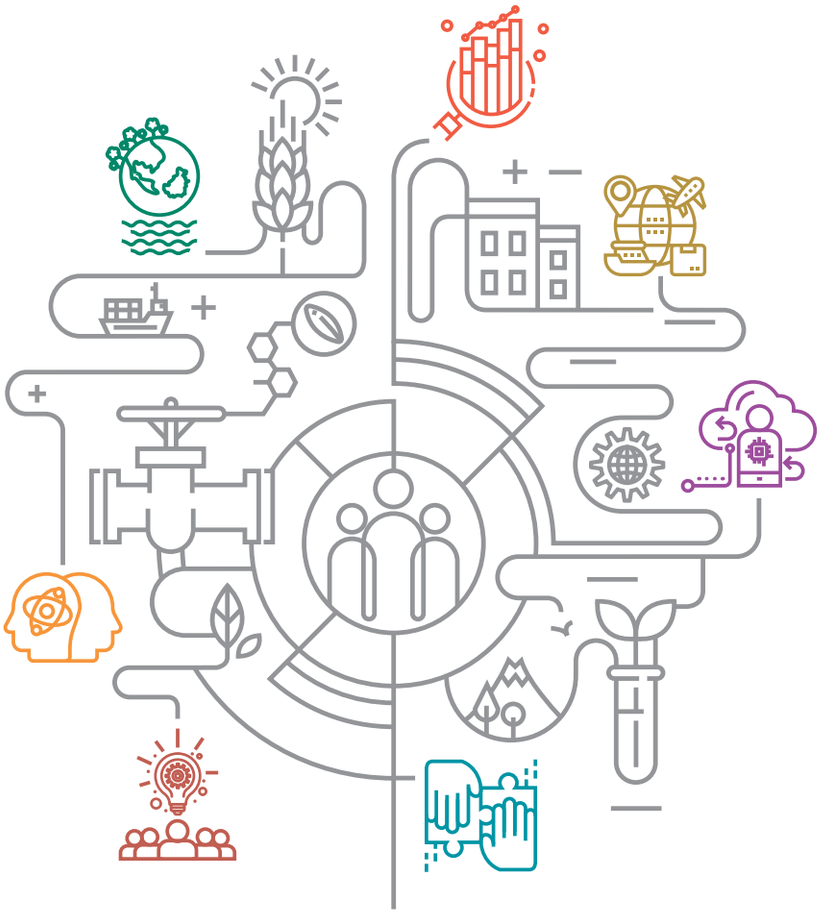


RMK12

TWELFTH MALAYSIA PLAN

2021-2025

A PROSPEROUS, INCLUSIVE, SUSTAINABLE MALAYSIA



Rukun Negara

Our nation, Malaysia, being dedicated:

to achieving a greater unity of all her peoples;

to maintaining a democratic way of life;

to creating a just society in which the wealth of the nation shall be equitably shared;

to ensuring a liberal approach to her rich and diverse cultural traditions; and

to building a progressive society which shall be oriented to modern science and technology.

We, her peoples, pledge our united efforts to attain these ends guided by these principles:

BELIEF IN GOD
LOYALTY TO KING AND COUNTRY
UPHOLDING THE CONSTITUTION
RULE OF LAW
GOOD BEHAVIOUR AND MORALITY

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TWELFTH MALAYSIA PLAN

2021-2025

A PROSPEROUS, INCLUSIVE, SUSTAINABLE MALAYSIA



> The success in implementation and achievement of the Twelfth Plan's objectives and goals is highly dependent on the commitment of each and everyone of us, especially our youth, based on the spirit of *Keluarga Malaysia*.

Foreword

The Twelfth Malaysia Plan 2021-2025 (Twelfth Plan) aims to address current issues and at the same time to restart and rejuvenate Malaysia's socioeconomic development for long-term sustainability and prosperity. It is intended to enable us, as *Keluarga Malaysia*, to move forward by restructuring the economy as the foundation in improving the wellbeing of the *rakyat*. This Plan with the objective of **'A Prosperous, Inclusive, Sustainable Malaysia',** encompasses the first half of the *Wawasan Kemakmuran Bersama 2030*.

The Twelfth Plan is a major agenda for national recovery to restore the economic stability of the *rakyat* as well as holistically regenerate and reinvigorate national economic growth. It had been formulated based on a 'bottom-up' approach where voices of all stakeholders have been given due consideration. Various engagements have been undertaken - both physically and virtually - throughout the process of preparing the Twelfth Plan. These engagements involved ministries, agencies, state governments, Members of Parliament, the private sector, academia, civil society organisations, international organisations and last but not least, the general public.

I would like to express my sincere appreciation and gratitude to each and everyone involved for their commitment in providing invaluable input and suggestions, to ensure the country continues to develop in a sustainable manner, while overcoming both the COVID-19 pandemic and economic crisis.

Resonating with the themes of the Twelfth Plan, by 2025, we aim among others to restore the wellbeing and prosperity of the *rakyat* by increasing their purchasing power, narrowing existing socioeconomic disparities and ensuring environmental sustainability. The role of the private sector as a driver of growth will be further strengthened. Despite Malaysia being in this difficult COVID-19 pandemic period, we, *Keluarga Malaysia* have an opportunity to reset the economy and together move forward.

This Twelfth Plan reflects the present Government's commitment to stay ahead of the curve and to plan our response in facing any possible situation. Although there are multiple ways of doing things, the key success factors to adapt to the new normal require that we embrace the principle of togetherness, leave our comfort zones and move forward with a clear direction. In today's unpredictable world, we need to successfully execute this Plan with regular reviews and enhanced flexibility to respond. This measure is in line with the Government's aspiration in ensuring that no one is left behind or neglected in development.

Insya-Allah, the Twelfth Plan serves as a blueprint in rebuilding a resilient economy for **'A Prosperous, Inclusive, Sustainable Malaysia'**. Ultimately, the success in implementation and achievement of the Twelfth Plan's objectives and goals is highly dependent on the commitment of each and everyone of us, especially our youth. Therefore, let us work together to achieve our national development agenda based on the spirit of *Keluarga Malaysia*.



DATO' SRI ISMAIL SABRI YAAKOB
Prime Minister of Malaysia
Putrajaya

September 2021

Preface

The Twelfth Malaysia Plan, 2021-2025 (Twelfth Plan), a medium-term plan with the objective of **'A Prosperous, Inclusive, Sustainable Malaysia',** is the start of a new phase in Malaysia's development journey - the Shared Prosperity Vision 2030 (WKB 2030).

This Plan paves the way forward for comprehensive policy responses in facing the challenging situation brought about by the COVID-19 pandemic. Policies under this Plan are structured to achieve sustainable economic growth, with a focus on equitable wealth distribution, the wellbeing of the *rakyat* and environmental sustainability. The Twelfth Plan introduces a new transformative approach based on three themes, four catalytic policy enablers and 14 game changers. This new approach is important in providing a strong foundation for Malaysia's future, and acts as a catalyst to restore economic growth, address socioeconomic challenges, balance regional development and enhance the nation's competitiveness to be a more resilient and sustainable player on the world stage.

The three themes of the Twelfth Plan are resetting the economy; strengthening security, wellbeing and inclusivity; and advancing sustainability. The four catalytic policy enablers of the Twelfth Plan meanwhile, focus on developing future talent; accelerating technology adoption and innovation; enhancing connectivity and transport infrastructure; and strengthening the public service. The 14 game changers represent bold and innovative actions to shift mindsets and change the approach to national development.

Cumulatively, these themes, enablers and game changers will enable Malaysia to attain its objective to become a high-income nation. Key to the success of this Plan is effective implementation and strong commitment from all stakeholders. In this regard, the public and private sectors, civil society organisations and the *rakyat* need to work hand in hand in ensuring the achievement of the Twelfth Plan objectives, and ultimately WKB 2030. With determination and perseverance, God willing, we will succeed.



DATO' SRI MUSTAPA MOHAMED
Minister in the Prime Minister's Department (Economy)
Putrajaya

September 2021

“The Twelfth Plan introduces a new transformative approach based on three themes, four catalytic policy enablers and 14 game changers in providing a strong foundation for Malaysia’s future.”



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Introduction

A Prosperous, Inclusive, Sustainable Malaysia

Introduction

The Twelfth Malaysia Plan, 2021-2025 (Twelfth Plan), is transformational. Whilst it builds on the previous plans, the Twelfth Plan injects fundamental reforms in realising the spirit of *Keluarga Malaysia* that will truly transform the development trajectory to achieve a prosperous, inclusive and sustainable Malaysia.

Various game-changing and radical initiatives will be implemented. These include programmes to alleviate the poor and uplift the standard of living of the *rakyat*. Specific focus will be given to the hardcore poor and poor in the bottom 10% household income decile group (B1). The Twelfth Plan will address the plight of all Malaysians, irrespective of gender, ethnicity, socioeconomic status and location.

Malaysia's development path over the next 10 years will be guided by the *Wawasan Kemakmuran Bersama 2030* (WKB 2030), which aims to transform Malaysia into a united, prosperous and dignified nation. The Malaysian economy registered a high growth rate at 6.2% per annum between 1971 and 2015. Although the growth rate moderated to 2.7% per annum between 2016 and 2020, Malaysia still fared better than most emerging markets and developing economies. The relatively high economic growth resulted in the improved wellbeing of the *rakyat* and narrowed income inequality.

The onset of the Coronavirus disease 2019 (COVID-19) pandemic in 2020 significantly altered business operations and the way people interact, as well as accelerated digital technology adoption. The pandemic also exacerbated socioeconomic inequalities and disparities. As a Government that cares for the people, especially in times of crisis, the 6R[1] approach was implemented to mitigate the impact of the pandemic. The National Recovery Plan (NRP) was introduced in June 2021 as a phased strategy to transition out from the Movement Control Order (MCO) in terms of the movement of people as well as the reopening of economic and social sectors. The transition of phases will be determined through a data-driven approach based on three main indicators, namely the daily number of new cases, bed utilisation rate in intensive care unit wards and percentage of the population that have been vaccinated. The formulation of the

[1] Resolve, Resilient, Restart, Recovery, Revitalise and Reform.

Twelfth Plan has taken into account the 6R approach that includes eight economic stimulus packages amounting to RM530 billion and the phased transition under the NRP.

As the first half of WKB 2030, the Twelfth Plan is critical given the current global and domestic challenges. The Plan is expected to rejuvenate and reposition Malaysia in the global economy. It will catalyse growth, ensure economic recovery and rebuild the economy to achieve prosperity, inclusivity and sustainability. Economic growth will be accompanied by more equitable wealth distribution to narrow disparities across income groups, ethnicities and geographic regions while ensuring environmental sustainability. The Twelfth Plan will also focus on upholding national security and sovereignty as well as solidifying national unity.

The Twelfth Plan is anchored on three key themes, namely resetting the economy, strengthening security, wellbeing and inclusivity as well as advancing sustainability. Four catalytic policy enablers, namely developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure as well as strengthening the public service will support the achievement of these themes. These policy enablers will form the foundation and building blocks of Malaysia's development over the next five years and beyond. The successful implementation of the Twelfth Plan will result in shared prosperity, enhance inclusivity and pave the way for a more sustainable Malaysia for future generations. This will restore the wellbeing of *Keluarga Malaysia* in the long-term.

The national development priorities of the Twelfth Plan will continue to be aligned to the Sustainable Development Goals (SDGs) of the 2030 Agenda for Sustainable Development (2030 Agenda). The adoption of the whole-of-nation approach is essential for SDGs implementation. In line with the principle of "leaving no one behind", localising SDGs initiatives will be intensified, and communication, education and public awareness (CEPA) will be emphasised to enhance understanding and implementation of the SDGs at the local level.

Malaysia's Development Pathway

The development policies implemented post-independence until 1970 were not able to fully address socioeconomic challenges, leading to inequitable growth and social imbalances. Consequently, the New Economic Policy, 1971-1990 (NEP) was formulated with the objective of attaining national unity through the two-pronged strategy of eradicating poverty and restructuring society. Vision 2020 was later introduced in 1991 aimed at making Malaysia a fully developed country in its own mould, encompassing economic, political, social, spiritual, psychological and cultural dimensions by the year 2020. Vision 2020 formed the basis of the National Development Policy, 1991-2000 (NDP), which sought to establish a more united and just society through balanced development.

The new millennium brought about challenges in terms of globalisation, liberalisation, as well as the rapid expansion of information and communication technology. The National Vision Policy, 2001-2010 (NVP) was formulated as the successor to the NDP, which incorporated a number of new dimensions, including transforming Malaysia into a knowledge-based economy. Vision 2020 was further supported by the National Transformation Policy, 2011-2020 (NTP), a national roadmap to comprehensively transform Malaysia into a high-income advanced nation. The NTP introduced a number of transformation programmes targeting improvements in specific areas such as governance, the economy and politics.

The Eleventh Malaysia Plan, 2016-2020 (Eleventh Plan), marked the conclusion of the 30-year development journey under Vision 2020. Key strategies included strengthening sectoral growth and expediting structural reforms as well as accelerating innovation and technology adoption. Various efforts were also implemented to raise income and uplift the wellbeing of the *rakyat*. During the Eleventh Plan, the economy grew at an average annual rate of 2.7%, mainly driven by the services and manufacturing sectors. While socioeconomic progress was achieved during the period, Malaysia has yet to become a fully developed economy. An appraisal of Vision 2020 is shown in *Box I-1*.

As the successor to Vision 2020, WKB 2030 aims to provide an enhanced standard of living for all by 2030 with three objectives, which are attaining development for all, addressing wealth and income disparities as well as making Malaysia a united, prosperous and dignified nation. It is a commitment to achieve sustainable economic growth accompanied by fair, equitable and inclusive economic distribution, across all income groups, ethnicities, regions and supply chains. The purchasing power of households will rise commensurately with the growth of the economy.

The Twelfth Plan is aligned to the 2030 Agenda, representing Malaysia's commitment in implementing the 17 SDGs. This is reflected in the policies, programmes and projects in the Twelfth Plan. Among the important areas under the 2030 Agenda are eradicating hardcore poverty; building a peaceful, just and inclusive society; creating conditions for sustainable, inclusive and sustained economic growth; providing decent work for all; ensuring protection of the environment and natural resources; as well as promoting shared prosperity.

The Twelfth Plan has been drawn up based on extensive engagements with various stakeholders, including ministries, state governments, the private sector and civil society organisations (CSOs), as well as online engagements with the public. Given the current circumstances, the drafting of the Twelfth Plan has proven to be the most challenging compared to previous five-year plans.

Box I-1

Vision 2020: An Appraisal

Background

Vision 2020, introduced in February 1991, encapsulated the goal for Malaysia to become a fully developed country in its own mould by the year 2020. Malaysia needed to overcome nine key challenges to be fully developed:

1. Establishing a united nation with a sense of common and shared destiny
2. Creating a psychologically liberated, secure and developed society
3. Fostering and developing a mature democratic society
4. Establishing a fully moral and ethical society
5. Establishing a mature, liberal and tolerant society
6. Establishing a scientific and progressive society
7. Establishing a fully caring society and culture
8. Ensuring an economically just society
9. Establishing a prosperous society with an economy that is fully competitive, dynamic, robust and resilient

Translating Vision 2020 into Development Plans

Vision 2020 was an ambitious national aspiration set 30 years into the future that served as the backbone for subsequent medium- and long-term development plans between 1990 and 2020. It was the guiding principle for three Outline Perspective Plans (National Development Policy, National Vision Policy and National Transformation Policy) and six Malaysia Plans (Sixth Malaysia Plan up to the Eleventh Malaysia Plan).

The economy needed to grow by 7% per annum, in real terms over the 1991-2020 period, in order to support a fully competitive, dynamic, robust and resilient economy as envisioned under the ninth challenge. The relatively high target of economic growth was designed to support efforts in addressing both the sixth and eighth challenges of establishing a scientific, progressive and economically just society. The growth target was later revised to focus on the required rate of growth to achieve the estimated minimum gross national income[1] (GNI) per capita level of a high-income economy by the year 2020.

The socio-political challenges were addressed by focusing on several key areas including creating equitable economic opportunities, developing quality human capital, enhancing public service delivery, improving governance, elevating integrity and accountability as well as uplifting the wellbeing of the *rakyat*.

Progress of Vision 2020

Many successes were achieved in the past 30 years. However, a number of crises during the period significantly impacted the journey to become a fully developed country by the year 2020. The quantitative and qualitative nature of the nine challenges as well as the wide-ranging set of objectives resulted in varying opinions on the progress of Vision 2020. The following analysis provides a snapshot of the progress made in the last 30 years.

Socioeconomic Challenges (Challenges 6, 8 and 9)

During the first decade of Vision 2020, the economy surpassed the 7% per annum growth target and grew by 7.1% despite going through the Asian Financial Crisis of 1997/1998. Growth in the subsequent decade moderated to 4.6% against the backdrop of the global electrical and electronics downturn in 2001 and the Global Financial Crisis in 2008/2009, while the decade until 2020 recorded a slightly lower annual growth rate of 4%. Overall, the Malaysian economy grew by 5.2% per annum between 1991 and 2020.

Malaysia is en route to becoming a high-income economy, as the gap between its GNI per capita and the minimum high-income economy threshold has been reducing over the period. In 2020, the country was 20.4% below the minimum high-income threshold of US$12,696, compared to 62.6% in 1991.

Generally, the *rakyat* has enjoyed a better standard of living as reflected in the higher mean household income of RM7,901 in 2019 compared to RM1,169 in 1989. This is mostly attributed to the relatively strong economic performance, low and stable inflation rate as well as full employment since 1992. The incidence of absolute poverty declined from 16.5% in 1989 based on the 1977 Poverty Line Income (PLI) methodology to 5.6% in 2019 based on the 2019 PLI methodology. Income inequality also fell as the Gini coefficient declined from 0.442 to 0.407 over the same period.

[1] Based on the World Bank Atlas Method.

In science and technology, Malaysia succeeded in sending its first citizen into space in October 2007 and owns several communications and remote-sensing satellites. The Multimedia Super Corridor (MSC) was launched in 1996 to propel Malaysia into the information and knowledge age.

While the economy recorded relatively high rates of growth over the 30-year period, several disparities and structural economic issues persist. These include spatial growth disparities, inequality between income groups, higher unemployment among youth, the rising cost of living and industries concentrated in the lower end of the production value chain. These issues need to be addressed comprehensively to enable Malaysia to transition into a developed nation by the year 2030.

Socio-Political Challenges (Challenges 1, 2, 3, 4, 5 and 7)

The socio-political achievements are particularly difficult to assess as they involve both social and political factors that are subjective in nature. There is a wide range of views with respect to the achievements on the socio-political front.

Malaysia is considered one of the most peaceful countries in the world. The Global Peace Index (GPI) 2021, which ranks 163 independent states and territories according to the level of peacefulness[2] place Malaysia in the 23rd position and among countries with a high state of peace. Malaysia's ranking improved by seven positions compared to GPI 2016 and continues to be among the top five peaceful countries in the Asia-Pacific region.

The outcome of the 14th General Election in 2018 reflected an increasingly mature democratic society. This was reflected in the improvement in Malaysia's ranking, in the Democracy Index[3] by the Economist Intelligence Unit (EIU), from 81st in 2006 to 39th in 2020. Malaysia is categorised as a "flawed democracy" similar to countries such as Japan and South Korea. According to the EIU, countries in this category have free and fair elections.

Internationally, Malaysia has been entrusted with several important roles, such as the Presidency of the United Nations General Assembly (1996) and as a non-permanent member of the United Nations Security Council (UNSC) (1999-2000, 2015-2016). Malaysia hosted and chaired the Non-Aligned Movement Summit (2003), the Tenth Islamic Summit Conference (2003) and Asia-Pacific Economic Cooperation (APEC) Summit 1998. Malaysia also hosted the first-ever fully virtual APEC Summit in 2020, which adopted the APEC Putrajaya Vision 2040 that envisions an open, dynamic, resilient and peaceful Asia-Pacific community by the year 2040. Malaysia's commitment to international peace and security is evident through its strong support towards UNSC Resolution 2334 in 2016 that called for Israel to stop the illegal construction of settlements in the Palestinian territories.

Malaysia still faces some degree of social deficit that hinders the attainment of social cohesion. Civil disturbances have occurred occasionally, affecting harmony and unity. Social issues including juvenile crime and domestic violence have been rising. Several socio-political challenges remain and need to be addressed in future development plans.

Conclusion

Vision 2020 was an aspirational and ambitious vision to transform Malaysia into a fully developed country by the year 2020. It provided a desirable ideal when it was launched in 1991 and the ensuing medium- and long-term development plans were the building blocks toward achieving developed country status. Development policies have evolved over the years but Vision 2020 with the overriding objective of national unity remained the underlying guiding principle throughout. Although significant progress has been made over the past 30 years, the nine challenges identified under Vision 2020 have yet to be fully addressed due to several structural domestic economic issues and a number of global economic crises. The WKB 2030, which will be implemented beginning 2021, seeks to address these issues while ensuring all Malaysians achieve an enhanced standard of living by 2030.

[2] The state of peace is measured across three domains: the level of societal safety and security, the extent of ongoing domestic and international conflict, and the degree of militarisation.
[3] The Democracy Index provides a snapshot of the state of democracy worldwide among 165 independent nations based on five categories: electoral process and pluralism; the functioning of government; political participation; political culture; and civil liberties.

Looking Back

Gross Domestic Product

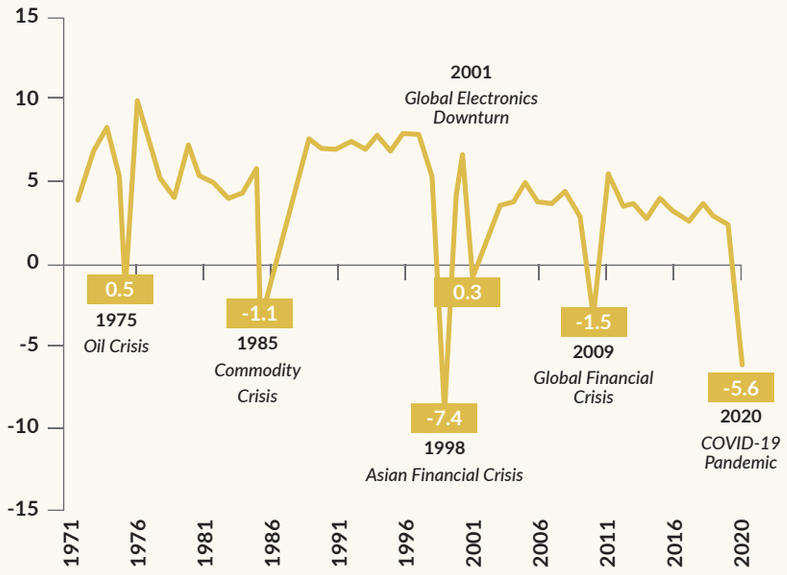
The Malaysian economy has grown rapidly since 1971 despite enduring several economic crises that were caused by external shocks.

5.2%
GDP
growth,
1991-2020

During the 1991 to 2020 period, real **gross domestic product (GDP)** grew by 5.2% per annum, underpinned by strong domestic demand, particularly private consumption spending.

Malaysia has maintained full employment since 1992, except in 2020 due to the COVID-19 pandemic.

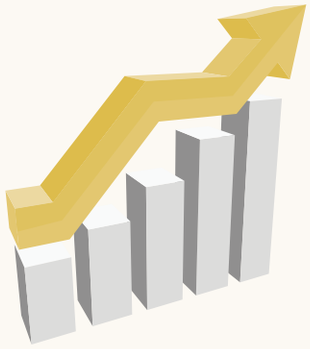
GDP growth, % p.a.



Source: Department of Statistics Malaysia

Gross National Income Per Capita

GNI per capita has expanded about sixfold from RM7,382 (US$2,730) in 1990 to RM42,503 (US$10,111) in 2020.

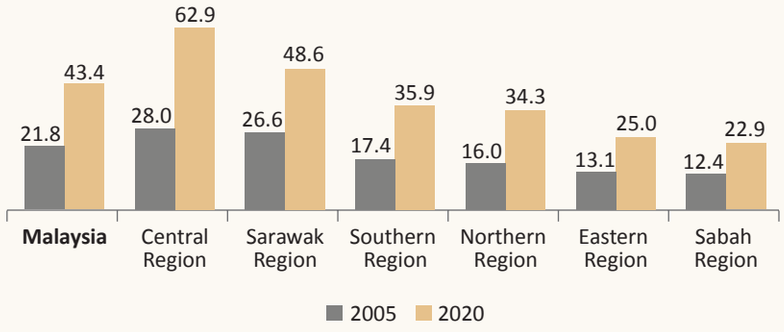


5.8x
Increase in
GNI
Per Capita
from 1990 to 2020

Gross Domestic Product Per Capita

The **GDP per capita** gap among regions continue to persist. Nevertheless, all regions recorded increases in their GDP per capita in 2020 compared to 2005, with the Central and Sarawak regions surpassing the national average.

RM '000,
at current prices



Source: Department of Statistics Malaysia

Education

Malaysians today possess higher levels of education with 32% of the labour force possessing **tertiary qualifications.** This represents a more than threefold increase from 1990. The quality of higher education also improved which is reflected by the increased graduate employability and higher global rankings of local universities.

Student enrolment in **primary schools** continued to exceed the universal enrolment threshold of over 95% since 1990. At the **secondary level**, the enrolment rate improved to 92.4% in 2020 from 48% in 1990.



32%
Labour Force Possessing Tertiary Qualifications in 2020

92.4%
Secondary Level Enrolment Rate in 2020

Source: Department of Statistics Malaysia and Ministry of Education

Poverty and Income Distribution

The incidence of poverty reduced significantly, from 16.5% in 1989 to 5.6% in 2019. The incidence of multidimensional poverty among households, as measured by the **Multidimensional Poverty Index[1] (MPI)** also declined from 0.015 in 2016 to 0.011 in 2019.

The average monthly household income increased more than sixfold from RM1,169 in 1989 to RM7,901 in 2019, while the **average monthly household income of B40** increased from RM424 in 1989 to RM3,152 in 2019. Income inequality has narrowed with the **Gini coefficient** falling from 0.442 in 1989 to 0.407 in 2019.

5.6%
Incidence of Poverty in 2019

6.8x
Average Monthly Household Income in 2019 compared to 1989

Source: Department of Statistics Malaysia

[1] MPI reflects both the incidence of multidimensional poverty and its deprivation intensity.

Basic Infrastructure and Amenities

The provision of **basic infrastructure and amenities** has also improved. The access to public health centres has increased as at 2019. The coverage of broadband infrastructure, access to clean and treated water supply, electricity supply as well as rural paved roads has also expanded as at 2020.



92.6%
Access[2] to Public Health Centres in 2019

95.1%
Access to Clean and Treated Water Supply in 2020



95.5%
Broadband Coverage in Populated Areas in 2020



98%
Access to Electricity Supply in 2020



3,982km
Access to Rural Paved Roads during 2016 to 2020 Period

Source: Department of Statistics Malaysia, Malaysian Communications and Multimedia Commission, Ministry of Rural Development and National Water Services Commission

[2] Distance from living quarters to public health centres less than 5km in 2019.

Housing and Healthcare Services

In improving the standard of living of the low income groups, more than 1.16 million units of **low-cost houses** were built during the 1999 to 2020 period.



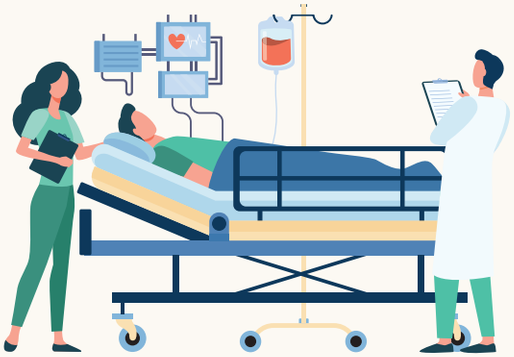
1.16 million
Units from
1999 to 2020

Healthcare services have improved as reflected by the **ratio of doctor to population** at 1:482 in 2019 compared to 1:2,533 in 1990. **Life expectancy at birth** increased to 74.7 in 2019 compared to 70.9 in 1990, higher than the World Bank average global target of 73.4. **The ratio of hospital beds** also increased to 1.95 per 1,000 population in 2019, from 1.3 in 1990.

Ratio of Doctor to Population
1:482
in 2019

Life Expectancy
74.7
in 2019

Ratio of Hospital Beds per 1,000 Population
1.95:1,000
in 2019



Source: Ministry of Health Malaysia and National Property Information Centre

Green Economy

29.4%
Reduction in GHG Emissions Intensity to GDP by the End of 2016

In enhancing environmental sustainability, Malaysia recorded a 29.4% reduction in **greenhouse gas (GHG) emissions intensity to GDP** by the end of 2016 based on emissions intensity in 2005.



20.7%
Average Proportion of GGP between 2016 and 2019

The average proportion of **government green procurement (GGP)** to total government procurement for selected green products and services was 20.7% between 2016 and 2019, exceeding the target of 20%.

Source: Ministry of Environment and Water and Ministry of Finance

International Ranking

The **IMD World Competitiveness Yearbook 2021** by the Institute for Management Development (IMD) ranked Malaysia as the **25th** most competitive economy among 64 countries.

The **Doing Business 2020 Report** by the World Bank ranked Malaysia at **12th** place among 190 countries for ease of doing business.

The **Global Competitiveness Report 2019** by the World Economic Forum placed Malaysia as the **27th** most competitive economy out of 141 countries.







Integrity

The **Malaysian Anti-Corruption Commission (MACC)** was established in 2009 as an independent, transparent and professional body to replace the Anti-Corruption Agency.

The **National Centre for Governance, Integrity and Anti-Corruption (GIACC)** was established in 2018 to advise the Government on governance, integrity and anti-corruption initiatives.

The **National Anti-Corruption Plan 2019-2023 (NACP)** was introduced in 2019 to create a corrupt-free nation. NACP replaced the National Integrity Plan (NIP), which was launched in 2004 to develop an ethical society.

The **Corruption Perceptions Index 2020** by the Transparency International ranked Malaysia **57th** among 180 countries.





Enhancement of Integrity and Accountability





Looking Ahead to a Prosperous, Inclusive, Sustainable Malaysia

The objective of the Twelfth Plan is to achieve a prosperous, inclusive and sustainable Malaysia, in line with the WKB 2030 and the 2030 Agenda. Sustainable economic growth will be accompanied by fair, equitable and inclusive economic distribution across all income groups, ethnicities and regions in order to provide a decent standard of living for all Malaysians. In addition, the Twelfth Plan encompasses strategies and initiatives that safeguard national security and sovereignty, which are vital for sustainable socioeconomic development.

The Twelfth Plan is anchored on three key themes focusing on resetting the economy, strengthening security, wellbeing and inclusivity as well as advancing sustainability. These themes are supported by four catalytic policy enablers focusing on developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure as well as strengthening the public service, paving the way for a prosperous, inclusive and sustainable nation.

In line with the transformative nature of the Twelfth Plan, game changers that represent the new and innovative ideas will be introduced to shift mindsets and fundamentally change the approach of national development. These game changers will ensure Malaysia attains the objectives of WKB 2030, namely sustainable growth along with fair and equitable distribution across income groups, ethnicities, regions and supply chains. Game Changer I encapsulates the key elements of the Twelfth Plan that are needed to achieve the required reforms and transformation.

Game Changer I
Imperatives for Reform and Transformation

Why reform and transformation are necessary?

The COVID-19 pandemic has impacted all economies around the world, and therefore maintaining the status quo will be untenable. Negative growth was recorded for four quarters of the economy following the deterioration in economic activities. The Twelfth Plan is formulated with the aim to:

- Rebuild the economy and build back better.
- Address uncertainties in the global economic landscape.
- Overcome shortcomings in development approach, governance and implementation.
- Provide hope and confidence in the future of the country, especially the youth.

How will this be achieved?

The Twelfth Plan is formulated to transform the economy. To ensure the comprehensiveness of the Plan, the transformation will incorporate the following elements:

- Transformational leadership involving all levels of Government.
- Monitoring of progress at the national level and problem-solving intervention.
- *Rakyat*-first policy is embedded into socioeconomic planning.
- Whole-of-nation is mobilised in pursuing national goals.
- Strengthening governance ecosystem.
- Political buy-in to ensure successful fundamental change.
- Enhancing collaboration among government agencies, private sector, academia, CSOs and the *rakyat*.
- Strengthening Malaysian identity, inculcating noble values and patriotism.

What will success portray?

- Achievement of the WKB 2030 and 2030 Agenda.
- Prosperous, high income, inclusive, low carbon, high-tech and sustainable nation.
- Globally competitive nation.
- United, harmonious and dignified nation.

Themes of the Twelfth Plan

The Government is committed to delivering game-changing and radical initiatives to ensure that the objectives of prosperity, inclusivity and sustainability are achieved during the Twelfth Plan. Emphasis will be on resetting the economy, strengthening security, wellbeing and inclusivity as well as advancing sustainability.

Theme 1
Resetting the Economy

Theme 1 focuses on restoring the growth momentum of key economic sectors, and propelling strategic and high impact industries as well as micro, small and medium enterprises (MSMEs) to realign growth in a sustainable trajectory as well as strengthening Malaysia's position in the global supply chain. Malaysia will move to high value-added and high-skilled economic activities, and set its sight on becoming a high-income nation driven by advanced technology. Over the next five years, concerted efforts will be undertaken to rejuvenate all the economic sectors, namely services, manufacturing, agriculture, mining and quarrying as well as construction. Meanwhile, productivity growth will be boosted, export markets will be expanded, financial intermediation ecosystem effectiveness and role of industrial estates and food production areas will be enhanced, while governance and policies will be improved. Focus will also be placed on accelerating the development of eight strategic and high impact industries and activities, namely electrical and electronics (E&E), global services (GS), aerospace, creative, tourism, halal, smart farming and biomass. In addition, efforts will be undertaken to strengthen MSMEs participation in the economy and boosting entrepreneurial capabilities.

Theme 1 outlines two game changers in resetting the economy, which are catalysing strategic and high impact industries to boost economic growth and transforming MSMEs as the new driver of growth. Game Changer II aims to enhance the contribution of the strategic and high impact industries and activities to the economy by leveraging on advanced technologies, digitalisation and niche capabilities. Private sector investments particularly with environmental, social and governance (ESG) elements will be encouraged to support green economy agenda. Whilst, Game Changer III will accelerate MSMEs development through technology and digital adoption in embracing new norms in business activities as well as enhancing the capabilities of Bumiputera entrepreneurs. In addition, focus will be given to shift MSMEs from a domestic to the global market and leveraging cooperative movement in developing entrepreneurs. These measures aim to improve competitiveness and the business ecosystem towards increasing MSMEs contribution to the economy.

Theme 2
Strengthening Security, Wellbeing and Inclusivity

Theme 2 will focus on strengthening security, wellbeing and inclusivity. In ensuring national defence and security, crime prevention efforts as well as rehabilitation and emergency preparedness will be intensified, while the welfare of the Malaysian Armed Forces and enforcement personnel will be improved. Priority will also be given in strengthening security governance. Healthcare service delivery will continue to be a focus in increasing the health status of the *rakyat*. Endeavours to improve preparedness in battling various diseases and the expansion of healthcare coverage will be continued. The supply of quality affordable housing will be increased by improving access to affordable housing and governance as well as ensuring inclusive housing development. An active lifestyle will be promoted continuously among the *rakyat* by creating a holistic sports ecosystem. Unity in diversity will be strengthened to maintain a harmonious society and prosperous nation. Addressing poverty as well as narrowing disparities among low income groups, inequitable Bumiputera socioeconomic outcomes, the low socioeconomic development of Orang Asli and social deprivation of specific target groups will be emphasised. Efforts will be intensified to accelerate the development of regions and states as well as narrow the development gap between rural and urban areas for greater inclusion. The development in Sabah and Sarawak will be further accelerated for better growth and wellbeing of the *rakyat*.

Theme 2 outlines four game changers, which are enhancing national security and unity for nation-building, revitalising healthcare system in ensuring a healthy and productive nation, transforming the approach in eradicating hardcore poverty as well as multiplying growth in less developed states especially Sabah and Sarawak to reduce development gap. Efforts in nation-building and creating a more conducive environment for economic activities as well as a safe and harmonious living for the *rakyat* will be emphasised by addressing issues on national defence and security as well as the unity. The COVID-19 pandemic has tested the strength and response of healthcare delivery systems across the world. Thus, revitalising healthcare system is critical in order to ensure the *rakyat* have equal access to healthcare services as well as be well-prepared in meeting future health crises. Addressing poverty holistically and uplifting the standard of living of the *rakyat* is one of the game changers in strengthening inclusivity and uplifting the livelihood especially of the hardcore poor, B40 and vulnerable groups. This will reduce the income disparities and uplift the standard of living of households in the different income segments and ethnic groups. The potential of less developed states will be optimised. Economic activities will be intensified while infrastructure and connectivity will be enhanced. In this regard, the rural-urban income ratio will be improved, while GDP per capita, average GDP growth and median monthly household income of the less developed states are targeted to increase further.

Theme 3
Advancing Sustainability

Theme 3 focuses on advancing green growth as well as enhancing energy sustainability and transforming the water sector. The next five years will see a nationwide shift to more sustainable economic practices and lifestyles that value natural endowments and environmental health. This shift will address the issues of climate change, unsustainable consumption and production practices, loss of biodiversity, lack of coherence in the implementation of policies and inefficient water resources management. In the Twelfth Plan, green growth will be augmented to achieve sustainability and resilience. In this regard, the need to share responsibility in moving towards a low-carbon nation will be emphasised, while more equal benefit sharing from the utilisation of natural resources will be promoted. Energy and water will be managed holistically and sustainably, taking into account the supply and demand of these resources. The energy sector will address the energy trilemma, while the water sector will focus on ensuring water security for all.

Two game changers will be implemented under Theme 3, namely embracing the circular economy and accelerating adoption of the Integrated Water Resources Management (IWRM). Transitioning to the circular economy will yield significant efficiency gains and cost-effectiveness as well as reduce pressure on the environment. It will also deliver a more innovative and competitive economy as well as create new opportunities for green growth. Accelerating the adoption of the IWRM will be the starting point in transforming the water sector. The effective execution of policies and strategies under Theme 3 will contribute to sustainable and resilient growth as well as the achievement of the 2030 Agenda.

Policy Enablers of the Twelfth Plan

The achievement of targets set under the three themes of resetting the economy, strengthening security, wellbeing and inclusivity, as well as advancing sustainability are supported by four catalytic policy enablers focused on developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure as well as strengthening the public service. These critical enablers form the fundamental foundation and building blocks of Malaysia's development over the next five years and beyond.



Policy Enabler 1

Developing Future Talent

The growth targets of the Twelfth Plan will require the development of highly skilled talent to support the demands of a growing economy. However, there are still persistent issues in the labour market and education sector. These issues include a low percentage of compensation of employees (CE) to GDP, inefficient labour market, limited access to quality education and weaknesses in the governance of educational institutions. The COVID-19 pandemic has caused a spike in the unemployment rate and brought about new norms in the way people work and how businesses operate. Hence, the Twelfth Plan will focus on developing future talent by realigning the labour market, education and training. Among the key initiatives for realigning the labour market are promoting equitable CE and labour participation, as well as strengthening labour market support. In addition, elevating the quality of education and leveraging emerging technologies will be the key initiatives to improve the education and training system.

Improving technical and vocational education and training (TVET) ecosystem to produce future-ready talent will be introduced as a game changer that can better meet industry demand. As a key catalyst in Malaysia's socioeconomic development, a strong TVET ecosystem will allow the country to effectively address persistent issues such as dependency on foreign workers, low CE and low student outcomes. Emerging technologies such as virtual reality, augmented reality and artificial intelligence will be leveraged to complement existing hands-on teaching and learning activities as well as research and development conducted in laboratories and workshop. The implementation of all these initiatives will lead to a flexible labour market that improves the standard of living of the *rakyat*.



Policy Enabler 2

Accelerating Technology Adoption and Innovation

Technology adoption and innovation are fundamental enabling factors that will catalyse growth across all sectors. The digitalisation process will be accelerated and the adoption of advanced technology, particularly the Fourth Industrial Revolution (4IR) technologies, will be promoted in achieving a high technology-based economy. In doing so, Malaysia will address the issues of insufficient digital infrastructure and services, fragmented governance, widening digital divide, low research, development, commercialisation and innovation (R&D&C&I) capacity and capability, and slow adoption of technologies. The Twelfth Plan will accelerate Malaysia's adoption and application of digital and advanced technology to create and unlock new opportunities. This will maximise the potential of the digital economy as well as achieve inclusive, responsible and sustainable socioeconomic growth. The talent and skills required to drive both the digital economy and 4IR will be enhanced, while R&D&C&I will be intensified. Malaysia will also aggressively attract investment in the digital economy to become the regional leader. The focus will be on mainstreaming digitalisation for inclusive development, accelerating R&D&C&I as well as capitalising on the potential of advanced technology.

This policy enabler outlines two game changers in accelerating technology adoption and innovation, which are enhancing digital connectivity for inclusive development as well as aligning R&D towards commercialisation, wealth generation and economic growth. The successful implementation of this policy enabler, among others, will ensure 100% 4G coverage in populated areas, wider 5G coverage, 100% urban and rural households subscribing to the internet, 2.5% gross expenditure on R&D (GERD) to GDP, 10.5% contribution of eCommerce to GDP and 25.5% contribution of the digital economy to GDP. The implementation of these initiatives is expected to enhance national competitiveness and resilience, thus better preparing Malaysia to be a high technology-based economy.



Policy Enabler 3

Enhancing Connectivity & Transport Infrastructure

Transportation and logistics play a crucial role in facilitating growth across all sectors of the economy. Emphasis will be on improving first- and last-mile connectivity, increasing industry competitiveness and strengthening governance. Nevertheless, challenges in meeting the demand for seamless connectivity and reliable transport and logistics infrastructure continue to hinder efforts in addressing the growing demand.

Provision of efficient and inclusive transportation and logistics infrastructure will continue to be the focus by enhancing accessibility to public transport, improving trade facilitation as well as strengthening the institutional and regulatory framework. Measures will be taken to improve last-mile connectivity through the integration of rail and road networks between airports, ports, industrial areas and cities. The capacity of ports infrastructure and services will be increased while a multimodal cargo movement approach by the same service provider will be adopted. In addition, transforming the logistics ecosystem for greater efficiency has been identified as a game changer for the logistics sector. Initiatives will be taken to centralise planning and development of logistics hub, accelerate digital adoption, encourage mergers and acquisitions among industry players, establish a single border agency and create a national regulatory framework for warehousing and maritime economy. These efforts will support and facilitate the expansion of economic activities and contribute to the socioeconomic growth of the country.



Policy Enabler 4

Strengthening the Public Service

This policy enabler fundamentally supports all themes and other policy enablers in promoting the wellbeing of the *rakyat* as well as ensuring Malaysia's continuous socioeconomic development. The public sector will further intensify digitalisation, citizen-centric decision-making, project implementation as well as collaboration and coordination between the three levels of government. In recognition of the current gaps in talent, governance ecosystem and project management, the public sector will be further strengthened with emphasis on integrity and transparency. In the Twelfth Plan, priorities will be given on developing a high-performing civil service, advancing the whole-of-government approach as well as enhancing budgeting and project management.

Transforming the public service through the whole-of-government approach will be the game changer in ensuring a more efficient and effective public service delivery as well as optimising existing resources. It is essential to review and streamline the structures and functions of ministries and agencies as well as ensure a clear delineation of roles and responsibilities between Members of the Administration and civil servants. In addition, enhancing the mechanism for selection of key leaders, improving the mechanism for recruitment of the professional and managerial officers as well as accelerating digitalisation will further enhance public service delivery. The implementation of this policy enabler, among others, will improve Malaysia's performance to be among the top 30 in the Corruption Perceptions Index and top nine in the Government Efficiency sub-index of the IMD World Competitiveness Yearbook as well as ensure 80% of online Federal Government services will be available end-to-end by 2025.

Challenges and Opportunities

The next five years presents both challenges and opportunities for the Malaysian economy. The pace of economic recovery is contingent on the COVID-19 vaccination rollout and compliance with the standard operating procedures (SOPs) as well as the effectiveness of measures under the stimulus packages. The increase in the debt and fiscal deficit to finance the stimulus packages will affect fiscal sustainability unless accompanied by medium-term fiscal consolidation efforts. Sustaining growth in the medium term will also hinge on the ability to increase the pace of structural transformation and transition into the production of higher value-added products and services in all economic sectors. This will require effective policies and strategies to address skill and talent gaps, accelerating R&D&C&I and increasing preparedness to embrace new technologies arising from the 4IR.

On the social front, increasing health risks and demographic shifts pose several challenges. The increase in the incidence of non-communicable diseases (NCDs) and the need to manage the COVID-19 pandemic, including the rollout of the National COVID-19 Immunisation Programme, has placed intense pressure on the healthcare system. Malaysia has to prepare itself holistically to meet the challenges posed by an aged society by 2030. The country is also confronted with the task of addressing poverty and inequality as well as raising the standard of living of the B40 and M40 in a more targeted manner while narrowing the development gap between regions. The rapid rate of urbanisation, while bringing new economic and employment opportunities, can pose challenges in terms of infrastructure, energy and water resources.

Despite these challenges, Malaysia will capitalise on its strengths and advantages to move forward in accelerating socioeconomic development. Strong macroeconomic fundamentals, including a highly diversified economic and export structure, low and stable inflation as well as a strong and well-capitalised financial sector, remain the key underlying strengths of the Malaysian economy. Its strategic position in Asia will enable Malaysia to position itself as a hub for a number of industries.

The Government remains committed to ensure Malaysia continues to be an attractive investment destination by introducing policy and regulatory reforms as well as improving governance. The Government views the private sector as a full development partner in line with the Malaysia Incorporated Policy and will continue to play an important role in realising the WKB 2030 and 2030 Agenda. The ecosystems that support private sector participation in development will continue to be improved such as facilitating regulation as well as increasing engagement and consultation with the private sector in policy formulation. Public service delivery will be strengthened to ease business operation.

Selected Targets of the Twelfth Plan

During the Twelfth Plan, the global economy is expected to regain momentum as it recovers from the COVID-19 pandemic. World trade is expected to grow by 5.3% per annum, mainly supported by better trade performance of emerging markets and developing economies. In tandem with the global economic recovery, the Malaysian economy is expected to grow between 4.5% and 5.5% per annum, resulting in a higher GNI per capita of RM57,882 or US$14,842 in 2025.

Efforts to accelerate productivity will continue under the Twelfth Plan, which will contribute to higher labour productivity growth. Focus will be given to gearing up for the 4IR, providing an enabling environment for the digital economy, intensifying R&D&C&I as well as developing the required talent. In addition, with better labour market conditions, Malaysia will regain full employment during the Twelfth Plan. In tandem with the focus on inclusive economic growth, salaries and wages are also projected to rise, thus contributing to higher household income. The wellbeing of the *rakyat* is expected to further improve, supported by both economic and social progress as well as inclusive regional development. The selected targets of the Twelfth Plan are as shown in *Exhibit I-1*.

Exhibit I-1

Selected Targets of the Twelfth Plan

Indicator	Eleventh Plan Performance	Twelfth Plan Target
GDP growth, per annum	*2.7%*	*4.5%~5.5%*
GNI Per Capita, end period	RM42,503	RM57,882
Labour Productivity growth, per annum	*1.1%*	*3.6%*
Compensation of Employees, end period (% of GDP)	*37.2%*	*40.0%*
Average Monthly Household Income, end period	RM7,160	RM10,065
Malaysian Wellbeing Index growth, per annum	*0.5%*	*1.2%*

Game Changers

Game Changer I: Imperatives for Reform and Transformation

The Twelfth Plan needs to be transformational to overcome global economic uncertainties, domestic structural economic challenges and shortcomings in the development approach. In this regard, among the elements to be incorporated into the Twelfth Plan are *rakyat*-first policy, whole-of-nation approach and political buy-in. These will ensure the successful implementation of the WKB 2030 and 2030 Agenda. The reform and transformation are imperative in achieving a prosperous, high-tech, inclusive and sustainable nation, thus enabling Malaysia to be united, harmonious and dignified.

Theme 1: Resetting the Economy

Game Changer II: Catalysing Strategic and High Impact Industries to Boost Economic Growth

Resetting the economy to address current and future economic challenges is centred around building resiliency and competitiveness by leveraging advanced technology adoption, digitalisation and niche capabilities. Thus, E&E, GS, aerospace, creative, tourism, halal, smart farming and biomass are identified as strategic and high impact industries and activities that will catalyse economic growth. In the Twelfth Plan, efforts will be focused on accelerating these industries to be more sophisticated by producing high value-added activities and products, attracting quality investments and expanding exports as well as contributing in green economy agenda.

Game Changer III: Transforming Micro, Small and Medium Enterprises as the New Driver of Growth

Prioritising MSME digitalisation as a national agenda is a powerful game changer for the economy. It enables MSMEs including Bumiputera entrepreneurs to transform, compete and penetrate global markets. MSMEs will be equipped with the skills to enable these enterprises to digitalise their business process by the year 2025.
To enhance competitiveness, MSMEs will also be assisted to produce products and services on par with international standards. A conducive and holistic ecosystem will be created to support MSMEs.
This includes giving a second chance to entrepreneurs who have tried and failed as success is very seldom achieved at the first-time attempt. A commissioner will be appointed to assist small businesses in securing payments on time and resolving payment disputes.
In addition, cooperative movement will be leveraged in developing entrepreneurs.

Theme 2: Strengthening Security, Wellbeing and Inclusivity

Game Changer IV: Enhancing National Security and Unity for Nation-Building

National security and unity remain a priority in maintaining a strong and resilient nation. A holistic plan will be implemented in curbing illegal activities at the border and a new National Defence and Security Industry Policy will be introduced in ensuring a sustainable defence and security capability. In addition, wider usage of advanced technology as well as greater involvement by the community will facilitate the whole-of-nation approach in combatting crimes. Acknowledging the importance of building social interaction among the *rakyat* will be fostered through unity programmes, sports and religious activities. Patriotism and volunteerism will also be strengthened through the utilisation of digital and other media platforms in building social cohesion and fostering greater unity to ensure peace and harmony.

Game Changer V: Revitalising the Healthcare System in Ensuring a Healthy and Productive Nation

The COVID-19 pandemic has proven that it is critical to have a robust healthcare sector and the need to embrace the whole-of-nation approach in ensuring better management of future outbreaks and health crises. Lessons learnt from managing the pandemic will be leveraged to revitalise healthcare services. Resources and responsibilities will be consolidated and healthcare services will be redesigned through collaboration between public and private sectors as well as CSOs. In addition, a more sustainable health financing model will be introduced and healthcare services will be digitalised to accelerate delivery.

Game Changer VI: Transforming the Approach in Eradicating Hardcore Poverty

In addressing hardcore poverty, all poor Malaysians irrespective of gender, ethnicity, socioeconomic status and location will be supported. Bold and radical initiatives on a need basis will be introduced to support the hardcore poor and poor among the B1. These initiatives include establishing dedicated poverty units at the Federal and district levels as well as integrating and centralising a database on poverty. The possibility of introducing a dedicated tax to finance poverty alleviation programmes will be explored. The implementation of these initiatives will ensure that hardcore poverty is eliminated by 2025 while all Malaysians enjoy a decent standard of living.

Game Changer VII: Multiplying Growth in Less Developed States especially Sabah and Sarawak to Reduce Development Gap

Priority will be given to Kedah, Kelantan, Perlis, Sabah, Sarawak and Terengganu by allocating at least 50% of the Total Basic Development Expenditure[2] (Basic DE). The development of these states will be driven by key growth nodes and hotspot areas as hubs for economic activities. Rural areas will be further developed by intensifying industrialisation and diversifying economic activities through smart and cluster farming. In addition, cross-border economic activities will be promoted to accelerate border development. A number of projects for infrastructure and connectivity improvement will be implemented. The implementation of these initiatives will accelerate growth in the less developed areas as well as ensure more balanced development and greater inclusion.

[2] Allocation for programmes and projects to achieve the targeted objectives and strategies in the Five-Year Malaysia Plans. Examples of Basic DE projects are construction of schools, hospitals, roads, industrial areas and poverty eradication programmes.

Theme 3: Advancing Sustainability

Game Changer VIII: Embracing the Circular Economy

Acknowledging the need to address the challenge of balancing socioeconomic development and environmental sustainability, the circular economy model will be embraced. The public and private sectors will be encouraged to adopt and integrate the SDGs and ESG principles in their decision-making. Apart from creating green job opportunities and ensuring resource security, the circular economy will reduce waste generation, pollution, GHG emissions and dependency on natural resources. To expedite the transition, an enabling ecosystem will be put in place, while more sharing economy models will be promoted. The use of recycled materials and recycling of production waste will be increased, while the responsibility of producers in managing their end-of-life products will be extended All these initiatives will expand the green economy and facilitate the attainment of a low-carbon future.

Game Changer IX: Accelerating Adoption of Integrated Water Resources Management

The Government recognises that there is a need for a comprehensive transformation of the water sector to ensure water security and sustainability. Ineffective management of water resources, inadequate understanding and lack of awareness have created environmental and social challenges which have impacted economic growth. The Twelfth Plan will lay the foundation for a comprehensive water transformation agenda by accelerating the adoption of IWRM. The whole-of-nation approach involving all stakeholders will be adopted to instil a sense of ownership and responsibility in protecting and conserving this precious resource. Governance of water resources will be strengthened to manage water resources effectively through revising existing laws and establishing an integrated centre for water data and R&D&C&I. Financial sustainability of water service providers will be improved to enhance efficient service delivery.

Policy Enabler 1: Developing Future Talent

Game Changer X: Improving TVET Ecosystem to Produce Future-Ready Talent

The availability of skilled technical workers is essential for the successful adoption of Industry 4.0. In this regard, it is imperative that gaps in the existing TVET ecosystem are reduced. To achieve this, the attractiveness and the quality of delivery and training of TVET will be enhanced through improvement in accreditation, recognition and certification. A ranking system for TVET institutions will be introduced whereby the allocation of funds will be based on a number of components including employability, wage levels of graduates, industrial engagement and the implementation of social initiatives in the rural areas. This will prepare TVET graduates to be future-ready talent.

Policy Enabler 2: Accelerating Technology Adoption and Innovation

Game Changer XI: Enhancing Digital Connectivity for Inclusive Development

The Government's decision to introduce telecommunication services as a public utility will enhance internet connectivity, enabling the *rakyat* to have equitable access to more affordable, reliable and quality broadband services. In narrowing the digital divide, the Government will also ensure that students and vulnerable groups have access to digital devices. The implementation of the *Pelan Jalinan Digital Negara* (JENDELA) will enhance digital connectivity and achieve full 4G coverage in populated areas, as well as enable 100% households' subscription to the internet. The establishment of Digital Nasional Berhad (DNB) will further accelerate the provision of 5G coverage for a better user experience.

Game Changer XII: Aligning Research and Development towards Commercialisation, Wealth Generation and Economic Growth

The commercialisation of research plays a significant role in enhancing knowledge transfer, economic growth, job creation and entrepreneurship. During the Twelfth Plan, 50% of all Government research funding will be focused on encouraging experimental development with high commercialisation potential. This will be coordinated by the newly established Research Management Unit (RMU), under the Economic Planning Unit of the Prime Minister's Department. The goal for Malaysia is to emulate the success of economies that have graduated from middle- to high-income. These countries have invested a significant percentage of their research funds on activities that can be commercialised.

Policy Enabler 3: Enhancing Connectivity and Transport Infrastructure

Game Changer XIII: Transforming the Logistics Ecosystem for Greater Efficiency

Logistics is an indispensable sector to the growth of the nation, thus efficient logistics services are crucial in ensuring the seamless movement of goods. However, fragmentation of the industry, low technology adoption, uncoordinated planning and implementation as well as weak governance have resulted in the mediocre quality of services and relatively higher costs. In the Twelfth Plan, the Government will transform logistics services by centralising the planning and development of logistics hubs, accelerating digital adoption and encouraging mergers and acquisitions among industry players. A single border agency for trade facilitation will be created, while a national regulatory framework for warehousing and the maritime economy will be formulated. These initiatives will create resilient and competitive logistics service providers, enhance international trade competitiveness as well as improve the governance structure.

Policy Enabler 4: Strengthening the Public Service

Game Changer XIV: Transforming the Public Service through the Whole-of-Government Approach

Integrity, accountability and transparency across the civil service will be enhanced. The structures and functions of ministries and agencies will be reviewed and streamlined to establish a flatter organisation, thus reducing bureaucracy, increasing transparency as well as optimising the use of resources. A public service act will be introduced to reinforce the principle of separation of powers between the executive, legislative and judicial branches. The Government will further enhance the performance-driven culture in the civil service as well as strengthen the mechanism for the selection of key leaders. The mechanism for recruitment of the professional and managerial officers will also be improved in attracting the best talent. In addition, accelerating digitalisation and implementation of the Malaysia Digital Economy Blueprint initiatives in the public sector will further enhance the public service delivery.

Conclusion

The Twelfth Plan focuses on the strategic priorities that will transform Malaysia. It is a critical compass for Malaysia during this time of unprecedented COVID-19 pandemic and the global economic uncertainty. It is within this context that the Plan strives to bring about sustainable economic recovery as well as provide better social protection to vulnerable segments of society.

The focus over the next five years will be on the key themes of resetting the economy, strengthening security, wellbeing and inclusivity as well as advancing sustainability. These themes will be supported by the policy enablers of talent, technology, transport infrastructure and public service delivery, consistent with the objectives of achieving prosperity, inclusivity and sustainability in line with WKB 2030 and the 2030 Agenda.

Chapter 1

Strengthening Macroeconomic Fundamentals



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1

Introduction

The Malaysian economy was on its targeted growth trajectory during the 2016-2019 period. Growth was driven by sustained domestic demand with the external sector expanding moderately against the backdrop of a challenging global environment. Household spending was supported by stable labour market conditions, low inflation and higher household income. The economy, however, was confronted with several issues including slow structural economic transition, limited trade gains, disruption in fiscal consolidation, socioeconomic inequalities and the adverse environmental impact in pursuing growth. The final year of Vision 2020 proved to be most challenging, due to the unprecedented COVID-19 pandemic, resulting in economic growth falling below the target set for the Eleventh Plan.

The Twelfth Plan is a medium- and long-term economic recovery plan to address the impact of the COVID-19 pandemic and to put the economy back to its long-term growth trajectory. The economy is expected to rebound to achieve stronger and more sustainable growth during the 2021-2025 period. Malaysia's economic resilience will be strengthened to better withstand current and future challenges in attaining the objectives of WKB 2030. Macroeconomic strategies will focus on enhancing productivity, promoting quality investment, accelerating structural economic transition, increasing participation in the global value chain (GVC) and ensuring long-term fiscal sustainability. Achieving greater regional balance will remain a priority to reduce disparity among states and green growth will be further emphasised in line with the 2030 Agenda. During the Twelfth Plan, the economy is expected to expand at a rate of 4.5% to 5.5% per annum, supported by strong domestic demand and a higher contribution from the external sector.

Performance of the Eleventh Malaysia Plan, 2016-2020

External Economic Environment

As an open economy, Malaysia's growth is influenced by the external economic environment. The global economy moderated at an annual rate of 3.4% between 2016 and 2019 amid a series of economic shocks. These include the inward-looking policies and normalisation of monetary policy among major economies, uncertainty over the outcomes of Brexit negotiations as well as volatile commodity prices. The economies of the five major member countries[1] of the Association of Southeast Asian Nations (ASEAN-5) grew by an average of 5.2% per annum. The United States (US) economy expanded by 2.3% supported by firm domestic demand and better labour market conditions. Meanwhile, the economy of the People's Republic of China (PRC) moderated to 6.6% per annum, due to trade tensions and efforts to rebalance the economy for a more domestic-driven growth.

The global economy experienced its first recession since the Global Financial Crisis 2008/2009 as it contracted by 3.3% in 2020, due to the COVID-19 pandemic. The pandemic has affected more than 200 countries with significant social impact, resulting in new behavioural norms. It has also severely interrupted economic activities and the global supply chain following lockdown measures undertaken in an attempt to halt the spread of the virus. Overall, the global economy grew by 2% per annum during the Eleventh Plan.

World trade increased by 0.7% per annum during the Eleventh Plan, lower than the global economic growth. This is mainly due to the heightened trade tensions among major economies that led to higher tariffs, protracted low crude oil prices and the global electronics downcycle as well as the COVID-19 pandemic in 2020. World inflation averaged at 3.2% per annum during the 2016-2020 period, partly as a result of prolonged low commodity prices.

Domestic Economy

The Malaysian economy registered a moderate average annual growth rate of 2.7% over the Eleventh Plan period as it was significantly weighed down by the impact of the COVID-19 pandemic. Growth was driven by improved productivity and sustained domestic demand with the external sector expanding moderately. Private consumption spearheaded by household spending supported by favourable labour market conditions, low inflation and cash assistance by the Government. On the supply side, growth was led by the services and manufacturing sectors. In addition, during the Eleventh Plan the share of compensation of employees (CE)[2] to gross domestic product (GDP) increased and the Malaysian Wellbeing Index (MyWI) improved. All states recorded positive growth, but with the GDP per capita gap widening compared to the national average. The fiscal deficit widened as the Government adopted an expansionary fiscal policy to cushion the impact of COVID-19 on the *rakyat*, businesses and economy.

Gross national income (GNI) per capita in current prices increased by 3% per annum from RM36,710 (US$9,399) in 2015 to RM42,503 (US$10,111) in 2020, as shown in *Exhibit 1-1*. Malaysia's gap to achieve a high-income status is 20.4%, based on the minimum threshold of a high-income economy set by the World Bank at US$12,696 for 2020. In terms of purchasing power parity[3], Malaysia's GNI per capita reached US$28,780 in 2019 as estimated by the World Bank. This puts Malaysia in the top 27th percentile among 190 countries.

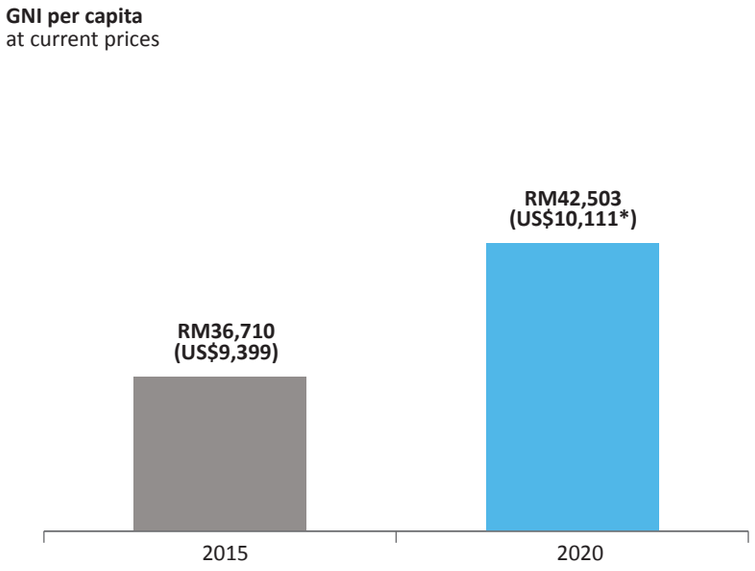
[1] Indonesia, Malaysia, the Philippines, Thailand and Vietnam.

[2] Total remuneration in cash or in kind, payable by an enterprise to an employee.

[3] Rates of currency conversion that equalise the purchasing power of different currencies between countries (World Bank).

Exhibit 1-1

Gross National Income Per Capita, 2015 and 2020



Note: *Average exchange rate at US$1=RM4.203 in 2020.
Source: Bank Negara Malaysia, Department of Statistics Malaysia and Economic Planning Unit

Performance of Multidimensional Goals

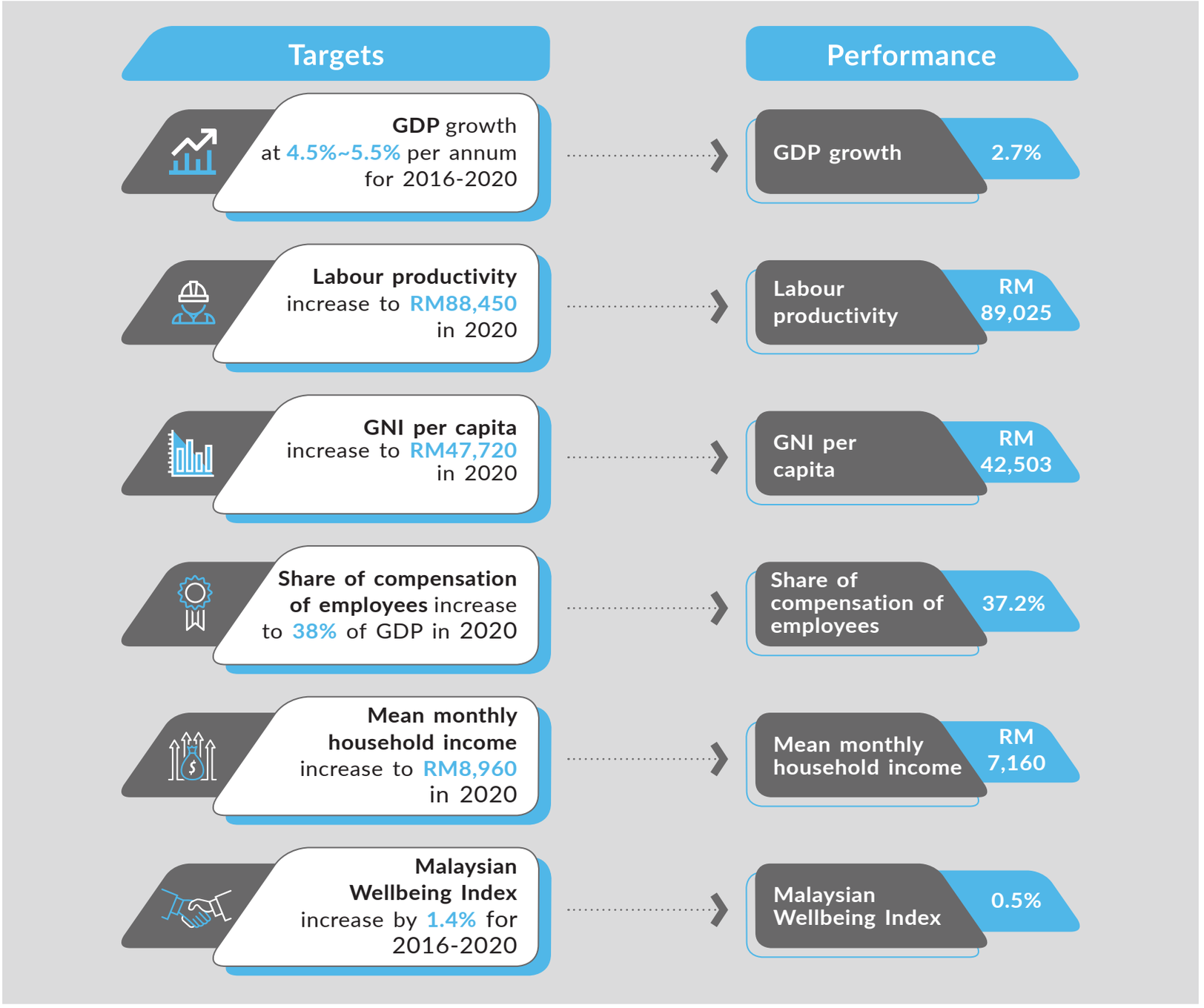
Six multidimensional goals were set during the Eleventh Plan encompassing quantitative and qualitative aspects of socioeconomic development, as shown in *Exhibit 1-2*. Out of the six goals, only one was achieved, which is labour productivity. Meanwhile, GDP growth, GNI per capita, share of CE to GDP, average monthly household income and the MyWI fell short of their targets. The GDP was on track to register growth within the target range of 4.9% per annum over the 2016-2019 period. However, the contraction in 2020 due to the COVID-19 pandemic affected the growth trajectory for the overall Eleventh Plan period. The pandemic also led to unfavourable labour market conditions that affected the earnings of workers and households, thus resulting in the lower share of CE to GDP, average monthly household income and MyWI.

Performance of Selected Macroeconomic Targets

Out of the 12 macroeconomic targets identified in the Eleventh Plan, only four were achieved, namely real public consumption, trade balance, current account of the balance of payments and inflation, as shown in *Exhibit 1-3*. Growth of real public consumption was higher, supported by government spending on emoluments as well as supplies and services. The trade balance and current account of the balance of payments surpassed their targets due to sluggish imports following lower domestic demand. Inflation was stable and lower than targeted due to dampened household spending and lower global crude oil prices. The remaining macroeconomic targets were not met due to lower domestic and external demand.

Exhibit 1-2

Eleventh Malaysia Plan: Performance of Multidimensional Goals



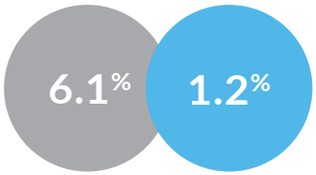
Source: Department of Statistics Malaysia and Economic Planning Unit

Exhibit 1-3

Eleventh Malaysia Plan: Performance of Selected Macroeconomic Targets

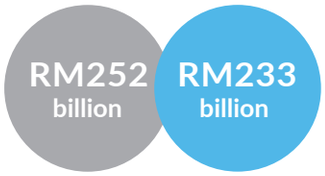
Consumption and Investment

Average Growth of Real Private Investment



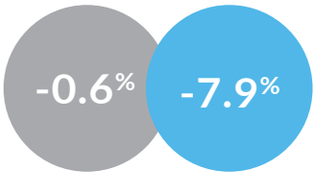
2016-2020

Average Private Investment in Current Prices



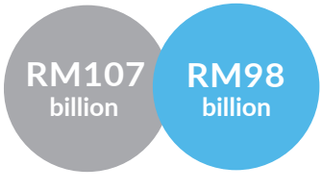
per year

Average Growth of Real Public Investment



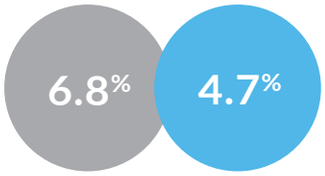
2016-2020

Average Public Investment in Current Prices



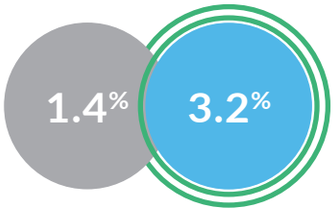
per year

Average Growth of Real Private Consumption



2016-2020

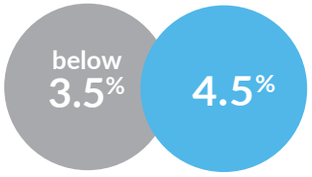
Average Growth of Real Public Consumption



2016-2020

Unemployment

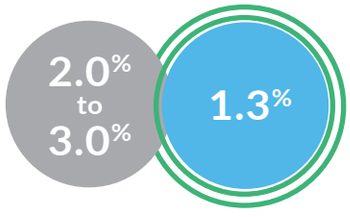
Unemployment Rate



2020

Inflation

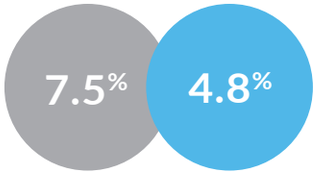
Average Annual Inflation Rate



2016-2020

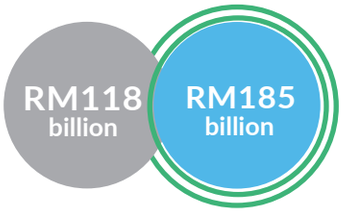
International Trade

Average Growth of Gross Exports



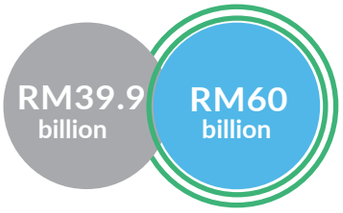
2016-2020

Trade Balance

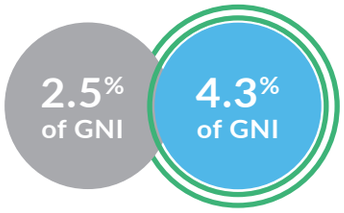


2020

Current Account of the Balance of Payments



2020



2020

Fiscal Balance

Percentage of Fiscal Balance to GDP



2020



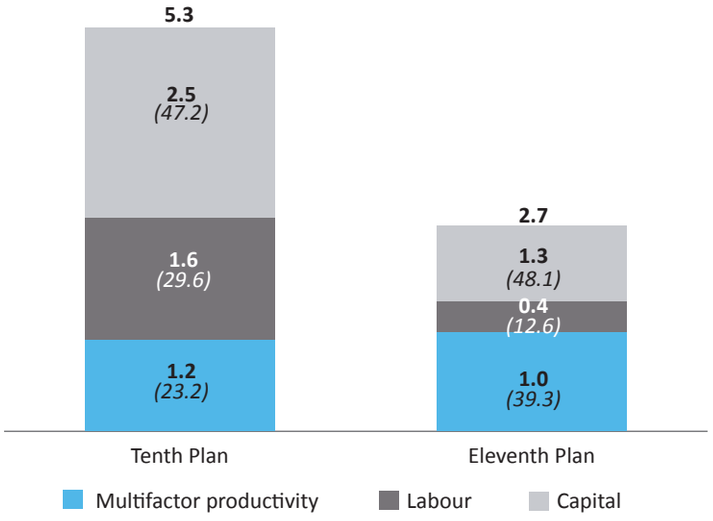
Productivity

During the Eleventh Plan, economic growth continued to be driven by capital and labour, as shown in *Exhibit 1-4*. The contribution of multifactor productivity (MFP) to real GDP growth improved, from 23.2% during the Tenth Plan to 39.3% in the Eleventh Plan, supported by measures to improve productivity. These included the review of regulatory policies and practices, benchmarking of best practices in reducing the cost of doing business as well as enhanced collaboration between the public and private sectors to boost competitiveness. Various initiatives were also implemented under the Malaysia Productivity Blueprint (MPB) to unlock the potential of productivity at the national, sectoral and enterprise levels.

Exhibit 1-4

Factors of Production, 2011-2020

Growth, % p.a.
Share to growth in brackets, %



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

Overall labour productivity grew at 1.1% per annum during the Eleventh Plan, from RM84,114 per worker in 2015 to RM89,025 in 2020, as shown in *Exhibit 1-5*. Productivity growth across all sectors was slower following the impact of the COVID-19 pandemic both in terms of value-added and employment. Growth was spearheaded by the manufacturing sector contributed by productivity enhancements across all subsectors. In the services sector, productivity improvements recorded in the information, communication and technology (ICT) services, transportation and storage as well as utilities subsectors. Productivity growth in the construction sector was supported by the increased adoption of technology and modern construction methods. The agriculture sector recorded marginal productivity growth as it was weighed down by the agricommodity subsector. Productivity growth in the mining and quarrying sector remained subdued following the continued decline in crude oil and condensate production since 2017.

Exhibit 1-5

Labour Productivity by Kind of Economic Activity, 2015-2020

Sector	RM '000 Per Worker, at Constant 2015 Prices		Average Annual Growth Rate, %	
	Actual		Eleventh Plan	
	2015	2020	Target	Actual
Agriculture	52.0	53.3	*0.2*	*0.5*
Mining and Quarrying	1,303.6	1,247.6	*4.2*	*-0.9*
Manufacturing	110.3	120.7	*3.9*	*1.8*
Construction	36.5	38.3	*4.3*	*1.0*
Services	79.1	84.3	*3.9*	*1.3*
Overall	**84.1**	**89.0**	***3.2***	***1.1***

Source: Department of Statistics Malaysia and Economic Planning Unit

Aggregate Demand

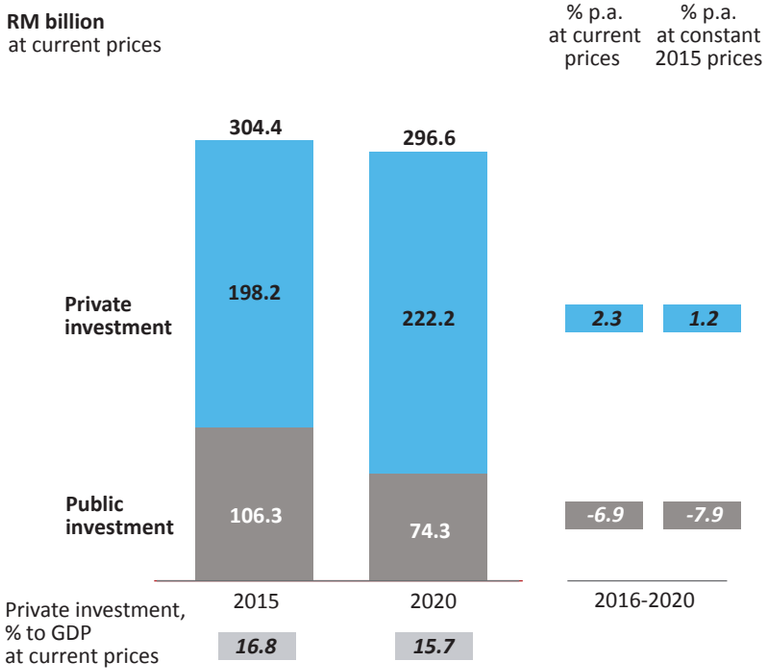
Private expenditure continued anchoring the expansion in domestic demand. *Private consumption* increased by 4.7% per annum during the Eleventh Plan, attributed to the accommodative monetary policy, favourable labour market conditions and stable wage growth. Despite being affected by the COVID-19 pandemic, private consumption remains resilient supported by the stimulus measures, such as the *Bantuan Prihatin Nasional*, loan moratorium and the Employees

Provident Fund (EPF) *i-Lestari* and *i-Sinar* withdrawal. These contributed to a higher share of private consumption to GDP from 54% in 2015 to 60.8% in 2020. *Private investment* increased by 1.2% per annum over the Eleventh Plan period although registering higher growth of 4.8% per annum during 2016-2019 period, as shown in *Exhibit 1-6*. Private investment registered a decline of 11.9% in 2020 on account of slower global economic growth and sluggish investor sentiment. Foreign direct investment (FDI) also declined from RM39.4 billion in 2015 to RM32.4 billion in 2019. The COVID-19 pandemic has further exacerbated the declining trend as total FDI fell to RM14.6 billion in 2020.

Public investment declined by 7.9% per annum during the Eleventh Plan. This was partly due to the postponement and reprioritisation of mega projects, including the East Coast Rail Link (ECRL). *Public consumption* grew by 3.2% per annum, supported by Government spending on emoluments as well as supplies and services.

Exhibit 1-6

Public and Private Investment, 2015-2020



Source: Department of Statistics Malaysia and Economic Planning Unit

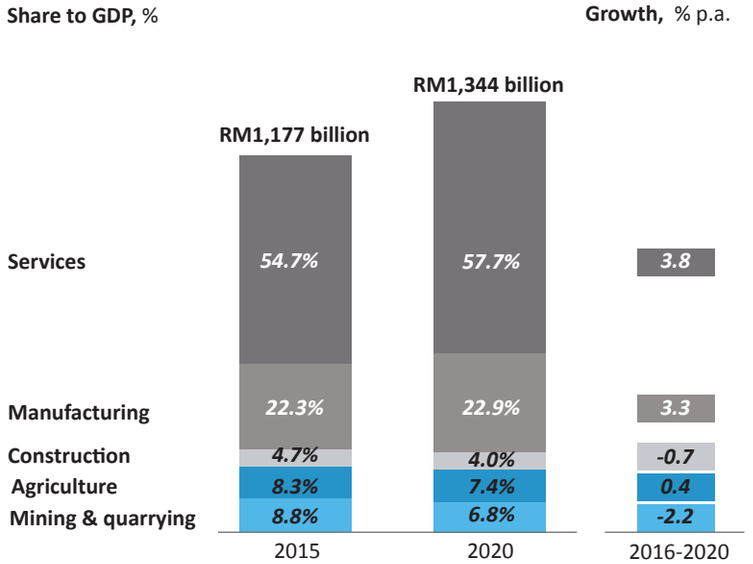
Sectoral Output

On the supply side, all sectors except mining and construction recorded positive growth with the services and manufacturing sectors continuing as the main impetus to economic growth during the Eleventh Plan, as shown in *Exhibit 1-7*. The mining sector declined following production disruptions. The implementation of the Movement Control Order (MCO) beginning March 2020 to curb the spread of the COVID-19 pandemic has adversely impacted the services sector, especially the tourism-related industries.

The *services sector* increased at an average annual rate of 3.8%. Growth was led by the transport, storage and communication as well as wholesale and retail trade subsectors, supported by sustained domestic consumption. The information and communication subsector expanded by 7.5% per annum, contributed by the strong performance of telecommunications, computer and information activities. In addition, eCommerce activities have also contributed to growth as more Malaysians turned to online platforms to purchase goods and services.

Exhibit 1-7

Gross Domestic Product by Kind of Economic Activity, 2015-2020



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia

The *manufacturing sector* increased by an average annual rate of 3.3%. Growth was driven by export-oriented industries, particularly electrical and electronics (E&E), which grew by 5.6% per annum, while petroleum, chemicals, rubber & plastic subsector by 2.8% per annum. In addition, the knowledge-intensive[4] industries increased by 3.3% per annum, among others supported by the increase in refined petroleum products, chemicals & chemical products and pharmaceutical products as well as electronic components & boards, communication equipment and consumer electronics products.

The growth of the *agriculture sector* increased marginally by 0.4% per annum. The agricommodity subsector declined by 2.3% per annum, mainly due to the lower production of oil palm that was severely impacted by the lower usage of fertilisers and adverse weather conditions, especially in 2019. The agrofood subsector grew by 3% per annum, mainly attributed to the increase in the production of livestock, vegetables and fruits, contributing 53.3% to the agriculture sector in 2020 compared with 46.8% in 2015.

The *mining sector* contracted by 2.2% per annum during the Eleventh Plan period. This was due to the lower output of crude oil and natural gas as a result of the planned and unplanned shutdown of oil and gas production facilities. In addition, Malaysia's commitment to the Organization of the Petroleum Exporting Countries (OPEC) and non-OPEC allies to cut production to stabilise global oil prices also contributed to the contraction of the sector.

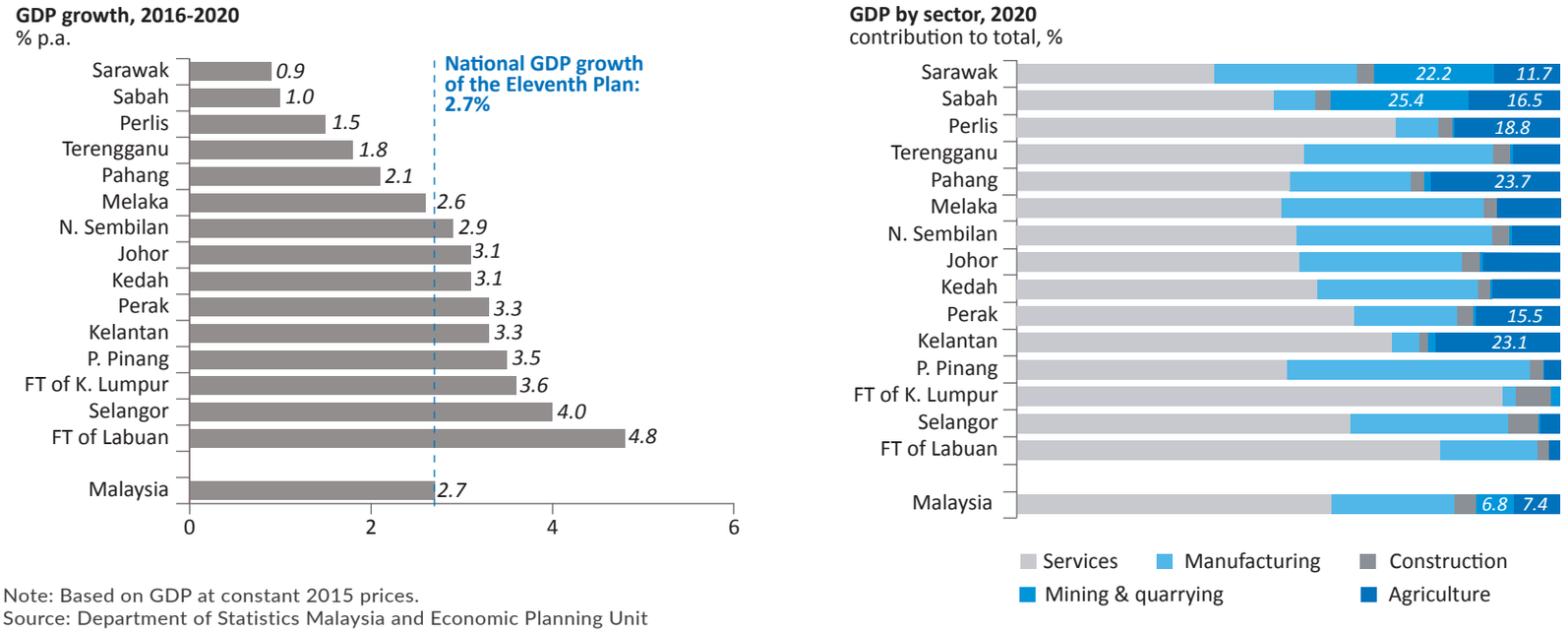
The *construction sector* contracted marginally by 0.7% per annum, mainly contributed by sluggish construction activities during the Eleventh Plan period. In addition, several major civil engineering projects were postponed and reviewed. Meanwhile, the residential and non-residential subsectors declined attributed to the large stock of unsold properties.

Gross Domestic Product by State

All states registered positive growth during the Eleventh Plan, with Selangor, the Federal Territory (FT) of Kuala Lumpur[5], Johor and Sarawak remaining as major contributors to the national economy in 2020, as shown in *Exhibit 1-8*. These states accounted for 59.4% of the national GDP, compared with 57.9% in 2015. The Federal Territories as well as seven states, namely Selangor, Pulau Pinang, Kelantan, Perak, Kedah, Johor and Negeri Sembilan recorded economic growth above the national average of 2.7% per annum. The growth in most of these states was predominantly led by the services and

Exhibit 1-8

Gross Domestic Product by State, 2016-2020



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

[4] Includes paper & paper products, printing & reproduction of recorded media, refined petroleum products, chemicals & chemical products, machinery & equipment, computer & peripheral equipment, electrical equipment, electronic components & boards, communication equipment and consumer electronics, manufacture of medical, precision & optical instruments, motor vehicle and transport equipment.

[5] Includes FT of Putrajaya.

manufacturing sectors. Most of the states which experienced growth below the national average were dependent on commodities. Sabah and Sarawak were particularly affected by the low prices of crude oil, palm oil and rubber.

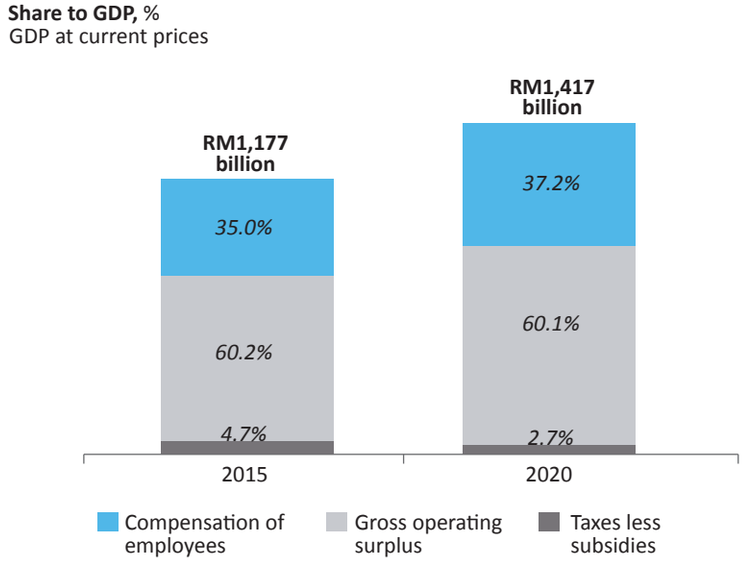
During the Eleventh Plan, each state continued to leverage its respective economic strengths to drive growth. The services sector continued to be the largest contributor across all states, particularly FT of Kuala Lumpur, FT of Labuan, Perlis, Kelantan, Perak and Selangor. The manufacturing sector is the second largest contributor for most of the states. The mining sector is an important contributor to the economies of Sabah and Sarawak, while the agriculture sector is significant in Pahang, Kelantan, Perlis, Sabah and Perak.

Gross Domestic Product Based on Income

Gross operating surplus[6] (GOS) is expected to remain the largest contributor to GDP, growing at 3.7% per annum during the Eleventh Plan, as shown in *Exhibit 1-9*. However, the share of GOS to GDP is expected to decrease marginally from 60.2% in 2015 to 60.1% in 2020 due to lower corporate earnings amid slower economic growth.

Exhibit 1-9

Gross Domestic Product Based on Income, 2015 and 2020



Source: Department of Statistics Malaysia and Economic Planning Unit

[6] Income of capital owners and mixed income.

Meanwhile, CE shows an increasing trend with its share to GDP expected to reach 37.2% in 2020, compared with 35% in 2015. CE is expected to grow by 5% per annum, mainly driven by the services and manufacturing sectors. This is due to the efforts undertaken in reforming the labour market and improving labour productivity as well as better wealth distribution. Consequently, mean monthly household income increased from RM6,958 in 2016 to RM7,901 in 2019.

International Trade and Balance of Payments

Malaysia as a highly open economy with trade accounting for 116.4%[7] of GDP continues to be ranked among the world's top 30 exporting nations[8]. The contribution of Malaysia's gross exports to world exports increased from 1.2% in 2015 to 1.3% in 2019. Exports to major trading partners, namely ASEAN, the PRC, Japan, the European Union (EU) and the US, represented 70% of total exports in 2020. During the Eleventh Plan, *total trade* remained resilient, expanding by 4% per annum, despite the challenging external environment. Among the key challenges were the escalation of trade tensions between major economies, the plunge in crude oil prices, the global technology downcycle and the COVID-19 pandemic in 2020.

Gross exports grew by 4.8% per annum, mainly supported by manufactured goods, which accounted for 86.4% of total exports in 2020. Exports of manufactured goods rose by 6.3% per annum driven by E&E, chemicals, optical and scientific equipment as well as rubber products. Greater use of semiconductors in the automotive, medical devices and consumer electronics industries continued to generate strong demand for E&E products. The share of the top 10 export destinations increased from 70.9% in 2015 to 71.7% in 2020 with PRC, Hong Kong, the US and Vietnam assuming a greater share.

Exports of agriculture goods rose by 1.3% per annum mainly supported by palm oil and palm-based products, which grew by 2.7% per annum. Exports of mining goods declined by 6.5% per annum, mainly due to lower export earnings from crude petroleum and liquefied natural gas (LNG). The shipment of crude petroleum contracted by 6.3% per annum, largely contributed by sluggish export prices. In addition, receipts from LNG declined by 8.4% per annum hampered by lower demand from Japan, which accounts for almost 50% of total exports of LNG.

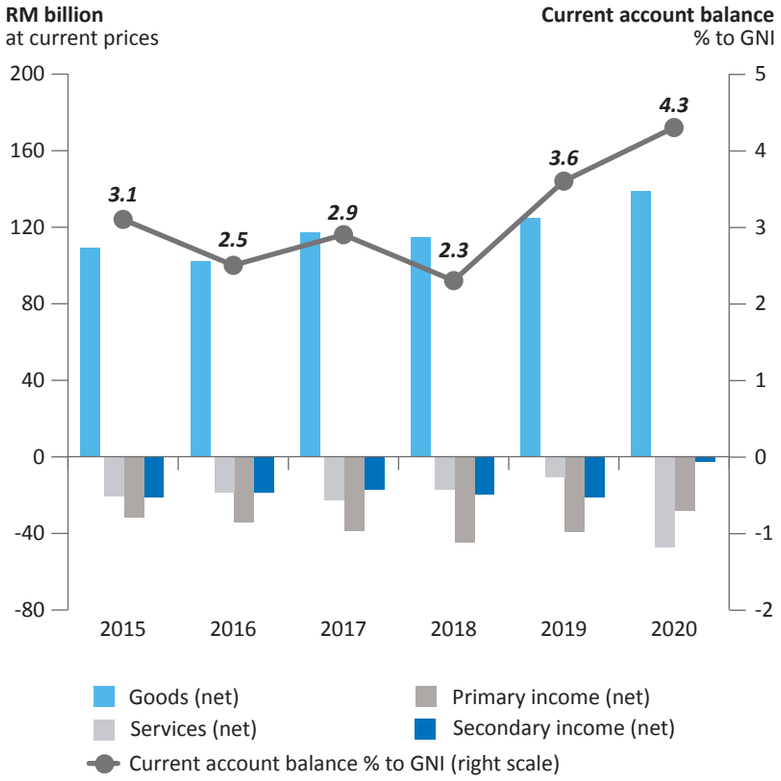
[7] Share of total trade of goods and services to GDP (2020).
[8] Trade Profiles report by World Trade Organisation (2020).

Gross imports expanded at an average annual rate of 3% driven by intermediate and consumption goods as well as re-exports. Imports of intermediate goods grew by 1.1% per annum in line with the sustained performance of manufactured exports. Imports of consumption goods expanded by 3.4% per annum attributed to continued demand from households. The expansion in imports for re-exports was contributed by higher re-exports of E&E and petroleum products. Imports of capital goods declined by 1.1% in tandem with slower domestic investment activities.

Overall, with the expansion in gross exports outpacing that of gross imports, the *trade surplus* widened to RM184.8 billion in 2020, compared with RM91.6 billion in 2015. Consequently, the *current account of the balance of payments* (BOP) recorded a higher surplus, from RM35.2 billion or 3.1% of GNI in 2015 to RM60 billion or 4.3% of GNI in 2020, as shown in *Exhibit 1-10*. This is attributed to the sizeable surplus in the goods account, which more than offset the continued deficit in the services and income accounts. The deficit in the services account reflected continued net payments for transportation, professional and technical services as well as intellectual property. The travel account recorded a deficit for the first time in 2020 since 1989, particularly due to the international travel restrictions following the COVID-19 pandemic. In addition, the income accounts remained in deficit following continued repatriation of profits and dividends by foreign investors as well as outward remittances by foreign workers in Malaysia.

Exhibit 1-10

Current Account of the Balance of Payments, 2015-2020



Note: Based on GDP at current prices.
Source: Department of Statistics Malaysia

Malaysia continued to record a resilient *international reserves* position. The level of international reserves remained sufficient to meet short-term external obligations, providing ample buffers against external vulnerabilities. As at 30 June 2021, international reserves stood at RM461.6 billion, equivalent to US$111.1 billion. This was sufficient to finance 8.2 months of retained imports and 1.1 times the short-term external debt.

The final year of the Eleventh Plan were more challenging for the external sector due to persistent economic risks from uncertainty as to the length and depth of the economic downturn following the COVID-19 pandemic, softening of commodity prices, trade protectionism and geopolitical issues. Nevertheless, Malaysia's well-diversified exports structure continued to support the overall current account of the BOP.

Federal Government Fiscal Position

The Federal Government was on the fiscal consolidation path early in the Eleventh Plan but a major change in policy priorities and a more expansionary fiscal stance towards the end of the period affected the fiscal position. The *fiscal deficit* as a percentage of GDP reduced from 3.2% in 2015 to 2.9% in 2017. This was attributed to various initiatives undertaken, such as the introduction of the Goods and Services Tax (GST), enhancement in tax administration and compliance, rationalisation and optimisation of expenditure, strengthening of fiscal institutions and improvement in budget management.

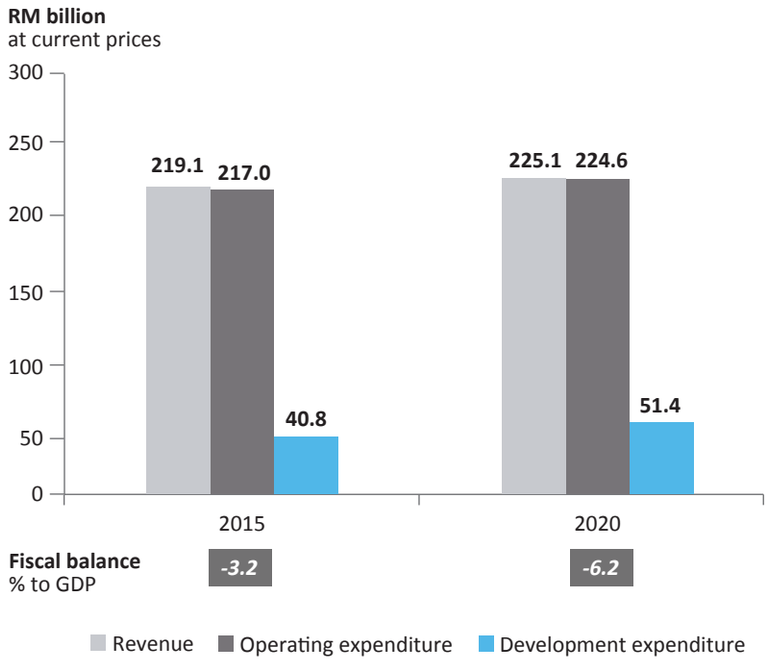
A major change in policy priorities in 2018, particularly the replacement of the GST with the Sales Tax and Service Tax (SST), led to a higher fiscal deficit at 3.7% of GDP in 2018. Fiscal expansionary measures were undertaken since 2020 to cushion the impact of the COVID-19 pandemic through four economic stimulus packages[9], worth RM305 billion, which included direct fiscal injection of RM55 billion. These packages were introduced to mitigate the economic impact of

[9] *Prihatin Rakyat* Economic Stimulus Package (PRIHATIN), Additional PRIHATIN SME Economic Stimulus Package (PRIHATIN SME+), National Economic Recovery Plan (PENJANA), PRIHATIN Supplementary Initiative Package (KITA PRIHATIN).

the pandemic, ensure business continuity and safeguard the wellbeing of the *rakyat* following the movement control measures to contain the COVID-19 outbreak. The increase in expenditure, as well as the decline in revenue following lower GDP growth and the fall in crude oil prices, resulted in a higher deficit of 6.2% of GDP in 2020, as shown in *Exhibit 1-11*.

Exhibit 1-11

Federal Government Fiscal Position, 2015 and 2020



Note: Based on GDP at current prices.
Source: Ministry of Finance

The Temporary Measures for Government Financing (Coronavirus Disease 2019 (COVID-19)) Act 2020 was introduced as a short-term measure to provide flexibility in financing the stimulus packages and economic recovery plan as well as to institutionalise its implementation mechanism. Under this Act, the statutory outstanding debt limit was temporarily raised to 60% to GDP until the end of 2022. In addition, several measures were undertaken to improve debt management, including the establishment of the Debt Management Committee in 2019. Overall, as at end-December 2020, the *Federal Government debt* stood at 62.1%[10] to GDP compared with 53.6% to GDP in 2015.

Fiscal policy continues to be expansionary at the beginning of the Twelfth Plan in addressing the health and economic crises. As at June 2021, four additional economic stimulus packages[11] have been introduced amounting to RM225 billion including a direct fiscal injection of RM25 billion. These packages aimed to protect the welfare of the *rakyat*, support businesses and strengthen the economy as well as accelerate the implementation of the vaccination programme to contain and break the chain of COVID-19 infection.

Inflation and the Labour Market

Inflation recorded a moderate average annual rate of 1.3% over the Eleventh Plan period. Inflation peaked at 2.9% per annum during the 2016-2017 period following measures to boost household spending, such as the temporary reduction in EPF contributions and salary increment for civil servants as well as higher commodity prices. Inflation grew slower at 0.8% per annum during the 2018-2019 period on account of the reintroduction of the SST at a lower rate than the GST, the fixing of retail fuel prices and the fall in global crude oil prices. Limited household spending following the implementation of the MCO as well as the fall in global crude oil prices, resulted in a negative inflation of 1.2% in 2020.

Malaysia continued to record full employment in the first four years of the Plan with the *unemployment* rate at 3.3% in 2019. This was attributed to the steady economic growth and improvements in the labour market, following rising job creation and expansion in the labour force. During the 2016-2019 period, about one million jobs were created, mainly in the services and manufacturing sectors. The COVID-19 pandemic significantly affected the labour market given the disruption to business activity and sizeable retrenchment by the corporate sector. As a result, the economy recorded a higher unemployment rate at 4.5% in 2020.

[10] In terms of statutory limit applied to Malaysian Government Securities, Malaysian Government Investment Issues and Malaysia Islamic Treasury Bills, debt-to GDP ratio stood at 57.9% as at end-December 2020.

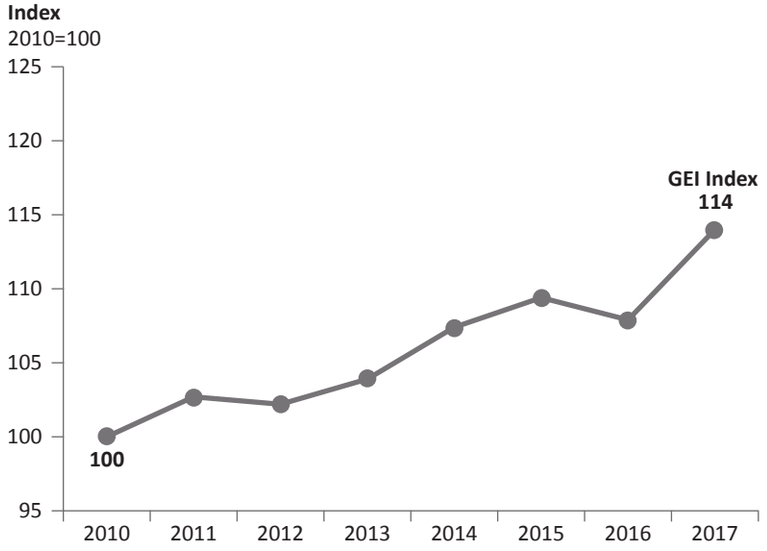
[11] *Perlindungan Ekonomi dan Rakyat* Malaysia (PERMAI) Assistance Package, Strategic Programme to Empower the People and Economy (PEMERKASA), Supplementary Strategic Programme to Empower the People and Economy (PEMERKASA+) and *Perlindungan Rakyat dan Pemulihan Ekonomi* (PEMULIH) Package.

Green Economy Indicators

The Green Economy Indicators (GEI), which were introduced in 2018, is a complementary tool to allow a systematic assessment of the impact of development on the environment. The GEI consists of 79 indicators, including carbon emission, energy intensity, share of renewable energy, forest area, aquaculture production and usage of chemical fertilisers. The GEI Index increased by 1.9% per annum from the baseline in 2010 to 114 points in 2017, as shown in *Exhibit 1-12*. In terms of performance, two out of five components recorded faster improvement, namely the policy response and economic opportunities as well as economic, demographic and social context for sustainable development.

Exhibit 1-12

Green Economy Indicators, 2010-2017



Component	Index		% p.a.	
	2015	2017	2016-2017	2011-2017
Index of Green Economy Indicators	**109.4**	**114.0**	***2.1***	***1.9***
Policy responses and economic opportunities	**112.3**	**121.8**	***4.2***	***2.9***
Economic, demographic and social context for sustainable development	**115.2**	**120.2**	***2.2***	***2.7***
The environmental dimension of quality of life	**106.2**	**115.1**	***4.1***	***2.0***
The natural asset base	**107.2**	**108.2**	***0.5***	***1.1***
The environmental and resource productivity	**106.3**	**104.7**	***-0.8***	***0.7***

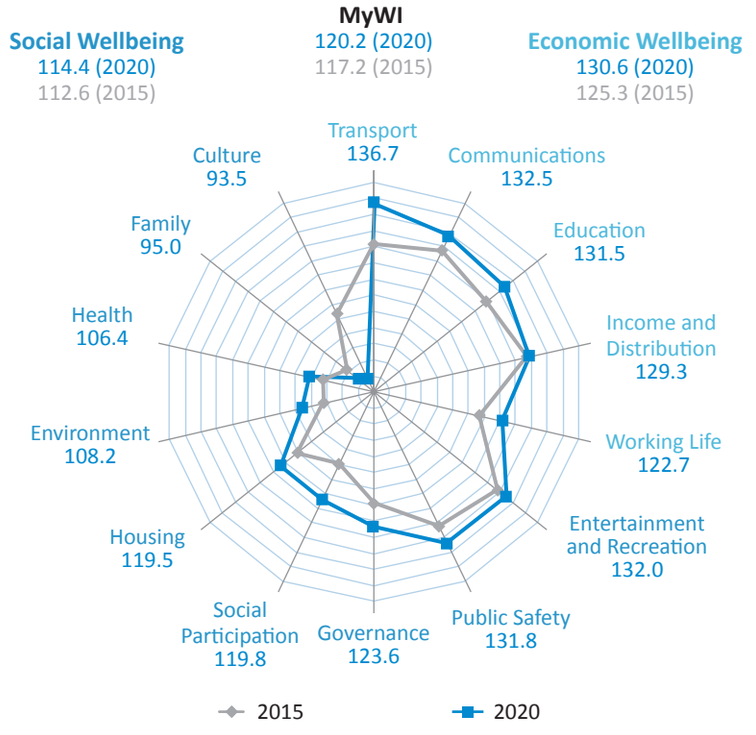
Source: Department of Statistics Malaysia and Economic Planning Unit

Malaysian Wellbeing Index

The MyWI grew by 0.5% per annum, from 117.2 points in 2015 to 120.2 points in 2020, driven by both economic and social wellbeing subcomposite indices, as shown in *Exhibit 1-13*. Based on the economic wellbeing subcomposite index, Malaysians benefitted from upgraded transportation infrastructure, improved working life, better quality of education and enhanced communications. Likewise, the increase in social wellbeing subcomposite index reflected higher social participation as well as improved environment and governance. Nevertheless, family and health subcomponents recorded among the least improvements. Family and health issues that need to be addressed include divorce rates as well as non-communicable disease cases.

Exhibit 1-13

Malaysian Wellbeing Index, 2015 and 2020



Source: Department of Statistics Malaysia and Economic Planning Unit

Issues and Challenges

Malaysia continues to strengthen economic resilience through the implementation of various measures over the last five years. Nevertheless, several key issues remain including low productivity among micro, small and medium enterprises (MSMEs), low quality of investment, slow structural economic transition, wide development gap between states, low share of CE, limited gains from GVC participation, disruption of the medium-term fiscal consolidation and adverse impact on the environment from unsustainable development. These challenges can significantly affect the nation's economic performance. Therefore, macroeconomic strategies under the Twelfth Plan will continue to focus on ensuring sustainable economic growth.

Issues and Challenges

- Low Productivity among Micro, Small and Medium Enterprises
- Low Quality of Investment
- Slow Structural Economic Transition
- Widening Development Gap between States
- Low Share of Compensation of Employees
- Limited Gains from Global Value Chain Participation
- Disruption of the Medium-Term Fiscal Consolidation
- Adverse Impact of Economic Growth on Environment

Low Productivity among Micro, Small and Medium Enterprises

The productivity level of MSMEs remains low, despite various efforts undertaken to boost productivity. MSMEs were three times less productive than large firms, resulting in a wider productivity gap during the Eleventh Plan. The lack of technology adoption and limited diffusion of technological innovation by MSMEs contributed to low productivity. In addition, MSMEs were highly dependent on low-skilled workers. Given the large presence of MSMEs in the economy, accounting for 97.2% of total establishments as at December 2020, enhancing the productivity performance of MSMEs will contribute greatly to increase national productivity.

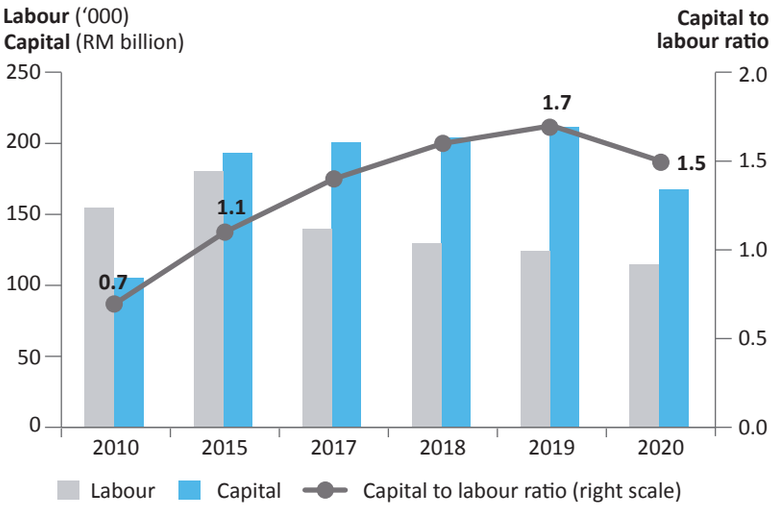
Low Quality of Investment

Based on the approved investment data, Malaysia is shifting from labour-intensive to more capital-intensive industries, with the ratio of capital expenditure to labour increasing from 0.7:1 in 2010 to 1.5:1 in 2020, as shown in *Exhibit 1-14*. However, investment was largely on physical structure accounting for 59.5% of total investment, while investment in ICT equipment and other machinery and equipment was at 20.3%. This reflects the low adoption of technology and automation among firms to harness the full potential of emerging technology, impacting the productivity and efficiency of firms.

Exhibit 1-14

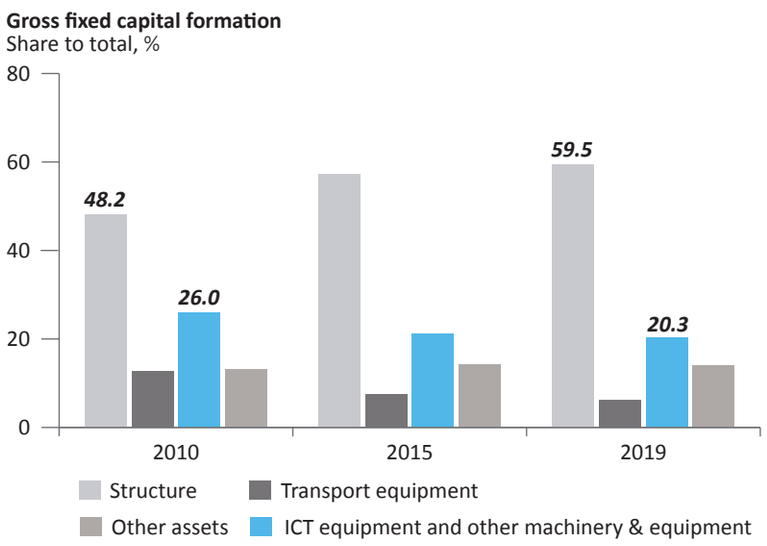
Quality of Investment, 2010-2020

Approved Investment, 2010-2020



Source: Economic Planning Unit and Malaysian Investment Development Authority

Gross Fixed Capital Formation by Type of Assets, 2010-2019



Note: Based on GDP at current prices.

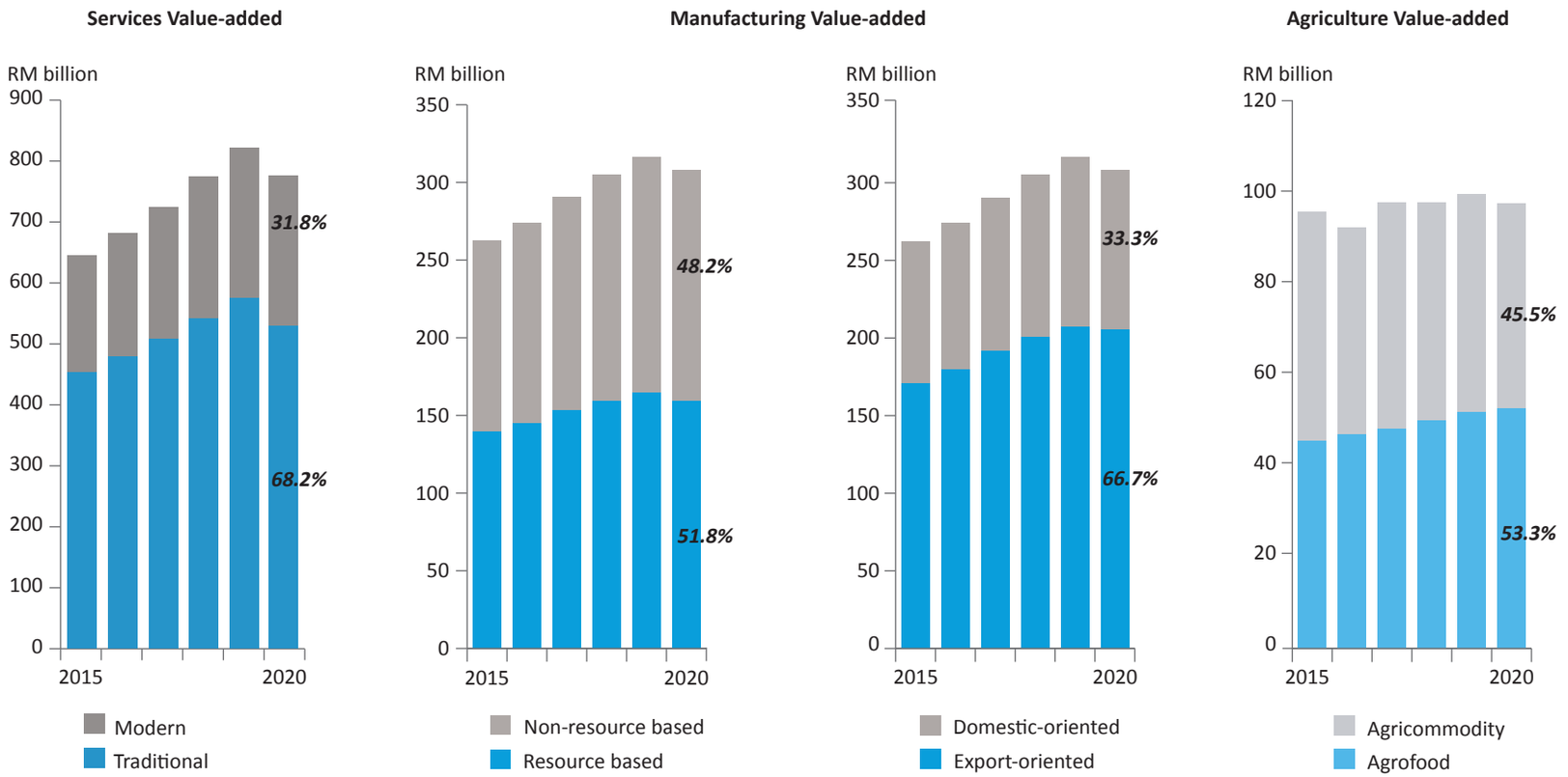
Source: Department of Statistics Malaysia

Slow Structural Economic Transition

As Malaysia progresses beyond 2020, it is imperative to move further up the value chain and diversify sources of growth by developing new and complex products in the services and manufacturing sectors to be competitive in the global market. However, most industries in Malaysia remain at the lower end of the production value chain. These industries are concentrated in labour-intensive economic activities with low technology content, as shown in *Exhibit 1-15*.

Exhibit 1-15

Slow Structural Economic Transition within Sectors, 2015-2020



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

Malaysian firms still have some way to go to close the labour productivity gap with firms in regional comparators in East Asia and aspirational comparators of the Organisation for Economic Co-operation and Development (OECD) economies, particularly in the manufacturing and services sectors. Large manufacturers are globally more competitive in terms of multifactor productivity, but the small and medium sized manufacturers are well behind regional comparators. Most services firms are sub-optimally small and the firms with relatively high labour productivity employ too few workers. Workforce skills and labour issues are often cited as the main obstacles to invest in the manufacturing and services sectors.

The agriculture sector lacks high technology adoption. Despite the implementation of various strategies to increase agrofood production in achieving self-sufficiency, the subsector's share of total agriculture at 53.3% in 2020, remains below the 60% target. The agriculture sector is heavily dependent on palm oil despite initiatives to diversify the production of crops. The services sector is driven by the expansion of traditional services[12] subsector, while the modern services[13] subsector remains stagnant. Similarly, MSMEs in the manufacturing sector focuses more on product assembly and packaging. In addition, the manufacturing sector lags behind advanced countries in terms of capacity and capability to develop local technology.

Widening Development Gap between States

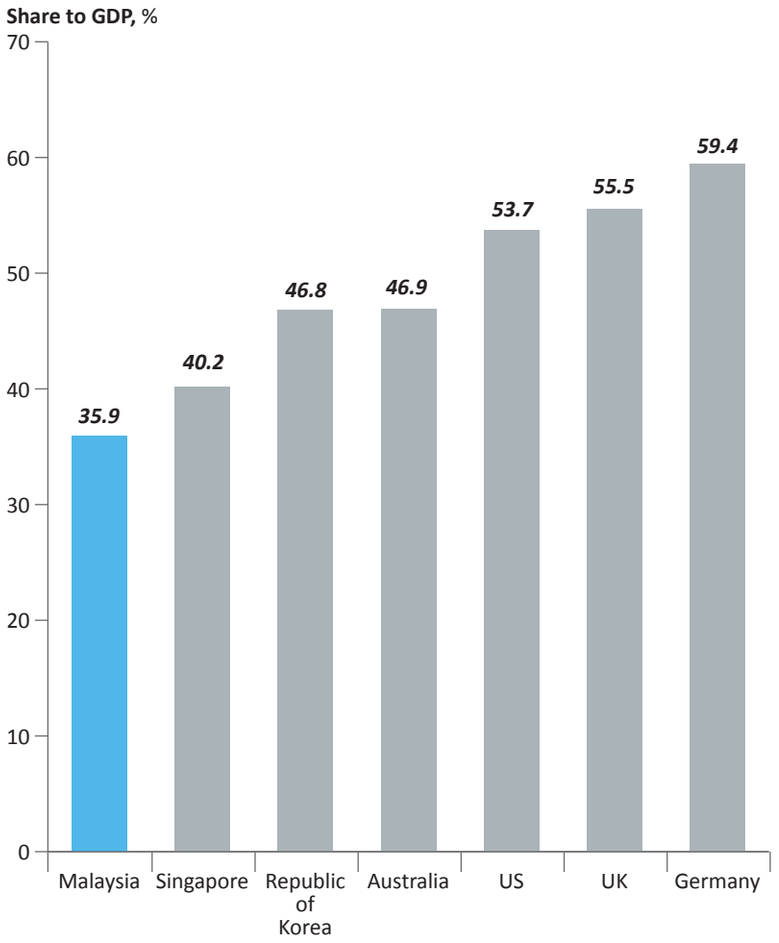
The national GDP per capita increased by 2.8% per annum during the Eleventh Plan, however it is unequally distributed among states. The Federal Territories and five states recorded GDP per capita above the national average of RM43,378 in 2020, with FT of Kuala Lumpur registering the highest at RM120,600. Meanwhile, Kelantan, Sabah, Kedah and Perlis registered low GDP per capita due to the excessive reliance on commodity-based sectors. Kelantan recorded the lowest GDP per capita amounting to RM14,083 with a gap of 67.5% below the national average. Wide regional disparity continues to prevail with Selangor and FT of Kuala Lumpur contributing 40.4% to the national GDP. The Central region recorded the highest GDP per capita of RM62,886 in 2020, while the Sabah region is the lowest at RM22,858 with a gap of 63.7% to the Central region.

Low Share of Compensation of Employees

Higher CE is crucial in providing a decent standard of living to all Malaysians. However, the contribution of CE to GDP is still low compared with most of the high-income countries, such as the US, Australia, Republic of Korea (ROK) and Singapore, as shown in *Exhibit 1-16*. The lower CE was a result of continued reliance on low-skilled workers, which suppressed wages and salaries. The structure of the economy remained at the lower end of the value chain, limiting its ability to create skilled and high-paying jobs. This was reflected by the low composition of skilled jobs, averaging 27.6% during the 2016-2020 period. In addition, the income received by employees did not correspond with the value of output produced, which restricted the growth of CE.

Exhibit 1-16

Compensation of Employees by Country Comparison, 2019



Source: Department of Statistics Malaysia and Organisation for Economic Co-operation and Development (OECD)

[12] Consists of electricity and gas, water, sewerage and waste management, wholesale trade, retail trade, motor vehicles, food and beverage, accommodation, transportation and storage, other services as well as government services subsectors.

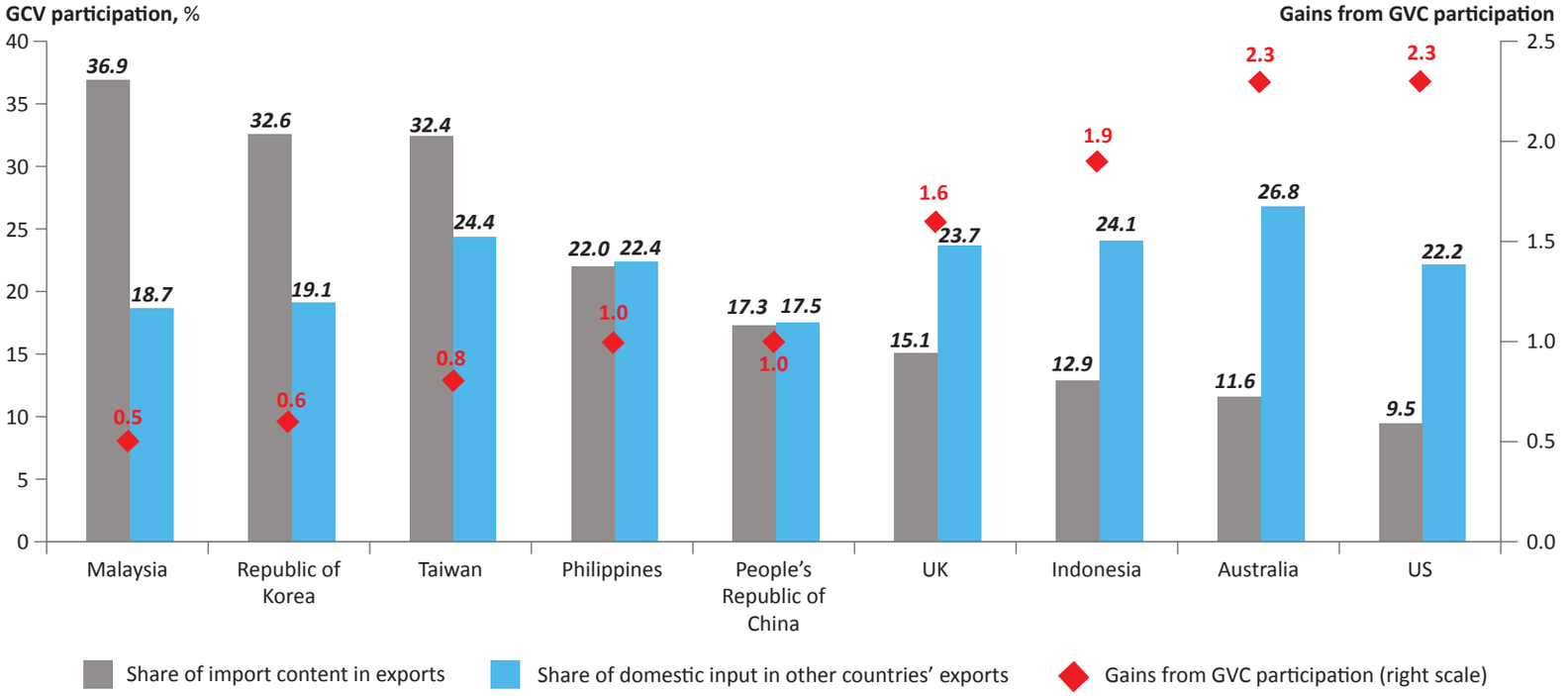
[13] Consists of information & communication, finance & insurance, business services, private health services and private education services subsectors.

Limited Gains from Global Value Chain Participation

Malaysia is deeply integrated in the GVCs with exports having sizeable imported inputs. Malaysia's use of imported inputs to produce goods for exports at 36.9%[14], is among the highest in the region compared to other countries such as Taiwan, the Philippines, Indonesia and ROK. However, Malaysian products used in other economies' exports was relatively low at 18.7%[15]. This indicated that Malaysia's gains from GVCs participation were limited, as shown in *Exhibit 1-17*. It is therefore important for Malaysia to shift towards higher value-added activities to be more competitive in the GVCs, while increasing locally produced inputs to reduce import content.

Exhibit 1-17

Gains from Global Value Chain Participation, 2015



Note: Gains from GVC participation refers to the share of domestic input in other countries' exports divided by the share of import content in exports.
Source: OECD-WTO: Statistics on Trade in Value Added database, 2015

[14] Measured as backward linkage, which is the share of imported inputs to produce goods for exports.

[15] Measured as forward linkage, which is the share of Malaysian products used as inputs in other economies' exports.

Disruption of the Medium-Term Fiscal Consolidation

The medium-term fiscal consolidation was disrupted to allow the Government to support the economic recovery and preserve the growth potential. The biggest challenge is to sustain pragmatic fiscal management and return to the fiscal consolidation path, while continuing to support growth. Long-standing fiscal issues need to be addressed, particularly the narrow revenue base, tax leakages and untargeted provision of tax incentives, rising retirement charges, increasing healthcare and education outlays as well as the lack of a comprehensive public expenditure review. The level of debt and liabilities also remain elevated following the need to fund the stimulus packages in line with the Government's commitment to protect the economy and promote recovery.

Adverse Impact of Economic Growth on Environment

Malaysia is fortunate to be endowed with abundant natural resources to support the economic growth. However, the rapid economic expansion has affected the environment in some cases. There was also a significant economic cost from the impact of climate change that was not fully incorporated into the cost of socioeconomic development. This is further exacerbated by the lack of a systematic tool to assess the holistic impact of development on the environment.

Way Forward: Twelfth Malaysia Plan, 2021–2025

Macroeconomic Prospects

The Twelfth Plan marks the first half of the WKB 2030, which aims to achieve a decent standard of living for all Malaysians. In tandem with the objectives to achieve balanced development and a people-centric economy, greater efforts will be undertaken to achieve the multidimensional goals of the Twelfth Plan. These goals encompass macroeconomic targets as well as socioeconomic goals to balance economic growth, equitable income distribution and wellbeing of the *rakyat*. The Twelfth Plan is also part of the final phase under the 6R approach implemented to protect the *rakyat* and businesses as well as restructure the economy affected by the COVID-19 pandemic.

External Economic Environment

As the global economy recovers from the aftermath of the COVID-19 pandemic, world economic growth is projected to grow by 4.1% per annum during the Twelfth Plan, as shown in *Exhibit 1-18*. The pace of recovery will depend on the progress of vaccination rollout and the effectiveness of economic stimulus packages implemented throughout the world. Global growth is to be driven by the emerging markets and developing countries, as it is expected to grow by 5.1% compared to advanced economies' growth of 2.7%. The economy of PRC is projected to expand slower due to structural factors, including an ageing population and slower productivity expansion. Nevertheless, PRC is still expected to be the main driver of global growth. Growth in advanced economies will be led by the US, arising from greater business fixed investment as well as research and development spending.

Exhibit 1-18

World Economic Outlook, 2016-2025

Item	Growth, % p.a.		Average Annual Growth Rate, %	
	Actual		Eleventh Plan	Twelfth Plan[2]
	2016	2020		
World Output	***3.3***	***-3.3***	***2.0***	***4.1***
Advanced Economies	*1.8*	*-4.7*	*0.7*	*2.7*
Emerging Market and Developing Economies	*4.5*	*-2.2*	*3.0*	*5.1*
World Trade	***2.2***	***-8.5***	***0.7***	***5.3***
Imports				
Advanced Economies	*2.6*	*-9.1*	*0.6*	*5.0*
Emerging Market and Developing Economies	*1.7*	*-8.6*	*0.7*	*6.2*
Exports				
Advanced Economies	*2.0*	*-9.5*	*0.3*	*4.9*
Emerging Market and Developing Economies	*2.7*	*-5.7*	*1.5*	*5.5*
Commodity Prices				
Nonfuel (average based on world commodity import weights)	*-0.4*	*6.7*	*2.9*	*2.6*
Crude Oil (US$ per barrel)[1]	42.8	41.3	53.3	53.6
Growth (%)	*-15.7*	*-32.7*	*-4.1*	*4.2*
Consumer Prices				
World	***2.7***	***3.2***	***3.2***	***3.2***
Advanced Economies	*0.7*	*0.7*	*1.3*	*1.8*
Emerging Market and Developing Economies	*4.3*	*5.1*	*4.8*	*4.2*

Note: [1] Average of UK Brent, Dubai Fateh and West Texas Intermediate crude oil prices.
[2] Estimate.
Source: International Monetary Fund, World Economic Outlook (April 2021)

World trade is also expected to recover and grow stronger at 5.3% per annum, mainly supported by stronger trade performance by emerging markets and developing economies. World inflation is expected to be moderate at 3.2% per annum following the expected prolongation of low commodity prices. Potential downside risks to global economic growth include lingering impacts from the COVID-19 pandemic, protracted trade tensions as well as geopolitical uncertainties.

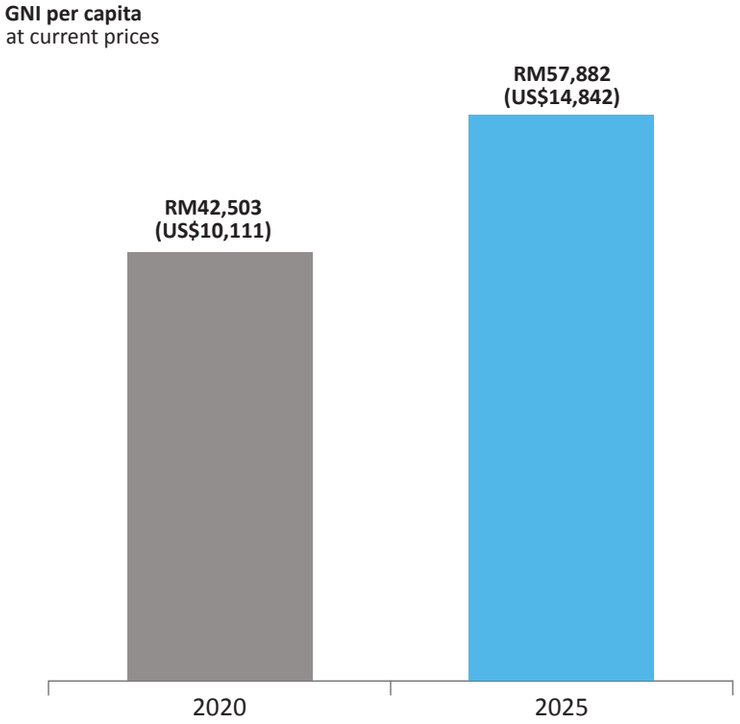
Domestic Economy

Against the backdrop of the challenging economic environment, including expectation of a prolonged and uncontainable COVID-19 pandemic, the Malaysian economy is expected to recover in line with the measures to reopen the economic sectors. During the Twelfth Plan, potential output is expected to expand between 4% and 5%. Private sector activity will rebound and remain the anchor of growth supported by accommodative monetary and fiscal policies. Labour market conditions are expected to improve with full employment in the Twelfth Plan, while inflation is projected to be stable.

During the Twelfth Plan, the GDP is expected to grow between 4.5% and 5.5% per annum led by higher labour productivity growth, resulting in a 6.4% per annum rise in GNI per capita, from RM42,503 (US$10,111) in 2020 to RM57,882 (US$14,842) in 2025, as shown in *Exhibit 1-19*. Salaries and wages are also expected to rise, resulting in a more equitable distribution of income between capital owners and employees as well as contributing to higher household income. The overall wellbeing of the *rakyat* is expected to improve, supported by both economic and social progress as well as balanced and inclusive regional development.

Exhibit 1-19

Gross National Income Per Capita, 2020 and 2025



Source: Department of Statistics Malaysia and Economic Planning Unit

Twelfth Malaysia Plan: Selected Macroeconomic Targets

Consumption and Investment

Average Growth of Real Private Investment (2021-2025)
3.8%

Average Private Investment in Current Prices (per year)
RM258 billion

Average Growth of Real Public Investment (2021-2025)
2.6%

Average Public Investment in Current Prices (per year)
RM80 billion

Average Growth of Real Private Consumption (2021-2025)
5.8%

Average Growth of Real Public Consumption (2021-2025)
3.7%

International Trade

Average Growth of Gross Exports (2021-2025)
5.0%

Trade Balance (2025)
RM191 billion

Current Account of the Balance of Payments (2025)
RM44 billion
2.2% of GNI

Unemployment

Unemployment Rate (2025)
4.0%

Inflation

Average Annual Inflation Rate (2021-2025)
2.7%

Fiscal Balance

Percentage of Fiscal Balance to GDP (2025)
-3.5% to -3.0%

Target

Macroeconomic Strategies to Restore Growth and Strengthen Economic Fundamentals

The macroeconomic policies for the Twelfth Plan will focus on restoring the economic growth and strengthening the economic fundamentals. Emphasis will be given to ensure a conducive and competitive economic environment towards achieving greater economic resilience. Eight strategies will be implemented to restore growth and strengthen economic fundamentals, as shown in *Exhibit 1-20*.

Exhibit 1-20

Macroeconomic Strategies and Multidimensional Goals, 2021-2025

Multidimensional Goals

- **4.5% to 5.5%** GDP growth per annum
- **3.6%** labour productivity growth per annum
- **RM10,065** average monthly household income by 2025
- **45%** reduction in GHG emissions intensity to GDP by 2030*
- **RM57,882** GNI per capita by 2025
- **40%** compensation of employees of GDP by 2025
- **1 : 2.5** GDP per capita gap between Central and Sabah regions by 2025
- **1.2%** Malaysian Wellbeing Index growth per annum

Note: *Based on emissions intensity in 2005.

Macroeconomic Strategies

- Enhancing Productivity
- Accelerating Structural Economic Transition
- Increasing Share of Compensation of Employees
- Strengthening Fiscal Governance
- Promoting Quality Investment
- Reducing Regional Development Disparity
- Leveraging Participation in the Global Value Chain
- Advancing Green Growth

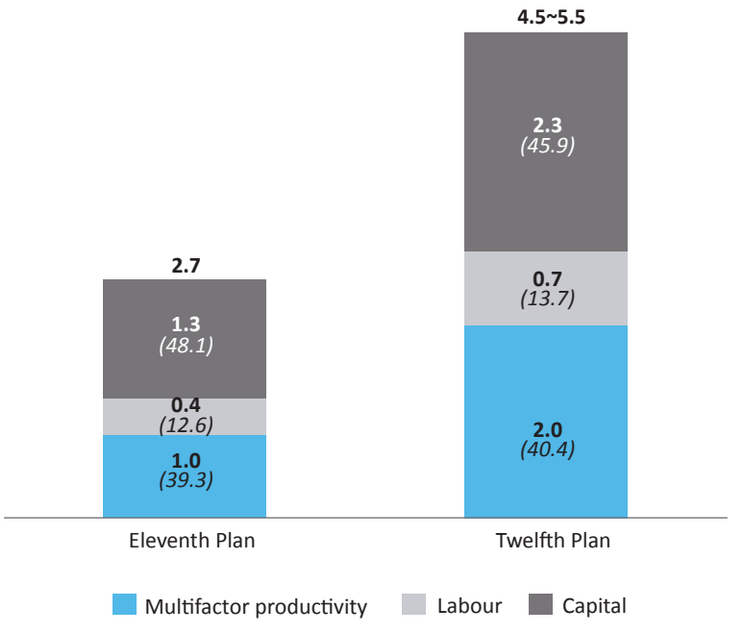
Enhancing Productivity to Sustain Quality Growth

Efforts to accelerate productivity growth will continue under the Twelfth Plan, with MFP expected to contribute 40.4% to GDP growth, as shown in *Exhibit 1-21*. The improved GDP growth will contribute to higher labour productivity growth of 3.6% per annum, as shown in *Exhibit 1-22*. The strong collaboration between the Government, private sector and academia established under the MPB will be leveraged to further improve productivity at the national, sectoral and enterprise levels. At the national level, the planning mechanism will be strengthened, the successful initiatives under the Productivity Nexus will be scaled up and the productivity gap between the large firms and MSMEs will be narrowed. In addition, various strategies at the sectoral level will be implemented to strengthen the ecosystem to increase productivity, including uplifting research, development, commercialisation and innovation (R&D&C&I) in new technology and improving access to financing in supporting innovation and skills development.

Exhibit 1-21

Factors of Production, 2016-2025

Growth, % p.a.
Share to growth in brackets, %



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

Exhibit 1-22

Labour Productivity by Kind of Economic Activity, 2020-2025

Sector	RM '000 Per Worker, at Constant 2015 Prices		Average Annual Growth Rate, %
	Actual	Target	Twelfth Plan
	2020	2025	2021-2025
Agriculture	53.3	60.3	*2.5*
Mining and Quarrying	1,247.6	1,341.9	*1.5*
Manufacturing	120.7	148.7	*4.3*
Construction	38.3	46.2	*3.8*
Services	84.3	100.6	*3.6*
Overall	**89.0**	**106.1**	***3.6***

Source: Department of Statistics Malaysia and Economic Planning Unit

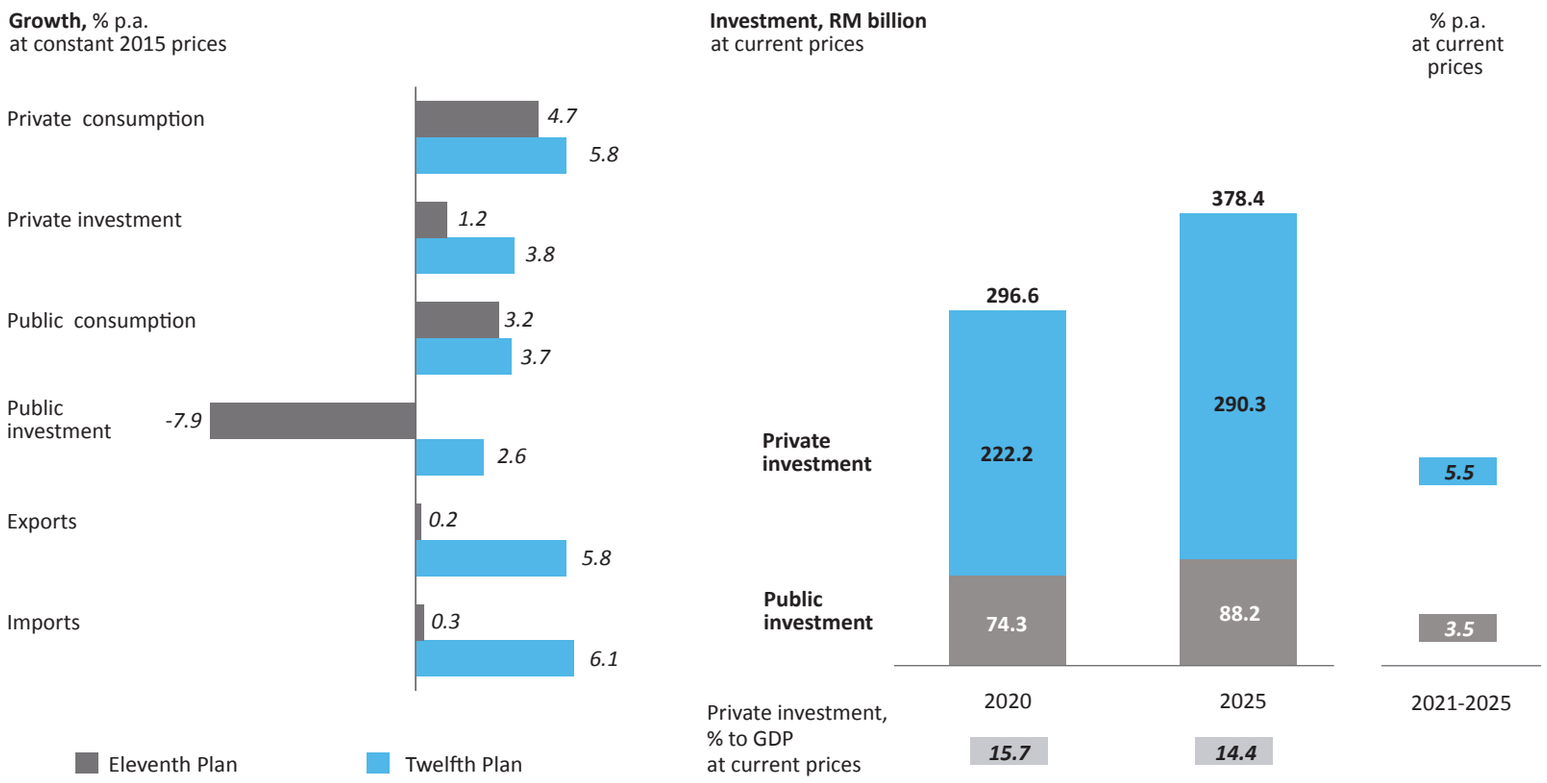
Promoting Quality Investment to Strengthen Economic Growth

On the demand side, the private sector will continue to be the key driver of growth. *Private consumption* is expected to increase at an average annual rate of 5.8%, as shown in *Exhibit 1-23*. The increase will be supported by higher household income arising from expected stable labour market conditions in tandem with the post-COVID-19 economic recovery, higher minimum wage and cash assistance to the targeted groups.

Private investment will rebound and is expected to grow at 3.8% per annum or an average of RM258 billion at current prices compared with RM233 billion during the Eleventh Plan period. It will become the catalyst of economic growth after the slowdown during the 2019-2020 period. The National Investment Aspirations (NIA) will be the basis for comprehensive reforms in all investment-linked initiatives and policies. NIA adopts a holistic and targeted approach in an effort to attract more quality investment in line with the goals to create high-paying jobs, expand domestic networks and enhance inclusivity. In addition, efforts will be focused on improving the ecosystem and

Exhibit 1-23

Gross Domestic Product by Expenditure, 2016-2025



Source: Department of Statistics Malaysia and Economic Planning Unit

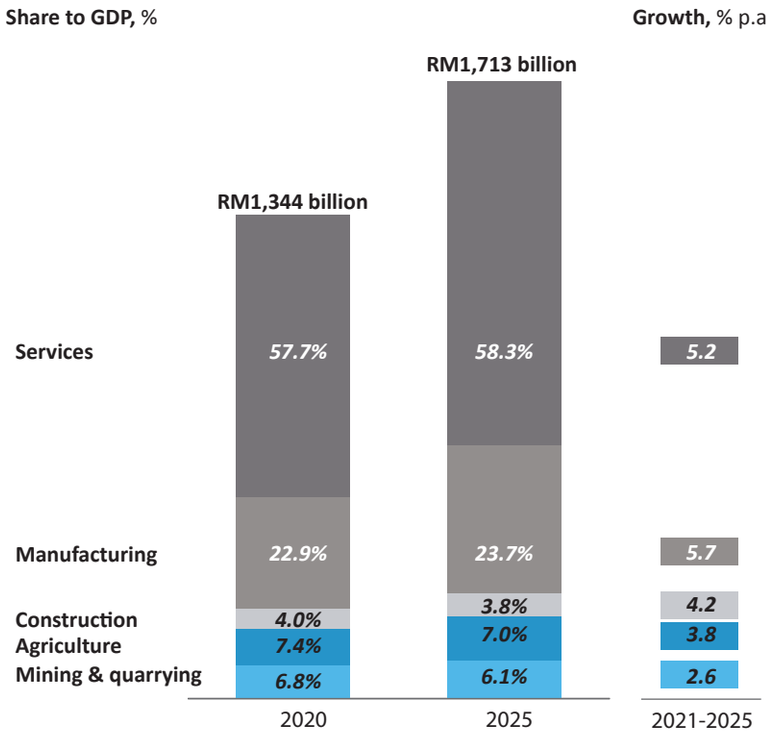
regulations to enable more effective public service delivery and facilitate ease of doing business. Existing investment incentives will also be reviewed to attract more investment, especially in strategic and high-impact industries. Domestic direct investment will be promoted, focusing on technology adoption and providing innovative business ecosystem, especially for MSMEs. In efforts to attract FDI, focus will be given to companies that will facilitate market access as well as technology and knowledge transfer for domestic firms. Through these efforts, private investment is expected to increase to more than 75% of total investment during the Twelfth Plan period compared with 70% during the Eleventh Plan period, attaining the average level prior to the 1997/1998 Asian Financial Crisis.

Measures to further promote private investment will include leveraging on competitive advantages of industry clusters, enhancing competitiveness and promoting sustainable development. Collaboration between businesses and higher education institutions will also be enhanced to address skills shortages. Investment institutions will be reformed to focus on attracting quality investment that promote the development of complex products and services, create high-skilled and high-paying jobs, encourage high use of domestic inputs and improve development in underserved areas. In addition, the incentives administration framework will be streamlined and targeted to improve efficiency and effectiveness.

Public investment is expected to grow at 2.6% per annum driven by the Federal Government development expenditure and capital spending of non-financial public corporations (NFPCs). The investment will be largely in infrastructure, transport, utilities as well as the oil and gas industry. Major public sector projects that will be undertaken include the ECRL, Johor Bahru-Singapore Rapid Transit System and Pan Borneo Highway. In view of the constraints in the allocation of development expenditure, these projects will be implemented in phases to ensure fiscal sustainability. *Public consumption* is expected to expand by 3.7% per annum, in line with the measures taken to reduce the impact of the COVID-19 pandemic and stimulate the economy.

Exhibit 1-24

Gross Domestic Product by Kind of Economic Activity, 2020-2025



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

Accelerating Structural Economic Transition to Move Up the Value Chain

The services and manufacturing sectors will continue to be the main drivers of the economy, as shown in *Exhibit 1-24*. The agriculture sector will be reinvigorated to support the downstream activities and to enhance food security. The growth in these sectors will be supported by strong demand, enhanced productivity as well as higher value-added and knowledge-intensive activities. The implementation of the National Fourth Industrial Revolution (4IR) Policy will be pivotal to boost growth across all sectors.

The *services sector* is expected to record a steady growth of 5.2% per annum and constitute 58.3% of GDP in 2025. The wholesale and retail trade subsector will continue to be the main contributor, supported by strategies to modernise the subsector as well as enhance the efficiency and effectiveness of the supply chain. Concerted efforts will be undertaken to ensure higher adoption of technology to enhance efficiency and productivity within the sector in line with the Malaysia Digital Economy Blueprint. Emphasis will also be placed on accelerating the development of high potential growth industries, including the halal, creative and tourism.

As Malaysia progresses towards embracing the 4IR, the *manufacturing sector* will continue to focus on shifting into higher value-added, diverse and complex products. Among the key industries that will drive growth are E&E, chemicals and chemical products and aerospace. In addition, focus will be given to growth along the value chain in shipbuilding, pharmaceutical and medical devices. Efforts will also be undertaken to leverage digital technology and enhance mechanisms to boost productivity, in line with the National Policy on Industry 4.0 (Industry4WRD). Emphasis will also be given to capitalise on the benefits of disruptive technologies in gearing up for the 4IR. The sector is expected to expand by 5.7% per annum, led by the export-oriented subsector.

Adoption of smart farming through modern and new technologies is vital in reinvigorating growth in the *agriculture sector*. In this regard, the emphasis will be on expediting the transformation of the agriculture sector into a modern, dynamic and competitive sector, supported by greater R&D&C&I. In addition, the strategies and initiatives under the National Food Security Framework and the National Agrofood Policy 2021-2030 will be implemented to meet food self-sufficiency targets and comply with international food safety standards. The utilisation of biomass and biogas will

also be optimised. The development of agricommodity entrepreneurs in speciality products, including tocotrienols, will be promoted to diversify into higher value-added products. This sector is projected to grow by 3.8% per annum during the Twelfth Plan, contributing 7% to GDP in 2025.

The *construction sector* is expected to expand by 4.2% per annum, driven by the civil engineering and residential buildings subsectors. More affordable housing will be developed in strategic locations. A total of 500,000 affordable homes will be built, which will be supported by several initiatives, such as *Rumah Mesra Rakyat*, *Residensi Wilayah* and *Program Perumahan Rakyat*.

The *mining sector* is expected to increase by 2.6% per annum during the Twelfth Plan, mainly driven by the increase in natural gas production. Meanwhile, LNG production is expected to increase to 32 million tonnes per annum, supported by the PETRONAS Floating LNG (PFLNG) facilities in Sabah. The production of crude oil and condensate is expected to moderate due to exploration of hydrocarbon resources activities in challenging areas such as deep-water and marginal fields.

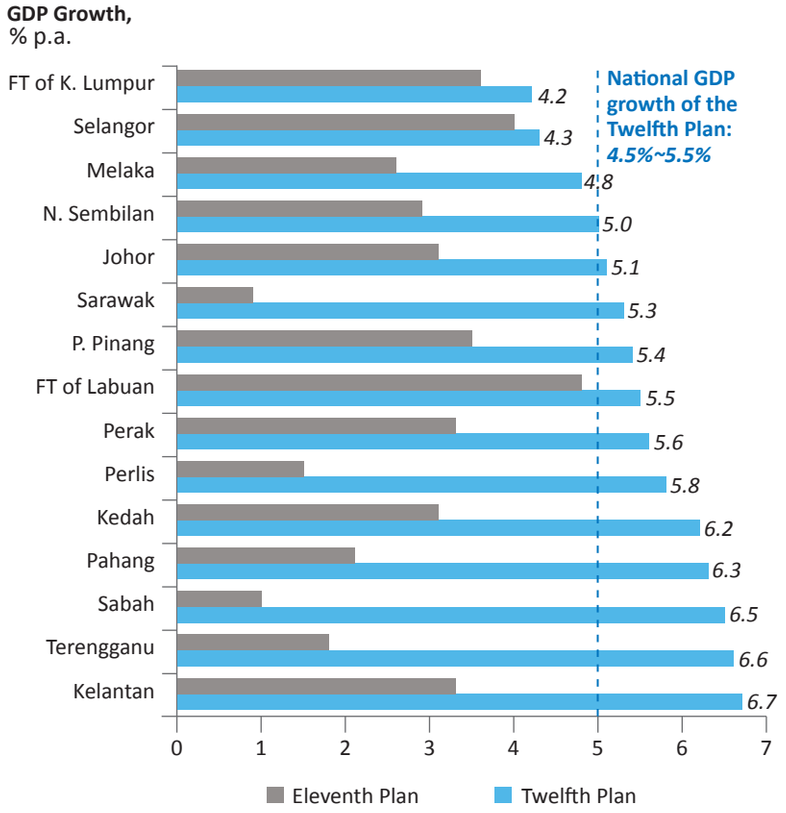
Reducing Development Disparity to Promote Regional Balance

Priority will continue to be given to bridging the development gap among states to ensure balanced regional development. The potential of each state and region will be optimised to stimulate and accelerate economic growth. Collaboration between the Federal, state and local governments, including regional development authorities, will be further strengthened for better regional development planning, implementation and coordination. Initiatives will be undertaken to upgrade infrastructure and re-energise economic activities in rural areas as well as improve the rural-urban linkages. More equitable distribution of socioeconomic benefits from balanced development across states and regions will narrow regional disparity and increase the wellbeing of the *rakyat*.

The GDP for all states is expected to expand in line with the national economic performance, as shown in *Exhibit 1-25*. The states with the lowest GDP per capita, namely Kelantan, Sabah, Kedah and Perlis are anticipated to record faster growth and narrow income disparity. Similarly, all regions are expected to record positive economic growth and narrow disparity in income. The GDP per capita gap between the highest and lowest regions, namely the Central and the Sabah regions, is expected to be reduced from 1:2.8 in 2020 to 1:2.5 in 2025.

Exhibit 1-25

Gross Domestic Product by State, 2016-2025



Note: Based on GDP at constant 2015 prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

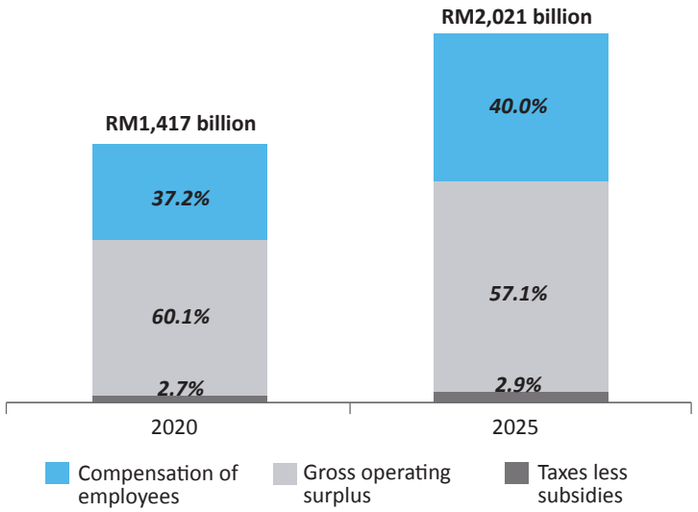
Increasing Share of Compensation of Employees to Improve Living Standard of Workers

During the Twelfth Plan, the share of CE to GDP is targeted to reach 40%, as shown in *Exhibit 1-26*. Efforts will be undertaken to promote high value-added economic activities and attract more investment in knowledge-intensive industries to spur the creation of skilled and high-paying jobs. Labour productivity initiatives will be further emphasised through greater adoption of advanced technology as well as upskilling and reskilling the workforce. In addition, measures will be taken to reduce dependency on low-skilled foreign workers. These measures are expected to raise wages and salaries, and subsequently improve the living standard of workers.

Exhibit 1-26

Gross Domestic Product Based on Income, 2020 and 2025

Share to GDP, %
GDP at current prices



Source: Department of Statistics Malaysia and Economic Planning Unit

Leveraging Participation in the Global Value Chain to Strengthen Trade and Balance of Payments

Malaysia's trade performance is expected to improve in tandem with the expected recovery in global trade and the strengthening of major commodity prices. *Gross exports* are projected to increase at an average annual rate of 5% supported by higher value-added products and diversification of markets. The implementation of the ASEAN Economic Community (AEC) Blueprint 2025 and new free trade agreements (FTAs) are expected to provide further impetus to external trade growth. These new trade agreements include the Regional Comprehensive Economic Partnership (RCEP), the world's largest FTA covering about 30% of global GDP and 2.2 billion people. The RCEP offers huge potential for Malaysia in terms of enhanced trade facilitation, greater market access and reduced trade barriers. Malaysia has close trade linkages with the RCEP economies contributing almost 60% to the nation's total trade in 2020. According to the World Bank[16], the RCEP is expected to generate a net positive effect on Malaysia with an increase in GDP of 0.8% by 2030. In addition, there are a number of FTAs currently being negotiated, which will benefit domestic industries, in particular manufacturing, tourism, finance, ICT, eCommerce, education, healthcare, agriculture, energy and aerospace.

Exports of manufactured goods is expected to record an average growth of 4.9% per annum, particularly driven by E&E and resource-based exports[17]. Growth in E&E exports at 5.1% per annum will be led by integrated circuits, diodes and photosensitive semiconductors following continuous demand in emerging technologies such as autonomous vehicles, artificial intelligence (AI), fifth generation technology standard (5G) and internet of things (IoT). Agriculture exports are expected to increase by 4.8% per annum, mainly contributed by palm oil and palm-based products as well as natural rubber. Growth of mining exports will rebound by 7.3% per annum supported by higher demand for crude petroleum and LNG exports.

Gross imports are estimated to expand at an average annual rate of 5.9% in line with strong exports performance and higher domestic investment activities, which will require more imports of intermediate and capital goods. Nevertheless, continuous efforts will be undertaken to enhance product substitution, especially for parts and components to reduce the import content. Imports of consumption goods are projected to strengthen as purchasing power of Malaysians are anticipated to increase during the Twelfth Plan. The *trade surplus* is expected to remain substantial at RM191 billion in 2025.

Efforts to leverage gains from trade will be intensified by further improving the efficiency of trade facilitation at all entry points and intensifying eCommerce transactions by encouraging MSMEs to utilise digital platforms. In addition, initiatives to strengthen resource-based downstream activities and related services will be escalated, while boosting competitive advantage of main export industries through adoption of new technologies. Collaboration among industry players, government agencies and research institutions will be further enhanced to identify new high value-added products and markets.

[16] Actual and Potential Trade Agreements in the Asia-Pacific: Estimated Effects, World Bank (2019).
[17] Includes chemicals and chemical products, manufactures of plastics, petroleum products, processed food, palm-oil based manufactured products as well as rubber and wood products.

The *current account of the BOP* is projected to remain in surplus at RM44 billion or 2.2% of GNI in 2025 supported by higher surplus in the goods account despite the continued deficit in the services account. Net payments for transportation, construction, insurance and professional services will contribute to the persistent deficit in the services account. However, measures will be undertaken to reduce the deficit, including greater internationalisation and continued promotion of Malaysia as a preferred destination for tourism, education and healthcare. In addition, efforts will be intensified to increase the efficiency of logistics services by streamlining administrative procedures, increasing regulatory compliance and stricter enforcement.

Strengthening Fiscal Governance to Enhance Public Finance Management

Fiscal policy will be expansionary in the short-term to revitalise the economy after the COVID-19 pandemic. Fiscal consolidation will resume once the economy is on a better footing to ensure long-term fiscal sustainability. As such, the *fiscal balance* is targeted to be between -3.5% and -3% of GDP in 2025. The total development expenditure allocation is estimated to be at RM400 billion in the Twelfth Plan period. However, allocations for basic development expenditure in 2021 and 2022 are expected to be challenging.

Fiscal governance will be strengthened by institutionalising the fiscal sustainability principles throughccc the introduction of the Fiscal Responsibility Act, which is imperative to ensure long-term fiscal sustainability. Revenue will be enhanced by exploring new sources, expanding the revenue base, reviewing tax incentives, strengthening overall tax administration and adopting a medium-term revenue strategy. The management of expenditure will be strengthened by introducing medium-term budgeting and expenditure frameworks, undertaking public expenditure reviews and improving Government procurement management to ensure spending efficiency and effectiveness. The medium- and long-term debt and liabilities management will continue to be enhanced with the implementation of accrual accounting, introduction of medium-term debt strategy, establishment of the Debt Management Office as well as enhancement of the government guarantees framework.

Advancing Green Growth to Enhance Environmental Sustainability

During the Twelfth Plan, efforts will be undertaken to ensure that development policies strike a balance between socioeconomic development and environmental sustainability. In this regard, an economic model on the green economy will be introduced to complement existing macroeconomic planning and impact analysis. The model will determine the linkages between economic growth and the use of natural resources as well as environmental impact, which will be a key reference for policy-making. This is crucial in ensuring sustainable growth, boosting resource efficiency and maintaining environmental ecosystem resilience. Concurrently, the assessment of socioeconomic impact on utilisation of limited resources such as water, energy, land use and raw materials will be conducted to support the formulation of development policies.

Maintaining Price and Labour Market Stability

Inflation is expected to stabilise at a lower level, averaging 2.7% per annum following better economic prospects along with the anticipated recovery in the global economy and commodity prices. The labour market is projected to remain favourable with more job creation for locals, backed by productivity improvement, greater utilisation of the latent[18] workforce and higher female labour force participation. The economy is estimated to return to full employment with an *unemployment rate* of 4% by 2025. Employment is expected to grow moderately at 1.4% per annum to reach 16.2 million by 2025, with an additional of 1.1 million jobs created.

Enhancing Wellbeing of *Rakyat*

The MyWI is targeted to increase by 1.2% per annum during the Twelfth Plan, compared with 0.5% during the Eleventh Plan. Both the economic and social wellbeing subcomposite indices are targeted to achieve higher growth. Social wellbeing is expected to improve substantially arising from a more balanced and people-centric development. The wellbeing of the *rakyat* will be enhanced through increased social participation and quality of the environment, improved transportation connectivity and better access to healthcare services.

[18] Potential labour force, which is currently not in the labour market such as the elderly, housewives and disabled persons.

Conclusion

During the Eleventh Plan, the Malaysian economy expanded at a moderate rate, underpinned by sustained domestic demand and a diversified economic base. The unprecedented COVID-19 pandemic and the low commodity prices dampened economic growth and weakened the fiscal position. Despite these challenges, the Malaysian economy is expected to rebound and achieve stronger and more sustainable growth during the Twelfth Plan. Focus will be given to expediting economic recovery and resetting the economy to achieve the multidimensional goals. This will increase the sustainability and resilience of the economy in realising the vision to be a prosperous, inclusive and sustainable nation.

Theme 1

Theme 1
Resetting the Economy

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Game Changer III	Transforming Micro, Small and Medium Enterprises as the New Driver of Growth	T1-6
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Overview

The 'new normal' created by the global COVID-19 pandemic has re-defined Malaysia's approach towards its economic priorities and strategies. It has provided Malaysia with a window of opportunity to reform its economic foundation towards a stronger recovery. The aim is to create a high-value and resilient economy, characterised by innovative industries and based on entrepreneurship.

Theme 1 focuses on restoring the growth momentum of core economic sectors in the country and at the same time, stimulating and propelling the growth of strategic and high impact industries, as well as Micro, Small and Medium Enterprises (MSMEs).

The services, manufacturing, agriculture, mining and construction sectors have been faced with a multitude of challenges. These include low productivity, uncompetitive firms, and imbalanced industrial development between regions. These have been further exacerbated by the COVID-19 pandemic.

A key priority moving forward is to shift all sectors towards higher value-added activities. This will be supported by boosting productivity growth in moving up the value chain, strengthening the financial capability of industry players as well as scaling up successful Productivity Nexus and green practices. These efforts will enhance overall competitiveness of businesses.

The Twelfth Plan also aims to expand export markets by improving market efficiency, empowering the role of industry players and strengthening trade facilitation. In addition, an effective financial intermediation ecosystem will be promoted, with a focus on promoting innovation, competitiveness, as well as the Islamic Finance agenda. The role of industrial estates and food production areas will be strengthened through the

Selected Key Performance Indicators

Chapter 2: Restoring Growth Momentum

4.5% to 5.5% GDP Growth Per Annum

RM57,882 GNI Per Capita

Chapter 3: Propelling Growth of Strategic and High Impact Industries as well as Micro, Small and Medium Enterprises

45% Contribution of MSMEs to GDP

25% Contribution of MSMEs to Total Exports

development of balanced industrial estates and the implementation of a green industry concept. These will narrow the development gaps across regions and states, as well as between urban and rural areas. Additionally, the strengthening of the country's economic foundation will be supported by improvement in overall governance and the development of comprehensive policies and legislations.

In regenerating economic growth, sustainable industrial development will be emphasised. While efforts undertaken in the Eleventh Plan witnessed various structural reforms and acceleration of technology adoption, overall industry development remains lacklustre and MSMEs continue to be uncompetitive.

In the next five years, focus will be placed on accelerating the development of strategic and high impact industries, namely electrical and electronics (E&E), global services (GS), aerospace, creative, tourism, halal, biomass as well as smart farming activities. Efforts will be aimed among others at promoting high technology adoption, governance reforms, talent upskilling, innovation and R&D to transform these industries into producing high value-added products and services, expanding global market and attracting quality investments.

In parallel, focused efforts will be undertaken to boost the capabilities of Malaysian entrepreneurs and enterprises, as well as cooperatives. Taking full cognisance of the COVID-19 pandemic impact, efforts will be undertaken to enable MSMEs to better compete in a globalised market. The development of innovative and sustainable entrepreneurs will be intensified through the adoption of advanced and digital technology. In addition, governance and facilitative regulations will be further enhanced to ensure the continuity and sustainability of businesses.

As Malaysia continues its path towards economic recovery, priority will be given in creating a high growth, and resilient economy. Theme 1 of the Twelfth Plan will be at the forefront which will lay the foundation required to support WKB 2030.

Chapter 2: Restoring Growth Momentum

Priority Area A
Boosting Productivity Growth

Priority Area B
Expanding Export Markets

Priority Area C
Strenghthening the Effectiveness of Financial Intermediation Ecosystem

Priority Area D
Strengthening the Role of Industrial Estates and Food Production Areas

Priority Area E
Improving Governance and Policy



Chapter 3: Propelling Growth of Strategic and High Impact Industries as well as Micro, Small and Medium Enterprises

Priority Area A
Accelerating the Development of Strategic and High Impact Industries

Priority Area B
Boosting Capabilities of Entrepreneurs and Enterprises

Game Changer II
Catalysing Strategic and High Impact Industries to Boost Economic Growth

Why do we need to transform these industries?

Malaysia needs to accelerate the development of key industries to realise its full potential of competing on a global stage. Strategic interventions in the following high-impact industries will:

- Enhance the contribution of these industries to GDP, namely E&E, GS, aerospace, creative, tourism, halal, smart farming and biomass.
- Spur investment in digitalisation and advanced technologies, build niche capabilities, and generate significant multiplier effects.
- Implementing the green economy agenda by prioritising environmental, social and governance (ESG) elements in investment.
- Create more high quality employment opportunities.

How will this be achieved?

Strategic interventions to boost economic growth will be implemented through:

- Boosting the E&E industry to move up the value chain through design and development (D&D), as well as front-end manufacturing activities.
- Realising the potential of the creative industry through the development of a holistic ecosystem.
- Enhancing the competitiveness of the halal industry to capture a bigger global halal market share.
- Transforming the aerospace industry with a focus on high-end, technology-driven manufacturing.
- Attracting multinational companies to position Malaysia as the regional GS hub.
- Accelerating the development of high value-added products and services in the biomass industry.
- Re-energising the tourism industry by strengthening brand positioning and aggressive promotion.
- Intensifying smart farming activities by accelerating the adoption of modern technologies.
- Promoting greater private sector investments in driving industrial growth.

What will success portray?

- E&E contribution to GDP of RM120 billion.
- Creative industry contribution to GDP of RM31.9 billion.
- Halal exports of RM56 billion.
- Aerospace industry revenue of RM30 billion.
- GS total investment at RM89 billion.
- Biomass industry total investment at RM10 billion.
- Total inbound tourist expenditure at RM73 billion.

Game Changer III
Transforming Micro, Small and Medium Enterprises as the New Driver of Growth

Why do we need to transform MSMEs?

MSMEs are vital in promoting entrepreneurship and economic growth of the country. Transformation of MSMEs will:

- Increase the contribution of MSMEs to GDP and exports.
- Enhance the competitiveness of MSMEs.
- Enhance the capabilities of Bumiputera entrepreneurs.
- Address the low level of technology and digital adoption.

How will this be achieved?

The transformation of MSMEs through enhancement of digital adoption and competitiveness as well as the development of a supportive ecosystem encompasses the following initiatives:

- Introducing a national MSMEs digitalisation roadmap.
- Leveraging the *Pusat Internet Komuniti* (PIK) and *Pusat Internet Desa* (PID) as the one stop centres to drive digitalisation.
- Developing a unified portal to facilitate entrepreneurs to obtain essential information on financing resources and advisory services.
- Shifting more MSMEs from a domestic focused market to the global market.
- Implementing the second chance intervention programme to assist failed entrepreneurs and mitigate the risk of bankruptcy.
- Appointing a commissioner to assist small businesses in securing payments on time and resolving payment disputes.
- Leveraging the cooperative movement in developing entrepreneurs.

What will success portray?

- MSMEs' contribution to GDP increases to 45%.
- MSMEs' contribution to total exports increases to 25%.
- MSMEs' average annual growth of labor productivity at 3.5%.
- 90% of MSMEs digitalise their business operations.
- Globally competitive MSMEs.

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Chapter 2

Restoring Growth Momentum

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2

Introduction

The five economic sectors, namely services, manufacturing, agriculture, mining and construction, continue to serve as the drivers of economic growth, creating jobs for the rakyat and generating export earnings. During the Eleventh Plan, efforts to strengthen growth and expedite structural reforms were undertaken by broadening the economic base, venturing into knowledge-intensive and high value-added activities, as well as expanding exports. The services sector continues to be the biggest sector in the economy in 2020, contributing 58% to total gross domestic product (GDP). The manufacturing sector contributes 23% to GDP, mining 7%, agriculture 7% and construction 4%. In general, these economic sectors face challenges in terms of low productivity, uncompetitive firms, rapid changes in the financial landscape and imbalanced industrial development between regions. There are also challenges arising from ineffective implementation mechanism and governance in some sectors. The COVID-19 pandemic has slowed down the growth of all sectors, impacting production, supply chain, trade, investment and productivity.

In the Twelfth Plan, concerted efforts will be undertaken to rejuvenate all economic sectors to ensure the growth momentum is restored. For this purpose, the focus will be on boosting productivity mainly through accelerating technology adoption, expanding market exports, strengthening the effectiveness of financial intermediation ecosystem, enhancing the role of industrial estates as well as improving governance and policy. Efforts to rejuvenate the economic sectors also require a major shift in approach and implementation mechanism that will transform the sectors and improve the performance of the economy.

Performance of the Eleventh Malaysia Plan, 2016–2020

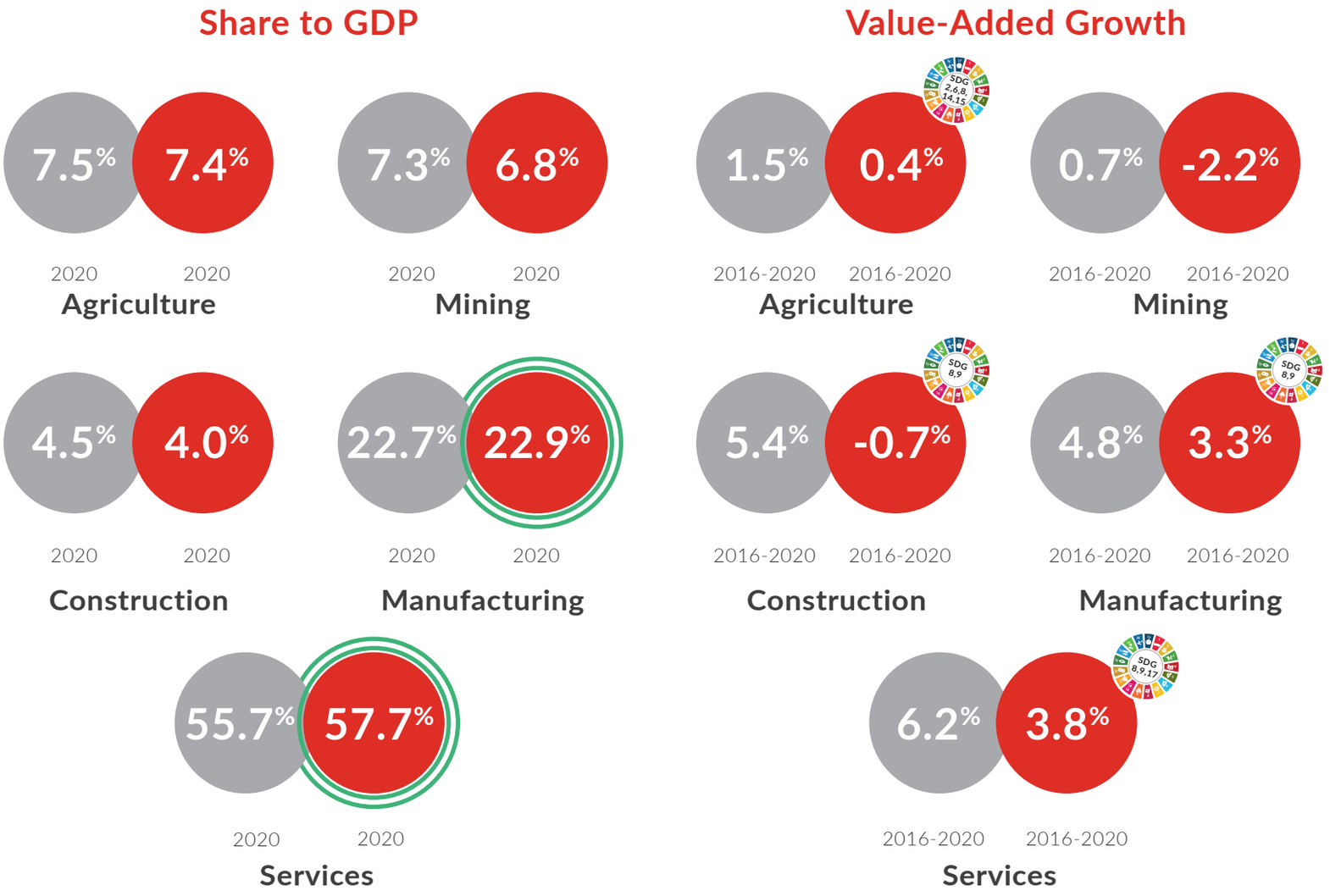
During the Eleventh Plan, the economy grew at an average annual rate of 2.7%, mainly driven by the services and manufacturing sectors. Concerted efforts were undertaken to transform the services and construction sectors, energise manufacturing and modernise agriculture. However, the economy was affected by external headwinds and a slowdown in the global economy, especially in 2020. The COVID-19 pandemic has disrupted the global value chain and domestic economic activities.

Performance of Selected Targets

Four targets, namely share to GDP, sectoral growth, labour productivity and total exports were set to strengthen growth of the economy and expedite structural reforms in each sector, as shown in *Exhibit 2-1*. The contributions to GDP targets for services and manufacturing sectors were realised, while for construction, agriculture and mining, the achievements were slightly below targets. Volatile commodity prices was the main reason for the low contribution of the agriculture sector to GDP, while mining production was affected by lower global oil and gas prices. In terms of value added, all sectors recorded positive growth albeit lower than targets set, except for mining which contracted at an annual average rate of 2.2% and construction at 0.7%, mainly due to the COVID-19 pandemic. In terms of labour productivity, only the agriculture sector surpassed its target as it grew by 0.5% per annum. The performance of other sectors was below the targets due to the slow adoption of automation and high dependency on low skilled workers. The export performance of all sectors fell below target due to a sharp decline in global demand towards the end of the Plan period.

Exhibit 2-1

Eleventh Malaysia Plan: Performance of Selected Targets



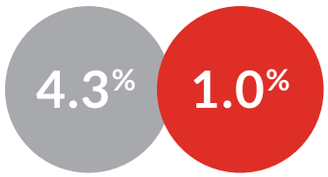
Labour Productivity Growth



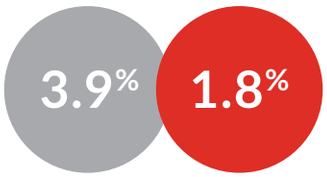
2020 2020
Agriculture



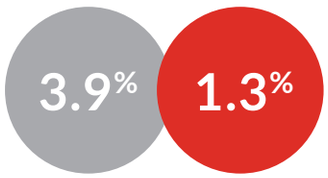
2020 2020
Mining



2020 2020
Construction

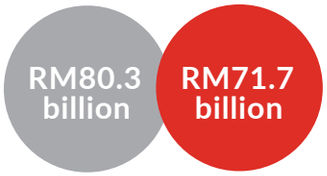


2020 2020
Manufacturing

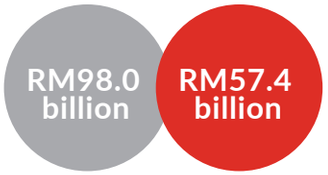


2020 2020
Services

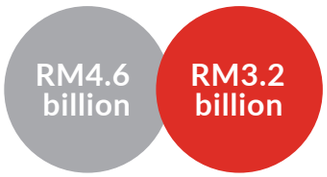
Total Exports



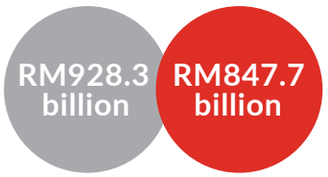
2016-2020 2016-2020
Agriculture



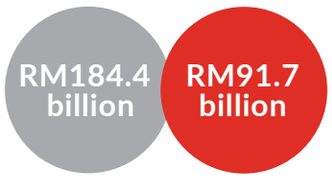
2016-2020 2016-2020
Mining



2016-2020 2016-2020
Construction



2016-2020 2016-2020
Manufacturing



2016-2020 2016-2020
Services



Performance of Selected Initiatives

Agriculture Sector

Various measures were implemented in the agriculture sector to increase sustainable production in improving food security as well as generating high and sustainable income for farmers[1]. The measures included provision of financial support, incentives for automation and mechanisation, efficient marketing channel, capacity building and infrastructure. A total of 113 new market outlets such as *Pasar Tani*, *Gerai Buah-Buahan Segar*, *Agrobazaar Kedai Rakyat* and *Agrobazaar Rakyat* were added to the existing 784 to enhance market access for farmers and consumers. The cumulative total sales generated from these 897 outlets were RM7.9 billion. The dedicated food production areas contributed to production of agricultural produce valued at RM1.5 billion involving 3,857 agropreneurs. A total of RM133 million loans were approved for 3,700 agropreneurs to undertake various agrofood subsector activities. Under the Young Agropreneur Programme, RM126 million worth of grants and loans were approved, benefitting 6,969 youth agropreneurs to initiate and expand agricultural activities. A total of RM76 million worth of matching grants were disbursed for automation and mechanisation through agricultural departments and agencies. A total of 4,960 farmers obtained Malaysia Good Agricultural Practice (myGAP) certification, which contributed to the production of safe and quality agricultural produce.

Several measures were implemented to strengthen the upstream and downstream activities of the agricommodity[2] subsector, which benefitted almost one million smallholders, particularly in oil palm, rubber and cocoa plantation. These measures included expansion of replanting programmes with high quality varieties, enhancement of research and development (R&D) activities and technology adoption, implementation of sustainable management as well as optimisation of resources through smallholders land consolidation. This subsector attracted total approved capital investments in the downstream activities amounting to RM7.6 billion in 2019, from RM3.6 billion in 2016, with 38.2% being domestic investments. In the area of sustainable agricultural practices, 88% of the total 5.9 million hectares of oil palm planted area received the Malaysian Sustainable Palm Oil (MSPO) certification.

Construction Sector

The Construction Industry Transformation Programme, 2016-2020 (CITP) was implemented as a national agenda to transform the construction sector to be greener and cost efficient. The CITP mid-term review re-aligned 115 KPIs to 36 KPIs in an effort to accelerate the transformation of the construction sector, with 91% overall achievement. Meanwhile, the adoption rate of Industrialised Building System (IBS) in the public projects was 85% in 2020, exceeding the 80% target. However, the IBS adoption rate in private projects was 41%, below the 50% target. The MyBIM Centre was established in 2017 as a one-stop centre to provide reference, support services and skills training to expedite technology adoption in the construction sector.

Manufacturing Sector

The High Value-Added and Complex Product Development Programme was introduced in 2016 to improve capacities and competencies of industry players in developing high value-added complex products. As of 2020, a total of 60 projects were implemented under this programme, undertaken through public-private-academia partnerships. Out of these projects, a total of 57 new complex products[3] and 29 new industry enablers[4] were developed, while 12 intellectual properties were filed. In addition, in line with the National Automotive Policy 2014 (NAP 2014), various programmes were implemented to increase the number of vendors that meet the minimum requirements of original equipment manufacturers (OEMs) and participate in the supply chain. As a result, the number of qualified vendors increased to 498 in 2020, from 277 in 2014. Exports of automotive parts and components increased to RM11.3 billion, from RM4.7 billion during the same period. In order to ensure the local automotive industries continue to be competitive, the National Automotive Policy 2020 (NAP 2020) was launched in February 2020, aiming to propel the country to become a regional leader in automotive manufacturing.

The National Policy on Industry 4.0 (Industry4WRD) was launched in 2018 to catalyse change in people, processes and technology in the manufacturing sector. In terms of readiness of firms to adopt Industry 4.0 related technologies, 890 firms were assessed through the Readiness Assessment Programme (RAP). In addition, efforts to encourage firms to modernise production plants, acquire new

[1] Farmers in the horticulture, fishers in marine fishery, fish farmers in aquaculture, ranchers in livestock, agropreneurs, as well as smallholders in the agricommodity subsector.
[2] Agricultural-based commodities which include oil palm, rubber, timber, cocoa, pepper, kenaf and other commodities under the Ministry of Plantation Industries and Commodities purview in the future.
[3] Products that have strategic opportunities for diversification according to the economic complexity measures.
[4] The catalyst in producing a product more efficient and productive. Among the enablers that have been developed are standards, testing laboratories and systems.

technology, upskill workers as well as expand into new markets were also undertaken through the Domestic Investment Strategic Fund (DISF). During the Eleventh Plan, a total of RM837 million matching grants under DISF were approved for 183 projects.

Services Sector

The services sector was mainly contributed by the traditional services subsector at 71.1%, while the balance 28.9% was by the modern services[5] subsector. The modern services subsector, recorded a higher growth of 5.1% per annum in the Eleventh Plan period compared with 3.2% by traditional services subsector. This better performance of the modern services subsector was contributed by the information and communication, finance and insurance as well as business services subsectors.

Efforts to transform the services sector into more knowledge-intensive and innovation-led sector were undertaken in line with the Services Sector Blueprint, 2015-2020 (SSB) through 29 action plans. The average cumulative achievement for four policy levers, namely internationalisation strategy, investment incentives, sector governance reform and human capital development, under the SSB was 93.3%. The internationalisation strategy registered the lowest performance at 89.5%.

Measures undertaken to improve governance in the services sector included enhancing the rules and regulations governing the development of the subsectors. The Consumer Protection Act 1999 was amended in 2017 to regulate credit sales, and in 2019 to increase the Tribunal for Consumer Claims jurisdiction limit from RM25,000 to RM50,000. The Guideline on Foreign Participation in Distributive Trade Services Malaysia 2010 was revised in 2019 in line with the rapid growth of eCommerce and to better attract new foreign investment. The Traditional and Complementary Medicine Act 2016 [Act 775] was introduced to regulate the traditional and complementary medicine (T&CM) services. The Traditional and Complementary Medicine Blueprint, 2018-2027 was launched in 2018 to guide the development of T&CM services in terms of practices, education, training and herbal medicinal materials and products as well as research.

Developments in the financial services sector continued to be guided by the Capital Market Masterplan 2 and the Financial Sector Blueprint, which covered the period 2011 to 2020. The capital market grew by 5% per annum, between 2016 and 2020, from RM2.8 trillion to RM3.4 trillion, while assets in the banking system and insurance and takaful sector grew by 5.1% per annum, from RM2.7 trillion to RM3.3 trillion. Collectively, the assets of both capital market as well as banking system and insurance and takaful sector amounted to about 4.8 times the size of the national GDP in 2020. In addition, alternative fundraising avenues within the capital market, such as the Venture Capital (VC), Private Equity (PE), Equity Crowdfunding (ECF) and Peer-to-Peer (P2P) Financing grew by 13.6% per annum from RM579.7 million in 2016 to RM965 million in 2020 to complement the banking system in mobilising capital for high growth firms and innovative activities.

Productivity

Overall labour productivity recorded an average annual growth rate of 1.1% during the Eleventh Plan, from RM84,114 per worker in 2015 to RM89,025 in 2020. The Malaysia Productivity Blueprint (MPB) which was launched in 2017, provided a framework to enhance productivity in a more comprehensive and cohesive manner. Among the initiatives undertaken under the MPB included developing the Integrated Foreign Workers Management System (ePPAx), launching of Industry4WRD and establishing the Unified Public Consultation portal. The ePPAx expedited and simplified the hiring of foreign workers in the approved sectors. The Unified Public Consultation portal was launched in 2019 to provide a platform for the public to air their views and provide feedback on regulations or amendments of existing legislation in improving governance.

The nine private sector-led Productivity Nexus conducted various programmes at the enterprise level, benefitting more than 10,000 companies. The Post School Finishing (PSF) programme under the Electrical and Electronics Productivity Nexus trained 127 graduate engineers in integrated circuit design. The Industrial IoT PLUGFEST programme was developed to accelerate the adoption of internet of things (IoT), benefitting 200 micro, small and medium enterprises (MSMEs) in electrical and electronics (E&E) subsector. In addition, the Malaysia Tourism Excellence Business Certification (MaTEx) was awarded to 250 enterprises which fulfilled MaTEx quality standards under the Tourism Productivity Nexus. During the 2018 to 2020 period, the overall labour productivity growth for subsectors under the nine Productivity Nexus declined marginally at an average annual rate of 0.2% due to the COVID-19 pandemic, as shown in *Exhibit 2-2*.

[5] Comprising information and communication, finance and insurance, business services, private healthcare and private education services subsectors.

Exhibit 2-2

Labour Productivity for Subsectors under the Nine Productivity Nexus, 2017-2020

Sector	Subsector[1]	RM '000 per Worker, at Constant 2015 Prices		Average Annual Growth Rate, %
		2017	2020	2018-2020
Agriculture	Agrofood	89.2	91.9	*1.0*
Manufacturing	Chemicals and Chemical Products	291.1	276.8	*-1.7*
	Machinery and Equipment	84.5	86.2	*0.7*
	Electrical and Electronics	164.8	177.4	*2.5*
Services	Retail and Food & Beverages	44.4	42.7	*-1.3*
	Tourism	66.9	37.3	*-17.7*
	ICT Services	339.2	367.3	*2.7*
	Professional Services	76.9	78.0	*0.5*
	Private Healthcare	61.3	59.1	*-1.3*
	Overall	**82.7**	**82.3**	**-0.2**

Note: [1] Subsectors are defined in line with the scope of each Productivity Nexus.
Source: Department of Statistics Malaysia and the Economic Planning Unit

Issues and Challenges

The economic sectors continue to face issues and challenges that affect competitiveness and hinder the sectors from achieving their full potential. Malaysia lags behind most regional peers in terms of productivity growth. Issues with respect to uncompetitive firms, limited market access, slow response to emerging trends and imbalanced industrial development, especially in less developed regions have suppressed sectoral growth. Ineffective implementation and governance mechanism have resulted in inefficiencies as well as increased cost of doing business. These challenges have been compounded by the COVID-19 pandemic that requires comprehensive strategies and effective implementation to restore the growth momentum.

Issues and Challenges

- Low Productivity
- Low Market Access and Uncompetitive Firms
- Rapid Changes in the Financial Landscape
- Imbalanced Industrial Development between Regions
- Ineffective Implementation Mechanism and Governance

Low Productivity

Malaysia is still facing various productivity-related issues, stemming from low value-added activities, lack of financial capacity and inefficient resource management. Productivity growth in most sectors remains lower than the target due to continued dependency on low-skilled labour and the slow progress in automation and mechanisation. In the agriculture sector, unsustainable financing mechanisms for replanting affected the capability of smallholders, resulting in low yields. Ineffective farm management and land fragmentation limit optimisation of land use and adoption of modern agriculture technology. In addition, high post-harvest losses along the supply chain contributed to low productivity in the sector. Productivity of the construction sector continues to lag behind due to slow adoption of IBS and other technological tools, including the Building Information Modelling (BIM).

In terms of the MPB implementation, the formulation and design of enterprise-level productivity programmes and initiatives are currently based on macro-level analysis. This approach has not been able to identify diverse enterprise-level issues such as market power, product competition, firm dynamism and resource allocation. In addition, there is a lack of proper evaluation of these initiatives, programmes and incentives. The implementation of programmes under several Productivity Nexus were confined to certain geographical locations where the industries are concentrated, especially in the Klang Valley. Thus, these initiatives only benefitted a small number of enterprises.

Low Market Access and Uncompetitive Firms

Most local firms in all the economic sectors face challenges in expanding locally or internationally due to low capability to penetrate markets and lack of competitiveness to participate in the global supply chain. Despite the conclusion of 13 free trade agreements (FTAs) at both bilateral and multilateral levels, the utilisation rate for most of these FTAs is still below expectation, partly due to the lack of knowledge and understanding by firms. In addition, domestic market inefficiency and unhealthy competition in the agriculture sector, especially through the excessive exploitation by middlemen in the distribution channels limited market access.

Local firms including small and medium professional practices (SMPPs) face challenges in handling large projects internationally due to lack of capacity and capability as well as limited financing and experience. In addition, the current investment and procurement policies of government-linked companies (GLCs) favour big and experienced companies. As such, inexperienced SMPPs are unable to participate in GLCs business activities both domestically and globally. Besides, it is also perceived that Malaysia's domestic regulations are

accomodative to traditional low value-added services, as opposed to high-technology modern services subsector. Furthermore, tax incentives in emerging technology such as AI and blockchain are still less flexible to meet dynamic changes in the market. This followed by low readiness among industry players to adapt technology and invest in talent for better career pathways. These hinder the firm's competitiveness and resilience to expand into the global market.

The logistics industry is fragmented and has limited economies of scale. The industry players are mostly small- to medium-size companies competing through aggressive pricing strategies instead of offering quality and breadth of services. The majority of service providers offer basic transport and storage services, and lack the capability to offer specialised or integrated services. Malaysian companies are slow in adopting the multimodal transport services concept and thus are unable to enhance the efficiency of the logistics supply chain. The cost of logistics services in Malaysia is higher compared with regional competitors. The industry also faces a shortage of skilled, experienced and entrepreneurial talent as well as low technology adoption. Industry players lack the drive to increase competitiveness in terms of quality and are mostly confined to the domestic market.

There is insufficient seamless connectivity, particularly last-mile connectivity in rural and hinterland areas, as well as limitations in terms of facilities, including warehouses and depots, leading to high cost and delays in inland transportation. Meanwhile, Malaysia's ranking in three key global indices are behind neighbouring countries, namely the World Competitiveness Yearbook, 2021, at 25th, Global Competitiveness Index, 2019/2020, at 27th and the Logistics Performance Index, 2018, at 41st. This demonstrates weakness in policy implementation and lack of effective measures to improve competitiveness. Neighbouring countries are aggressively improving their logistics infrastructure and marketing themselves as logistics hubs, challenging Malaysia's aim to be a regional logistics hub.

Rapid Changes in the Financial Landscape

The financial sector is facing new challenges due to the rapid changes in the global and domestic markets. Rising market uncertainties, including the impact of the global health crisis and other adverse shocks, pose a challenge to the banking system and capital market. Slow adaptation and response to global megatrends, such as rapid technology advancement and digitalisation, recalibration of global value chains as well as changing consumer demands threaten to undermine the financial sector's efficiency and competitiveness. In addition, there is intense competition from other countries within the region in offering innovative financial products and services.

Imbalanced Industrial Development between Regions

Huge development gaps remain among, regions as well as between urban and rural areas. The Eastern region in Peninsular Malaysia, Sabah and Sarawak face challenges in attracting investment due to inadequate infrastructure, such as utilities, telecommunications and transportation. In addition, there is a lack of planning in the development of industrial estates, with the management and maintenance of some of the estates being below the expectations and requirements of investors. As a result, a number of industrial parks are underutilised and most industries are concentrated in well developed areas.

Ineffective Implementation Mechanism and Governance

The implementation of policies remains a challenge in addressing the needs of various sectors within the economy. Related regulations and programmes are administered by multiple agencies, resulting in overlapping of roles and functions as well as target groups. This is evident in the duplication of grants disbursements and provision of training, resulting in rent-seeking behaviour and suboptimum resource utilisation. In addition, existing platforms for collaboration among agencies have not been fully leveraged, leading to fragmented coordination and monitoring. Limited data sharing and lack of big data analytics (BDA) among agencies affect overall development planning and implementation.

Way Forward: Twelfth Malaysia Plan, 2021–2025

In the Twelfth Plan, efforts will focus on rejuvenating the economy to ensure the momentum of growth is restored. This will be achieved by boosting productivity growth, expanding exports markets, strengthening the effectiveness of financial intermediation ecosystem, enhancing the role of industrial estates and food production areas as well as improving governance and policy. The private sector will play a greater role in restoring the growth momentum in meeting future challenges and competing in the global market.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Restoring Growth Momentum

Priority Area A

Boosting Productivity Growth

Strategy A1
Strengthening the Planning, Evaluation and Monitoring Mechanism

Strategy A2
Moving up the Value Chain

Strategy A3
Strengthening Financial Capability

Strategy A4
Scaling Up Successful Productivity Nexus

Strategy A5
Scaling Up Green Practices

Priority Area B

Expanding Export Markets

Strategy B1
Improving Market Efficiency

Strategy B2
Empowering Industry to Compete in the Domestic and Global Markets

Strategy B3
Strengthening Trade Facilitation

Priority Area C

Strengthening the Effectiveness of Financial Intermediation Ecosystem

Strategy C1
Transforming the Financial Ecosystem to Meet Future Economic Needs

Strategy C2
Enhancing the Resilience and Governance of the Financial System

Strategy C3
Promoting a Sustainable and Inclusive Financial System

Priority Area D

Strengthening the Role of Industrial Estates and Food Production Areas

Strategy D1
Enhancing the Role of Industrial Estates and Food Production Areas as Growth Catalyst

Strategy D2
Achieving Balanced Industrial Estates Development

Priority Area E

Improving Governance and Policy

Strategy E1
Strengthening Coordination and Collaboration

Strategy E2
Enhancing Institutional Roles and Functions

Strategy E3
Strengthening Policies and Legislation



Twelfth Malaysia Plan: Selected Targets

Boosting Productivity Growth

Average Growth of Labour Productivity



2021-2025
Agriculture



2021-2025
Mining



2021-2025
Construction



2021-2025
Manufacturing



2021-2025
Services

Expanding Export Markets

Total Exports



2025
Agriculture



2025
Mining



2025
Construction



2025
Manufacturing



2025
Services

Strengthening the Effectiveness of Financial Intermediation Ecosystem



2021

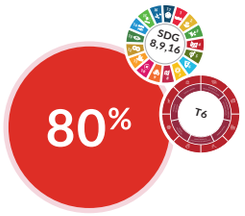
Financial Market



2021

Capital Market

Strengthening the Role of Industrial Estates and Food Production Areas



2025

Utilisation Rate of Dedicated Food Production Areas



2025

Increase Utilisation rate in Selected Industrial Estates

Improving Governance and Policy



2021 2021

Agriculture



2021

Mining



2021

Construction



2021

Manufacturing



2022

Services

Target

SDG

WKB 2030

Priority Area A

Boosting Productivity Growth

Malaysia aims to boost productivity growth across all sectors in restoring the momentum of economic growth and enhancing the competitiveness of industries. Emphasis will be given to strengthening the planning, evaluation and monitoring mechanism, moving up the value chain and strengthening financial capability. In addition, measures will be undertaken to scale up successful initiatives of the Productivity Nexus. Green practices will also be scaled up in managing resources and environmental issues. The implementation of these measures will drive productivity growth and improve efficiency.



Strategy A1

Strengthening the Planning, Evaluation and Monitoring Mechanism

A robust planning, evaluation and monitoring mechanism is crucial in ensuring that policies for productivity growth will be able to deliver the intended outcomes. Evidence-based policy (EBP) making will be promoted including, establishing a user-friendly data sharing framework. In addition, programme evaluation and monitoring will be improved to increase the effectiveness of productivity initiatives.

Promoting Evidence-Based Policy Making

The adoption of EBP approach will enhance the effectiveness of policies and programmes by leveraging available research and studies. The adoption of EBP will be supported by establishing a dedicated network to facilitate research on productivity. This network will involve participation of experts from government agencies, research institutions and institutions of higher education. It will also facilitate better collaboration between international and local researchers. In addition, the compilation of microdata will be strengthened, including developing a linked employer-employee dataset, to better identify the diverse and pertinent factors which stifle enterprise-level productivity. A user-friendly data-sharing framework will also be developed to improve the research ecosystem. This improvement will facilitate access and enhance transparency of the microdata as well as foster diversification of research.

Improving Programme Evaluation and Monitoring

A structured programme evaluation framework will be developed to assess the effectiveness of all productivity programmes, particularly in ensuring more cost-effective interventions. Monitoring and reporting mechanisms will be strengthened to ensure transparency and sustainability of intervention programmes. In this regard, the findings from the evaluation and monitoring efforts will be made as references in improving existing and developing new productivity-related programmes.

Strategy A2

Moving up the Value Chain

As part of efforts to strengthen resilience, all sectors will need to move up the value chain by enhancing efficiency and modernising the production process and developing new products and services. Measures will be introduced to enable all economic sectors to move up the value chain by improving operational and production processes, adopting emerging technology in new product development, accelerating talent development as well as increasing high value-added activities. These efforts will enhance business competitiveness, thus improving sectoral productivity.

Improving Operational and Production Process

The operation and production process in the *agriculture sector* will be transformed to minimise costs, reduce processing time and optimise the usage of resources through adoption of digital technologies. Farmers will be encouraged to adopt digital applications in farm and fishery management practices, production and marketing. The sector will utilise BDA that enable farmers to access granular data, such as on agricultural land, farm inputs, incentives and financial assistance as well as market demand in making smart decisions on production. The utilisation of sonar-based fish detection system will encourage efficient marine fishery activities. Meanwhile, farmers as well as agricultural cooperatives and associations will be encouraged to leverage eCommerce platforms to improve marketing of agriculture produce, reducing over dependency on intermediaries. In addition, these platforms will be leveraged to outsource farming machinery and equipment services to optimise resources and achieve cost efficiency. The adoption of technology in the agriculture sector will also minimise farming operations risk from health-related crises to ensure uninterrupted production.

In the *construction sector*, in line with the Construction 4.0 Strategic Plan adoption of advanced technologies, including augmented reality (AR) and virtual reality (VR) in buildings and infrastructure projects will be intensified. Efforts will also be undertaken to increase the effectiveness of project implementation and monitoring by promoting real-time collaboration. The existing online application and approval mechanism will be improved to simplify and shorten the project approval process. In this regard, the existing One Stop Centre (OSC) 3 Plus Online platform at local authorities, will be integrated with the BIM e-submission system. This integration will enable information sharing among respective approval authorities and allow assessment of building plans using three dimensional information modelling.

The quality of development projects will be further improved through wider adoption of quality assessment tools. In this connection, the IBS Score and the use of Quality Assessment System in Construction in the evaluation of construction projects will be expanded, particularly in the private sector. These tools will contribute to efforts in promoting best practices, improving credibility of industry players and reducing dependency on low-skilled labour, mainly foreign workers.

Efforts will be undertaken to modernise and digitalise operations and processes in the *manufacturing sector*, which will propel the industry towards higher productivity. The implementation of Industry4WRD will be intensified, particularly in developing local system integrator capabilities to provide innovative solutions related to digitalisation of production processes. In addition, the implementation of RAP will be enhanced to facilitate more firms in adopting Industry 4.0 related technologies for productivity improvement.

Concerted efforts will be undertaken to ensure higher adoption of technology to enhance efficiency and productivity across the *services sector*. Modern services subsectors, such as financial, professional and private healthcare services, will focus on the adoption of 4IR technologies to increase efficiency and effectiveness in service delivery. In the wholesale and retail subsector, emphasis will be on modernising business activities that are mostly manually operated. Large scale retailers will be encouraged to invest in systems that are cost-effective and improve consumer experience, including self-check-out, and pick and pack. Meanwhile, hawkers and petty traders will be encouraged to adopt multichannel payment gateways, including e-payment and e-wallet, as a step to modernising their business.

Digitalisation in logistics services is essential to increase productivity and efficiency as well as deliver quality services. The industry will be encouraged to digitalise its operations and connect to an integrated platform in establishing a smart and highly efficient supply chain. This initiative will facilitate seamless information sharing and improve cost efficiency, which will eventually benefit end users and drive competitiveness of the logistics industry. In keeping up with increasing demand from eCommerce channels and meeting expectations of consumers, logistics services providers will be encouraged to increase investment in warehousing and distribution centres to enhance efficiency. This will assist in accelerating development of the advanced supply chain.

Increasing High Value-Added Activities

In the *agriculture sector*, efforts to increase high value-added products will be intensified in the upstream and midstream activities by producing premium agricultural products, high-yielding crop varieties and breeds as well as internationally accepted by-products. Smart farming and precision agriculture technologies will be adopted on a wider scale for both agrofood and agricommodity subsectors. These initiatives will include adopting high-tech farming methods utilising BDA, AI and IoT as well as precision tools, such as drones, robotics and sensors. Focus will also be given to developing and customising agricultural machineries and equipment to suit local conditions, such as terrain features, weather and crop requirements. In addition, smart indoor vertical farming or plant factory will be expanded by leveraging on existing Permanent Food Production Parks (TKPM), idle land and abandoned buildings. Farmers will be encouraged to adopt organic farming practices in meeting increasing demand for organic products and generating higher income. In the area of marine fishery, agricultural cooperatives and associations will be encouraged to venture into deep sea and high sea fishing utilising modern vessels and innovative equipment to enhance competitiveness as well as promote a sustainable fishing industry.

The *mining sector* will be repositioned to be more agile, sustainable and competitive in providing resources for other industries. In this respect, the midstream and downstream industries will be strengthened to enhance the high value-added activities related to mining. Industry collaboration in R&D, particularly in processing technology and product design will also be promoted to create more high value-added products. Meanwhile, the National Mineral Industry Transformation Plan 2021-2030 will drive the development of the mineral industry holistically. The plan will, among others, improve the governance and legislation as well as human capital and value chain development. Furthermore, international cooperation will be explored to facilitate technology transfers and foreign investment in the mineral subsector and mineral-based manufacturing subsector. In addition, a comprehensive chemical roadmap will be developed to address gaps in the downstream oil and gas ecosystem, particularly in petrochemical. The roadmap will also prescribe the right infrastructure support required to attract more quality investment.

In increasing high value-added activities in the *construction sector*, focus will be on greening the sector. Adopting and implementing green construction practices will create value, improve resource efficiency and cost effectiveness, while reducing environmental impact. The industry players in this sector will be further encouraged to uptake green building design that promotes resources, energy and water efficiency as well as incorporates measures to withstand extreme weather patterns and natural disasters.

Implementation of the circular economy[6] concept will increase the use of sustainable, durable, biodegradable and recycled construction materials, which will contribute to lower cost and higher product value. Its implementation will be promoted through the application of the IBS concept and technologies, BIM, Prefabricated Prefinished Volumetric Construction (PPVC) and Modular Methods. The green procurement initiative in the construction sector will promote sustainable resource sourcing and increase demand for high value-added green construction materials. Developers will also be urged to adopt sustainable certification and performance tools, including the Sustainable Infrastructure Rating Tool (Sustainable INFRASTAR), Green Building Index (GBI) and GreenRE in ensuring environmental sustainability features are incorporated from the beginning of the design and construction phases to operation phase.

The growth strategy in the *manufacturing sector* will focus on producing high value-added and complex products, especially in the E&E, chemical and chemical products, machinery and equipment (M&E) and aerospace. Meanwhile, avenues for growth along the value chain in the shipbuilding, pharmaceutical and medical devices will be explored. Intensification of high value-added activities in the automotive industry will be supported through the implementation of the NAP 2020. The manufacturing sector will also focus on developing and incorporating key technologies, including IoT, AI, sensor fusion as well as deep and machine learning into manufacturing products, in line with the implementation of the Industry4WRD. The sector also aims to increase the production of advanced critical parts and components locally to reduce imports, which includes using robotics application to cater for increasing demand.

In the *services sector*, technological innovations are changing the way businesses operate and deliver services. In ensuring continued recovery and restoration of the economy, the modern services subsector will focus on accelerating high value-added activities, adapting technological changes, improving labour productivity

[6] Emphasises on putting resources back into environmental and economic systems through reuse end waste and waste prevention initiatives, thus reducing material loss.

and increasing export. These efforts will lead to a high quality and knowledge-based services sector. For the professional services subsector, local SMPPs will be encouraged to provide high value-added services through the adoption of 4IR technology such as BDA, AI and IoT. This effort will transform service delivery and provide better customer services and complex products. In this regard, a comprehensive roadmap for all professional services to embrace 4IR will be developed.

Meanwhile, measures will be undertaken to increase the adoption of BDA as well as strengthen the provision of holistic end-to-end care in the private healthcare subsector. This effort will enable real time analysis and provide high quality healthcare services. In addition, exclusive high-end medical tourism packages for premium healthcare travellers will be promoted. This will better position Malaysia as the choice destination in the region among healthcare travellers. Emphasis will also be given on digital innovation in healthcare delivery and solutions to ensure better quality of healthcare services including aged care services. In the private education subsector, virtual teaching and experiential learning will be further strengthened to enhance the learning experience, thus improving the quality of education. This will drive innovation in the production of education technologies and tools, such as educational applications as well as audio and video materials.

The Industrial Collaboration Programme (ICP), a component of the Government Procurement policy will be promoted as a strategic tool to support the effort in moving up the value chain through high technology uptakes and innovation strategies. In this regard, the implementation of the ICP will be further strengthened to ensure more significant involvement of the local companies in the economic development. This initiative will drive creation of higher value local contents and jobs, enabling technology transfer, promoting innovation as well as greater regional and global market penetration through strategic partnership.

Adopting Technology in New Product Development

A more targeted approach will be taken to move the economic sectors up the value chain, producing high value, diverse and complex products through technology adoption. The establishment of the Research Management Unit (RMU) will enhance management, facilitation and monitoring of research activities by industry and research institutions. Experimental research and commercialisation will be prioritised to encourage more demand-driven R&D activities. In addition, efforts will be intensified to strengthen technical cooperation in product innovation among local and international research centres, higher education institutions (HEIs) and the private sector.

Efforts will be intensified to embrace future industries in producing high value products and enable continuous productivity improvements in the *manufacturing sector*. In this regard, a centre of excellence for future industries will be established to coordinate and integrate best practices and research as well as provide support and training. The centre will establish strategic collaboration to optimise resources in conducting R&D&C&I activities.

In the *agriculture sector*, research will focus on developing new crop varieties, livestock and fish breeds, methods of planting and niche export products, as well as ensuring affordable, healthy and safe agriculture produce. Research will be intensified through greater collaboration between local and international research institutions. In accelerating the development of the private healthcare subsector under the *services sector*, a more coordinated research in T&CM will be conducted through private sector led collaboration with the research institutions. The research will focus on high-value and complex products as well as quality control and safety, utilising advanced medical technology along the value chain.

Accelerating Talent Development

The skills and capability of the workforce will be uplifted to enable all economic sectors to move up the value chain. In the *agriculture sector*, the training curricula and modules will be reviewed to produce certified and highly knowledgeable agriculturists to meet current and future demand. A professional body will be established to recognise trained and experienced farmers, farm experts, agricultural technicians and scientists, as professional agriculturists to elevate the standing, image and recognition of the agriculture sector workforce.

Industry players in the *construction sector* will be encouraged to share resources and partner with training institutions in providing industrial training for workers and students on the latest applied technology. In addition, university-industry linkages will be strengthened by embedding industry input and expertise in the field of study and training to keep abreast with the rapid technological changes. Industry players will also be encouraged to leverage training and accreditation programmes offered by the Construction Industry Development Board to upskill existing workers, in producing qualified local talent in the sector.

Industries in the *manufacturing sector* will be encouraged to collaborate with skills training institutions in designing customised training programmes to accommodate their respective needs in moving up the value chain. Efforts to uplift talent will also focus on expanding the provision of micro-credentials programmes to meet the current reskilling and future skills requirements. Under these programmes, workers will be trained to acquire additional skills set, such as software coding or data analytics modelling beyond traditional disciplines to meet market demand.

The shift to a knowledge-based *services sector* requires talent in this sector to be equipped with the latest professional and practical skills. In this regard, a new SSB will provide the strategies for talent development programmes in the services sector. A holistic blueprint for business and professional services will also be formulated to guide the relevant stakeholders in upskilling the talent with automation tools and advanced technology in embracing 4IR.

Strategy A3

Strengthening Financial Capability

The financial capability of some stakeholders, particularly farmers, entrepreneurs and MSMEs will be strengthened to facilitate the adoption of emerging technology along the value chain to increase productivity. Measures will include enhancing existing incentives and introducing new financing mechanisms for technology adoption. These initiatives are expected to attract quality investment and produce more high value-added products, while addressing issues related to food security, healthcare and overdependency on low-skilled labour.

Enhancing Incentives and Financial Assistance

Incentives and financial assistance in all economic sectors will be enhanced to promote quality investment based on a performance-based approach. In the agriculture sector, financial incentives for investment, including in building, machinery, training and utilities will be reviewed to catalyse the transition from traditional to modern agriculture. The subsidy and incentive disbursement mechanisms will be rationalised from input-based to performance- and output-based. This rationalisation is expected to minimise leakages and enhance productivity, thus increasing the income of farmers. The *Skim Tanam Semula* (STS)[7] will be implemented and an endowment fund will be established to improve the replanting financing mechanism. FELDA settlers will be the pioneers of this new scheme before rolling it out to all smallholders.

In the *manufacturing sector*, performance-based incentives will be emphasised with clear KPI, validity period and exit policy to increase productivity. The Automation Capital Allowance will be improved in terms of quantum and mechanism to allow manufacturers to further diversify into high value-added and complex products. In addition, the promoted list for tax incentives in the Promotion of Investment Act 1986 will be updated to encourage industries to diversify the product base and increase productivity. Concurrently, measures will be undertaken to increase the uptake of matching grants through collaboration with financial institutions.

Initiatives to spur growth in the *services sector* will continue to focus on attracting quality investment, particularly in the modern services subsector by improving existing incentives. In the private healthcare subsector, existing tax incentives will be revised to attract involvement of more research-based organisations and increase foreign direct investment (FDI) in clinical research. This is to promote Malaysia as a regional hub in clinical research, especially in the fields of cardiology, oncology, rheumatology, fertility and genetic diseases. At the same time, efforts will be undertaken to increase domestic investment in the pharmaceutical industry through commercialisation of R&D findings to secure sustainable medicine supply in Malaysia.

The adoption of digitalisation in teaching and learning is vital to enhance competitiveness of the private HEIs. In this regard, the private HEIs, particularly MSMEs will be encouraged to utilise existing financing facilities to upgrade and modernise ICT assets as well as digitise teaching content. This initiative will enable private HEIs to improve quality and expand online teaching and learning for better outcomes.

Introducing New Financing Mechanism and Incentives for Technology Adoption

A new financing mechanism and incentive structure will be introduced to accelerate the development of high potential industries across the economic sectors, particularly in adopting 4IR technologies. A dedicated smart farming fund will be established to accelerate the adoption of modern technology in the agriculture

[7] The Replanting Scheme (STS) is a monthly fixed contribution by smallholders comprising of investment to finance replanting and life insurance elements.

sector. This fund will offer opportunities for farmers, especially for youth agropreneurs and smallholders to modernise farming activities along the value chain in ensuring food security. Incentives will be introduced in the *construction sector* to encourage adoption of technology, such as IBS, BIM and modular construction. Mechanisation and automation in this sector will expedite project completion, ensure resource and cost efficiency while maintaining quality. This will also reduce dependency on low-skilled workers.

Malaysia is expected to become an aged nation by 2030, thus innovative solutions are required to ensure the population continues to be productive. In this regard, financial incentives will be introduced to promote adoption of advanced healthcare technology among private aged healthcare facility providers. This technology, which include robotics, VR and AR, will contribute to a healthier and more productive aged society.

Strategy A4

Scaling Up Successful Productivity Nexus

Under the Twelfth Plan, the Productivity Nexus model will be further leveraged to drive the implementation of productivity initiatives at the sectoral level. These initiatives will be undertaken through close collaboration among government, private sector and academia. Successful initiatives and programmes under the existing nine Nexus will be scaled up to boost overall productivity.

Expanding the Coverage of Productivity Nexus

The Productivity Nexus model, where the private sector takes the lead in formulating and implementing productivity improvement programmes at the sector level will be extended to cover more sectors. At least two new Productivity Nexus will be established during the Twelfth Plan, namely construction and logistics services. These two sectors have strong linkages with other sectors and contributed 7.1% to the GDP and 12.9% of total employment in 2020.

Enhancing Effectiveness of Productivity Nexus Initiatives

A comprehensive review will be carried out to assess the effectiveness of initiatives and programmes under the nine Productivity Nexus. Ineffective programmes will be rationalised to ensure resources are channelled to programmes that have greater impacts in improving enterprise productivity. The initiatives and programmes that have a significant impact on productivity improvement will be rolled out to benefit more enterprises across the nation. A comprehensive mechanism will also be established to facilitate the scaling up of these programmes.

Strategy A5

Scaling Up Green Practices

Green practices will enhance efficiency in resource utilisation, thus contributing to higher productivity, protecting the environment and sustaining natural resources for inter-generational use. In this regard, focus will be given in accelerating the adoption of green practices among industries and enhancing the related implementation mechanisms. The implementation of green practices across all sectors of the economy is intended to build long-term resilience, generate sustainable businesses and new economic opportunities as well as provide societal and environmental benefits.

Accelerating the Adoption of Green Practices among Industries

Industries will be encouraged to accelerate the adoption and implementation of green practices, particularly sustainable consumption and production (SCP) practices. The expansion of green procurement initiatives will increase demand for green products and services, and catalyse the industries to shift towards green practices. Industries will be urged to procure and utilise local green products and services, which will contribute in expanding the green market. In addition, industries will be encouraged to implement the circular economy concept throughout the products and services value chain. This will lead to optimisation of recycled materials used in the production cycle, thus reducing demand for raw inputs. The triple helix collaboration in R&D will be strengthened to increase innovation and commercialisation of green products as well as transfer best practices into mass-production for higher productivity.

Sustainable agriculture will improve food safety and security as well as minimise its impact on the environment. Efforts to inculcate green practices in the *agriculture sector* will be intensified by encouraging farmers to adopt good agriculture practices such as myGAP, MSPO and Malaysian Organic (myOrganic). In addition, agriculture procurement for contract farming will be leveraged to promote adoption of green practices. This initiative will enable agricultural cooperatives and associations to facilitate farmers in adopting smart farming and environment-friendly farming practices.

Enhancing Implementation Mechanisms for Green Practices

A short-term action plan and a guideline on government green procurement (GGP) on works will be introduced to encourage green practices in the *construction sector*. A nationwide implementation of the GGP on works, including procurement of green labelled materials, will catalyse the shift towards more sustainable and green construction practices. Industry players will be urged to adopt green certification and performance tools for new development projects as well as renovation and retrofitting works. The tools, include the Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST), Sustainable INFRASTAR, Malaysia Green Highway Index, GBI and BIM.

The global demand for products in *manufacturing sector* is shifting to more durable and resource-efficient goods that are repairable, reusable and recyclable. In this regard, the circular economy model will be promoted through a structured mechanism to enable industries in adopting sustainable manufacturing processes, reducing the use of raw materials and increasing the use of recycled materials. The implementation of the National Policy of Remanufacturing will help industries to embark on the circular economy through the remanufacturing of products. Under this policy, the focus will be on five sectors namely, aerospace, automotive, electronics and information technology, marine as well as M&E. In addition, the adoption of the eco-industrial parks concept which embodies the circular economy model will be made a pre-requisite for the development or new industrial parks. Existing industrial parks will also be encouraged to adopt the model, by promoting collaboration among tenants in these parks in managing resources and environmental issues efficiently. In addition, industry players will be required to adopt the environment, social and governance (ESG) elements in their business practices. The adoption of the ESG in the manufacturing and related sectors will promote the low-carbon and climate-resilient economy.

Priority Area B

Expanding Export Markets

A stable and healthy market is important to stimulate sectoral growth and achieve sustainable economic development. In this regard, the role of GLCs will be enhanced while a more fair and healthy competitive environment will be encouraged to improve market efficiency for the private sector to expand into domestic and international markets. Measures to expand domestic and export markets will focus on improving market efficiency, empowering role of industry players and strengthening trade facilitation.



Strategy B1

Improving Market Efficiency

Market efficiency is crucial in ensuring industries gain wider market access and attain higher growth, to remain competitive and sustainable. Initiatives to improve market efficiency will encompass connecting suppliers directly to consumers through digital platforms and enhancing supply chain sustainability. Efforts will also be undertaken to position Malaysia as a regional logistics hub, capitalising its advantage of good connectivity in the Asia-Pacific region. These initiatives will offer a wide range of opportunities and create a more efficient network effects.

Connecting Suppliers and Consumers through Digital Platforms

In the *agriculture sector*, farmers will be encouraged to leverage eCommerce platforms to facilitate direct sales and enhance traceability of agricultural products. In this regard, related infrastructure and facilities will be improved to enable more farmers to have direct access to market the products. In addition, collaboration between eCommerce companies as well as agricultural cooperatives and associations will be established to enable farmers in the rural areas to participate in the online market. Agricultural cooperatives and associations will also be encouraged to utilise eCommerce market places to increase exports to new markets. An online auction platform will be developed for a number of agricultural products to facilitate transparent transactions, thus improving the efficiency of the market and eradicating price manipulation by middlemen. Farmers will also be able to better manage production risk through this platform, allowing more contract farming and joint ventures for the supply of agricultural produce. These efforts will lead to improved market efficiency, induce higher productivity and expand market access for farmers.

Enhancing Supply Chain Sustainability

The *manufacturing sector* supply chain will continue to be enhanced to produce basic inputs for manufacturing products. In this regard, initiatives will be undertaken in mapping and identifying gaps in the existing supply chain to ensure its sustainability. New investment as well as mergers and acquisitions (M&A) will be promoted in addressing the gaps. In addition, Malaysian companies will be encouraged to increase cooperation with foreign companies to facilitate the transfer of technology and knowledge, and develop a skilled domestic workforce.

Positioning Malaysia as a Regional Logistics Hub

In the effort to position Malaysia as a regional logistics hub, ease of doing business, including regulatory procedures will be improved to facilitate domestic players as well as attract global players to base their operations in the country. An efficient supply chain management and regional distribution centres will be established to provide comprehensive services to consumers. Logistics services providers will be encouraged to adopt best practices and emerging technology as well as introduce new ways of doing business. Multimodality will be promoted to establish a well-integrated logistics and communication network to ensure an efficient and advanced supply chain. Industry players will be encouraged to form alliances, including through M&A to become fourth-party logistics (4PL) providers to manage and control all activities within the supply chain network and serve as a single point of contact for customers. Establishing Malaysia as a regional hub will increase the competitiveness of industry players and expand the market share in the region.

Strategy B2

Empowering Industry to Compete in the Domestic and Global Markets

The capacity of industry will be strengthened to enhance competitiveness and sustainability of local industries. This will be undertaken by encouraging collaboration among industry and scaling up capacity and capability of industry players to increase export market share. These efforts will enable the industry to participate effectively in the domestic and global market.

Encouraging Collaboration among Industry

Efforts will be intensified to increase collaboration among industry players, including through smart partnerships, to enhance market access. The contract farming approach will be further expanded in the *agriculture sector*. Through this approach, anchor companies or agricultural cooperatives and associations will provide greater market access for smallholders, particularly for high value agricultural products. This will generate higher income for the farmers.

In the *manufacturing sector*, multinational companies (MNCs) will be incentivised to collaborate with MSMEs to strengthen backward linkages to assist MSMEs in participating in the global value chain. This collaboration will expedite technology transfer to domestic firms. In addition, MSMEs will be encouraged to leverage industry associations to obtain marketing advisory services and information in increasing market access.

Scaling Up Capacity and Capability of Industry Players

The ability of industry players to venture into the international market is highly dependent on capacity and capability to fulfil the expectations of the global value chain. In this regard, a consortium of industry players in the *construction sector* will be established to integrate various local industry players, including contractors,

suppliers and financiers, to bid for international projects. Establishment of the consortium will allow the industry players to capitalise on individual strengths and create synergistic value to enhance competitiveness.

GLCs play an important role to assist small firms in increasing market shares and creating local brand visibility abroad. Towards this end, GLCs will be encouraged to implement hand-holding programmes for SMPPs in the *services sector*, particularly the business and professional services subsector. This will reduce GLCs dependency on foreign professional talent while creating more opportunities for SMPPs to grow. Meanwhile, SMPPs will be encouraged to form companies through M&A in establishing strong multi-disciplinary enterprises as well as digitalise and adopt advanced technology. This will enable SMPPs to keep abreast with rapid technological advancement and enhance competitiveness. In this regard, tax incentives will be considered for M&A companies to adopt digital technology. These initiatives will enhance capacity and capability of SMPPs to expand in the domestic market and penetrate into the international market.

A national oil and gas services and equipment (OGSE) industry blueprint, which will serve as a guide for the development of the industry, will be formulated. The blueprint will provide strategic direction to improve competitiveness, efficiency and technological capability of local OGSE industry players. Through these improvements, the local OGSE industry players will be able to upscale services and undertake complex jobs domestically and internationally.

Strategy B3

Strengthening Trade Facilitation

Effective trade facilitation will ensure seamless movement of goods and services between countries. During the Plan period, focus will be on leveraging trade agreements, and intensifying marketing and export promotion. These initiatives will enable exporters to access wider markets, enhance trade activities and increase overall visibility of local products and services internationally.

Leveraging Trade Agreements

Malaysia has implemented various trade agreements to expand and promote international trade. MSMEs, SMPPs and mid-tier companies in all sectors of the economy will be encouraged to maximise opportunities from existing FTAs, bilateral agreements and economic partnerships with other countries. Industry players will be provided with advisory services and comprehensive information relating to foreign market as well as market intelligence. In addition, new bilateral and multilateral agreements with potential trading partners will be explored. The Regional Comprehensive Economic Partnership agreement, which potentially provides preferential market access to 45% of the world's population, is expected to be ratified and implemented in the Twelfth Plan period. Several potential FTAs are currently being negotiated and will be among the priorities to be leveraged. These trade agreements will open up greater opportunities for local industries to penetrate the global market.

Intensifying Marketing and Exports Promotion

Trade missions will be further streamlined to play an effective role in intensifying marketing and promotion efforts. Export promotion efforts will be enhanced to increase exports of high value products to traditional and new markets. Premium and high value agricultural produce, such as birdnest, Musang King durian and MD2 pineapple will be actively promoted through various platforms. Agricultural exporters will be encouraged to comply with Malaysia's Best standard, which meets internationally recognised myGAP and myOrganic standards, as well as Grading, Packaging and Labelling of Agricultural Products Regulation to ensure market acceptance. Meanwhile, concerted efforts to counter the discriminatory campaigns against Malaysia's agricommodity products, particularly on palm oil and timber will be continued. These include intensifying programmes to ensure full adoption of the MSPO among smallholders by the end of 2021.

Continuous efforts will be undertaken to facilitate industry players in the *manufacturing sector* to penetrate into markets of major trading partners. The National Trade Blueprint (RTPN) is designed to improve the business ecosystem and enhance the competitiveness of Malaysian exporting companies by focusing on trade regulations, logistics and market access. In addition, the Mid-Tier Companies Development Programme and Going Export (GoEx) Programme will be enhanced to enable local companies to export high value-added products. Manufacturers will also be encouraged to create strong brand propositions for local products to increase international recognition. The Malaysian brand will be promoted globally as a brand for quality products.

In the *services sector*, efforts will be undertaken to increase export of local products and services to further reduce the services trade deficit. For private healthcare subsector, Malaysia healthcare brand visibility will be strengthened by intensifying marketing and promotion digitally. Moving forward the industry will shift its focus on promotion of high intensity revenue services such as fertility and oncology, as well as strengthening existing network and channels through strategic partners in identified key markets especially ASEAN and Middle East. The potential of private HEIs will be leveraged by introducing niche programmes to attract international students. Strategic collaboration between private HEIs, and large corporations as financial partners, will be encouraged. This collaboration will mutually benefit both parties by improving the sustainability of the private HEIs and ensuring the right talent for the corporations. Meanwhile, the various export initiatives and programmes in the retail and F&B subsectors, including the Enhanced Franchise Development Programme and the Product Transformation and Distribution Programme will be enhanced to improve their effectiveness. Measures will also be implemented to uplift the brand image of local products and services to increase international market presence.

The existing services export fund will be expanded to cover the business services focusing on high potential activities, while the implementation and monitoring of the fund will be strengthened. These will increase the utilisation rate and enhance the effectiveness of the financing facility. Mandatory reporting by fund recipients will be imposed to track the performance and to get timely feedback to facilitate necessary intervention measures. This initiative will strengthen the capability of local service providers to penetrate the international market.

Priority Area C

Strengthening the Effectiveness of Financial Intermediation Ecosystem

An effective and resilient financial intermediation ecosystem is key to support the sustainable growth of the economy and development of society. This is particularly critical as countries, including Malaysia, respond to and recover from the economic and social impact of the global health crisis and other adverse shocks. The launching of third capital market masterplan and the new blueprint for the financial sector will serve to steer the direction of the overall financial system over the next five years. Emphasis will be on transforming the financial ecosystem to meet future economic needs, enhancing resilience and governance, as well as promoting a sustainable and inclusive financial system.



Strategy C1

Transforming the Financial Ecosystem to Meet Future Economic Needs

Efforts will be undertaken to ensure that the financial ecosystem is able to meet future needs of the economy. These efforts will be premised on promoting greater innovation and enhancing competitiveness of the financial services sector, as well as facilitating

wider avenues of financing across the life cycle of all businesses. Taken together, these initiatives will transform the financial ecosystem to become more vibrant, efficient and technology-enabled.

Promoting Innovation and Competitiveness to Enhance Efficiency

As economic growth is increasingly driven by advancement in technology and knowledge-intensive activities, efforts will be focused on facilitating innovation and technological applications in the financial services sector. The adoption of e-payments in the economy for more seamless and secure financial services experience will also be expanded and accelerated. Incumbents in the financial system will therefore need to adapt and digitise to remain relevant, while measures will be undertaken to facilitate greater industry digitisation to improve overall efficiency of the financial services.

To infuse competition and foster greater innovation, efforts will be undertaken to facilitate entry of new players such as digital banks, digital insurers, robo-advisors and digital brokers, as well as support market participants in embracing new innovative business models. Enhancements to key enabling infrastructure, regulations and practices will also be pursued, including implementation of an effective cyber security framework to promote greater efficiency, safety and resilience. There will also be continued efforts to enhance regional connectivity and linkages to attract greater foreign capital and knowledge transfer into the country.

Facilitating More Financing across Business Life Cycle

Differentiated market-based fundraising avenues will be further expanded to cater to the fundraising needs of MSMEs across their growth cycle, as well as more mature companies seeking regional expansion. This entails the development of a vibrant alternative financing to complement the banking system, as well as reinforcing consumer protection in the provision of credit, given the growing number of non-traditional entities. In addition, efforts to enhance the provision of microfinancing to these enterprises will continue to be pursued. Alternative financing will enable greater opportunities for businesses as well as investors seeking portfolio diversity. It is envisaged that these efforts will promote greater efficiency in intermediating risk capital to mobilise savings into high potential growth sectors of the economy.

Strategy C2

Enhancing the Resilience and Governance of the Financial System

Strengthening the resilience of the overall financial system is critical against the backdrop of increasing volatility and greater uncertainties in the global financial system. Focus will be given on strengthening safeguards for financial stability and enhancing good governance. This will ensure resilience and integrity of the financial system.

Strengthening Safeguards for Financial Stability

A more collaborative approach among regulatory authorities within and beyond the country will be adopted to strengthen regulatory enforcement, given the growing recognition that financial markets are increasingly fragmented, with a greater number of non-traditional players providing borderless services. In keeping up with technology advancement and proliferation of data, tools and mechanisms relating to regulatory technology (regtech) and supervisory technology (suptech) will also be developed to enhance the effectiveness and efficiency of regulators' role and functions.

Enhancing Good Governance in the Financial Sector

Regulatory and supervisory focus towards inculcating good culture and conduct within the financial sector will be enhanced through more outcome-focused regulatory action to shape market and institutional behaviour. This includes greater emphasis on strengthening investor confidence in listed companies through effective discharge of directors' duties and responsibilities. In addition, the role of institutional investors in good governance and stewardship will be enhanced, and holistic anti-corruption measures will be implemented within the capital market.

Strategy C3

Promoting a Sustainable and Inclusive Financial System

The financial sector plays a critical role in advocating sustainable and inclusive finance. This includes efforts to promote Islamic finance, advance financial inclusion and literacy among the wider population, as well as enhance sustainable financial services.

Promoting the Islamic Finance Agenda

Moving forward, Malaysia aims to sustain its position as a leading international Islamic financial centre. Efforts to consolidate Malaysia's role as a prominent thought leader in Islamic finance, particularly in the areas of regulation and supervision will be intensified. Additionally, the adoption of value-based intermediation (VBI) principles in the provision of finance will be expanded. On this, Islamic financial institutions have been exploring the usage of social finance instruments through blending endowment *(waqf)*, donation *(sadaqah)* and alms-giving *(zakat)*, to further unlock and more effectively mobilise resources towards provision of financing and financial protection to low income communities. Backed by strong global leadership track record in Islamic capital markets, Malaysia is well-positioned to further innovate in this space. In this regard, measures will be undertaken to develop more innovative market-based mechanisms and products, leveraging on Islamic fintech, to better serve the needs of a wider financial market and the economy at large.

Advancing the Financial Inclusion and Literacy Agenda

Advancing the financial inclusion agenda remains a key priority to ensure all Malaysians have meaningful access to quality and affordable financial services, with emphasis on innovative financial solutions, technology-led modes of delivery and assessment tools. The offering of micro-insurance and micro-takaful products will be expanded, while instituting measures to ensure long-term sustainability of medical health insurance and takaful for the population. Efforts will also be accorded to expedite reforms and address structural issues that hinder the financial inclusion agenda, such as inadequacy of financial safety nets to buffer B40 households from income shocks. This will be pursued in collaboration with key strategic stakeholders for effective outcomes. At the same time, initiatives under the National Strategy for Financial Literacy will continue to be pursued to further improve financial literacy among Malaysians.

Enhancing Sustainable Financial Services

Malaysia has made important strides in integrating ESG considerations into business practices and investment considerations of companies and financial service providers. The financial system will play a catalytic role in transforming Malaysia into a low-carbon economy. Recognising the urgent need to accelerate and ensure a smooth and orderly transition, a committee comprising of Bank Negara Malaysia, the Securities Commission Malaysia and the financial industry, will drive and support climate change actions within the sector. This committee will focus on risk and data management, governance and disclosure, product and innovation, as well as engagement and capacity building.

Islamic finance was developed with an overarching objective that emphasises positive value creation and prevention of negative impact. Islamic financial institutions are primed to advance the sustainability agenda, through initiatives such as the VBI framework. Through VBI, Islamic finance will bring various stakeholders together to advance the sustainability agenda. VBI also encourages Islamic financial institutions to assess how they create value and impact, particularly in response to changing economic, social and environmental conditions. This will support the socioeconomic development in line with Malaysia's long-term agenda of economic growth and shared prosperity for all. In addition, efforts to develop a facilitative Sustainable and Responsible Investment (SRI) ecosystem under the SRI Roadmap will also be intensified. Islamic finance will also be leveraged to further advance SRI solutions. This will include broadening Islamic capital market products and services to further support social finance activities, such as *waqf*, for the greater good of society.

Priority Area D

Strengthening the Role of Industrial Estates and Food Production Areas

The development of industrial estates and dedicated food production areas have been recognised as one of the important platforms in attracting investments especially high-tech investments. For Malaysia, industrial estates have played an important role in boosting rapid development in a number of selected industries, promoting the decentralisation of development and accelerating regional growth. Under the Twelfth Plan, focus will be given on enhancing the role of industrial estates as growth catalyst and achieving a more balanced industrial development. Hence, initiatives will be intensified to improve the attractiveness and investments in these areas.



Strategy D1

Enhancing the Role of Industrial Estates and Food Production Areas as Growth Catalyst

Measures will be undertaken to better plan, coordinate and manage the development of industrial estates and dedicated food production areas throughout the country. The development will be in line with the aspiration of becoming a high-tech nation and the 2030 Agenda, particularly focusing on efficient management, adoption of advanced technology as well as environmental sustainability. Incentives and financial assistance will be reviewed to promote the development of these areas.

Enhancing Industrial Estates Development and Management

Resilience of industrial estates depends on a sustainable ecosystem. Recognising this, the development of industrial estates will be promoted based on the green industry concept. Through this concept, sustainable practices will be incorporated in increasing economic prosperity with minimal environmental and social impact. A comprehensive guideline on eco-industrial parks will be introduced to be adopted by industrial estates.

Development of new industrial estates will be based on prospective demand and tailored to the actual needs of investors. A policy framework will be formulated to guide the developers in the planning, development and operation of these estates. This framework will enhance backward linkages and efficient maintenance of industrial estates in creating a conducive investment ecosystem. Developers will be encouraged to conduct comprehensive feasibility and market studies to reduce the potential risks of underutilisation of industrial estates. Meanwhile, a comprehensive review will be undertaken to revive the existing underutilised industrial estates.

The role of dedicated food production areas will be strengthened to increase participation of agropreneurs in modern farming. A comprehensive mechanism in developing and managing these food production areas, such as TKPM, Aquaculture Industrial Zones and Permanent Ruminant Production Parks will be formulated through collaboration between the Federal and state governments. Collaboration between the government, private sector service providers and agropreneurs will be intensified to facilitate adoption of modern technologies.

Strengthening Provision of Incentives and Financial Assistance

The provision of incentives and financial assistance for players in industrial estates, particularly those investing in advanced technology will be enhanced. Greater automation and technology utilisation along the value chain will drive productivity growth and reduce reliance on low-skilled foreign workers. Incentives will be redesigned to attract quality investments that utilise clean technology to ensure sustainable practices. Financial assistance will also be extended to agropreneurs in the food production areas to facilitate the adoption of smart farming practices for higher income and productivity.

Strategy D2

Achieving Balanced Industrial Estates Development

Industrialisation is an important enabler in regional development in ensuring a balanced and inclusive growth. In the Twelfth Plan, efforts will be undertaken to promote equitable development and improve industrial distribution in narrowing development gaps across regions and states as well as between urban and rural areas. A more dispersed industrial development will enable better utilisation of local resources and spur greater economic activities through the spillover effects.

Promoting Equitable Industrial Development

The development of industrial estates, particularly in less developed states will be complemented by a number of facilities and supporting infrastructure. As such, industrialisation roadmaps will also be formulated including for Sabah and Sarawak to ensure the development of industrial estates is based on local strengths and capabilities. In addition, the existing investment incentive mechanism will be improved to ensure less developed regions or states are given priority in getting special incentives. This will improve the investment ecosystem and attract new investors to conduct business and operations in less developed regions.

Improving Industrial Distribution for Balanced Development

A more balanced distribution of industrial development in terms of types of industries and activities will facilitate a more balanced economic development. The success of developing catalytic industries based on clustering concept in the Klang Valley, Johor and Penang will be replicated in the development of industrial estates in several other regions. In this regard, a mapping of potential industries based on local strengths and advantages will be undertaken. This will ensure high value economic activities are not concentrated in specific regions.

Priority Area E

Improving Governance and Policy

Strong governance accompanied by comprehensive policies and legislations that are responsive to changes will facilitate the economic sectors to move up the value chain and attract high quality investment. Measures will be undertaken to strengthen coordination and collaboration for more effective implementation, enhance roles and functions of institutions as well as strengthen policy and legislation. The implementation of the said measures will support these sectors to be more productive in driving the growth of the economy.



Strategy E1

Strengthening Coordination and Collaboration

Effective coordination and collaboration among stakeholders are critical in ensuring successful implementation of policies, strategies and programmes. Efforts will be undertaken to enhance the effectiveness of existing mechanisms and encourage the sharing of data and resources, which will enable stakeholders to improve quality of outcomes. Consequently, this will lead to optimal use of resources and improve decision-making in achieving higher growth.

Enhancing the Effectiveness of Existing Mechanism

A comprehensive approach will be adopted to reinvigorate the investment ecosystem and respond effectively to emerging megatrends as well as the evolving needs of investors. In this regard, the National Investment Aspirations (NIA) policy was introduced in April 2021 to promote sustained flow of quality investments. NIA will be the basis for comprehensive reforms of all relevant national policies and initiatives related to investment. Emphasis will be given on more targeted, relevant and effective investment promotion and facilitation strategies. In addition, this policy framework will act as a foundation for Malaysia to become a regional investment hub which will increase economic diversification, creating high value jobs, expanding domestic networks, creating new economic segments and enhance inclusivity.

The implementation and coordination mechanism will be strengthened to improve transparency and minimise redundancies. In this regard, the role of the Incentives Coordination and Collaboration Office (ICCO) as a coordinator will be augmented to coordinate and oversee all incentives across economic sectors. The effectiveness of the i-Incentives portal as a one-stop application portal for grants and funding provided by various ministries and agencies will be enhanced. Meanwhile, the existing state and district offices of the Ministry of Domestic Trade and Consumer Affairs will be leveraged as a single window to facilitate MSMEs in accessing services. These include assisting in registration of business and intellectual property, application of licenses and permits as well as obtaining information related to financial assistance.

Existing coordination mechanisms in the *agriculture sector* will be further leveraged to create better synergy among agencies involved in agricultural development to increase efficiency and effectiveness in service delivery. Business Development Centre will be set up in all states as a one-stop centre to provide multiple agricultural related services, such as agronomic advisory, licence and permit approvals as well as certification and marketing services. Strategic collaboration among ministries, state governments and agencies will be strengthened to improve efficiency in the marketing of agriculture products. This will be undertaken by capitalising the existing eCommerce platforms to provide opportunities for farmers to participate in promotion activities and increase visibility of agriculture products. The function of overseas missions will be streamlined to improve coordination in terms of export promotion activities, facilitating market access and dealing with trade-related matters.

Encouraging Sharing of Data and Resources

Availability of accurate and comprehensive data and information, as well as sufficient resources is vital in providing better services to customers. In the healthcare services subsector, an integrated data system encompassing the public and private sector will be developed to capture and manage comprehensive information, including health registries, disease surveillance and economic activities related to healthcare. This system will facilitate sharing of data and information between public and private healthcare providers. This will enable real-time data analysis to assist evidence-based, effective and accurate decision-making. Meanwhile, collaboration among private HEIs will be promoted in sharing resources, including facility and equipment to improve the quality of teaching and learning. In addition, the private HEIs will be encouraged to explore alternative financing, including *waqf* and crowdfunding in ensuring sustainability of the institutions.

Strategy E2

Enhancing Institutional Roles and Functions

The growth of the economic sectors needs to be governed by a comprehensive institutional framework and implemented efficiently with specific mandates. In the Twelfth Plan, focus will be given in addressing issues pertaining to fragmented governance and overlapping roles and functions. These include establishing a dedicated authority for mineral subsector and reforming existing institutions to enhance effectiveness and efficiency of service delivery.

Establishing a Dedicated Authority and Institutional Framework

Output of the mineral subsector is one of key inputs for industrial growth. Advancing the development of the subsector strategically will create opportunities to produce high value-added products at competitive cost for local industries. As such, a mineral industry development board will be established to systematically regulate and drive the development of a sustainable mineral subsector throughout the value chain. The board will also be responsible for

attracting investments in the midstream and downstream activities as well as encouraging the adoption of technology and intensifying collaboration in mineral-related R&D between local and international industry players.

A comprehensive institutional framework for professional services will be formulated to enhance SMPPs capacity and capability in expanding high value-added services. This framework will specify clear roles and functions of relevant agencies involved in planning, implementing and monitoring the development of professional services. This will increase domestic capabilities of SMPPs and enhance the ability to export their services, thus increasing their visibility in the global market.

Reforming Existing Institutions

The roles and functions of relevant agencies will be streamlined to improve service delivery, contribute to effective decision-making and optimise resources. The roles and functions of several agencies in the *agriculture sector* related to training, research and marketing will be reviewed and realigned in modernising the sector. This includes taking into account the needs for IR4.0 technology adaptation, extension services and private sector investment. In the *construction sector*, *Akademi Binaan Malaysia* will be enhanced as an internationally recognised training institution to produce high skilled technical talent. In addition, the roles and functions of the Construction Research Institute of Malaysia and the Centre of Excellence for Engineering and Technology will be streamlined through strategic collaboration to enhance the effectiveness of R&D in the construction sector.

Strategy E3

Strengthening Policies and Legislation

In embracing global trends and challenges, policies and legislations need to be more agile and responsive. In this regard, efforts will be undertaken to strengthen existing legislation as well as develop and review relevant policies. A conducive regulatory environment will facilitate sectoral transformation to move up the value chain.

Developing New and Reviewing Existing Policies for Sectoral Development

A robust sectoral policy is pivotal in the development of the economy by providing overall direction for sectoral development, enabling local industries to modernise and thrive, and ultimately contributing to higher employment and growth. Government agencies will be required to adopt Good Regulatory Practices (GRP) to increase transparency, especially in disseminating information related to changes in law and regulations. This will enable industry to keep abreast with the latest regulations in ensuring compliance.

In the *agriculture sector*, the National Agrofood Policy 2021-2030 (DAN 2.0), which is being formulated will focus on the application of modern technology in the agrofood subsector to attain higher productivity and income. The policy will focus on enhancing food security in Malaysia. An action plan on national food security is also being formulated and is expected to be finalised by the end of 2021. This action plan will identify initiatives that will strengthen the four pillars of food security namely availability, access, utilisation and stability. The action plan will achieve several outcomes including reduced dependency on food imports and sustainable production of food products. The implementation of DAN 2.0 will enable small farmers, through agricultural cooperatives and associations, to modernise and operate efficiently and effectively. The National Agricommodity Policy 2021-2030 (DAKN2030) is also being formulated to provide a new direction and targets to increase productivity, enhance downstream activities and promote the growth of new industries.

The gas subsector will continue to play an important role in supporting growth of the *mining sector* in tandem with the rising demand from industry. A roadmap will be developed to chart the direction of the natural gas industry in optimising demand growth, ensuring security of supply and liberalising the market to enhance efficiency and competitiveness. In addition, efforts will be undertaken to formulate strategies in capitalising potential of the gas subsector to position Malaysia as a regional gas trading hub.

A national policy on *construction sector* will be formulated to increase the resilience of the sector in responding to fast-changing demand and technological development. This policy will ensure higher standards of practice focusing on quality, safety and professionalism to promote productivity and sustainability. An implementation mechanism will be put in place to enhance coordination and streamline governance at all levels of government.

Relevant policies and regulations will also be introduced and reviewed in line with the Industry4WRD framework to support growth in the *manufacturing sector*. The new Industrial Master Plan which is being formulated will chart the direction of industry, including reinvigorating private investment. Efforts will be undertaken to encourage more domestic direct investment as well as quality FDI. Additionally, policies and regulations will be instituted to cater to the development of emerging technologies and strengthen intellectual property management and protection. Relevant policies will be reviewed and roadmaps will be developed for the catalytic subsectors, namely E&E, chemical and chemical products, M&E, aerospace, shipbuilding, pharmaceutical and medical devices. In addition, specific blueprints for the automotive value chain identified under the NAP 2020 will be formulated to promote the adoption of specific technologies and expand market segments.

Global megatrends are reshaping and modernising the *services sector*. In this regard, a new SSB, outlining the policy framework and strategic approaches will be implemented to further develop the sector. This blueprint will focus on the development of high potential subsectors to increase competitiveness and drive growth of the sector. It will include measures to develop skilled talent, increase investment and enhance access to digital solutions to support the growth of the subsectors. In addition, relevant infrastructure, which is critical to drive growth of the sector will be developed. Hence, the services sector will be more resilient to shocks and continue to be an important contributor to the national economy.

Strengthening Legislation

Good governance hinges upon the existence of a dynamic legislation framework. In this regard, several rules and regulations will be amended to modernise agricultural activities, increase food safety and nutrition safety requirements as well as address issues that hinder the development of the *agriculture sector*. A number of acts will be amended, including the Fisheries Act 1985, Federal Agricultural Marketing Authority Act 1965 and Land (Group Settlement Areas) Act 1960. Meanwhile, standard operating procedures and guidelines on best practices for the mineral subsector, particularly on the aspect of enforcement, land rehabilitation and sustainable practices will be reviewed and harmonised for implementation at state level. Related legislations will be formulated and reviewed in developing potential strategic minerals as well as minimising environmental impact from mining and quarrying activities.

In the *construction sector*, amendments will be made to relevant laws, while guidelines will be streamlined to realign the role of the Federal Government and local authorities. The Uniform Building By-Laws 1984 (UBBL) will be reviewed to accommodate the evolving construction technology and requirements. Accordingly, relevant guidelines will be streamlined to the amended UBBL to ensure compliance with standard practices in construction activities.

Self-regulation will be introduced to encourage adherence to legal and safety regulations, particularly in the wholesale and retail subsector. This will reduce the regulatory costs of doing business and improve market outcomes for consumers. Current regulations will be amended to fully empower the associations and federations to undertake the regulatory responsibility as well as enforce compulsory registration of businesses with the respective associations and federations. This amendment will allow respective associations and federations to directly monitor and penalise members for non-compliance. Meanwhile, acts and regulations related to private HEIs will be reviewed to align with current developments in the education services subsector. The amendments are crucial to enhance the governance of these institutions, improve the quality of services and increase the potential of private HEIs as an important industry.

Conclusion

During the Eleventh Plan, the agriculture, mining, construction, manufacturing and services sectors recorded moderate growth amid global uncertainties and trade tensions. The services and manufacturing sectors continued to be key contributors to the economy. However, all sectors continue to face several challenges that affect the ability to achieve their full potential. Besides confronting various issues related to technology, firm competitiveness, market access, as well as governance, these sectors have been adversely affected by the COVID-19 pandemic at the end of the Eleventh Plan period. Moving forward, the Twelfth Plan will give priority to boost productivity, expand market access, enhance financial intermediation, promote balanced industrial development as well as improve policy and governance. The implementation of the various strategies will restore the growth momentum, thus contributing towards development for all.

Chapter 3

Propelling Growth of Strategic and High Impact Industries as well as Micro, Small and Medium Enterprises



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3

Introduction

Given the increasingly challenging domestic and global economic landscape, it is vital to introduce appropriate strategies to sustain the growth momentum and strengthen resilience. During the Eleventh Plan, measures were undertaken to support economic development by strengthening industrial growth, expediting structural reforms as well as accelerating innovation and technology adoption. However, several challenges in terms of lacklustre industry development as well as uncompetitive micro, small and medium enterprises (MSMEs) remain and need to be addressed to realise their full economic potential. In addition, the COVID-19 pandemic has adversely impacted the performance of industries and MSMEs.

During the Twelfth Plan, initiatives will be undertaken to enhance the contribution of strategic and high impact industries in regenerating economic growth. These include electrical and electronics (E&E), global services[1] (GS), aerospace, creative, tourism, halal, smart farming and biomass. Efforts will also be undertaken to boost entrepreneurs capabilities and promote inclusive growth by strengthening MSMEs participation in the economy. The implementation of these initiatives will enhance competitiveness and strengthen resilience to achieve a high-income economy driven by advanced technology.

[1] High-value services that incorporate multiple functions and business services operating across the country with full control in the decision-making process, budget and reporting lines. These services include ICT, R&D, finance and accounting, human resources, procurement, legal, marketing, business analytics and shared support services across multiple locations within an organisation. Examples of global services are Principal Hubs, Global Business Services and headquarters operations.

Performance of the Eleventh Malaysia Plan, 2016-2020

Various initiatives were implemented to re-engineer economic growth for greater prosperity during the Eleventh Plan. Key strategies included strengthening sectoral growth and expediting structural reforms as well as accelerating innovation and technology adoption. Most of these strategic and high impact industries recorded steady growth, while MSMEs' contribution to GDP was on an upward trend. However, 2020 was a challenging year due to the COVID-19 pandemic that has caused massive disruption to economic activities, adversely affecting most industries and businesses.

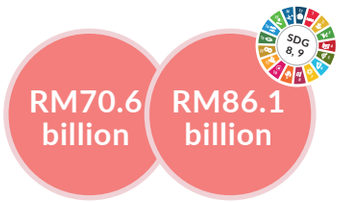
Performance of Selected Targets

During the Eleventh Plan, based on several indicators, strategic and high impact industries recorded significant improvements. In 2020, the tourism industry and MSMEs performed below target in terms of total inbound tourist expenditure, the contribution of MSMEs to GDP and total exports. The COVID-19 pandemic further made it impossible to achieve the targets as business operations were adversely affected which resulted in a permanent or temporary closure of businesses. The performance of these industries and MSMEs are as shown in *Exhibit 3-1*.

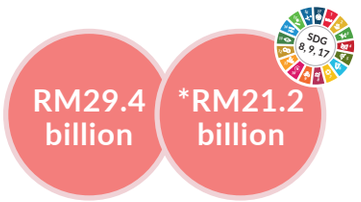
Exhibit 3-1

Eleventh Malaysia Plan: Performance of Selected Targets

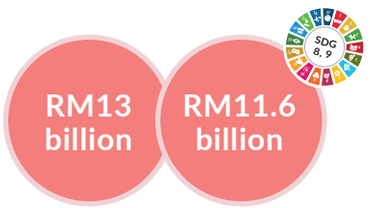
Performance of Strategic and High Impact Industries



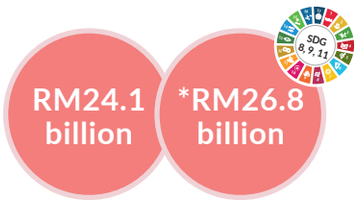
Electrical and Electronics
Contribution to GDP



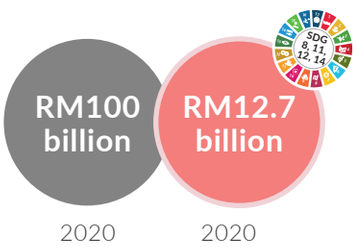
Global Services
Business Spending
* Preliminary data



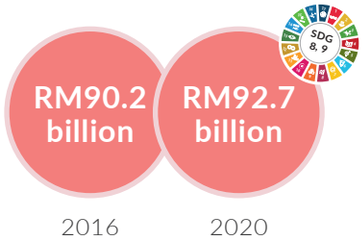
Aerospace
Total Revenue



Creative
Contribution to GDP
* Preliminary data



Tourism
Total Inbound Tourist Expenditure

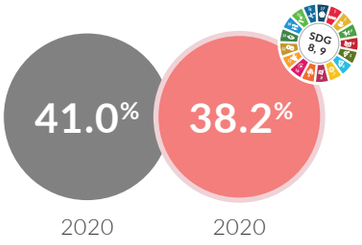


Halal
Contribution to GDP

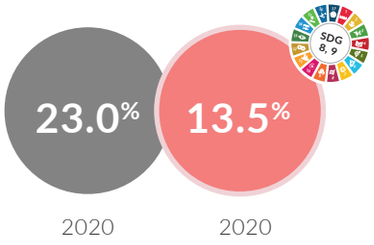


Biomass
Total Investment

Strengthening Sectoral Growth and Structural Reforms



MSMEs
Contribution to GDP



MSMEs
Contribution to Total Exports



Performance of Selected Initiatives

Electrical and Electronics Industry

The E&E industry in Malaysia is the catalytic sector that cuts across various other industries and has been a major contributor to the manufacturing sector. In 2020, the E&E industry contributed 6.4% to GDP, valued at RM86.1 billion. From 2016 to 2020, the E&E industry grew at 5.6% per annum, slightly higher than the manufacturing sector growth of 3.3% per annum. In addition, the E&E subsector dominated the country's exports with total exports share accounting to 45.6% or RM386.1 billion in 2020. A total of 577 E&E projects with investments of RM71.4 billion were approved between 2016 and 2020.

Global Services

Global Services (GS), which comprise Principal Hubs, Global Business Services (GBS) and headquarters operations, is the main contributor of foreign direct investments (FDI) in the services sector. Approved investments in GS by multinational companies recorded RM46.1 billion, which constitutes 51.7% of the total FDI in the services sector from 2016 to 2020. During the same period, 309 new GS ventures worth RM17.6 billion in realised investments were recorded. These realised investments have created 21,711 jobs, out of which 4,411 were high paying jobs with an average gross monthly salary of RM20,000. Total business spending from these ventures inclusive of capital expenditure amounted to RM46.3 billion, and another RM5.7 billion were spent on local ancillary services. To date, Malaysia is home to 579 GBS with MSC status while another 349 are various operational headquarters employing 146,478 knowledge workers.

Aerospace Industry

The aerospace industry evolved from a small and domestically focused to a globally recognised industry, guided by the Malaysian Aerospace Industry Blueprint 2030 (MAIB 2030). The blueprint outlined 5 strategic areas and 41 initiatives, which include enhancing effectiveness of institutions, developing human capital, capturing new markets and strengthening the supply chain. The aerospace industry, however, was heavily affected by the COVID-19 pandemic. In 2020, the total revenue generated by this sector declined to RM11.6 billion, in comparison with RM13 billion in 2016 and RM16.2 billion in 2019. Out of the 2020 total revenue, 49.9% was contributed by the aerospace manufacturing subsector and 42.2% by maintenance, repair and overhaul (MRO). The aerospace industry has employed more than 25,600 people as at 2020.

Creative Industry

The creative industry, which includes multimedia as well as culture, arts and heritage, is becoming increasingly important globally. The MyDigital Content programme has helped local animation companies to market creative products with intellectual properties (IP), such as *Upin & Ipin*, *Ejen Ali*, and Didi and Friends in penetrating local and global markets. Efforts to boost the culture, arts and heritage segment were undertaken to strengthen the contribution of this segment to support the creative industry. The creative industry grew at an average annual rate of 3.6%, from RM22.5 billion in 2015 to RM26.8 billion in 2020[2].

Tourism Industry

The tourism industry recorded positive growth from 2016 to 2019, mainly due to the growing size of the affluent middle-income population in Asia, greater connectivity, more affordable travel options and better economic conditions. In 2019, the gross value-added of the tourism industry (GVATI) was RM240.2 billion, compared with RM165.9 billion in 2015. Although tourist arrivals increased marginally by 0.4% per annum, from 25.7 million in 2015 to 26.1 million in 2019, total inbound tourist expenditure grew higher by 5.7% per annum, from RM69.1 billion to RM86.1 billion during the same period. Employment in the tourism industry also increased by 5.6% per annum from 2.9 million in 2015 to 3.6 million in 2019. The COVID-19 pandemic had adversely affected the tourism sector and most of the Visit Malaysia 2020 promotional campaigns and events were cancelled. It caused a sharp decline in tourist arrivals in 2020 to 4.3 million tourists, with total receipts of only RM12.7 billion compared with the target of 30 million tourist arrivals with a revenue of RM100 billion. The GVATI in 2020 also dropped 33.9% to RM158.9 billion, compared with RM240.2 billion 2019.

[2] Preliminary data by the Department of Statistics Malaysia, based on selected economic activities that contribute to the creative industry.

Halal Industry

During the Eleventh Plan, initiatives were undertaken to ensure an integrated and comprehensive development of the domestic halal industry. Efforts were focused on the development of halal standards and certification, branding and promotion as well as commercialisation of halal products and services. The total contribution of the halal industry to GDP in 2019 was 7.6%, valued at RM115.5 billion. Out of this, 69.3% was from the manufacturing sector and 30.7% from the services sector. The industry grew by an average of 5.5% per annum during the 2016 to 2019 period. In addition, the value of halal exports increased marginally by 0.8% per annum, from RM39.4 billion to RM40.6 billion during the 2016 to 2019 period. However, in 2020, the GDP contribution decreased to RM92.7 billion and exports declined sharply to RM30.6 billion. Cumulative investments in the 22 existing halal parks amounted to RM2.8 billion in 2020, out of which 55% were foreign direct investments. A total of 2,225 new companies received halal certification. These companies created an additional 160,337 job opportunities.

Smart Farming

Several measures were undertaken to drive the implementation of smart farming in the agriculture sector to increase the productivity and income of farmers. The Agriculture Flagship (AgF) system that supports analytical development and big data was developed to encourage farmers to adopt smart farming. In addition, farmers, as well as agricultural cooperatives and associations, received grants worth RM76 million for mechanisation and automation. In promoting smart farming, three pilot projects under the eLadang programme were undertaken to provide opportunities for farmers to adopt digital solutions along the complete supply chain. These pilot projects resulted in an increased yield of about 12% and reduced manpower by 50%. In the area of research and development (R&D), a total of 57 agricultural technologies worth RM16.7 million were developed and commercialised.

Biomass Industry

The potential of the biomass industry was leveraged in generating higher export of biomass-based products and contribute to reducing greenhouse gas (GHG) emissions based on the circular economy concept. On average, approximately 80 million dry tonnes of biomass were produced annually from oil palm plantations, of which five states, namely Sabah, Sarawak, Johor, Pahang and Perak accounted for 85% of the palm biomass. During the Eleventh Plan, a total of 29 biomass-based projects with investments amounting to RM1.0 billion were successfully implemented, of which RM534 million were from foreign investments. These projects created 1,122 job opportunities. The potential of this industry is yet to be fully leveraged as only about 15% of the available biomass was used. The production of biomass-based products was mainly concentrated on basic products, such as pellets, palm fibre, plywood, panels and biogas.

Micro, Small and Medium Enterprises

MSMEs continued to play an important role in economic development during the Eleventh Plan period. As of December 2020, a total of 1,151,239 establishments were categorised as MSMEs, constituting 97.2% of total registered companies. Of this total, 85.5% were in the services sector, 7.4% in construction, 5.1% in manufacturing, 1.7% in agriculture and 0.3% in mining and quarrying. In 2020, MSMEs contributed 38.2% or RM512.8 billion to GDP, compared with 37% or RM435.1 billion in 2015 while contribution to total exports accounted for RM117.8 billion or 13.5% in 2020, compared to RM145 billion or 17.7% in 2015. Additionally, employment in MSMEs increased to 7.2 million in 2020, from 6.5 million in 2015.

A total of 172 development programmes were conducted, benefitting about 220,000 MSMEs and more than 390,000 entrepreneurs and individuals, annually. The programmes focused on access to financing, market expansion, innovation and technology adoption as well as infrastructure and talent development. In addition, the *Dasar Keusahawanan Nasional* (DKN 2030) was launched in 2019, setting a direction to create a holistic and conducive entrepreneurial ecosystem to support the development of competitive and resilient entrepreneurs.

Issues and Challenges

Strategic and high impact industries played an important role in driving economic growth during the Eleventh Plan period. These industries have also contributed to the growth of MSMEs. However, there are several issues and challenges which impeded the growth of these industries and MSMEs. The key challenges are lacklustre industry development and uncompetitive MSMEs.

Issues and Challenges

Lacklustre Industry Development

Uncompetitive Micro, Small and Medium Enterprises

Lacklustre Industry Development

Despite the significant contribution to the economy, the *E&E industry* faces several challenges in maintaining growth and competitiveness globally. This industry is facing a shortage of skilled talent, especially for top-end design engineers and researchers, to meet industry needs. In addition, easy access to low-skilled foreign workers has discouraged the E&E industry from innovating and investing in automation as well as in new technology to produce high value products. The industry is also lacking in local R&D activities. Furthermore, the industry is mainly focused on back-end manufacturing activities such as assembly, testing and packaging, which are low in value-added, capital intensity and technology complexity.

In facing the rapid changes in business models and the dynamics of decision-making, companies globally are shifting to bundle key strategic services for business units into one single location. Although this trend brings opportunities for the establishment of more *Global Services* (GS) operations, Malaysia faces challenges in seizing these opportunities due to the lack of a supportive ecosystem. Among the challenges are a lack of clear and consistent policies, regulations that are not facilitative, shortage of talent, slow development of digital infrastructure as well as a lack of air connectivity to major cities.

The *aerospace industry* faces several challenges to remain competitive and sustainable. These challenges include the lack of technological capabilities in aerospace manufacturing, absence of an effective digitalisation strategy, and low adoption of Industry 4.0-based advanced technology. Additionally, MRO activities were concentrated on line and base maintenance with little participation in high value-added activities, such as component and engine repair. Outsourcing of component repair services to neighbouring countries increased the cost and turn-around time, which has made the local MRO industry less competitive. There is a lack of government-to-government (G2G) and government-to-business (G2B) collaboration to develop Malaysia as an aerospace hub. The industry also has yet to fulfil the Carbon Offsetting and Reduction Scheme for International Aviation's (CORSIA) requirement to reduce carbon dioxide emissions from the aviation sector.

The development of the *creative industry* is constrained by unclear definitions, poor governance, limitation in terms of financing, incentives and IP as well as lack of talent and capacity building. The National Creative Industry Policy 2010 (DIKN) encompassing three major fields, namely multimedia, cultural arts and heritage is not comprehensive in terms of scope and coverage. This has affected the planning and development of the creative industry as well as its ability to expand and explore new markets.

The existing government-owned facilities for culture, arts and heritage are not fully optimised due to the absence of a suitable mechanism for the utilisation of these facilities by the private sector. As a result, some of the demands by the public and tourists to view cultural performances have not been met. Public galleries, museums and libraries have also failed to attract visitors due to poor management and lack of collaboration with the private sector. Lack of promotion to instil an appreciation for local culture, arts and heritage among Malaysians has further affected the demand for these products. Branding, marketing and package development remain untapped avenues to increase product attractiveness.

The rapid evolution of creative technology is constantly shifting the production and consumption of digital media and content globally. However, the lack of local talent, as well as inadequate education and training programmes to keep abreast with this dynamic technology, have affected the growth of the creative industry. Lack of financial resources for marketing and promotion has also hampered the development of local digital content.

The *tourism industry* is losing its competitiveness as reflected by stagnant tourist arrivals between 2016 and 2019. This is partly due to the lack of product development and poor maintenance of tourist attractions. Malaysia's natural attractions, such as islands, beaches and highlands, face risk of degradation from poorly managed development activities. Many environmentally sensitive areas, such as marine parks, national parks and geoparks have yet to institute limits in terms of carrying capacity[3] and Limits of Acceptable Change[4] (LAC). In addition, available tourism packages, which do not fully capitalise on local culture, arts and heritage products, have failed to entice tourists in appreciating Malaysian culture.

Promotional activities via digital platforms have not been fully leveraged in capturing the right tourist segment. Conventional advertising methods, including billboards and print media, are still widely used, which serve only to create brand awareness but is ineffective in translating promotions into actual visitation. Meanwhile, the termination of many direct long-haul routes involving several countries by the national carrier in its efforts to downsize has affected tourism demand from these markets. Congestion and poor facilities at entry points have also affected tourist arrivals from neighbouring countries. Weak governance and insufficient engagement among stakeholders have rendered the tourism industry services inefficient and ineffective.

The *halal industry* continues to face several issues and challenges, both domestically and internationally. Domestic players lack the capacity to produce high value-added products and services that can meet the demands of the halal market. Lack of technology adoption, low strategic investment, shortage of talent as well as inadequate halal-related R&D&C&I are among the main issues that hinder the development of this industry. Limited halal MSMEs business networking, lack of global entrepreneurial mindset and low adoption of dynamic business models constrict market expansion. Domestic halal exporters face rising competition from the increasing number of foreign players with halal certification and the increasing number of halal certification bodies, including from countries with non-Muslim majorities. This has affected the Malaysian halal brand and products visibility.

Climate change, growing population and biodiversity loss are some of the macro challenges that require urgent attention. The adoption rate of modern technologies in the agriculture sector remains at moderate levels. This is contributed by various factors such as lack of holistic efforts to encourage *smart farming*, dependency on low- and semi-skilled labour, ageing farmers and lack of private sector investments. In addition, farmers are also confronted with several issues in adopting smart farming including the lack of technical knowledge, fragmentation of information, higher deployment cost and poor network connectivity to support smart technologies.

The *biomass industry* in Malaysia faces several issues and challenges. The lack of a comprehensive master plan to guide biomass development has led to the uncoordinated implementation of the initiatives to promote the industry. In addition, the absence of an effective business model throughout the value chain has resulted in low investments. Plantations and mills also lack logistical support for the collection of biomass feedstock from scattered locations for centralised processing.

[3] The maximum number of people that may visit a tourist destination at the same time, without causing destruction of the physical, economic, and sociocultural environment, and an unacceptable decrease in the quality of visitor satisfaction (United Nations World Tourism Organisation).

[4] Limit on how much an area can tolerate a change due to a variety of tourist activities and development.

Inadequate information on the availability of technologies and market potential has resulted in low investments in the biomass production chain. In addition, the long lead time and high capital expenditure required for the adoption and development of biomass technologies have contributed to the slow growth of the industry. As a result, this industry has only produced low-value biomass products, which are mostly generic and highly substitutable, making the industry less competitive.

Uncompetitive Micro, Small and Medium Enterprises

MSMEs remain uncompetitive due to low technology adoption, lack of skilled talent and management know-how, as well as facing constricted access to finance. The low adoption of technology and high dependency on unskilled workers have widened the productivity gap between MSMEs and large firms, and render local MSMEs uncompetitive globally. In addition, there is poor understanding among MSMEs regarding processes and compliance to requirements to secure funding. Existing rules and legislation pertaining to business financing procedures are not supportive in promoting sustainable growth of MSMEs and innovation-based entrepreneurship. The lack of holistic and integrated entrepreneurial development programmes have impeded market expansion, innovation and sustainability. The COVID-19 pandemic has further affected the performance of MSMEs arising from lower demand for goods and services and disruption in the supply chain.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The aerospace and tourism industries have been adversely affected by the COVID-19 pandemic and will take some time to recover. Thus, strategies for the aerospace industry in the Twelfth Plan will focus on laying a stronger foundation for recovery to seize future growth opportunities in the post-pandemic global market. The tourism industry will be re-energised in the Twelfth Plan as it is a substantial contributor to foreign exchange earnings and has high spillover effects on other sectors.

E&E, GS, creative, halal, smart farming and biomass are strategic industries and activities that will be further developed in generating high value-added activities and products, advanced technology adoption, R&D and innovation and quality employment opportunities. In the Twelfth Plan, efforts will be focused on transforming these industries and activities to be more sophisticated and driven by advanced technology.

The Twelfth Plan will focus on propelling a number of potential growth drivers leveraging advanced technology and digitalisation in line with the National Fourth Industrial Revolution (4IR) Policy and the Malaysia Digital Economy Blueprint. In this regard, the development of strategic and high impact industries will be accelerated, while the capabilities of entrepreneurs and enterprises particularly MSMEs will be enhanced. The successful implementation of these measures will strengthen the competitiveness and resilience of the economy and position Malaysia as an important player in the global supply chain for complex and high value-added products and services.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Propelling Growth of Strategic and High Impact Industries as well as Micro, Small and Medium Enterprises

Priority Area A

Accelerating the Development of Strategic and High Impact Industries

Strategy A1
Boosting Electrical and Electronics Industry in Moving up the Value Chain

Strategy A2
Enhancing Competitiveness of Global Services

Strategy A3
Establishing a Sustainable Aerospace Industry

Strategy A4
Maximising the Potential of the Creative Industry

Strategy A5
Re-energising the Tourism Industry

Strategy A6
Fostering Competitiveness of Inclusive Halal Industry

Strategy A7
Intensifying Smart Farming Activities

Strategy A8
Realising the Potential of Biomass Industry

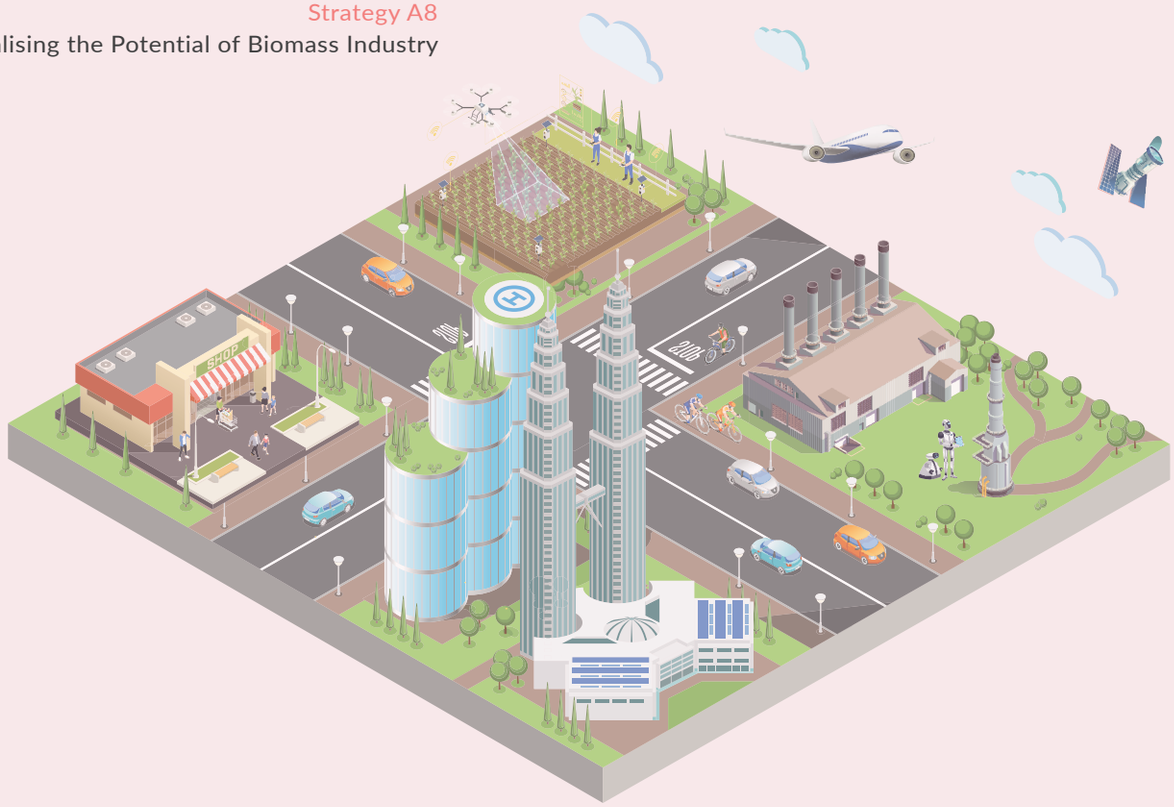
Priority Area B

Boosting Capabilities of Entrepreneurs and Enterprises

Strategy B1
Creating Innovative and Sustainable Entrepreneurs

Strategy B2
Promoting Inclusive Participation through Micro, Small and Medium Enterprises, Cooperatives and Agriculture-Based Associations

Strategy B3
Creating a Conducive and Holistic Ecosystem for Entrepreneurship



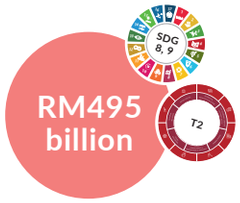
Twelfth Malaysia Plan: Selected Targets

Accelerating the Development of Strategic and High Impact Industries



2025

Contribution of Electrical and Electronics Industry to GDP



2025

Export Value of Electrical and Electronics Products



2025

Total Investment of Global Services



2025

Revenue from the Aerospace Industry



2025

Job Opportunities Created in the Aerospace Industry



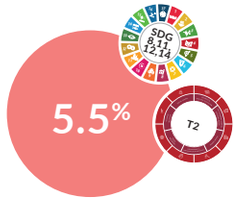
2025

Contribution of Creative Industry to GDP



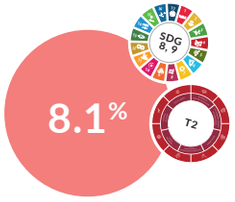
2025

Total Inbound Tourist Expenditure



2021-2025

Annual Growth of Domestic Visitors



2025

Contribution of Halal Industry to GDP



2025

Export Value of Halal Products



2021-2025

Total Investment in Biomass Industry

Target
SDG
WKB 2030

Boosting Capabilities of Entrepreneurs and Enterprises



2025

Revenue of Cooperatives



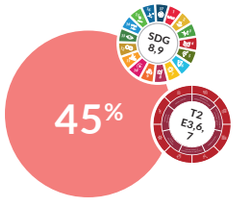
2025

Revenue of *Pertubuhan Peladang Kawasan* (PPK)



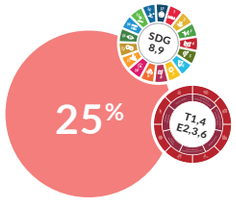
2025

Revenue of *Persatuan Nelayan Kawasan* (PNK)



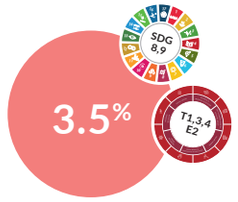
2025

Contribution of MSMEs to GDP



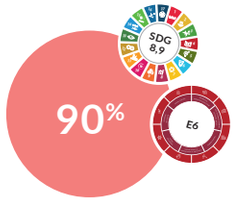
2025

Contribution of MSMEs to Total Exports



2021-2025

Average Annual Growth of Labour Productivity of MSMEs



2025

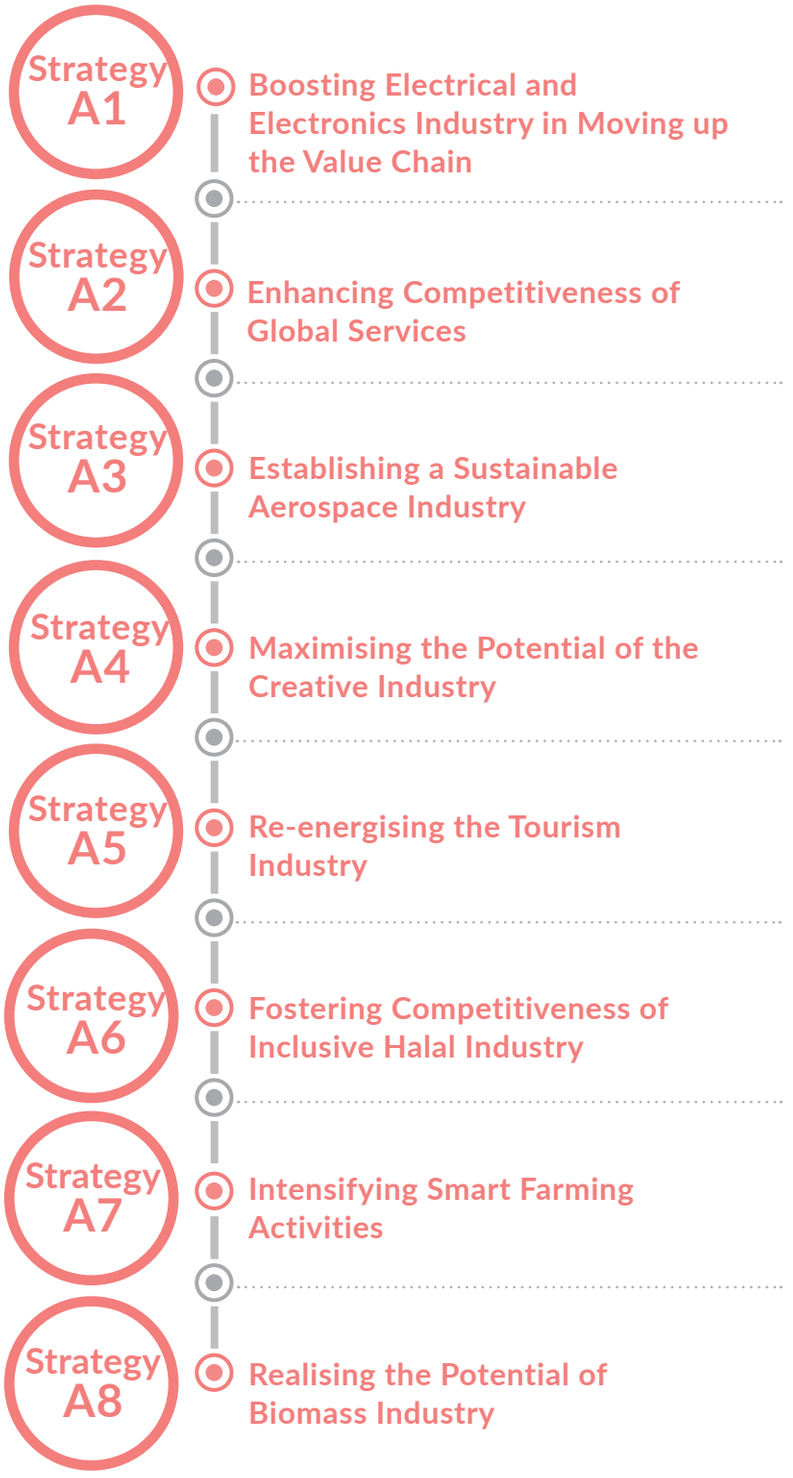
MSMEs to Digitalise Business Operations

Target
SDG
WKB 2030

Priority Area A

Accelerating the Development of Strategic and High Impact Industries

The development of strategic and high impact industries will be accelerated to propel the growth of the economy, particularly in adapting to the changing global supply chain landscape post-pandemic. The focus will be on boosting the E&E industry to move up the value chain, strengthening Malaysia as a global services hub, establishing a sustainable aerospace industry, maximising the potential of the creative industry, re-energising the tourism industry, fostering the competitiveness of the halal industry, intensifying smart farming activities, as well as realising the potential of the biomass industry. These industries are prioritised based on their ability to harness advanced technologies and niche capabilities, as well as their significant multiplier effects. The implementation of these strategies is expected to increase the contribution of the industries to GDP growth, create high-paying jobs and boost export earnings.



Strategy A1

Boosting Electrical and Electronics Industry in Moving up the Value Chain

During the Twelfth Plan, the E&E industry players will be encouraged to adopt advanced technologies and produce more sophisticated products, resulting in higher productivity and growth. The E&E industry needs to be repositioned by boosting investments in high value activities such as design and development (D&D) and front-end manufacturing. In this regard, efforts will be focused on strengthening manufacturing ecosystems, promoting new technology adoption, uplifting the development of talent as well as enhancing R&D and D&D activities. By 2025, the E&E industry is targeted to contribute RM120 billion to GDP and generate RM495 billion in export earnings.

Strengthening the Electrical and Electronics Industry Ecosystem for Higher Value Chain

A comprehensive ecosystem based on a more systematic approach is important to ensure the sustainable development of the E&E industry. In this regard, a national E&E roadmap will be formulated to provide strategic direction for the industry. The key subsectors in the roadmap include semiconductors, solar photovoltaic, light-emitting devices (LED), electronics manufacturing services (EMS) and manufacturing-related services (MRS). These subsectors are selected based on the vast potential and Malaysia's current strengths in these subsectors.

The roles of relevant organisations will be enhanced to better coordinate and create strong linkages and collaboration with research institutions as well as between the public and private sectors. Incentives for the E&E industry will be restructured to be more impactful. The implementation of these initiatives will enable the streamlining of Government funding, technical support and facilities.

Promoting High Adoption of Technology

Emerging technologies have been identified as a strategic catalyst to leapfrog the country's capability in developing high value-added products and creating skilled jobs. Efforts will be undertaken to move the E&E industry towards higher-value activities across the supply chain with greater automation and advanced technology utilisation. The application of technologies such as artificial intelligence (AI), IoT, robotics, and big data relies heavily on advanced semiconductors. In this regard, industry players will be encouraged to concentrate on the manufacturing of advanced semiconductors.

Multinational companies (MNCs) will be encouraged to facilitate the enhancement of local MSMEs capabilities. The implementation of the Lighthouse Project, which was introduced in 2020, will be intensified to encourage MNCs to assist local MSMEs in embracing digitalisation and Globalization 4.0[5] in their business models. In addition, the establishment of the Fourth Industrial Revolution (4IR) business platform will provide opportunities to E&E companies and MSMEs to accelerate 4IR technology adoption and innovation.

Uplifting the Development of Talent and Capability

A skilled talent pool is important to grow the E&E industry in meeting the new competitive landscape. In this regard, the various micro-credentials programmes will be expanded based on the Triple Helix model. Additional skills sets, including software coding and data analytics modelling, will be provided by various training institutions to meet market demand.

Several initiatives will be implemented to develop talent in the E&E industry in line with the National 4IR Policy. These include establishing industry-led 4IR skills development centres, incentivising industry to reskill and upskill employees in 4IR areas, and establishing an AI-enabled data platform to facilitate manpower planning. To accelerate the development of the high-end manufacturing industry, employees will be upskilled and reskilled in the field of designing. A dedicated centre will be identified to train highly skilled design engineers to meet industry demand.

[5] Major global changes brought about by technologies such as artificial intelligence (AI), robotics and the IoT.

Enrolment in science, technology, engineering and mathematics (STEM) education programmes will be increased in providing talent to support the production of high value and high-tech products in the E&E industry. Programmes in software engineering and programming in public universities will be aligned with industry requirements. The implementation of these initiatives will reduce talent gaps, as well as enhance the competence of talent in the E&E industry.

Enhancing Research and Development as well as Design and Development

Knowledge-intensive design programmes for the E&E subsector will be promoted to realise the importance of innovation and design activities thereby spurring growth in the industry. Industry players will be encouraged to undertake D&D activities, particularly in integrated circuits (IC), IC packaging, embedded systems as well as test and engineering design services. Incentives will be provided to encourage companies to invest more in D&D activities.

R&D grants and incentives will be reviewed to cater to advanced technology push and market pull activities. In addition, end-to-end R&D activities will be promoted to ensure the R&D outputs are able to go through extensive experimental development and testing programmes to meet the technology and product standards. In addition, research institutions and centres of excellence will be streamlined to reduce redundancy and increase the effectiveness of conducting R&D activities. Dedicated technology and innovation centres will be established to drive technology development, accelerate innovation and technology transfer as well as increase the development of home-grown technologies.

Strategy A2

Enhancing Competitiveness of Global Services

A conducive and supportive ecosystem is important for Malaysia to be a competitive GS hub. To create this environment, clear and supportive policies, a better regulatory and business environment, talent development, digital infrastructure and air connectivity to major cities are required. Meeting these requirements will enable Malaysia to attract more GS companies and facilitate the growth of ancillary services providers.

Instituting Clear and Supportive Policies, Regulations and Business Environment

Clear and supportive policies, a conducive regulatory and business environment are important to attract global and homegrown business services to reside in Malaysia. In this connection, improvements will be made in enhancing the ease of doing business, facilitating the movement of talent, enabling supportive tax policies, greater flexibility in the movement of funds, intermediary liability protection as well as formalising alternative funding models and enhancing R&D.

Enhancing Talent and Capability of Global Service Providers

To support the operations of global services hubs, the capabilities of professionals and professional service providers need to be upgraded. This will involve the formulation of comprehensive programmes and facilitation to create a larger talent pool of world-class professionals equipped with the required skills sets. Public-private collaboration in talent development especially upskilling and reskilling will be promoted to ensure a sustainable talent pipeline to meet industry demand. In addition, existing funds such as the Domestic Investment Strategic Fund (DISF) will be further leveraged to accelerate digitalisation and enhance local GS capabilities.

Improving Digital Infrastructure

Excellent digital infrastructure and connectivity are vital to support the growth of GS. The implementation of the Malaysia Digital Economy Blueprint is expected to boost Malaysia's digital infrastructure and connectivity. In this regard, the 5G network and cloud storage services will be a catalyst to create a conducive ecosystem in enhancing Malaysia's attractiveness as an investment destination. This will enable GS companies to offer high value-added services in the global market.

Enhancing Air Connectivity to Major Cities

The greatest advantage Malaysia offers to MNCs seeking to establish operations in the region is the country's excellent infrastructure. This has earned Malaysia a reputation for having one of the most well-developed infrastructures among Asian countries. Improved air connectivity between Kuala Lumpur and other major international destinations will further boost Malaysia's attractiveness as an investment destination. In this regard, collaboration with international airlines will be intensified to further improve air connectivity.

Strategy A3

Establishing a Sustainable Aerospace Industry

The aerospace industry has been identified as one of the strategic industries to propel Malaysia into the high technology trajectory. The industry will be transformed to produce more complex products and services. The initiatives will include developing a sustainable ecosystem, clustering and zoning of aerospace activities, establishing an aerospace digital system and venturing into sustainable energy. These initiatives will improve industry capability and competitiveness, thus strengthening its position in the global value chain. The industry is projected to generate RM30 billion in revenue by 2025, from RM11.6 billion in 2020, and create 30,000 jobs.

Developing a Sustainable Aerospace Ecosystem

The development of a sustainable ecosystem for the aerospace industry will require strong and effective collaboration among all stakeholders. In this regard, the National Aerospace Industry Coordinating Office (NAICO) will be upgraded as an agency to create a conducive ecosystem for the development of the industry. This will enable NAICO, which is currently a unit under the Ministry of International Trade and Industry, to enhance its role in facilitating the implementation of initiatives and action plans under MAIB 2030. This agency will facilitate collaboration between the government, industry and academia based on the Triple Helix model.

The upgrading of the NAICO will also strengthen its role to coordinate the implementation of the newly introduced Aerospace Industry Framework, as shown in *Exhibit 3-2*. This framework lays out the overall targets of the industry as well as strategies and desired outcomes for each cluster to achieve MAIB 2030 objectives. The strategies under this framework include the enhancement of education and training to provide the needed talent. A one-stop centre will also be established to coordinate the certification process of various regulatory bodies related to aerospace. In addition to this, a centre of excellence for aerospace will also be set up to provide training and share best practices and facilities, especially for the MSMEs to enhance industry competitiveness and position Malaysia as the regional aerospace hub in South East Asia (SEA).

Aeronautics and astronautics technologies will be developed to strengthen the aerospace industry. In this regard, capabilities of aeronautics and astronautics facilities will be improved and current infrastructure will be used optimally, while local expertise will be enhanced. Efforts will also be undertaken to create a new source of growth through strategic cooperation between the Government and local players involved in the aerospace industry.

Incentives and financial assistance will be enhanced for the industry to remain competitive in the global value chain and promote sustainable growth. This is particularly critical as global markets, including Malaysia, respond to and recover from the economic and social implications of the COVID-19 pandemic. In this regard, incentives will be reviewed to accelerate R&D, innovation and high value-added investments. Loan and loan guarantees for businesses will be explored to enhance the industry access to liquidity in compensating for reduced cash flow due to the impact of the pandemic. These measures aim to aid the recovery of businesses as well as promote new investments in advanced technology and high value-added activities to seize opportunities in the future global value chain. In addition, the implementation of the Industrial Collaboration Programme (ICP) will be further strengthened to ensure more meaningful participation by local aerospace companies in Government procurement, particularly in the defence sector.

Clustering and Zoning of Aerospace Activities for Balanced Industry Growth

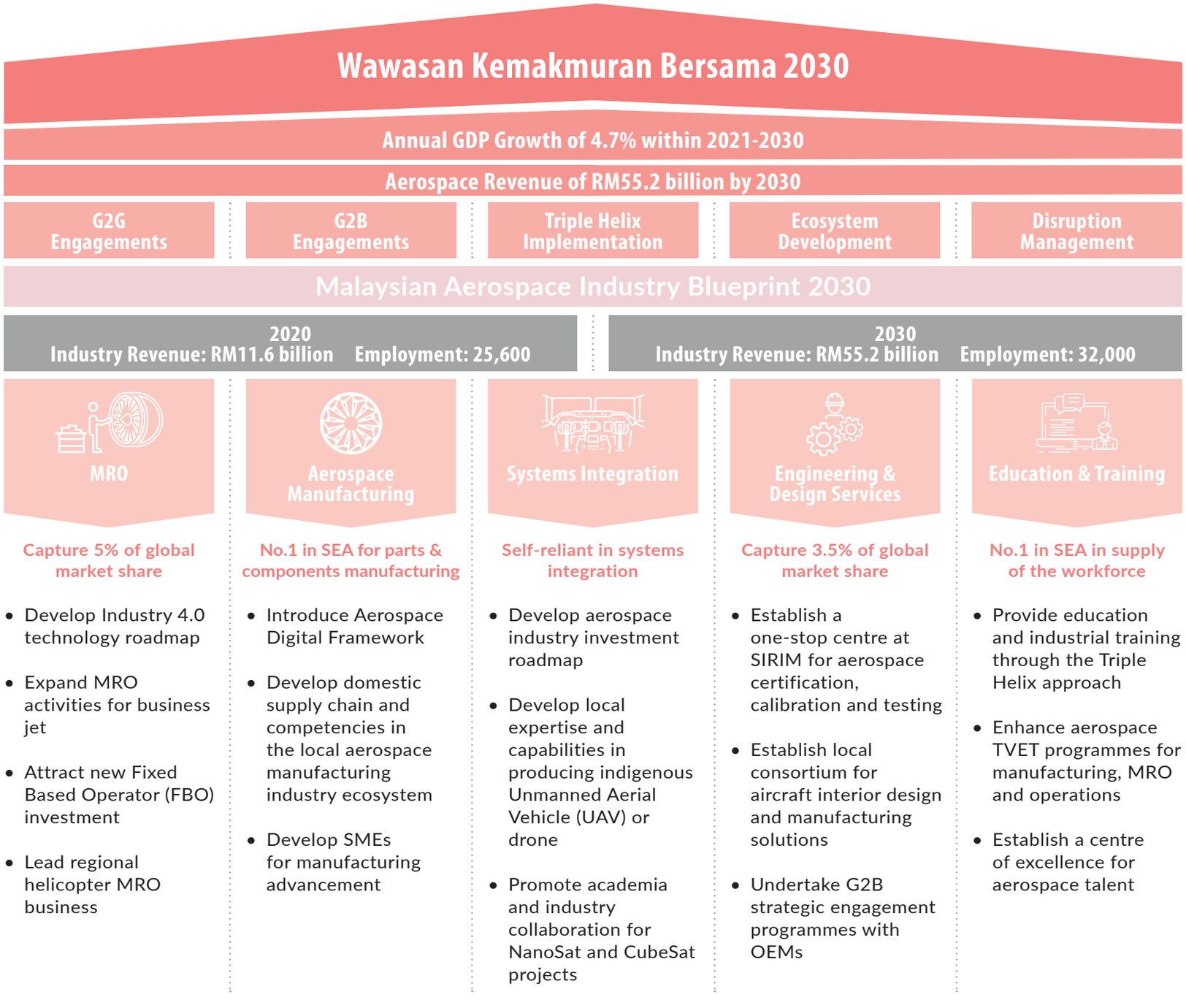
The development of the aerospace industry will be realigned to create specialised capabilities through the clustering and zoning of aerospace activities in selected economic areas. The industry development will focus on four clusters, namely MRO, aerospace manufacturing, systems integration, and engineering and design services to create synergy and promote the growth of local players. The zoning and clustering of aerospace activities will be based on the inherent strengths of each economic area. Among others, the aerospace cluster in Selangor will focus on MRO, manufacturing and assembling, while the cluster in Penang will focus on system integration and engineering services. This zoning approach will enable the deepening of aerospace activities within the four clusters to produce more complex and high value-added products and services.

Establishing an Aerospace Digital System

A dedicated aerospace digital system will be established as a central data repository for aircraft operations, MRO and aerospace manufacturing in Malaysia through a public-private collaborative effort. This system will be managed by the Government to regulate and monitor industry development. It will also facilitate various stakeholders and industry players in accessing real-time information on demand and supply to increase the competitiveness of the local aerospace industry. This information is critical to enable adjustment of business strategies at firm and industry levels to fit into the new normal in the global value chain arising from the impact of the COVID-19 pandemic that has changed the global aerospace industry landscape.

Exhibit 3-2

Aerospace Industry Framework



Source: Economic Planning Unit, Malaysia Aerospace Industry Association and National Aerospace Industry Coordinating Office

Venturing into Sustainable Energy

Efforts will be undertaken to position Malaysia as the key producer of bio-jet fuel in the region. In this regard, a programme to produce Malaysia's first bio-jet fuel prototype using local research and technology will be initiated. The first bio-jet fuel test on piloted aircraft will be conducted in early 2022. This is part of the industry strategy of adhering to the new International Civil Aviation Organisation (ICAO) regulations focusing on carbon offsetting. The implementation of this initiative is expected to have multiplier effects on other sectors, particularly in the supply of raw materials for bio-jet fuel.

Strategy A4

Maximising the Potential of the Creative Industry

The creative industry is fast emerging with vast opportunities and potential. Efforts in maximising the creative industry's potential will leverage Malaysian creativity and digital technology while preserving invaluable national culture, arts and heritage. Measures to accelerate the creative industry growth include developing a holistic ecosystem, upskilling talent to match industry needs as well as strengthening product development and promotion. Enhancement of these growth enablers will increase revenue and job opportunities as well as bolster local distinctive cultural identities, paving the way for Malaysia to become a renowned exporter in the field. These efforts will facilitate the creative industry to grow at 3.6% per annum during the Twelfth Plan period, contributing RM31.9 billion to the GDP in 2025.

Developing a Holistic Creative Industry Ecosystem

A holistic creative industry ecosystem, which includes policy framework, governance and financing, is imperative for the creative industry to become a growth catalyst in reinvigorating the economy. The creative industry will be redefined to align with the United Nations Conference on Trade and Development definition. This is to ensure the scope and coverage are comprehensive to represent the entire creative industry. Existing policies, mainly DIKN and institutional framework will be reviewed to chart a new direction for the industry and support the expansion of local companies into regional and global markets. The framework for digital content development will be improved to increase exports, attract investments, by fully utilising local talent and strengthening public-private partnerships.

The National Creative Industry Development Council, led by the Ministry of Communications and Multimedia Malaysia and Ministry of Tourism, Arts and Culture (MOTAC), will be the overarching platform to drive the creative industry development. A satellite account for the creative industry will be developed to facilitate data collection and analysis, further augmenting evidence-based decision-making in realising the industry's potential. A comprehensive database will also be established to facilitate better planning, monitoring and assessment. Financing mechanisms, including incentives, will be enhanced to accelerate the growth of the creative industry. Existing government facilities, including those for cultural programmes under the Jabatan Kebudayaan dan Kesenian Negara (JKKN) and Istana Budaya, will be made available for private entities to optimise, in promoting and showcasing creative products and services. Concerted efforts will be undertaken to increase awareness of the importance of IP in improving creative content production and protection as well as increasing income-generating capability.

Upskilling Talent to Match Industry Needs

In ensuring that the creative industry is both resilient and rewarding, more focus will be given to developing talent in the creative space, by aligning it with the national science, technology and innovation agenda. Efforts will include establishing specialised training and learning opportunities that meet industry requirements. Upskilling and reskilling of talent will be accelerated in various areas, including animation, movie-making and gaming. A regional platform for eSports, digital content regional hub and the Creator's Studio will be established to meet the demand of the evolving creative content industry. In addition, institutions related to talent development will be encouraged to continuously update training programmes to produce quality talent in various fields such as music, fashion and design. The teaching and learning of creative industry-related subjects, particularly multimedia, digital technology and fashion design, will be expanded to more TVET institutions nationwide.

Strengthening Product Development and Promotion

Most creative industry players are highly dependent on technology to stay current and relevant. In this regard, R&D capacity will be augmented to ensure sustainability and maximise the potential of creative goods and services. Mobile applications and online platforms will be further leveraged to strengthen product development and promotion. Cultural and heritage products, including museums and galleries, will be enhanced by utilising technology, comprising among others, infographics and information-sharing tools, to provide a wholesome experience. Digital platforms will be adopted to promote and export the Malaysian brand, capitalising on unique local destinations, food and culture.

Strategy A5

Re-energising the Tourism Industry

Sustainability of the tourism industry is vital as it has substantial spillover effects on the economy. In 2019, this industry provided 3.6 million jobs, contributing 23.6% of total employment. During the Twelfth Plan period, the tourism industry will be re-energised to cater to tourists needs amid higher demands for improved safety and hygiene measures. This includes restoring tourist confidence, providing better quality products and services, enhancing the sustainability of tourism products, strengthening brand positioning and promotion, instituting governance reforms and intensifying domestic tourism. These measures will translate into higher growth, increased investment, greater local community participation and improved sustainability. Given the impacts of the COVID-19 pandemic on the global travel industry, it is anticipated that foreign tourist arrivals will begin recovering in 2023, to reach 24.3 million tourists in 2025, generating RM73 billion receipts. Domestic visitors are expected to grow at 5.5% per annum in the Twelfth Plan, reaching 212 million and generating RM100 billion in revenue by 2025.

Restoring Tourist Confidence

Safety and hygiene are key determinants for tourists when deciding on holiday destinations and for event organisers when selecting locations for meetings, incentives, conventions and exhibitions (MICE), especially since the COVID-19 pandemic. In reviving the tourism industry and ensuring its resilience and vibrancy, safety and hygiene will be the main focus in all branding and promotional efforts. In this regard, a campaign to inculcate socially responsible culture and restore tourist confidence will be launched. Businesses will be encouraged to adopt advanced technology, such as automation, robotics and AI, to minimise physical interaction with customers thus reducing risks in the spread of infectious diseases.

Enhancing Quality of Products and Services

The value and impact of tourism products and services will be strengthened by capitalising on content, storytelling and packaging, to cater to changing demands of tourists who seek experiential-based tourism activities. Storytelling, in particular, is vital in adding depth and value to tourism products and enriching overall tourists' experience. Ecotourism products and services, which distinctly portray Malaysian experiences, will be promoted as premier products targeting high value tourists. Specific monitoring mechanisms will be established at ecotourism destinations, such as Kilim Geoforest Park in Kedah, Royal Belum State Park in Perak, Danum Valley in Sabah and Mulu National Park in Sarawak to ensure the sanctity and sustainability of these sites. Measures will also be undertaken to encourage the private sector to improve management and profitability, and ultimately ensuring the preservation and conservation of such sites. Local communities will be engaged to increase their participation in providing unique homestay experiences, producing handicrafts and offering tour guide services, which will improve their economic wellbeing.

Malaysian culture, arts and heritage will be leveraged to further boost tourism promotional efforts. These efforts will focus on showcasing Malaysia's unique heritage and culture, such as festivals, traditional dances and gastronomic experiences. In ensuring the sustainability of the local heritage and culture, compensation and appreciation to art practitioners will be reviewed. The role of the private sector in providing enhanced tourist services at government-owned facilities such as museums, galleries and JKKN complexes will be strengthened. In this regard, a more agile and effective business model will be introduced to enable the private sector to complement government efforts. Measures will also be undertaken to promote Malaysia as the first-choice destination for MICE events and shopping.

The performance of the tourism industry is also dependent on the quality of services provided by the talent in the industry. In this regard, initiatives will be undertaken to attract and retain talented individuals by providing a better working environment, quality training and upskilling, as well as adopting international best practices in the food and hospitality industry. Collaboration between industry, government and academia will be strengthened to produce talent with the right skills in meeting industry needs.

Enhancing Sustainability of Tourism Products

Industry players will be encouraged to innovate and adopt digital technology in enhancing the sustainability of tourism products. The adoption of digital technology will improve service delivery and enable tourism and cultural products to be better showcased through virtual tours, as well as online cultural shows and handicraft-making. Online marketplaces will also be utilised to complement arts and handicraft complexes including *Kompleks Kraftangan* and *Balai Seni* to enable wider market access and increase the visibility of local arts and crafts globally.

Sustainable consumption and production practices, including the adoption of green labels, will be further encouraged. This will elevate Malaysia as the preferred holiday destination among green tourists. The pricing mechanisms for tourism products and services will be reviewed to commensurate with the value offered. Limits in terms of carrying capacity and LAC for environmentally-sensitive tourism sites, especially those accorded UNESCO Global Geopark or heritage status will be established. In addition, measures will be implemented to maintain high standards of cleanliness and quality of public amenities at these sites. Concurrently, awareness programmes to instil maintenance culture among stakeholders will be intensified.

Strengthening the Malaysia Brand and Marketing Strategies

Efforts to enhance Malaysia as a brand that incorporates the identity, essence, image and culture of the nation, will be implemented through distinct brand positioning strategies. This will include creating a strong and positive brand image that is synonymous with high values such as trust, quality and sustainability, which will attract tourists, clients, investors and various stakeholders from around the globe. Aggressive marketing and promotional campaigns, which focus on differentiating Malaysia from its competitors and building a distinct market, will be pursued. Clear market targets and key performance indicators (KPIs) will be set to measure the effectiveness of these strategies.

The Malaysia Truly Asia tagline will be revitalised to leverage the brand recognition and value built through past efforts. Attractive tour packages will continue to be developed and marketed, showcasing destinations and activities that include culture, arts and heritage elements to provide a unique experience. Digital platforms will be harnessed to realise tourism-related aspirations. In tandem with improvements in infrastructure and connectivity between Asia and the rest of the world, travel to and from Malaysia will be made more efficient by improving travel facilitation and enhancing air connectivity. Malaysia will also adopt digitalisation in capturing tourist data and trends in improving planning, resource deployment and decision-making.

Instituting Governance Reforms

The National Tourism Policy 2020-2030 will be the overarching guide for the development of the tourism industry. The implementation of its strategies and initiatives will be accelerated to attain higher industry growth and sustainability. The national steering committee on tourism development will be strengthened to involve agencies at federal and state levels in providing strategic oversight and coordination. In addition, a Malaysian tourism federation will be established as a platform for synergistic collaboration between the private and public sectors. This will pave the way for effective governance to spur the competitiveness of the tourism industry. Meanwhile, the functions of departments and agencies within the purview of MOTAC will be streamlined and augmented to improve service delivery. Redundancies and overlapping functions will be reduced to improve cost-effectiveness and service delivery. Keeping abreast with changing trends in travel behaviour, the business model for destination marketing will be restructured. As current trends imply most travel-related decisions and purchases leverage online platforms, Malaysian representative offices abroad for marketing and promotion purposes are no longer required and will be rationalised.

Intensifying Domestic Tourism

Domestic tourism has remained the backbone of the tourism industry, creating demand and ensuring the viability of the industry. Domestic tourism will be given an additional boost to support the tourism industry especially in mitigating the impact of shocks such as the COVID-19 pandemic. Incentives and promotional campaigns will be intensified, ensuring the tourism industry is revived to be robust and capable of withstanding any shocks. Digital platforms will be aggressively utilised to entice domestic travellers to explore local sights and scenes. In addition, community-based tourism that offers a homestay experience will be aggressively promoted through attractive and unique packages such as living as a fisherman, living in a longhouse and living a *kampung* life. These packages will provide opportunities for tourists to stay with the host and experience unique lifestyles.

Strategy A6

Fostering Competitiveness of Inclusive Halal Industry

The global halal landscape is rapidly changing, as rising demand has resulted in the entrance of many new global players that offer halal products and services. Hence, the halal industry development will be strengthened to produce competitive domestic halal industry players in capturing a bigger global halal market share. Measures will be undertaken to enhance the capacity and capability of the halal industry by uplifting the development of halal talent, establishing halal professional recognition, accelerating industry development including Bumiputera participation, increasing product competitiveness and positioning Malaysia as a global halal hub. These measures are expected to contribute to the growth of the halal industry, increasing its share to GDP to 8.1% and generating RM56 billion export revenue in 2025.

Uplifting the Development of Halal Talent

An expansion of the halal industry will increase demand and create opportunities for halal talent and professionals to actively participate in the industry. The existing mismatch between talent supply and industry needs will be resolved to ensure adequate supply of halal talent to support the expansion. In this regard, the halal occupational framework will be expanded to include talent requirements in high potential industries such as the pharmaceutical, cosmetics and medical devices industry, through engagement with the industry. The academic programmes and training modules for halal courses will be streamlined and accredited in accordance with the National Occupational Skills Standards (NOSS) and Malaysian Qualifications Framework (MQF). Institutions of higher education and skills training institutions will be encouraged to offer more halal-related programmes to produce graduates with holistic halal knowledge and skills. Collaboration between public research institutions and the private sector will be strengthened to create a pool of halal researchers, scientists and engineers, thus increasing the ability to produce high value halal products and services.

Establishing Halal Professional Recognition

The Halal Professional Board (HPB) under the Department of Islamic Development Malaysia (JAKIM) will be restructured based on new regulations, which will be formulated, to broaden the accreditation of halal professionals for global markets. Mechanisms related to halal professional practices standards, codes of conduct and competency assessment will be identified to develop the halal professional recognition framework. The recognition of halal professionals will pave the way for a bigger pool of quality halal talent as well as establish Malaysia as a reference centre for halal professionals.

Accelerating Halal Industry Development to Enhance Competitiveness

The halal industry will be further developed by leveraging domestic strength, including by increasing the participation of Bumiputera companies through the implementation of the Halal Industry Master Plan 2030 (HIMP 2030). The Master Plan aims to enhance halal industry development by creating a larger talent pool, improving integrated infrastructure and accelerating the production of high value-added products and services to better capture the global halal market opportunities. Collaboration and co-investment between local and international businesses will be encouraged to commercialise R&D output to enhance the competitiveness and resilience of the industry. Under this initiative, local halal entrepreneurs will be encouraged to venture into the production of high value-added products, such as halal ingredients, pharmaceuticals, cosmetics and medical devices.

The role of MSMEs will be enhanced to be a key driver for the development of the halal industry. High performing MSMEs will be groomed as home-grown halal local champions. This will involve upscaling production capacity and product quality as well as promoting local brands to be on par with global brands in improving access to the international market. In addition, the capacity and capability of local companies will be strengthened to facilitate participation in the supply chain of MNCs. The Malaysia Halal Analysis Centre (MyHAC) will be enhanced to improve its function in conducting analysis and providing scientific evidence for halal authentication and traceability. The tracking and monitoring mechanisms for halal integrity along the supply chain will be improved to be more transparent and further boost consumer confidence.

Inclusive participation, particularly involving Bumiputera companies in the halal supply chain will be further promoted through the improvement of existing programmes and the creation of new programmes to facilitate the expansion of high value products. Halal innovation-focused business incubator programmes will also be implemented to grow local companies and connect with other business incubators globally for better networking, acceptance and recognition. A dedicated fund for halal exporters will be established to support the formation of consortiums, improve branding and promote business matching with global partners to capture a larger share of the halal market. In addition, fundraising activities through *waqf* and equity crowdfunding will be conducted to support halal business start-ups.

Improving Halal Product Competitiveness

The Malaysian halal brand will be strengthened through targeted campaigns and promotions as well as strategic collaboration and partnerships to capture new growth opportunities in existing markets and penetrate new markets. Halal services, in terms of consultancy on halal ecosystem development, will also be offered to interested countries including non-Muslim majority countries to build Malaysia's halal brand recognition. The halal-related Malaysian Standard (MS), which includes accreditation and certification, will be enhanced as a key enabler to improve the competitiveness of products and services. Access of MSMEs products to the global halal market will also be promoted through compliance with international standards and requirements, such as Hazard Analysis Critical Control Points (HACCP) and Good Manufacturing Practice (GMP), and utilisation of reputable online trading platforms. To enable data-driven decision-making, the integrated halal database comprising information on products, services, market trends and profiles will be enhanced.

Positioning Malaysia as a Global Halal Hub

The halal industry supply chain will be improved to position Malaysia as a global halal hub. In this regard, existing distribution centres, such as Digital Free Trade Zone (DFTZ), Port Klang Free Zone (PKFZ) and halal eCommerce platforms will be leveraged to promote seamless connectivity of the halal supply chain. The role of halal parks will be strengthened to be more industry-friendly to attract new investments and expand existing businesses. Existing underperforming halal parks will be revived through a holistic development approach to facilitate more integrated planning, coordination and implementation involving state authorities, investment promotion agencies and regional economic corridors authorities. In addition, incentives will be improved to attract strategic partners to invest in halal promoted products and services. A syndicated Islamic fund and a digital advisory platform will be established to provide financial solutions for local and international companies. Malaysia will also be promoted as a destination for halal investments through various international platforms, such as ASEAN, the Organisation of Islamic Cooperation (OIC) and chambers of commerce. The regional network and distribution channels of local large companies and MNCs will be leveraged in promoting export-oriented products and services.

Strategy A7

Intensifying Smart Farming Activities

Smart farming approach will be implemented across all subsectors in the agriculture sector including crops, aquaculture and marine fishery as well as livestock. This will be undertaken by developing a comprehensive smart farming framework, accelerating the adoption of modern technologies, improving the dissemination of technological information and talent development, enhancing the participation of technology providers, and empowering local communities. This approach will increase the productivity and income of farmers, reducing dependency on foreign workers as well as minimising environmental impact.

Developing a Comprehensive Smart Farming Framework

Smart farming has been identified as one of the Key Economic Growth Areas (KEGA) of the WKB 2030. A comprehensive framework will be developed as a guideline to support the implementation of smart farming. This framework will be embedded into the National Agrofood Policy 2021-2030 (DAN 2.0) and the National Agricommodity Policy 2021-2030 (DAKN2030), which are currently in the process of formulation. Collaboration among agencies at Federal and state levels will be enhanced to ensure policies on smart farming are consistent.

Accelerating the Adoption of Modern Technologies

The application of modern technology is one of the key factors in increasing the productivity and income of farmers as well as achieving sustainable production. Efforts to accelerate the adoption of modern technologies among farmers will be implemented by encouraging utilisation of big data analytic (BDA), IoT and AI as well as intensifying usage of drones, robotics and sensors. Several dedicated food production areas such as Permanent Food Production Parks and Aquaculture Industrial Zone will be leveraged for the implementation of demonstration projects. These projects will provide cost-benefit evidence of modern technology to attract the participation of more farmers in smart farming.

Existing incentives will be improved to promote investments in smart farming that utilise modern technologies and apply green practices. The mechanisation and automation fund will be expanded to encourage participation from private companies as well as agricultural cooperatives and associations. A dedicated smart farming fund will also be introduced to support the acceleration of modern technology adoption in the agriculture sector. The application of precision agriculture technology in plantations under FELDA through geospatial information systems will be rolled out to improve operational efficiency. This initiative will enable FELDA to utilise detailed plantation data including tree counts, vacant areas and tree health indicators to optimise resources use.

Improving Dissemination of Information on Technology and Talent Development

Effective dissemination of information pertaining to modern technologies will be one of the important factors to increase application of smart farming. The AgF will be strengthened to provide reliable and specific data related to modern technologies. This system will also include interactive analytical information to allow sharing and exchange of information among key stakeholders. The outcomes of demonstration projects in food production areas will also provide practical information and serve to convince farmers in adopting modern technologies.

Knowledge on the utilisation of modern technologies such as drones and robotics that are supported by AI and IoT is essential to drive the adoption of smart farming. In this regard, training curricula and modules will be reviewed to incorporate elements of modern technology. The involvement of farmers including young agropreneurs in technological research will be intensified to ensure farmers are always kept abreast of new developments. Extension services will also be enhanced by appointing successful farmers as technical partners to provide advisory services and guidance in adopting technologies.

Enhancing Participation of Technology Providers

The role of technology providers in supporting the adoption of modern technology is essential for sustainable and profitable production. In this regard, programmes such as eLadang will be enhanced to encourage participation of technology providers in introducing modern technology and digital solutions to farmers, including ranchers, fishers and smallholders. Collaboration between technology providers and farmers will be promoted to inculcate modern technology usage as well as increase accessibility and adoption of affordable smart technology along the agriculture sector value chain. Efforts in establishing more agricultural outsourcing services will also be intensified to reduce high capital expenditure and the cost of production incurred by farmers.

The smart farming initiatives through technology providers will also be expanded under the FELDA *Program Pembangunan Peneroka* to increase the productivity and income of settlers. In this regard, the smart farming pilot project through modern agricultural activities including cash crop, aquaculture and livestock initiated in FELDA Bukit Rokan will be expanded to several other FELDA settlements. This expansion will involve dissemination of information on modern technologies as well as capacity building and provision of advisory services to the settlers.

Empowering Local Communities

Community farming promotes socio-economic development of local communities as well as encourages a healthier lifestyle and sustainable food production. Food production through community farming will be enhanced by adopting smart farming. In this regard, incentives will be provided to assist local communities in intensifying the implementation of community farming. In addition, public-private collaboration in providing advisory services and suitable smart farming technology for local communities will be enhanced.

Strategy A8

Realising the Potential of Biomass Industry

The biomass industry will leverage the abundance of resources to generate a new source of income for the nation. In ensuring resources are fully capitalised, the biomass industry will be shifted from producing low-value to high value biomass-based products. The measures will include formulating a comprehensive biomass policy, developing local technology through R&D&C&I, accelerating the development of high value-added products and services and promoting utilisation of high value-added biomass products. These measures are envisaged to increase investments in the biomass industry to RM10 billion in the Plan period. It will also contribute to creating new jobs, and protecting the environment through the reduction of GHG emissions.

Formulating a Comprehensive Biomass Policy

A national biomass policy will be formulated as a comprehensive framework to ensure the sustainable development of the industry and unlock its economic potential. The policy will prescribe measures to strengthen collaboration and coordination among related agencies to ensure effective implementation. In addition, an effective business model will be developed to facilitate better profit-sharing mechanisms among stakeholders along the value chain. A holistic biomass database will be developed to integrate biomass information along the value chain, from bio-resource supply to bio-energy and bio-product markets.

Developing Local Technology through Research, Development, Commercialisation and Innovation

Local capabilities in the biomass industry need to be enhanced in developing and adopting advanced biomass conversion technologies that are sustainable, reliable and cost-effective. R&D&C&I activities by research institutions, HEIs and Government-linked companies (GLCs) will be intensified to further create value from biomass resources. The private sector will also be encouraged to invest in research-driven activities related to biomass through financial assistance and advisory services. Additionally, existing incentives, such as the Green Technology Financing Scheme, Green Investment Tax Allowance, and Green Income Tax Exemption will be enhanced to attract more investors including MSMEs.

Accelerating the Development of High Value-Added Products and Services

Commercialisation and innovation in the biomass industry will be intensified to produce a diverse range of high value-added products and services. The development of these products and services will cater for niche markets, especially highly demanded biochemical-related products that are environmentally friendly, as well as provide substitutes for existing conventional products. Collaboration between the government and the private sector will be strengthened to support the development of this industry.

Incentives will be introduced to encourage the development of collection, aggregation and pre-treatment facilities for biomass feedstock to strengthen the value chain. Financial assistance for logistics will be provided to attract companies and cooperatives to actively participate in biomass logistics services. These initiatives will facilitate efforts in ensuring consistency of feedstock supply. Meanwhile, financial institutions will be actively engaged to increase awareness of the prospects in the biomass industry.

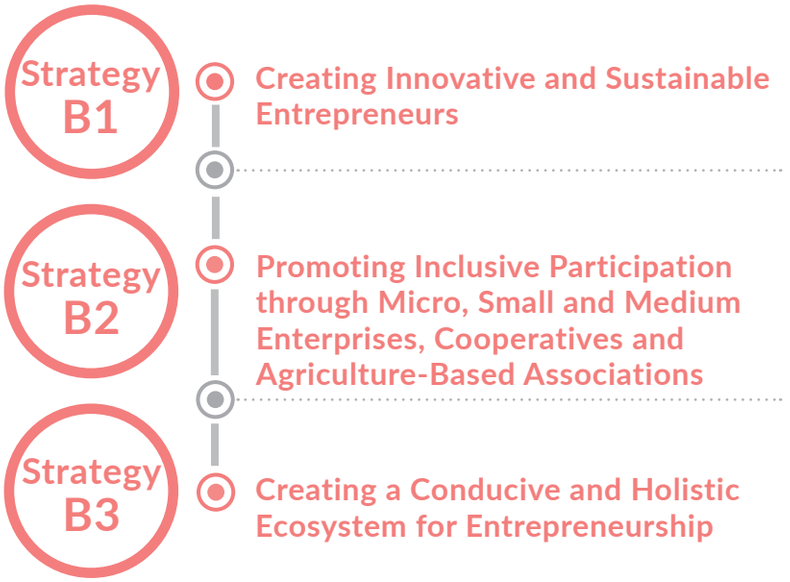
Promoting Utilisation of High Value-Added Biomass Products

As the biomass industry is relatively new to Malaysia, efforts will be intensified to increase the domestic utilisation of biomass-related products as well as leverage its potential in generating high value exports. In this regard, biomass products will be branded as an important component of the green agenda. A strategic communication plan will be crafted to streamline all biomass public awareness and education programmes as well as advocacy efforts. Moreover, social awareness activities will be strengthened to increase public awareness of the benefits and contributions of biomass products to environmental sustainability. Additionally, public-private collaborations will be intensified to explore and penetrate new markets.

Priority Area B

Boosting Capabilities of Entrepreneurs and Enterprises

The Twelfth Plan will continue to boost the capabilities of entrepreneurs, cooperatives, agriculture-based associations, social enterprises and MSMEs. Measures will focus on creating innovative and sustainable entrepreneurs, promoting inclusive participation through MSMEs, cooperatives and agriculture-based associations as well as improving the entrepreneurial ecosystem. Successful implementation of these measures is expected to increase the contribution of MSMEs to GDP to 45% and the cooperatives' revenue to RM60 billion in 2025. Similarly, the revenues of agriculture-based associations, namely the *Pertubuhan Peladang Kawasan* (PPK) and *Persatuan Nelayan Kawasan* (PNK), are expected to increase to RM2.8 billion and RM149 million, respectively.



Strategy B1

Creating Innovative and Sustainable Entrepreneurs

Competitiveness among entrepreneurs will depend on their ability to be agile and innovative. Efforts to produce entrepreneurs that are competitive and resilient will include enhancing entrepreneurship development and promoting innovation-driven entrepreneurs. These will enhance the capacity and capability of entrepreneurs to be competitive domestically and internationally.

Enhancing Entrepreneurship Development Programmes

The development of entrepreneurs will be guided by the DKN 2030. Entrepreneurial development programmes will be further enhanced to inculcate the right mindset among aspiring entrepreneurs. Education and training will also focus on developing students with entrepreneurial skills set to produce more job creators among graduates. Triple Helix collaboration will be encouraged to enable entrepreneurs to acquire the necessary skills and competencies. In addition, the implementation of outreach programmes will be intensified in boosting entrepreneurial capability and skills among youth, Bumiputera and specific target groups. Incubation spaces will be established in rural and less developed areas to support aspiring entrepreneurs. Intrapreneurship development within organisations will be augmented to provide opportunities for employees to become entrepreneurs. Training modules will incorporate skills, such as analytical thinking, emotional intelligence, reasoning, problem-solving, social influence and originality to assist entrepreneurs in their business.

Promoting Innovation-Driven Entrepreneurs

Innovation is essential to enable entrepreneurs to produce products and services that can cater to ever-changing consumer demand. Support programmes will be implemented to increase the number of innovative entrepreneurs, including youth, Bumiputera and specific target groups in strategic and high impact industries, such as smart farming, halal, aerospace, biotechnology, medical devices and digital economy. In addition, entrepreneurs will be encouraged to continuously innovate by adopting advanced and digital technology, including in their business operation and management. Collaboration between entrepreneurs and researchers will be intensified to enhance innovation in creating more high value products and services that will boost competitiveness.

Strategy B2

Promoting Inclusive Participation through Micro, Small and Medium Enterprises, Cooperatives and Agriculture-Based Associations

The participation of MSMEs, cooperatives and agriculture-based associations in the economy will be strengthened to ensure inclusive growth. In realising this, initiatives will include increasing MSMEs contribution to the economy, widening market access and international trade opportunities as well as capitalising cooperatives, agriculture-based associations and social enterprise in developing entrepreneurs.

Increasing Micro, Small and Medium Enterprises Contribution to the Economy

Concerted efforts will be undertaken to increase the contribution of MSMEs to the economy. In this regard, the transformation of MSMEs into innovation-driven enterprises is crucial to increase their resilience and competitiveness. Initiatives to accelerate the creation of high growth and innovative firms will include enhancement of targeted assistance for automation, digitalisation, AI and other 4IR technologies. Focus will also be given to strengthening the ecosystem for future industry start-ups by creating technology and digital entrepreneurial cluster. Financial assistance will also be streamlined to meet the specific needs of innovation-driven and high-tech start-ups.

Technology adoption and innovation will be promoted by increasing R&D uptake and strengthening research collaboration between MSMEs, industry experts and academia. Targeted assistance and access to financing will be improved for the development and adoption of new technology. Training and development programmes related to automation, digitalisation and 4IR technologies will be strengthened to upskill and reskill talent in supporting technology adoption and automation.

The digitalisation of MSMEs will be undertaken as an important national agenda to transform the conventional way of doing business. A national MSMEs digitalisation roadmap will be introduced to drive the adoption of digitalisation. A mechanism to assist and guide MSMEs in the digitalisation process will be strengthened, among others through the Digital On-Boarding for Micro Businesses (DigitalNiaga), Digital Transformation Acceleration Programme (DTAP), and *Warongku* initiatives. The Digital Compass will be enhanced to help assess MSMEs readiness and capabilities to adopt

technology-based business processes and 4IR-related technologies. This will also include cyber health checks to assess the vulnerability of MSMEs to potential threats and attacks. Outcome-based KPIs for all funds provided for digitalisation and eCommerce adoption will be established to track the effectiveness of the programmes. A total of RM147.1 billion was allocated by the Government to assist MSMEs through the eight economic stimulus packages since the outbreak of the COVID-19 pandemic. Out of this total, more than RM20 billion is dedicated to drive the digital and technological transformation agenda.

The Vendor Development Programme (VDP) will be expanded in creating more competent Bumiputera vendors among MSMEs. Initiatives to develop more anchor companies through collaboration with GLCs and MNCs will be intensified in promoting an integrated supply chain and providing more business opportunities. Other support programmes, such as certification, marketing and branding, packaging as well as product development will be enhanced to improve the capacity and capability of vendors in meeting industry requirements. These efforts will target strategic and high impact industries, such as aerospace, rail, medical devices and biotechnology.

Increasing Market Access and International Trade Opportunities

Measures to enhance market access and opportunities will be further expanded to assist MSMEs in increasing sales of goods and services domestically and internationally. Government Procurement (GP) will be fully leveraged as a means to support MSMEs in the domestic market, instil business confidence, drive innovation, and stimulate the development of products for local content requirements. In this regard, efforts will be accelerated to ensure local MSMEs, including manufacturers to actively participate in GP.

Linkages with large firms, especially MNCs will be strengthened in enabling MSMEs to have access to a bigger market. In this regard, MNCs will be encouraged to use locally produced materials by MSMEs in their production supply chain. For this purpose, the capacity and capability of MSMEs in producing products and services that comply with the global supply chain standards will be strengthened. Capacity building programmes will be enhanced with emphasis on 4IR, strategic management, certification, marketing and branding, packaging, product development and eCommerce.

An efficient domestic supply chain is important in ensuring an uninterrupted supply of products and services. This will mitigate risks arising from global supply chain disruption due to unforeseen circumstances, including rising trade tensions and health-related issues. In this regard, business-to-business (B2B) opportunities will be expanded through initiatives that encourage large companies to source locally from MSMEs. The 'Buy Malaysia Campaign' will be intensified to support local MSMEs. In addition, intervention programmes will be undertaken to break unhealthy monopolistic practices in certain industries.

In ensuring MSMEs are globally competitive, MSMEs will need to produce better quality products and services on par with international standards. In this regard, MSMEs that demonstrate high export growth potential will be facilitated through the provision of advisory services, international market intelligence, IP registration as well as brand and product development. Initiatives will also focus on trade facilitation measures, including reducing regulatory barriers to cross-border trade and business through G2G partnerships and collaboration among countries within ASEAN and APEC as well as with other international organisations. Efforts will also be undertaken to leverage the benefits of FTAs in widening market access and accelerating the internationalisation of MSMEs.

Capitalising Cooperatives, Agriculture-Based Associations and Social Enterprises in Developing Entrepreneurs

The governance structure and legal framework that govern the cooperative movement will be improved through the implementation of the Malaysian Cooperative Transformation Plan (TRANSKOM) 2021-2025. The cooperative movement among the B40 and rural communities will be further promoted to encourage them to pool their limited resources to achieve economies of scale. The support provided to MSMEs will be extended to cooperatives, including access to programmes, assistance and business opportunities. This will empower the cooperative movement to be an enabler and catalyst to achieve balanced, inclusive, progressive and sustainable socio-economic growth.

The role of PPK and PNK in developing entrepreneurship among their members will be further enhanced by providing continuous support in the form of inputs, financial assistance, technology uptake and consultation. The PPK and PNK will be encouraged to implement modern agro-food projects in partnership with their members to increase productivity and income. This will be undertaken, among others, through the implementation of more agropreneur programmes, which will facilitate wider market access for the members through PPK and PNK.

The development of a strong social enterprise community is integral in enhancing social impact through business activities among the communities. In promoting the development of social enterprises, continuous support and capacity development will be provided for business and market expansion. In this regard, Blueprint *Perusahaan Sosial* 2021-2025 will be introduced to further strengthen social enterprise development. In addition, *Program Perolehan Impak Sosial Kerajaan* (PPISK) will be rolled out to enable the onboarding of social enterprises to the national e-procurement system. The Inclusive Business (IB) model, which promotes the involvement of MSMEs in the supply chain of GLCs and MNCs, will also be expanded to facilitate the participation of social enterprises.

Strategy B3

Creating a Conducive and Holistic Ecosystem for Entrepreneurship

A conducive and holistic ecosystem is paramount to support entrepreneurship development, given the diverse characteristics of entrepreneurs, cooperatives, agriculture-based associations, social enterprises as well as MSMEs. In this regard, initiatives will be undertaken to enhance governance, regulations, institutional roles and financing to boost the performance of entrepreneurs. These initiatives will provide comprehensive support to establish an enabling environment, unlock entrepreneur potential and accelerate growth.

Enhancing Governance, Regulations and Institutional Roles

Good governance reduces bureaucratic hurdles and ultimately promotes a supportive environment for businesses to thrive. In ensuring policies and programmes implemented benefit the target groups, the categorisation of entrepreneurs, including social entrepreneurs and start-ups, will be reviewed to reflect the current needs and future landscape. Startups will also be classified under technology and non-technology clusters to align with the current technological advancements and business models. A corporate governance toolkit for MSMEs will be developed to improve business efficiency and performance through fair practices, good ethics and the right corporate and management culture.

Facilitative regulations are vital to unlock the value of new businesses. Existing legislations related to entrepreneurship will be reviewed to enhance the effectiveness and inclusiveness of entrepreneurship development. In this regard, relevant laws and regulations will be improved to ensure businesses and cooperatives remain vibrant. Measures will continue to be undertaken to encourage registration of businesses in the informal sector. This will enable entrepreneurs to have access to necessary supports, such as financing, marketing, and legal protection.

A commissioner will be appointed to provide support for small businesses in securing payments on time and will act as a mediator in resolving payment disputes thereby advocating better payment practices among government and businesses. This will address the issue of late payments for products and services rendered which is burdensome for small businesses as it disrupts not only the cash flow but also poses a threat to the survival of businesses.

A centralised database will be established to provide comprehensive information on entrepreneurship activities. This database will enable users to access information on programmes, quantity and quality of entrepreneurs as well as undertake relevant analysis to enhance entrepreneur development programmes. A unified portal, MyAssist MSME and a centralised platform that leverage existing one-stop centres such as *Pusat Internet Komuniti* (PIK) and *Pusat Internet Desa* (PID) will be further strengthened to facilitate entrepreneurs to acquire knowledge, learn business best practices and obtain essential information on starting a business, market access, human capital development, financial resources and other various business aspects. In addition, the roles and functions of entrepreneurship development organisations (EDOs) will be strengthened and streamlined to improve efficiency and optimise resources. In supporting this, a holistic and integrated monitoring mechanism will be introduced to measure the overall impact of entrepreneurial development programmes by EDOs.

Improving Access to Financing

A more diversified financing landscape for entrepreneurs will be promoted with greater involvement of the private sector through various alternative financing mechanisms. Co-funding initiatives between the public and private sectors will be intensified, particularly for high-potential and innovative entrepreneurs and enterprises to

venture into high value-added products and services. The role of the Development Financial Institutions (DFIs) will be revitalised to ensure access to financing for different target groups at various stages of growth.

Access to financing for new entrepreneurs, especially start-ups, will also be improved to encourage the development and adoption of emerging technology in businesses. Financing procedures and processes will be simplified to expedite the approval and disbursement of funding to entrepreneurs. In addition, intervention programmes will be introduced to assist failed entrepreneurs and mitigate the risk of bankruptcy. These include debt restructuring and providing a second chance for entrepreneurs. Correspondingly, monitoring of programmes will be enhanced to ensure entrepreneurs are more successful and resilient. In this regard, an appropriate mechanism for assessment, implementation and monitoring will be developed in the Plan period.

Initiatives will be undertaken to develop an invention to innovation ecosystem that propagates IP registration among entrepreneurs, especially startups. Performance-based loans and incentives, including utilisation of IP as collateral, will be explored in providing financial assistance. This will promote invention and innovation among entrepreneurs.

Conclusion

During the Eleventh Plan, measures undertaken to accelerate the momentum of economic growth have brought positive results with steady growth of a number of industries as well as MSMEs. However, several issues and challenges continue to hamper efforts to expedite the growth of these industries and MSMEs. The unprecedented disruption from the COVID-19 pandemic has slowed down economic growth and affected the resilience of entrepreneurs and industries. Moving forward, efforts will be undertaken to accelerate the development of strategic and high impact industries and enhance the capacity and capability of entrepreneurs as well as enterprises. Effective implementation of these strategies will position Malaysia as a key player in the global value chain.

Theme

2

Theme 2
Strengthening Security, Wellbeing and Inclusivity

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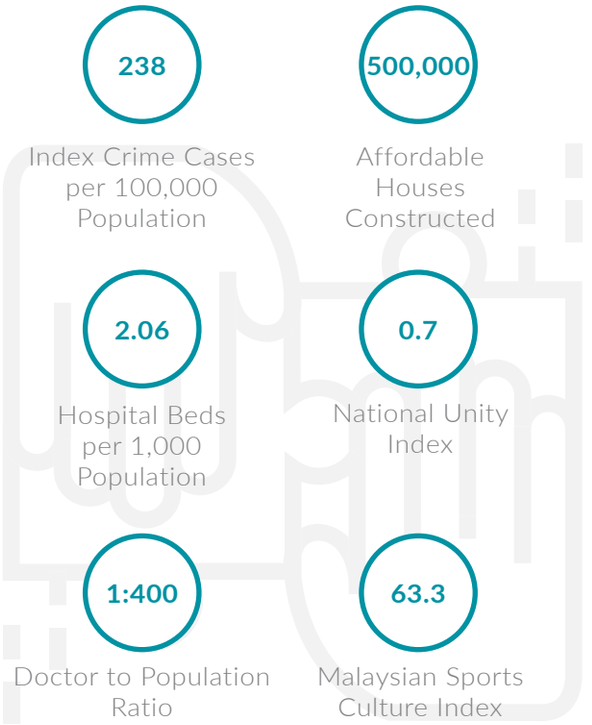
Overview

Theme 2 focuses on strengthening security, wellbeing and inclusivity among the *rakyat*. This is to uphold the country's stability through defence and security, while improving healthcare, providing affordable housing, promoting an active lifestyle and fostering unity. In addition, emphasis will be on addressing poverty, disparities in the B40 group, inequitable Bumiputera socioeconomic outcomes, the low socioeconomic development of Orang Asli and social deprivation of specific target groups. Development gaps among regions, states and rural areas will be narrowed, with specific emphasis on enhancing socioeconomic development in Sabah and Sarawak. These will result in more equitable development across all geographic locations in line with the WKB 2030 and 2030 Agenda.

The Government will not compromise in safeguarding the national sovereignty. Efforts will be intensified in crime prevention, rehabilitation and emergency preparedness, as well as improve the welfare of security personnel. Security governance will be strengthened to ensure the nation remains peaceful and public safety is maintained. In addition, healthcare service delivery will be enhanced by reforming the healthcare sector. Meanwhile, the supply of quality and affordable houses will be increased. Sports will be leveraged as a means to build an active nation, while unity in diversity will be strengthened to create a more harmonious society. The implementation of these initiatives will contribute towards building a nation that is inclusive, united and prosperous.

Selected Key Performance Indicators

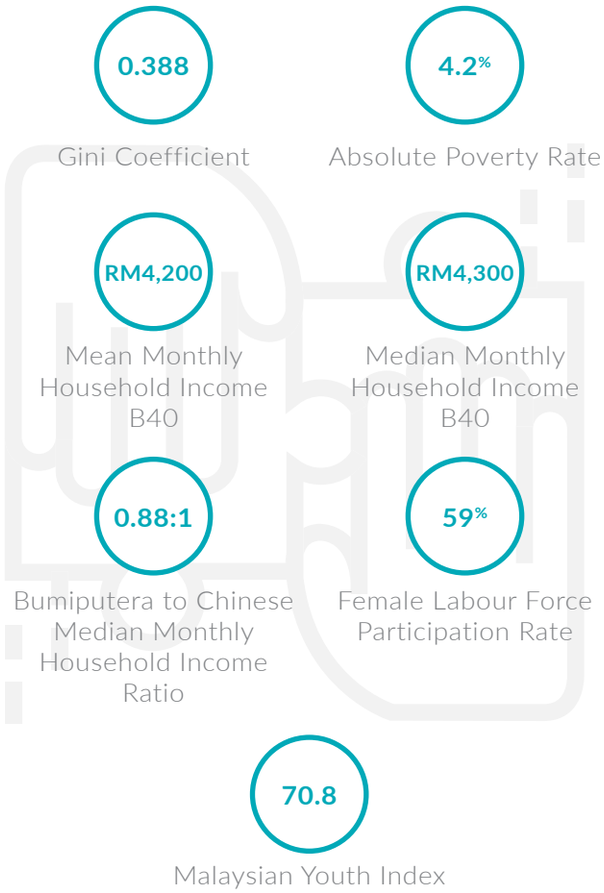
Chapter 4: Enhancing Defence, Security, Wellbeing and Unity



Addressing poverty will be given higher priority during the Twelfth Plan period, consistent with the principle of leaving no one behind, in ensuring social justice and a decent standard of living for the *rakyat*. Several strategies will be implemented to empower the B40 in increasing their standard of living and income, while support will be provided to the M40 to improve their quality of life. The Bumiputera Agenda will be pursued by further enhancing human capital development, expanding business opportunities and increasing their share of equity and property ownership. A more comprehensive development approach will be introduced to enhance the wellbeing of the Orang Asli community. Synergistic efforts will be mobilised in improving the wellbeing of children, youth, women, older persons, persons with disabilities (PWDs) and family institutions. These strategies are expected to raise the income and standard of living of the target groups, irrespective of gender, ethnicity, socioeconomic status and location.

Selected Key Performance Indicators

Chapter 5: Addressing Poverty and Building an Inclusive Society



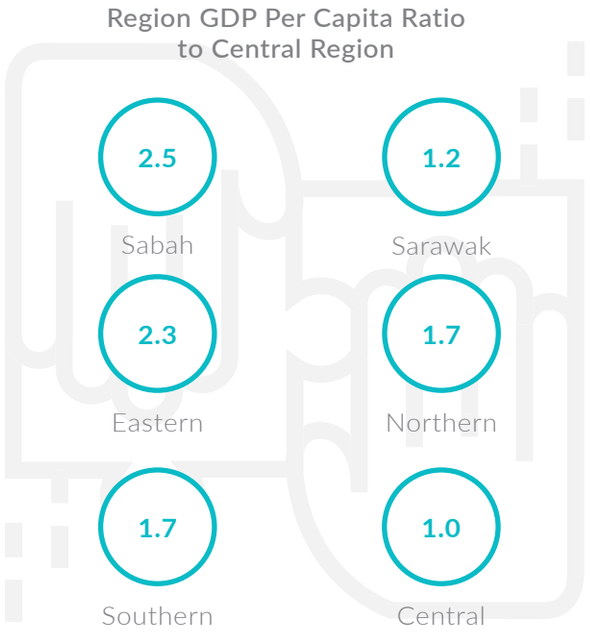
Efforts will also be intensified to accelerate the development of less developed states and regions, and further narrow the development gap between rural and urban areas. Rural areas will be transformed by optimising idle land for smart and cluster farming activities, as well as employing advanced technology to increase farm produce. Private sector and social enterprises will be encouraged to boost the rural economy, while key growth nodes and hotspot areas will be identified to accelerate development. The subregional cooperation under the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) and Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) will be leveraged to catalyse growth in border areas.

Socioeconomic development in Sabah and Sarawak will be intensified to promote regional inclusion. Cooperation between Federal agencies and state governments will be strengthened to effectively implement programmes and projects. The provision of infrastructure and connectivity will be enhanced, while economic potential optimised by creating a conducive ecosystem for economic growth. Access to better social services will be enhanced by improving educational infrastructure, healthcare services and housing, while security and public safety will be strengthened in ensuring a safer environment. The implementation of these measures will ensure more inclusive development and uplift living standards in Sabah and Sarawak. These holistic efforts in strengthening security, wellbeing and inclusivity are expected to steer Malaysia towards becoming a safer, inclusive and prosperous nation.

Selected Key Performance Indicators

Chapter 6: Improving Regional Balance and Inclusion

Chapter 7: Enhancing Socioeconomic Development in Sabah and Sarawak



Rural-Urban Income Ratio

0.67:1

Chapter 4: Enhancing Defence, Security, Wellbeing and Unity

Priority Area A
Ensuring National Security and Sovereignty

Priority Area B
Enhancing Healthcare Service Delivery

Priority Area C
Increasing the Supply of Quality Affordable Housing

Priority Area D
Leveraging Sports in Building an Active Nation

Priority Area E
Strengthening Unity for a Prosperous Nation

Chapter 5: Addressing Poverty and Building an Inclusive Society

Priority Area A
Addressing Poverty and Narrowing Inequality from a Multidimensional Perspective

Priority Area B
Empowering B40

Priority Area C
Supporting the M40 towards Equitable Society

Priority Area D
Achieving an Equitable Outcome for Bumiputera

Priority Area E
Enhancing Development of Orang Asli Commnity

Priority Area F
Empowering Specific Target Groups



Chapter 6: Improving Regional Balance and Inclusion

Priority Area A
Optimising Regional Economic Potential

Priority Area B
Developing Sustainable Cities

Priority Area C
Transforming Rural Areas to Bridge Development Gap

Chapter 7: Enhancing Socioeconomic Development in Sabah and Sarawak

Priority Area A
Solidifying Provision of Infrastructure

Priority Area B
Optimising Economic Potential

Priority Area C
Improving Access to Social Services

Priority Area D
Enhancing Inclusive Development

Priority Area E
Strengthening Cooperation between the Federal Agencies and State Governments

Game Changer IV
Enhancing National Security and Unity for Nation-Building

Why enhancing national security and unity are critical?

Security and sovereignty as well as unity are the foundations of the country's stability and prosperity. This will strengthen Malaysia's ability to address:

- Threats at the border.
- Crime and perception of feeling unsafe.
- Issues of unity, erosion of noble values and unethical usage of social media.
- Lack of appreciation of *Rukun Negara* and Malaysia's history.

How will this be achieved?

Nation-building is multidimensional and requires the implementation of the following initiatives:

- Expanding the use of advanced technology in identifying threats and enforcement activities.
- Strengthening national cybersecurity and cyber defence.
- Implementing a holistic plan in managing security threats and curbing illegal activities at the border.
- Strengthening security management at the border including the movement of people and goods, as well as enforcement, through the establishment of a single border agency.
- Introducing the National Defence and Security Industry Policy.
- Promoting social interaction through unity programmes, sports and religious activities.
- Strengthening patriotism and volunteerism through the utilisation of digital and other media platforms.
- Increasing the *rakyat's* understanding and appreciation of the Federal Constitution and *Rukun Negara*.

What will success portray?

- Top 10 in Global Peace Index.
- A conducive environment for economic activities and safe living.
- Sustainable defence and security capabilities.
- Whole-of-nation approach in combatting crimes.
- Harmonious and peaceful nation.
- More responsible use of social media.
- A strong and resilient nation.

Game Changer V
Revitalising the Healthcare System in Ensuring a Healthy and Productive Nation

Why revitalising the healthcare system is critical to the nation?

The COVID-19 pandemic has created gaps in the healthcare system. A comprehensive revitalisation of the country's healthcare system aims:

- Increase preparedness in meeting future health crises.
- Ensure *rakyat* have equal access to healthcare services.
- Reduce the high level of subsidies, unsustainable healthcare financing and poor integration of databases among public and private healthcare institutions.
- Address inadequate facilities and mismatch of resources for healthcare services in several remote areas.

How will this be achieved?

Revitalisation will require a holistic approach that will include:

- Implementing a whole-of-nation approach in handling future health crises.
- Consolidating resources and responsibilities, and redesigning healthcare service through collaboration among public and private sectors as well as civil society organisations (CSOs).
- Introducing a more sustainable health financing model.
- Digitalising healthcare services by leveraging emerging technologies.

What will success portray?

- Optimisation of financial and human resources.
- Improvement of quality of healthcare at affordable prices.
- Enhancement of healthcare preparedness in managing infectious diseases and health crises.

Game Changer VI
Transforming the Approach in Eradicating Hardcore Poverty

Why eradicating hardcore poverty is critical to Malaysia?

A country's prosperity is measured by the quality of life of the *rakyat*. In this regard, the Government aims to address the following issues:

- Pockets of hardcore poverty in rural and urban areas.
- High incidence of poverty among Bumiputera, including Orang Asli and communities living in remote areas.

How will this be achieved?

A more effective mechanism of eliminating hardcore poverty will encompass the following:

- Establishing dedicated poverty units at Federal and district levels.
- Formulating poverty policies based on data-driven approach.
- Integrating and centralising the database on poverty.
- Enhancing bottom-up approach programmes.
- Localising poverty solution at the grassroot level.
- Exploring the possibility of introducing dedicated tax as a financing source for poverty alleviation programmes. *Zakat* and *waqf* as well as contributions from GLC, private entities and individuals will be considered.

What will success portray?

- Zero hardcore poverty by 2025.
- Decent standard of living for all Malaysians irrespective of gender, ethnicity and location.
- Reduced inequalities among the *rakyat*, including Bumiputera which constitutes the majority of the poorest group.

Game Changer VII
Multiplying Growth of Less Developed States especially Sabah and Sarawak to Reduce Development Gap

Why is it important to multiply the growth of less developed states?

The Government intends to narrow the gap between less developed states and developed states to ensure a more equitable socioeconomic development. The Twelfth Plan will aim to:

- Address the slow GDP growth of Kedah, Kelantan, Perlis, Sabah, Sarawak and Terengganu.
- Reduce high poverty incidence in Sabah, Kelantan and Sarawak.

How will this be achieved?

The ambition of multiplying growth of less developed states will require comprehensive initiatives, which encompass the following:

- Allocating at least 50% of Total Basic Development Expenditure[1] for the six less developed states, especially Sabah and Sarawak.
- Developing higher value added activities.
- Increasing quality investments.
- Providing attractive incentive packages to entice investments to these states.
- Enhancing cross-border economic activities.
- Promoting sustainable cities by extending the Green City Action Plan (GCAP).
- Intensifying rural industrialisation by developing new industrial parks and reinvigorating existing ones.
- Optimising idle land and utilising advanced technology for smart and cluster farming.
- Enhancing infrastructure and connectivity.

[1] Total Basic Development Expenditure (Basic DE) is the allocation for programmes and projects to achieve the targeted objectives and strategies in the Five-Year Malaysia Plan. Examples of Basic DE projects are the construction of schools, hospitals, roads, industrial areas and poverty eradication programmes.

What will success portray?

- Better connectivity.
- Rural-urban income ratio improved from 0.58:1 in 2019 to 0.67:1 by 2025.
- Accelerated GDP growth of the six less developed states.
- Lower incidence of poverty from 5.6% in 2019 to 3.7% in 2025.

	States' GDP growth (%)		States' Median Monthly Household Income (RM)	
	2016-2020	2021-2025	2019	2025
Malaysia (National Average)	2.7	4.5~5.5	5,873	6,900
Kedah	3.1	6.2	4,325	5,100
Kelantan	3.3	6.7	3,563	4,210
Perlis	1.5	5.8	4,594	5,420
Sabah	1.0	6.5	4,348	5,380
Sarawak	0.9	5.3	4,544	5,430
Terengganu	1.8	6.6	5,545	6,470

Chapter 4

Enhancing Defence, Security, Wellbeing and Unity

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4

Introduction

National defence had always been prioritised to safeguard national interest and territory. In addition, internal security including crime prevention efforts as well as law enforcement is crucial in ensuring public safety and national stability to achieve economic growth and enhance the wellbeing of the *rakyat*. In this regard, the capacity and capability of the Malaysian Armed Forces (ATM) and enforcement agencies were enhanced while crime prevention programmes were improved.

The wellbeing of *rakyat* was also improved by the enhancement of healthcare service delivery, provision of quality and affordable housing as well as promotion of an active lifestyle. Programmes were also implemented to cultivate social cohesion and national unity. The overall wellbeing of the *rakyat* was further enhanced with better performance of both economic and social aspects as reflected by the improvement in the Malaysian Wellbeing Index (MyWI) 2019. Nevertheless, the country is still facing several issues such as the complexity of crimes, the presence of a large number of illegal immigrants and ineffective border management, rising cost of healthcare services, and escalation of housing prices. The COVID-19 pandemic posed further challenges to the overall security and wellbeing of the *rakyat*.

The Government is constantly alert to the requirements to strengthen national defence and security as well as enhance wellbeing and unity of the *rakyat*. In the Twelfth Plan, priority will be given to improve national security and safeguard sovereignty in ensuring the nation remains peaceful and prosperous. Meanwhile, healthcare service delivery, provision of quality and liveable affordable houses will be improved. Sports will be leveraged to build an active nation while unity among the *rakyat* will be enhanced. This is in line with WKB 2030 and 2030 Agenda. The implementation of these initiatives will contribute towards building a nation that is inclusive, united and prosperous.

Performance of the Eleventh Plan 2016-2020

During the Eleventh Plan, various initiatives were implemented to enhance national defence and security as well as wellbeing and unity of the *rakyat*. Priority was given to ensure the nation is safer and more secure, enhance healthcare service delivery and increase the supply and quality of affordable housing to poor, low- and middle-income households. Programmes in promoting an active lifestyle were expanded to inculcate sports culture amongst the *rakyat*. In addition, social cohesion and national unity were further promoted among Malaysians.

Performance of Selected Targets

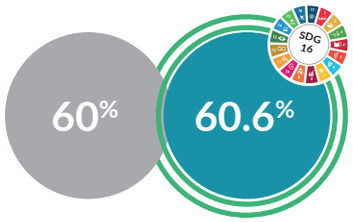
In the efforts to enhance the national defence and security as well as wellbeing and unity of the *rakyat*, 10 targets were set in the Eleventh Plan. Five targets were achieved, namely, index crime cases, perception of being safe, the number of houses constructed or repaired for the poor households, the percentage of Malaysians embracing the sports culture and the number of schools with *Kelab Rukun Negara*, as shown in *Exhibit 4-1*. However, the targeted police response-time was not achieved due to lack of technology adoption, shortage of manpower and logistics issues. The performance of the healthcare service delivery was below target as reflected by the low performance of the health component in MyWI due to an increase in the infant mortality rate, the maternal mortality ratio[1] and the rising incidence of non-communicable diseases (NCDs). The targets for doctor to population and the hospital bed to population ratios remain unmet. In addition, the target to build houses for low and middle-income households was not achieved due to the take-up rate by property developers, limited suitable land and bureaucracy in the development plan approval process.

[1] Including non-citizen with identification document.

Exhibit 4-1

Eleventh Malaysia Plan: Performance of Selected Targets

Safe and Secure Nation



Perception of Feeling Safe

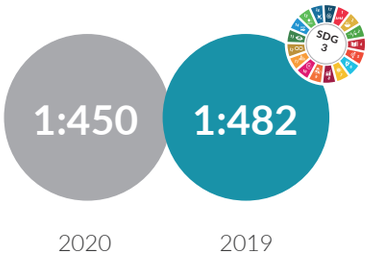


Index Crime Cases per 100,000 Population

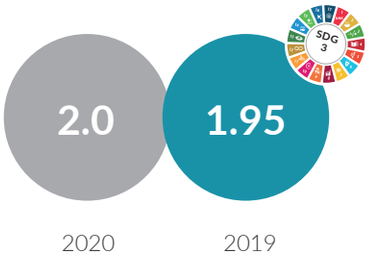


Police Response Time

Healthcare Service Delivery



Doctor to Population Ratio

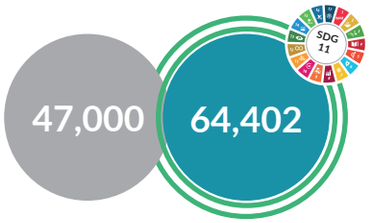


Hospital Beds per 1,000 Population

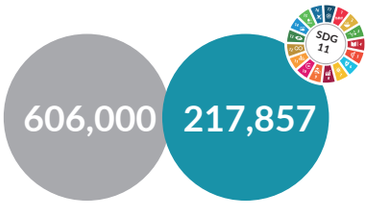


Emergency Response Time

Affordable Housing

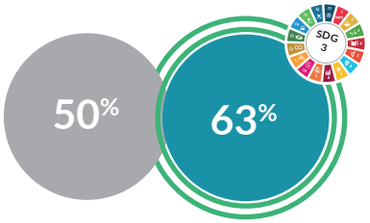


Number of Houses Constructed/ Repaired for Poor Households



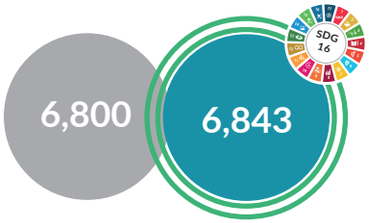
Number of Houses Developed for Low- and Middle-Income Households

Active Lifestyle



Percentage of Malaysians Embracing Sports Culture

Social Cohesion and National Unity



Number of Schools with *Kelab Rukun Negara*



Performance of Selected Initiatives

Safe and Secure Nation

Concerted efforts were implemented in making the nation safer and secure during the Eleventh Plan. The capacity and capability of ATM and enforcement agencies were enhanced while crime prevention programmes were intensified. These initiatives contributed to increased confidence among the *rakyat*, thus, providing a conducive environment for safe living.

Capacity and Capability of Malaysian Armed Forces and Enforcement Agencies

The capacity and capability of ATM and enforcement agencies were strengthened through enhancement of training programmes as well as upgrading of facilities and equipment. The competency of personnel in these agencies was improved through systematic training and specialised courses such as strategic joint training, crime analysis and forensic investigation. As at the end of 2020, ATM personnel participated in 299 specialised training and exercises while Royal Malaysia Police (PDRM) personnel attended 234 special courses. In addition, personnel from ATM and PDRM also participated in specialised joint training programmes on a larger scale to enhance skills in interoperability. These programmes also enabled them to evaluate and enhance battle readiness.

Facilities and equipment were upgraded to ensure the availability of tools for intelligence gathering, investigation, evidence analysis and prosecution. The Police Cyber Investigation Response Centre and the Armed Forces Cyber Defence Operation Centre were established while the Police Reporting System was developed to strengthen the enforcement mechanism. Several new radars were installed to broaden the coverage of surveillance and control at sea in curbing illegal activities and foreign vessel encroachment.

Cooperation through bilateral and multilateral arrangements in defence and security was intensified to strengthen networking and exchange experiences. Defence diplomacy was enhanced through 489 bilateral and multilateral engagements. In mitigating cross-border issues, cybercrime, terrorism and organised crimes, several memorandum of understanding (MoUs) were ratified and collaboration with other countries were implemented. Among these initiative included cooperation and assistance related to civil maritime law enforcement operations and collaboration in countering violent extremism.

Crime Prevention Efforts

Crime prevention efforts were intensified through various programmes involving PDRM omnipresence and public participation. The *Unit Rondaan Bermotosikal* (URB), Mobile Patrol Vehicle (MPV) and high-profile policing programmes were among the initiatives undertaken to increase the omnipresence of PDRM. These efforts contributed to improving the perception of being safe among the *rakyat*. Meanwhile, border controls and patrolling were intensified through joint operations among ATM, PDRM and other enforcement agencies to curb the entry of illegal immigrants and other illegal activities, such as drug trafficking, smuggling and trafficking in persons.

The community participation and volunteerism programmes provided opportunities and exposure to the *rakyat* in safeguarding the nation and uplifting the spirit of togetherness in combatting crimes. In 2020, a total of 837,728 volunteers registered under the Volunteer Smartphone Patrol (VSP) programme to assist in crime prevention. In addition, the Go to Safety Point (GTSP) programme involving 2,918 out of 3,485 petrol stations and 15,607 activities under the *Aman Wanita (AMANITA)* programme were implemented to increase awareness and participation in reducing crimes. The *Program Pegawai Perhubungan Sekolah* involving 10,341 police personnel was implemented to contain juvenile crime and drug abuse. Meanwhile, a total of 10,421 drug prevention activities targetting school children, teenagers, adults as well as families were implemented to increase awareness and curb drug abuse.

Improvement in Healthcare Service Delivery

Healthcare service delivery was enhanced to increase the health status of the *rakyat*. These included the provision of a sustainable healthcare system as well as financial support, improving health literacy among the population and greater collaboration among stakeholders. The implementation of these initiatives has enabled the *rakyat* to have better access to quality and affordable services.

Provision of Sustainable Healthcare System

Significant progress was made in achieving a more sustainable healthcare service. Among the completed projects include four new hospitals, 77 new health clinics, 78 upgraded hospital projects, 17 upgraded health clinics and 61 other healthcare facilities projects including rural water supply and sanitation services. In improving patient flow and waiting time, 32 cluster hospitals[2] were established

[2] Cluster hospitals concept aims to optimise the use of healthcare facilities and overcome the shortage of specialists in non-specialist hospitals.

involving 113 existing hospitals. In combatting communicable diseases (CDs), Malaysia was recognised by the World Health Organization (WHO) in 2018 as the first country in the Western Pacific Region to eliminate mother-to-child transmission of Human Immunodeficiency Virus (HIV) and syphilis. Meanwhile, efforts to address emerging diseases were intensified through the implementation of the Malaysia Strategy Framework for Emerging Diseases and Public Health Emergencies II (MYSED II) Workplan (2017-2021). This work plan has proven to be extremely beneficial in battling the COVID-19 pandemic in terms of preparedness whereby swift control measures were put in place to contain the outbreak as well as save lives and resources. Malaysia was also selected to participate in vaccine trials for COVID-19 infection.

Provision of Financial Support

The *Skim Peduli Kesihatan untuk Kumpulan B40* (PeKa B40) was launched to address the healthcare needs of the B40 group, focusing on NCDs. This scheme offers four benefits, namely health screening, medical equipment, transport subsidy and incentives to complete cancer treatment. As at the end of 2019, a total of 201,497 individuals or 25% of the target group were registered and screened for NCDs. Meanwhile, contributions were received from various civil society organisations (CSOs), the corporate sector and the community to enhance healthcare capacity and capability during the COVID-19 pandemic. Multinational companies and other firms also contributed medical equipment, medicine, reagents, disposable items and other medical necessities besides donating cash to a number of COVID-19 funds. The plan was initiated to establish *tabung wakaf kesihatan negara* which focus on the development of *waqf* properties and products.

Improvement of Health Literacy among the Population

Efforts to improve health literacy among the population were continued through community-based programmes and user engagement. As at 2019, the *Komuniti Sihat Pembina Negara* (KOSPEN) programme was implemented in 5,872 localities. At the same time, the Communication of Behavioural Impact (COMBI) programme was implemented in 2,761 localities, providing training to 5,100 community leaders with the participation of 30,600 volunteers. In addition, the *Duta Kenali Ubat Anda*, a community empowerment programme was extended to 1,447 community leaders to increase awareness on the correct usage of medicine. A total of 63,548 women underwent mammogram screening, 137,015 breast clinical examination and 60,050 pap smear screening while 96,010 received the Human Papillomavirus (HPV) vaccine in 2018 at public healthcare facilities. The National Men's Health Action Plan 2018-2023 provided structured healthcare services in increasing the quality of life of men. Besides, under the National Immunisation Program, 98.9% of Standard 1 school children and 82% of school girls aged 13 years were given immunisation coverage in 2018.

Schools and HEIs were given a bigger role in advocating health literacy among students. In order to instil awareness and a healthy lifestyle among students, the *Program Tunas Doktor Muda* was implemented in 1,842 preschools by end of 2019. In addition, the *Kelab Doktor Muda* was established in 3,286 primary schools and 577 secondary schools, while *Program Siswa Sihat* (PROSIS) was implemented in 67 HEIs. Various school health programmes on promoting physical activity, healthy diet as well as NCDs risk factor screening and intervention were organised. As of 2019, a total of 230 mobile health clinic teams and 954 dental mobile teams were set up to expand the healthcare services delivery.

Greater Collaboration among Stakeholders

Greater collaboration was established among various agencies, the private sector and CSOs in strengthening disaster management. For example, during the chemical waste disposal incident in Sungai Kim Kim, Pasir Gudang, Johor in 2019, the Pasir Gudang Emergency Mutual Aid was further strengthened with the involvement of 30 agencies and 50 industrial players to implement contingency plans and protect the public from health hazards. In addition, various ministries, agencies and the private sector cooperated in managing the COVID-19 pandemic. This includes the conversion of the Malaysia Agro Exposition Park Serdang, an exhibition facility in Selangor, into a temporary Low-Risk Patient Quarantine and COVID-19 Treatment Centre with 3,000 beds. In addition, a total of 1,649 quarantine centres were gazetted at government buildings and hotels. A total of 28 additional diagnostic laboratories in public HEIs and teaching hospitals were utilised for COVID-19 testing.

Provision of Adequate and Quality Affordable Housing

The provision of adequate and quality affordable housing for the poor and low- and middle-income households continued to be given priority during the Eleventh Plan. Among the initiatives undertaken included increased access to affordable houses, enhancement of planning and implementation for better management of public affordable houses and provision of user-friendly facilities for enhanced liveability.

Increased Access to Affordable Houses

As of 2020, a total of 282,259 units or 43.2% out of the targeted 653,000 units of affordable houses[3] were completed by the Federal and state governments, and private developers. Access to affordable housing was enhanced through the provision of financing facilities for first time home buyers and the Rent-to-Own (RTO) housing programme for poor and low-income households. Special financing schemes, namely, My First Home Scheme (MyHome) and First House Deposit Financing Scheme (MyDeposit) were provided. These schemes provided financial assistance for down payment with a maximum of RM30,000 or 10% of the housing value. As of 2020, a total of 6,818 home buyers benefited from the MyHome scheme while another 2,865 from the MyDeposit. Meanwhile, a total of 5,877 units of houses were provided under the RTO programme for poor and low-income households, enabling them to rent and opt to purchase the houses under the *Program Perumahan Rakyat* (PPR).

Enhancement of Public Affordable Houses Governance

Measures were undertaken to strengthen the governance of public affordable housing programmes. The Perbadanan PR1MA Malaysia, Syarikat Perumahan Negara Berhad and *Program Perumahan Penjawat Awam Malaysia* (PPAM) were centralised under the Ministry of Housing and Local Government (KPKT) for better governance and coordination. In addition, the *Sistem Bank Data Perumahan Negara* was developed in 2018 to enable data sharing among agencies at the Federal and state levels. Public affordable houses were also constructed on *waqf* land through strategic partnerships between various agencies at Federal and state levels as well as with the private sector. A total of 2,934 public affordable houses were developed on *waqf* land under this initiative.

Provision of User-Friendly Facilities for Enhanced Liveability

Affordable housing schemes had contributed towards better living conditions. Major repair and maintenance works on public and private low- and medium-cost housing were completed under the *Program Penyenggaraan Perumahan* (PPP) and *Tabung Penyelenggaraan Perumahan Malaysia* (TPPM). The implementation of PPP involved a total of 313 public low- and medium-cost housing projects, benefitting 202,909 households while the TPPM involved 405 private low- and medium-cost housing projects, benefitting 559,739 households. Facilities to enhance liveability including ramps, parking facilities, lifts and toilets for persons with disabilities (PWDs) as well as public amenities such as community halls, playgrounds, *surau* and convenient stores were also incorporated in the housing projects. The requirement of 1% public housing designated for PWDs and senior citizens was also imposed. As of 2020, a total of 151 units of PPR and 166 units of PPAM were allocated for the PWDs.

[3] Houses costing less than RM300,000.

Promotion of Active Lifestyle

Efforts in promoting an active lifestyle were undertaken through the implementation of programmes and initiatives in encouraging mass sports and high-performance sports (HPS). These measures had been successful in inculcating the sports culture among Malaysians as reflected in the increased involvement in sports activities to 63% in 2020, exceeding the national target of 50% by 2020. The implementation of 3,172 sports programmes including *Bulan Sukan Negara*, Fit Malaysia and *Liga Sukan untuk Semua* attracted close to 20 million participants. Meanwhile, 33 new sports facilities were built while 322 existing facilities were upgraded to increase the availability and quality of sports facilities across the nation.

Measures were also undertaken to encourage active participation by the community in inculcating a sporting culture. The private sector and community-based sports bodies supported the efforts in promoting an active lifestyle by organising 6,130 sports events and recreational activities. A total of 2,342 individuals were trained as qualified fitness instructors as at 2020. Meanwhile, 3,821 sports bodies were registered from 2016 to 2020, increasing the total number of sports bodies to 10,728. E-sports programmes have been promoted to encourage the development of cognitive skills, critical thinking and a healthy mind as well as to enhance social interaction through digital platforms. E-sports tournaments were also organised in collaboration with the private sector.

The implementation of sports development programmes as well as the progress in sports science and medical services contributed to the improvement in the performance of athletes. Efforts to increase knowledge and skills among coaches and technical officers were strengthened through the implementation of various training courses, such as sports science and sports management, benefitting 13,732 participants. In addition, various tools were developed through R&D activities for sports science, such as Analysis Tool for Badminton (BStAT), Cycling Monitoring Software and Force Measurement Platform to enhance the performance of athletes. Meanwhile, 15,727 sports science services including biomechanics and performance analysis, exercise physiology, sports nutrition and psychology were provided to uplift the performance of HPS athletes.

The performance of national athletes in most of the HPS at the international level improved as shown in *Exhibit 4-2*. These achievements were mainly contributed by the implementation of various HPS development programmes, such as the Podium Programme, Paralympic Programme and Junior Programme. As of 2020, a total of 830 athletes, including 115 para-athletes participated in HPS development programmes. The Talent Identification Programme was introduced to provide a pool of potential athletes for HPS, which involved 1,574 students aged between 13 to 15 years.

Exhibit 4-2

Malaysia's Achievement in Major International Sports Competitions

No.	Competition	Previous Achievement	Latest Achievement
1.	Olympic Games	Ranked 65th with 1 silver medal and 1 bronze medal at the London Olympic Games 2012	Ranked 60th with 4 silver medals and 1 bronze medal at the Rio Olympic Games 2016
2.	Paralympic Games	Ranked 65th with 1 silver medal and 1 bronze medal at the London 2012 Paralympic Games	Ranked 36th with 3 gold medals and 1 bronze medal at the Rio 2016 Paralympic Games
3.	Commonwealth Games	Ranked 12th with 6 gold, 7 silver and 6 bronze medals at the 2014 Glasgow Commonwealth Games	Ranked 12th with 7 gold, 5 silver and 11 bronze medals at the 2018 Gold Coast Commonwealth Games
4.	Asian Games	Ranked 14th with 5 gold, 14 silver and 14 bronze medals at the 2014 Incheon Asian Games	Ranked 14th with 7 gold, 13 silver and 16 bronze medals at the 18th Asian Games Jakarta-Palembang 2018
5.	Asian Para Games	Ranked 7th with 15 gold, 20 silver and 27 bronze medals at the 2014 Incheon Asian Para Games	Ranked 8th with 17 gold, 26 silver and 25 bronze medals at the 2018 Jakarta Asian Para Games
6.	Southeast Asian (SEA) Games	Ranked 1st with 145 gold, 92 silver and 86 bronze medals at the Kuala Lumpur 2017 SEA Games	Ranked 5th with 56 gold, 57 silver and 71 bronze medals at Philippines 2019 SEA Games
7.	ASEAN Para Games	Ranked 3rd with 52 gold, 58 silver, 37 bronze medals at Singapore 2015 Para ASEAN Games	Ranked 2nd with 90 gold, 85 silver and 83 bronze medals at Kuala Lumpur 2017 Para ASEAN Games

Social Cohesion and National Unity

The National Unity Index[4] (IPNas) was developed in 2018 as a comprehensive measurement to help policy makers in evidence-based decision making. The score for IPNas in 2018 was 0.567, reflecting that the level of national unity is high[5]. This was contributed by various initiatives such as social interactions and religious harmony programmes implemented at all levels of society, including at the educational institutions and the community level. A total of 232,042 social interaction activities through the *Kawasan Rukun Tetangga* programmes were implemented including *Program Sayangi Komuniti*, *Pasukan Skuad Uniti*, *Program Jaringan Sosial* and *Program Silang Budaya*, involving 10,105,256 Malaysians. These programmes were carried out in collaboration with the private sector, HEIs and CSOs. As of 2020, a total of 400 community mediators have been certified in resolving community issues. Awareness, training and mediation programmes were organised mainly for youth to reduce religious disputes and maintain harmony in the society. *Jawatankuasa Mempromosikan Persefahaman dan Keharmonian Antara Penganut Agama* (JKMPKA) was rebranded to *Jawatankuasa Keharmonian Antara Penganut Agama* (HARMONI) to promote better understanding on religious matters.

Various measures were also implemented to instil unity and noble values as well as patriotism among children and youth. *Pelan Hala Tuju Perpaduan dalam Pendidikan* was introduced in 2017 to provide a comprehensive strategic plan to ensure that national unity is fostered effectively. Programmes such as *Rancangan Integrasi Murid untuk Perpaduan* (RIMUP) and *Kelab Malaysiaku*, as well as Service Learning Malaysia - University for Society (SULAM) were implemented. National unity and patriotism elements were embedded in *Mata Pelajaran Pengajian Umum*, while a total of 164 *Sekretariat Rukun Negara* (SRN) have been established at the HEIs.

The Ministry of National Unity was established in 2020 to implement the Government's commitment to enhancing national unity consistent with the objective of achieving a united and prosperous Malaysia by the year 2030. *Majlis Penasihat Perpaduan Negara* was established to advise the Government in addressing unity issues and propose recommendations to strengthen national unity. *Jawatankuasa Pelaksana Perpaduan Negara* and *Jawatankuasa Tindakan Perpaduan Negeri* were established to deliberate on issues affecting unity.

[4] Index developed by Jabatan Perpaduan Negara dan Integrasi Nasional to measure the level of unity.

[5] Score within the range of 0.26 to 1.00 to measure human behaviour which is categorised as high based on Cohen's Measurement Scale (1988).

Efforts to increase understanding and tolerance among ethnics were undertaken through various arts and culture programmes. Programmes such as *Festival Permainan Malaysia*, *Festival Gendang Sarawak* and *Pesta Angin Timur Perlis* were organised involving 367,969 participants from different ethnicities. In addition, *Hari Kraf Kebangsaan*, *Festival Kesenian Rakyat Kelantan* and Living Arts Culture Festival were organised, involving almost one million visitors. *Majlis Rumah Terbuka* for main festivals were organised every year to strengthen unity and bonds of friendship among races. *Program Bulan Bahasa Kebangsaan* was implemented to instil appreciation towards the nation through the usage of one language. This programme received support from more than one million participants annually.

Issues and Challenges

During the Eleventh Plan period, various measures were undertaken in enhancing defence and national security as well as the wellbeing and unity of the *rakyat*. Nevertheless, a number of issues that need to be addressed still remain. These issues include increasing threats to public safety and security, gaps in healthcare service delivery and lack of provision of affordable homes. In addition, the nation's sports potential remains untapped and incidences of disunity still exists.

Issues and Challenges

- Increasing Threats to Public Safety and Security
- Gaps in Healthcare Service Delivery
- Lack of Affordable Homes
- Untapped Sports Potential for Active Living
- Social Cohesion and National Unity

Increasing Threats to Public Safety and Security

Among the challenges in maintaining a stable and peaceful nation include the increase in complexity of crime and drug-related issues as well as porous borders and the influx of illegal immigrants. Weak governance and lack of agency readiness have affected the defence and enforcement capability in preserving safety and sovereignty. In addition, community volunteerism in complementing the Government efforts to maintain public safety during an emergency is still lacking.

The security landscape involving threats across borders as well as the dynamism of advanced technologies and digitalisation have contributed to the complexity of crime. These include cybercrime, terrorism and extremism as well as encroachment by foreign vessels, which have been increasing. Meanwhile, drug and substances abuse continues to be a major threat to the country. This has been aggravated by the existence of new psychoactive substances (NPS) that are not regulated by any international convention. The number of reported drug addicts increased, thus requiring additional costs of treatment and facilities. Unreported drug abusers posed threats to society and complicate the efforts by the community and authorities to control drug abuse and provide rehabilitation. Porosity at the border areas remains a challenge, partly caused by lack of coordination among the relevant agencies and inefficient enforcement. The influx of illegal immigrants continues to be a major concern. The number of illegal immigrants at detention depots increased from 10,949 in 2016 to 37,054 in 2019, causing higher expenditure to the Government.

Weak governance has eroded public trust and confidence in agencies responsible for enforcement. The number of misconduct cases reported against enforcement officers has increased. The ATM and enforcement agencies lack manpower as well as outdated assets and facilities, thus affecting service delivery quality. For instance, there are capacity gaps in the present national registration and immigration systems to meet the increasing needs. Meanwhile, weaknesses in managing the ATM and other enforcement agencies' quarters have affected the welfare and wellbeing of personnel.

Defence readiness remains a challenge, particularly in addressing issues on overlapping claims and disputes over land, maritime and air territories as well as conflict among major powers in the region. If not addressed amicably, these issues will compromise regional stability, the security and prosperity of the nation. Meanwhile, overcrowding in prisons has also resulted in insufficient basic supplies, poor hygiene and health as well as increased safety risks. In 2020, prisons were operating at 17.2% above capacity and 61.7% of inmates were involved in drug-related crimes.

Volunteerism among the community for safety and security is still low due to a lack of engagement and cooperation with relevant agencies. Lack of training, first aid skills, and basic equipment have also discouraged volunteers to respond at accident or emergency sites. These hampered efforts to improve community involvement in volunteerism.

Gaps in Healthcare Service Delivery

Despite achievements in the provision of quality healthcare services, major issues such as mixed performance in the health status of the *rakyat* and poor quality of certain healthcare services need to be addressed. Malaysia also faces increasing incidence of double burden diseases[6]. In relation to CDs, the incidence of diseases such as dengue, tuberculosis (TB), polio and HIV are on the rise while malaria and measles have reemerged.

The incidence of NCDs such as cardiovascular diseases, diabetes mellitus, cancer, mental illness and injury-related conditions continue to rise, contributing to an estimated 73% of total deaths in 2018. The increasing incidence of NCDs has led to a high number of avoidable premature deaths among Malaysians and higher demand for better healthcare services. In addition, under-nutrition among children below five years old remains a problem. The stunting prevalence has increased from 17.7% in 2015 to 21.8% in 2019. The prevalence of obesity among adults showed an increasing trend from 17.7% in 2015 to 19.7% in 2019.

Inadequate facilities, mismatch of resources across different levels of healthcare services and unsustainable healthcare financing have affected the delivery of healthcare services. This has worsened during the COVID-19 pandemic. Lack of readiness in disease surveillance and public health management remain challenging. The high level of subsidies in providing healthcare services, particularly in curative treatment increased Government expenditure. In public hospitals and clinics, overcrowding and long waiting time for treatment continue to affect the quality of service delivery. The inadequate number of health personnel, particularly specialists impede the provision of services to rural and remote areas. There is also poor integration of health databases among the public healthcare institutions. Rising healthcare costs have threatened the financial sustainability of the Government in providing quality public healthcare.

Lack of Affordable Homes

Efforts to provide affordable houses to the *rakyat* continue to face challenges, due to low household incomes in relation to houses prices, escalating construction costs of houses and tedious approval processes. Low- and middle-income households lack the ability to buy houses. Despite the decrease in the median multiple or house price to income ratio[7] from 5.0 in 2016 to 4.1 in 2019, houses remain unaffordable.

Labour-intensive traditional construction methods are less productive, resulting in a longer construction period and higher overall costs. The rising cost of land, particularly in urban and densely populated areas added to the project costs. Tedious and time-consuming processes, resulted in higher development costs, which will be transferred to homebuyers. In addition, the lack of quality control affects the delivery of quality affordable houses. There is a tendency for developers to compromise quality in maximising profit. In some cases, housing projects were also abandoned, thus affecting the low- and medium-income market segments.

Lack of coordination among the stakeholders contributes to weak planning and implementation of public affordable housing programmes. Several programmes undertaken by authorities at the Federal and state levels are not aligned to the affordable housing policy. The lack of comprehensive data and limited data sharing among agencies has further delayed the progress in achieving the national target for affordable housing.

Untapped Sports Potential for Active Living

Despite encouraging progress in promoting an active lifestyle through sports, inclusive participation in mass sports remains unsatisfactory while accessibility and maintenance of sports facilities are still poor. The inconsistent performance of national athletes and lack of new talent have further impeded progress in HPS. Malaysian participation in mass sports remains moderate, improving from 59.8% in 2017 to 63% in 2020. This was mainly due to poor time management, sedentary lifestyle and lack of awareness on the importance of active and healthy living. Furthermore, limited access to sports facilities and high charges by private sports providers have discouraged Malaysians from embracing the sports culture. The role of various sports bodies at the community level in promoting sports has not been successful due to poor management and lack of professionalism.

[6] A situation whereby a patient is suffering from both CDs and NCDs. For example, a patient with diabetes mellitus is also suffering from COVID-19.

[7] Methodology developed by Demographia International to evaluate urban housing markets. A house is considered affordable if it can be financed by less than three times a household's median annual income.

Inconsistent performance of athletes, low participation of women and lack of sports competition exposure impeded Malaysia's progress in HPS at the international level. Limited new sports talent and lack of professional career opportunities in HPS have hampered the creation of a pool of elite athletes. Inadequate centres for sports science, dedicated training centres as well as medical and sports science services have affected the performance of athletes and sports development research.

The sports industry as a new source of growth has not been fully capitalised on, mainly due to the absence of a clear policy. There are inadequate incentives to promote local sports products and services, while local sports event organisers lack the financial capability to host international and prestigious sports events. The quality and standards of a number of existing sports facilities are below the minimum requirements set by international sports bodies.

Social Cohesion and National Unity

National unity remains strong and resilient. However, there are several challenges that potentially threaten and hampered unity and harmony. These include incidence of disunity, erosion of noble values and unethical usage of social media. Uncoordinated planning of social cohesion programmes has hindered efforts to unite the *rakyat*. The erosion of noble values in family institution, which is essential in building a harmonious society has been linked to the rising number of juvenile crimes, domestic violence cases and divorces. This is reflected in the decreased score of the family component in MyWI from 98.6 in 2015 to 95.0 in 2020.

While the proliferation of digital technology has brought many opportunities, the misuse of this technology has posed some challenges to national unity. In 2020, the internet subscription has reached 29 million, out of which 93.3% were social media users. The incidence of misuse of social media to spread false news, slanders, sensitive or hate speeches and excessive trolling increased significantly. This is evident from the increasing number of complaints received on the misuse of social media including fake accounts, hate speech and false news, from 109 in 2016 to 8,618 in 2020.

The Federal Constitution and *Rukun Negara* are the foundation of national identity to maintain peace and harmony. However, there has been a gradual erosion in the respect, appreciation and understanding of values as enshrined in the Federal Constitution and *Rukun Negara*. The absence of a policy on national unity has led to uncoordinated planning and implementation of programmes among government, private sector and CSOs. This has affected the achievement of intended outcomes for social cohesion and national unity.

Way Forward: Twelfth Malaysia Plan, 2021-2025

In the Twelfth Plan, efforts will be intensified in enhancing defence and national security as well as the wellbeing and unity of the *rakyat*. This will be achieved by ensuring national security and sovereignty, enhancing the healthcare service delivery, increasing the supply of quality and liveable affordable housing, leveraging sports in building an active nation as well as strengthening national unity. This is to ensure prosperous living as stipulated in WKB 2030.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Enhancing Defence, Security, Wellbeing and Unity

Priority Area A

Ensuring National Security and Sovereignty

Strategy A1
Safeguarding National Sovereignty

Strategy A2
Intensifying Efforts in Crime Prevention, Rehabilitation, Emergency Preparedness as well as the Welfare of Personnel

Strategy A3
Strengthening Security Governance

Priority Area B

Enhancing Healthcare Service Delivery

Strategy B1
Redesigning the Healthcare Service

Strategy B2
Strengthening Health Financing and Public Awareness

Strategy B3
Leveraging Technology

Priority Area C

Increasing the Supply of Quality Affordable Housing

Strategy C1
Improving Access to Affordable Housing

Strategy C2
Enhancing Governance

Strategy C3
Ensuring Inclusive Housing

Priority Area D

Leveraging Sports in Building an Active Nation

Strategy D1
Promoting Sports for Active and Healthy Living

Strategy D2
Enhancing Sports Excellence

Strategy D3
Developing Sports Industry

Priority Area E

Strengthening Unity for a Prosperous Nation

Strategy E1
Embracing Diversity as an Asset

Strategy E2
Building a More Tolerant Society

Strategy E3
Strengthening Governance



Twelfth Malaysia Plan: Selected Targets

Ensuring National Security and Sovereignty



2025

Rank in Global Peace Index



2025

Index Crime Cases per 100,000 Population



2025

Police Response Time

Enhancing Healthcare Service Delivery



2025

Health Index in Malaysian Wellbeing Index (MyWI)



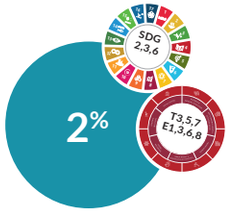
2025

Doctor to Population Ratio



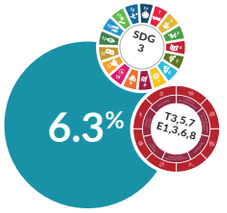
2025

Hospital Beds per 1,000 Population Ratio



2025

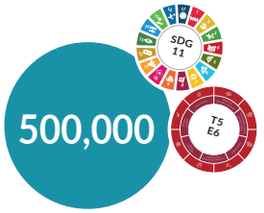
Reduction in Risk of Premature Mortality



2025

Reduction in Prevalence of Smoking

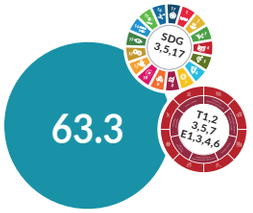
Increasing the Supply of Quality Affordable Housing



2025

Affordable Houses Constructed

Leveraging Sports in Building an Active Nation



2025

Malaysian Sports Culture Index

Strengthening National Unity for a Prosperous Nation



2025

National Unity Index



2021

Formulation of a Unity Policy

Target
SDG
WKB 2030

Priority Area A

Ensuring National Security and Sovereignty

National security and sovereignty will continue to be given priority in ensuring a conducive environment for economic activities and safe living as well as maintaining a dignified and resilient nation. Emphasis will be given on safeguarding national sovereignty, intensifying efforts in crime prevention, rehabilitation and emergency preparedness as well as the welfare of ATM and enforcement personnel. In addition, priority will be given in strengthening the security governance.



Strategy A1

Safeguarding National Sovereignty

Various efforts will be undertaken to safeguard national sovereignty from illegal immigrants and unlawful activities at the border as well as enhancing defence capacity and capability. These efforts include developing a holistic plan to manage illegal immigrants, improving border patrols and strengthening defence diplomacy. These initiatives are crucial in ensuring a safe nation as well as maintaining and promoting regional stability.

Managing Threats from Illegal Immigrants and Activities at the Border

A holistic plan will be developed to manage illegal immigrants, which will cover strategies to improve policy enforcement operations, border control, management of immigrants as well as media reporting and publicity. The plan will include improvement of the enforcement system in dealing with immigrants who entered the country legally but continue working after the expiry of their work permit. The plan will also strengthen strategic cooperation with state governments to ensure increased community participation in channelling information particularly on illegal immigrants. Community leaders will be empowered and awareness programmes for the public will be enhanced to assist enforcement agencies in stopping the flow of illegal immigrants.

Border control will be improved through joint operations and border patrolling on land and maritime domains involving ATM and enforcement agencies to prevent any unauthorised entry. The number of security posts located along the international borders will be increased, especially in Sabah and Sarawak. Surveillance will be reinforced through the use of advanced systems and technology including sensors, radars, CCTVs and drones to compensate for the limited number of personnel and inaccessible areas. Maritime control will also be tightened to combat illegal activities, such as sea piracy, smuggling and encroachment by foreign vessels. Cooperation at domestic and regional levels will also be intensified, particularly on joint enforcement operations as well as exchange of information on illegal trades and smuggling activities.

Enhancing the Defence Capacity and Capability

Defence capacity and capability will be enhanced in safeguarding national sovereignty as outlined in the Defence White Paper. In this regard, military capability will be strengthened in the aspects of intelligence, surveillance, target acquisition and reconnaissance. Measures will also be undertaken to improve firepower and mobility in enhancing the defence capacity and capability. In addition, maritime security will be fortified, especially in surveillance and enforcement activities as well as showing presence to protect the socioeconomic interest and security of the country.

Defence diplomacy will be intensified through bilateral and multilateral collaboration to reduce and avoid conflicts. Cooperation with countries and strategic partners will be strengthened through MoUs and memorandum of agreements (MoAs), including in promoting joint exercises and training. The cooperation will enable sharing of experience and information, acquiring technical knowledge as well as enhancing networking and international relations. A national defence and security industry policy will be formulated to provide overall direction to reduce dependency on foreign assets and equipment. The policy will focus on products and services development, talent enhancement, technology adoption as well as R&D activities, thus reducing over-dependency on foreign resources.

Strategy A2

Intensifying Efforts in Crime Prevention, Rehabilitation, Emergency Preparedness as well as the Welfare of Personnel

Measures to strengthen public safety and security will focus on improving crime prevention efforts, combatting drug abuse and trafficking as well as curbing trafficking in persons. In addition, prison management and operations will be improved to provide more effective correctional and rehabilitation programmes. Efforts will also be undertaken to improve emergency response and preparedness. The welfare of ATM and enforcement personnel will be taken care off to enhance personnel performance in implementing duties.

Improving Crime Prevention

Crime prevention efforts will be further intensified through the implementation of various programmes involving PDRM, CSOs, the private sector and the *rakyat* at large. The PDRM omnipresence programmes, including URB and MPV will be enhanced, while Community Policing will be strengthened through collaboration with CSOs, the private sector and local communities. The Safe City Programme, which incorporates the environmental design approach in crime prevention, such as the installation of streetlamps, anti-crime safety mirrors and closed-circuit television, will be continued. Greater cooperation among enforcement agencies, ATM, local authorities and communities will be enhanced for more effective information sharing to reduce crime and public disorder. These initiatives will also promote efforts in achieving nation-building.

Public awareness and campaigns through social media will be increased to create better awareness of crime prevention. Social media will also be utilised as a platform between the public and enforcement agencies to promote information exchange related to crime. Capacity building programmes for enforcement personnel will also be strengthened, especially in the areas of intelligence, investigation and prosecution.

A national action plan for preventing and countering violent extremism will be developed as a guide in ensuring rapid response against terrorism and extremism threats. Networking and information sharing with relevant domestic and foreign agencies as well as telecommunication companies, will be strengthened in countering the terrorist movements. In curbing radicalism, awareness and deradicalisation programmes involving relevant agencies will be enhanced.

An integrated sharing platform among ATM and other enforcement agencies will be developed to improve cybercrime investigations performance. The capabilities of personnel will be enhanced to combat cybercrime, focusing on criminal investigation, cyber-intelligence, cyber-defence and online surveillance. The involvement of security and enforcement agencies will be intensified, particularly ATM and PDRM, in curbing cybercrime threats such as the Macau Scam, eCommerce fraud and online gambling. Cooperation through bilateral and multilateral arrangements will also be strengthened in addressing cross-border cybercrime. Advocacy programmes among the public will be intensified to increase awareness of cybercrime and cyber safety.

Combatting Drug Abuse and Trafficking

Drug-related laws will be reviewed to expand the definition of drugs and substances to cover NPS and ketum. In addition, relevant provisions in the law will be amended to de-list drug addicts who are not involved in crime from the register of criminal and undesirable persons. This is to provide them a second chance in life for employment opportunities. Integrated and coordinated surveillance as well as operations by related enforcement agencies will be intensified to combat drug trafficking. The alternative service delivery (ASD) programme will be enhanced by empowering CSOs and the private sector to improve the effectiveness of drug prevention programmes. Awareness programmes targeting families, schools, HEIs, workplaces and communities will be intensified. An index to measure drug related issues will be introduced for better decision making in combatting drug abuse and trafficking.

Curbing Trafficking in Persons

A more holistic approach in curbing trafficking in persons will be adopted in ensuring fair and just treatment. In line with the United Nations Convention against Transnational Organized Crime (Palermo Protocol), this approach will cover prevention and prosecution of trafficking in persons as well as protection of victims. Comprehensive indicators will be developed to help with identifying victims and reporting on human trafficking activities. Furthermore, strategic collaboration with CSOs and international organisations will be strengthened to provide better care and protection for the victims.

Enhancing Management and Operation of Prisons

The management and operation of prisons will be improved to enhance service delivery. A holistic plan will be developed to improve detention centres as well as rehabilitation and correctional programmes. In supporting this, the capacity and capability of prison personnel will be enhanced. Prisons will be upgraded to provide a more conducive environment and adequate space for rehabilitation programmes. Drug offenders under Section 15 of the Dangerous Drug Act 1952 will be segregated from other inmates within the prison.

Alternatives to imprisonment will be expanded by implementing more probation and community corrections programmes. These alternatives include compulsory attendance order, deferred sentences, day parole, home detention, court order parole and prison supervision. In addition, strategic partnerships among CSOs, volunteers and employers will be enhanced, particularly for the reintegration into society and smart internships with the corporate sector. These initiatives will help in promoting reintegration and resettlement of ex inmates or parolees back into society.

Improving Emergency Preparedness

The capability of agencies in providing emergency services will be enhanced through the upgrading of facilities and assets. Voluntary participation by local communities in the Civil Defence Emergency Response Team–Community (CDERT-C) will be encouraged by promoting awareness on the importance of volunteerism. These volunteers will be trained to be certified emergency responders. Meanwhile, the emergency response system and the Public Warning System will be upgraded to improve response time. Voluntary firefighter services will also be expanded to include FELDA areas.

Enhancing the Welfare of Malaysian Armed Forces and Enforcement Personnel

The welfare of ATM and enforcement personnel will be taken care of to ensure the wellbeing of personnel as well as effectiveness in implementing duties. In this regard, the quarters will be built, upgraded and maintained to create a condusive environment for the personnel. Dilapidated and unsafe quarters will be reconstructed while two rooms quarters will be upgraded. Better maintenance will be enhanced to ensure these facilities are comfortable for living. Meanwhile, healthcare programmes for ATM and enforcement personnel will be improved to increase health and fitness. These measures will enhance personnel preparedness in fulfilling operations orders at any time.

Strategy A3

Strengthening Security Governance

The governance of security will be strengthened to improve service delivery in upholding public safety and security. The role and function of the National Security Council (NSC) will be strengthened, several laws on public safety and security will be reviewed and anti-corruption measures will be further enhanced. Coordination and collaboration among stakeholders as well as data sharing and system integration will be intensified. These efforts will ensure rules and regulations are better enforced, achieving higher trust in institutions and strengthening national defence and security.

Strengthening the Role and Function of National Security Council

The role and function of the NSC as a lead agency in coordinating policies related to national security will be strengthened. In this regard, the coordination of the various committees under NSC will be improved to ensure direction and measures related to national security as well as public safety will be implemented more effectively at the federal, state and district levels. The coordination will focus on security issues including cyber security, cross-border crimes, disease outbreak, natural disasters as well as economic and social crises. In addition, the National Operations Management Centre will be enhanced through better coordination among relevant stakeholders and connection with all systems related to security, defence and disaster management. This will enable faster information gathering and accelerate the decision-making process as well as better coordination among agencies in dealing with threats and crises.

Improving Legislation on Public Safety and Security

A number of laws will be amended to ensure relevancy and effectiveness in improving public safety and security. These include laws related to crime, including the Prevention of Crime Act 1959, Security Offences (Special Measures) Act 2012, Prevention of Terrorism Act 2015 and the Penal Code 1957. In addition, the Sedition Act 1948 and Printing Presses and Publications Act 1984 will be reviewed.

Strengthening Anti-Corruption Measures

A number of anti-corruption measures will be strengthened across all enforcement agencies and ATM. These include the mandatory implementation of the Anti-Bribery Management System standards, as outlined under the National Anti-Corruption Plan. All enforcement agencies under the Ministry of Home Affairs will be required to implement the Recruitment Profiling System for high risk and sensitive positions to reduce corruption risks. Job rotation will also be made mandatory.

Improving Coordination and Collaboration

Effective coordination and collaboration among all stakeholders involved in safeguarding national security is vital in promoting good governance among the enforcement agencies. A security and public order consultative council will be established to streamline efforts in addressing security threats. This council will provide a platform for knowledge sharing among the security experts. This council will also evaluate the effectiveness of policies and programmes as well as the existing legislation and procedures related to safety and security.

In dealing with cross-border crime, concerted efforts will be undertaken to bring together the several mandates and powers of ATM and all enforcement agencies related to border control, including at the entry points. In this regard, security management and enforcement, including the movement of people and goods, will be strengthened through the establishment of a single border agency. A holistic border management and operation action plan will be developed to streamline all border enforcement operating procedures.

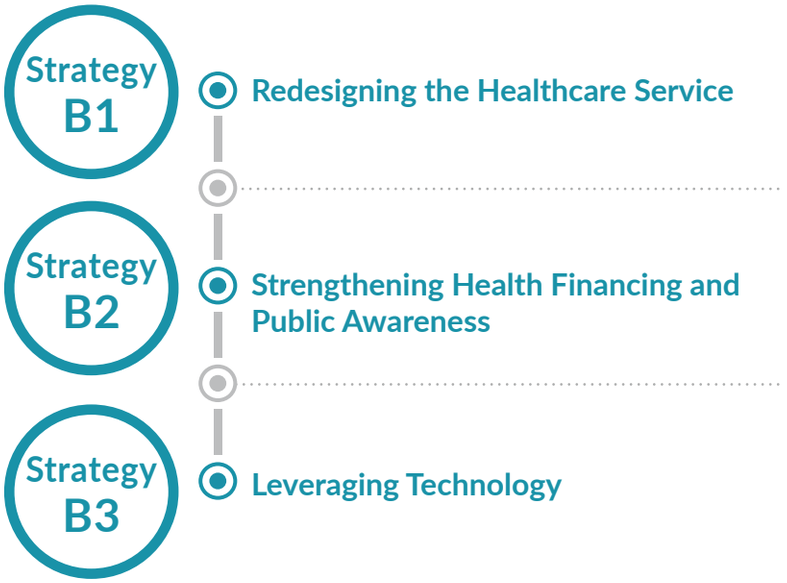
Enhancing Data Sharing and System Integration

A national digital identification policy will be introduced to enable a trusted, secured and transparent movement of data. Under this policy, all systems related to population registration will be integrated to allow data sharing among relevant agencies. This initiative will cater for future population data expansion and enable the adoption of additional digital identity features.

Priority Area B

Enhancing Healthcare Service Delivery

In improving the wellbeing of the *rakyat*, more focus will be given to enhance healthcare service delivery through revitalising of the healthcare system and greater collaboration in the consolidation of resources. The healthcare system will be redesigned, while health financing and public awareness will be strengthened. Emerging technologies will be leveraged to support the initiatives for better provision of healthcare services. The implementation of these measures will contribute in ensuring healthy lives and promoting the wellbeing of the *rakyat*.



Strategy B1

Redesigning the Healthcare Service

The healthcare service will be redesigned to ensure efficient and affordable healthcare delivery to the ***rakyat***. Measures will focus on strengthening healthcare policy, combatting CDs and NCDs as well as enhancing healthcare programmes for older persons. The capability in handling health crises will be enhanced in ensuring quality and accessibility to healthcare services.

Introducing Healthcare Policy

A blueprint for Malaysia Healthcare System Reform will be introduced as a new way forward for national healthcare system transformation. In designing this blueprint, a study will be undertaken to strengthen the healthcare sector landscape. This study will include public healthcare sector transformation, private healthcare sector regulatory reform and sustainable health financing. Several policies targeting specific health needs will be introduced, such as oral healthcare, mental health and immunisation policies. In addition, food safety policies will be reviewed to protect the public against health hazards and fraud in the food supply chain including preparation, sale and use of food. The drinking water quality act will also be introduced.

The implementation of all these initiatives will ensure comprehensive health coverage, streamline the role of various stakeholders and facilitate better coordination in healthcare service delivery involving a whole-of-nation approach.

Combatting Communicable Diseases

The prevention and intervention programmes will be intensified to combat CDs, especially during an outbreak or pandemic. Awareness and mitigation programmes on disease transmission, especially COVID-19, HIV, dengue, TB, rabies, hepatitis B and C, will be heightened, focusing on targeted groups. The Wolbachia[8] programme will be expanded to control the dengue endemic, particularly in the red zone areas. Effective communication plans for the national immunisation programme will be implemented to avoid vaccine preventable diseases. In addition, a national immunisation registry will be established, while the immunisation programme will be expanded to include children in private schools, older persons, Orang Asli and underserved communities in Sabah and Sarawak. The role of local authorities in public health management will be enhanced by incorporating health aspects in the development planning as well as the provision of public sanitation services and disease control measures. The Food Hygiene Regulation 2009 will be amended, while other related legal and regulatory frameworks will be refined to reduce the incidences of food borne diseases caused by home-based food businesses.

Combatting Non-communicable Diseases

Efforts will be intensified to combat NCDs, focussing on cancer, cardiovascular diseases, diabetes mellitus and mental illness. Various awareness programmes on a healthy lifestyle will be expanded to cover a wider population. The screening and diagnosis services for colorectal, oral, breast and cervical cancers will be strengthened by increasing the number of mobile health clinics. In addition, cancer awareness programmes will be conducted at more health clinics and hospitals, targeting high-risk groups for early detection.

The obesity intervention programmes at schools, HEIs, workplaces and local community centres will be intensified to increase awareness of the risks of poor dietary habits. The scope of sugar tax will also be expanded to include premix drink products. Nutrition advocacy activities for women of reproductive age will be heightened to control and prevent double burden[9] of malnutrition. Quit smoking programmes

[8] The objective of the Wolbachia programme is to replace wild dengue-transmitting mosquito population with population that is unable to transmit dengue, zika or chikungunya viruses to people. This will be done using bacteria called Wolbachia, which is naturally found inside many insects, including mosquitoes and are passed to the offspring through eggs.

[9] A situation whereby co-existence of under nutrition along with overweight or obesity and diet related NCDs.

will be further strengthened in both the public and private sectors. The role of the Cure and Care Clinics as a One Stop Centre for Addiction will be expanded to include alcohol addiction in the rehabilitation programme.

A national strategic plan will be formulated to address mental health issues, covering among others, measures for prevention, intervention and treatment. Campaigns and services related to mental health will be enhanced to educate and increase awareness through concerted efforts with related agencies, volunteers, community-based organisations (CBOs) and CSOs. In addition, the national suicide registry[10] will be established to assist in formulating effective measures in addressing the rising suicide rate.

Strengthening Healthcare Programmes for Older Persons

As Malaysia moves toward an aged nation by 2030, it is imperative to further improve the healthcare programmes for older persons. The design of private healthcare facilities shall comply with the Private Aged Healthcare Facilities and Services Act 2018 and Care Centres (Amendment) Act 2018 to cater for the needs of older persons. In addition, domiciliary healthcare will incorporate oral healthcare services to prevent and treat oral cancer among older persons. Strategic partnerships with the private sector, HEIs, CBOs and CSOs will be enhanced to implement preventive and self-care programmes. Awareness programmes on healthy ageing and eating will be strengthened, including at the *Pusat Aktiviti Warga Emas* to maintain good health among older persons.

Increasing Preparedness in Handling Health Crises

Healthcare services will be strengthened with better facilities, pharmaceutical services, health personnel and medical equipment to increase the preparedness level in handling health crises. The capacity of clinical skills laboratory will be improved to enhance competencies of health personnel in providing the best quality care. The safety measures at the clinical laboratories will also be improved to fully comply with the standard requirements set by the WHO to ensure the safety of personnel. Furthermore, the multi-hazard public emergency response team will be strengthened in terms of health personnel and medical equipment at a number of selected entry points, particularly at the Kuala Lumpur International Airport, Sepang. All emergency departments, particularly in state hospitals will be better equipped to improve service delivery efficiency. In addition, a pharmaceutical track and trace system will be introduced to ensure sufficient supply and efficient distribution of medicines to all healthcare facilities. The system will also be able to check the authenticity of medicines.

Ensuring Quality and Accessibility of Healthcare Services

A master plan on healthcare facilities and human resources will be formulated to strengthen the capacity and capability of healthcare personnel as well as improve facilities. The design for new healthcare facilities will be refined to fulfil post COVID-19 requirements. The cluster hospital concept will be expanded to include more public hospitals, including teaching hospitals and health clinics, in increasing accessibility to specialists' services. The curriculum of the National Postgraduate Training Programme will be enhanced to improve the quality and increase the number of medical specialists. Focus will also be given to the maintenance aspect through repair, replace and restore approach to improve aged healthcare facilities especially those above 50 years, as well as obsolete medical equipment. In addition, leasing of medical equipment approach will be explored to enable rapid technology adoption in medical equipment procurement. The construction of healthcare facilities will be accelerated through better collaboration between the Federal and state governments in meeting the health needs of the *rakyat*. In ensuring communities in remote areas have equitable access to healthcare services, the mobile health services will be expanded to include laboratory, x-ray and mammogram services.

Emerging technologies will be optimised in providing better access to healthcare services. The e-hailing service will be further leveraged to provide better home healthcare services. This service includes the delivery of medicine and health screening results as well as the transport of medical personnel for blood tests and health consultations. Virtual clinic services will be expanded to 250 clinics over five years to provide better access to online medical consultations. A mobile application, will be introduced, enabling patients to register for appointments as well as view their medical history and prescriptions online. This initiative will reduce patient flow and waiting time in hospitals. The e-payment platform will be leveraged to allow e-wallet usage for payment of medical bills in public health clinics. In this connection, the e-wallet service, which is currently available at four clinics, namely the *Klinik Kesihatan* Kuala Lumpur, *Klinik Kesihatan* Cheras, *Klinik Kesihatan* Seremban and *Klinik Kesihatan* Putrajaya Presint 18, will be expanded nationwide.

[10] An integrated database between agencies to record cases of suicide and fatal injuries as a result of suicide.

Strategy B2

Strengthening Health Financing and Public Awareness

Measures will be undertaken to address the increasing cost in the provision of quality healthcare services. Initiatives will be introduced to ensure sustainable healthcare financing and strengthen health protection coverage for targeted groups. In addition, health literacy and awareness among the public will be enhanced through the implementation of various programmes at all levels. The implementation of these initiatives are expected to facilitate delivery of quality healthcare services.

Ensuring Financial Sustainability for Healthcare

The Government financial burden will be reduced gradually in providing sustainable quality healthcare services. The Malaysia National Health Accounts report will be strengthened by incorporating a more detailed analysis of public health expenditure as a tool to identify cost drivers within the health system. Current healthcare charges will be reviewed so that higher income patients will be required to pay higher charges. Subsidies for healthcare services will be streamlined based on a means test[11]. In addition, a national health endowment fund, particularly from *waqf* will be introduced as a measure to diversify sources of funding and create alternative financing for healthcare. Several approaches including public-private partnership, rent-to-own, leasing and sharing of facilities will be explored in reducing the dependency on Government allocations.

The rising cost of pharmaceutical products and medical equipment is a source of concern to consumers. The existing strategic purchasing initiative will be enhanced through the expansion of the pooled procurement approach in purchasing pharmaceutical products and medical equipment. This approach will be undertaken in collaboration with the private sector as well as other ASEAN countries to obtain better terms in procurement. In addition, a price control mechanism for medicines will be introduced to protect consumers from unfair pricing.

Strengthening Health Protection

Efforts will be undertaken to encourage the *rakyat* to have insurance and *takaful* in financing healthcare expenses. The existing social protection scheme under the Social Security Organisation (SOCSO) will be expanded to cover workers in the informal sector, including those in agriculture and retail trade. Workers under this scheme will also enjoy health benefits. Meanwhile, the PeKa B40 programme will be expanded to cover the cost of treatment and services at private healthcare facilities through strategic purchasing and service level agreements to ensure sustainable health financing.

Enhancing Health Literacy and Awareness

A national health literacy policy will be introduced to improve the knowledge and understanding of the public on the basic health information and services needed. This will also facilitate agencies in planning for better programme implementation. The health literacy surveillance system will be developed to support the implementation of this policy. In line with *Agenda Nasional Malaysia Sihat*, healthcare awareness programmes will be intensified through various platforms at all levels. The implementation of KOSPEN will be invigorated at workplaces including government agencies to reduce the number of NCDs cases. In addition, wellness facilities under various agencies will be leveraged, while capacity building programmes for community leaders will be enhanced to improve health literacy and awareness.

More school children, HEIs students, local leaders and community members will be appointed as health agents and national health icons to promote health awareness at various levels. A health alliance will be formed to better organise the content and activities of health volunteers to improve effectiveness. Social media platforms will be leveraged to invigorate health literacy and counter misleading information that exacerbates health issues.

[11] Determination of whether an individual or family is eligible for government assistance.

Strategy B3

Leveraging Technology

The healthcare subsector will leverage emerging technologies to reduce costs and unnecessary procedures. In this regard, more healthcare services will be digitalised to ensure seamless utilisation of information and solve the issue of fragmented health information systems. In addition, research, development and innovation will be leveraged to ensure better provision of healthcare services.

Digitalising Healthcare Services

The Electronic Medical Record (EMR) initiative will be rolled out in phases to ensure seamless flow of information among healthcare facilities and will create a lifetime health record. A number of dedicated information systems will be introduced, particularly on environmental health, water, sanitation and hygiene to gather information for health surveillance and auditing purposes. In this regard, big data analytics (BDA), business intelligence and precision medicine will be utilised for better planning and decision-making. In addition, an integrated food safety information system and a healthier choice logo system for food and beverages as well as a food composition database will be developed to provide information on food safety, ingredients composition and nutrition content.

A virtual platform will be established and integrated with the Malaysian Health Data Warehouse (MyHDW) to allow data sharing across government agencies. This platform will facilitate more evidence-based decision-making to improve the provision of healthcare services and disease surveillance. This will ensure effective healthcare planning and cost-efficient implementation.

Improving Research, Development and Innovation Capacity

Research, development and innovation capacity will be intensified to improve the healthcare system. A centre for digital health research and innovation will be established at the National Institute of Health (NIH) to accelerate the development of innovative digital healthcare products and services. In addition, the capabilities of researchers will be enhanced through quality training programmes in improving their competency and performance. The role of the existing National Public Health Laboratory in Sungai Buloh will be strengthened by developing a centre for External Quality Assurance (EQA) providers. This centre will enhance the quality aspect of public health laboratory services by providing an independent assessment of its performance. Efforts will also be undertaken to enhance scientific research by conducting birth cohort studies, vulnerability and adaptation assessment as well as human biomonitoring programme. Collaboration and strategic partnerships, including with the private sector and foreign partners will be enhanced to strengthen the capacity and capability of research and development in the healthcare subsector.

Priority Area C

Increasing the Supply of Quality Affordable Housing

The national home ownership agenda continues to focus on providing access to quality and liveable affordable housing for the *rakyat*. Emphasis will be given to improving access to affordable housing by enhancing affordable housing governance and ensuring inclusive housing development. These strategies are in line with WKB 2030 and the 2030 Agenda that aim to provide access to adequate, safe and affordable housing for all.



Strategy C1

Improving Access to Affordable Housing

Providing better access to affordable housing to the *rakyat* will remain a priority. This will be achieved by ensuring the provision of affordable housing for target groups, increasing access to financing and managing housing construction costs to facilitate home ownership. Efforts will continue to be undertaken to capitalise on government-owned and *waqf* land to enable higher ownership of affordable housing for selected target groups.

Increasing Supply of Affordable Housing for Target Groups

More affordable housing will be constructed for the selected target groups. A regulation will be introduced to limit the purchase of only one affordable house per eligible citizen. A comprehensive database of affordable homeowners will be established to monitor home ownership. Ceiling prices of affordable housing will also be introduced in the secondary market to control house prices, especially in the urban areas. In addition, the exit policy on errant tenants of PPR will be strictly enforced to ensure this programme only benefits deserving households.

Increasing Access to House Financing

The existing housing financing schemes will be improved to assist the B40 and M40 households to own houses. In this regard, the RTO programme will be expanded to cover houses priced up to RM500,000 with an option to purchase the property within five years of renting. In addition, the Fund for Affordable Homes and Youth Housing Scheme will continue to be provided in financing the purchase of the first house.

The *Skim Pinjaman Perumahan* will be strengthened to assist households that own land to build affordable houses. A new financial model with more attractive loan packages will be introduced to increase take-up rate. Efforts will also be undertaken to assist home owners in preventing their houses from being auctioned due to financial difficulties. In this connection, the *murabaha* to *ijarah* to *murabaha* programme (own-to-rent-to-own) will be introduced to allow home owners to repurchase the property acquired by banks.

Managing Housing Construction Costs

Initiatives will be undertaken to manage the construction cost of affordable houses. Charges and fees imposed by local authorities and utility providers for the construction of affordable housing will be standardised. A model for affordable housing development based on a cost-sharing mechanism will be introduced through collaboration between the Federal Government and state governments, and private developers. The existing Industrialised Building System (IBS) incentives will be reviewed to encourage developers to use IBS technology to manage costs and improve efficiency.

Capitalising Land Owned by Governments and *Waqf* Land

Efforts will be undertaken to capitalise land owned by the Federal Government and state governments, *waqf* land and utility providers for the development of affordable housing. A law on *waqf* land development will be introduced at the Federal level which will serve as a guide for *waqf* land development throughout the country. The Federal Government will continue working closely with the state Islamic religious councils and other stakeholders to identify suitable *waqf* land to be developed for housing purposes. In addition, suitable land owned by public utility companies will be identified to develop affordable housing, particularly in the urban and peripheral areas. To date, three sewerage treatment plants have been earmarked for such development.

A housing redevelopment guideline will be formulated, using the public-private partnership model, to rebuild public housing, especially dilapidated flats, and old or abandoned government quarters that are beyond economic repair. This guideline will facilitate the redevelopment of low-cost housing areas to increase supply of better quality houses. In addition, affordable housing will be built close to transport terminals to improve mobility and connectivity. In this regard, the provision of affordable housing will be included in the development planning of new townships.

Strategy C2

Enhancing Governance

The governance of affordable housing will be enhanced to improve planning, coordination and execution of affordable housing projects at the Federal, state and local levels. Institutional capability in building affordable houses, enforcing houses standards, and strengthening rules and regulations to safeguard homebuyers and tenants will be enhanced. These initiatives will ensure the provision of quality homes and improve liveability for the target groups.

Strengthening Institutional Capability to Build Affordable Houses

A data centre on housing, integrating relevant data from the Federal and state governments as well as private developers will be established to strengthen the institutional capability. BDA will be leveraged to facilitate evidence-based policy formulation in developing housing projects. In addition, a housing integrated management system will be developed to serve as a single-entry platform for the application and processing of advertisement and sale permits.

Enforcing National Housing Standards

The *Piawaian Perumahan Berkualiti* (PPB) will be enforced to ensure the quality of affordable houses. The PPB prescribes the National Housing Standard[12] as the referral guideline in the construction of quality affordable houses. The Quality Assessment System for Building Construction Works (QLASSIC) will be made mandatory under PPB and become a pre-requisite for development approval. The assessment conducted under QLASSIC will be mainly based on the quality of workmanship of houses constructed.

Strengthening Rules and Regulations to Safeguard Homebuyers and Tenants

The *Akta Pemajuan Perumahan (Kawalan dan Pelesenan)* 1966 will be revised to improve existing housing laws and regulations to protect homebuyers. Stronger action will be taken against irresponsible developers and individuals associated with the companies for abandoning housing projects and treating homebuyers unfairly. An act on commercial development will be introduced to protect the interest of small property owners in commercial development projects. This will address issues related to the development of several types of properties under commercial projects, such as studios, duplexes and small office home office (SOHO) that do not conform to affordable housing requirements. Meanwhile, in an effort to improve the housing rental market, an act on residential tenancy will be introduced to regulate the rights of proprietors and tenants.

Strategy C3

Ensuring Inclusive Housing

Measures will be undertaken to ensure the provision of affordable housing is inclusive. In this regard, the construction of affordable houses will be made a prerequisite in new township development. In addition, communities will be encouraged to adopt best practices under the National Community Policy, National Cleanliness Policy and Separation at Source to enhance liveability.

Ensuring Affordable Housing in New Township Development

The construction of affordable houses will be made a priority in the development of new townships, making them accessible to low-income groups. The pursuit of the profit maximisation objective in a number of development projects has resulted in an insufficient supply of affordable houses. A national guideline will be formulated to serve as a reference for state governments in the development of affordable housing in new townships. This is to achieve greater inclusiveness by ensuring people from various income segments are represented in the townships.

[12] The standard developed by the Construction Industry Development Board (CIDB). The standard provides minimum quality standards for housing in Malaysia and serves as a guideline in the planning, design and construction of affordable housing projects.

Adopting Best Practices to Enhance Liveability

The National Community Policy (NCP) launched in 2019 is aimed at building the spirit of unity to enable members of a community to live in a conducive and harmonious environment. The NCP initiatives will be rolled out nationwide to encourage communities to be more active in keeping the surroundings safe and clean. The local communities and residential management bodies will be equipped with the necessary skills to undertake and organise community programmes effectively. The roles of joint management bodies and management corporations will be strengthened by amending the Strata Management Act 2013.

A more conducive living environment will be provided through the expansion of best practices as outlined in the NCP, National Cleanliness Policy and Separation at Source. Private developers will be encouraged to adopt the universal design concept in housing projects to cater for the needs of specific target groups, particularly PWDs and older persons. Local authorities will also be encouraged to build more environment-friendly facilities, including public parks and recreational spaces, particularly in high-density residential areas.

Priority Area D

Leveraging Sports in Building an Active Nation

Sports will be further leveraged as a medium to build an active nation. The National Sports Vision 2030 (VSN 2030), which is a continuation of the National Sports Policy 2009 will be introduced to set a new direction to build Malaysia as a sporting nation by 2030. This will be undertaken by promoting sports for active and healthy living, enhancing sports excellence and developing the sports industry as a new source of growth. These strategies will enable Malaysians to embrace an active lifestyle, enhance Malaysia's presence in sports internationally and boost the contribution of the sports industry to the economy.



Strategy D1

Promoting Sports for Active and Healthy Living

Concerted efforts will be undertaken to promote sports culture in building an active and healthy society. These efforts include enhancing accessibility to sports facilities, strengthening community-based sports bodies and promoting inclusive participation in sports. The implementation of these efforts will support Goal 3 of the 2030 Agenda to ensure healthy living and promote wellbeing as well as to support the principle of inclusiveness under WKB 2030.

Enhancing Accessibility to Sports Facilities

A national plan will be introduced to provide a comprehensive guideline for the construction, management and maintenance of public sports facilities. A centralised system will be developed to manage these facilities and ensure optimal utilisation. An integrated online booking system, including mobile applications, will be developed to allow greater access to public sports facilities.

Continuous engagement with local authorities and community leaders will be undertaken to ensure the development of new sports facilities and recreational areas are based on the needs of local communities. Existing public sports facilities will also be upgraded and properly maintained to optimise usage, while local authorities will be urged to undertake regular maintenance of sports and recreational facilities under their purview. In addition, the private sector and sports bodies will be encouraged to provide more sports facilities for public use.

Strengthening Community-Based Sports Bodies

Community-based sports bodies will be strengthened to conduct sports events and promote an active lifestyle more effectively. The management of these sports bodies will be enhanced through capacity building programmes to improve leadership, financial management and administrative skills. A rating system will be introduced to promote management excellence among community-based sports bodies. These measures will enable community-based sports bodies to promote an active lifestyle and identify new talent at the grassroots level.

Promoting Inclusive Participation in Sports

Specific facilities to cater for the needs of target groups such as PWDs, older persons and women will be provided in the development of new sports facilities and recreational areas. Sports event organisers will also be required to organise dedicated programmes to encourage participation of these target groups. Local authorities will also be encouraged to organise more sports activities for these groups at the community level. In addition, a national plan of action to boost participation of women in sports will be introduced. This plan will not only promote sports awareness among women, but also facilitate specific needs of women, including enhancing safety and security at the sports facilities. Intensive efforts will also be undertaken to instil sports culture among children and youth by improving sports programmes and syllabi in schools and HEIs. Awareness campaigns, particularly through digital platforms and sports events will be implemented to encourage sports participation among the targeted groups.

Strategy D2

Enhancing Sports Excellence

A number of initiatives will be undertaken to ensure national athletes continue to excel in sports competitions. As such, focus will be given to strengthen the governance of HPS, enhance the performance of athletes, improve support services for sports as well as uplift the wellbeing of athletes. These efforts will boost national performance in sports and enable national athletes to receive international recognition.

Strengthening Governance of High Performance Sports

The National Sports Policy will be revised to include, among others, measures to strengthen the administration and management of national sports associations (NSAs). The professionalism of NSAs will be enhanced through capacity building programmes. The NSAs will also be encouraged to hire former national athletes to tap their experience and skills. The Women in Sports Secretariat will be tasked, among others to ensure more women, particularly former national athletes are trained as qualified coaches and office bearers in HPS entities.

Enhancing Athletes Performance

Support for HPS athletes will be further enhanced to ensure consistent performance. The participation of HPS athletes in specialised training programmes and competitive tournaments at local and international levels will be increased. Collaboration with the NSA will be strengthened to organise more tournaments of international standard to provide national athletes with adequate exposure to compete. More dedicated training facilities for HPS will be built to increase accessibility and availability of training avenues for athletes. In increasing the pool of sports talent, specific programmes to identify talent will be conducted at schools and HEIs. State Sports Councils will be empowered in identifying and training new talent through the re-establishment of the HPS unit.

Improving Support Services for Sports

A holistic approach will be undertaken to improve sports science and medicine services to support the overall development of sports. This includes revising current policies to facilitate the growth of sports science and provide incentives for the procurement of sports science and medical equipment. Emerging technologies, including BDA, will be utilised to enhance and monitor the performance of athletes. Efforts will also be continued to encourage R&D&C&I in sports science. The capacity of the National Sports Medicine Centre will be expanded to provide more services.

Uplifting the Wellbeing of Athletes

The wellbeing of athletes will be given greater importance by providing better opportunities in education, career development and social protection. Collaboration with HEIs will be strengthened to provide more opportunities for athletes to pursue higher education. Capacity building programmes will be intensified to enable athletes to be involved in sports-related businesses and pursue vocations such as coaches, personal trainers and technical officials. A study will be undertaken to introduce social protection for athletes in enhancing their wellbeing, including after retirement.

Strategy D3

Developing Sports Industry

The sports industry will be promoted as a new source of growth to aid the socioeconomic development of the *rakyat*. Measures will focus on improving the sports industry ecosystem and developing the sports tourism segment. These measures will provide a conducive environment for the industry to grow, create more jobs and business opportunities as well as promote Malaysia as a preferred destination for sports tourism.

Improving Sports Industry Ecosystem

The sports industry ecosystem will be improved by introducing appropriate policies as well as formulating related laws and regulations to facilitate the sustainable development of this industry. These policies will provide direction for the development of the industry. A coordinating committee will be established to promote the sports industry as a new source of growth. This committee will consist of relevant stakeholders, including industry players. The BDA approach will be adopted to facilitate informed decision-making in developing the industry.

Efforts will be undertaken to encourage local entrepreneurs to venture into sports goods manufacturing and marketing industry as well as sports event management and sports facility management. These entrepreneurs will be supported by creating a conducive environment, including providing access to financing, for the businesses to grow and increase competitiveness. The local sports businesses, particularly small and medium enterprises will be encouraged to participate in various local and international trade exhibitions and sports events to showcase their products and services. Promotional activities will also be intensified to create consumer awareness of local sports products and services. Also, the private sector will be encouraged to play a bigger role in organising sports events as a platform to provide business opportunities for local entrepreneurs.

Promoting Sports Tourism

Sports tourism will be promoted to spur growth in the industry by hosting or organising sports events, such as recreational sports, e-sports and extreme sports. In this regard, efforts will be intensified for international sports events to be held in Malaysia to attract both local and foreign participants and spectators. Special tourism packages will also be developed for them to experience local culture and hospitality. The private sector will also be encouraged to invest in sports facilities that comply with international standards. These efforts will position Malaysia as a regional premiere sports events centre as well as a preferred tourist destination.

Priority Area E

Strengthening Unity for a Prosperous Nation

It is imperative to create a prosperous Malaysia based on trust, unity and tolerance across its society. As such, efforts will be concentrated on embracing diversity of society as a national asset, building a more tolerant society as well as strengthening governance for social cohesion and national unity. These measures will help in building a prosperous nation, a more united and harmonious society as well as contribute to nation-building.



Strategy E1

Embracing Diversity as an Asset

Continuous efforts will be undertaken to ensure the *rakyat* embrace, appreciate and celebrate Malaysia's diversity. The core objective is to build a more united, prosperous and harmonious society. Measures will be undertaken to promote social interaction and capitalise on various educational platforms in preserving diversity and fostering unity.

Promoting Social Interaction

Social interaction will be encouraged by improving and expanding unity programmes such as *Kawasan Rukun Tetangga* and *Skim Rondaan Sukarela* programmes. More cultural programmes and festivals will be organised to promote understanding and expose the *rakyat*, especially youth and children, to traditional customs and culture of various ethnic groups in Malaysia. Activities in museums, memorials and art galleries as well as historical sites will be intensified to increase the understanding and exposure to the rich history and cultural diversity of the nation. In addition, sports activities will also be promoted as a medium to foster unity.

Engagement sessions at national, state and community levels will be intensified, including through town hall and dialogue sessions, to encourage discussions on unity and national integration. More community mediation avenues will be established by utilising existing facilities, while the number of certified community mediators will be increased nationwide. These efforts will facilitate in resolving and reducing conflicts or differences at the community level.

Religion will cultivate moral integrity, and therefore contribute to the building of a harmonious society. As such, advocacy programmes in promoting inter-religious harmony will be expanded, while houses of worship and religious activities, as well as mainstream and social media will be leveraged to enhance respect for different faiths. An index will also be developed to measure the level of inter-religious harmony in our multi-religious society and as a reference in formulating relevant strategies.

Capitalising Educational Platforms

Unity-related syllabus and academic programmes in schools and HEIs will be reviewed and streamlined to enhance effectiveness and relevancy. Programmes and initiatives to promote the usage as well as to strengthen the proficiency of *Bahasa Melayu*, as the national language, in society will be further intensified. These measures will be undertaken in collaboration with various stakeholders such as educational institutions, private sector and community. In addition, efforts will be intensified to encourage the *rakyat* to learn other local languages such as Mandarin, Tamil and other ethnic languages. Learning methods for other local languages will be diversified by leveraging digital technology. These initiatives will enable the *rakyat* to better understand the various customs and cultures as well as increase the level of trust among each other. More educational programmes, campaigns and engagements will be undertaken to cultivate noble values.

Strategy E2

Building a More Tolerant Society

Focus will be given to enhance understanding and respect in building a more tolerant society. Measures will be undertaken to strengthen patriotism and volunteerism as well as leverage the digital platform in instilling noble values. These measures are the basis for nation-building and will ensure Malaysians live in peace and harmony.

Strengthening Patriotism and Volunteerism

Understanding and appreciation of the Federal Constitution and *Rukun Negara* will be enhanced through wider awareness campaigns by leveraging digital media and other platforms. In addition, constitutional experts and social media influencers will be appointed as icons to raise the level of awareness on patriotism. A new index will also be developed to assess the level of patriotism among Malaysians and assist in designing patriotism programmes. Efforts will be intensified in disseminating knowledge on Malaysia's history to every citizen. Initiatives such as short documentaries and interactive programmes will be increased through collaboration with relevant stakeholders. Awareness programmes, including *Kelas Bimbingan Malaysia* will be expanded to all major diplomatic missions to enhance patriotism and nationalism among Malaysians residing overseas.

Volunteerism will be further promoted, especially among youth to strengthen social cohesion in society. Existing programmes will be expanded to enable youth to actively participate in voluntary activities. Volunteer icon awards will be introduced to recognise outstanding youth volunteers and social media influencers in helping the government to inculcate volunteerism and fostering national unity. Digital platforms will be leveraged to boost the spirit of volunteerism and unity among youth as well as promote activities to build social cohesion and unity.

Promoting Ethical Use of Digital Platform

Advocacy programmes on ethical and responsible digital media usage will be expanded at all levels of society to maintain harmony. Ethical digital media usage will be incorporated in relevant academic programmes as well as co-curricular activities in schools and HEIs. In addition, collaboration with celebrities, social media influencers and content creators will be enhanced to not only advocate ethical and responsible media usage but to also create positive and meaningful content on unity. Several provisions in existing laws such as the Penal Code, Sedition Act 1948 and Communications and Multimedia Act 1998 will be reviewed and strengthened to curb the proliferation of malicious and seditious materials as well as fake news that threaten national unity and harmony.

Strategy E3

Strengthening Governance

Efforts to promote social cohesion and strengthen national unity require a solid governance structure, clear policies and strong leadership. Measures will be undertaken to formulate policies and strengthen stakeholders collaboration in improving governance of social cohesion and unity. Leaders and CSOs will also be encouraged to actively participate in various programmes to promote unity.

Formulating Policy on Unity

A national policy on unity will be introduced to promote social cohesiveness and harmony as well as capitalise diversity as an asset to strengthen national unity. This policy will outline three thrusts in leading the unity agenda, namely, developing patriotism and principles of democracy among the *rakyat*, forging a national identity and strengthening the unity ecosystem. An action plan will also be introduced to translate the policy through the implementation of specific programmes and initiatives by multiple sectors and agencies to further foster, strengthen and preserve unity among Malaysians. More capacity building programmes will be organised to strengthen competency and develop subject matter experts on unity.

Strengthening Stakeholders Collaboration

In line with the whole-of-nation approach, collaboration between government, the private sector and CSOs will be intensified to promote social cohesion, unity, patriotism and volunteerism. More engagement sessions and smart partnership programmes will be organised to ensure inclusive participation and promote better networking. Public facilities, such as *Pusat Rukun Tetangga*, *Kompleks Perpaduan*, *Pusat Komuniti Desa*, *Pusat Khidmat Masyarakat* and *Pusat Aktiviti Warga Emas* will be optimised to encourage social interaction.

Local governments and CSOs will be encouraged to proactively organise unity-related programmes, such as dialogues, focus group meetings and public information campaigns. Training and capacity building programmes for local government and CSOs will be intensified to equip them with relevant mediation, conciliation and negotiation skills. CSOs will be encouraged to diversify funding sources from crowdfunding and private sector to conduct these programmes.

Leaders are the driving force to propagate patriotism and strengthen national unity right to the grass root level. Thus, it is imperative for leaders to set aside differences and enhance mutual understanding in order to create a strong, united and prosperous society. Religious leaders will be encouraged to play a more important role in instilling noble values and ensure the society behaves in a responsible and dignified manner. Religious leaders are an important medium in communicating messages to enable social change. Community centres, offices of members of parliament and state assemblymen as well as places of worship will be utilised as venues to mediate community issues and promote unity programmes.

Conclusion

During the Eleventh Plan, focus was given to strengthening national defence and enhancing national security, wellbeing and unity of the *rakyat*. Measures were focused on improving public safety and security, enhancing healthcare service delivery, providing adequate and quality affordable housing, promoting an active lifestyle and fostering national unity. Nevertheless, there are still several issues and challenges related to security and public safety, health, housing, sports and unity that need to be addressed. In the Twelfth Plan, efforts will be intensified to strengthen national defence and security. The wellbeing and unity of the *rakyat* will be enhanced through improving healthcare service delivery as well as increasing the supply of quality affordable housing. Sports will be leveraged in building an active nation while unity will further be given priority in building a united and prosperous nation as well as contribute to nation-building.

Chapter 5

Addressing Poverty and Building an Inclusive Society



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5

Introduction

Addressing poverty and inclusive development have always been important pillars of Malaysia's socioeconomic development. Since the Second Malaysia Plan, reducing hardcore poverty and improving the wellbeing of all Malaysians irrespective of gender, ethnicity, socioeconomic status and location have been priorities in development planning. In the Eleventh Plan, equitable opportunities were provided to enable the *rakyat* to participate and benefit from economic growth and development. Inclusive development initiatives included raising the income and purchasing power of B40[1] households (B40), enhancing the capacity of the Bumiputera Economic Community (BEC), empowering minority groups and addressing inequalities. In the past five years, the standard of living has improved, as evident from the increase in median monthly income, better access to healthcare services as well as improvement of basic infrastructure and amenities. However, there are still issues and challenges that need to be addressed in achieving inclusivity for all. Apart from income, other dimensions of poverty also need to be addressed. In addition, a number of issues remain unresolved, including wide disparities between income groups, inequitable socioeconomic outcomes among the Bumiputera community and deprivation of a number of target groups.

The Twelfth Plan lays emphasis on addressing poverty and inclusivity consistent with the principle of leaving no one behind, in achieving a decent standard of living and ensuring social justice. This strategy is an integral part of WKB 2030, which supports the commitment for Malaysia to be a developed and prosperous nation, with fair and equitable wealth distribution across income groups, ethnicities and supply chains. This is also in line with the 2030 Agenda. In this regard, concerted efforts will be undertaken in further reducing hardcore poverty incidence, achieving equitability for all, while addressing current and future challenges, including the impact of COVID-19 pandemic. These initiatives are expected to raise the income and standard of living of the poor households regardless of ethnicity, B40, M40[2], Bumiputera and Orang Asli as well as to empower specific target groups.

[1] Bottom 40% household income group. B40 monthly household income at the national level is below RM4,850, based on the Household Income & Expenditure Survey and Basic Amenities 2019 (HIES & BA 2019).

[2] Middle 40% household income group. M40 monthly household income at the national level is between RM4,850 and RM10,959 (HIES & BA 2019).

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, various efforts were implemented to raise income and uplift the wellbeing of the *rakyat*. Continuous efforts were undertaken in empowering the B40 including the urban and rural poor, minorities such as Orang Asli as well as low-income Chinese in *Kampung Baru*[3] and Indian households. Specific target groups such as women and children, persons with disabilities (PWDs) and older persons[4] were also given priority in improving their wellbeing. In addition, initiatives to increase the purchasing power of the *rakyat* and programmes to increase wealth ownership among BEC were implemented.

Performance of Selected Targets

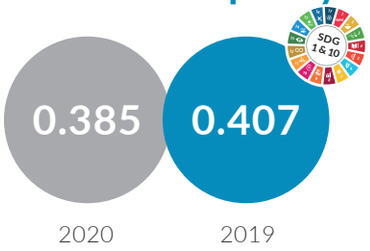
In the Eleventh Plan, 10 selected targets were identified in enhancing inclusiveness towards an equitable society and improving the wellbeing of all as shown in *Exhibit 5-1*. One target was achieved, while four targets recorded significant progress. Five targets have yet to be achieved due to lower-than-expected economic growth and weaknesses in the delivery system.

[3] Villages established under the Briggs Plan during the Malayan Emergency (1948-1960).
[4] Individuals aged 60 years and above as adopted in United Nations World Assembly on Ageing in Vienna.

Exhibit 5-1

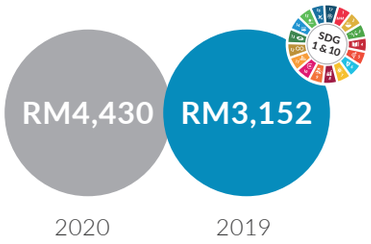
Eleventh Malaysia Plan: Performance of Selected Targets

Reducing Overall Income Inequality

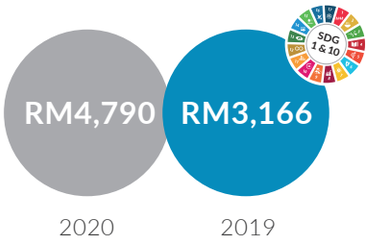


Gini Coefficient

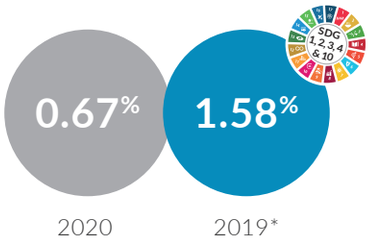
Uplifting the B40 towards a Middle-Class Society



Mean Monthly B40 Household Income



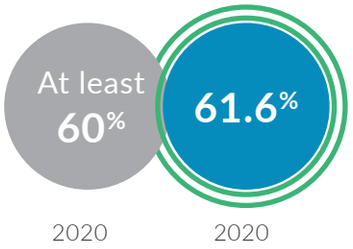
Median Monthly B40 Household Income



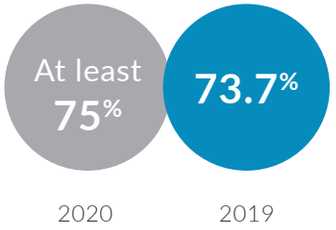
Incidence of Multidimensional Poverty

* Based on PLI 2005 methodology

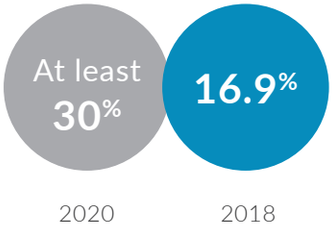
Enhancing Bumiputera Economic Community (BEC) Opportunities to Increase Wealth Ownership



Participation of Bumiputera in Skilled Occupation Category

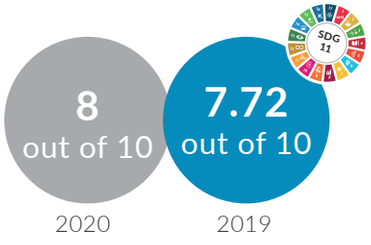


Percentage of Bumiputera Households Owning a Residential Unit

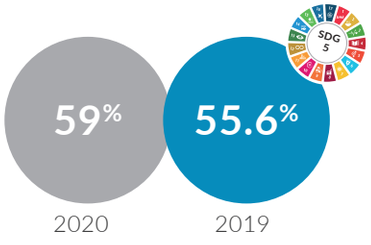


Corporate Equity Ownership with Effective Control by Bumiputera

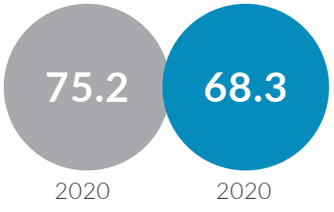
Addressing the Needs of Specific Target Groups



Family Wellbeing Index



Female Labour Force Participation Rate



Malaysian Youth Index

Target · Perfomance · Target Achieved · SDG

Performance of Selected Initiatives

Income Improvement of B40

During the Eleventh Plan, various initiatives were introduced to raise the income and purchasing power of the B40 resulting in the overall socioeconomic improvement of these households. The median monthly household income of B40 increased from RM3,000 in 2016 to RM3,166 in 2019, while their mean monthly household income increased from RM2,848 in 2016 to RM3,152 in 2019. However, the overall Gini coefficient increased to 0.407 from 0.399, reflecting widening income inequality.

The Poverty Line Income (PLI) was reviewed in 2019 to better reflect household consumption patterns and cost of living. Based on the 2019 PLI methodology, the national PLI was at RM2,208. The incidence of absolute poverty declined from 7.6% in 2016 to 5.6% in 2019. The incidence of absolute poverty in the rural areas was 12.4% while in the urban areas was at 3.8% in 2019. Among the poorest districts in the country are Tongod, Pitas, Kota Marudu, Beluran, Kudat in Sabah, Pusa in Sarawak and Lojing in Kelantan as shown in *Exhibit 5-2*. Meanwhile, the incidence of relative poverty increased from 15.6% in 2016 to 17% in 2019. In line with international practices, the Multidimensional Poverty Index (MPI) was introduced to measure poverty more inclusively in 2016. The MPI measures poverty from four dimensions, namely income, education, health and standard of living. MPI improved from 0.015 in 2016 to 0.011 in 2019, contributed by better performance in income and education dimensions. According to DOSM, the incidence of absolute poverty increased to 8.4% in 2020[5] arising from the COVID-19 pandemic.

Exhibit 5-2

Location of Ten Poorest Districts in Malaysia, 2019



Source: HIES & BA 2019, Department of Statistics Malaysia and Economic Planning Unit

[5] DOSM's simulation based on HIES & BA 2019 data and selected indicators from Salaries and Wages Survey 2020, LFS, Economic Activity Survey 2020 and Special Survey on Effects of COVID-19 on Economy & Individual.

Box 5-1

Revision of Poverty Line Income

Background

Accurate and updated poverty measurement methods are important for better policy formulation on poverty. Malaysia measures household poverty incidence based on three methods, namely absolute, relative and multidimensional. Poverty based on the absolute approach is measured by the Poverty Line Income (PLI), which was introduced in 1977. Under the PLI, there are two categories of poverty, namely poor and hardcore poor. Households earning less than half of household median income are considered relatively poor. The Multidimensional Poverty Index (MPI) is a broader measurement involving income and non-monetary aspects, namely health, education and basic amenities.

PLI refers to the total monthly household income needed to meet the minimum nutritional food and non-food requirements for every household member to live a healthy and active life. This measurement is based on the cost of basic needs concept as suggested by Ravallion (1998)[1]. This concept is adopted by most developing countries. The measurement of PLI takes into account the demographic characteristics of households, such as size, age and gender of each household member as well as location, namely state, urban or rural. The PLI methodology was revised in 2005 and 2019.

PLI 2005 Methodology

The PLI 1977 methodology was revised extensively in 2005 by the Economic Planning Unit (EPU), Department of Statistics Malaysia (DOSM), and nutritional experts from local universities, in collaboration with the United Nations Development Programme (UNDP). Two components of PLI were introduced namely food PLI and non-food PLI. The dietary requirement of the food PLI is based on the minimum calorie intake for each household member. It also takes into account the food pyramid and balanced diet as suggested by the World Health Organization's Food and Nutrition Board Recommended Dietary Allowance. Taking into account gender and age characteristics, the total amount of calories required will be converted to macronutrient items. These items are then matched to prices in the food PLI basket. Components for non-food PLI are determined on actual low-income household spending patterns which include clothing, housing, transportation and other non-food goods and services. Non-food PLI also takes into account economies of scale in household expenditure as well as price differences by state, urban and rural areas. Households with income below the food PLI are categorised as hardcore poor. The PLI is updated in line with the Household Income and Expenditure Survey and Basic Amenities (HIES & BA) which is conducted twice every five years.

[1] Non-food PLI is based on the low-income household expenditure pattern.

PLI 2019 Methodology

The PLI 2005 methodology was revised in 2019 by EPU in collaboration with DOSM, the Ministry of Health (MOH) as well as other relevant ministries and agencies. The revision has been made to ensure the PLI better reflects current cost of living. The 2019 methodology maintains the cost of basic needs approach in the selection of food and non-food items. However, the measurement for the food PLI changes from minimum calorie requirement to the optimum minimum concept[2]. For the non-food PLI, the number of items required increased from 106 to 146 items based on the spending pattern of the bottom 20% of households (B20). The 2019 PLI also reflects changes in prices of goods and services.

Food PLI

The key difference in the 2019 methodology compared with the 2005 methodology is the use of optimum minimum concept and food-based dietary guidelines. This methodology takes into consideration the calorie needs based on gender and age. This method considers not only macronutrients but also micronutrients. The calorie and nutrient requirements for an individual are based on the Recommended Nutrient Intakes (RNI) for Malaysia (2017) by MOH. These requirements are then converted to number of servings for each food group according to the Malaysian Food Pyramid 2020 as stipulated in the Malaysian Dietary Guidelines (MDG) 2020. Different calorie requirements for each household will result in different food PLI. The average value of food PLI at the national level in 2019 was RM1,169 per month. An example of food PLI measurement based on a four-person household is illustrated in *Figure 1*.

[2] Optimum nutritional requirements set based on the RNI 2017 and Malaysian Food Pyramid 2020. Meanwhile, minimum refers to selection of food items as proxy for each food group which is based on the spending pattern among the B20.

Figure 1

Food PLI Optimum Minimum Concept



Note:

- The recommended number of servings is calculated based on 1,500 kcal, 1,800 kcal and 2,000 kcal for adults.
- Low active/sedentary adults should choose minimum number of servings.

Non-Food PLI

The non-food PLI of 2019 methodology takes into account basic goods and services as well as the quality-of-life aspects needed by households based on six categories which are clothing, education, health, transportation, housing and communication. A total of 146 non-food items were selected as compared with 106 items in the 2005 methodology. Expenditures which are taken into account include medication for diabetes, hypertension and cardiovascular, tuition fees and expenses for prepaid mobile phones. Non-food PLI at the national level was at RM1,038 in 2019.

Overall PLI based on 2019 Methodology

Based on the calculation of food and non-food PLI, the national PLI for 2019 was RM2,208 compared to RM2,141 in 2016[r]. The PLI by states is shown in *Table 1*.

Table 1

Poverty Line Income by States, 2016 & 2019

State	PLI 2016[r] (RM)	PLI 2019 (RM)
Malaysia	**2,141**	**2,208**
FT Labuan	2,676	2,633
Sabah	2,514	2,537
Terengganu	2,347	2,507
Johor	2,428	2,505
Melaka	2,272	2,375
Pahang	2,274	2,270
Kedah	2,113	2,254
FT Kuala Lumpur	2,206	2,216
Kelantan	2,054	2,139
Sarawak	2,108	2,131
FT Putrajaya	1,980	2,128
Negeri Sembilan	1,972	2,088
Perak	2,010	2,077
Selangor	1,950	2,022
Pulau Pinang	1,938	1,989
Perlis	1,957	1,967

Note
[r] PLI 2016 is revised based on 2019 PLI methodology

The eRezeki programme was introduced in 2016 to provide opportunities for the B40 in general and M40 in urban areas to earn additional income through digital platforms. Since inception, a total of 354,479 participants from the B40 segment were trained to leverage on digital platforms. The programme connected participants to over 100 validated crowdsourcing and sharing economy platforms, providing additional income opportunities to 699,517 users with a total cumulative income of RM1.4 billion as of 31 December 2020. Meanwhile, a total of 5,597 entrepreneurs were trained under the *Program Pemerkasaan Ekonomi Komuniti Bandar* (PEKB), formerly known as *Program Azam Bandar*. In collaboration with CSOs, this programme has provided opportunities for the urban poor to venture into micro businesses, such as hairdressing salons, landscaping services and bakeries. Participants who completed this programme were able to earn an additional average monthly income of up to RM600. Social entrepreneurship was nurtured through collaboration with HEIs to promote the establishment of social enterprises[6] (SEs) in addressing socioeconomic issues. A total of 8,180 aspiring social entrepreneurs were trained and 140 SEs were established[7]. In addition, *Pemangkin Usahawan Sosial Hebat* (PUSH) a pilot project to produce social entrepreneurs was conducted. 30 SEs participated in this project.

Program Agropreneur Muda has provided financial assistance and training to entrepreneurs to venture into farming, livestock, fisheries and agro-based activities. This programme has benefitted 6,969 youths among the B40. Meanwhile, urban farming programmes have been conducted in 4,556 locations involving 111,486 participants, generating an additional average monthly income of at least RM300.

[6] Entity that pursues a social mission by using a sustainable business model. This entity envisions to deliver a sustainable impact to improve the wellbeing of society in the aspects of income, social and environment.
[7] Based on Malaysian Global Innovation and Creativity Center (MaGIC) data as at first quarter 2020.

Improved Access to Education for B40

In 2019, a minimum enrolment quota of 60% for B40 students was introduced for *Maktab Rendah Sains MARA* (MRSM), *Sekolah Berasrama Penuh* (SBP) and matriculation. Measures were also undertaken to encourage students to take up TVET and entrepreneurship programmes. About 80% of students who enrolled in TVET and entrepreneurship programmes came from B40 households.

Bumiputera Economic Community Development

The Bumiputera development agenda continues to be one of the national priorities in uplifting the socioeconomic status and ensuring the success of the BEC. Initiatives undertaken included enhancing the capacity and capability of human capital, raising effective control of corporate equity ownership, increasing wealth ownership and building a resilient and sustainable BEC.

Majlis Amanah Rakyat (MARA) plays a vital role in enhancing Bumiputera human capital development through institutions such as MRSM, *Kolej Profesional MARA*, *Kolej Kemahiran Tinggi MARA* and Universiti Kuala Lumpur. As of 2020, a total of 289,884 students were trained in TVET, as well as in management and professional programmes. During the period 2016 to 2020, a total of 241,274 students completed their tertiary education with the support from MARA.

As of 2020, a total of 28,109 participants enrolled in *Peneraju Tunas*, *Peneraju Skil* and *Peneraju Profesional* programmes provided by the *Yayasan Peneraju Pendidikan Bumiputera* (YPPB). The target groups for these programmes were mostly students from low-income households and challenging family backgrounds. Under the *Peneraju Tunas* programme, 71.9% of 4,256 students at the secondary level in MRSM and SBP and 94.4% of 3,381 students at the tertiary level achieved satisfactory results. Meanwhile, 89.5% of 9,032 participants under *Peneraju Skil* and *Peneraju Profesional* programmes were employed in highly skilled jobs. Under the *Peneraju Skil Mahir*, 71.4% of 658 participants earned a monthly salary of more than the targeted RM3,800. Furthermore, 1,304 participants qualified as professional accountants, 51 as Chartered Financial Analysts and three as Financial Risk Managers under the *Peneraju Profesional* programme. This programme has produced 86 accounting trainees who received 113 global recognitions for outstanding academic performance.

Measures were undertaken to increase Bumiputera corporate equity ownership with effective control. *Permodalan Nasional Berhad* (PNB) invested RM270 billion Assets Under Management (AUM) owned by Bumiputera in various asset classes in 2020 compared with RM218 billion in 2015. These assets were invested in listed and unlisted companies, real estate as well as cash and fixed income instruments. During the period 2016 to 2020, a total of RM52.4 billion in dividends were distributed to more than 12 million-unit holders through five-unit trust funds, namely *Amanah Saham Bumiputera* (ASB), ASB 2, ASB 3 *Didik*, *Amanah Saham Nasional* (ASN) and ASN Equity 2. Besides, MARA through PMB Investment Berhad invested RM1.3 billion in 15 Islamic unit trust funds. Since its inception in 2009, *Ekuiti Nasional Berhad* (EKUINAS) invested in 41 companies with committed investments worth RM4.2 billion and total cumulative realised proceeds of RM3.4 billion. The investment is in various subsectors within the education, manufacturing and services, oil and gas, retail as well as food and beverage sectors. EKUINAS distributed RM320 million to *Yayasan Pelaburan Bumiputera* to benefit Bumiputera trust funds unit holders managed by PNB. To increase Bumiputera investment and equity ownership in the high technology sector, VentureTECH invested RM244 million in companies related to biotechnology, green and bio-based technology as well as emerging technologies, created an aggregate RM1.1 billion net worth of investees.

The percentage of Bumiputera corporate equity ownership increased slightly from 16.2% in 2015 to 16.9% in 2018 based on par value, as shown in *Table 5-1*. The corporate equity ownership by non-Bumiputera declined while ownership by foreign investors remained at about 45%. Ownership by nominees[8] increased significantly from 7.8% in 2015 to 11.9% in 2018. The methodology in calculating equity ownership was based on the par values of shares as reported to the Companies Commission Malaysia and Bursa Malaysia. Corporate equity ownership for 2019 has not been finalised due to moratorium granted to companies from lodging annual returns and financial statements to SSM arising from COVID-19 pandemic.

[8] Companies that provide services as nominees or trustees appointed on behalf of beneficial owner. Shareholding based on ethnicity could not be identified as the beneficial owner is not declared.

Table 5-1

Corporate Sector Equity Ownership by Category, 2015 and 2018

Category	Equity Ownership (%)	
	2015	2018
Bumiputera	16.2	16.9
Non-Bumiputera	30.7	26.3
Foreign	45.3	44.9
Nominee	7.8	11.9
Total	100	100

Source: Economic Planning Unit

Bumiputera property ownership recorded a slight increase during the Eleventh Plan. The percentage of Bumiputera households owning a residential unit increased marginally from 73% in 2016 to 73.7% in 2019, which was below the target of at least 75%. The properties owned by *Pelaburan Hartanah Berhad* (PHB) increased by RM1.5 billion with the acquisition of five commercial buildings. The total fund size of *Amanah Hartanah Bumiputera* (AHB) increased from RM2 billion in 2015 to RM4 billion in 2020, while unit holders increased from 50,000 to 75,070. A total of 494 business premises worth RM238.7 million, were acquired by *Perbadanan Usahawan Nasional Berhad* (PUNB), MARA and state economic development corporations (SEDCs). These premises were rented to 576 Bumiputera entrepreneurs at subsidised rates.

Bumiputera entrepreneurs were given various financial assistance in supporting business start-ups and expansion. A total of RM485.5 million grants were approved through the facilitation fund under *Unit Peneraju Agenda Bumiputera* (TERAJU). These grants assisted 215 Bumiputera companies to undertake 259 projects with a total investment value of RM3.8 billion. These projects created more than 11,000 new jobs. In addition, grants and loans disbursed by entrepreneur development organisations (EDOs) amounting to RM2.8 billion benefitted more than 100,000 Bumiputera entrepreneurs. This enabled entrepreneurs to create 51,000 new job opportunities. Meanwhile, *TEKUN Nasional* (TEKUN) disbursed a total of RM1.7 billion soft loans to finance 132,650 Bumiputera micro entrepreneurs, mainly in agro-based and cottage industries as well as retail businesses.

Besides MARA, other Bumiputera mandated agencies including TERAJU and EKUINAS have also been tasked to increase Bumiputera participation in business. TERAJU acted as the secretariat to the *Majlis Ekonomi Bumiputera* which is responsible for coordinating Bumiputera socioeconomic development. TERAJU was also mandated to increase Bumiputera participation by implementing a number of programmes such as *Syarikat Bumiputera Berprestasi Tinggi* (TERAS), *Skim Usahawan Permulaan Bumiputera* (SUPERB), *Dana Pembangunan Usahawan Bumiputera*, *Skim Jejak Jaya Bumiputera* as well as carve-out and compete initiative. Meanwhile, the role of EKUINAS was realigned not only to increase corporate equity ownership, but also to generate more significant Bumiputera outcomes through job creation, professional and managerial participation as well as talent development.

Empowerment of Minority Groups

Efforts to empower minority groups namely, Orang Asli as well as low-income Chinese and Indian households, contributed to the better socioeconomic development of these communities. These efforts included the provision of basic infrastructure and amenities, implementation of economic development programmes as well as the resolution of ownership and land rights. Roads in 754 out of 853 Orang Asli villages were upgraded. Electricity supply was provided to 701 villages while 706 villages were provided access to reticulation and alternative treated water. At the end of the 2020, most of the Orang Asli villages were provided with electricity and treated water. In addition, the *Program Pembangunan Ekonomi Orang Asli* was implemented to increase income, benefitting 23,980 households. A total of 1,448 participants benefitted from entrepreneurship courses under the *Program Pembangunan Keusahawanan Orang Asli*, while 324 entrepreneurs received grants for various businesses. As of September 2020, a total of 33,220 hectares of land were gazetted for settlement and economic activities of Orang Asli.

To elevate the socioeconomic status of low-income Chinese in *Kampung Baru*, *Skim Pinjaman Khas Penduduk Kampung Baru Cina* was continued during the Eleventh Plan. As of December 2020, soft loans amounting to RM130.95 million were approved for 3,428 micro entrepreneurs. In addition, 2,503 basic infrastructure projects and amenities as well as landscaping were implemented. For the low-income Indian community, a total RM117 million in soft loans was approved by TEKUN to 5,825 entrepreneurs under the *Skim Pembangunan Usahawan Masyarakat India*. Furthermore, in improving education attainment, more opportunities were provided for young Indians to pursue secondary education in boarding schools and to enrol in TVET programmes. During the Plan period, 2,060 Indian students were enrolled in MRSM.

The Wellbeing of Specific Target Groups

The wellbeing of specific target groups comprising children, youth, women, older persons, PWDs and family continued to be given priority. The Child Care Needs and Child Protection Unit (CCNCPU) was expanded to protect the interest of children. In addition, 244 child protectors were trained nationwide. In improving the safety and protection of children, the Sexual Offenders against Children in the Child Registry (eDKK) system was introduced in 2019 to provide security vetting services for employers. As of 2020, a total of 4,009 potential employees were screened. In addition, 411 schools participated in the Child Protection and Rehabilitation Programme that benefitted 96,512 students. To strengthen early childhood care and education (ECCE), 30 new *Taman Asuhan Kanak-kanak* (TASKA) were set up in government premises with an allocation of RM4.6 million in 2020. As of 2020, there were 5,302 TASKA and 14,306 *Taman Didikan Kanak-kanak* (TADIKA).

Efforts were undertaken to nurture youth to be future leaders through the implementation of various leadership and volunteerism programmes. From 2016 to 2020, a total of 227,900 youth benefitted from several leadership programmes such as the Perdana and Corporate Fellows, Malaysia Youth Parliament and *Majlis Belia Malaysia* in Business (MiB300) Squad as well as The Ship for Southeast Asian and Japanese Youth Programme. About 300,000 youth participated in various volunteerism programmes. These programmes included the Malaysian Youth Volunteering Programme (MYCorps), Post-able Disaster Volunteer Programme and *Institut Latihan Kemahiran Belia dan Sukan* (ILKBS) Touch Point Volunteerism Programme. The Youth Societies and Youth Development Act 2007 was amended in 2019, to provide more opportunities for the youths to become leaders in youth associations.

The role of women in economic development was enhanced through various awareness and capacity building programmes, including in leadership and entrepreneurial development. Women participation in decision-making improved as the percentage of women in top-level management[9] rose from 35.6% to 38.2% in the public sector and from 24.4% to 25.8% in the private sector between 2016 and 2020. In addition, as part of the economic empowerment initiative, 7,542 women were trained in community-based enterprise programmes.

In ensuring women are safe, secure and healthy, various measures were undertaken to improve awareness and enhance the wellbeing of women. In this regard, 53,057 women participated in Legal Clinics and programmes on the elimination of violence against women. The National Committee on Domestic Violence was formed in 2019 comprising representatives from government and CSOs to address the issue of violence against women. The D'Stress Clinic programme was introduced to address mental health issues, which benefitted a total of 66,027 women. In addition, a gender mainstreaming project on strengthening and enhancing women inclusiveness was organised to promote the understanding of gender issues and gender equality.

In enhancing the wellbeing of older persons, the Physical Planning Guideline for the Elderly was introduced in 2018 as a guide in planning and designing suitable accommodation for the elderly and care centres. Meanwhile, the number of volunteers participating in the Home Help Service programme increased by 33%, from 2,242 in 2016 to 2,982 in 2020. This enabled greater outreach for care and companionship, benefitting 8,592 older persons in 2020 compared with 6,117 in 2016. In addition, the Private Aged Healthcare Facilities and Services Act [Act 802] was enacted in 2018 to safeguard the rights of older persons in receiving quality care. This Act stipulates the minimum standard requirement for quality care and services at private aged care institutions.

PWDs have been empowered to be more self-reliant and economically independent. The Disability Accessibility Action Plan endorsed in 2019 served as a guideline to local authorities in improving accessibility to public facilities. Meanwhile, 85 Disability Equality Training programmes were organised to ensure active participation of PWDs in society. The *Pemulihan Dalam Komuniti* (PDK) programme was implemented to develop capacity and capability of PWDs. A total of 240 PDKs out of 560 were upgraded with information and communication technology (ICT) facilities and rebranded as PDKNet. This initiative provided PWDs with wider access to information through the digital platform. A study to explore more economic and job opportunities for PWDs as well as to strengthen the support system for carers of PWDs was initiated in 2019 and is expected to be completed in 2021.

[9] Premier Grade C and above for public service and board of directors in top 100 public listed companies for private sector.

Various outreach programmes were conducted to increase the registration of PWDs in *Sistem Maklumat Orang Kurang Upaya* (SMOKU), including through the *Santuni OKU* programme. The increased registration in SMOKU helped to improve the delivery of targeted assistance. Under the Job Coach Service programme, a total of 1,397 PWDs were trained and facilitated in securing employment. As of 2020, a total of 4,488 PWDs were employed, representing 0.33% of the targeted quota of at least 1% participation of PWDs in the public service. In 2019, one representative from PWDs was appointed a member of the Public Services Commission to promote the employment of PWDs in the public service. One PWD representative continues to be a member of *Dewan Negara*.

Various efforts have been undertaken to strengthen the family institution. The Family and Community Empowerment (FACE) programme was introduced in 2016 to promote parenting awareness and skills. Programmes such as Parenting@Work, SMARTbelanja@LPPKN and FamilyEducation@LPPKN were undertaken to provide knowledge and skills related to marriage, parenting and family wellbeing, benefitting 907,100 family members as of 2020. Various programmes were also carried out to address issues concerning maternal mortality and unwanted pregnancies. These programmes included counselling as well as sexual and reproductive health education. A total of 1,065,301 family members particularly women benefitted from family support programmes such as family planning, mammograms, cervical cancer screening and subfertility treatment.

Increasing Purchasing Power

Efforts to increase the purchasing power of the *rakyat* were intensified, particularly in helping households affected by the high cost of living, addressing market distortions and advocating consumerism. The National Cost of Living Council (NACCOL) was established in 2018 to address issues and challenges related to the cost of food, healthcare, education, housing, transportation and utilities. Among the programmes coordinated and initiated under NACCOL were the Food Bank, *Barangan Asas 100* (BA100), *Penguatkuasaan Skim Harga Maksimum Musim Perayaan*, Unlimited Travel Passes as well as a subsidised loan facility for low-income households. The My30, My50 and My100 Unlimited Passes for Rapid Bus and Rapid Rail users were introduced to reduce transportation costs and benefitted two million users nationwide. A fund of RM1 billion was established for first-time house buyers earning below RM4,360 a month to purchase affordable homes costing RM300,000 and below.

The Price Control and Anti-Profiteering Regulations were enhanced in 2017 to prohibit profiteering of goods and services. In advocating consumerism, programmes such as *Skuad Pengguna*, Friends of KPDNHEP, *Kelab Pengguna Sekolah* and *Gerakan Pengguna Siswa* were carried out. More authority was given to the Tribunal for Consumer Claims Malaysia in 2019 to resolve consumer claims by increasing the award limit from RM25,000 to RM50,000. The Malaysia National Strategy for Financial Literacy 2019-2023 was launched as a roadmap to enhance financial literacy and financial wellbeing of Malaysians.

Issues and Challenges

During the Eleventh Plan period, various efforts were implemented to enhance inclusive development and wellbeing of the *rakyat*. Nevertheless, socioeconomic inequalities in terms of income and wealth distribution continue to remain a challenge. The COVID-19 pandemic has adversely affected the wellbeing of the rakyat. The socioeconomic issues include poverty, the wide disparities in the B40 group, inequitable Bumiputera socioeconomic outcomes, the low socioeconomic status of Orang Asli and specific target groups. The M40 group is now facing more challenges especially with the onset of the COVID-19 pandemic. Furthermore, low purchasing power and high cost of living, lack of social protection as well as low financial education have also impacted the wellbeing of the *rakyat*. These challenges need to be addressed to avoid social polarisation.

Rising cost of living decreases purchasing power, affecting the wellbeing of the *rakyat*, particularly low-income households. For these households, the increase in prices of basic necessities such as food and beverages, housing and transportation have resulted in them having fewer resources for other needs, particularly education and health. In addition, the social protection system is fragmented and coverage remains low. Agencies involved in providing social protection have been working in silos, without a centralised and integrated database, resulting in mistargeting groups and double-dipping of benefits. A large number of workers in the informal sector are not protected. Meanwhile, poor financial management among some Malaysians due to lack of financial literacy and unsustainable lifestyles, preventing them from making sound financial decisions and making them vulnerable to financial scams and fraud.

Issues and Challenges

Incidence of Poverty
Wide Disparities in the B40 Group
Challenges Faced by the M40 Group
Inequitable Bumiputera Socioeconomic Outcomes
Lagging Socioeconomic Development of Orang Asli
Social Deprivation of Specific Target Groups

Incidence of Poverty

Malaysia has recorded significant success in poverty alleviation. However, pockets of poverty are still prevalent in certain locations. Among the factors contributing to poverty are low level of education, lack of access to basic infrastructure facilities and dependence on a single source of income. Poor households face challenges in terms of access to quality healthcare services and affordable housing. The urban poor face high cost of living and lack the capacity to leverage economic opportunities. The delivery mechanism in eradicating poverty remains weak and uncoordinated. In addition, indicators in measuring multidimensional poverty are still not comprehensive. The COVID-19 pandemic impacted the poor households severely due to the nature of their low-skilled and informal sector jobs which are vulnerable to job losses.

Wide Disparities in the B40 Group

The diverse characteristics of the B40 pose complex challenges. The B40 comprises of poor and low-income households with different characteristics and needs, which require different sets of policies and strategies. This group is also vulnerable to economic and social shocks due to the inability to adapt to major changes. The majority of the B40 group has lower educational attainments as well as a lack of access to health facilities, affordable housing and social protection.

The B40 have high exposure to debts due to insufficient income and very low savings. The low levels of education and skills among the B40 prevent access to high paying jobs and curb upward social mobility. In 2019, only 12.8% of B40 heads of households had tertiary education, while 21.2% of them had minimal years of schooling. The B40 also faces the challenge of accessing healthcare services due to distance and lack of savings. In addition, they can not afford to purchase houses due to the inability to fulfil the requirements imposed by financial institutions.

Initiatives undertaken to improve the wellbeing of the B40 have not fully realised their intended outcomes as they are generic in nature and not specifically addressing the diverse needs of this group. The social protection system is focused mainly on social assistance and does not adequately address social insurance and labour market interventions. Furthermore, there is a lack of coordination and targeting in the delivery of social protection for the B40. This has resulted in ineffective and unsustainable welfare programmes leading to inefficient resource allocation and unfulfilled outcomes.

The low-income Chinese in *Kampung Baru* and low-income Indian households continue to face challenges in obtaining employment and microcredit facilities for their businesses. Inadequate financing facilities, particularly microcredit for businesses, have hindered low-income Chinese households in *Kampung Baru* in expanding their businesses. Meanwhile, low-income Indian households are mostly in low-skilled occupations and lack entrepreneurial opportunities. They also face social challenges such as unconducive living conditions, dysfunctional families and gangsterism among youth.

Challenges Faced by the M40 Group

The M40 group has limited avenues to seek assistance as they are generally ineligible for social assistance programmes and they are not fully covered by social insurance benefits, especially those working in the informal sector. Among the issues faced by this group include high cost of living and slow income growth. The majority of the M40 live in cities, where the cost of living is higher. The M40 income range is taxable while tax reliefs provided to them are perceived to be inadequate. This group also has limited access to childcare facilities and Government provided ECCEs is based on a first-come-first-served basis with priority given to the B40. This is further exacerbated by their inability to afford and subscribe to comprehensive health and employment insurance coverage.

Inequitable Bumiputera Socioeconomic Outcomes

The key issues faced by Bumiputera are inequitable distribution of income, high incidence of poverty and unemployment rate as well as high concentration in low-skilled occupational categories. Bumiputera are involved mainly in micro low value-added businesses. There is also high dependency on government assistance among Bumiputera entrepreneurs. Low ownership in property and underutilised Malay Reserve Land (TRM) are a further reflection of challenges faced by Bumiputera. Additionally, Bumiputera corporate equity ownership with effective control is relatively low, while the delivery mechanism of the Bumiputera agenda is still suboptimal.

Although Bumiputera household income has recorded a slight increase, it is still relatively low compared to other ethnic groups. In 2019, the Bumiputera median monthly household income was RM5,420 compared to the Chinese at RM7,391 and the Indians at RM5,981. The median income gap between Bumiputera and Chinese was RM1,971, four times higher than in 1989. The income disparity ratio between Bumiputera and Chinese slightly widened from 0.74:1 in 2016 to 0.73:1 in 2019. Besides, the incidence of hardcore poverty among Bumiputera was still relatively high at 0.5% compared to the Chinese at 0.1% and Indians at 0.4%. Furthermore, absolute poverty was the highest at 7.2% among Bumiputera compared to the Chinese, 1.4% and Indians, 4.8%. While Bumiputera represented 65.1% of the total national households in 2019, 71.4% of them were in the B40 income group. Although, Chinese households accounted for 25.9% of the total national households, 39.2% of them are in the T20[10] and 19.5% are in the B40 group. The COVID-19 pandemic has further impacted the growth in income, wealth ownership, entrepreneurship and job opportunities of Bumiputera.

Bumiputera unemployment recorded the highest number compared to other ethnic groups, at 406,000 or 57.1% of the total unemployment of 711,000 in 2020. Most unemployed Bumiputera were from the age group of 15 to 30 years, which was 308,700 or 76% of the total Bumiputera unemployment. The unemployment rate surged to 4.6% in 2020 compared to 3.7% in 2019 due to the COVID-19 pandemic.

According to the Labour Force Survey (LFS) 2020, the percentage of Bumiputera in the skilled job category was lower, at 39.3% compared to Chinese at 40.1%. Bumiputera participation in selected professional jobs such as accountants at 8.9% and architects at 41.3% was relatively low compared to other ethnic groups in 2019. Meanwhile, employment opportunities for *huffaz*[11], have been limited to the informal sector due to lack of technical skills.

Bumiputera micro, small and medium enterprises (MSMEs) accounted for 39.1% of total MSMEs in 2015[12], but the majority of them, 82.8% were concentrated at the micro level with low value-added products and services. Bumiputera MSMEs have been highly dependent on Government projects and assistance such as grants and loans. The lack of development in certain regions and states has limited the opportunities for Bumiputera MSMEs to grow. Bumiputera MSMEs lack entrepreneurial capacities and capabilities as well as have limited networks to participate in supply chains.

The percentage of Bumiputera households owning at least one residential unit is still below the target of at least 75% by 2020. The value of Bumiputera transactions in residential, commercial and industrial properties was low due to a lack of capital in facilitating acquisition and ownership. The transactional value for Bumiputera residential properties in 2019 amounted to RM26.4 billion compared with RM40 billion by the non-Bumiputera. The transactions value of Bumiputera was lower as Bumiputera ownership was mainly concentrated in the low to medium cost residential segments. Meanwhile, the value of Bumiputera

[10] Top 20% household income group. T20 monthly household income at the national level is RM10,960 and more (HIES & BA 2019).
[11] Muslims who memorised the whole *Al-Quran*.
[12] Source: Bumiputera Statistic 2019, DOSM (Limited Circulation)

transactions for commercial properties amounted to RM1.4 billion compared with RM9 billion for non-Bumiputera. In the industrial property category, Bumiputera transactions stood at RM135 million against RM1.9 billion for non-Bumiputera. In addition, a significant gap in wealth distribution remains among Bumiputera. For example, 9.5% of ASB subscribers owned 83% of total shares in 2020 compared with 79% in 2015. The significant gap of investment among Bumiputera is due to the high percentage of Bumiputera in low-paying occupations which resulted in lesser savings and lack of investment literacy.

The development of TRM and *waqf* land is still limited due to lack of financial capabilities and governance issues. The total size of TRM decreased from 5.04 million hectares in 2017 to 4.88 million hectares in 2019 because of difficulties in finding equivalent land for replacement. There is no comprehensive data on the total size of *waqf* land. The absence of a common regulatory framework to govern the TRM and *waqf* land leads to uncoordinated planning and development. Meanwhile, there is a lack of awareness on the potential of *waqf* instruments in improving the socioeconomic wellbeing of the *rakyat*.

The share of Bumiputera corporate equity ownership remained below the target set in the year 1971 of at least 30%. This target is yet to be achieved partly due to the liberalisation of a number of economic sectors including the relaxation in the condition of 30% Bumiputera equity ownership under the Industrial Coordination Act 1975 for the manufacturing sector. The divestment to non-Bumiputera and foreigners has resulted in no major improvement in the Bumiputera corporate equity ownership over the years. In addition, a number of Bumiputera mandated institutions have pursued the maximum commercial profit objective rather than implementing the Bumiputera agenda.

The Bumiputera agenda delivery mechanism is still suboptimal, resulting in leakages and unmet targets. The agencies responsible for driving Bumiputera socioeconomic development are mostly working in silos, which leads to overlapping of programmes and fragmented business approaches. Furthermore, most initiatives and programmes are Government-driven. Multinational companies (MNCs) and the private sector are less supportive of the Bumiputera agenda policies and initiatives. Unclear demarcation of socioeconomic objectives and commercial functions among Bumiputera mandated agencies[13] have resulted in less effective Bumiputera agenda achievement.

[13] Agencies mandated to drive Bumiputera agenda namely TERAJU, MARA, PNB, EKUINAS, PHB, PUNB and YPPB.

Lagging Socioeconomic Development of Orang Asli

Orang Asli are still lagging in socioeconomic development. In 2019, the incidence of poverty among Orang Asli remained high at 33.6%. The lack of a holistic development plan has hindered the socioeconomic development of Orang Asli. In addition, low education levels among Orang Asli have adversely affected their social mobility and employability. The education achievements of Orang Asli are well below the national standard and many Orang Asli are not in the mainstream of development. Inadequate provision of basic infrastructure as well as lack of amenities and services such as roads, electricity, treated water and telecommunications have affected the wellbeing of the community. Different policies on land gazettements among states and lack of sensitivity towards the interest of the Orang Asli have inhibited their development. In addition, agencies involved in the development of Orang Asli lack the capacity to deliver their services effectively.

Social Deprivation of Specific Target Groups

Specific target groups namely children, youth, women, older persons, PWDs and families, are faced with multifaceted challenges. These challenges include fragmented policies, high unemployment, gender inequality, inadequate safety net and lack of a supportive environment. These challenges have impeded opportunities for these groups to improve their wellbeing.

On child development, there is a lack of measurement tools to indicate the different levels of their development. The current laws on child offences focus on punitive action, resulting in minor offences being referred to the courts. Some children are therefore exposed to social stigma which has made it difficult for them to reintegrate into society. In respect of childcare centres there remain issues of accessibility, affordability, quality and registration. These issues have affected the quality of care and education for young children.

In 2020, the unemployment rate among youth[14] aged between 15 to 30 years old reached 8.3% from 6.5% in 2015. In addition, a high percentage of youth were underemployed, whereby 40.8% or 643,900 of employed youth with tertiary qualifications were in the semi- and low-skilled job category in 2019. The high percentage of educated youth in semi- and low-skilled occupations reflects slow growth in quality job creation. As at December 2020, 163,763 youth participated in debt management assistance programmes reflecting the challenges youth are facing in managing their finances. Based on the Malaysian Youth Index 2020, youth participation in voluntary and patriotic activities was still modest at 73.27.

The labour force participation rate among females was at 55.3% in 2020 compared to males at 80.6%. Meanwhile in politics, women involvement accounted for only 13.2% of elected parliamentary representatives. The proportion of women in decision-making positions in the private sector was still below the 30% minimum national target, with only 25.8% of women directors on the boards of Malaysia's top 100 public listed companies (PLCs).

The absence of a comprehensive aged care framework, low savings during old age, limited lifelong learning and lack of employment opportunities have hindered older persons to be independent. Meanwhile, the absence of a comprehensive database has adversely affected the provision of better care for older persons. In addition, the Physical Planning Guideline for the Elderly introduced in 2018 has not been adopted by most of the local authorities, affecting the living environment for older persons. Lack of sustainable financial management among older persons has resulted in financial instability, which has made post-retirement living more challenging and increases the risk of them falling into poverty. Older persons also have limited opportunities to participate actively in society and to become economically independent.

Low registration of PWDs in the SMOKU has prevented the effective implementation of programmes to improve their wellbeing. The lack of a supportive environment, including accessibility to public facilities as well as banking and insurance services, limits the ability of PWDs to be active in society. Although *Garis Panduan Perancangan Reka Bentuk Sejagat* provides guidelines for local authorities in the development of public facilities, its adoption is yet to be made mandatory. Moreover, the lack of specific TVET programmes in upskilling and reskilling has restricted the career development of PWDs.

Family-related issues such as dysfunctional family institutions, limited knowledge on sexual and reproductive health, ineffective parenting skills, lack of work-life balance, over-indebtedness as well as excessive internet addiction require urgent attention. More than one-third of couples end up in divorce within five years of marriage, thus contributing to more dysfunctional families. Meanwhile, the national fertility rate in 2019 went down to 1.8, below the replacement level of 2.1, posing a challenge to building a viable future workforce. Ineffective parental control to ensure child online safety is also a matter of concern as highlighted in the Family Wellbeing Index in 2019.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Moving forward, the Twelfth Plan will focus on addressing poverty and building an inclusive society to achieve a decent standard of living and social justice. This will be undertaken through various strategies and initiatives to improve the wellbeing of the *rakyat*. Concerted efforts will be geared towards addressing poverty, increasing income and the standard of living of the B40, supporting the M40 and achieving an equitable outcome for Bumiputera. Focus will also be given to uplift the wellbeing of Orang Asli and specific target groups.

[14] Based on Youth Societies and Youth Development Act (Amendment) 2019 [Act 668].

Way Forward: Twelfth Malaysia Plan, 2021-2025

Addressing Poverty and Building an Inclusive Society

Priority Area A

Addressing Poverty and Narrowing Inequality from a Multidimensional Perspective

Strategy A1
Increasing Income of the Poor
Strategy A2
Improving Access to Essential Services
Strategy A3
Uplifting Standard of Living of the Poor
Strategy A4
Addressing Quality of Life of Urban Poor
Strategy A5
Strengthening Service Delivery Mechanism
Strategy A6
Narrowing Household Income Inequality

Priority Area B

Empowering B40

Strategy B1
Increasing B40 Income and Redefining Income Group Category
Strategy B2
Improving Access to Basic Services for the B40
Strategy B3
Elevating Socioeconomic Status of Low-Income Chinese and Indian Households

Priority Area C

Supporting the M40 towards Equitable Society

Strategy C1
Boosting Income of the M40
Strategy C2
Improving Access to Quality and Affordable Education
Strategy C3
Encouraging Health and Employment Protection
Strategy C4
Increasing M40 Housing Ownership

Priority Area D

Achieving an Equitable Outcome for Bumiputera

Strategy D1
Accelerating Bumiputera Socioeconomic Development
Strategy D2
Improving Governance and Strengthening Service Delivery
Strategy D3
Strengthening Education and Empowering Human Capital
Strategy D4
Increasing the Resilience and Sustainability of Bumiputera Businesses
Strategy D5
Increasing Bumiputera Wealth Creation
Strategy D6
Optimising Malay Reserve Land and *Waqf* Instruments
Strategy D7
Ensuring Sustainable Corporate Equity Ownership

Priority Area E

Enhancing Development of Orang Asli Community

Strategy E1
Strengthening Education as a Catalyst for Development
Strategy E2
Accelerating Socioeconomic Development of Orang Asli

Priority Area F

Empowering Specific Target Groups

Strategy F1
Advancing Children Wellbeing
Strategy F2
Building Dynamic, Resilient and Competitive Youth
Strategy F3
Empowering the Role of Women
Strategy F4
Increasing the Wellbeing of Aged Population
Strategy F5
Empowering Persons with Disabilities
Strategy F6
Strengthening the Family Institution



Twelfth Malaysia Plan: Selected Targets

Addressing Poverty and Narrowing Inequality



2025

Gini Coefficient



2025

Incidence of Absolute Poverty



2025

Incident of Relative Poverty



2025

Multidimensional Poverty Index

Increasing Income and Standard of Living of B40



2025

Mean Monthly B40 Household Income



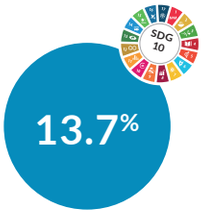
2025

Median Monthly B40 Household Income



2025

Share of Income of B40 from Overall Household Income



2025

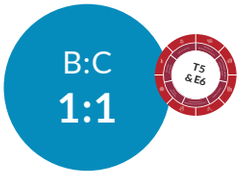
Percentage of Skilled Workers to Total B40

Achieving an Equitable Outcome for Bumiputera



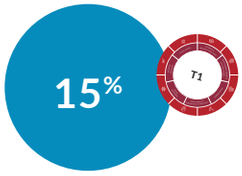
2025

Median Monthly Household Income Ratio Bumiputera to Chinese



2025

Median Monthly Salary and Wages Ratio Bumiputera to Chinese



2025

Bumiputera Enterprise Contribution to GDP



2025

Participation of Bumiputera in Skilled Occupation Category



2025

Percentage of Bumiputera Households Owning a Residential Unit



2025

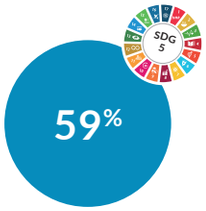
Bumiputera Corporate Equity Ownership with Effective Control

Empowering Specific Target Groups



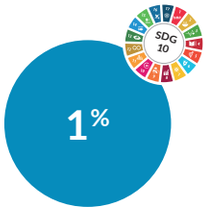
2025

Malaysian Youth Index



2025

Female Labour Force Participation rate



2025

Participation Rate of PWDs in Public Service



2025

Family Wellbeing Index

Target
SDG
WKB 2030

Priority Area A

Addressing Poverty and Narrowing Inequality from a Multidimensional Perspective

Poverty and inequality need to be addressed from a multidimensional perspective. The strategies include improving access to essential services, increasing income and uplifting the standard of living of the poor, addressing urban poverty, strengthening the service delivery mechanism and narrowing household inequality. Poverty eradication programmes will be undertaken through coordinated efforts within the public sector, between the public and private sectors, CSOs and communities with special attention given to the poorest districts and locations in urban and rural areas. The implementation of these strategies will ensure hardcore poverty is eliminated by 2025.



Strategy A1

Increasing Income of the Poor

Uplifting and Diversifying Income

Existing social welfare programmes for the hardcore poor and poor will be enhanced. Assistance such as cash transfers and healthcare support will continue to be provided on a need basis. Productive welfare programmes, including entrepreneurship and micro financing will be intensified to provide economic opportunities for the poor. In addition, training and upskilling will be strengthened among members of poor households to increase employability and capacity in venturing into income-generating activities. Basic financial education will be enhanced to improve their financial literacy.

Promoting a Whole-of-Nation Approach in Addressing Poverty

The private sector will be encouraged to offer structured and targeted assistance to poor households by providing scholarships and training, entrepreneurship and job opportunities as well as organising public benefit programmes through in situ development. Social enterprises and cooperatives will be further promoted among the poor to increase household income. Community-based economic activities will be pursued as part of income-generating programmes. The inclusive business approach[15] will be introduced to increase the involvement of the poor in the supply chain.

Strategy A2

Improving Access to Essential Services

Improving access to essential services is key in addressing poverty. In this regard, improving access to quality education and skills training as well as improving healthcare services will be given priority. These initiatives will uplift the wellbeing of the poor and improve their standard of living.

Improving Provision for Quality Education and Skills Training

Provision for quality education will be expanded to enhance the education level among members of poor households. In this regard, subsidised ECCE will be continued and expanded to offer more affordable and high-quality childcare services for the poor. Steps will be taken to provide early childhood education for all, while efforts will be intensified to ensure children from poor families will complete compulsory schooling of 11 years. In addition, targeted interventions such as scholarships will be provided to reduce the number of school dropouts among poor households. Scholarship opportunities will also be provided in easing the financial burden to pursue skills training, TVET and higher education. This will improve economic and social mobility as well as employability among poor households.

Improving Healthcare Services

Efforts to uplift the health of the poor will focus on improving the outreach of pre-natal care to geriatric services to the community. In addition, awareness of the importance of good health will be further promoted by ensuring balanced nutrients intake at all stages of life. Initiatives will be intensified to promote a balanced diet through the food basket programme for the poor according to the optimum minimum requirement based on the Malaysia Food Pyramid. These measures will reduce the child mortality rate, enhance life expectancy as well as promote an active and healthy lifestyle. This is particularly important in early childhood as it is a crucial time in a child's development. It is this period that lays the foundation for the child's learning and wellbeing.

[15] Businesses that engage people living at the base of the economic pyramid (B1) to provide goods and services, making them part of the value chain.

Strategy A3

Uplifting Standard of Living of the Poor

Efforts will be intensified to uplift the living standard of the poor. These efforts include improving basic amenities and infrastructure as well as upgrading the living conditions of the poor. In this regard, basic infrastructure will be improved while new houses will be built and dilapidated houses repaired.

Improving Basic Amenities and Infrastructure

Priority will be given to provide equal opportunities for all Malaysians to enjoy a decent living. Access to systematic garbage collection and transportation services will be improved. Basic utilities and communication services such as treated water, electricity and broadband connectivity will be enhanced, particularly in remote areas.

Upgrading Living Conditions

In ensuring the adequate supply of affordable housing for poor households, the housing assistance programme will be continued. This programme is aimed at improving the living conditions of poor households in rural and urban areas by building new and repairing dilapidated houses. This programme is expected to benefit a total of 50,000 poor households.

Strategy A4

Addressing Quality of Life of Urban Poor

Efforts to address urban poverty will focus on improving access to social support in maintaining a certain level of quality of life and uplift the wellbeing of urban poor communities. These include increasing and diversifying their income, facilitating access to education and healthcare and providing affordable housing.

Increasing and Diversifying Income

Access to entrepreneurship training and microfinancing will be expanded to increase and diversify income of the urban poor. In this regard, SE initiatives will be promoted to address social and economic issues faced by the urban poor. Community-based activities in producing goods and services such as urban farming, childcare services and home-based food business will also be promoted to generate additional income. In addition, the urban poor will be exposed to job opportunities in the gig economy. An additional 500,000 affordable houses will be constructed to provide quality and decent housing for poor households.

Facilitating Access to Education and Healthcare

Early childhood programmes will be made more accessible for children from urban poor households. CBOs will be encouraged to provide ECCE facilities at public and private low-cost housing areas. In addition, the provision of tuition classes to the urban poor students residing in low-cost housing projects will be enhanced. Digital platforms will be leveraged to provide online tuition. A balanced nutrient intake will also be promoted to address malnutrition issues among children. In addition, awareness of TVET programmes will be intensified among youth from urban poor households.

Strategy A5

Strengthening Service Delivery Mechanism

The service delivery mechanism will be strengthened by enhancing the delivery system, improving poverty measurement and policy implementation as well as exploring new funding mechanisms. This is important to ensure all poverty alleviation outcomes are realised.

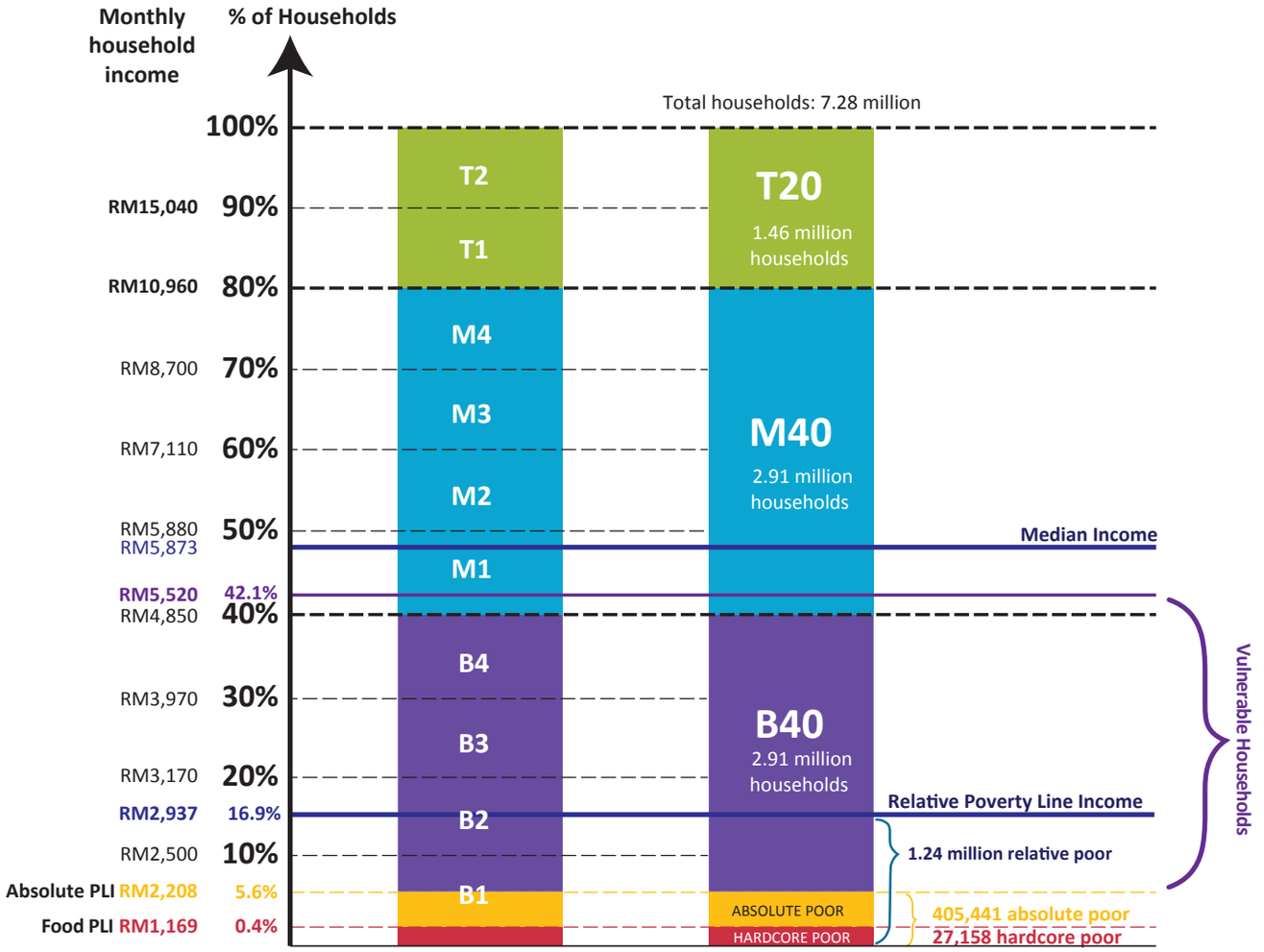
Enhancing the Service Delivery System

Service delivery will be strengthened through a comprehensive action plan and clear exit policy to improve efficiency and optimise resources. Policies and initiatives will be streamlined, while an integrated approach will be adopted in providing assistance to various target groups. In this regard, a special unit staffed by competent personnel will be established to address poverty in a holistic manner. The unit will function as the central body to plan, coordinate, implement and monitor measures in poverty alleviation. The possibility of introducing dedicated tax to finance poverty alleviation programmes will be explored. In addition, additional sources will also be considered from *zakat* and *waqf*, contributions from GLC, private entities and individuals. Social assistance and poverty alleviation programmes will be mapped out according to the different categories of the poor and vulnerable, focusing on the hardcore poor and poor from the B1[16] income decile. The National Household Income Categories are shown in *Exhibit 5-3*.

[16] Bottom 10% household income decile group in the B40. Based on HIES & BA 2019, B1 monthly household income at the national level is below RM2,500.

Exhibit 5-3

National Household Income Category, 2019



Every decile of the income category represents 10% of the total households, equivalent to 727,500 households

Note: Who is defined as poor?

- **Hardcore poor** refers to households earning income less than food PLI, RM1,169 (-----)
- **Absolute poor** refers to households earning income less than absolute PLI, RM2,208 (-----)
- **Relative poor** refers to households earning income less than half of national median monthly household, RM2,937 (——)
- **Vulnerable households** refers to households earning income between absolute PLI and 2.5 times of absolute PLI, RM5,520 (——)

Source: Department of Statistics Malaysia and Economic Planning Unit

The eKasih system will be reviewed and strengthened in identifying, implementing and monitoring poverty alleviation programmes to enhance transparency and accuracy of the data. Evidence-based policies will facilitate the process of identifying target groups and developing the profile of poor households. Databases related to poverty eradication and social assistance will be integrated through the development of *Pangkalan Data Perlindungan Sosial* (PDPS) to eliminate redundancies as well as inclusion and exclusion errors. Big data analytics and data-driven policies will also be adopted in enhancing poverty eradication initiatives. In addition to existing programmes, the bottom-up approach will be enhanced with the involvement of CSOs and CBOs. Local authorities and community leaders will also be empowered to identify and alleviate pockets of poverty at the community level. Designated government officials at the local level will be assigned to coordinate and implement the grassroots approach to ensure the success of poverty alleviation initiatives.

Improving Poverty Measurement and Policy Implementation

The measurement of poverty will be continuously improved in ensuring the effectiveness of poverty alleviation initiatives. The MPI dimensions and indicators will be expanded to be more comprehensive in better reflecting the measurement of multidimensional poverty. MPI will facilitate evidence-based decision-making at all levels of planning, implementation, monitoring and evaluation of poverty alleviation. The MPI approach will be adopted by all stakeholders in designing programmes taking into consideration the deprivation and needs of the households for more targeted and effective implementation.

Strategy A6

Narrowing Household Income Inequality

Narrowing household income inequality is pertinent in achieving equitable distribution. Initiatives to reduce inequality include addressing the rising cost of living and increasing purchasing power as well as strengthening social protection. These initiatives will ensure the *rakyat* benefit from socioeconomic development in achieving inclusivity and social cohesion.

Addressing the Rising Cost of Living and Increasing Purchasing Power

Efforts to narrow household inequality will be intensified to enhance inclusivity and achieve equitability for all. These include addressing the issue of the cost of living and increasing purchasing power. In this regard, enforcement of price control on goods and services will be enhanced to address price manipulation. The Food Bank initiative and corporate social responsibility (CSR) programmes will help reduce the financial burden of poor households. In addition, financial education and literacy will be promoted among all age groups.

Strengthening Social Protection for All

The Malaysia Social Protection Council (MySPC) and *Jawatankuasa Khas Kabinet Menangani Kemiskinan* (JKKMK) have been merged to become a single entity. This is to ensure better coordination in the formulation of policies as well as effectively executing strategies on social protection. Apart from combating poverty, this Council will also focus on addressing social insurance and labour market issues.

Priority Area B

Empowering B40

Several strategies will be implemented to empower the B40 in increasing their standard of living and income. Focus will be given to diversify income of the B40, review income group categories and increase the income of low-income households. In addition, efforts will be undertaken to improve access to basic services such as education, healthcare, housing and social protection.



Strategy B1

Increasing B40 Income and Redefining Income Group Category

Enhancing Capacity and Capability of B40

The B40 will be encouraged to diversify sources of income so that they will enjoy a decent standard of living. Members of the households will be supported in terms of education, training and skills to enhance their capacity and capability through a bottom-up and community-based approach. They will be encouraged to focus on high value-added activities through the application of best practices and adoption of technology such as smart farming, online businesses and outsourcing. The successful implementation of these initiatives will result in increased income and better employment opportunities.

Enhancing Entrepreneurship among the B40

Efforts to create more income-generating opportunities through entrepreneurship activities among the B40 will be enhanced. In addition, opportunities will be provided for the B40 to engage in online business. The SE approach will be intensified by leveraging local resources to create business opportunities. An inclusive business approach will be promoted to enable the B40 to be involved in the supply chain.

Reviewing Income Group Category

The existing household income category will be reviewed to enable more targeted assistance. This review will take into account the changing structure of income and expenditure, cost of living, purchasing power, demography as well as location of the households. The new household income categorisation will strengthen policy formulation and improve delivery.

Strategy B2

Improving Access to Basic Services for the B40

Improving Access to Education and Skills Training

Access to quality education and skills training will be strengthened to increase capacity and capability among the B40 household members. ECCE will be further enhanced by encouraging CBOs to provide facilities in areas where such services are lacking. Children of the B40 will continue to be given priority for scholarships and intakes into SBP and MRSM. Financial assistance will be extended to pursue skills training including TVET and higher education.

Enhancing Access to Healthcare Services

Access to quality healthcare and primary health facilities in rural and remote areas will be enhanced to provide affordable and better healthcare services. The *Skim Peduli Kesihatan untuk Kumpulan B40* (PeKa B40) initiative will be strengthened by widening the coverage and increasing the target group's awareness of PeKa B40 benefits. The PeKa B40 assistance will partly finance the cost of healthcare services and medical equipment. The *waqf* model will be utilised as an alternative to ease the burden of B40 in meeting healthcare expenses. It will also provide ambulance services as well as set up dialysis and elderly care centres. In addition, cooperatives will be encouraged to provide affordable healthcare services for their members.

Enhancing Opportunities for Home Ownership by B40

Existing housing policies and programmes to assist the B40 will be continued. However, priority will be given to the B1 income decile to own affordable homes. In this regard, housing programmes such as Rent-to-Own (RTO), *Rumah Mesra Rakyat* and *Program Perumahan Penjawat Awam Malaysia* will continue to be implemented. Coordination between the Federal and state governments as well as local authorities in integrating and streamlining overall housing policies will be strengthened.

Strategy B3

Elevating Socioeconomic Status of Low-Income Chinese and Indian Households

Elevating Standard of Living of Low-Income Chinese Households

Strategies and initiatives for addressing poverty and empowerment of the B40 will be implemented irrespective of ethnicity. For low-income Chinese households in *Kampung Baru*, access to financing facilities will be continued by providing business loans to facilitate their expansion of business. The *Skim Pinjaman Khas Penduduk Kampung Baru* will be expanded to include the promotion of villages as attractive tourist destinations. In addition, basic infrastructure and amenities will continue to be upgraded to enable the *Kampung Baru* community to enjoy better facilities.

Elevating Standard of Living of Low-Income Indian Households

In pursuing inclusive development, the wellbeing of low-income Indian households will continue to be given priority in line with the Malaysian Indian Blueprint. Access to quality education will be improved while low education attainment and the issue of dropouts among this community will be addressed. Targeted upskilling programmes that match the requirements of industry players will be offered in increasing employment opportunities while entrepreneurship opportunities will be enhanced. In addition, appropriate programmes such as pre- and post-marital parenting courses as well as support services for high-risk families will be provided to holistically address dysfunctional families and youth issues.

Priority Area C

Supporting the M40 towards Equitable Society

Concerted efforts to support the M40, especially the M1[17] income decile will be undertaken to attain more equitable economic gains and improve their standard of living. In this regard, access to education will be improved while affordable home ownership will be facilitated. In addition, incentives will be provided to encourage them in obtaining health and employment insurance.



[17] Bottom 10% household income decile group from M40. Based on HIES & BA 2019, M1 monthly household income at the national level is between RM4,850 and RM5,879.

Strategy C1

Boosting Income of the M40

Participation of M40 in Income Generating Activities

The M40 will be supported to boost their income to cope with the high cost of living and prevent them from falling into the vulnerable group. In this regard, the M40 will be encouraged to be involved in entrepreneurship and supplementary income activities as well as invest in income-generating portfolios. The sharing economy will be promoted among the M40 through the use of digital platforms. In addition, financial institutions will be encouraged to provide financial literacy programmes and advisory services.

Strategy C2

Improving Access to Quality and Affordable Education

Providing Early Childhood Care and Education Assistance

Improving access to affordable education will ease the burden of the M40 in providing quality education for their children. In addition, affordable ECCE especially in urban areas and public sector premises will be provided and enhanced. The private sector will be further encouraged to provide affordable day care services at their workplaces.

Strategy C3

Encouraging Health and Employment Protection

Promoting Health and Employment Insurance

The M40 will be encouraged to subscribe to health and employment insurance to mitigate them from financial vulnerability. In addition, income tax relief on health and life as well as employment insurance for the M40 will be reviewed to reduce healthcare costs. These initiatives will cushion them from unforeseen circumstances due to health and work-related risks.

Strategy C4

Increasing M40 Housing Ownership

Facilitating the Ownership of Affordable Homes

Ownership of affordable homes by the M40 will be facilitated. This will be undertaken through greater collaboration with state governments and the private sector in providing quality affordable housing at strategic locations. The RTO Programme will be strengthened to provide the M40 with an option to own houses with affordable monthly instalments.

Priority Area D

Achieving an Equitable Outcome for Bumiputera

The Bumiputera agenda will continue to be a national agenda in achieving fair, equitable and inclusive socioeconomic development in line with WKB 2030. This agenda will be embedded in all existing and new policies. Bumiputera socioeconomic development will be given priority through enhancing the governance, service delivery and human capital development as well as strengthening access to education. Bumiputera businesses will be empowered to be resilient and sustainable. In addition, concerted efforts will be undertaken in increasing wealth creation, optimising TRM and waqf instruments as well as ensuring sustainable corporate equity ownership.



Strategy D1

Accelerating Bumiputera Socioeconomic Development

Eradicating Poverty and Increasing Bumiputera Household Income

Strategic and targeted efforts will be implemented to obtain more equitable socioeconomic benefits among Bumiputera households. Assistance in the form of basic necessities such as housing, education and health will continue to be provided to poor Bumiputera households. Furthermore, the B40 Bumiputera households will be encouraged to diversify their sources of income to improve their standard of living through the provision of appropriate training.

The M40 Bumiputera households will continue to be empowered towards increasing their potential to attain a better standard of living. This income group will be encouraged to venture into entrepreneurship, enhance financial literacy and investment management as well as participate in additional income-generating activities, including leveraging on digital platforms. The T20 Bumiputera households will be encouraged to actively contribute back to the Bumiputera community. In addition, collaboration between Bumiputera EDOs, SOEs and private sectors with successful icons will be initiated to create value and trickle-down effects to the community.

Strategy D2

Improving Governance and Strengthening Service Delivery

Governance and service delivery of Bumiputera institutions and mandated agencies will be enhanced to ensure the success of the Bumiputera socioeconomic development agenda. In this regard, the functions and programmes of these institutions will be reviewed to ensure effectiveness and avoid duplication. The Bumiputera database across ministries, agencies and SOEs will be coordinated. The implementation of these initiatives will facilitate the achievement of an equitable outcome for Bumiputera.

Improving the Governance of Bumiputera Institutions and Mandated Agencies

Concerted efforts will be directed towards promoting good governance and effective service delivery. In this regard, a review of the Government's mandate, functions, programmes and the role of Bumiputera institutions will be conducted to ensure Bumiputera derive maximum benefits. Besides, programmes to rejuvenate the Bumiputera aspirations among leaders of Bumiputera institutions and mandated agencies will be introduced to ensure commitment in implementing the agenda.

The mandate and functions of each ministry and agency will be streamlined to ensure effective implementation of the Bumiputera agenda. In this regard, a dedicated Bumiputera Prosperity Division (BKB) will be established in each ministry and agency through the redeployment of existing staff. This division is responsible for implementing the Bumiputera agenda within the ministries and agencies as well as in monitoring and evaluating equitable outcomes. Meanwhile, boards of directors and top management of EDOs and SOEs will be appointed among qualified corporate and industry players in line with the Malaysia Code of Corporate Governance who can successfully execute the Bumiputera agenda.

The role of MARA will be strengthened to exercise the power enacted under the MARA Act 1966. MARA will explore a new development model to further accelerate progress in uplifting the Bumiputera socioeconomic position. MARA will continue to be involved in a number of commercial and industrial activities to create more opportunities for Bumiputera entrepreneurs. In addition, MARA will play an important role in unlocking the economic potential of the TRM.

TERAJU will continue to play a key role in implementing the Bumiputera agenda and serve as the secretariat to *Majlis Kemakmuran Bumiputera* in coordinating, monitoring and evaluating the implementation of strategic Bumiputera development programmes. TERAJU will develop a single database related to Bumiputera participation in key socioeconomic activities. Data collection and data sharing among stakeholders will be enhanced to facilitate the establishment of an integrated data warehouse. In addition, TERAJU will create a single gateway in providing information and services related to education and training, entrepreneurship as well as equity and property ownership of Bumiputera.

Strengthening the Service Delivery System

The performance of the board of directors and CEOs of EDOs as well as and SOEs will be assessed on the outcome-based key performance indicators (KPIs). The Bumiputera scorecard will be reintroduced to measure the achievement of Bumiputera socioeconomic outcomes. All stakeholders including Federal, state and local governments as well as EDOs and SOEs will be required to implement the scorecard. Business organisations and the private sector will also be encouraged to adopt this scorecard. A comprehensive Bumiputera Prosperity Index will be developed to measure Bumiputera progress and wellbeing.

Initiatives will be introduced to encourage equitable employment for Bumiputera in the private sector to promote fair opportunities. Moreover, the Government procurement policies and regulations will be reviewed and strengthened in ensuring equitable distribution of Government contracts at every level. Amendments and improvements will be made to the Companies Act 2016 and the Malaysian Anti-Corruption Commission Act 2009 to enable better identification of the beneficial owner of shares in companies and Government procurement.

Strategy D3

Strengthening Education and Empowering Human Capital

Human capital development will be the main focus in uplifting Bumiputera socioeconomic position. Efforts will be intensified in expanding educational access and opportunities, improving the quality of skills programmes, increasing the participation in certified professional programmes as well as improving *huffaz* skills and marketability. These initiatives will be implemented to enhance the capacity and capability of Bumiputera in securing higher skilled jobs as well as balanced human capital in terms of knowledge, skills and moral values.

Expanding Educational Access and Opportunities

Access to quality education opportunities from pre-school to tertiary level will be the main focus in enhancing the socioeconomic status of Bumiputera. MARA education institutes will be leveraged to equip Bumiputera human capital with skills of the future including artificial intelligence (AI), advanced digital skills, critical thinking as well as spiritual and positive values to enhance creativity and competency. The Bumiputera education institutions will also be encouraged to implement the nurturing and development programmes[18] in complementing the academic and technical training received by students and trainees.

Improving the Quality of Skills Programmes

Structured skills training in TVET programmes will be intensified by MARA to increase the supply of Bumiputera talents in meeting industrial demands as well as to address the high Bumiputera unemployment rate particularly among youth. In this regard, a digital platform will be developed through collaboration between HEIs and industry to improve the employability of Bumiputera graduates. In addition, a programme to develop new skill sets related to the solution of complex problems, technology design and programming will be introduced to equip the Bumiputera for newly emerging skilled jobs.

Increasing Bumiputera Participation in Certified Professional Programmes

More eligible Bumiputera graduates will be supported to increase the number of Bumiputera professionals such as accountants, architects and engineers. In line with technological developments and 4IR, specific strategies will be formulated to increase Bumiputera participation in future careers such as analysts, data scientists and big data experts through strategic collaboration with industry and skills training institutions. In addition, more Bumiputera professionals will be trained to become specialists in various fields such as medicine and engineering. Funds will be sourced from SOEs and the private sector as well as individuals through crowdfunding to reduce dependency on government.

[18] This programme will help students and trainees to acquire relevant skills and values such as industry relevant soft skills, financial literacy, employment readiness, leadership and spiritual values to complement technical competencies in creating balanced and competitive individuals.

Improving *Huffaz* Skills and Marketability

Concerted efforts will continue to be implemented to accredit *tahfiz*[19] programmes, particularly in private institutions to provide better routes for *huffaz* to enter into mainstream education. In this regard, the alignment of *tahfiz* modules with the *Kurikulum Bersepadu Tahfiz* (KBT) will be improved and aligned with *Dasar Pendidikan Negara*. In addition, YPPB and MARA will continue to train more *huffaz* in technical and professional fields as well as *program pembelajaran sepanjang hayat* (PSH) in enhancing their employability.

Strategy D4

Increasing the Resilience and Sustainability of Bumiputera Businesses

Increasing the resilience and sustainability of Bumiputera businesses will be the main focus in strengthening entrepreneurship culture. Bumiputera participation in high impact and the emerging strategic sectors will be enhanced. This will strengthen the ability of Bumiputera businesses to be more competitive at all levels of the supply chain.

Enhancing Capacity and Capability of Entrepreneurs

The capacity and capability of Bumiputera entrepreneurs will be enhanced by inculcating self-reliance, a competitive mindset and a high-performance culture. Financial and non-financial assistances will be provided based on merit and needs. Structured coaching and mentoring programmes will be strengthened through the involvement of successful entrepreneurs in sharing business ethics and best practices. More Bumiputera entrepreneurs will be encouraged to venture into the digital economy.

Intensifying Entrepreneurship Programmes

Start-up entrepreneurship programmes including for youth and professionals will be intensified to enhance Bumiputera participation by providing more training and advisory services in innovative and knowledge-based businesses. Bumiputera entrepreneurs will be encouraged to venture into industries with high growth potential such as halal, aerospace, creative industries, agriculture biomass, tourism and advanced E&E. In this regard, Bumiputera participation in these high potential industries will be facilitated through the acquisition of local and foreign technologies as well as intellectual properties (IP). Moreover, the corporate sector will be encouraged to create Bumiputera crowdfunding aimed at providing alternative financing to Bumiputera entrepreneurs.

Enhancing Bumiputera MSMEs Participation in the Strategic High Impact and Emerging Economic Sectors

The involvement of Bumiputera MSMEs in the Vendor Development Programme will be further intensified. This programme will be strengthened to include anchors among MNCs to assist new Bumiputera vendors in increasing their participation along the supply chain in emerging industries such as bio-medical devices and aerospace. Meanwhile, the carve-out and compete initiative will be extended to various sectors in increasing effective Bumiputera participation in the economy. Bumiputera MSMEs will also be encouraged to form consortiums and cooperatives in enhancing their capacity and capability to compete along the supply chain. Meanwhile, VentureTECH will be injecting capital into Bumiputera companies with potential. A clear exit policy will be formulated to encourage successful Bumiputera MSMEs to be more independent and resilient.

Exploring and Expanding Businesses

Bumiputera MSMEs will be encouraged to grow and penetrate the global market. In this regard, SOEs will enhance collaboration with MNCs and global companies in identifying and assisting potential Bumiputera MSMEs. Smart partnerships between SOEs, R&D institutions and Bumiputera MSMEs will be intensified to develop and commercialise IPs as well as innovative products and services to penetrate new markets. Bumiputera businesses will be promoted in new growth areas across the country, while Development Financial Institutions (DFIs) will be urged to expand financial assistance, coaching and mentoring to support potential Bumiputera entrepreneurs venturing into high value-added activities.

[19] Islamic religious schools that focus on memorisation and interpretation of the *Al-Quran*.

Strategy D5

Increasing Bumiputera Wealth Creation

Introducing New Financing Mechanisms for Non-Financial Assets

Various initiatives will be undertaken to further increase property ownership of Bumiputera. Better terms of financing for the purchase of properties will be introduced through collaboration between financial institutions, private developers and investors. Furthermore, EDOs will be encouraged to acquire and develop commercial and industrial assets under the Rent-to-Own scheme for Bumiputera entrepreneurs.

In increasing Bumiputera residential ownership, a dedicated fund will be explored to provide a financing scheme for eligible Bumiputera households. Furthermore, to reduce regional imbalances, new townships in sub-urban areas with good connectivity and infrastructure will be developed by the private sector and Bumiputera mandated agencies. Besides, the policy on Bumiputera quota in home ownership will be coordinated between Federal, state and local governments to enable them to buy residential assets at affordable prices.

Introducing New Business Models for Non-Financial Assets

In increasing Bumiputera assets ownership, PHB will explore new business models to enable participation in government privatisation projects as part of its real estate investment trust portfolio. A new model of property ownership will be introduced through the injection of funds in the AHB to generate dividends, which will be reinvested as long-term investment instruments. In adjusting to the post COVID-19 pandemic new normal, EDOs and SOEs will explore innovative new business models to retain and enhance the ownership of the commercial and business premises.

Strategy D6

Optimising Malay Reserve Land and *Waqf* Instruments

Strengthening the Development of Malay Reserve Land and *Waqf* Instruments

To enhance the socioeconomic development of the Bumiputera community, the development of TRM and *waqf* instruments will be optimised. In this regard, state authorities will be encouraged to develop TRM and *waqf* lands through collaboration with the Federal agencies. An integrated master plan on the development of TRM, waqf land and waqf instruments will be formulated to provide a framework for socioeconomic development at state and local levels. The role and scope of the *Jawatankuasa Pemandu Pengurusan Data Tanah Rizab Melayu Semenanjung Malaysia* will be expanded to provide guidelines relating to land development and value creation.

A committee comprising representatives of Federal and state governments will be set up to provide overall direction in planning, implementation and monitoring of *waqf* land development. In addition, the possibility of expanding the concept of waqf as an instrument for broader socioeconomic development will be explored. A *waqf* fund at the Federal level will be established to mobilise resources from individuals and corporate bodies to fund socioeconomic activities. These initiatives will be implemented without compromising the status of the state Islamic religious councils as sole trustees of the *waqf* assets.

Strategy D7

Ensuring Sustainable Corporate Equity Ownership

Bumiputera effective control of corporate organisations will be strengthened to ensure sustainable corporate equity ownership. This will be achieved by revisiting investment strategies and promoting investment literacy. Furthermore, the role of SOEs as development enablers in increasing Bumiputera equity ownership will be further enhanced.

Revisiting Investment Strategies

The investment model in the Bumiputera mandated institutions will be revisited to ensure optimal returns from strategic investments and divestments to the Bumiputera companies. In ensuring sustainable Bumiputera corporate sector equity ownership, shares of companies divested by Bumiputera mandated agencies will be offered to eligible Bumiputera consortiums and companies. Returns from the divestment will be distributed and shared with other Bumiputera mandated agencies to improve the Bumiputera wealth distribution. Disposal of Bumiputera-owned companies will be monitored by the sector regulators to maintain the Bumiputera corporate equity ownership. The possibility of establishing an equity safety-net will be explored to ensure disposal of Bumiputera equity will be made to other qualified Bumiputera individuals and entities. In addition, the Committee on Equity Ownership established under the EPU, JPM will be tasked to oversee the implementation of policies and strategies to further strengthen Bumiputera corporate sector equity ownership.

Promoting Investment Literacy

Bumiputera institutions, such as PNB, MARA and EKUINAS will collaborate with the Securities Commission and Bursa Malaysia in promoting investment literacy. Outreach programmes for initial public offering (IPO) opportunities will be intensified in encouraging individuals, companies and eligible Bumiputera cooperatives to apply for the Special Provision of Bumiputera Shares. This initiative will help increase Bumiputera corporate equity ownership in public listed companies.

Enhancing the Role of SOEs as Enablers for Bumiputera Equity Ownership

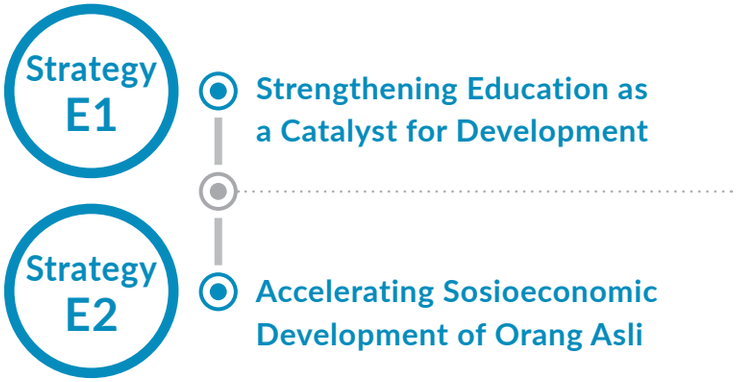
Investment of GLCs and GLICs will be prioritised in the strategic sectors while participation in non-strategic sectors will be gradually reduced. The disposal of assets owned by the GLCs and GLICs in the non-strategic sectors will be coordinated in ensuring priority will be given to qualified Bumiputera entrepreneurs and entities. GLCs and GLICs will be required to enhance the Bumiputera agenda to ensure the sustainability of Bumiputera corporate sector ownership. Programmes to facilitate more Bumiputera companies to be listed will be expanded through improvements to the existing programmes. Strategic collaboration with foreign investors and fund managers will be facilitated to raise funds for Bumiputera MSMEs and PLCs to become global players.

PNB will facilitate to increase the participation of Bumiputera community in digital-based financial planning and investment services. In addition, PNB will introduce new unit trust products that have investment exposure in the foreign market. In terms of investment strategy, PNB will continue to invest in high performing PLCs in Bursa Malaysia as well as diversify its investment portfolio at the domestic and international market. *Khazanah Nasional Berhad* (KHAZANAH), as the national sovereign wealth fund, will also continue to lead collaboration with selected GLCs and GLICs to support and strengthen the Bumiputera Empowerment Agenda in increasing the Bumiputera corporate equity ownership. Bumiputera companies in high value-added, green and emerging industries will be developed through the VentureTECH performance-based investment programme.

Priority Area E

Enhancing Development of Orang Asli Community

The wellbeing of Orang Asli will be enhanced in ensuring that the community will be able to meaningfully participate in the country's socioeconomic development. In this regard, a comprehensive development approach with a focus on education will be introduced. A socioeconomic development plan for Orang Asli will be formulated focusing on poverty reduction as well as expanding basic infrastructure, amenities and services. Inter-agency collaboration will also be strengthened to improve service delivery. These initiatives will promote inclusive development and enhance the socioeconomic status of the Orang Asli community.



Strategy E1

Strengthening Education as a Catalyst for Development

Access to education will be improved to facilitate social and economic mobility of Orang Asli. This will be done by strengthening education programmes and improving the approach in teaching and learning, thus enhancing the educational attainment of Orang Asli.

Strengthening Education Programmes

Efforts in strengthening ongoing programmes on education will be streamlined. Access to ECCE for the Orang Asli community will be improved to better prepare them in acquiring the basic skills of reading, writing and counting (3M). Student dropouts during the transition from ECCE level to primary and from primary to secondary will be reduced while teaching and learning methods will be improved to ensure that Orang Asli students remain in school and progress towards higher levels of education. In addition, enrolment in TVET programmes and tertiary education will be increased.

The *Program Jom Belajar* will be further expanded within the community to improve student attendance through innovative teaching and suitable learning methods in reducing illiteracy. In ensuring a conducive living environment for the teachers, adequate decent accommodation will be provided. The *Program Kelas Komuniti* will continue to ensure the community is able to master the basic 3M skills.

Improving Education of Orang Asli

Access to education will be improved to encourage social and economic mobility of Orang Asli. The Comprehensive Special Model School 9 (K9) which offers schooling up to Form 3 will be made accessible to more Orang Asli students in facilitating the transition from primary to secondary schools. A Comprehensive Special Model School 11 (K11) that provides 11 years of schooling will be implemented to ensure Orang Asli students remain in school until they sit for the SPM examination. In order to motivate the Orang Asli students to attend secondary education, K11 schools will focus on TVET programmes with specific training skills taking into account the local as well as national requirements.

SPM leavers and graduates from local communities will be encouraged to assist in teaching Orang Asli students. As such, a special programme, Bringing School to Community, will be introduced through collaboration between government, universities and CSOs. The programme will adopt a semi-formal teaching and learning method that emphasises 3M skills in preparing students to enrol in the mainstream education system.

Strategy E2

Accelerating Socioeconomic Development of Orang Asli

Formulating Comprehensive Socioeconomic Development Plan for Orang Asli

The socioeconomic development of Orang Asli will be accelerated and customised to the needs and culture of the community. In this regard, a development plan will be formulated, encompassing education and training, increasing income, provision of basic infrastructure, land development, healthcare services and housing. The integrated socioeconomic development plan of Orang Asli will be implemented with close cooperation of all stakeholders. Inter-agency collaboration will be strengthened to enhance the efficiency and effectiveness of the delivery system in improving the wellbeing of Orang Asli. The capacity and capability of *Jabatan Kemajuan Orang Asli* and other relevant agencies will be enhanced.

Increasing Income of Orang Asli

Poverty eradication programmes will focus on income-generating activities. Potential crops that have commercial value and traditional handicrafts will be further developed to fully exploit their potential. In addition, microfinancing facilities and skills training will be provided for Orang Asli to become entrepreneurs, particularly in ecotourism, agrotourism as well as arts and handicrafts. State governments will be encouraged to enhance the gazettement of land for economic activities.

Expanding Basic Infrastructure, Amenities and Services for Orang Asli

Efforts will be intensified to improve the livelihood of Orang Asli by expanding basic infrastructure, amenities and services. This includes the construction of roads and provision of treated water, electricity and housing to uplift the standard of living of the community. Access to telecommunications and healthcare services will be improved to enhance the wellbeing of Orang Asli.

Priority Area F

Empowering Specific Target Groups

Synergistic efforts will be mobilised in empowering specific target groups to improve their wellbeing and achieve a higher standard of living based on the principle of leaving no one behind. Priority will be given to the wellbeing of children, youth development as well as women empowerment. Initiatives will also be centred on increasing the wellbeing of aged population, empowering PWDs to be self-reliant and strengthening family institution.



Strategy F1

Advancing Children Wellbeing

Strengthening Governance for Children Development and Protection

In advancing the wellbeing of children, governance and implementation mechanisms for children development and protection will be enhanced. A national child development index will be formulated as a tool to improve policies related to the biological and psychological growth of children. The child judicial process will be reviewed to further strengthen children protection. Under this review, programmes to separate children with minor crimes from those committing more serious offences will be undertaken to assist the reintegration of the young offenders into the community. Meanwhile, the issue of child marriage will continue to be addressed through the implementation of the National Strategy Plan in Handling the Causes of Child Marriage. The ECCE programmes will also be rationalised to enhance accessibility and quality of programmes as well as to ensure fees are affordable.

Strategy F2

Building Dynamic, Resilient and Competitive Youth

Strengthening Youth Development and Participation

The role of youth in national development will be strengthened as youth plays an important role in the future of the country. A national plan on youth economic empowerment will be introduced to provide strategic direction in improving youth employability. This plan will cover among others, training and skills upgrading including digitalisation, job creation as well as sharing information on available financing facilities. In addition, a youth financial education network will be initiated as a platform to promote financial literacy and credit management programmes. Youth leadership and volunteerism programmes at school, HEIs and community levels will be streamlined to enhance youth participation in community activities. Moreover, with the constitutional amendment to lower the voting age to 18 years old, focus will be given to inculcate patriotism, increase awareness on politics as well as improve knowledge on the Federal Constitution and the role of the legislative system in the country's administration. Efforts to promote a healthy and active lifestyle among youth with greater emphasis on mental wellbeing will be intensified. Meanwhile, more awareness programmes will be undertaken to elevate ethical usage of technology, including the digital platform.

Strategy F3

Empowering the Role of Women

Promoting Gender Equality

Women will be empowered to play a more significant role in society. Efforts will focus on promoting gender equality, increasing economic participation and enhancing the role of women in decision-making. Relevant laws will be reviewed to ensure that women are better protected. The gender mainstreaming[20] framework will be introduced to incorporate the gender perspective in formulating policies. Emphasis will be placed on enhancing institutional capacity and evidence-based policymaking, particularly in gender related analysis. Women's participation in all sectors will be elevated via multiple economic platforms, including the sharing economy and entrepreneurship development.

Enhancing Legal Protection

Safety and security issues will continue to be addressed by strengthening both civil and sharia laws as well as enhancing women's rights awareness and intervention programmes. Legislation to address sexual harassment and gender inequalities will be formulated to ensure a safe environment as well as eliminate violence against women and gender-biased discrimination.

[20] The United Nations Economic and Social Council (ECOSOC) defined gender mainstreaming as the process of assessing the implications of any proposed action for women and men, including legislation, policies or programmes, in all fields and at all stages.

Strategy F4

Increasing the Wellbeing of Aged Population

Enhancing Care and Support for Older Persons

As Malaysia moves towards becoming an aged nation[21] by 2030, concerted efforts will be undertaken to enhance care, protection and support for older persons to be active members of society. This will include introducing laws to protect the rights of older persons, establishing a comprehensive long-term care framework, enhancing quality and services of caregivers as well as invigorating the social care industry. Awareness campaigns on healthy ageing will be intensified, while care givers for the aged will be promoted as a professional career. In addition, collaboration between public and private healthcare providers in broadening palliative care services will be strengthened to ensure the effectiveness of intervention programmes. New initiatives will also be introduced to modernise healthcare services by utilising internet of things (IoT) in homecare monitoring and virtual medical consultations.

Strengthening Social Protection

Programmes to inculcate financial literacy among the younger generation will be amplified to improve financial management skills in preparation for old age. Pension systems and retirement coverage will also be enhanced. Private retirement schemes will be promoted to complement existing schemes. Current social assistance programmes will be streamlined to strengthen social protection for older persons. In this regard, the *e-Warga Emas* will be launched as an integrated national database for older persons, to facilitate better policymaking and programme implementation. Accessibility to lifelong learning programmes and employment opportunities will be broadened to improve income and quality of life. Local authorities will be encouraged to adopt the Physical Planning Guideline for Elderly, while a national framework on Age Friendly City will also be introduced to promote a more conducive environment for the aged population. Intergenerational programmes will be further promoted to strengthen social interaction among different generations.

Strategy F5

Empowering Persons with Disabilities

Ensuring Inclusiveness of Persons with Disabilities

Measures will be undertaken in empowering PWDs to be independent and be actively involved in society. The registration of PWDs in SMOKU will be improved through strategic collaboration among various agencies and CSOs as well as through the integration with the Malaysian Government Central Data Exchange (MyGDX) system. The inclusiveness of PWDs in education and training, employment, financing as well as sports will be enhanced. More economic opportunities will be made available for PWDs through various platforms, including the sharing and digital economies. Adoption of universal design principle will be further encouraged among local authorities to improve accessibility to public facilities for PWDs. Social protection for PWDs will also be strengthened by reviewing insurance protection coverage, including for the caregivers.

Strategy F6

Strengthening the Family Institution

Building Strong Family Institution

The family institution plays a vital role in moulding individuals towards building strong communities and a caring society. As such, the family institution will be strengthened through community empowerment. Pre-marital education and parenting skills programmes will be redesigned to leverage the digital platform and be more relevant to the current issues and challenges.

Work-life balance will be enhanced by promoting flexible working hours. Adaptable working arrangements will be expanded while the private sector will be encouraged to provide paternity leave and better care centres. Sexual and reproductive health programmes will be enhanced by expanding the role of *Lembaga Penduduk dan Pembangunan Keluarga Negara* (LPPKN) Subfertility Centre. Financial literacy and debt advisory services will be improved, particularly for families from the B40. Awareness on digital literacy among parents will be expanded to address digital addiction, while child cyber protection programmes will be incorporated in the school curriculum to increase understanding of cyber threats.

[21] Nation where resident/citizen aged 60 years and above has reached 15% of its total population.

Conclusion

The Eleventh Plan focused on achieving a more equitable society and improving the wellbeing of all, in line with the principle of inclusivity. Emphasis was given on raising the income and purchasing power of the B40 group, enhancing BEC development and addressing the social deprivation of specific target groups. Nevertheless, there are still issues and challenges in addressing poverty and socioeconomic inequalities. During the Twelfth Plan period, more emphasis will be given towards efforts in addressing poverty and strengthening inclusivity, as well as in achieving a decent standard of living and social justice. Measures will focus on education and training, entrepreneurship, social protection for all households, particularly the poor, B40, M40, Bumiputera, Orang Asli and specific target groups. This is in line with WKB 2030 and the 2030 Agenda. Holistic efforts and integrated implementation in addressing poverty and building an inclusive society will steer Malaysia to become a developed, inclusive and prosperous nation by 2030.

Chapter 6

Improving Regional Balance and Inclusion



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6

Introduction

Regional development aims to address socioeconomic imbalances and promote equitable growth among regions and states as well as between rural and urban areas. During the Eleventh Plan, focus was given to strengthening inter-state collaboration as well as modernising and diversifying the economic base to spur economic growth across all regions. Growth areas and major cities were leveraged to create investment opportunities and boost the urban economy. The ASEAN subregional cooperation platforms, namely the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) and the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA) were utilised to facilitate the development of border areas. Accessibility and connectivity to basic infrastructure and amenities were also improved in less developed areas to generate economic activities. However, disparities and imbalances between and within states and regions remain. Development gaps also still persist between rural and urban areas.

In the Twelfth Plan, efforts will be intensified to accelerate the development of states and regions and further narrow the development gap between rural and urban areas for greater inclusion. These will include optimising regional economic potential, developing sustainable cities[1] and transforming rural areas to bridge the development gap. Greater emphasis will be placed on the development of the less developed states.

[1] A city that meets the needs of the present without compromising the ability of future generations to meet their own needs. A sustainable city requires an integrated and balanced consideration of economic, social, cultural, physical and environmental aspects in its development process with emphasis on the efficient use of resources to promote high quality of life.

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, various measures were implemented at the regional and state levels as well as in urban and rural areas to achieve balanced development. Emphasis was given on attracting investment, generating economic activities and improving infrastructure in less developed regions and rural areas. These contributed towards the better spread of socioeconomic benefits among regions and states as well as increased the wellbeing of the *rakyat*.

Performance of Selected Targets

In the Eleventh Plan, eight selected targets were identified, as shown in *Exhibit 6-1*. Five targets were achieved, namely the completion of the Integrated Regional Development Framework study, construction of rural paved roads, number of additional houses supplied with electricity as well as construction of new and upgrading of telecommunication towers in rural areas. The remaining targets were not achieved due to various issues, including the slow implementation of development projects and the impact of the COVID-19 pandemic.

Exhibit 6-1

Eleventh Malaysia Plan: Performance of Selected Targets

Strengthening Regional Economic Development

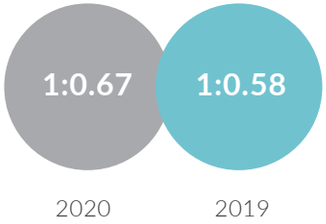


Integrated Regional Development Framework Study

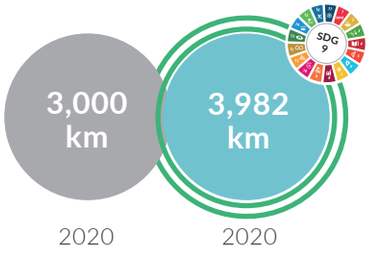


City Competitiveness Master Plan Study

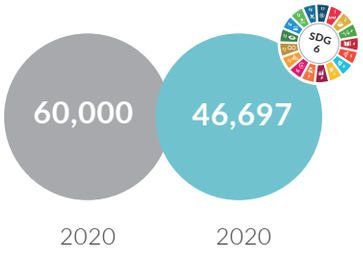
Bridging Urban-Rural Development Gap



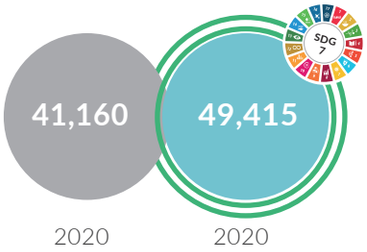
Urban-Rural Income Disparity Ratio



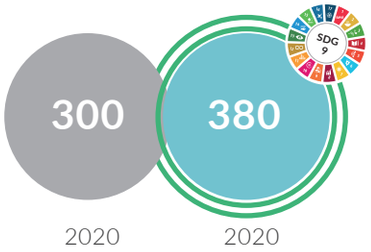
Construction of Paved Roads



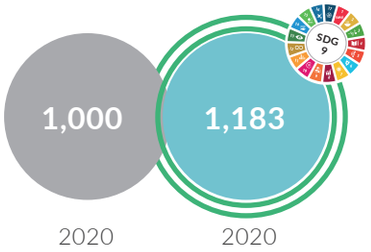
Additional Houses Supplied with Clean and Treated Water



Additional Houses Supplied with Electricity



New Towers



Upgraded Towers

Telecommunication Towers in Rural Areas Nationwide



Performance of Selected Initiatives

Several measures were undertaken to address socioeconomic imbalances and promote equitable growth among six regions, namely the Northern, Eastern, Central, Southern, Sabah and Sarawak. These included strengthening and streamlining regional economic development, modernising and diversifying the economic base, promoting competitive cities, enhancing subregional cooperation as well as accelerating rural development. The strength and resources availability in each region were leveraged to spur growth and enhance socioeconomic development.

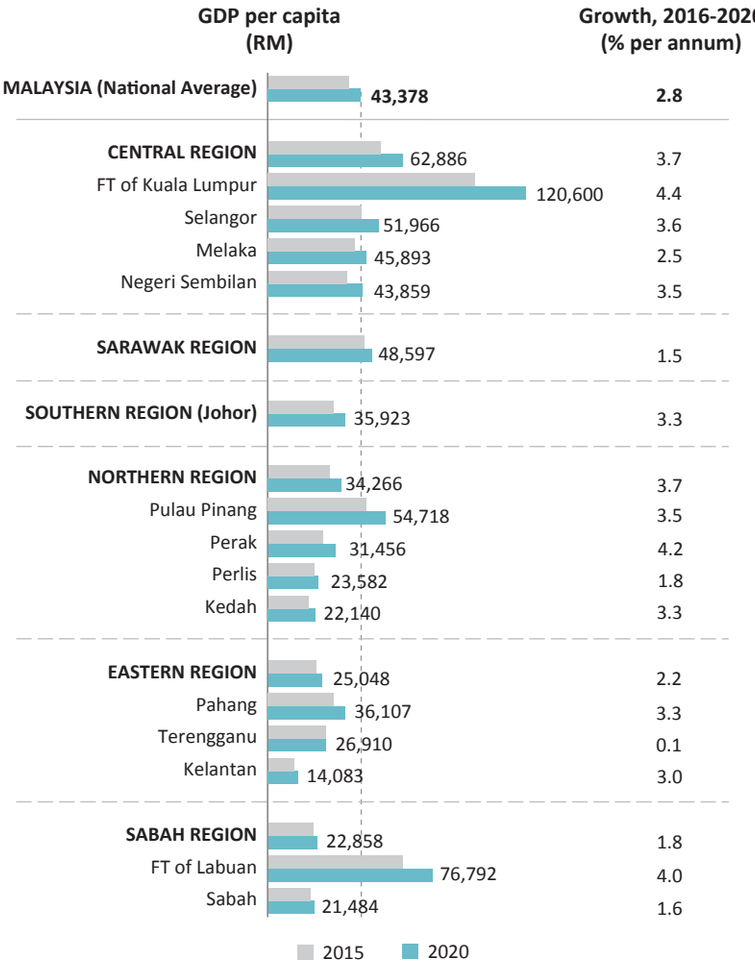
Regional Economic Development

Efforts to strengthen and streamline regional economic development included the commissioning of Integrated Regional Development Framework study in 2019. The study comprised a comprehensive framework for development planning and review of the development composite index as a planning tool for all levels of government. Six less developed states, namely Sabah, Sarawak, Kelantan, Terengganu, Kedah and Perlis were given priority in the allocation of development expenditure (DE). Based on the original allocation, about 46% of the total Eleventh Plan DE was distributed to these states, mainly for the implementation of infrastructure projects, including roads, water supply, drainage and irrigation as well as agriculture projects to ensure more balanced development among states.

Measures were undertaken to catalyse economic activities to reduce socioeconomic disparities among regions and states. All regions recorded a better performance in terms of gross domestic product (GDP) per capita, as shown in *Exhibit 6-2*, with the Central and Sarawak regions surpassing the national average of RM43,378. In terms of GDP per capita growth, the Central and Northern regions recorded the fastest annual average growth of 3.7% compared with the national average of 2.8% from 2016 to 2020.

Exhibit 6-2

Gross Domestic Product Per Capita by Region, 2015 and 2020

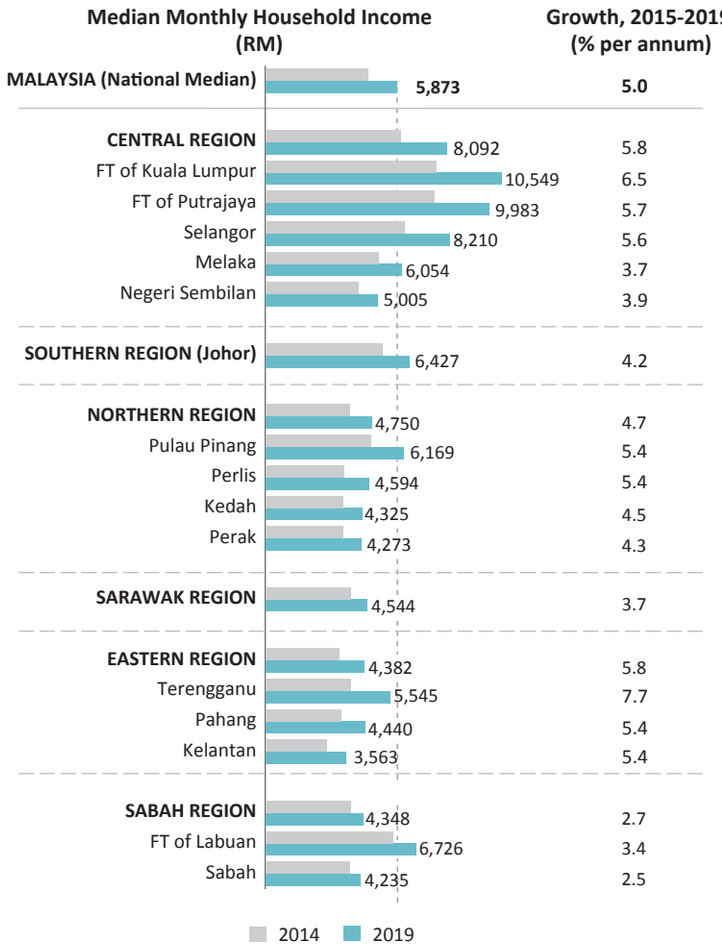


Source: Department of Statistics Malaysia

All regions and states also showed an improvement in the median monthly household income in 2019, as shown in *Exhibit 6-3*. The Central and Southern regions surpassed the national median of RM5,873. The median monthly household income of the Federal Territory (FT) of Kuala Lumpur, FT of Putrajaya, Selangor, FT of Labuan, Johor, Pulau Pinang and Melaka were higher than the national median. The median monthly household income of the Central and Eastern regions recorded a growth of 5.8% per annum, surpassing the national median of 5% between 2014 and 2019. Terengganu witnessed the fastest growth in the median monthly household income of 7.7% over the same period.

Exhibit 6-3

Median Monthly Household Income, 2014 and 2019



Source: Department of Statistics Malaysia

Diversified Economic Base and Better Connectivity

Concerted efforts were also undertaken to diversify the economic base and provide better connectivity. Emphasis was given to promote diversification into high value-added downstream activities in various sectors through the utilisation of modern technologies. The implementation of economic projects, including the Kertih Biopolymer Park in the Eastern region and the Palm Oil Industrial Cluster Lahad Datu Container Terminal in Sabah were able to attract quality investments, provide job opportunities and spur growth in these regions. Efforts were also intensified to improve accessibility and connectivity by providing basic infrastructure and services, including transport networks, utilities and digital infrastructure. Among the construction work undertaken were the Central Spine Road and the Kota Bharu-Kuala Krai highway in the Eastern region as well as the provision of infrastructure for High Speed Broadband and Suburban Broadband.

Competitive Cities

Four City Competitiveness Master Plans (CCMPs) were completed for the FT of Kuala Lumpur, Johor Bahru, Kuching and Kota Kinabalu. The plans were aimed at enhancing the major cities' competitiveness by identifying key drivers of growth to maximise their contributions as growth catalysts. The CCMP for George Town and Kuantan is expected to be completed in 2021. The Malaysia Smart City Framework (MSCF) was launched in 2019 to roll out the implementation of smart city initiatives and position Malaysian cities to be on par with global smart cities. The objective of the framework is to promote the utilisation of information and communications technology (ICT) and advanced technology in addressing urban issues.

Initiatives to promote city competitiveness in terms of better living and connectivity focused on enhancing the provision of infrastructure, amenities and services for the wellbeing of urban dwellers. The completion of key rail projects, including the Light Rail Transit 2 (LRT 2) in 2016 and Mass Rapid Transit 1 (MRT 1) in 2017 eased congestion in the Greater Kuala Lumpur/Klang Valley area. Efforts were also undertaken to improve service delivery through the establishment of 13 additional Urban Transformation Centres nationwide. The National Housing Policy 2018-2025, National Affordable Housing Policy (NAHP) and 29 planning guidelines served as a framework to guide local authorities in achieving better standards of living for urban dwellers.

The wellbeing of the urban population was measured through the Happiness Index, which is one of the indicators in the Malaysian Urban-Rural National Indicators Network for Sustainable Development (MURNInets) system. The assessment of the Happiness Index by local authorities category in 2019 showed that 66%, which is 69 out of 105 local authorities evaluated have achieved happy status compared with 10%, which is 10 out of 101 local authorities in 2015. Based on the assessment, ten cities were categorised as the happiest cities in 2019. Six cities scored 100%, namely Bentong, Jasin, Kuala Terengganu, Kuantan, Seremban and Taiping, while four remaining cities which are Kulai, Melaka Historic City, Jeli and Yan, scored above 90%. Among the criteria used in measuring the happiest city include family relationship, good health and the quality of services by local authorities.

ASEAN Subregional Cooperation

The ASEAN subregional cooperation under the umbrella of IMT-GT and BIMP-EAGA continued to be leveraged to improve the wellbeing of the *rakyat*. The initiatives focused on enhancing connectivity and facilitating border clearance for the movement of people and goods. The completion of the second phase of the Immigration, Customs, Quarantine and Security (ICQS) Complex in Bukit Kayu Hitam has enabled better service delivery and helped in promoting cross-border economic activities. Progress was also made towards connecting ICQS Bukit Kayu Hitam with the Customs, Immigration and Quarantine (CIQ) Sadao, Thailand.

Connectivity within the subregions was enhanced with the commencement of various projects under the IMT-GT Physical Connectivity Projects (PCPs) and the BIMP-EAGA Priority Infrastructure Projects (PIPs). These projects were in various stages of development. The signing of the memorandum of understanding (MoU) on air linkages between IMT-GT member countries further promoted opportunities for business–expansion, including tourism activities. Under this MoU, seven designated domestic airports were identified to have direct flight connectivity, which would increase mobility and foster greater economic activities. The construction of the Pan Borneo Highway-Package 1 in Sarawak was completed. The upgrading works of the Sandakan Airport and the expansion of the Sepanggar Bay Container Port are progressing. In addition, the Kota Kinabalu Green City Action Plan was launched in 2019.

Rural Development

Efforts to accelerate rural development especially in pockets of hinterland continue to be implemented. Measures to reduce the development gap between rural and urban areas included improving rural infrastructure, increasing rural-urban linkages and promoting local economic activities. These efforts contributed to reducing the urban-rural income disparity ratio from 1:0.57 in 2016 to 1:0.58 in 2019.

Rural Infrastructure

Rural infrastructure was improved by constructing and upgrading rural roads and digital infrastructure as well as increasing the coverage of water and electricity supply. During the Eleventh Plan, a total of 3,982 kilometres of rural paved roads were constructed and upgraded to improve connectivity. An additional 46,697 houses in rural areas were provided access to water supply, resulting in an increased coverage to 96%. Rural electricity supply's coverage reached 98%, with 49,415 additional houses getting access. The construction of 380 new telecommunication towers and upgrade of 1,183 towers in rural areas exceeded the target set under the Eleventh Plan, improving the coverage of broadband services to 95.5% in 2019 compared with 85% in 2015.

Urban-Rural Linkages

Connectivity between rural areas and small towns as well as urban areas within states and regions was improved. The Stage Bus Services Transformation Programme was expanded to improve connectivity between rural and urban areas as well as to provide scheduled trips for rural communities. The myBAS service opened up new routes in underserved rural areas, such as Bahau in Negeri Sembilan, Salak Tinggi in Selangor and Chemor in Perak.

Access to basic services in rural areas, such as primary healthcare, education and affordable housing was further enhanced. Primary healthcare coverage was expanded through the construction and upgrading of 478 health clinics and 139 community clinics. Healthcare outreach programmes were strengthened with the addition of 218 mobile health clinics and 10 Flying Doctor services. Access to quality education was improved through the construction and upgrading of 776 schools, including dilapidated schools. The *Program Bantuan Rumah* (PBR) increased the accessibility to affordable and quality housing in rural areas with 6,919 new houses constructed and 35,794 houses repaired. The Rural Transformation Centres (RTCs) and mini RTCs were also rebranded as *Pusat Komuniti Desa* (PKD) to continue offering key government front line services, business advisory and entrepreneurial skills programmes. As of 2020, 191 PKDs were established nationwide.

Rural Economic Activities

Initiatives to intensify local economic activities in rural areas were undertaken by encouraging more private sector participation and rural entrepreneurship. These included the Permanent Food Production Park (TKPM) project, *Projek Integrasi Tanaman Nanas* and *Program Peningkatan Pendapatan* (PPP). TKPM was optimised to increase food production through good agricultural practices and create agropreneurs with a minimum monthly income of RM4,000. In 2020, a total of 1,303 agropreneurs participated in the existing 68 TKPM nationwide. Out of this total, 626 agropreneurs earned an average monthly income of RM4,000. The integration of pineapple cultivation with the agri-commodity subsector, mainly oil palm and rubber, through the *Projek Integrasi Tanaman Nanas* benefitted 839 participants, covering over 880 hectares of land. Seventy percent of these participants earned an average monthly income of more than RM3,700. Meanwhile, 321 out of 803 participants of various programmes under PPP, such as bakery, retail, and cultivation of chilli through the fertigation method, managed to increase their income by 30%.

The *Desa Lestari* and Rural Business Challenge (RBC) programmes under the Prosperous Village of the 21st Century concept were implemented to inspire the rural community to live and work or venture into business in rural areas. Through the *Desa Lestari* programme, 551 jobs were created with the participation of 71 village cooperatives, benefitting 5,563 members. Under the RBC programme, 209 youth entrepreneurs were awarded business development assistance, creating 1,892 jobs and increasing average annual profits by 30%.

The *Perkhidmatan e-Dagang Setempat* (PeDAS) was established at 10 *Pusat Internet Desa* (PID) nationwide as a one-stop centre to offer opportunities for MSMEs to hone skills in the digital economy. Structured training programmes were also introduced to develop the entrepreneurial and management skills of rural entrepreneurs. In this regard, 300 training courses covering the *Program Latihan Usahawan*, *Kursus Pelancongan Desa: Homestay* and *Kursus Pengurusan Institusi Desa Berasaskan ICT: Perniagaan Atas Talian* were conducted, benefitting more than 370,000 rural entrepreneurs.

Issues and Challenges

Although several improvements were made in terms of regional balance during the Eleventh Plan, more efforts remain to be undertaken. Disparities among regions and states as well as between urban and rural areas continue to exist. The issues are imbalanced regional development, weak urban development management, rural-urban development gap and inadequate economic opportunities at border areas.

Issues and Challenges

- Imbalanced Regional Development
- Weaknesses in Managing Urban Development
- Rural-Urban Development Gap
- Inadequate Economic Opportunities at Border Areas

Imbalanced Regional Development

Imbalanced regional development has partly been contributed by the lack of region-specific economic and spatial planning. Overconcentration of low value-added economic activities and inadequate supporting ecosystems have further contributed to the development gap. Spatial development planning in each region lacks focus and fails to identify potential key economic activities. There is also a lack of collaboration among regions and states. Economic activities were implemented without leveraging the existing strengths and advantages of each region, resulting in unhealthy competition for investments and resources among regions.

Most regions have been engaged in low value-added activities which do not adopt high technology or employ knowledge-intensive workers. As such, they are unable to attract quality investments. Several regions are highly reliant on agriculture

products and resource-based industries, which make them vulnerable to volatile commodity prices. This has resulted, among others, in lower per capita income in the regions.

Inadequate supporting ecosystem has affected the business environment and economic growth. Lack of basic infrastructure, amenities and services including water and electricity supply, broadband coverage as well as road and transport connectivity have hampered efforts to attract high quality investment. Insufficient R&D&C&I has further hindered efforts to improve productivity. Some regions outside the Klang Valley have also faced a shortage of skilled workers to meet industry-specific demand.

Weaknesses in Managing Urban Development

Malaysia's urbanisation rate increased from 74.3% in 2015 to 77.2% in 2020. Ineffective planning, low economic density, environmental degradation and an unconducive city environment have led to unsustainable physical, economic and social urban development. Urban planning and governance are partly constrained by unclear urban boundaries, inadequate city-level data, insufficient monitoring mechanisms as well as low capacity and capability among most local authorities to embrace innovative approaches. Lack of data sharing among government agencies, especially city-level data has also hampered efficient urban planning and development.

Several major cities in Malaysia continue to experience low economic density compared with cities in high-income countries. This is due to the inability to attract investment particularly in high technology industries and the higher concentration of land use for residential and property development. Meanwhile, low adoption of the Low Carbon Cities Framework (LCCF), which includes inefficient waste management and energy practices also poses a challenge in sustainable urban development. Insufficient household income, inadequate affordable housing and basic amenities as well as high cost of living affect liveability in urban areas. The lack of first- and last-mile connectivity for public transportation and limited transit-oriented development in cities have increased the cost of living of urban dwellers.

Rural-Urban Development Gap

The wide disparity between rural and urban areas remains due to the relatively slower development in rural areas. Key issues and challenges in rural development include insufficient basic infrastructure, services and amenities, inadequate rural-urban linkages, low value-added rural economic activities and inefficient coordination among agencies. These have affected the rural population's wellbeing and quality of life.

The provision of infrastructure, including paved roads, water and electricity supply as well as digital infrastructure to several pockets of population and hinterland areas remain inadequate. This is due to poor accessibility, difficult terrain conditions and scattered population. Basics amenities in rural areas, particularly sanitation, sewerage, drainage system, waste disposal as well as telecommunication and broadband coverage are insufficient. Basic services, such as public housing and healthcare in rural areas are also inadequate. The lack of access to transportation and logistics services has hindered connectivity and mobility in rural areas, due to the unsustainability of bus services and inadequate logistics services. All these conditions deter investment, thus limiting the ability of rural communities to participate in economic activities.

The majority of the rural population work in low-skilled occupations. As of 2020, 20.4% of the rural labour force obtained primary education, while 56.4% completed secondary education. A majority of the rural workforce was engaged in low value-added activities, mainly in the services and agriculture sectors. Additionally, participation among rural entrepreneurs in the digital economy is low.

The lack of an effective implementation mechanism has resulted in inefficient resource utilisation in rural development. Weak coordination among multiple stakeholders has contributed to the duplication of programmes and target groups. The lack of experience, professionalism and leadership skills among rural leaders have also led to low quality village administration. The low quality of data in the *Sistem Profil Kampung Peringkat Nasional* (SPKPN) has hampered comprehensive planning for rural development.

Inadequate Economic Opportunities at Border Areas

Limited cross-border economic opportunities and value chain development pose a challenge to developing border areas. This is mainly due to lack of access to basic amenities and connectivity as well as weak collaboration and coordination among agencies. Inadequate electricity and water supply, waste management facilities, as well as telecommunication infrastructure and services limit the MSMEs from expanding or venturing into new businesses. In terms of transport connectivity, there are still gaps between the border areas, cities and industrial centres.

Most businesses operating in border areas are MSMEs that focus on low value-added activities with low technology utilisation. The shortage of catalytic projects to spur local economic activities has prevented the MSMEs from moving up the economic value chain. In addition, the absence of simplified and standardised cross-border regulations has contributed to long clearance time for the movement of goods, people and vehicles. These have inadvertently led to higher costs of doing business. Moreover, weak collaboration and coordination among the ministries, agencies and state authorities deter effective implementation of cross-border programmes and projects.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The Twelfth Plan will continue to focus on accelerating balanced and inclusive regional development. This will be undertaken by optimising regional economic potential, developing sustainable cities and transforming rural areas to bridge the development gap. The implementation of these measures is expected to stimulate economic growth in all regions as well as improve liveability in rural and urban areas. These initiatives will also support the achievement of Goals 6, 7, 8, 9, 10 and 11 of the 2030 Agenda.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Improving Regional Balance and Inclusion

Priority Area A

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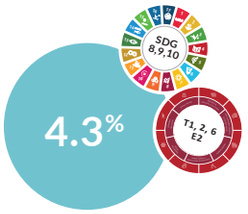
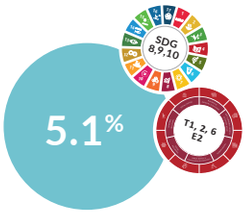
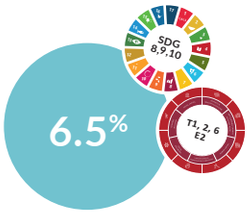
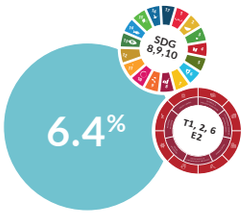
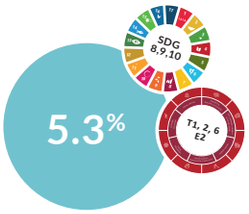
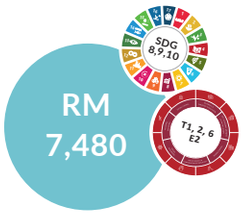
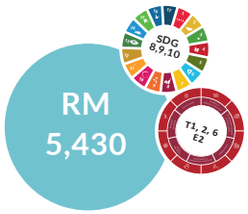
Strategy B3
Prioritising Green and Resilient Urban Development

Strategy B4
Building Sustainable Urban Society



Twelfth Malaysia Plan: Selected Targets

Optimising Regional Economic Potential

	Northern	Central	Southern	Eastern	Sabah	Sarawak
Region GDP Per Capita ratio to Central region	 2025	 2025	 2025	 2025	 2025	 2025
Average GDP Growth	 2021-2025	 2021-2025	 2021-2025	 2021-2025	 2021-2025	 2021-2025
Median Monthly Household Income	 2025	 2025	 2025	 2025	 2025	 2025

Developing Sustainable Cities



2025

Achieve Sustainable City Status based on MURNInets



2025

Implement Green City Action Plan under IMT-GT and BIMP-EAGA Platform

Transforming Rural Areas to Bridge Development Gap



2025

Constructing and Upgrading Rural Paved Roads



2025

Coverage Access to Clean and Safe Water



2025

Coverage Access to Electricity



2025

Rural-Urban Income Ratio

Target
SDG
WKB 2030

Priority Area A

Optimising Regional Economic Potential

Regional economic potential will be optimised to spur economic growth and address inter- and intra-regional imbalances. Initiatives will focus on accelerating development based on key growth nodes and hotspot areas, attracting quality investment, improving the business ecosystem, enhancing strategic collaboration and coordination as well as enhancing cooperation under IMT-GT and BIMP-EAGA. These are crucial in reducing socioeconomic gaps across regions and states to enable a more balanced and inclusive regional development.



Strategy A1

Accelerating Development Based on Key Growth Nodes and Hotspot Areas

Regional development will be driven by the development of key growth nodes and hotspot areas. In this regard, several niche economic activities will be promoted in these areas. Efforts will be focused on accelerating the implementation of high value-added activities and green growth initiatives, which will contribute to economic growth and ensure inclusive regional development.

Promoting Economic Activities of Key Growth Nodes and Hotspot Areas

Key growth nodes will be developed in each region as hubs for economic activities, allowing for economies of scale, agglomeration of economic activities, optimisation of resources and the creation of a conducive ecosystem. Hotspot areas, which refer to the areas surrounding key growth nodes that have the potential to be developed on a smaller scale, will be established to complement the key growth nodes. Synergistic development in the key growth nodes and hotspot areas will attract strategic and quality investment as well as create more employment and entrepreneurship opportunities. This will provide economic spillover to the surrounding areas.

States will continue to play an important role in socioeconomic development to achieve more balanced and inclusive growth. In this regard, strategic development programmes at the regional and state levels will be implemented through state-driven initiatives and private sector-led projects. The development of new townships led by the private sector, including in the Setia Fontaines, Pulau Pinang as well as Seriemas in Ampangan and Rantau, Negeri Sembilan, are expected to provide additional job and business opportunities. The Setia Fontaines township is expected to leverage the eco-city concept, while Seriemas township will focus on Transit Oriented Development (TOD) and Transit Adjacent Development (TAD), thereby encouraging compact development in a high density area. Such private-led development projects will be catalysts for greater growth in states.

Integrated and comprehensive mixed development projects, including the catalytic development of Malaysia Vision Valley 2.0 (MVV 2.0) in Negeri Sembilan and the proposed Pagoh Special Economic Zone in Johor will provide new opportunities for growth. The MVV 2.0, pioneered by the state government through public-private partnership, will focus on high technology industrial

activities, including the aerospace industry, and is expected to be the catalyst for a new growth triangle of Seremban, Nilai and Port Dickson districts. The development of phase three of the Techpark@Enstek in Negeri Sembilan will expand the development of halal-related activities, particularly in food and beverages, pharmaceuticals and cosmetics industries. In addition, the proposed Pagoh Special Economic Zone will attract both local and foreign investment, offering huge potential for the area's future development. These private sector-led projects will create more jobs and entrepreneurship opportunities, while inducing economic spillover effects to the surrounding areas. All these efforts will grow the economies of the aforementioned states and regions, thus enabling more balanced and inclusive development across the country.

The extended and new demarcation of the Sarawak Corridor of Renewable Energy area, which covers the Upper Rajang, Northern and Highland areas will ensure a more comprehensive development to accelerate economic growth in the rural and interior areas of Sarawak. Similarly, the proposed extension of other regional corridor boundaries to include a number of additional districts and *mukim* will promote development and more economic activities in these areas.

Accelerating High Value-Added Activities

Industry players, especially MSMEs in the key growth nodes and hotspot areas, will be encouraged to move up the value chain and participate in high value-added activities. Efforts will be undertaken to facilitate industries to embrace the 4IR through the adoption of technology, automation and innovation, particularly in complex industrial processes. This will enable industries to be more sustainable and competitive, creating new market opportunities.

Implementing Green Growth Initiatives

Industries will also be encouraged to implement green growth initiatives by adopting green technology and best practices. These initiatives will facilitate the reduction of greenhouse gas (GHG) emissions, minimise pollution and ensure sustainable utilisation of natural resources. This will also unlock opportunities for innovation and value creation as well as mainstream environment into economic activities.

Strategy A2

Attracting Quality Investment

Measures to attract quality investments, particularly in less developed regions, will be intensified to expedite development. The focus will be on enticing high value-added, advanced technology and knowledge-intensive activities by enhancing competitive incentive packages and intensifying R&D&C&I. These initiatives will increase industries productivity and competitiveness.

Focusing on High Value-Added, Advanced Technology and Knowledge-Intensive Activities

To enhance productivity and generate high per capita income, efforts will be undertaken to move away from low-end economic activities to high value-added, advanced technology and knowledge-intensive activities. This will be achieved by enhancing industry facilitation, strengthening participation in the global value chain, intensifying talent development and fortifying international collaboration. These efforts will complete the entire value chain in the ecosystem to attract quality investment and accelerate economic growth in the region.

Enhancing Incentive Packages

Incentive packages will be enhanced to attract more quality investment to catalyse key economic activities across key growth nodes and hotspot areas. Attractive incentive packages will also be extended to encourage investments in less developed areas. This will create more skilled jobs and entrepreneurship opportunities, thus enhancing the socioeconomic development in the regions.

Intensifying Research, Development, Commercialisation and Innovation

Efforts to enhance R&D&C&I will be intensified to increase productivity, particularly among MSMEs. Industries will be encouraged to collaborate with HEIs and research centres to embark on research that focuses on the specific needs of the industries and communities in each region. Anchor companies will be identified to assist MSMEs in the less developed regions. In the agribusiness industry, anchor companies will take up an active role in providing technical assistance and greater market access to small scale agropreneurs to provide wider growth opportunities to MSMEs.

Strategy A3

Improving the Business Ecosystem

A conducive ecosystem for economic activities will stimulate growth and enhance competitiveness. Connectivity and mobility will be improved to boost inter- and intra-regional economic activities. Measures will also be undertaken to enhance the provision of basic infrastructure and services, intensify talent and entrepreneurship development as well as promote collaboration for broader production networks.

Improving Connectivity and Mobility to Boost Inter- and Intra-Regional Economic Activities

The regional ecosystem will be enhanced to ensure existing industries within the region continue to grow and remain competitive. The transport network will be strengthened for better connectivity and mobility to boost inter- and intra-regional economic activities. The integrated transport network connecting land, air and sea will be improved to stimulate economic growth, facilitate the movement of people and goods as well as reduce travelling time and transportation costs. Meanwhile, the implementation of catalytic projects to improve the transport network through private initiatives, such as the West Coast Expressway and the proposed construction of the Labuan-Menumbok bridge will be encouraged to spur the economy, attract more quality investment and create more job opportunities.

Enhancing the Provision of Basic Infrastructure and Services

The provision of basic infrastructure and services, including the supply of water and electricity as well as broadband coverage across regions will be further enhanced. Collaboration with various agencies, including state governments will be strengthened to improve the reliability of water and electricity supply to meet industry requirements. The expansion of fibre networks will also provide high-speed and reliable broadband services to support the growing demand of industries.

Intensifying Talent and Entrepreneurship Development

Efforts will be undertaken to intensify talent development and reduce skills mismatch to meet industry demand as well as enhance entrepreneurship development in every region. Talent development programmes will continuously be revised, emphasising 4IR knowledge and skills to keep pace with the dynamic requirements of industry. Tailored training concerning the identified key economic activities in each region will be undertaken through collaboration with respective HEIs and TVET institutions. Industries will also be encouraged to provide internship programmes. Entrepreneurship programmes will also be enhanced to spur new businesses and produce more job creators at the regional level.

Enhancing Collaboration in the Production Networks

In embracing 4IR, MSMEs will be encouraged to increase participation in the broader production networks encompassing large firms and multinational corporations to move up the value chain, open up new business opportunities, increase market access and facilitate the adoption of 4IR technologies. The triple helix model[2] will be leveraged to provide advisory and consultation services on the application of the latest technologies. Analytical tools will be utilised to assist in providing predictive information for data-driven decision-making.

Strategy A4

Enhancing Strategic Collaboration and Coordination

Strategic collaboration and coordination between the Federal Government and state governments will be strengthened to support effective regional development planning and implementation. Emphasis will be given to improve the implementation mechanism and enhance data sharing. The six less developed states will continue to be prioritised in the development budget allocation.

[2] Collaboration between government, industry and HEIs by leveraging technology and innovation to stimulate economic development

Strengthening Regional Planning

Collaboration between the Federal Government and state governments will be strengthened to promote sustainable and balanced development across the regions. The role of key agencies at the state level will also be streamlined to support more effective regional planning and coordination, particularly in the six less developed states. This will involve rationalising the role of all state economic development corporations (SEDCs), state economic planning units, regional development authorities and regional economic corridor authorities.

The development plans of the state governments will be streamlined to support and complement the Federal development policies and strategies. State policies, such as the Smart Selangor Action Plan 2025, *Pelan Induk Terengganu Sejahtera* 2030 and Perlis Digital Plan 2021-2025 will be aligned to the national digital transformation objectives. State initiatives, such as the improvement of logistics services, river management and the development of the aerospace industry will also be mapped with the respective development policies at the Federal level. These alignments will facilitate better development planning to achieve a more balanced regional growth.

Improving Implementation Mechanisms and Enhancing Data Sharing

The Development Composite Index 2.0 (DCI 2.0) will be introduced as an instrument to measure the level of development at the state and regional levels. The DCI 2.0 will comprise economic, social and environmental dimensions. The DCI 2.0 will leverage the relevant indicators of the Malaysian Wellbeing Index, while incorporating green elements towards achieving sustainable development. Meanwhile, data sharing between Federal and states agencies will be improved through better coordination and collaboration.

Prioritising Development Allocation for Less Developed States

The six less developed states comprising Kedah, Kelantan, Perlis, Sabah, Sarawak and Terengganu will continue to be prioritised with at least 50% of the Total Basic Development Expenditure[3]. Greater collaboration among Federal and states agencies will be undertaken to ensure the effective and efficient implementation of targeted programmes and development projects. These measures will accelerate the provision of basic infrastructure and amenities as well as generate more economic opportunities in the less developed states and contribute to reducing the development gap.

Strategy A5

Enhancing Cooperation under IMT-GT and BIMP-EAGA

Regional development will continue to leverage the subregional cooperation platform to promote and accelerate socioeconomic growth. The cooperation under IMT-GT and BIMP-EAGA will focus on promoting cross-border trade, investment and sustainable development based on comparative and competitive advantages. Emphasis will be given to increase cross-border economic activities and strengthen the value chains, create liveable towns and cities in subregional areas, improve infrastructure accessibility and connectivity as well as enhance collaboration and coordination between stakeholders.

Increasing Cross-Border Economic Activities and Strengthening Value Chains

Cross-border economic activities will be promoted through the diversification of production and supply chain activities across neighbouring countries. MSMEs will be encouraged to diversify and modernise cross-border economic activities as well as venture into downstream industries. Cross-border economic activities will be accelerated by adopting the digital platform, promoting private sector participation and developing talent through upskilling and reskilling.

A strategic action plan will be formulated to accelerate cross-border value chain development. In line with the project-centric approach of IMT-GT Vision 2036 and BIMP-EAGA Vision 2025, at least 30 catalytic projects with a strong focus on enhancing local economic activities will be identified. These projects will be mainly private sector-led and scalable, replicable and sustainable. The implementation of the strategic action plan will involve close collaboration and coordination between the public and private stakeholders. This will stimulate cross-border trade and investment as well as generate new sources of growth.

[3] Total Basic Development Expenditure (Basic DE) is the allocation for programmes and projects to achieve the targeted objectives and strategies in the Five-Year Malaysia Plan. Examples of Basic DE projects are construction of schools, hospitals, roads, industrial areas and poverty eradication programmes.

Creating Liveable Towns and Cities in Subregional Areas

Specific measures will be undertaken to create liveable towns and cities in the subregions. These include extending and implementing the Green City Action Plan (GCAP) for additional 14 urban centres, namely Kangar, Langkawi, Kulim, Taiping, Kuala Kangsar, Ipoh, Manjung, Teluk Intan, Kota Bharu, Seremban, Labuan, Kuching, Penang Island and Seberang Perai under the Sustainable Urban Development Framework (SUDF). Implementation of the SUDF will enhance the adoption of sustainable development initiatives as well as create green investment opportunities.

Improving Infrastructure Accessibility and Connectivity

Measures will continue to be undertaken to improve infrastructure accessibility and connectivity by accelerating the implementation of existing subregional initiatives as well as embarking on a new framework to spur economic growth at border areas. The implementation of the existing PCPs in IMT-GT and PIPs in BIMP-EAGA will be expedited to boost trade and socioeconomic activities. In this regard, the bridge connecting Rantau Panjang, Kelantan and Sungai Golok, Narathiwat will be upgraded. Meanwhile, the completion of more segments of the Pan Borneo Highway project will enhance economic growth across Sabah and Sarawak.

Enhancing Collaboration and Coordination between Stakeholders

Implementation of subregional initiatives will be further enhanced through better collaboration and coordination among stakeholders for Malaysia to optimise the economic opportunities. Subregional initiatives will be streamlined for more effective and efficient institutional support. Project appraisal committees and project implementation teams comprising all stakeholders will be established to ensure a more holistic and inclusive process in identifying cross-border projects. This will enhance institutional support, improve cross-sectoral collaboration and coordination as well as promote greater stakeholder ownership.

Priority Area B
Developing Sustainable Cities

By the year 2040, about 85% of the total population is estimated to live in urban areas. Priority will be given in promoting effective urban planning and governance, fostering a sustainable urban economy, prioritising green and resilient urban development as well as developing sustainable urban society. This will promote better inclusion and enhance the wellbeing of urban dwellers. The measure also in line with the New Urban Agenda (NUA)[4] to support the 2030 Agenda.



[4] Urbanisation blueprint to be implemented by all cities and its stakeholders, in support of the 2030 Agenda, especially in making cities inclusive, safe, resilient and sustainable. The NUA was adopted by 170 countries at the UN Habitat III Summit in Quito, Ecuador in 2016.

Strategy B1

Promoting Effective Urban Planning and Governance

Effective urban planning and governance are important in addressing challenges of rapid urbanisation and developing sustainable cities. Databases at the urban level will be improved to strengthen urban development planning. Measures will also be undertaken to promote sustainable and smart city approaches for better wellbeing of urban dwellers. Laws relating to local governments will also be further enforced through better coordination.

Strengthening Urban Development Planning

The Second National Urbanisation Policy (NUP2) will continue to drive the planning and development of urban areas to be more cohesive and effective. Urban profiling will be improved based on the findings of the *Kajian Penentuan Sempadan Bandar* to facilitate better planning at the local government level. The Malaysia Urban Observatory (MUO), a multidimensional big data analytics system will be introduced as an integrated policy tool for better planning and decision-making. The MUO will enhance urban data collection and data openness as well as promote data sharing among multiple stakeholders for spatial planning at all levels of government. Meanwhile, the Fourth National Physical Plan (NPP4) to be launched in 2021 will provide a comprehensive spatial planning framework, which will also cover urban planning.

Promoting Sustainable and Smart City Approach

All local authorities will be encouraged to adopt the MURNInets system. The system is a tool to measure sustainability of cities based on six dimensions, including competitive economy, sustainable environmental quality and healthy communities. A total of 120 cities[5] are expected to achieve sustainable city status by 2025 compared with 75 cities in 2019. The MSCF will be adopted as the framework in implementing the smart city agenda. Efforts to strengthen smart city governance at the national level will leverage technical experts. Assessment indicators will be introduced to set the standard for accreditation, qualification and recognition of smart cities.

Improving Coordination and Governance Mechanisms

The role of the National Physical Planning Council and National Council for Local Government will be enhanced to enable effective planning and implementation of sustainable development through better coordination and cooperation among agencies at Federal, state and local levels. The Local Government Star Rating System will be aligned with the 2030 Agenda. Efforts will also be undertaken to promote the SDGs' implementation at the local level. Governance mechanisms will be improved by intensifying enforcement and improving the relevant legislations, including the Local Government Act 1976, Town and Country Planning Act 1976 as well as Road, Drainage and Building Act 1974.

Strategy B2

Fostering Sustainable Urban Economy

Focus will be given to promote the development of the urban economy by leveraging the potential of cities to attract investment and talent. Efforts will include enhancing urban agglomeration and ecosystem, encouraging the growth of economic activities in urban areas and leveraging city competitiveness. These efforts will increase city competitiveness and spur development in urban areas.

Enhancing Urban Agglomeration and Ecosystem

Urban economic density and a conducive ecosystem are the preconditions to ensure a sustainable urban economy. Identified growth areas, such as urban conurbations[6], promoted development zones and catalyst centres, particularly in less developed regions will be leveraged to create economic agglomeration in achieving higher productivity and economic density. Besides, initiatives to improve the ecosystem in urban areas will focus on providing better infrastructure, accessibility and connectivity as well as enhancing talent development. The implementation of these initiatives will be based on the CCMP action plans.

[5] Administration areas under the purview of local authorities. These local authorities are categorised as either city hall/city council, municipal council or district council.

[6] Economic urban growth areas encompassing cities, major urban areas and physically connected urban areas, having economic relationship and experiencing population growth to form a continuous developed built-up area.

Encouraging the Growth of Economic Activities in Cities

Concerted efforts will be undertaken to generate more vibrant and viable urban economic activities, including addressing the impact of the COVID-19 pandemic. Efforts will be intensified to improve business activities in urban areas through a better digital ecosystem. This will include the provision of better digital infrastructure and online services to support eCommerce activities. Meanwhile, the Planning Guidelines for Commercial Areas will be reviewed to optimise the utilisation of commercial floor space in urban areas as well as promote mixed-use development and digital ecosystems.

Leveraging City Competitiveness to Attract Investment

Priority will be given to enhance land utilisation through better zoning and the redevelopment of underutilised land parcels with specific themes and clustering economic activities. City development based on specific characteristics will be further pursued to attract quality investment. The revitalisation of Cyberjaya as a global technology hub and the development of Bandar Malaysia as an international business hub will promote the Malaysia brand and provide skilled job opportunities for local talent. The development of suburban areas, including border towns will be emphasised to attract more investment and businesses, generating spillover effects to wider surrounding areas.

Strategy B3

Prioritising Green and Resilient Urban Development

An effective environment and disaster risk management is required to ensure the sustainability and resiliency of cities. Green and resilient urban development will be prioritised to address environmental issues and climate change as well as promote efficient usage of resources. In addition, efforts will be intensified to strengthen waste management, increase energy efficiency, promote green mobility and enhance biodiversity.

Strengthening Waste Management

Waste will be managed holistically and sustainably by enforcing waste separation at source and intensifying the reduce, reuse and recycle (3R) initiative. In supporting this, facilities for waste separation and recycling will be enhanced, particularly in residential, institutional and commercial areas. Additionally, efforts will be strengthened to reduce single-use plastics, especially at eateries and public events. These efforts are in line with the National Cleanliness Policy 2019 to reduce waste pollution as well as promote the circular economy and waste-to-wealth initiatives.

Enhancing Energy Efficiency and Resilience of City

Focus will be given to the adoption of a green and resilient city framework and certification to enhance energy efficiency and resilience of cities. This will be undertaken by advocating local authorities to implement the LCCF, MSCF and Planning Guideline for Disaster Resilient City. In addition, developers will be encouraged to adopt accredited green certification tools, such as the Green Building Index and the Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST) during the construction and operation phases. In enhancing the resilience of cities against the impact of climate change and disasters, developers of public and private development projects will be urged to adhere to the land use policies in designated development areas as prescribed in the NPP4, State Structure Plans, Local Plans or Special Area Plans. Green initiatives in cities will also be accelerated through the implementation of the Green City Action Plan under the IMT-GT and BIMP-EAGA platforms. These efforts will reduce emissions of GHG and enhance the resilience of cities against the impact of climate change and disasters.

Promoting Green Mobility

The adoption of the green mobility approach to facilitate the movement of people via public transport and active mobility will be promoted. Accessibility, connectivity and efficiency of public transport will be improved, including through TOD and first- and last-mile connectivity to attract people to shift from private vehicles to public transport. Pedestrian infrastructure in urban areas will be upgraded to ensure that it is safe, user-friendly and connected to public transport nodes to encourage active mobility among urban dwellers. The green mobility approach will contribute to easing congestion in urban areas and reducing GHG emissions from the transport sector.

Enhancing Urban Biodiversity

Green and blue spaces, such as recreational parks, urban forests and lakes, will be expanded to improve microclimate and enhance biodiversity in urban areas. An action plan for urban biodiversity will be developed to guide local authorities in enhancing liveability. Developers of residential and commercial projects will be encouraged to revive the green and blue spaces with endemic plant species as well as facilitate community-based urban farming. These efforts will contribute towards the overall wellbeing of the people and improve environmental quality.

Strategy B4

Building Sustainable Urban Society

Focus will be given to building a sustainable urban society by improving livelihood and living conditions. Efforts to improve the liveability in urban areas will include the provision of affordable housing and better infrastructure. Meanwhile, the implementation of Local Agenda 21 (LA21) will be accelerated to achieve the 2030 Agenda.

Improving Liveability and Inclusiveness

Measures to enhance liveability in cities will be intensified by providing better access to quality and affordable housing as well as programmes to improve household income, particularly for the urban poor. The provision of affordable housing for urban dwellers will be continued as part of the initiatives under the NAHP. More mixed-use development that incorporates affordable housing with commercial development, including TOD, will be encouraged in realising a more inclusive development. The quality of life of urban dwellers will be improved with the provision of better public infrastructure, especially to suit the needs of older persons and persons with disabilities. This initiative will promote inclusive urban development to enhance the wellbeing of urban dwellers.

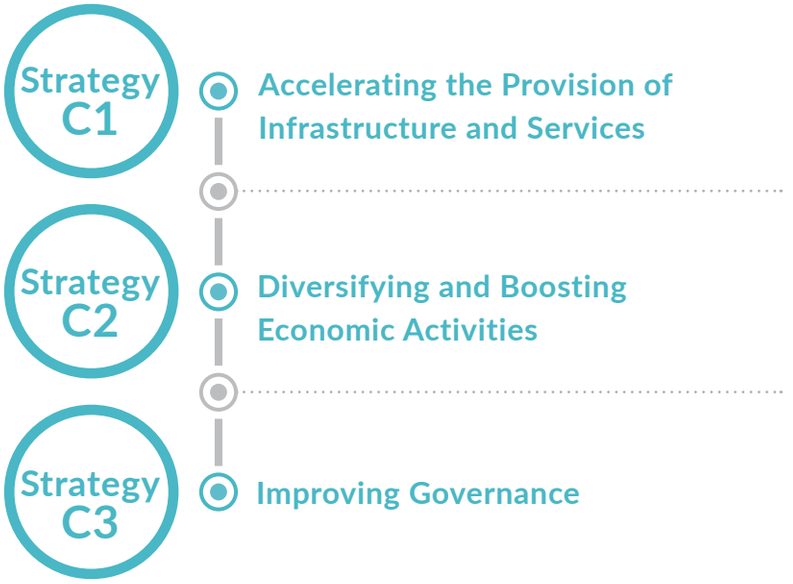
Accelerating Local Agenda 21 Implementation

The implementation of LA21 will be accelerated through greater collaboration among local authorities, communities and the private sector in championing urban sustainable development. The community activity coordination offices in the *Program Perumahan Rakyat* as well as low- and low medium-cost housing will be further leveraged in accelerating the implementation of LA21 programmes. The LA21 implementation will further contribute to the achievement of SDGs for better social inclusion.

Priority Area C

Transforming Rural Areas to Bridge Development Gap

Rural areas will be further developed to narrow the development gap between rural and urban areas by upgrading infrastructure and basic amenities, providing better connectivity and expanding socioeconomic activities. Development will be undertaken without compromising the rural heritage and the environment. The rural areas will be further transformed by accelerating the provision of infrastructure and services, diversifying and boosting economic activities as well as improving governance.



Strategy C1

Accelerating the Provision of Infrastructure and Services

Measures will be undertaken to further accelerate the provision of infrastructure and services. These measures include increasing the provision of rural infrastructure, improving basic services and enhancing connectivity and mobility. The rural infrastructure provision will be further extended, especially in remote areas of Sabah and Sarawak as well as pockets of hinterland in Peninsular Malaysia. These initiatives will create socioeconomic opportunities for the rural population and improve rural-urban linkages, thus narrowing the development gap.

Increasing Provision of Rural Infrastructure

The provision of rural infrastructure will be further expanded through constructing and upgrading of roads, bridges and digital infrastructure. These include building and upgrading 2,800 kilometres of paved roads, 100 bridges and installing street lights to ensure the safety of road users. Digital infrastructure will be expanded to increase fixed broadband coverage in rural areas, targeting at least 20% of premises with up to 500Mbps.

The coverage of water supply will be expanded to reach 98% of rural households, including providing alternative water supply and reticulation system. Electricity supply will be expanded to reach 99% coverage through grid connection and alternative systems, such as small hydro, solar hybrid and solar photovoltaic. These initiatives will improve the quality of life of the rural population.

Enhancing Basic Services

The coverage and accessibility to basic services will be continuously improved. Waste management and sanitation services in rural areas will be enhanced to ensure a sustainable environment. The *Komuniti Sihat Pembina Negara* programme will be expanded to increase health awareness among rural communities. Rural development planning will also address the needs of older persons, including the provision of healthcare and home caregiver services. The *Program Bantuan Rumah* will be continued to provide quality and affordable housing in rural areas.

Improving Connectivity and Mobility

Connectivity and mobility between rural and urban areas will be improved to bridge the development gap and foster greater economic integration. Transportation services, such as buses, e-hailing and water transportation in rural areas will be enhanced. Measures to widen internet and telecommunication coverage will also be undertaken for better connectivity in rural areas. The improved connectivity will facilitate economic activities and mobility of the rural population. The eCommerce programme will be intensified to assist rural entrepreneurs to migrate from traditional business methods to digital platforms for better market access. PKDs will be leveraged to be the hub for services in rural areas in facilitating the delivery of government and business services. PIDs will be enhanced to promote digitalisation among the rural population.

Strategy C2

Diversifying and Boosting Economic Activities

Vibrant rural economic activities are crucial in increasing the income of the rural community and reducing the incidence of poverty. Initiatives to diversify and boost the rural economy will focus on optimising land use and re-energising the rural cottage industry. Income-generating activities will also be intensified to reduce the rural-urban income disparity.

Optimising Land Use for Rural Economy

Rural economic activities will be diversified and re-energised, particularly through the development of underutilised land. Smart and cluster farming activities will be undertaken by optimising idle land to increase economies of scale. This initiative will be implemented by utilising advanced technology to increase the quantity and quality of farm produce.

The *Program Pembangunan Peneroka* in the FELDA settlements, will be further intensified to increase the income of settlers. Training, upskilling and financing programmes as well as the use of modern technology, will be provided for settlers to venture into agricultural activities, such as cash crop and herbs, cultivation through fertigation method, horticulture, livestock as well as aquaculture. The pilot project in FELDA Bukit Rokan, Negeri Sembilan will be expanded to other FELDA settlements nationwide. In addition, the Government will continue supporting FELDA's transformation efforts in moving towards achieving operational and financial sustainability.

Re-energising Rural Cottage Industries

Efforts will be intensified to re-energise the rural cottage industry through various initiatives in supporting MSMEs. Natural endowments and resources will be leveraged to create business and employment opportunities as well as generate additional income for the rural population. Greater collaboration will be fostered among relevant ministries, regional development agencies and state governments to promote rural cottage industries. The private sector and social enterprises will be encouraged to participate in rural economic activities.

Strategy C3

Improving Governance

Strong leadership and effective delivery mechanisms are essential in realising rural development objectives. These efforts require commitment from all levels of government, CSOs, private sector and community. Strategies will focus on strengthening rural governance and streamlining the delivery system to enhance rural development.

Strengthening Rural Governance

Rural community leadership has a significant role in ensuring effective implementation of rural community programmes. Training development programmes for the *Jawatankuasa Pembangunan dan Keselamatan Kampung* (JPKK) and *Jawatankuasa Pembangunan dan Keselamatan Kampung Persekutuan* (JPKKP) will be strengthened to enhance the quality of grassroot leaders. These training programmes include leadership, village management, financial management and community cohesion. More representatives among the rural youth and women will be appointed in JPKK and JPKKP to enhance their participation in village administration.

Streamlining Delivery System

Strategic collaboration among government agencies, private sector and CSOs will be strengthened to undertake various rural development initiatives to ensure effective implementation of the Rural Development Policy 2030. The data in SPKPN will be continuously updated to provide a comprehensive centralised database for better rural development planning. Collaborations between the Federal Government and state governments will be enhanced in ensuring a complete and accurate database is available for all stakeholders.

Conclusion

The Eleventh Plan focused on pursuing balanced regional development by bridging the gap between regions and states as well as diversifying their economic base. This has contributed towards a better spread of socioeconomic benefits among regions and states as well as increased the wellbeing of the *rakyat*. The Twelfth Plan will optimise regional economic potential, develop sustainable cities and transform rural areas to bridge the development gap. The six less developed states, namely Kedah, Kelantan, Perlis, Sabah, Sarawak and Terengganu will continue to be given priority in development budget allocation. The implementation of these initiatives will accelerate development across regions and states, as well as rural, urban and border areas, thus ensuring more balanced development and greater inclusion.

Chapter 7

Enhancing Socioeconomic Development in Sabah and Sarawak



7

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Introduction

Socioeconomic development in Sabah and Sarawak aims to address socioeconomic imbalances and promote equitable growth among regions in Malaysia. During the Eleventh Plan, measures were undertaken to accelerate development in Sabah and Sarawak. Focus was given on accelerating economic growth, strengthening development planning and improving infrastructure for better connectivity. In respect of infrastructure, efforts were focused on expanding access to basic infrastructure, amenities and services in rural areas. In addition, measures were undertaken to increase employment opportunities, as well as enhance the development of customary land. Nevertheless, socioeconomic development in Sabah and Sarawak continue to face challenges, including high poverty rate, lack of accessibility to basic infrastructure and services, low investment, as well as lack of economic opportunities.

In the Twelfth Plan, socioeconomic development in Sabah and Sarawak will be intensified to promote regional inclusion. To do this, the provision of infrastructure will be solidified, economic potential optimised, access to social services improved, inclusive development enhanced and cooperation between the Federal agencies and state governments strengthened. The implementation of these measures will reduce disparities and uplift living standards in Sabah and Sarawak, which is in line with the *WKB* 2030 and the 2030 Agenda.

Performance of the Eleventh Malaysia Plan, 2016-2020

In the Eleventh Plan, the economy of Sabah recorded growth at an annual average rate of 1%, while Sarawak at a lower rate of 0.9%. The three main drivers of the economy of Sabah were services, contributing 47.1% of the economy, followed by mining and quarrying at 25.4%, and agriculture at 16.5%. Meanwhile, for Sarawak, the services sector contributed 36.2%, followed by manufacturing at 26.3%, and mining and quarrying at 22.2%. The low prices of crude oil, palm oil and rubber, as well as the COVID-19 pandemic in 2020, contributed to the slow economic growth of Sabah and Sarawak.

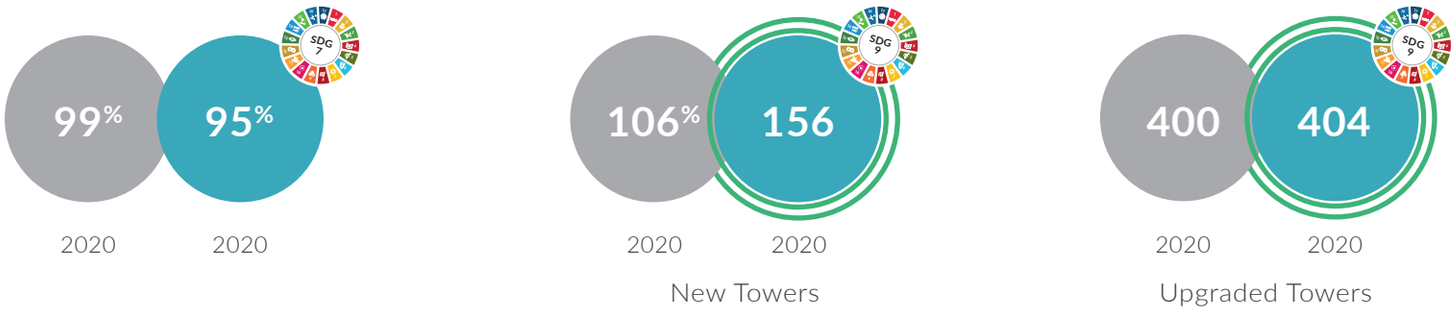
Performance of Selected Targets

Five selected targets were identified to achieve a balanced regional development, as shown in *Exhibit 7-1*. In terms of performance, two targets were achieved, where 156 new telecommunication towers were constructed compared to 106 targeted, while 404 telecommunication towers were upgraded compared to a target of 400. On the other hand, the supply of electricity achieved a coverage of 95%, which is well below the target of 99%. This was mainly due to geographical challenges, which limited the expansion of electricity supply coverage into the rural areas. The target set for the mapping of Native Customary Rights (NCR) land was also not met, mainly due to disputes over land boundaries and claims by the land occupants. The Movement Control Order activated during most of 2020 to contain the COVID-19 pandemic further delayed the mapping process.

Exhibit 7-1

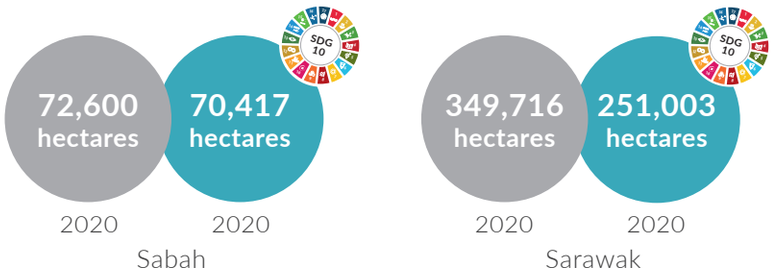
Eleventh Malaysia Plan: Performance of Selected Targets

Accelerating Development in Sabah and Sarawak



Coverage of Electricity Supply

Telecommunication Towers



Mapping of Native Customary Rights (NCR) Land



Performance of Selected Initiatives

Socioeconomic Improvement

Socioeconomic development in Sabah and Sarawak further improved during the Eleventh Plan period. This is reflected in better household income and lower poverty incidence. The median monthly household income in Sabah increased slightly from RM4,110 in 2016 to RM4,235 in 2019. While in Sarawak, it improved from RM4,163 to RM4,544. In addition, the incidence of absolute poverty in Sabah decreased from 23.9% in 2016 to 19.5% in 2019, while Sarawak recorded a decline from 11.9% to 9% over the same period.

Regional economic corridors (RECs) play an important role in promoting regional socioeconomic development by attracting investment, as well as creating jobs and entrepreneurship opportunities. During the Eleventh Plan, the Sabah Economic Development and Investment Authority (SEDIA) recorded RM30.36 billion realised investment in various economic activities, including agriculture, tourism, energy, manufacturing, and logistics. These investments created 196,491 jobs and 955 entrepreneurship opportunities.

The Regional Corridor Development Authority (RECODA) secured RM167.50 billion in realised investment, mainly in the manufacturing and heavy industries, palm oil and energy sectors, which created 343,368 jobs and 401 entrepreneurship opportunities. The Sarawak State Government established three new development agencies under RECODA in 2017, namely the Upper Rajang Development Agency (URDA), the Highland Development Agency (HDA) and the Northern Region Development Agency (NRDA). The establishment of these three new agencies enabled development in the remote and interior parts of Sarawak to be given higher priority. The implementation of various initiatives under these corridors spurred the economy and reduced income disparities, thus increasing the wellbeing of local communities.

Focus was also given to boost the tourism industry. Foreign tourist arrivals in Sabah increased by 10.7% per annum in the first four years of the Eleventh Plan, from 0.98 million in 2015 to 1.47 million in 2019. Sarawak, however, recorded a negative growth of 4.4% per annum in terms of foreign tourist arrivals, from 2.50 million to 2.08 million over the same period. Sabah's better performance was attributed to its aggressive marketing efforts and success in establishing greater connectivity with target markets such as the People's Republic of China (PRC), Republic of South Korea and Singapore. There were 225 international flights per week into Sabah in 2019 with total seat capacity of 39,182. Conversely, Sarawak only managed to secure 63 international weekly flights with 9,161 seat capacity. Sabah recorded the second highest hotel average occupancy rate (AOR) at 65.8% in 2019 compared with the national AOR of 58.8%, while Sarawak ranked 11th, recording only 46.1% AOR.

In 2020, the tourism industry in Sabah and Sarawak suffered severe losses due to the impact of the COVID-19 pandemic which saw almost full closure of borders, affecting both foreign and domestic tourist arrivals. Foreign tourist arrivals into Sabah plunged by 87.7% from 1,469,475 in 2019 to 180,284 in 2020. Similarly, Sarawak recorded a decrease of 82.6% from 2,082,444 to 363,304 within the same period.

Micro, small and medium enterprises (MSMEs) have great potential to further contribute to the economic growth of Sabah and Sarawak. Of the 1.2 million MSMEs in the country, 6.7% or about 80,000 enterprises are currently operating in Sabah, while Sarawak accounted for 6.9% or about 83,000 enterprises.

Various efforts were implemented to preserve the natural assets of Sabah and Sarawak. Under the Heart of Borneo initiative, 242,201 hectares of forest area were gazetted as a Fully Protected Area from 2016 to 2019, increasing the entire gazetted area to 1,961,653 hectares. The Luconia Shoals National Park in Sarawak, covering 1,011,772 hectares was gazetted as a marine protected area in 2018. In restoring degraded forests, a total of 1,337 hectares in Sabah and 2,224 hectares in Sarawak had been planted with various tree species in 2019.

Initiatives were also undertaken to increase the competitiveness of major cities in Sabah and Sarawak. The City Competitiveness Master Plans (CCMPs) were formulated for Kuching in 2018, and for Kota Kinabalu in 2019. The CCMPs outline action plans pertaining to the provision of better accessibility and mobility, including digital connectivity, as well as more green spaces.

Provision of Infrastructure for Better Connectivity

Connectivity and mobility across Sabah and Sarawak were further improved with the commencement of the Pan Borneo Highway project in 2016. As of end 2020, 44% of the 15 work packages for Pan Borneo Sabah project which have been approved in Eleventh Plan has been completed. The Sabah portion of the highway is expected to be

completed by 2024. Progress of the Pan Borneo Sarawak is at 59.4% completion and is expected to be completed by 2022. In addition, a total of 892.2 kilometres of rural roads in Sabah and 795 kilometres in Sarawak were constructed and upgraded to ensure connectivity and mobility in rural areas. Efforts were also undertaken to uplift the Rural Air Services (RAS) by upgrading short take-off and landing airstrips (STOLports) in enhancing connectivity and safety compliance. The upgrading of Mukah Airport phase 1 was completed in 2016, while phase 2 is scheduled for completion by 2021, which will improve connectivity and catalyse the development in Mukah. The Sandakan Airport is undergoing runway extension works to allow bigger planes to land without weight restriction. This extension is expected to be completed by the end of 2021.

Access to Basic Infrastructure, Amenities and Services

Access to basic infrastructure in Sabah and Sarawak continues to be improved with the implementation of various initiatives, including the Rural Electricity Supply, Rural Water Supply, as well as Environmental Sanitation and Water Supply programmes. As a result, water supply coverage in Sabah increased to 93.9% in 2020, while coverage in Sarawak reached 95.4%. Meanwhile, rural electricity coverage in Sabah increased to 96.3%, while the coverage in Sarawak reached 93.4% in 2020.

In the effort to improve the quality of electricity supply to consumers in Sabah, the Federal Government provided subsidies for fuel, solar and tariff support amounting to RM1.45 billion during the Eleventh Plan. In addition, the Federal Government allocated a total of RM2.3 billion in grants and RM1.14 billion in the form of loans to improve the quality of electricity supply in Sabah. This has significantly reduced the System Average Interruption Duration Index (SAIDI) from 379 minute/customer/year in 2015 to 189 minute/customer/year in 2020.

Broadband coverage and capacity in Sabah and Sarawak were enhanced in line with efforts to improve nationwide coverage in supporting economic growth. In 2020, broadband coverage in Sabah increased to 84.1% from 75.5% in 2015 while in Sarawak it increased to 84.6% from 67.4%. The broadband penetration rate increased to 81.2% from 62.5% per 100 inhabitants for Sabah while Sarawak has also seen an increment to 108% from 77.6% over the same period. Meanwhile, home internet subscription in Sabah was 73.7% in 2020, an increase from 55.5% in 2016, whereas Sarawak achieved 90% compared to 65.6% in 2016. The percentage of households subscribing to internet in Peninsular Malaysia was at 91.7% as compared to 78.8% in the same period.

Program Perhimpunan Sivik, an outreach programme introduced in 2016 to enhance access to government services in the rural and remote areas of Sarawak was expanded. The services include healthcare outreach, as well as issuance of birth certificates and identity cards. These services have enabled the population to have better access to essential services such as education, banking and employment opportunities. As of September 2020, a total of 4,000 people from rural areas benefitted from this programme.

Access to Education and Employment Opportunities

Several initiatives were undertaken to improve the access and quality of education in Sabah and Sarawak, especially in increasing education attainment in the rural areas. In terms of access to education, the preschool enrolment rate in Sabah increased from 83.6% in 2015 to 84.2% in 2020, and in Sarawak from 96.4% to 97.2%. Meanwhile, the primary school enrolment rate improved from 98.5% in 2015 to 106.3%[1] in 2020 in Sabah and from 97.9% to 98.3% in Sarawak. At the secondary school level, the enrolment rate in Sabah increased from 79% in 2015 to 90.9% in 2020, while in Sarawak it increased from 84.7% to 92.6%.

Special pathways to public higher education institutions (HEIs) are provided for students under four categories, namely those with special needs, from B40 households, the Orang Asli community, as well as athletes. For the 2020 academic session, a total of 6,735 *Sijil Pelajaran Malaysia* leavers and 5,205 *Sijil Tinggi Pelajaran Malaysia* leavers in

[1] Student enrolment including Ministry of Education, *Maktab Rendah Sains MARA*, Department of Islamic Development Malaysia and private schools. Percentage of more than 100 percent due to student enrolment exceeds the birth rate of students in the state. The enrolment has taken into account students born in other states that have migrated to Sabah.

Sabah and Sarawak were offered placement in public HEIs through these pathways. As of 2020, 13% or 71,673 students of the total local students enrolled in public universities were from Sabah and Sarawak. In addition, the Government provided scholarships to 15,152 students amounting to RM196.2 million[2] to pursue higher education.

Student intake into technical and vocational education and training (TVET) programmes has recorded a slight decrease in Sabah and Sarawak. The number of students enrolled in public skills training institutes in Sabah and Sarawak decreased from 28,624 students in 2015 to 27,347 students in 2020. Meanwhile, the number of diploma and certificate level trainees who graduated from public skills training institutes in Sabah and Sarawak increased significantly from 3,574 trainees in 2015 to 11,874 trainees in 2020[3]. Besides that, 2,633 participants were trained under the *Program Khas Anak Negeri Sabah* to provide various skills, including handicrafts, sewing, embroidery and batik painting. Meanwhile, for *Program Khas Bumiputera Sarawak*, 6,790 participants completed entrepreneurship courses, and 564 completed apprenticeships in electrical, automotive and welding.

Talent development programmes were implemented to enhance employment opportunities. However, as an effect of COVID-19 pandemic, the unemployment rate for both Sabah and Sarawak has increased. For Sarawak, the rate increased from 3.5% in 2015 to 4.3% in 2020 whereas Sabah recorded an increase from 5% in 2015 to 8% in 2020. In Sarawak, it is estimated that an average of 9,500 net jobs were created per annum between 2016 to 2020. The majority of the jobs were created in the services sector, totalling 17,100 jobs per annum, followed by the manufacturing sector with 2,700 jobs. It is estimated that about 24,700 new jobs were created annually for the 2016 to 2020 period in Sabah. Most of the jobs created were in the services sector, totalling 45,300 per annum, followed by the manufacturing sector with 11,400 per annum.

Development of Customary Land

The development of customary land in Sabah and Sarawak was enhanced to create income-generating activities for the rural communities. The mapping and gazetting of NCR land further promoted land development and reduced land disputes. As of September 2020, a total of 55,552 hectares of NCR land were granted land titles benefitting 34,353 *Anak Negeri Sabah*, an improvement over the 11,684 hectares for 9,901 beneficiaries in 2016. Meanwhile, for *Bumiputera Sarawak*, a total of 16,644 hectares of NCR land were granted land titles to 19,420 beneficiaries, compared to 2,334 hectares and 3,795 beneficiaries in 2016. In comparison, between 2016 and 2020, there was an increase of 375% in granted land areas and a 247% increase in beneficiaries in Sabah, while Sarawak recorded an increase of 613% in granted land areas and a 412% increase in beneficiaries.

The customary land was developed by state agencies, as well as investors for large scale plantations. In Sabah, 11,928 hectares of oil palm and rubber were planted involving 3,375 beneficiaries. Meanwhile, in Sarawak, 1,338 hectares of oil palm and rubber were planted with 720 beneficiaries. The land development provided the beneficiaries with income generation opportunities from the plantation activities.

[2] Source: Ministry of Higher Education, Public Service Department and *Majlis Amanah Rakyat*.
[3] Graduate Tracer Study, Ministry of Higher Education.

Issues and Challenges

During the Eleventh Plan, various efforts were implemented to accelerate development in Sabah and Sarawak. Despite these efforts, development imbalances persist. Key issues include gaps in the provision of infrastructure and services, limited access to social services, challenges in security and public safety, as well as lack of progress in inclusive development. Besides that, the economic potential of Sabah and Sarawak are yet to be fully leveraged for accelerating growth. Lack of effective collaboration between the Federal and state governments, as well as inefficient public service delivery have hampered the development in Sabah and Sarawak to match with other states.

Issues and Challenges

Gaps in the Provision of Infrastructure and Services
Slow Economic Growth
Limited Access to Education and Training
Limited Access to Healthcare Services
Challenges in Security and Public Safety
Challenges in Inclusive Development
Lack of Cooperation and Inefficient Service Delivery

Gaps in the Provision of Infrastructure and Services

The provision of infrastructure and services, particularly roads, water and electricity supply remain inadequate to cater for the needs of the *rakyat*. This is partly due to the sparsely populated areas, challenging terrain conditions and poor accessibility to project sites. Public amenities in rural areas are also insufficient, particularly in the provision of sanitation and drainage systems, as well as sewerage and waste disposal services. Basic services, such as public housing, healthcare and internet connectivity are still limited. All these issues restrict the ability of the local communities to actively partake in socioeconomic activities.

The coverage of digital infrastructure is also limited mainly due to low return of investment in the rural areas, high permit charges and a complicated approval process. The challenging geographical terrain in Sabah and Sarawak also contribute to high infrastructure development costs, including the provision of last-mile connectivity and this deters telcos from providing digital services, especially in the rural areas.

Connectivity through air transportation is important for Sabah and Sarawak due to limited access to other means of transportation, especially by road. RAS was set up as an effort to fulfil the social needs of communities living in the interiors of Sabah and Sarawak. However, currently the RAS is financially unsustainable and heavily subsidised by the Federal Government. In addition, some STOLports are also facing operational constraints due to a lack of maintenance and floods.

Distribution grid networks in Sabah are ageing and fast approaching the design load limits. This has contributed to frequent electricity supply disruptions to consumers, resulting in an increase in SAIDI. Electricity generation, especially in the east coast relies on ageing power plants, which are less efficient. The unbalanced generation capacity between the west and east coasts of Sabah continues to be a major challenge. At present, the west and east coast of Sabah are connected through a single 275 kilovolt (kV) double circuit transmission line. Lack of generation capacity in the east coast has contributed to overloading of the transmission line for power transfer, especially during peak periods. In addition, dependency on diesel power plants has also increased the cost of electricity generation to 47.85 sen/kilowatt hour (kWh), which is much higher than the electricity tariff rate paid by consumers at 34.52 sen/kWh. This has resulted in the continuous provision of a tariff support subsidies by the Federal Government.

Slow Economic Growth

Sabah and Sarawak are highly dependent on crude oil and palm oil. As of end 2020, the total planted area of oil palm in Sabah and Sarawak encompasses about 53.3% of the total planted area in Malaysia. The production of crude palm oil amounted to 8.70 million tonnes, contributing 45.5% of Malaysia's total production in 2020. However, downstream activities for these commodities and also the agrofood subsector have yet to be optimised in both states. The agrofood subsector is mainly concentrated on low value-added activities.

There are challenges faced by Sabah and Sarawak in attracting new investment, particularly in producing high value-added downstream and specialty petrochemical products. These are mainly due to the chemical composition of natural gas in Sabah and Sarawak, which limits production to low value-added products, namely methanol, urea, fertilizer and related products. As such, despite having dedicated industrial parks, including the Sipitang Oil and Gas Industrial Park in Sabah and Tanjung Kidurong in Sarawak, investment in high value-added downstream activities in these parks is still lacking.

The slow development of the digital economy in Sabah and Sarawak was mainly due to the low adoption of digital technology by the MSMEs, lack of experience and lack of readiness to go global. Despite relatively better digital infrastructure, the MSMEs in Sarawak are still slow in embracing digital technology due to a lack of awareness. Internet coverage is lower in Sabah, which hinders access to online business opportunities.

Sabah and Sarawak are blessed with natural endowments including vast forested land and marine areas, as well as a variety of wild species. Nevertheless, these assets are facing threats from unsustainable utilisation and land use change. Some species are on the brink of extinction due to illegal killing, taking and trading, as well as poaching and destructive fishing practices. The loss of these resources has impacted the livelihood of local communities. In addition, the exploitation of traditional knowledge is not generating fair benefits to the owners.

There is imbalanced industrial development among regions, as well as between the urban and rural areas. Sabah and Sarawak continued to face challenges in attracting investment for industry development due to inadequate infrastructure, such as utilities, telecommunication and transportation. Meanwhile, there is a lack of a supportive ecosystem, particularly the availability of local technology, skilled talent, efficient supply chain, as well as attractive incentives. A number of industrial parks are underutilised due to less structured development approach or that the management and maintenance standards do not meet investor requirements. Limited accessibility and connectivity between industrial estates and both hinterland and suburban areas also pose major challenges. Consequently, this leads to longer travel time and higher costs.

The corridor development authorities, SEDIA and RECODA, were established to spearhead regional development in Sabah and Sarawak. These authorities have yet to achieve the intended outcomes due to several challenges. The spatial areas designated for development under both agencies are relatively large, while the scope of economic activities is wide-ranging, thus lacking focus on areas where the states have the potential and comparative advantage in.

Sabah and Sarawak face challenges to attract investments from other regions or even other members within the Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area (BIMP-EAGA). This is despite the two states having a geographical advantage and strong historical, cultural and linguistic ties with most BIMP-EAGA members. The COVID-19 pandemic has further undermined investment sentiment with member countries adopting a more cautious and inward-looking approach. Currently, the incentives offered by Sabah and Sarawak are similar to those offered at the national level. As a result, the two states do not have any extra edge in promoting themselves under the BIMP-EAGA branding. The relatively higher cost of doing business in the two states also serves as an investment deterrent.

Imbalanced urban development across divisions in Sabah and Sarawak remains a challenge. Development activities are mostly centred in major cities like Kota Kinabalu and Kuching, while the potential in other cities remain untapped. Furthermore, the lack of city competitiveness to attract investments and talent, as well as inconducive ecosystems hinder development and the possibility of achieving strong economic agglomeration in a number of urban centres. Meanwhile, the lack of data integration, as well as ineffective coordination between agencies in these states and relevant agencies in Peninsular Malaysia have also resulted in fragmented development planning and monitoring.

Both Sabah and Sarawak are vulnerable to climate change as their export-based industries are built around natural resources, and major cities and towns are concentrated along the coastlines. The rapid pace of urbanisation in some cities has exacerbated carbon pollution and waste-disposal problems. There is an urgent need for the two states

to adopt and implement strategies that can effectively address the threats to its rich natural resources and also enhance biodiversity and ecosystem services.

Private sector participation including social enterprises in economic activities in rural areas is still relatively low. This is due to insufficient basic infrastructure and logistics services. This contributed to the lack of employment and economic opportunities in the rural areas.

The educational attainment of the rural population in Sabah and Sarawak is relatively low. In 2020, only 12.7% of Sabah's rural workforce had tertiary education while Sarawak was slightly higher at 13.4%. The low educational attainment along with the lack of skills and knowledge resulted in a low percentage of the population involved in high-productivity and knowledge-intensive sectors. These contributed to low median household income in the rural areas of Sabah and Sarawak, which was at RM3,172 for Sabah and RM3,195 for Sarawak in 2019, compared to the national average of RM3,828.

Limited Access to Education and Training

The dilapidated buildings in some schools are a hindrance for students to experience a conducive teaching and learning environment. In addition, the digital divide, especially in remote areas, has affected student learning outcomes. The number of Comprehensive Special Model Schools 9 (K9), which offer schooling from Year One to Form Three in the same school, is limited in Sabah and Sarawak. These challenges contributed to the low number of students from remote areas graduating from the schooling system and enrolling in tertiary level education.

Due to the COVID-19 pandemic, students in schools, HEIs and TVET institutions have to undergo online teaching and learning. This caused problems to students with limited internet access, especially those who live in rural and remote areas or from low-income families. Teachers and instructors in rural areas also face the challenge of ensuring that online teaching and learning sessions run smoothly. This has further hampered efforts in providing quality education in Sabah and Sarawak.

TVET institutions also face major challenges in finding industries that are willing to accept students for industrial training or work-based learning. The number of companies in several sectors capable of taking students as trainees has also declined. This has affected the ability of TVET graduates to secure jobs.

In 2020, the incidence of youth unemployment was the highest in Sabah at 17.3%, compared with the national average of 12%. As for Sarawak, the rate was lower at 12.3%. Most of the unemployed youths were found lacking in skills required by the industry. A total of 75.9% of unemployed youth in Sabah received secondary education and below, while the percentage for Sarawak was 67.7%.

Limited Access to Healthcare Services

The public healthcare facilities and services are still inadequate to meet the needs of the scattered population in Sabah and Sarawak. Insufficient skilled and competent human resources remain a challenge in improving quality healthcare. The COVID-19 pandemic has demonstrated that sufficient technical and health personnel is crucial in ensuring effective service delivery. In addition, the lack of connectivity and low frequency of mobile health services have dampened the efforts to deliver quality healthcare services to the rural and remote populations.

Challenges in Security and Public Safety

Border porosity and the influx of illegal immigrants continued to be a major concern in Sabah and Sarawak. These have led to an unconducive living environment and restricted job opportunities for the local community, contributing to the increasing number of criminal cases. The overlapping claims, disputes over land and maritime boundaries, as well as conflicts among major powers posed threats to the national sovereignty and security.

Challenges in Inclusive Development

Sabah and Sarawak continue to face various issues that hamper efforts in promoting inclusive development and uplifting the wellbeing of the local community. These include a high level of poverty and inequitable distribution of income. In 2019, the incidence of absolute poverty in Sabah was 19.5% and 9% in Sarawak, which were above the national level of 5.6%. A majority of these poor households were among the *Anak Negeri Sabah* and *Bumiputera Sarawak*. These groups are socioeconomically lagging behind in terms of education, as well as technical and entrepreneurship skills, limiting their access to employment opportunities. In addition, the poverty rate is high in a number of districts in Sabah including Tongod at 56.6%, Pitas at 53.6%, Kota Marudu at 46.1%, Beluran at 45% and Kudat at 41.5%. Meanwhile, in Sarawak, the highest rates of poverty were in the districts of Pusa at 38.6%, Tebedu at 28.7% and Matu at 24.1%. Nine out of the 10 poorest districts in Malaysia were in Sabah and Sarawak.

Survey activities and mapping of NCR land in Sabah and Sarawak faced many obstacles and challenges, thus constraining efforts in promoting economic activities for local communities. Overlapping land claims, which resulted in communal land disputes and failure in demarcating communal boundaries, have further delayed land survey processes. Majority of the land claimants have claimed bigger areas than those marked as NCR land. In addition, topographical factors, inclement weather and limited number of survey parties, both public and private, have adversely affected surveying activities.

Lack of Cooperation and Inefficient Service Delivery

Lack of coordination in socioeconomic planning at various levels poses challenges in integrating regional development planning and smooth implementation. Although regional economic corridor authorities have formulated long-term development plans, the strategies identified in each development plan require periodic revisions to align them with the policies and direction stipulated at national and state levels. The Sabah Development Corridor (SDC) Blueprint, 2008-2025 need to be aligned with the Sabah Long Term Strategic Action Plan, 2035 and other policies at the Federal level. In addition, the implementation of strategies and initiatives between SEDIA and state government occasionally overlaps with those implemented by the Federal agencies. This has caused inefficient resources allocation and unhealthy competition.

The lack of efficiency in urban governance among some local authorities has affected the delivery of quality services. Based on the *Sistem Penarafan Bintang Pihak Berkuasa Tempatan* in 2019, only 12 out of 25 local authorities in Sabah and 19 out of 26 in Sarawak achieved a 4-star out of 5-star rating, compared with 96 out of 101 for the rest of the country. Among the reasons cited for Sabah include the low score of local authorities in the assessment such as ISO accreditation, financial revenue and outdated local plans. For Sarawak, the key findings include low financial revenue and poor solid waste management. Meanwhile, the poor adoption of national strategic spatial planning policies, namely the National Physical Plan, National Urbanisation Policy and National Rural Physical Planning Policy by Sabah and Sarawak has hampered efforts in establishing a uniform national spatial planning framework and mainstreaming the national development agenda.

In September 2018, the Federal Government established the Special Cabinet Committee on Malaysia Agreement 1963 to review the implementation of the Malaysia Agreement 1963 (MA63). Since then, significant progress was recorded in resolving issues highlighted by the states of Sabah and Sarawak. However, a number of pertinent issues remain unresolved, particularly those related to differences in legislation between the Federal and state governments. The Federal Government has agreed in principle on the handing over of regulatory power for gas and electricity supply to the State Government of Sabah. However, the handing over will be time-consuming and challenging. Among the challenges include the absence of a legal instrument and regulatory body at the state level to regulate the gas and electricity supply industries, as well as the ability to revisit the tariff structure and reduce subsidy dependency from the Federal Government.

While efficient public service delivery is essential in supporting the socioeconomic development of Sabah and Sarawak, several issues need to be addressed to enhance capacity and capability. These include an ineffective placement system, lack of talent and inadequate digital technology adoption. Issues related to integrity and accountability have also affected service delivery quality.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The Twelfth Plan will focus on enhancing socioeconomic development in Sabah and Sarawak to be at par with other states in Peninsular Malaysia. Priorities will be given in solidifying the provision of infrastructure, optimising economic potential, improving access to social services, enhancing inclusive development and strengthening cooperation between Federal agencies and state governments. The implementation of these measures is expected to reduce disparities between Sabah, Sarawak and Peninsular Malaysia, and improve the wellbeing of the *rakyat*.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Enhancing Socioeconomic Development in Sabah and Sarawak

Priority Area A

Solidifying Provision of Infrastructure

Strategy A1
Extending the Provision of Infrastructure

Strategy A2
Extending the Provision of Connectivity

Priority Area B

Optimising Economic Potential

Strategy B1
Reenergising Economic Activities

Strategy B2
Strengthening the Development of Micro, Small and Medium Enterprises

Strategy B3
Providing a Conducive Ecosystem

Strategy B4
Advancing Rural Development

Strategy B5
Accelerating Urban Development

Strategy B6
Promoting Green Growth

Priority Area C

Improving Access to Social Services

Strategy C1
Improving Access to Education

Strategy C2
Improving Access to Healthcare Services

Strategy C3
Improving Access to Affordable Housing

Strategy C4
Enhancing Security and Public Safety

Priority Area D

Enhancing Inclusive Development

Strategy D1
Addressing Poverty and Diversifying Sources of Income

Strategy D2
Strengthening *Anak Negeri Sabah* and *Bumiputera Sarawak* Socioeconomic Development

Priority Area E

Strengthening Cooperation between the Federal Agencies and State Governments

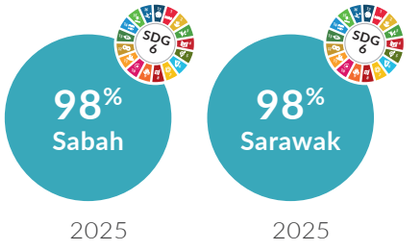
Strategy E1
Establishing a Supportive Ecosystem for Cooperation

Strategy E2
Enhancing Collaboration among Authorities

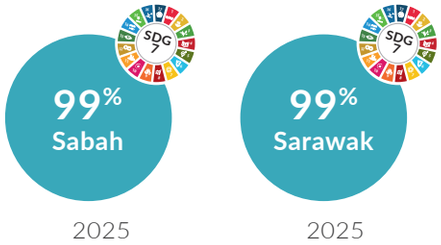


Twelfth Malaysia Plan: Selected Targets

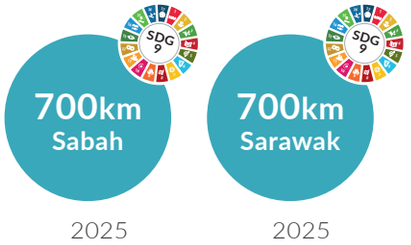
Solidifying Provision of Infrastructure



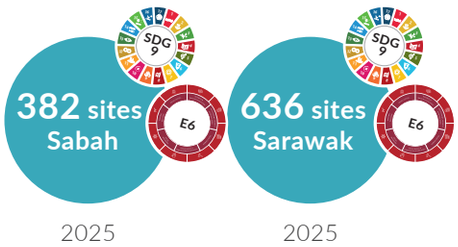
Coverage Access to Clean and Safe Water



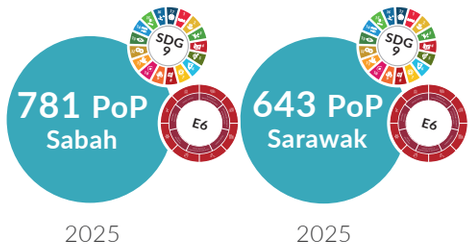
Coverage Access to Electricity



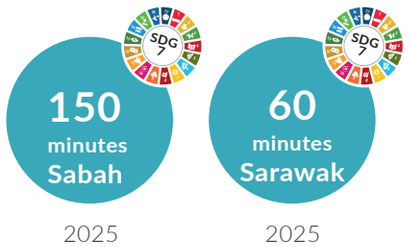
Constructing and Upgrading Rural Paved Roads



New Sites for Digital Infrastructure Development



Numbers of Points of Presence for Broadband Connectivity in Rural Schools



System Average Interruption Duration Index (SAIDI)

Target
SDG
WKB 2030

Optimising Economic Potential



2021-2025 2021-2025

Average GDP Growth



2025 2025

Median Monthly Household Income

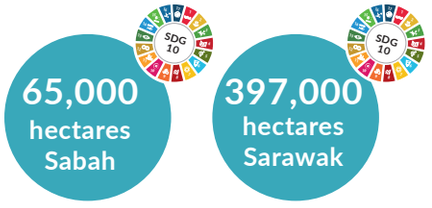
Improving Access to Social Services



2025

Houses Constructed and Repaired for the Poor Households in Sabah and Sarawak

Enhancing Inclusive Development



2025 2025

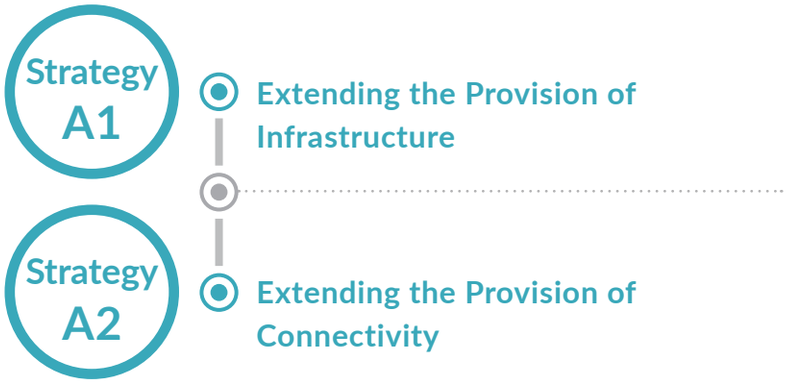
Mapping of Native Customary Rights (NCR) Land

Target
SDG
WKB 2030

Priority Area A

Solidifying Provision of Infrastructure

Infrastructure play an important role in catalysing socioeconomic development in Sabah and Sarawak. The provision of infrastructure and connectivity will be solidified to facilitate economic activities and enable better delivery of social services, particularly in the rural areas. This will improve socioeconomic status and enhance the wellbeing of the *rakyat* in Sabah and Sarawak.



Strategy A1

Extending the Provision of Infrastructure

The provision of basic infrastructure, including roads, water and electricity supply will continue to be given emphasis. This will be aligned according to the priorities of the states. Besides the expansion of broadband coverage in populated areas, broadband connectivity to rural schools will also be provided. In addition, coverage of water and electricity supply in Sabah and Sarawak will be further expanded to meet growing demands.

Improving the Provision of Basic Infrastructure

The provision of basic infrastructure will be intensified in Sabah and Sarawak. This includes the upgrading and construction of roads and bridges. The completion of various work packages of the Pan Borneo Highway will further improve connectivity and mobility of people and goods. Access to clean and safe water supply, as well as sanitation systems will be further improved to uplift the quality of life of the *rakyat* in Sabah and Sarawak. In addition, new water services infrastructure such as dams, off-river storage, water treatment plants and sewage treatment plants will be constructed, and existing ones upgraded. To prevent and reduce water loss, allocations will be provided for Non-Revenue Water Reduction Programme in the two states.

Expanding Broadband Coverage

Broadband coverage in Sabah and Sarawak will be further enhanced under the *Pelan Jalinan Digital Negara* (JENDELA), to widen the coverage of broadband services in the effort to provide equitable digital opportunities to the population. The expansion of digital infrastructure under JENDELA will contribute to 100% broadband coverage in populated areas. In this regard, digital infrastructure will be provided at 382 new sites in Sabah and 636 in Sarawak.

Measures will be undertaken to improve broadband connectivity in schools, as well as the surrounding areas. The provision of broadband in the urban areas will be driven by industry, while the government will focus on the rural areas. Under the Twelfth Plan, 781 points of presence (PoP) will be provided in Sabah and 643 in Sarawak. The provision of these PoP will enable nearby government premises, housing areas and commercial buildings enjoy broadband connectivity, thus promoting more online activities in the rural areas.

Augmenting Electricity Supply System

The Sabah electricity supply system will be further augmented through the construction and upgrading of generation facilities, as well as transmission and distribution networks. The issue of insufficient power generation in the east coast of Sabah will be resolved through the construction of a new power station and transmission upgrading works in the Sabah East-West Grid. Additionally, the Southern Link transmission network project will start with initial work in the Twelfth Plan. The Incentive-Based Regulation framework will be introduced to improve the quality and efficiency of electricity supply. These initiatives are expected to enhance the resilience and reliability of the grid system, consequently improving electricity supply services in Sabah.

The Sarawak electricity system will be further strengthened with the implementation of the 1,285 megawatt Baleh hydroelectric project that is expected to be completed in 2025. In ensuring reliability of supply and meeting growing demand, Sarawak will expand its 500 kV transmission line as the second transmission backbone. In addition, the Northern Grid will be developed to expand the State

Grid System to cover the whole state. This will also provide additional capacity to meet load growth in Limbang and Lawas, as well as allow connection to many villages under the Rural Electrification Scheme. The implementation of these projects will provide an injection point for future power supply to Sabah and export to Kalimantan.

Strategy A2

Extending the Provision of Connectivity

Efficient transport connectivity is key in promoting seamless movement of people and goods, which will attract higher investment. This will be undertaken through improvement of public transport and logistics services, which will spur economic activities, reduce the cost of doing business and enable services to be better delivered to the people.

Enhancing Rural Air Services

Recognising RAS as one of the important elements in mobilising people, particularly the lower income group especially in the rural areas, the Federal Government will continue to subsidise RAS for Sabah and Sarawak. Reviews will be conducted periodically to ensure that these services are viable in the long run. The exercise will involve rationalisation of existing routes and the possible introduction of new ones to enhance overall connectivity in rural Sabah and Sarawak. In ensuring operational efficiency, the airport operators will continue to undertake the maintenance of STOLports.

Improving Logistics Services

The efficiency of logistics services in Sabah and Sarawak will be enhanced by improving existing infrastructure as well as last-mile connectivity. The capacity of ports, airports and service providers will be further enhanced to provide efficient cargo handling services in terms of time and costs, and also to accommodate expected future trade growth in Borneo Island. The upgrading of the Sepanggar Port which commenced in 2020 is expected to be completed in 2024. This port will serve as the transhipment and entry point for trade activities in the BIMP-EAGA subregion. In supporting this, road connectivity to industrial and cargo hubs, as well as the interior of Sabah will be enhanced.

The upgrading of the capacity and services of Bintulu Port is vital in establishing it as one of the main ports of call on Borneo Island. In line with rapid development of the manufacturing sector in Kuching and Bintulu, Bintulu Port is an important node in the West Borneo Economic Corridor. In addition, the last-mile connectivity will be improved to enable efficient and effective delivery of goods to consumers, particularly in the hinterland areas. In this regard, road connectivity will be improved. This will not only reduce the cost of transport, but also facilitate the growth of cargo hubs along the road alignments.

Priority Area B

Optimising Economic Potential

Sabah and Sarawak are strategically located in the Borneo Island close to a majority of ASEAN countries, as well as the PRC and Japan. These offer the two states huge potential in terms of economic opportunities and trade. Leveraging on this, measures will be undertaken to provide a conducive ecosystem for economic growth. The implementation of these measures will contribute to increasing average annual GDP growth in Sabah to 6.5% and Sarawak at 5.3% during the Twelfth Plan.



Strategy B1

Reenergising Economic Activities

In promoting growth in Sabah and Sarawak, the focus will be given on more equitable industrial development, modernising the agriculture sector, strengthening the oil and gas subsector, enhancing the services sector and promoting the digital economy. The success of these initiatives will reduce socioeconomic disparities among regions in Malaysia.

Promoting More Equitable Industrial Development

The development of industrial estates in Sabah and Sarawak will be accelerated through better provision of infrastructure, namely roads, electricity and water supply, as well as internet connectivity. The formulation of a new national industrialisation roadmap will take into account the local strength of Sabah and Sarawak. The roadmap is expected to improve the investment ecosystem and attract new investors in these states. Existing investment incentive mechanisms will be reviewed focusing on selected quality industries and addressing regional imbalance in industrial development.

The halal industry in Sabah and Sarawak will be strengthened to leverage the availability of resources and the growing global demand for halal products. Initiatives will be undertaken to increase participation of Bumiputera companies through entrepreneurship development programmes. In addition, measures will be put in place to upscale the production capacity and quality, as well as improve access to the international market. The existing halal parks including the Kota Kinabalu Industrial Park and Palm Oil Industrial Cluster Lahad Datu in Sabah, as well as Tanjung Manis Halal Hub in Sarawak, will be upgraded through a holistic development approach to enable more integrated planning, coordination and implementation in increasing the utilisation of the parks. This will facilitate local companies in expanding existing businesses and attracting new investment.

Promoting Digital Economy

The successful adoption of the digital economy hinges upon the depth and breadth of MSMEs in embracing digital technology. MSMEs will be encouraged to adopt digital technologies in production and business services. Training, mentoring and awareness programmes will be implemented for MSMEs in enhancing readiness to digitalise and compete in the local and global market. One-stop centres with connections to other parts of the country will be established to assist local MSMEs to have better access to funding, facilities and stewardship. The eRezeki and eUsahawan programmes will be improved and expanded to increase the skills and opportunities of the *rakyat* in Sabah and Sarawak. The National Digital Economy and 4IR Council, which was established in 2020 will also be leveraged in solving digitalisation issues in Sabah and Sarawak.

Modernising Agriculture Sector

Agricultural activities in Sabah will focus on producing high value agrofood, aquaculture, deep sea fishing and dairy produce. Ranau and Keningau will be further developed as the main producer of vegetables and dairy products, while Kota Belud has been identified to undertake large scale paddy and fruit farming. Dedicated food production areas such as the *Taman Kekal Pengeluaran Makanan* (TKPM) and *Zon Industri Akuakultur* (ZIA) will be upgraded to encourage modern agriculture. The deep sea fishing industry utilising high-tech fishing vessels will be further encouraged to leverage the availability of resources and competitive advantage.

The Integrated Agricultural Development Areas of Kalaka Saribas and Samarahan in Sarawak will be transformed into modern agriculture areas. In this regard, pilot projects will be initiated. The existing TKPM and ZIA will also be upgraded to encourage modern agriculture. High value produce such as durians, pineapples and coconuts will be promoted for large scale cultivation. In the fishery industry, the utilisation of fishery complexes in Tanjung Manis and Tanjong Bako will be optimised in supporting the development of downstream activities.

The utilisation of digital technology will be enhanced through the application of smart farming and precision agriculture along the production value chain. Capacity building and advisory services will be provided to accelerate the adoption of modern agriculture. In addition, farmers will be encouraged to adopt good agricultural practices such as Malaysian Good Agricultural Practice, Malaysian Sustainable Palm Oil and Malaysian Organic for sustainable agriculture and food safety. The capabilities of state agricultural departments and agencies in undertaking research and development activities will be enhanced. Collaboration with HEIs in the area of research will also be intensified, focusing on soil testing, production of seeds and breeds, as well as biosecurity control. Meanwhile, to facilitate the adoption of modern technologies, collaboration between the Federal and state governments of Sabah and Sarawak in implementing agricultural development will be strengthened.

Strengthening Oil and Gas Subsector

The State Governments of Sabah and Sarawak finalised their gas masterplans in 2020. The plan is designed to ensure long-term energy security for the development of the gas industry as well as provide strategies to attract new investment in gas-related industries. This will encourage fuel switching from diesel to natural gas, which is expected to reduce costs and subsidies. Initiatives under both plans will be taken into account in formulating the national natural gas roadmap. This roadmap will also provide strategies to monetise gas resources, as well as identify investment potential in the high value-added petrochemical industry in Sabah and Sarawak. In addition, this roadmap will provide direction to optimise the utilisation of natural gas and facilitate market-based pricing.

Enhancing Resource-Based Manufacturing Activity

The abundance of natural resources in Sabah and Sarawak provides opportunities to drive growth in the manufacturing sector. These resources can be utilised as feedstock in downstream manufacturing, such as oil and gas, palm oil, timber as well as minerals. In this regard, the capabilities and competitiveness of MSMEs in resource-based manufacturing activity will be enhanced with greater adoption of automation and technology. To ensure existing industrial parks are fully utilised, several measures will be undertaken by intensifying promotion activities and improving the maintenance of the industrial parks. These measures will transform existing industrial parks to be more competitive, thus attracting new quality investment.

The potential of Sabah and Sarawak in the aerospace industry will be leveraged based on the states' inherent strengths. This will create synergies with existing local activities and accelerate the development of local expertise. The Kota Kinabalu International Airport is the second busiest airport in Malaysia with potential to grow as a commercial aerospace hub in Borneo Island. Thus, the development of the aerospace industry in Sabah will focus on maintenance, repair and overhaul (MRO), as well as becoming centre of excellence for skilled training. Due to Sarawak's frequent use of rural air transportation for the provision of basic social services, such as mobile healthcare services and RAS, the focus for Sarawak will be on helicopter operations and MRO.

Enhancing the Services Sector

Sabah and Sarawak are endowed with pristine natural surroundings and distinctive cultures that give both states a competitive edge in ecotourism. Respecting and celebrating nature are the intrinsic part of the local culture and as such, sustainable practices are already widely observed in Sabah and Sarawak. The successful public-private partnership and carrying capacity practice at the Mulu Caves of Sarawak and the Sipadan Island of Sabah will be replicated across other local sites in the interest of preservation, thereby improving the livelihoods of the local community and improving the sites' long-term economic viability. In addition, specific initiatives will be undertaken to improve tourism facilities and infrastructure to increase accessibility to the major attractions in these states.

Promotional campaigns will also be tailored to celebrate the unique qualities of Sabah and Sarawak. Efforts to restore confidence among tourists following the effects of COVID-19, will be carried out with strong commitment from the industry in applying the best safety and hygiene standards. The overall governance and implementation mechanism of tourism development will also be improved to ensure that planned strategies and initiatives come to fruition. In addition, identifying and establishing new markets and routes, along with targeted promotional efforts in specific markets will boost tourist arrivals in Sarawak. Strategic partnerships with airlines and foreign travel agents will be strengthened to establish more international

routes to Sarawak. This will expand the tourism industry in Sarawak, benefitting not only local communities and the state but also the nation at large.

Recognising the potential of the Pan Borneo Highway as a game changer for Sabah and Sarawak, consolidation hubs will be established along the route to ensure cargo handling efficiency. It is also important to develop and improve inland container port facilities to support inland logistics, particularly the Keningau Inland Port in Sabah and the Tebedu Inland Port in Sarawak. Regional and local airline connectivity will be enhanced by providing incentives to targeted airlines. In addition, logistics services providers will be encouraged to create partnerships with suppliers.

Business registration regulations will be reviewed and reformed to improve the ease of doing business. This will attract higher investments and further intensify business growth in Sabah and Sarawak. Businesses will be encouraged to leverage eCommerce platforms and modernise business processes through digitalisation. Roads and last-mile connectivity, as well as digital infrastructure will allow businesses to grow and permeate into rural areas, as well as access to reasonably priced goods and services.

Private HEIs in Sabah and Sarawak will be encouraged to introduce niche programmes, such as robotics and artificial intelligence, to attract local and international students. In addition, collaboration between private HEIs and enterprises as strategic partners will be encouraged to provide students with industry skillsets through coaching and mentoring, as well as on-job-training. This collaboration will increase the supply of talent to meet the needs of the industry.

Accelerating the Construction Sector

The construction of mega projects, such as the Pan Borneo Highway, Sarawak Water Grid Programme and Sabah Seafront will spur the growth of the construction sector. This will create more demand for construction materials and provide civil engineering works opportunities for the local workforce. These projects will catalyse the use of high technology construction methods. The testing of construction and building materials is vital to ascertain the quality and safety of the projects. The laboratory facilities for testing the aforementioned materials will be upgraded to increase capacity and speed up approval processes.

The utilisation of technology, such as Industrialised Building System, Building Information Modelling and modular construction, which leverages mechanisation and automation will expedite project completion. In this regard, incentives will be introduced to encourage more industry players to adopt the latest construction technologies. *Akademi Binaan Malaysia* in Sabah and Sarawak will conduct reskilling, upskilling and accreditation programmes to produce qualified local talent. A wider adoption of mechanisation and automation will reduce dependency on low-skilled foreign workers.

Strategy B2

Strengthening the Development of Micro, Small and Medium Enterprises

A conducive ecosystem is vital to ensure progressive and sustainable growth of MSMEs in Sabah and Sarawak. For this purpose, efforts will be undertaken towards improving access to financing, enhancing resource-based activities, facilitating ease of doing business and boosting the market access of MSMEs. These initiatives will enhance the contribution of MSMEs to the economy.

Improving Access to Financing

Access to financing will be improved for MSMEs by allocating a special fund for Sabah and Sarawak. This fund will provide more opportunities for MSMEs to apply financial assistance to grow their business. Special programmes will be implemented to increase awareness of available financing for MSMEs. In addition, mobile banking will be expanded to provide better access to financing.

Enhancing Resource-Based Micro, Small and Medium Enterprises Activities

MSMEs in Sabah and Sarawak will be encouraged to utilise domestic natural resources in producing high value-added products and services. In this regard, MSMEs participation in industries such as oil and gas, ecotourism, agri-business and palm oil will be further strengthened. The growth of these industries will increase the opportunities for capable MSMEs to participate in the supply chain for downstream activities. In encouraging MSMEs to venture into higher value-added services within the resource-based industries, comprehensive entrepreneurship training and development programmes will be developed.

Facilitating Ease of Doing Business

The existing network of business registration counters across Sabah and Sarawak will be expanded and innovative registration mechanisms will be introduced to facilitate business registration. Districts offices will be encouraged to act as the focal point to disseminate information on programmes offered by the Federal and state governments as well as financial institutions.

Boosting Micro, Small and Medium Enterprises Market Access

Initiatives will be undertaken to boost MSMEs market access. A mechanism for aggregation of MSME products will be introduced to provide wider market access through utilisation of existing platforms at the district, municipal and local leader levels in small and mid-

size towns. In addition, MSMEs will be encouraged to increase the sales of products and services through adoption of technology and digitalisation.

Strategy B3

Providing a Conducive Ecosystem

Establishing a conducive ecosystem is a prerequisite in promoting economic growth. In this regard, efforts will be focused on leveraging regional economic corridors to play a more important role as an engine of growth. In addition, concerted efforts will also be undertaken in making Sabah and Sarawak as preferred investment destinations in BIMP-EAGA by leveraging on comparative advantages in both states.

Leveraging Regional Economic Corridors for Integrated Socioeconomic Development

Measures will be undertaken to strengthen regional development strategies in ensuring a higher development impact. This will be undertaken by emphasising development based on specific spatial focus with identified economic activities, while optimising local resources utilisation. In delivering this, SEDIA and RECODA will intensify efforts in expediting the implementation of strategic development projects. SEDIA and RECODA will be actively collaborating with various agencies to create a conducive environment in attracting quality investment.

SEDIA will concentrate on six niche areas, namely oil, gas and energy, tourism, palm oil, manufacturing and logistics, agriculture, as well as education. In promoting tourism activities in Sabah, the involvement of local communities will be encouraged. The development of the manufacturing sector and logistics services will emphasise high value-added downstream activities. As SEDIA is currently reviewing the SDC Blueprint, 2008-2025, it will be aligned to the policies and strategies at national and state levels. The review, which will be finalised in 2021, is expected to provide a more strategic development approach, particularly in attracting quality investment to create jobs and entrepreneurship opportunities in the region.

In accelerating development in Sarawak, the SCORE area was extended beyond the central region with the establishment of the URDA, HDA and NRDA in ensuring a comprehensive development of the rural and interior areas of Sarawak. The development areas by subregions are as shown in *Exhibit 7-2*. The focus activities in these areas include modern commercial agriculture, aquaculture, hydroelectric power generation and tourism. This is aimed at accelerating economic growth in the hinterland areas and reducing income disparity. The implementation of strategic projects in the five key growth nodes in the SCORE areas, namely Tanjung Manis, Mukah, Samalaju, Baram and Tunoh will be accelerated. The provision of infrastructure, facilities and services will support economic activities, which in turn will result in spillover effects to the surrounding areas.

Promoting Sabah and Sarawak as Preferred Investment Destinations in BIMP-EAGA

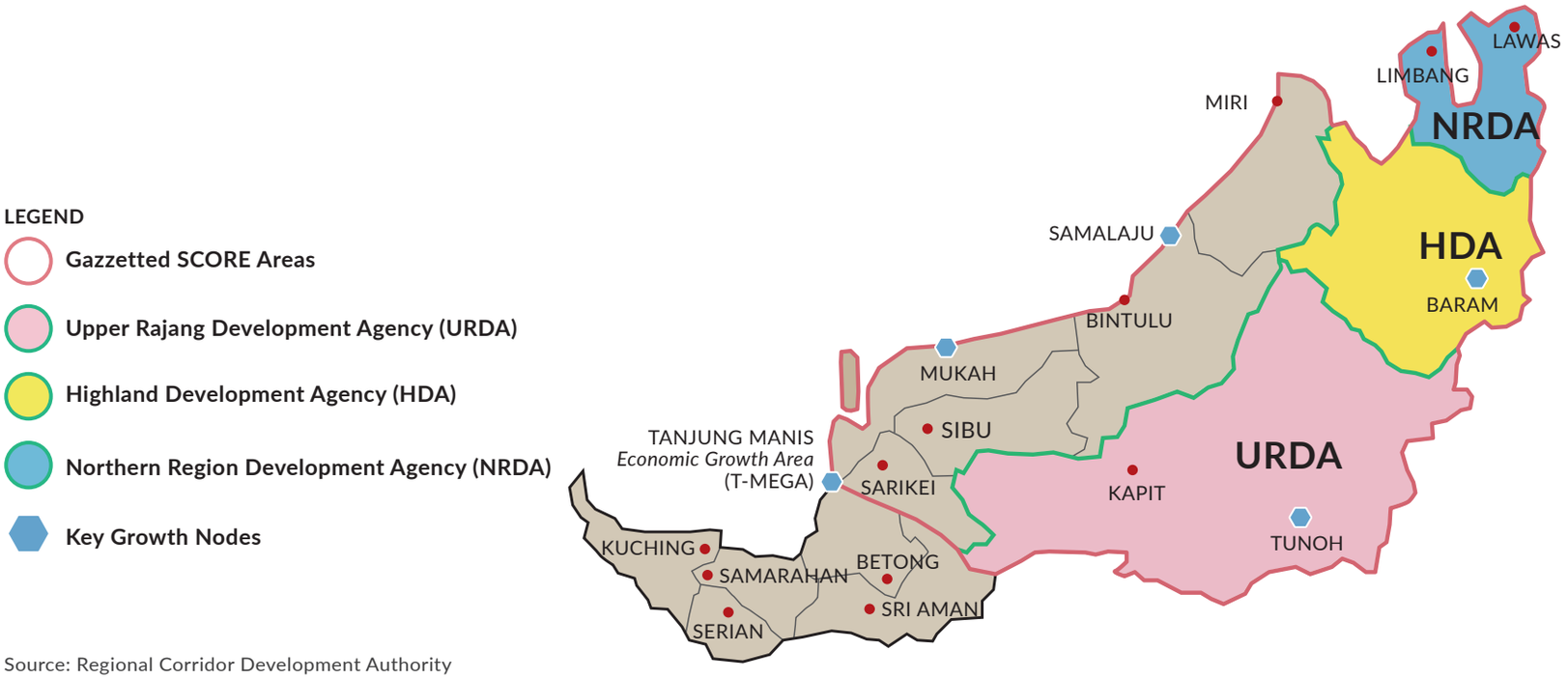
The investment promotion and facilitation functions of the RECs and other investment promotion agencies in Sabah and Sarawak will be strengthened to promote both states as preferred investment destinations for BIMP-EAGA. The state governments will play a proactive role in creating a conducive environment for businesses, including efforts to complement national investment incentives with local incentives. Measures will be undertaken to ensure adequate electricity and water supply, proper waste management facilities, as well as sufficient digital infrastructure and services at strategic industrial zones and growth nodes. Special fiscal and non-fiscal incentive schemes to attract investment originated from BIMP-EAGA and elsewhere will be explored, particularly schemes that promote green growth and green infrastructure.

Enhancing Infrastructure Connectivity for Stronger Economic Ties with Kalimantan

Transport connectivity between Sabah and Sarawak with Kalimantan will be improved. This will include construction of a road link between Serudong in Tawau and Simanggaris in North Kalimantan. To support bilateral economic activities between Serudong and Simanggaris, Immigration, Customs, Quarantine and Security Complex (ICQS) facilities and border towns will be developed in the surrounding areas. Consideration will also be given in developing other potential cross-border road links and ICQS facilities, including in Pegalungan, Nabawan and Long Pasia, Sipitang. In Sarawak, Customs, Immigration and Quarantine (CIQ) facilities in Tebedu, Serikin and Telok Melano will be upgraded to cater for the increasing cross-border commercial activities. The digital infrastructure, electricity and water supply in priority border crossings and border towns in Sabah and Sarawak will be upgraded to stimulate growth.

Exhibit 7-2

Development Areas under the Regional Corridor Development Authority



Source: Regional Corridor Development Authority

Strategy B4

Advancing Rural Development

The development of rural areas in Sabah and Sarawak will be accelerated to close the gap between rural and urban areas. Measures include strengthening growth enablers, re-energising rural economic activities and providing access to online businesses. These will improve productivity and create additional employment opportunities.

Strengthening Growth Enablers

The provision of basic infrastructure will be intensified in the rural and remote areas of Sabah and Sarawak. These include the upgrading and construction of rural roads and bridges to improve connectivity and mobility. In addition, rural water and electricity supply will be enhanced. The coverage of rural water supply in both states is targeted to reach 98% coverage, while rural electrification is targeted to achieve 99% coverage by 2025. Alternative water and electricity supply will be provided in the remote areas. Alternative rural water supply, such as tube wells, gravity feed and rainwater harvesting will be utilised. Meanwhile, solar hybrid and mini hydro will be installed to support micro- and pico- grids.

Linkages between rural and urban areas will be improved by enhancing connectivity and mobility to foster greater economic integration. Transportation services in rural areas such as rural buses, water transportation services and e-hailing will be enhanced. Broadband coverage in rural areas will be improved to enhance internet connectivity, thus facilitating socioeconomic activities and business expansion through the digital platform. *Pusat Komuniti Desa* (PKD) will be upgraded to be hubs for services in rural areas. New services will be introduced in PKD, such as courier services, disaster alerts and co-working space.

Re-energising Rural Economic Activities

Rural economic activities will be re-energised to increase productivity and income. Smart and cluster farming activities will be undertaken by utilising idle land to increase economies of scale, while village cooperatives will be strengthened. In this regard, community-based economic activities will continue to be implemented including *Projek Bersepadu Pembangunan Ekonomi Kampung* and *Program Desa Lestari*. The rural cottage industry will be enhanced through various initiatives in supporting MSMEs. Collaborative efforts among relevant ministries, agencies and state governments will also be strengthened to promote rural cottage industry. Social enterprises and the private sector will also be encouraged to participate in diversifying rural economic activities.

Sabah and Sarawak have a relatively large land bank with untapped potential, especially in the production of agrofood. Measures will be undertaken to increase participation in the modern agricultural activities to attain higher income. These measures include expansion of land management consolidation, provision of incentives and financial assistance, enhancement of capacity building and advisory services, as well as the adoption of modern technologies.

Efforts to expand land management consolidation will be undertaken through collaboration between smallholders, cooperatives and associations to generate economies of scale through optimisation of resources. This approach will also facilitate efforts to cultivate high-yielding and high-demand crop varieties. Smallholders in the agricommodity subsector, namely oil palm and rubber will also be encouraged to implement intercropping by cultivating pineapples, corn and other cash crops during the replanting period to generate additional income.

Incentives including the provision of agricultural inputs, such as seeds, breeds and fertilisers, as well as financial support will be provided to assist agropreneurs in venturing into agricultural activities. These will encourage participation of rural communities, particularly among the younger generation. Capacity building programmes will be provided to improve technical capabilities whilst technical expert teams will be formed through public-private partnership to provide advisory services in increasing agricultural produce. Farmers in rural areas will also be encouraged to adopt modern technologies in the production process. Collaboration between farmers, cooperatives and associations will be strengthened to leverage eCommerce platforms in improving the distribution and marketing of agricultural produce.

Providing Access to Online Businesses

Access to online business platforms will be capitalised to elevate competitiveness and capacity of rural entrepreneurs of Sabah and Sarawak. The 133 *Pusat Internet* in Sabah and 138 in Sarawak, comprising of PKD, *Pusat Internet Desa* and *Pusat Internet*, will be optimised as platforms to promote digitalisation among rural entrepreneurs. The DesaMall@KPLB programme will be expanded to assist rural entrepreneurs in migrating from traditional business methods to online businesses for better market access.

Strategy B5

Accelerating Urban Development

An efficient management of urban areas will accelerate economic growth and promote better livelihoods. In ensuring better contribution of cities towards the development in the states, measures to accelerate urban development will focus on improving the development potential of cities, upgrading urban services and enhancing liveability. These measures will spur more development and contribute towards the wellbeing of urban dwellers.

Improving Development Potential of Cities

Focus will be given to improve the competitiveness of major cities through the implementation of action plans identified under the CCMP for Kota Kinabalu and Kuching. The uniqueness of these two cities with a vibrant waterfront area will be leveraged to promote tourism and economic activities. In addition, measures to increase job opportunities will focus on optimising existing industrial parks, namely the Kota Kinabalu Industrial Park, the Sama Jaya Free Industrial Zone and Samalaju Industrial Park. Meanwhile, the efficiency of the urban ecosystem will be enhanced to promote liveability in the major cities through better access to digital infrastructure, affordable housing and entrepreneurial opportunities.

Efforts to increase the potential of cities in other division areas in the states will focus on enhancing economic activities to spur development. The development potential of cities and towns such as Keningau, Kota Marudu, Lahad Datu, Sandakan and Tawau in Sabah, as well as Bintulu, Kapit, Miri and Sibu in Sarawak will be optimised by leveraging the strengths of each city and town to attract investment. The development of Sandakan and Tawau will optimise its rich biodiversity to increase tourism activities, while Bintulu and Sibu will leverage its respective industrial township to boost economic growth. Meanwhile, efforts to improve supporting ecosystem in these areas will also be given emphasis through collaboration and coordination between Federal and state agencies.

Upgrading Urban Services

Urban governance will be improved to enhance service delivery among local authorities. In this connection, a roadmap will be developed to enhance the capability of local authorities by incorporating new technology and digitalisation. Meanwhile, local authorities in Sabah and Sarawak will also be encouraged to identify new sources of income for better revenue while addressing the needs of the growing urban population. Efforts to strengthen data coordination and sharing among local authorities will ensure better planning and coordination. In this regard, participation from local authorities in adopting the Malaysian Urban-Rural National Indicators Network for Sustainable Development system as a tool to measure sustainability of cities will help improve data readiness and support SDG's targets achievement.

Enhancing Liveability through Implementation of Green City Action Plan

Measures will be undertaken to enhance the liveability of cities and ecological resilience of Sabah and Sarawak. This will be done through the implementation of the Green City Action Plan (GCAP) in the two states. Under the GCAP initiative, key cities and towns will be identified for greenhouse gas emission inventory and climate resilience assessment. The green financing mechanism will be put in place and innovative incentive schemes will be introduced to promote investment in green infrastructure including energy, transport and housing. Efforts will be intensified to build or install more renewable energy equipment such as solar photovoltaic, energy-efficient street lighting, low carbon buildings and integrated solid waste management facilities. Ecological fiscal transfer measures and payments for ecosystem services will be implemented to ensure the sustainability of the ecosystem services. To instil sustainability awareness among the younger generation, eco-school programmes will be extended across the schools in Sabah and Sarawak.

Strategy B6

Promoting Green Growth

Green growth is imperative in boosting sustainable socioeconomic development through the expansion of the green market. Green growth will be promoted by accelerating green initiatives and conserving natural capital. These initiatives represent a systemic shift towards generating new economic opportunities, while minimising its detrimental impact on the environment, addressing climate change and ensuring natural resource sustainability. This will also contribute to the achievement of Goals 2, 6, 7, 11, 12, 13, 14 and 15 of the 2030 Agenda.

Accelerating Green Initiatives

Implementation of green initiatives will be accelerated to ensure sustainable, responsible and resilient socioeconomic growth. Businesses will be encouraged to implement the circular economy along their value chain, particularly using recycled materials to produce green products. The private sector will also be encouraged to implement energy efficiency initiatives in their operation and premises, as well as intensify development and utilisation of renewable energy sources, including hydrogen. Government green procurement initiative will also be implemented in Sabah and Sarawak as a catalyst in expanding the green market, including the green construction sector.

In supporting the circular economy, the adoption of the extended producer responsibility approach, user-pay and polluter-pay principles, as well as self-regulation among industries will be further promoted. Waste separation at source and the reduce, reuse and recycle (3R) initiatives will also be intensified. Economic instruments, environmentally motivated subsidies and the existing green financing incentives will be leveraged to support businesses in greening their activities.

Conserving Natural Capital

Sabah and Sarawak are rich in biodiversity and mineral resources. In preserving the natural assets, conservation programmes on the terrestrial, inland water, coastal and marine ecosystems will be intensified. In safeguarding the wildlife species, the implementation of species conservation programmes including sustainable fisheries management, as well as enforcement activities will be strengthened. In addition, mining operators will also be encouraged to subscribe to a sustainability rating in ensuring sustainable mining practices.

Forests as well as coastal and marine areas provide livelihood to the local communities. Local communities' participation in protecting and managing protected areas sustainably will be elevated to improve their livelihood. Education and awareness programmes on access and sharing of benefits will be enhanced. In this regard, provision of the Access to Biological Resources and Benefit Sharing Act 2017 will be enforced through enactments and ordinances at the state level. In addition, payment for ecosystem services including carbon offset will be explored.

Priority Area C

Improving Access to Social Services

Access to better social services and a safe environment will improve the wellbeing of the *rakyat*. In this regard, efforts will concentrate on improving access to education, healthcare services and housing as well as enhancing security and public safety. These initiatives will enhance the standard of living of the *rakyat*.

Strategy C1

Improving Access to Education

Access to education is essential as a key driver in fostering socioeconomic growth. As such, efforts will focus on improving access to education and training, as well as enhancing collaboration with industry. These measures will increase employment opportunities, improve income and ultimately reduce absolute poverty in Sabah and Sarawak.



Improving Access to Education and Training

In ensuring a conducive teaching and learning environment for students, efforts will be undertaken to further improve school infrastructure. All schools which are classified as level six and seven in the School Building Condition Index[4] will be rebuilt. The number of Comprehensive Special Model School 9 (K9) will be increased, while several existing K9 schools will be upgraded to Comprehensive Special Model School 11 (K11) to provide the remotely located students a complete 11 years of schooling, increasing opportunities to pursue tertiary education. The K11 schools will focus on enhancing skills development by strengthening the TVET programme. Students' hostels, as well as teachers' quarters will be upgraded to provide better access for students and liveable conditions for the teachers.

Digital infrastructure including internet connectivity will be improved to facilitate better teaching and learning in line with the new norms. To narrow the digital divide, 'fit-for-purpose' digital devices will be provided for students from the selected group. Concurrently, efforts will be taken to upgrade the local area network in schools and education offices and expand MyGov*Net to provide wide area network to education offices.

In ensuring early intervention for students with special education needs (SEN), the Special Education Service Centres, which provide screening, intervention, rehabilitation and consultation services to students with SEN and parents, will be expanded to more locations. At the same time, the GENIUS Kurnia centre will be established in Sabah and Sarawak to ensure children with autism receive early intervention and education. In increasing accessibility of students with SEN, at least one school in every district will be equipped with a set of basic facilities for the disabled.

Access to higher education will be enhanced to increase opportunities in human capital development. Infrastructure, equipment and academic programmes in the existing HEIs in Sabah and Sarawak will be improved according to local needs. This will enable more opportunities for local communities to further their studies in HEIs.

Remote learning approaches will be strengthened to improve learning and teaching processes, which will increase access for students in HEIs and TVET institutions. Infra- and info-structure facilities in Sabah and Sarawak will be enhanced to create a conducive learning

[4] The index developed by the Ministry of Education for describing the building condition in schools. It describes the building condition on a seven-point scale, from scale 1 for comfortable up to scale 7 for those which are unsafe.

environment on campus. These initiatives will enable students and academic staff to leverage the latest technologies in improving learning and teaching outcomes.

Enhancing Industry Collaboration Network

TVET institutions are encouraged to work closely with industry in extending industrial training or industry attachment period. This will encourage industry in acquiring skilled workforce at a competitive cost while students, will gain real-world work experience. Existing laboratories and workshops at the institutions will be upgraded as the Institution-Industry Lab (IIL) through shared ownership between selected TVET institutions and industries. The establishment of IIL will benefit both parties in terms of the transfer and sharing of knowledge, skills and technology.

Strategy C2

Improving Access to Healthcare Services

Healthcare services will be improved to ensure better access and efficient delivery in Sabah and Sarawak, particularly in remote and rural areas. Among the efforts to be undertaken are strengthening healthcare personnel and improving facilities for healthcare services. This will facilitate efforts to increase the quality of healthcare services in improving the wellbeing of the *rakyat*.

Strengthening Healthcare Personnel

A national master plan for healthcare facilities and human resource development will be introduced to address inadequate healthcare facilities and personnel, including in Sabah and Sarawak.
In improving access to healthcare facilities among underserved communities, the number of patient transport service vehicle, used by health district offices will be increased. In addition, more medical equipment will be provided to both states. This is part of the measures to increase preparedness level. In addition, the construction of teaching hospitals for *Universiti Malaysia Sabah* and *Universiti Malaysia Sarawak* will complement efforts to produce specialists in Sabah and Sarawak.

Improving Facilities for Healthcare Services

The cluster hospital concept will be expanded to increase accessibility to specialists' services. The number of mobile health services will be increased, while existing healthcare facilities will be upgraded. New health clinics will be built in Penampang and Beaufort in Sabah, as well as in Samarahan, Sarikei and Miri in Sarawak. Public health clinics, located far from hospitals, will be equipped with birth centres and observation room facilities as well as X-ray services. A new regional blood centre will be built in Sabah, while in Sarawak, state public health and food safety laboratories will be built. The development of these facilities will increase the capacity of research, development and innovation in public health.

Strategy C3

Improving Access to Affordable Housing

The provision of quality and affordable housing is important in enhancing the quality of life of the poor and low-income households. A new public housing model will be adopted to encourage more private developers to build affordable houses. Concurrently, supply of affordable housing will be increased for the targeted groups. These will improve the standard of living of the *rakyat*.

Adopting a New Public Housing Model

A total of seven projects involving 3,202 low-cost houses under the *Program Perumahan Rakyat* (PPR) in Sabah and Sarawak will be completed during the Twelfth Plan period. The PPR has been rebranded as *Rumah Malaysia* to ensure the provision of affordable houses is more sustainable in the long run. The *Rumah Malaysia* concept will adopt the request for proposal approach to provide a platform for collaboration among the Federal Government, state governments and private developers. This model will be implemented throughout the nation, including Sabah and Sarawak based on specifications set out in the *Dasar Perumahan Mampu Milik Negara*.

Increasing the Supply of Affordable Housing for Targeted Groups

More affordable houses will be constructed for the targeted groups in Sabah and Sarawak. This includes the *Rumah Mesra Rakyat* (RMR) programme under the *Syarikat Perumahan Negara Berhad*. The RMR will assist poor and low-income households that own land to build their own houses. A total of 2,400 houses are targeted to be built in these two states.

Strategy C4

Enhancing Security and Public Safety

Security and public safety will be enhanced in Sabah and Sarawak. Stringent measures will be introduced to curb illegal immigrants and unlawful activities. These include strengthening border and maritime security, as well as implementing a holistic plan to manage illegal immigrants.

Enhancing Border and Maritime Security

Border security will be enhanced by increasing the number of security posts along the international border of Sabah and Sarawak to prevent the entry of illegal immigrants and combat unlawful activities. In addition, maritime patrolling and joint operations will be intensified to make maritime zones safer and more secure. Defence capacity and capability will be strengthened especially in surveillance, enforcement and show of presence to protect the state's socioeconomic interests and security. Advocacy programmes will be expanded to increase awareness on unlawful activities, such as illegal fishing, maritime border crossing and drug trafficking.

Implementing Holistic Plan to Manage Illegal Immigrants

A holistic plan will be implemented to manage illegal immigrants. The plan will cover a comprehensive strategy in enforcement with the involvement of related agencies, state governments and the public. The strategies include reviewing policies related to illegal immigrants, improving control at the border and increasing the capacity of detention centres. Communities will be encouraged to channel information on the presence of illegal immigrants to the enforcement agencies. These measures aim to deter and stop the entry of illegal immigrants and enhance security and public safety.

Priority Area D

Enhancing Inclusive Development

Socioeconomic potential will be optimised to achieve inclusive and balanced development in Sabah and Sarawak. The incidence of poverty in both states will be reduced through programmes and projects that focus on income-generating activities. The socioeconomic status *of Anak Negeri Sabah* and *Bumiputera Sarawak* will be improved by creating more employment opportunities and high value economic activities. This will increase the standard of living of the *rakyat* in Sabah and Sarawak.



Strategy D1

Addressing Poverty and Diversifying Sources of Income

Efforts to address poverty, as well as increase and diversify sources of income will be intensified. In this regard, measures to alleviate poverty and strengthen Bumiputera socioeconomic development will be escalated. Efforts will also be undertaken to increase employability and promote entrepreneurship as well as facilitate the development of NCR land.

Alleviating Poverty through the Provision of Basic Infrastructure and Services

Poverty alleviation programmes will be enhanced to uplift the wellbeing of poor households. Efforts will be intensified to improve quality education and skills training as well as access to healthcare services. In uplifting the standard of living, the provision of basic infrastructure and services including roads, treated water, electricity and broadband connectivity will be enhanced. The housing assistance programme will be continued in building new and repairing dilapidated houses to improve the living conditions of poor households in rural and urban areas. The implementation of this programme is expected to benefit a total of 26,000 poor households in Sabah and Sarawak.

Increasing and Diversifying Sources of Income

Sources of income of the poor households will be increased and diversified through participation in high value-added economic activities as well as human capital and entrepreneurship development. The rich natural resources and culture will be leveraged to commercialise high value-added indigenous products, including arts and crafts as well as venturing into agriculture, aquaculture and ecotourism industries. The upskilling programmes, especially TVET, will be intensified. Untapped ancestral skills and talent of local communities will be unleashed by providing customised skills training.

The entrepreneurship ecosystem such as financing assistance and marketing through digital platforms will be strengthened to facilitate entrepreneurs in accelerating the socioeconomic development of these communities. In improving service delivery to the target groups, cooperation between the Federal and state governments, the private sector, community-based organisations and communities will be strengthened. Delivery mechanisms will be enhanced through a bottom-up approach and involvement of social enterprises in alleviating pockets of poverty at the community level.

Strategy D2

Strengthening *Anak Negeri Sabah* and *Bumiputera Sarawak* Socioeconomic Development

The socioeconomic development of *Anak Negeri Sabah* and *Bumiputera Sarawak* will continue to be given priority to uplift their wellbeing. In this regard, the capacity and capability of these communities will be enhanced to improve employability and entrepreneurship. The development of NCR land will be facilitated to provide income-generating opportunities, particularly in undertaking agriculture activities on a large scale. These efforts will contribute towards improving the socioeconomic status of these communities.

Improving Employability and Promoting Entrepreneurship

Human capital development is necessary for uplifting the socioeconomic status of *Anak Negeri Sabah* and *Bumiputera Sarawak*. Education and training will be pursued to enhance the capacity and capability of these communities, starting from early childhood care and education until tertiary level. These communities will also be encouraged to venture into ecotourism, agriculture and aquaculture as well as indigenous arts and crafts activities. Entrepreneurship will be inculcated among these communities by providing necessary support such as financing facilities, logistic services and access to market, including through digital platform. These measures will enhance skills and employability, thus increasing economic opportunities and income.

Access to the human resources development fund programmes will be improved to enhance the employability of youth by providing dedicated reskilling and upskilling programmes to leverage local economic opportunities. Youth will also be provided courses on self-discipline, interpersonal and communication skills, adaptability and self-confidence to better compete with more experienced workers. In addition, youth who are inclined towards entrepreneurship will be channelled to specific programmes in developing their ability to venture into business.

Accelerating Development of Customary Land

Ongoing programmes in facilitating the development of NCR land will be accelerated in ensuring the *Anak Negeri Sabah* and *Bumiputera Sarawak* have access to opportunities for generating higher incomes. Hence, the surveying and mapping exercise of the NCR land will be accelerated to facilitate the state governments in gazetting and granting land titles. Collaboration between the state governments, landowners and investors will be strengthened to ensure successful development of the NCR land through an integrated land development approach.

Priority Area E

Strengthening Cooperation between the Federal Agencies and State Governments

Strong cooperation between the Federal and state authorities will accelerate socioeconomic development in Sabah and Sarawak. Strategies will focus on establishing a supportive ecosystem for cooperation and enhancing public service delivery. This is crucial in strengthening governance and in addressing the needs of the *rakyat*.



Strategy E1

Establishing a Supportive Ecosystem for Cooperation

The public service will need to be strengthened in ensuring efficient service delivery to the *rakyat*. In this connection, the rights of Sabah and Sarawak will be reviewed, talents will be strengthened and development allocations for the states will be prioritised.

Reviewing the Rights of Sabah and Sarawak

The establishment of the Special Council on Malaysia Agreement 1963 in September 2020 replacing the Special Cabinet Committee further demonstrated the commitment of the Federal Government to ensure that the rights of Sabah and Sarawak under MA63 continue to be protected. Moving forward, efforts in coordinating and streamlining the remaining issues raised by Sabah and Sarawak will be continued. The *Bahagian Hal Ehwal Sabah dan Sarawak*, which was established under the Prime Minister's Department is tasked with coordinating all the issues relating to the implementation of MA63.

The process of handing over the regulatory power for gas and electricity under MA63 will be continued in the Twelfth Plan. In this regard, a number of provisions in the existing law will be amended while a regulatory body will be established. In order to ensure sustainability of the grid system, the Federal Government will continue to provide financial support in the implementation of existing infrastructure projects. Efforts will also be undertaken to gradually reduce dependency of the State Government of Sabah on the tariff support subsidies.

Strengthening Talent

Federal departments in Sabah and Sarawak will be strengthened by enhancing training and improving succession planning. Capacity and capability of talent in these two states will be improved by enhancing knowledge and skills in various fields, including leadership, digital technology, creativity and innovation. Subject matter experts in the related fields will be identified and groomed in ensuring quality service delivery. This will improve productivity and efficiency of public service delivery in Sabah and Sarawak.

Prioritising Development Allocation for Sabah and Sarawak

The Federal Government is committed to ensuring the less developed states are given priority in the development allocation. In the Twelfth Plan, Sabah and Sarawak will each continue receiving between 15% and 18% annually of the total basic development allocation. A significant portion of this allocation will be channelled to the economic sectors in both states. This will contribute towards improving infrastructure and basic facilities in these two states.

Strategy E2

Enhancing Collaboration among Authorities

Collaboration among all agencies in the two states will be strengthened by promoting synergies among the RECs with the Federal and state agencies. In addition, the Federal Government will work closely with both Sabah Economic Development Corporation (SEDCO) and Sarawak Economic Development Corporation (SEDC) to enhance their contribution in delivering better outcomes to the *rakyat*. Support will also be given to enhance the states' role in a number of areas, including the promotion of Islam and strengthening the native courts.

Promoting Synergies among the Regional Economic Corridor Authorities with Federal and State Agencies

Measures will be undertaken to promote more coordinated and integrated regional development planning through better collaboration with the relevant agencies, both at the Federal and state levels. This will create synergies and address development needs in a holistic manner. Regional economic authorities in both states will streamline the development planning and initiatives introduced by all the relevant authorities. SEDIA will need to align the review of the SDC Blueprint with all related policies at the national and state levels. Similarly, RECODA together with URDA, HDA and NRDA will collaborate with Federal and state agencies in accelerating development within the SCORE areas. These efforts will amplify economic growth and enhance regional development as well as improve the quality of life in Sabah and Sarawak.

Improving and Strengthening the Roles of SEDCO and SEDC

The roles of SEDCO and SEDC will be further enhanced to facilitate the planning of economic activities in Sabah and Sarawak, in line with the mandate given to these two agencies to correct economic imbalances at the state level. SEDCO and SEDC were both established under the Incorporation (State Legislatures Competency) Act 1962 and complemented with the respective State Enactments. There is a need to realign their roles as state agencies in promoting development. In this connection, a committee will be established comprising multiple key Federal and state agencies that are responsible for regional planning, coordination and evaluation. This committee will coordinate strategies with a number of Federal programmes at the regional level in bridging development gaps across regions and states.

Enhancing State Role in Promoting Islam and Strengthening Native Courts

While religion is a state matter, efforts will continue to be undertaken by the Federal Government to facilitate the states in delivering effective services to the *rakyat*. The role of *Institut Pengajian Islam dan Dakwah Sabah* in providing more comprehensive Islamic training programmes will be enhanced by upgrading its physical infrastructure. The ongoing upgrading of *Institut Kemahiran Islam Malaysia Sarawak* is expected to be completed in 2023. This upgrade will provide trainees with more conducive facilities for better teaching and learning outcomes.

The *Mahkamah Anak Negeri Sabah* and *Mahkamah Bumiputera Sarawak* will be further strengthened in the effort to uplift the institution of native courts and uphold native customary rights, culture and practices of the *Anak Negeri Sabah* and *Bumiputera Sarawak*. In the Twelfth Plan, the building of *Mahkamah Anak Negeri* in Tambunan will be continued and completed in 2021, while five new native courts buildings will be constructed in Sabah. Meanwhile, 10 *Mahkamah Bumiputera Sarawak* will be upgraded to provide better services to communities in Sarawak. In total, 15 *Mahkamah Anak Negeri* and *Mahkamah Bumiputera* in both states are scheduled to be operationalised during the Twelfth Plan.

Conclusion

During the Eleventh Plan, the implementation of various development strategies have contributed to the reduction in disparities between Sabah and Sarawak and other states. However, the COVID-19 pandemic and the slow growth of the global economy have also impacted these two states. In the Twelfth Plan, greater emphasis will be given in enhancing socioeconomic development in Sabah and Sarawak by providing better infrastructure, optimising economic potential, improving access to social services, enhancing inclusive development and strengthening cooperation between the Federal agencies and state governments. The implementation of these strategies will lead to more inclusive development for both Sabah and Sarawak.

Theme 3

Theme 3
Advancing Sustainability

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Overview

Advancing sustainability is imperative to guarantee continuous economic growth and to enhance the quality of life, while protecting the environment, conserving natural resources and ensuring planetary health. It is critical to ensure that economic growth does not adversely impact the environment and lead to unsustainable utilisation of resources. In this regard, Theme 3 of the Twelfth Plan focuses on advancing green growth, enhancing energy sustainability and transforming the water sector. This reflects the continuous commitment in ensuring environmental sustainability and resilience of the nation as well as access and security to energy and water. The strategies outlined under Theme 3 will complement the strategies under Theme 1: Resetting the Economy and Theme 2: Security, Inclusivity and Wellbeing.

In advancing green growth, the whole-of-nation approach will be adopted. It is an inclusive means for all stakeholders to share responsibility and accountability in implementing the clean, green and resilient agenda. This will accelerate the nation's progress in moving towards a low-carbon nation, safeguarding natural endowments and increasing resilience against climate change and disasters. In this regard, adoption of the circular economy, which represents a systemic shift will be accelerated to create more responsible businesses and investments as well as to expand the green market and generate new economic opportunities. In addition, natural capital will continue to be managed efficiently through conservation and sustainable utilisation, while ensuring equitable benefit sharing. The green growth will be strengthened by a robust enabling environment and supported by a mindset change as well as behavioural shift of the *rakyat*.

Selected Key Performance Indicators

Chapter 8: Advancing Green Growth for Sustainability and Resilience

- **Up to 45%** — Reduction in Greenhouse Gas (GHG) Emissions Intensity to GDP by 2030 Based on Emissions Intensity in 2005
- **25%** — Government Green Procurement
- **At Least 20%** — Terrestrial and Inland Water Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures
- **At Least 10%** — Coastal and Marine Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures
- Introduction of a Policy on Disaster Risk Management

Chapter 9: Enhancing Energy Sustainability and Transforming the Water Sector

- Introduction of a Comprehensive National Energy Policy
- **31%** — Renewable Energy of Total Installed Capacity
- **98%** — Coverage of Access to Clean and Safe Water in Rural Area

Energy sustainability will be further enhanced by an ensuring adequate supply of energy resources and related infrastructure. Effectively managing the energy transition requires a calibrated approach in addressing the energy trilemma through properly balancing energy security, affordability and sustainability. A comprehensive national energy policy will be formulated to streamline and harmonise all energy-related policies, thus providing an overarching framework to address issues across energy-consuming sectors. Furthermore, renewable energy as an alternative energy source will be augmented to complement energy efficiency measures. These measures will focus on demand side management, resulting in the prudent and efficient management of energy.

In the water sector, accelerating the adoption of Integrated Water Resources Management (IWRM) will be the key priority. This will ensure the realisation of the Government's long-term goal to increase the efficiency of water management, generate wealth and create skilled jobs. To achieve this, the focus will be placed on strengthening water resources governance, financial sustainability and continuous engagement with the *rakyat* as well as implementing the circular economy concept in the entire sector's value chain. The effective implementation of strategies identified under Theme 3 will contribute to the achievement of the Twelfth Plan's targets and the SDGs.

Chapter 8: Advancing Green Growth for Sustainability and Resilience

Priority Area A

Implementing a Low-Carbon, Clean and Resilient Development

Priority Area B

Managing Natural Resources Efficiently to Safeguard Natural Capital

Priority Area C

Strengthening the Enabling Environment for Effective Governance

Chapter 9: Enhancing Energy Sustainability and Transforming the Water Sector

Priority Area A

Ensuring Sustainable Energy for All

Priority Area B

Transforming the Water Sector



Game Changer VIII
Embracing the Circular Economy

Why do we need to embrace the circular economy?

Malaysia aims to transform itself from the conventional linear economy model to the sustainable circular economy model. This will enable the country to:

- Achieve a systemic shift towards long-term resilience.
- Eliminate unsustainable consumption and production practices.
- Address the issues of climate change, environmental degradation and biodiversity loss.

How will it be achieved?

The implementation of the circular economy model requires a comprehensive set of initiatives that include:

- Adopting the whole-of-nation approach involving all stakeholders.
- Integrating the SDGs and environmental, social and governance (ESG) principles into decision-making.
- Enhancing policies, regulations, green financing and economic instruments.
- Encouraging businesses to develop the circular economy design and the sharing economy model.
- Increasing smart partnerships and triple-helix collaboration.

What will success portray?

- Sustainable, low-carbon and resilient nation.
- Reduced GHG emissions intensity to GDP up to 45% by 2030 based on emissions intensity in 2005.
- Increased recycling rate of household waste by 40% and scheduled waste by 35%.
- Reduced incidence of pollution.
- Reduced dependency on natural resources and maintaining at least 50% forest cover.
- Increased share of government green procurement to 25%.
- Increased green financing, investments, businesses and jobs.
- Change in mindset and behaviour in adopting green practices.

Game Changer IX
Accelerating Adoption of Integrated Water Resources Management

Why do we need to accelerate adoption of IWRM?

Water resources management will require a more cohesive approach aimed at addressing longstanding issues such as:

- Uncoordinated management of water resources.
- Absence of integrated database.
- Lack of awareness and participation among stakeholders.
- Weak collaboration among Federal Government, state governments and local authorities.
- Negative impact of land use change on water resources.

How will it be achieved?

The Twelfth Plan will focus on the following initiatives:

- Introducing the Water Sector Transformation 2040 (WST 2040) agenda.
- Establishing single water management agency.
- Revising existing laws and formulating new ones to strengthen governance and enforcement.
- Promoting innovative financing mechanisms with more involvement of the private sector.
- Establishing an integrated centre for water data and R&D&C&I to enhance data-driven decision-making.
- Introducing Tariff Setting Mechanism to ensure financial sustainability.
- Adopting the whole-of-nation approach.

What will success portray?

- The water sector as an important contributor to national growth.
- Coverage of access to clean and safe water in rural area increased to 98%.
- Non-revenue water level reduced to 25%.
- More clean rivers.
- Reduced disruptions in water supply and water-related disasters.

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Chapter 8

Advancing Green Growth for Sustainability and Resilience

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8

Introduction

Advancing green growth is imperative for achieving shared prosperity, not only in terms of economic growth, but also for environmental sustainability and social inclusivity. During the Eleventh Plan, green growth was introduced as a game changer that incorporated the economic, social and environmental pillars of sustainable development to better prepare the nation in meeting future challenges. Green growth was pursued by strengthening governance, conserving natural endowments, combating climate change and reducing disaster risks. Nevertheless, several challenges remain, including unsustainable consumption and production practices, loss of biodiversity and the lack of a supportive enabling environment.

In the Twelfth Plan, green growth will be bolstered to ensure sustainability and resilience. This will be undertaken by implementing a clean, green and resilient development agenda through the whole-of-nation approach. In this regard, embracing the circular economy, sharing responsibility in moving towards a low-carbon nation, implementing evidence-based and risk-informed actions, ensuring equitable benefit sharing and steering behavioural changes will cumulatively advance green growth in the country. These efforts will be supported by public and private investments and appropriate green financing facilities. Green growth strategies will ensure planetary health and a better quality of life, enhance the resilience of the nation as well as conserve and protect the environment for current and future generations. These strategies will also deliver a more sustainable, innovative and competitive economy as well as create new opportunities for economic growth.

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, concerted efforts were undertaken to shift towards green growth in implementing the 2030 Agenda. Several policies and legislation were reviewed to ensure coherence and alignment with current developments and future needs. Institutional capacities were also strengthened to enable more effective environmental governance. There was greater emphasis placed on conserving protected areas and rehabilitating degraded ecosystems of terrestrial and marine areas as well as enhancing the livelihood of indigenous and local communities (ILCs). Priority was also given to climate change mitigation and adaptation actions as well as disaster risk reduction measures.

Performance of Selected Targets

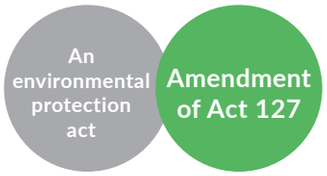
A total of 10 targets were set in the Eleventh Plan to achieve green growth. Three targets were achieved, as shown in *Exhibit 8-1*. The average proportion of government green procurement (GGP) for selected green products and services was 20.7% between 2016 and 2019, exceeding the target of 20%. As planned, the integrated weather and flood forecasting and early warning system were developed for the Sungai Kelantan, Sungai Pahang and Sungai Terengganu river basins. The national recycling rate of household waste exceeded the 30% target reaching 30.7% by 2020. Meanwhile, there is progress in meeting the targets of greenhouse gas (GHG) emissions intensity reduction and the number of people protected from floods.

Five targets that have yet to show significant progress, namely the formulation of an environmental protection legislation, renewable energy (RE) installed capacity, development of a demand side management (DSM) master plan, and the gazetting of terrestrial and inland water as well as coastal and marine areas as protected areas. Some components of the proposed environmental protection legislation were incorporated in the amendments to the Environmental Quality Act 1974 [Act 127]. Slow uptake of the projects led to the underperformance of RE installed capacity. The proposed DSM master plan was replaced with an energy efficiency (EE) and conservation bill. Only 10% of the terrestrial and inland water areas were gazetted as protected areas as at 2018 compared to the 17% target for 2020, while 5.3% of coastal and marine areas were gazetted as at 2020 against the target of 10%. This was mainly due to the lengthy gazetting process and the different conservation priorities of state governments.

Exhibit 8-1

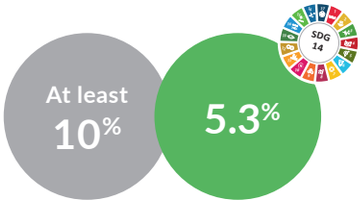
Eleventh Malaysia Plan: Performance of Selected Targets

Strengthening Governance

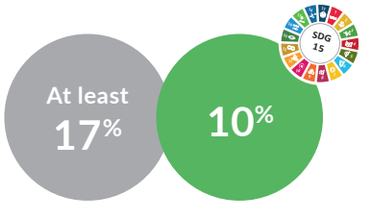


Formulation of an Act to Enhance Environmental Protection

Conserving Natural Resources

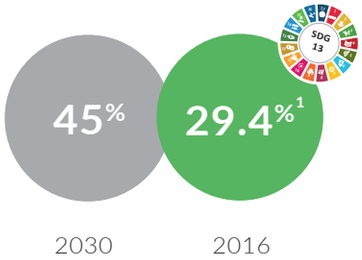


Coastal and Marine Areas Gazetted as Protected Area

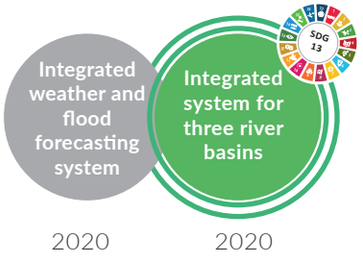


Terrestrial and Inland Water Areas Gazetted as Protected Area

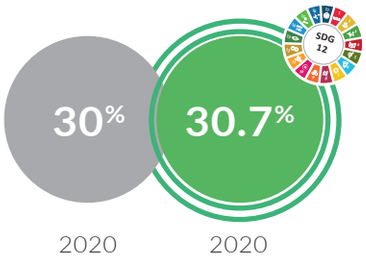
Combating Climate Change and Reducing Disaster Risks



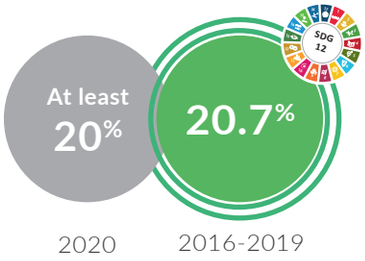
Reduction in Greenhouse Gas (GHG) Emissions Intensity to GDP Based on Emissions Intensity in 2005



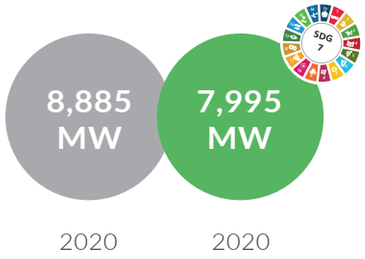
Development of Integrated Systems



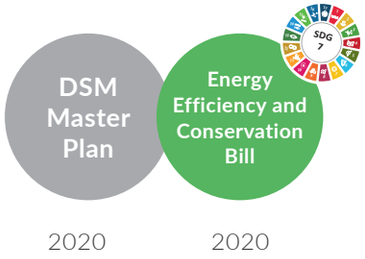
National Recycling Rate of Household Waste



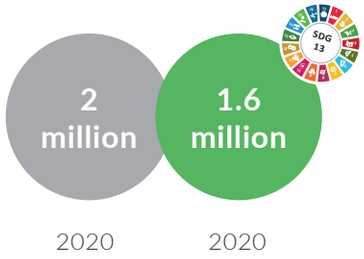
Government Green Procurement



Renewable Energy Installed Capacity



Formulation of an Energy Demand Side Management (DSM) Master Plan



People Protected through Flood Mitigation Projects



[1] The greenhouse gas (GHG) emission indices for Malaysia (based on Approach 2: with Land Use, Land-Use Change and Forestry (LULUCF) (emissions only)) as reported in the Third Biennial Update Report Malaysia to the United Nations Framework Convention on Climate Change, 2020 (BUR 3). Refer to BUR 3 for detailed description of the GHG emission indices for Malaysia based on Approach 1, Approach 2 and Approach 3.

Performance of Selected Initiatives

Improvement in Governance and Financing

During the Eleventh Plan, new policies and regulations were introduced to strengthen environmental governance. The National Transport Policy, 2019-2030 was introduced to improve integration and enable seamless movement of people and goods as well as to support the low-carbon mobility agenda. In addition, the National Automotive Policy 2020 was launched to promote new and more environment-friendly technology in the automotive industry. The Solid Waste and Public Cleansing Management (Scheme for Commercial, Industrial and Institutional Solid Waste) Regulations 2018 as well as the Solid Waste and Public Cleansing Management (Scheme for Construction Solid Waste) Regulations 2018 were enacted to ensure the separation at source of commercial, industrial, institutional and construction waste, thereby enabling proper treatment and disposal.

The institutional framework and financing capacities were strengthened to support green growth. The Climate Governance Malaysia initiative was set up in 2019 and the Malaysia Climate Action Council in December 2020, to improve the coordination of climate change actions by the government and private sector. A Joint Committee on Climate Change was also established in 2019 by Bank Negara Malaysia and the Securities Commission to create greater synergy in developing climate-related solutions for the capital and financial markets as well as to drive and coordinate the financial sector's collective response to climate risks. In supporting this, the climate change and principles-based taxonomy is being developed to enhance understanding and assessment of the risks. Guidelines were also provided for financial institutions, particularly Islamic financial institution to incorporate environmental, social and governance (ESG) risk considerations in their financing and investment decision-making processes. Meanwhile, the Sustainable Development Financing Fund and Public Transport Fund were set up in 2019 to facilitate private sector efforts in implementing sustainable development-related initiatives. To support environment-related education and awareness programmes, the *Amanah Lestari Alam* was established in July 2020. This institution will mobilise funds from the public and private sector as well as international organisations. Meanwhile, the ecological fiscal transfer (EFT) mechanism was implemented in 2019 to encourage the gazetting of protected areas by state governments. In the external trade sector, the Sustainablity-Action Values for Exporters (SAVE) programme was launched in 2019 to encourage exporters to embrace sustainable business practices. Initiatives under the SAVE programme included enhancing the adoption of sustainability best practices, identifying new niche markets for sustainable businesses and products as well as integrating Malaysian companies into the global sustainable supply change.

Various efforts were also undertaken to enhance stakeholder collaboration and monitor the implementation of environment-related initiatives. The Malaysia Sustainable Development Goals Summit was organised in November 2019 to increase awareness and share best practices in achieving the 2030 Agenda. The Sixth National Report to the Convention on Biological Diversity (CBD) was submitted in the same year to update on biodiversity achievements. In addition, the Third Biennial Update Report Malaysia to the United Nations Framework Convention on Climate Change (UNFCCC) (BUR 3) was submitted in December 2020 to communicate climate change-related initiatives undertaken at the national level.

Natural Resources Conservation

A number of initiatives were undertaken to enhance the quality of the ecosystems in terrestrial and marine areas. These initiatives include gazetting of protected areas, establishment of ecological corridors as well as restoration and reforestation. A total of 1,791 hectares under the Central Forest Spine (CFS) initiative were gazetted as protected areas between 2016 and 2019, increasing the total area gazetted to 31,938 hectares. During the same period, 242,201 hectares under the Heart of Borneo (HoB) initiative were gazetted as Totally Protected Areas, increasing the total area gazetted to 1,961,653 hectares. A total of 28.5 million trees were planted by government agencies and various stakeholders, exceeding the target of 25 million trees under the Eleventh Plan. Meanwhile, 136 hectares of land in Peninsular Malaysia, 1,337 hectares in Sabah and 2,224 hectares in Sarawak were planted with various tree species under the forest restoration programme in 2019.

Several initiatives were implemented to enhance the quality of coastal and marine ecosystems. Coastal areas planted with mangroves and other suitable species increased from 2,605 hectares in 2015 to 2,982 hectares in 2020. Marine spatial plans were developed for the Pulau Payar Marine Park in Kedah, Pulau Perhentian Marine Park in Terengganu as well as for the Pulau Besar Marine Park and Pulau Lima in Johor to designate areas for general use, recreation and conservation. In addition, 1,011,772 hectares of the Luconia Shoals National Park in Sarawak were gazetted as a new marine protected area in 2018.

Numerous programmes were implemented as part of wildlife conservation initiatives, including the establishment of wildlife sanctuaries and conservation centres. The first National Tiger Survey was carried out in 2016 to determine the population and distribution of tiger species and was completed by end of 2020. The National Tiger Conservation Centre, covering an area of 40 hectares in Lanchang, Pahang was established in 2019 to complement the existing National Wildlife Rescue Centre in Sungkai, Perak. The Johor Elephant Sanctuary in Kota Tinggi, covering an area of 15,000 hectares was also established in 2019 to address human-wildlife conflict through the relocation of wild elephants.

Operasi Bersepadu Khazanah, launched in 2019, is a strategic collaborative operation between the Royal Malaysian Police (PDRM) and the Department of Wildlife and National Parks (PERHILITAN). This operation is supported by several government agencies and civil society organisations (CSOs) to curb encroachment, poaching and illegal taking of wild fauna and flora. Similar operations were also conducted by PDRM in Sabah and Sarawak with relevant state agencies. As at November 2020, 82 poachers and 130 offenders were arrested, while 1,058 animal traps and snares destroyed. An estimated RM4.3 million worth of protected species were seized.

The inventory assessment exercise undertaken between 2016 and 2019 documented 18,324 biodiversity specimens, namely 11,927 flora, of which 185 were newly discovered plant species as well as 3,506 fauna, 1,993 insects and 898 fungi. In addition, initiatives were implemented to diversify ILCs income, including through involvement as nature tourist guides and participation in community-based enterprises. The appointment of ILCs as PERHILITAN staff has also enabled them to participate in conservation programmes. The Access to Biological Resources and Benefit Sharing Act 2017 [Act 795] was gazetted to regulate access to biological and genetic resources as well as ensure benefits from its utilisation are fairly and equitably shared.

Climate Change and Disaster Risks

Several mitigation actions were undertaken to reduce GHG emissions from the main GHG emitting sectors, including transport, industrial processes and product use, energy and waste. In the transport sector, the B10 biodiesel blend containing 10% palm methyl ester was introduced in 2019, while higher EURO 4M fuel standard for RON95 was implemented in 2020. In the industrial sector, the B7 biodiesel blend was introduced in 2019.

In the energy sector, the total RE installed capacity, mainly from solar and large hydro sources, increased from 6,059 megawatts (MW) in 2015 to 7,995 MW in 2020. As for energy-efficient related initiatives, the Minimum Energy Performance Standard and the National Building Energy Intensity (BEI) programmes were intensified. The EE labelling for domestic appliances was extended to include microwave ovens and electric rice cookers, increasing the number to eight appliances. Additionally, a total of 200 government buildings were labelled as energy-efficient under the BEI programme. As part of the green building initiative, 28 government premises, including 18 hospitals, were retrofitted to be energy-efficient. In addition, 108 industrial and 109 commercial buildings were audited and retrofitted. The Sustainable Infrastructure Rating Tool (Sustainable INFRASTAR) was launched in 2019 to encourage the construction of green infrastructure.

The national recycling rate of household waste increased to 30.7% in 2020, mainly through the implementation of waste separation at source and the reduce, reuse and recycle (3R) initiatives. In addressing the growing hazard of single-use plastics, the Roadmap towards Zero Single-Use Plastic 2018-2030 was launched in 2018. In addition, the National Cleanliness Policy, 2020-2030 was introduced in 2019 for Malaysia to become a clean, sustainable and prosperous nation. The policy also aims to further increase recycling initiatives among the public to support the waste-to-wealth agenda and contribute to environmental conservation efforts.

In strengthening resilience against climate change and disasters, a number of adaptation and risk reduction measures were undertaken, especially in the vulnerable sectors. By the end of 2020, 1.6 million people were protected from the impact of floods through the implementation of flood mitigation projects. In addition, 10 Integrated River Basin Management (IRBM) plans were completed by 2019 to enable a more integrated and coordinated management of natural resources in the river basins. Several Total Maximum Daily Load (TMDL) studies were completed during the Eleventh Plan period, including Sungai Semenyih and Sungai Beranang, to facilitate development planning. Seismic hazard areas are being mapped out to identify active faults, enabling appropriate measures to be put in place, thus enhancing preparedness and resilience to earthquakes. A total of 39 active fault monitoring benchmarks were installed in the seismic hazard areas to detect the deviation of the fault system from the predefined benchmark.

Issues and Challenges

During the Eleventh Plan period, a number of initiatives were implemented to pursue green growth in achieving environmental sustainability and resilience. However, several challenges have to be addressed to accelerate green growth. These include unsustainable consumption and production practices, loss of biodiversity as well as lack of a supportive enabling environment. Megatrends, such as globalisation, urbanisation and technology advancement will need to be managed in a sustainable manner to ensure minimal impact on the environment and biodiversity.

Issues and Challenges

- Unsustainable Consumption and Production Practices
- Loss of Biodiversity
- Lack of a Supportive Enabling Environment

Unsustainable Consumption and Production Practices

Most economic sectors in Malaysia have been practising the linear economy[2], which is inefficient in its use of resources, hence generating high volumes of waste. Such unsustainable consumption and production practices are detrimental to the environment and long-term economic resilience. These practices have also resulted in expensive clean-up and mitigation measures.

The improvements in living standards, advancement in technology and proliferation of products in the market have influenced consumption patterns and lifestyles. Although these changes have improved the quality of life, more waste is generated. Markets are also inundated with shorter lifespan, single-use and disposable products, with an increasingly complex mix of materials, including plastics and hazardous substances, which are difficult to manage safely. Meanwhile, non-compliance in handling effluent discharge into water resources increases the risks of emerging pollutants, thus threatening human health and ecosystems. For example, approximately 6,000 people were affected by the illegal dumping of toxic waste into Sungai Kim Kim, Johor in March 2019 and about RM8.5 million was spent to clean-up the river.

Malaysians generated about 38,150 tonnes of waste per day in 2018, an increase from 36,500 tonnes per day in 2015. This is equivalent to approximately 1.17 kilogram per capita per day, much higher than the global average of 0.74 kilogram[3]. Furthermore, clinical waste, particularly face masks, and household waste, mostly from food packaging have increased due to the COVID-19 pandemic. The recycling rate also remains low in Malaysia due to the apathy among the people and businesses. Approximately RM200,000 is spent per month in Kuala Lumpur alone to clear illegal dumping involving mainly construction and manufacturing waste[4].

As a result of rapid economic growth and urbanisation, cities face increasing demand for buildings, infrastructure, energy, water and other resources. According to the BUR 3, GHG emissions in 2016 accounted for approximately 334.6 million tonnes of carbon dioxide equivalent (CO_2eq), with about 75% from the energy sector, including transport. In addition, unsustainable development activities coupled with non-compliance with development guidelines have led to environmental degradation, consequently increasing disaster risks as well as threatening lives and economic activities. The average annual cost borne by the Government to mitigate floods rose from about RM3 million during the Second Plan period, 1971-1975, to approximately RM1 billion during the Eleventh Plan.

Loss of Biodiversity

The slow regeneration and overexploitation of natural resources exacerbate the pressure on biodiversity. Even though Malaysia has 55.3% of forested land, the forests are fragmented, resulting in lesser ecological connectivity and food availability for wildlife. This has adversely affected the habitat and population of wild fauna and flora, eventually contributing to human and wildlife conflicts. Habitat loss and illicit activities, such as poaching and illegal taking as well as illegal trade and consumption of wild fauna and flora, have threatened endangered species. In addition, the loss of biodiversity, changes in animal-human relations, and disturbance of ecosystem processes increase the risk of emerging zoonotic diseases.

[2] A conventional way of take-make-use-dispose approach where raw materials are extracted, then transformed into products that are used until they are finally discarded as waste.

[3] Urban Development Series: What a Waste 2.0 – A Global Snapshot of Solid Waste Management to 2050, World Bank Group, 2018.

[4] Source: Solid Waste and Public Cleansing Management Corporation

Inadequate efforts in conservation and lack of appreciation in valuing natural resources have resulted in the deterioration of biodiversity and ecosystems. There are also issues of genetically modified organisms (GMO) and biopiracy[5], which have threatened natural resource sustainability. In addition, the capacity to enforce Act 795 and manage GMO issues is still lacking.

The ocean is under stress due to pollution, unsustainable fishing practices and other economic-related activities. Despite their significant economic potential, the health of the ocean is deteriorating due to marine litter and debris, declining fish stock and decreasing live coral coverage. Approximately 15% of the Malaysian shoreline is threatened by coastal erosion.

River pollution has shown to be an increasing issue, which requires immediate attention. The number of polluted rivers increased from 33 in 2015 to 51 in 2017 out of 477 rivers monitored, whereas in 2019, 59 out of the 672 were polluted. The pollution is mainly caused by sewage and effluent discharge from agro-based and manufacturing industries, irresponsible earthworks and land clearing activities as well as disposal of waste. Polluted rivers cause water supply disruptions, and increase health and disaster risks as well as threaten aquatic life. Several pollution incidences between September and November 2020, at Sungai Selangor and Sungai Gong in Selangor as well as Sungai Batang Benar in Negeri Sembilan disrupted water supply to millions of consumers.

Lack of a Supportive Enabling Environment

The involvement of various authorities with different legislation poses serious challenges to the management of natural resources and the environment. There are also other governance-related issues, including limited enforcement capacity, inadequate monitoring, reporting and evaluation as well as insufficient R&D&C&I. The fragmentation, inaccessibility and lack of quality data have hindered comprehensive data analysis to support evidence-based and risk-informed decision-making. Limited financing has hampered the sustainability of environmental protection and biodiversity conservation efforts. There is also a lack of ownership and shared responsibility among stakeholders in effectively managing the environment and biodiversity, despite numerous efforts undertaken to enhance environmental awareness.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The Twelfth Plan will advance green growth by implementing the clean, green and resilient development agenda through the whole-of-nation approach. As Malaysia commits to conserve planetary health and aspires to become a carbon neutral[6] nation in the long-term, priority will be given to low-carbon and climate resilient sosioeconomic development as well as conservation of natural resources and ecosystems. Building upon the green growth initiatives of the Eleventh Plan, sustainability and resilience will be enhanced by addressing climate change and pollution, reducing disaster risks, managing natural resources efficiently and strengthening the enabling environment for effective governance. The strategies to be implemented include accelerating transition to the circular economy, promoting green and resilient cities and townships, enhancing green mobility, augmenting low-carbon energy and extending producer's responsibility as well as implementing evidence-based and risk-informed actions to increase resilience against climate change and disasters. Emphasis will also be placed on efforts to safeguard natural capital, ensure sustainable utilisation of resources and benefit sharing, strengthening of environmental governance, scaling-up green financing and instilling a sense of shared responsibility. The clean, green and resilient development agenda through the whole-of-nation approach is summarised in *Box 8-1*.

[5] Misappropriation of biological resources and traditional knowledge without proper compensation or payment.

[6] The balance between emitting carbon and absorbing carbon from the atmosphere in carbon sinks.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Advancing Green Growth for Sustainability and Resilience

Priority Area A

Implementing a Low-Carbon, Clean and Resilient Development

Strategy A1
Moving Towards a Low-Carbon Nation

Strategy A2
Accelerating Transition to the Circular Economy

Strategy A3
Sharing Responsibility in Pollution Prevention

Strategy A4
Increasing Resilience against Climate Change and Disasters

Priority Area B

Managing Natural Resources Efficiently to Safeguard Natural Capital

Strategy B1
Conserving Natural Ecosystems

Strategy B2
Protecting and Conserving Species and Genetic Resources

Strategy B3
Ensuring Sustainable Utilisation and Benefit Sharing

Strategy B4
Enhancing Conservation of Water Resources

Priority Area C

Strengthening the Enabling Environment for Effective Governance

Strategy C1
Strengthening Environmental Governance

Strategy C2
Scaling-up Green Financing and Investments

Strategy C3
Instilling Sense of Ownership and Shared Responsibility



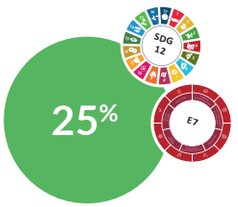
Twelfth Malaysia Plan: Selected Targets

Low-Carbon, Clean and Resilient Development



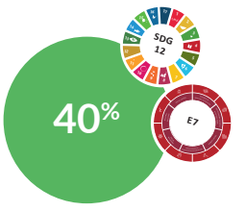
2030

Reduction in Greenhouse Gas (GHG) Emissions Intensity to GDP by 2030[7] Based on Emissions Intensity in 2005



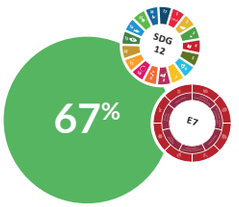
2025

Government Green Procurement



2025

Recycling Rate of Household Waste



2025

Reduction of Hydrochloroflourocarbon (HCFC) Consumption

Managing Natural Resources Efficiently



2025

Terrestrial and Inland Water Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures



2025

Coastal and Marine Areas Conserved through Gazettement and Other Effective Area-Based Conservation Measures



2025

Stabilisation of Tiger Population



2025

Implementation of the Integrated River Basin Management (IRBM) Plans

Strengthening the Enabling Environment for Effective Governance



2025

Introduction of the Policy on Disaster Risk Management (DRM)



[7] Malaysia's Nationally Determined Contribution to the Paris Agreement of the United Nations Framework Convention on Climate Change to reduce up to 45% greenhouse gas (GHG) emissions intensity to GDP by 2030 based on emissions intensity in 2005.

Box 8-1

Clean, Green and Resilient Development Agenda through the Whole-of-Nation Approach

The clean, green and resilient development agenda through the whole-of-nation approach, which is socially inclusive and sustainable, will be the way forward for green growth. Clean in the sense that it minimises environmental impact, green in that it is efficient in the use of natural resources and resilient in accounting for natural hazards.

Clean

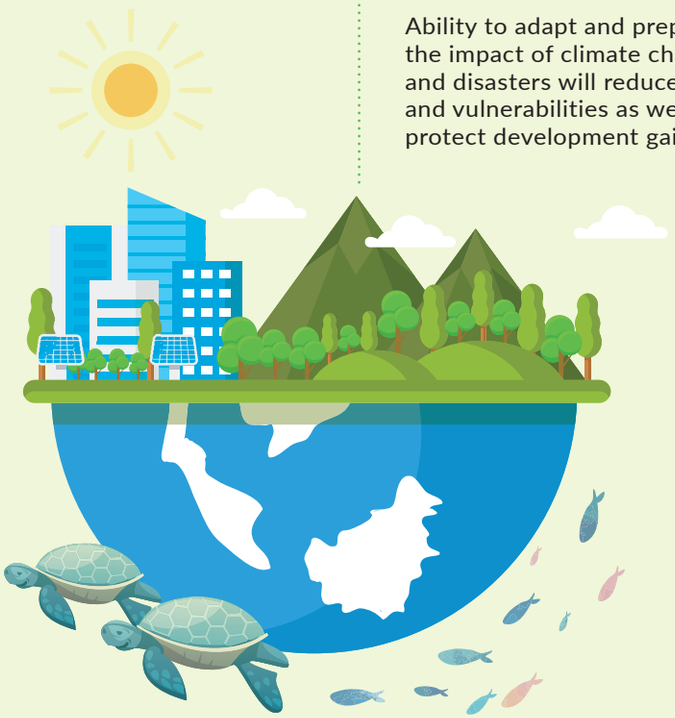
Socioeconomic development that is low-carbon, less polluting and resource-efficient will lead to a green economy, create new opportunities for growth and shift people's behaviour towards sustainable consumption and production practices.

Green

Conservation and protection of the natural capital will improve the health of ecosystems, enhance livelihood and ensure food security.

Resilient

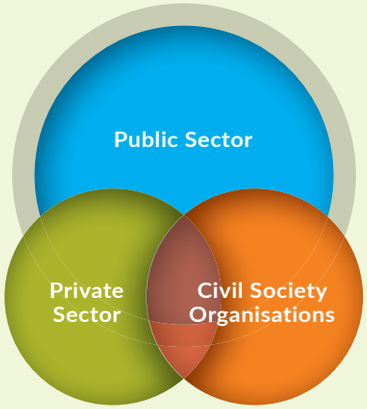
Ability to adapt and prepare for the impact of climate change and disasters will reduce risks and vulnerabilities as well as protect development gains.



The whole-of-nation approach is a holistic means to hold all stakeholders accountable in implementing the clean, green and resilient development agenda. Such an approach will intensify collaborative efforts and ensure complementarity of actions taken by stakeholders in addressing environment-related issues. In this respect, the public and private sectors, civil society organisations[1] (CSOs) and individuals will share responsibility in ensuring environmental sustainability and achieving the common goals of the 2030 Agenda. In addition, the financial services sector will play a key role in channelling capital to accelerate the adoption of sustainable business practices.

From

Current Collaboration Approach



To

Whole-of-Nation Approach



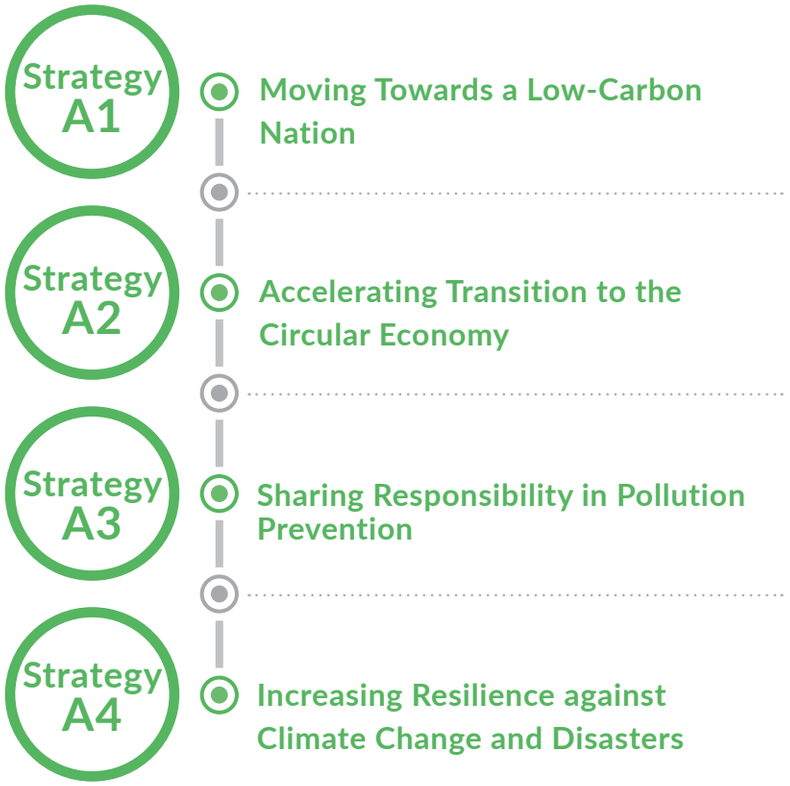
The 2030 Agenda reflects the common understanding that a healthy environment is integral to the full enjoyment of basic human rights, including the rights to life. Directly acknowledging the linkages between the environment and socioeconomic development present new and interwoven opportunities to meet the SDGs. Implementation of the clean, green and resilient development agenda will contribute towards planetary health, a green economy that is competitive and innovative as well as the achievement of Goals 2, 6, 7, 11, 12, 13, 14 and 15.

[1] Non-market and non-state organisations, which include community-based organisations, non-governmental organisations, labour unions, professional associations, chambers of commerce and independent research institutes.

Priority Area A

Implementing a Low-Carbon, Clean and Resilient Development

A low-carbon, clean and resilient development plan that gives due emphasis on planetary health and sustainability as well as resilience of the nation will be implemented to achieve sustained socioeconomic growth. Focus will be placed on efforts to attain a low-carbon nation status, accelerate transition to the circular economy and share responsibility in reducing pollution. In addition, climate change adaptation and risk reduction measures will be intensified to protect development gains and enhance the resilience of the nation in withstanding the impact of climate change and disasters.



Strategy A1

Moving Towards a Low-Carbon Nation

The Government will continue to address climate change across all sectors. In this regard, collaborative efforts among Federal, state and local governments as well as the private sector and CSOs will be intensified to support the transition to a low-carbon nation. This collaboration is particularly critical in the main GHG emitting sectors, namely energy, transport, industrial processes and product use, waste management, agriculture, forestry and land use. In fulfilling Malaysia's commitment to the Paris Agreement of the UNFCCC to reduce up to 45% GHG emissions intensity to GDP by 2030 based on emissions intensity in 2005, the focus will be on developing enabling instruments for climate action, including carbon pricing. In addition, efforts will also be focused on promoting green and resilient cities and townships, enhancing green mobility and augmenting the consumption of low-carbon energy as well as expanding the green market and GGP. More private sector companies will be encouraged to declare their aspiration to achieve net zero carbon emissions by 2050. Among the institutions and companies that have declared their Race to Zero[8] initiative include the Employees' Provident Fund (EPF), PETRONAS, Osel Group, Sunway Group, Tai Wah Garments Industries Sdn. Bhd. and Sarawak Energy Berhad. The Kuala Lumpur City Hall has also announced its aspiration to become a net zero carbon city by 2050. The commitment for a more ambitious climate outcome and collaboration among all stakeholders will bring the country towards a more sustainable future and contribute to the achievement of Goals 7, 11, 12 and 13 of the 2030 Agenda.

Developing Enabling Instruments for Climate Action

In line with the aspiration to become a carbon neutral nation in the long-term, robust enabling instruments for climate action will be introduced. In this regard, a Nationally Determined Contribution roadmap will be developed to devise specific mitigation action plans in fulfilling the country's commitment to the Paris Agreement. The roadmap will specify the amount of emissions that need to be reduced from each of the key GHG emitting sectors. Multi-scenario analyses and detailed studies will also be undertaken to formulate long-term low emission development strategies as well as assessing the cost and implications to the country in achieving carbon neutrality. In addition, a feasibility study will be conducted on carbon pricing, such as carbon tax and the Emission Trading Scheme. The study will recommend the most suitable carbon taxation system to incentivise the right behavioural changes and introduce a platform for

[8] Race to Zero initiative mobilises actors outside of national governments to join the Climate Ambition Alliance, which was launched at the United Nations Climate Action Summit 2019.

carbon trading. These instruments will also help mobilise investments required in stimulating the development and utilisation of green technologies as well as green market innovation, thus promoting low-carbon economic growth.

Promoting Green and Resilient Cities and Townships

Cities and townships development, including industrial estates, will adopt the green and resilient city concepts, such as the low-carbon city, sponge city[9], smart city and equitable transit-oriented development[10] (eTOD). The implementation of these concepts will address the issues of climate change and disaster risks as well as promote efficient resource use. As such, green and resilient city tools, including the building information modelling, Malaysian Smart City Framework and Planning Guideline for Disaster Resilient City in Malaysia will be adopted in cities and townships development. A master plan for low-carbon cities will be introduced to guide and coordinate low-carbon initiatives at the local levels. In addition, public and private development projects will be required to adhere to the land use policies in designated development areas as prescribed in the National Physical Plan, State Structure Plan, Local Plan or Special Area Plan. Meanwhile, the development of sustainable and resilient infrastructure and buildings as well as promotion of environment-friendly construction materials will be among the focus areas in the construction sector.

The adoption of green certification tools during the construction and operation phases, such as the Sustainable INFRASTAR, Malaysian Carbon Reduction and Environmental Sustainability Tool (MyCREST) and Malaysia Green Highway Index, will be expanded to more government buildings and infrastructure projects. The private sector will be urged to adopt recognised green certification and performance tools for new development projects as well as renovation and retrofitting works. Developers of residential and commercial projects will be encouraged to facilitate urban and communal farming as well as increase, revive and maintain green and blue spaces to regulate microclimate and increase resilience in urban areas as well as promote recreational activities. Sense of ownership and responsibility among the community will be enhanced to jointly create, manage and maintain green and blue spaces as well as public properties. Malaysian Urban Observatory system will also be introduced to enable integrated town development and improve efficiency in city operations and management. The performance of green and resilient cities and townships will be monitored to enable continuous improvement in attaining sustainable development.

[9] The type of city that acts like a sponge, absorbing rain water, which is then naturally filtered by the soil and allowed to reach into the urban aquifers.
[10] Transit Oriented Development (TOD) efforts that are undertaken with an explicit commitment to achieve equity goals through dedicated strategies in ensuring low-income residents benefit from the new development.

Enhancing Green Mobility

Greening the mobility of people and goods will be the main consideration in urban and rural planning. In this regard, a low-carbon mobility blueprint will be introduced to guide the planning, implementation, monitoring and evaluation of green mobility initiatives. The blueprint will outline strategies to reduce GHG emissions from the transportation sector as well as accelerate the shift to green mobility, particularly low-carbon public transport and active mobility. Accessibility, connectivity, safety and reliability of public transport will be further improved. Simultaneously, micro-mobility[11] services for first- and last-mile connectivity, which enable seamless movement, will be expanded to increase access to public transport. In promoting active mobility, pedestrian and cycling infrastructure will be enhanced to be user-friendly, connected, safe and comfortable. This enhancement includes traffic calming measures and natural shading for pedestrian walkways. To ensure effective implementation of green mobility initiatives, master plans and design guidelines for green mobility at the local level will be developed, while relevant legislation at the Federal and state levels will be reviewed.

The usage of green vehicles, which reduce air pollution and GHG emissions, and increase energy efficiency, as a preferred mode of transport will be promoted to drive the transition to green mobility. Incentives provided to local manufacturers to produce green vehicles and the purchase of these vehicles by consumers will be reviewed. In addition, an energy-efficient driving programme[12] for all classes of vehicles will be made mandatory. Adoption of fuel economy standards to increase fuel efficiency for new vehicles will also be encouraged.

The B20 biodiesel programme that contains 20% palm methyl ester will be expanded throughout the country in stages, while the B30 programme will be introduced at the end of the Twelfth Plan to further increase the use of biofuel. Alternative fuel sources, including compressed natural gas, hydrogen energy and fuel cell will also be expanded. The use of green vehicles, particularly for public transport as well as logistics and delivery services will be expanded, while the shift of freight transport mode from road to rail will be further encouraged. Carbon impact assessment for the transport sector will be developed. A study to identify mechanisms in phasing out old vehicles in a sustainable manner will also be undertaken.

[11] The joining of every different form of transport, especially smaller vehicles to ensure quick and easy as possible journeys, particularly for the first- and last-mile.
[12] Training that incorporates energy-efficient driving techniques as a requirement to obtain driving licenses and permit applications.

The private sector will be encouraged to invest in advancing next generation vehicles, technologies and supporting infrastructure, such as energy-efficient, hydrogen-powered and electric vehicles, and their charging stations. In relation to this, triple-helix[13] collaboration will be intensified, while the green-related incentive schemes will be enhanced. These schemes include the Green Technology Financing Scheme (GTFS), Green Investment Tax Allowance (GITA) and Green Income Tax Exemption (GITE). In addition, the private sector will also be encouraged to uptake recognised green labelling for next generation vehicles and technologies. The enabling ecosystem, in terms of policies, legislation, standards, incentives and best practices, will be strengthened to facilitate private-driven initiatives and ensure effective implementation of the green mobility agenda.

Augmenting Low-Carbon Energy

Efforts to pursue low-carbon energy through RE and EE will be scaled-up to reduce GHG emissions. The development and utilisation of RE sources will be intensified to meet the 31% RE target of total installed capacity. The RE industry will be encouraged to venture into floating solar and waste-to-energy projects. Apart from large hydro and solar, focus will also be on increasing the contribution from other renewable sources, such as biomass and biogas. The use of existing and new technologies, namely cogeneration, solar thermal and fuel cell will be further promoted to expand options available to the industry. In addition, the Renewable Energy Certificate[14] will be promoted to enable procurement and trading of RE.

Energy efficiency plays an important role in reducing energy usage. As such, the use of energy by high-intensity consumers in the industrial and commercial sectors will be regulated through the introduction of the EE and conservation act. Meanwhile, to promote EE, Energy Audit Conditional Grants will continue to be provided to selected industrial and commercial sectors.

PETRONAS has declared its target to achieve net zero carbon emissions by 2050. The company has put in place plans to deliver clean energy and low-carbon solutions globally. PETRONAS will also undertake several initiatives, including reducing hydrocarbon flaring and venting, capturing methane emissions and optimising production and operations. Other initiatives include increasing efficacy in providing low-carbon energy and solutions, such as natural gas and RE; developing low and zero carbon fuels, products and solutions; and investing in nature-based solutions by preserving and restoring the capacity of forest ecosystems to act as carbon sinks.

Expanding the Green Market and Government Green Procurement

A sustainable green market is fundamental in supporting green growth. In this regard, the green market will be expanded by increasing demand for local green products, services and technologies as well as encouraging the private sector to undertake green procurement. These initiatives will expand the green business. To enhance capability and prevent greenwashing[15], local industries, especially micro, small and medium-sized enterprises (MSMEs), will be encouraged to participate in green industry development programmes, including capacity building, certification, dissemination of information and business matching. Local industries will also be encouraged to adopt recognised green labelling and undertake triple-helix collaboration in developing new green products. Accordingly, initiatives to facilitate industries to obtain green labels will be enhanced by providing appropriate financial mechanisms and technical expertise.

The GGP initiative will be expanded to state governments and local authorities. More local green products and services will be made available to support the expansion. The GGP implementation will also be expanded to include procurement of works for construction and renovation. This will be the catalyst in greening the construction sector. Green labels, designs and methods as well as the use of green and recycled materials will be promoted. To further promote green construction, a short-term action plan and guidelines for GGP works will be developed. Meanwhile, the promotion of green products and services, including green buildings and infrastructure, will be intensified to boost demand from the private sector and the general public. In addition, the sustainable consumption and production (SCP) blueprint will be implemented to encourage sustainable business practices and lifestyles. The implementation of SCP practices will improve resource efficiency and cost effectiveness, while reducing environmental impact.

[13] Collaboration among three key players, namely academia, industry and government, working together to foster and accelerate innovation to address challenges faced by society.

[14] Mechanism that enables consumers to have a choice to procure RE through green tariff offerings, known as MyGreen+ as well as the opportunity to track and trade RE through Malaysia Green Attribute Tracking System platform.

[15] An act of conveying a false impression or providing misleading information that a company's product is environmentally sound.

Strategy A2

Accelerating Transition to the Circular Economy

The transition from the conventional linear economy to the circular economy is needed to create more sustainable and responsible businesses and investments. It represents a systemic shift towards long-term resilience, which will generate green businesses and new economic opportunities, as well as provide environmental and societal benefits. As Malaysia embraces the circular economy, adoption of the whole-of-nation approach, and integration of the SDGs and ESG principles into decision-making will be promoted. Among initiatives that will be implemented to expedite this transition include creating an enabling ecosystem, improving design and processes of products and services, extending producer responsibility and strengthening waste management. These initiatives are in line with Goals 6, 7, 11, 12, 13, 14 and 15 of the 2030 Agenda. The circular economy concept is summarised in *Box 8-2*.

Creating an Enabling Ecosystem for the Circular Economy

Businesses, especially MSMEs, will be encouraged to adopt the circular economy concept in the design, production, logistics, consumption and waste management of products and services. In this respect, an enabling framework will be developed as guidance for the economic sectors to shift to the circular economy. It will map the entire value chain of products and services as well as the stakeholders involved. A blueprint for the circular economy related to solid waste, plastics, scheduled waste and agricommodities will also be introduced to deliver better system-wide economic and environmental outcomes. Relevant policies, legislation and economic instruments will be developed to facilitate the transition to the circular economy. Meanwhile, R&D&C&I and smart partnership among stakeholders will be intensified to boost the implementation of the circular economy.

Improving Design and Processes of Products and Services

The design of products and services plays a key role in determining resource efficiency and promoting the circular economy. Therefore, businesses will be encouraged to design products that are more durable, repairable, reusable and recyclable as well as use recycled materials as inputs. They will also be encouraged to uptake recognised green labelling. Relevant policies and legislation will be reviewed to incorporate eco-design requirements, including the use of recycled materials. Environmental benchmarks, in terms of recycled content criteria, safety levels of recycled materials and chemical content, will also be incorporated in the review. Meanwhile, economic instruments, such as GTFS, GITA and GITE will be leveraged to support businesses in producing green products and services. More sharing economy models, including product-as-a-service will be introduced to encourage sharing the use of products and services as well as facilities.

Adoption of green technology in industries will result in more efficient resource-use and production cost savings. In the circular economy, optimisation strategies will entail increased recycling of production waste and use of recycled materials in creating new products as well as reverse logistics[16]. In relation to this, the minimum content of recycled materials and sustainable sourcing standards will be set. In supporting this, the triple-helix collaboration for innovation will be intensified, particularly in undertaking R&D&C&I for high-value products from waste as well as adopting best practices. Businesses will also be encouraged to invest in development of green technologies and products as well as waste recycling industry. Companies undertaking local waste recycling activities that are high-value added and use green technologies are eligible for Pioneer Status or Investment Tax Allowance under the Promotion of Investments Act 1986. These activities include the recycling of agricultural waste or agricultural by-products, recycling of toxic or non-toxic waste, recycling of chemical and reclaimed rubber as well as the production of reconstituted wood-based panel boards or products. To be eligible, companies are only allowed to recycle waste obtained within Malaysia, and importation of waste from overseas are prohibited.

Implementing Extended Producer Responsibility

Extended producer responsibility (EPR) is a policy approach where producers are held responsible for the treatment and disposal of post-consumer products, either through self-undertaking or financial contribution. Assigning such responsibility will incentivise producers to reduce waste at source and promote the production of environment-friendly products. In this regard, a new regulation on household electrical and electronic waste (e-waste) will be introduced to implement the EPR for e-waste. The EPR approach will also be extended to cover other types and streams of waste, particularly packaging materials and single-use plastics. Accordingly, relevant regulations, economic instruments and monitoring mechanisms will be put in place to enable producers and retailers to implement the EPR for other type of waste. Implementation of EPR will be supported through the take-back system by producers or brand owners as well as the adoption of the user-pay and polluter-pay principles.

[16] The process of implementing, controlling and planning the cost-effective flow of finished goods, raw materials, and in-process goods. The flow is from the point of consumption (i.e. the customer) to the point of origin (i.e. manufacturer), for proper disposal or to recapture value.

Box 8-2

The Circular Economy Concept

What is Circular Economy?

Most sectors in Malaysia are practising the linear economy, which is resource-intensive and inefficient, generates high volumes of waste, emits greenhouse gases and causes pollution. Given the fast depletion, slow regeneration and the deterioration of natural resources, there is an urgent need to shift to the circular economy. Such an economy emphasises on returning resources into environmental and economic systems through reuse and waste prevention[1] initiatives, thus reducing material loss. A design for circularity is the starting point in the development of any new product or service in the circular economy, with durability, reuse, repair, recycling and remanufacturing in mind. The circular economy will be achieved through improved product design and manufacturing, innovative sharing economy models[2] and enhanced recycling mechanisms. A transition to the circular economy will yield significant efficiency gains and cost effectiveness, reduce dependency on natural resources and pressure on the environment as well as address climate change. It will also deliver a more innovative and competitive economy as well as create new opportunities for green growth.

Linear Economy vs. Circular Economy

The linear economy traditionally practices the take-make-use-dispose approach, whereby raw materials are extracted, then transformed into products that are used until finally discarded as waste. Hence, economic value is created by producing and selling as many products as possible. In contrast, the circular economy follows the reduce, reuse and recycle (3R) approach, whereby resource use is minimised, reuse of products maximised and materials are recycled into the manufacturing loop. In the circular system, economic value is created by focusing on conservation. The differences between the linear economy and the circular economy are shown in the table below:

Component	Linear Economy	Circular Economy
Approach	Take-make-use-dispose	Reduce-reuse-recycle
Resource Use	Resource-intensive	Resource-efficient
System Boundary	Short-term use	Long-term use and multiple lifecycles
Reuse	No reuse	Repair and reuse
End-of-Life	Disposal	Recovered and recycled (only unavoidable waste will be disposed)

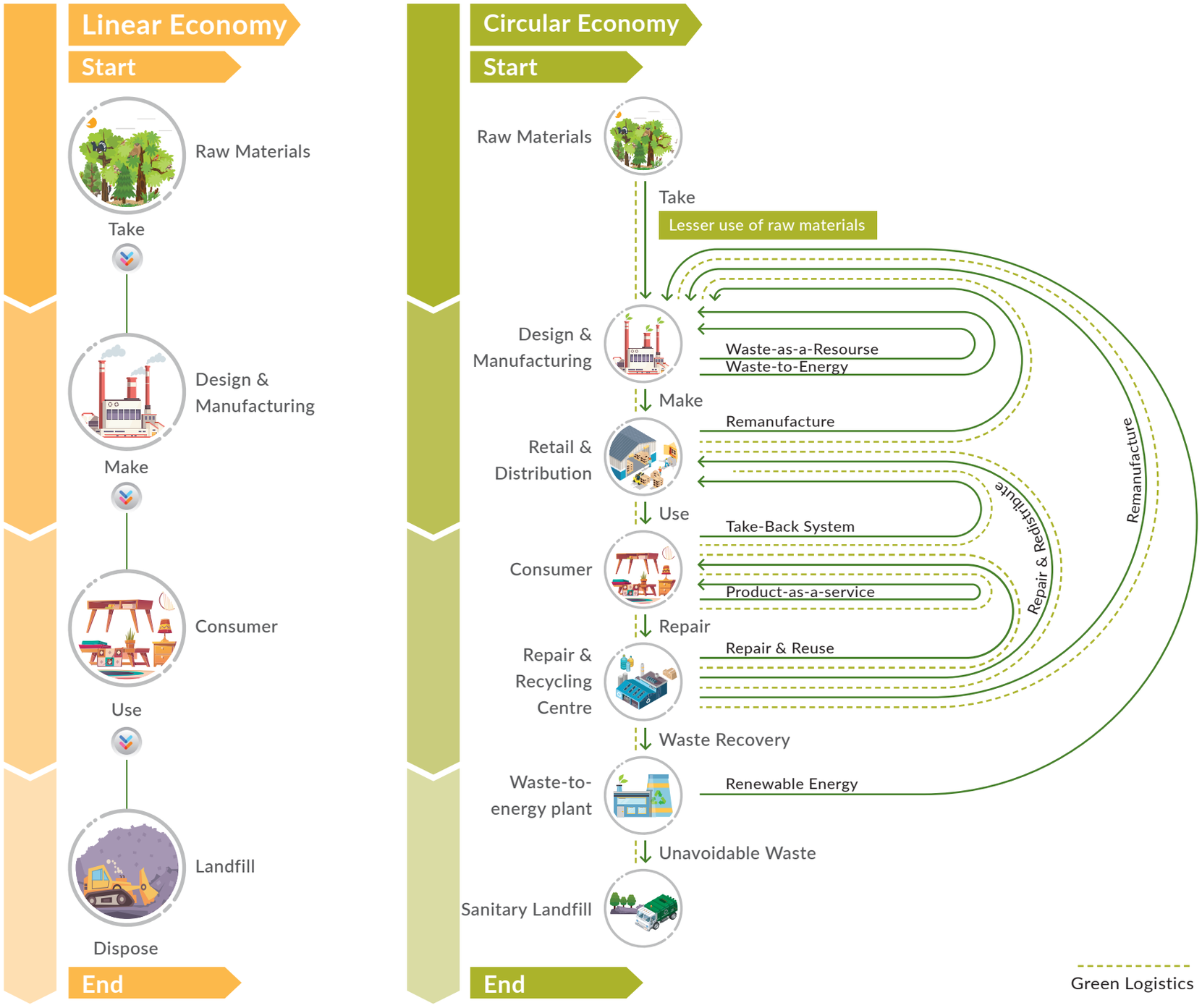
How the Circular Economy Works?

The circular economy can be illustrated through the manufacturing of wooden furniture as depicted in *Figure 1*. Raw materials are sustainably sourced through selective harvesting from sustainable forest plantations. Resource-efficient manufacturing will enable production waste to be fed back into the process to make other products or generate renewable energy. In the circular economy, products will be eco-labelled and designed to be of high quality, durable, repairable, reusable and recyclable. Hence, products lifespan can be maintained as long as possible and damaged products can be repaired and reused. Products beyond repair, can then be recovered and recycled, and subsequently fed back into the manufacturing loop as inputs for new products or renewable energy generation. This will reduce the sourcing of raw materials needed for production. Only unavoidable waste that cannot be reused or recycled will be disposed at sanitary landfills. The entire circular economy supply chain is supported by green logistics.

[1] The Circular Economy in Cities and Regions, Organisation for Economic Co-operation and Development (OECD), 2019.
[2] An online platform that allows customers to have access to, rather than owning the assets. Examples of sharing economy model include Airbnb, Grab and SOCAR Malaysia.

Figure 1

Linear Economy vs. Circular Economy



Best Practices of Circular Economy

The circular economy is being adopted in many parts of the world. The concept focuses on resource efficiency and the 3R approach. The circular economy promotes, among others, eco-design, ban of single-use plastics and utilisation of biodegradable plastic bags for organic waste. The implementation of the circular economy concept covers the whole product value chain, which includes setting regulations and guidelines as well as in the application of economic instruments.

Production

Design guidelines for polyethylene terephthalate (PET) bottles

The European PET Bottle Platform has published design guidelines for PET bottles, including additives, closure systems, liners, labels and other components, to facilitate recyclability. Among others, the guidelines clearly discourage the use of polyvinyl chloride colloquial (PVC) in any part of the bottles and propose the use of recyclable materials, such as polyethylene (PE) or polypropylene (PP). In 2019, many international producers and brands made a commitment to phase out PVC in labels and packaging, and to use at least 25% of recycled plastics in their bottles. This minimum share of recycled content will become mandatory in all European countries in 2025, and subsequently increased in the years after.

Consumption

Ban of single-use plastics

The municipalities of Basel and Bern in Switzerland (2019), Munich in Germany (1992) and Vienna in Austria (2011) have introduced policies mandating the use of reusable cups, dishes and bottles for all public events. In many cases, a mandatory deposit-refund system is required to ensure that reusable items are handed-back to food stalls or event organisers. Many public events prefer the use of reusable and sturdy plastic cups as they are considered safe. These policies have drastically reduced plastic waste generation at public events. Generated waste at food stalls, mostly comprising food waste and tissues, will be recycled as compost or biogas.

Bali, Indonesia introduced a ban of single-use plastics, such as shopping bags, styrofoam and straws in December 2018, targeting producers, distributors, suppliers and businesses. After a grace period of six months, business institutions that do not comply will have their permits withdrawn. Meanwhile, in tackling the issue of plastic pollution, the implementation of an additional tourist tax is being considered to finance beach clean-ups.



Reuse

Reusable beverage bottles

Use of reusable beverage bottles has environmental advantages over single-use bottles and cans. In Germany, a mandatory deposit-refund system for all beverage containers has created a level playing field. All producers of beverage bottles are required to contribute in a joint take-back mechanism. With the system, consumers are motivated to return all beverage containers and get paid for each returned bottle. This initiative has increased the share of reusable bottles.

Waste collection

Biodegradable plastic bags for the collection of organic waste

The city of Milan, Italy promotes the use of biodegradable plastic bags for the collection of household food waste. The bags are compostable and can be co-processed with the collected food waste at biogas and composting plants. Following the introduction of this mechanism in 2012, collection rates for biowaste increased from approximately 35% to almost 60% and Milan ranks among the highest in Europe.

Strengthening Waste Management

In moving towards zero-waste, solid waste management will be strengthened to ensure compliance with existing standards. The enforcement of waste separation at source and the implementation of the 3R initiatives will be intensified, especially in urban areas. The provision of waste collection, separation and recycling facilities will be increased, particularly in residential, institutions and commercial areas. States which have not adopted the Solid Waste Management and Public Cleansing Act 2007 will be encouraged to formulate or amend the relevant by-laws or ordinance to ensure all types of waste are managed holistically. Enforcement of the Solid Waste and Public Cleansing Management (Scheme for Commercial, Industrial and Institutional Solid Waste) Regulations 2018 and the Solid Waste and Public Cleansing Management (Scheme for Construction Solid Waste) Regulations 2018 will ensure all waste are separated at source to enable proper treatment, recycling and disposal. A comprehensive database for all types of waste will also be developed for better monitoring and to support the circular economy initiatives.

In order to further enhance the effectiveness of waste management, a number of integrated waste management facilities will be constructed. These facilities will incorporate a material recovery facility to sort and separate waste; treatment facility, including anaerobic digester, composter and incinerator; as well as a sanitary landfill. The use of these integrated facilities will be optimised to manage different types of waste, such as solid and industrial wastes as well as sewage, therefore enabling a systematic, holistic and sustainable waste management. The construction of these integrated facilities will enable treatment of about 95% of waste and only 5% will be disposed at sanitary landfills. In increasing local waste recycling, recovery and treatment activities as well as to accelerate the transition to the circular economy, the establishment of waste eco parks and development of waste management technologies will be encouraged. Over time, all open landfills will be safely closed and import of waste will be ceased.

Single-use products, including plastics and packaging materials will be discouraged, particularly in eateries and at public events through collaboration with relevant stakeholders, including restaurants and shopping complex owners as well as public event organisers. The stakeholders will instead be encouraged to utilise hygienic, environment-friendly and convenient alternative solutions, such as reusable, biodegradable or sturdy wares.

Existing legislation, including Act 127 and the Customs Act 1967, will be reviewed to enable stringent and robust enforcement, monitoring and control of waste imports and exports. The recent amendments on classification of plastics under the Basel Convention on the Control of Transboundary Movements of Hazardous Wastes and Their Disposal will be enforced in 2021. Following this, exporting countries will have to attain prior informed consent from importing countries before transboundary shipping of waste takes place. In addition, on-site inspections and verification for all types of imported waste will be enhanced. This is to ensure waste brought into the country is safe to be treated and recycled as materials for production, thus supporting the circular economy. Simultaneously, efforts to track and weed out illegal waste operators will be escalated and stiffer penalties imposed to curb illegal operations.

Strategy A3

Sharing Responsibility in Pollution Prevention

The responsibility to protect the environment will be shared between the government and all stakeholders. In preventing pollution, planetary health will be mainstreamed in policies, and development planning and implementation. Accordingly, efforts will be intensified to prioritise environmental health as well as implement environmentally sound management of chemical and hazardous substances. These efforts are in line with Goals 6, 11 and 12 of the 2030 Agenda and will contribute to a healthier environment as an integral part of a better quality of life.

Prioritising Environmental Health

Acknowledging the linkages between the environment and human health, it is imperative to prioritise environmental health to reduce potential risks to all living things, especially humans. In addressing environmental issues effectively, including emerging issues, Act 127 will be reviewed. Existing regulations, master plans and guidelines will be enhanced, while new ones will be put in place. These include the introduction of regulation on household e-waste, master plan on clean air and guidelines for managing end-of-life vehicles as well as green practice modules for chemical and scheduled waste industries. Environmental enforcement efforts will be intensified and improved through smart surveillance and enforcement systems, online system for self-regulation among industries, hydrocarbon fingerprinting to address marine oil spills and environment geospatial information system. In addition, a special task force involving environment-related enforcement agencies and PDRM was established in September 2020 to combat environmental crime through strategic collaboration. In enabling immediate action to be taken against environmental criminals, the task force will be empowered to enforce Act 127 and the Water Services Industry Act 2006. Meanwhile, studies to determine the carrying capacity of the atmosphere, river and soil in absorbing pollutants, particularly in high-risk areas will be undertaken to facilitate enforcement efforts.

The prescribed activities under the Environmental Impact Assessment (EIA) will be enhanced to strengthen environmental management. In supporting this, studies on the effectiveness of the EIA and the introduction of the Strategic Environmental Assessment[17] (SEA) will be undertaken. The Fisheries Act 1985 will be revised to incorporate impact assessment of coastal area development on the fisheries ecosystem. In addition, health and social impact assessments will be enhanced to support evidence-based and risk-informed decision-making.

In line with the concept of cleaner production, premise owners and developers will be required to prevent pollution or reduce its emissions at source through better preventive and emission control measures. They will also be required to submit regular reports to the relevant authorities. As such, new environmental pollution prevention requirements as stated in Act 127 and other standards, including the JKR Standard on Environmental Protection and Enhancement Works, will be imposed. In enhancing the adherence of industries to environmental regulations and standards, technical training in relevant fields as well as professional certification programmes for the industry players will be enhanced.

The implementation of the Malaysia Hydrochlorofluorocarbons (HCFC) Phased-Out Management Plan (HPMP Stage 2) (2017-2022) will be expedited to eventually eliminate the use of ozone depleting substances in foam, refrigerant and air conditioning production. This will also spur utilisation and adoption of better technologies and alternative materials, thus resulting in cleaner and safer industrial processes. With the ratification of the Kigali Amendment to the Montreal Protocol on Substances that Deplete the Ozone Layer, processes and procedures will be put in place to phase-down hydrofluorocarbons (HFC) use. The phasing down of HFC consumption will contribute in mitigating climate change.

Implementing Environmentally Sound Management of Chemical and Hazardous Substances

Environmentally sound management of chemical and hazardous substances, and their waste is critical in controlling and minimising risks from these substances. In this regard, a dedicated task force will be established to coordinate and oversee the overall management of chemical and hazardous substances, from the production to disposal stages. A detailed study will be undertaken to formulate a comprehensive regulatory framework and strengthen its governance to be at par with international best practices. In line with this, a new regulation will be introduced, while relevant legislation, including Act 127, the Occupational Safety and Health Act 1994 and the Poison Act 1952 will be reviewed. Under this new regulation, notification and reporting of production, import, export, utilisation and management of these substances will be made mandatory. A mechanism to monitor movement of chemical and hazardous substances and their waste will also be introduced. Integrated scheduled waste treatment and disposal facilities will be constructed to enable recovery, treatment, recycling and sound management of the waste, therefore minimising illegal dumping. By end of 2025, the target is to increase the recycling rate of scheduled waste to 35%.

Implementation of the Strategy and Action Plan for Chemical Management will be accelerated. The import and export of selected mercury-containing products will be banned. The use of mercury and its compounds in manufacturing processes as well as the use of environmentally harmful pesticides and toxic chemicals will be phased-out. These substances will be replaced with environment-friendly alternatives. Triple-helix collaboration will be further encouraged to undertake R&D&C&I in developing more environment-friendly products.

Strategy A4

Increasing Resilience against Climate Change and Disasters

Climate change exacerbates the scale and intensity of natural hazards and extreme weather events, consequently increasing climate-related disaster risks. Floods, drought, landslides, earthquakes, tsunamis as well as health-related disasters, threaten human wellbeing, disrupt economic activities and destroy the environment. These make resilience against climate change and disasters an important consideration in socioeconomic development. In relation to this, evidence-based and risk-informed actions as well as integrated approaches for climate change adaptation and disaster risk reduction will be undertaken in development planning. Early warning systems as well as disaster response, preparedness and recovery measures will be strengthened. These initiatives will enhance the resilience of the nation to withstand the impact of climate change and disasters, in line with Goals 11 and 13 of the 2030 Agenda.

Implementing Evidence-Based and Risk-Informed Actions

Climate change impacts and disaster risks will be taken into account in policy planning and implementation to enable evidence-based and risk-informed actions. Vulnerability assessments will be expanded, covering more high-risk and sensitive areas, communities and sectors, including flood-prone areas, human health and the agriculture sector. Cross-sectoral collaboration between government agencies and all other stakeholders will be strengthened for a more coordinated

[17] SEA is a proactive and comprehensive process, which identifies and evaluates the significant environmental and sustainability implications of particular plans, programmes and policies to ensure that they are fully considered and addressed at the earliest stages of decision-making.

and effective implementation as well as better decision-making. In addition, relevant data will be made available to the stakeholders, while data sharing processes and protocols will be developed to ensure better data integration.

Monitoring and assessment of natural hazards will be enhanced to further improve disaster preparedness and response measures. A multi-hazard data centre and risk register platform will be established for efficient data and information sharing. The ability of hydroclimate models to represent the dynamical process and project precipitation variation will be enhanced. These hydroclimate models will be integrated with multi-hazard risk assessments to incorporate climate variabilities, sea-level rise, storm surges and abnormally high tides. In addition, multi-scale hazard and risk maps will be expanded to cover more areas, in order to mitigate the impact on vulnerable communities and sectors.

Studies have shown that loss of biodiversity, ecosystem degradation and climate change have a direct impact on the spread of zoonotic diseases and vector-borne diseases, such as rabies, Japanese encephalitis and dengue. As such, research will be intensified on climate-sensitive diseases, especially vector-, water- and air-borne diseases as well as illnesses due to the deteriorating environmental quality. This extensive research would contribute to finding cures for diseases and establishing standard operating procedures to control their spread.

Adopting Integrated Approaches for Climate Adaptation and Disaster Risk Reduction

Inclusive planning and integrated approaches will be adopted in addressing climate change and disaster risks. A national policy on disaster risk management and multi-level disaster resilience plans as well as a national adaptation action plan will be developed. These will be integrated into the local, structural and sectoral development plans to improve planning and implementation of appropriate measures. A framework will be developed to outline adaptation and risk reduction measures for geological hazards, including earthquake and submarine landslides. These measures will be incorporated in the revision of all relevant spatial plans. In addition, scientific and indigenous knowledge will be assimilated to improve planning and implementation of measures, which will address the complexity and dynamicity of the impact of climate change and disasters.

Adoption of integrated approaches, combining structural and non-structural initiatives, will be expanded to enhance resilience as well as ensure sustainability and cost effectiveness. In relation to this, developers will be further encouraged to include site hazard mapping, disaster preparedness plans and disaster insurance in project implementation. In supporting this, the socioeconomic impact of climate change and disasters will be quantified to better understand and manage the implications of such events. Nature-based adaptation and risk reduction measures will also be enhanced through green cover expansion and coastal improvement as well as watershed, wetlands and river conservation. Technologies, including artificial intelligence sensors and alert systems, will be leveraged to ensure more effective disaster response.

Enhancing Early Warning Systems and Disaster Response

Early warning systems and disaster response will be enhanced to ensure at-risk communities are better prepared to take action ahead of impact, thus saving lives and minimising property losses. The use of big data analytics and artificial intelligence in forecasting and early warning systems will enable better prediction and mitigation of disaster risks. The integrated weather and flood forecasting and early warning system for floods will be expanded to cover more high-risk river basins. The earthquake monitoring system and early warning system for tsunamis will also be enhanced for better response. Collaboration with all stakeholders, particularly the private sector, will be intensified to effectively disseminate early warning information to the public.

Coordination among disaster management-related agencies will be strengthened to further improve the efficiency of disaster response measures, including health-related disasters. This will be supported by increasing the number of technical training and simulation exercises, including with regional and international disaster response teams. Stakeholders, particularly the private sector and CSOs, will also be urged to be actively involved in disaster response and recovery efforts. Community-based Disaster Risk Management and Civil Defence Emergency Response Team for Community programmes, led by disaster management-related agencies as well as local stakeholders, will continue to be implemented to empower local communities to undertake early disaster response. The capability of communities living in disaster-prone areas will be strengthened through sharing of knowledge and practical approaches as well as by organising more regular drills.

Enhancing Disaster Preparedness and Recovery

The build back better approach will continue to be adopted as one of the disaster preparedness and recovery measures in enhancing resilience against climate change and disasters, hence protecting development gains. In this regard, the reconstruction of damaged buildings and infrastructure as well as new developments will be required to adhere to the planning and development guidelines as well as resilient construction guidelines and building standards. Meanwhile, new developments in high-risk, flood-prone and environmentally sensitive areas, including highlands will be strictly regulated. In addition, existing building codes will be reviewed, while critical buildings and infrastructure will be retrofitted.

The build back better approach will also be adopted to facilitate affected communities to recover from the aftermath of disasters. Alternative sources of income will be identified to allow affected communities to sustain their livelihood. In addition, counselling services for the affected communities will be enhanced to help them cope with the trauma. These efforts will improve the adaptive capacity of the affected communities to recover faster.

Priority Area B

Managing Natural Resources Efficiently to Safeguard Natural Capital

Efficient management of natural resources will ensure the sustainability of natural capital and economic growth as well as planetary health. Therefore, it is important to strike a balance between utilising resources for socioeconomic development and safeguarding natural capital. In this respect, focus will be on conserving ecosystems, protecting species and genetic resources, ensuring sustainable utilisation and benefits sharing of resources as well as enhancing conservation of water resources.



Strategy B1

Conserving Natural Ecosystems

Continuous conservation of the ecosystem is crucial to ensure natural habitats are protected and ecologically connected. In relation to this, conservation of terrestrial, inland water, coastal and marine areas will be enhanced through habitat protection, rehabilitation and connectivity as well as mainstreaming ecosystem considerations into planning and development. These initiatives will enhance the resiliency and ability of ecosystems to continuously provide ecological services for sustaining biodiversity and support socioeconomic growth, in line with Goals 14 and 15 of the 2030 Agenda.

Enhancing Conservation Measures for Terrestrial and Inland Water Areas

The gazetting of protected areas for terrestrial and inland waters will be intensified through the establishment of a special task force. In addition, a framework for other effective area-based conservation measures[18] (OECM) will be developed to increase conservation of natural areas, including geoparks and inland waters to maintain at least 50% forest cover over the total land area. Forest restoration, rehabilitation and enrichment will be intensified through multi-stakeholder collaboration. The private sector will be encouraged to actively participate in forest rehabilitation programmes. Other companies are encouraged to emulate the lead taken by Nestlé to commit the planting of three million trees by 2023 through Project RELeaf. Meanwhile, connectivity of four major forest complexes[19] in Peninsular Malaysia will be improved by accelerating the establishment of ecological corridors under the CFS initiative. Similarly, the management and conservation of forested areas in Sabah and Sarawak will be further enhanced through the ongoing HoB initiative. State governments will be urged to conduct public hearings before any degazetting of Permanent Reserved Forest (PRF) and Permanent Forest Estate (PFE).

[18] A geographically defined area other than a Protected Area, which is governed and managed in ways that achieve positive and sustained long-term outcomes for the *in-situ* conservation of biodiversity, with associated ecosystem functions and services.

[19] Forest complexes in (i) Banjaran Titiwangsa-Banjaran Bintang-Banjaran Nakawan; (ii) Taman Negara-Banjaran Timur; (iii) South East Pahang wetlands, Chini Lake and Bera Lake; and (iv) Endau Rompin National Park-Kluang Wildlife Reserve, covering most states in Peninsular Malaysia.

Enhancing Conservation Measures for Coastal and Marine Areas

The conservation and management of coastal and marine areas will be enhanced through rehabilitation programmes, such as beach nourishment, mangrove planting and deploying artificial reefs, particularly through multi-stakeholder collaboration. Conservation of these areas will also be intensified by developing, implementing and reviewing management plans for marine protected areas (MPAs) as well as undertaking studies to identify potential MPAs. An OECM framework will also be developed for coastal and marine areas. The Regional Plan of Action on Coral Triangle Initiative will be reviewed to focus on improving the health of coastal and marine ecosystems, ensuring food security and increasing climate resilience. A blue economy[20] blueprint will also be introduced to govern coastal and marine areas as well as related socioeconomic sectors. The blueprint will incorporate measures to optimise ocean resources and create alternative sources of income as well as undertake risk assessments, including the impact of climate change and disaster on people and businesses. In addition, measures to address marine debris and pollution will be introduced to protect the marine ecosystems.

Mainstreaming Natural Ecosystem Science and Approaches into Development Planning

Natural ecosystem science and approaches will be mainstreamed into development planning and decision-making to ensure uninterrupted ecosystem services. In this regard, vital natural areas, such as High Conservation Value areas[21], Important Bird and Biodiversity Areas and Particularly Sensitive Sea Areas[22] will be recognised and protected. Spatial mapping of the vital areas and vulnerable ecosystems, such as peatlands, inland waters and riverine areas will be undertaken to facilitate conservation efforts. The value of ecosystem services will be incorporated into the decision-making process by adopting appropriate approaches, including The Economics of Ecosystems and Biodiversity (TEEB). In addition, efforts to monitor ecosystem health, including soil fertility will be intensified to conserve the affected ecosystems. SEA will also be introduced to mainstream environmental considerations at the earliest stages of decision making, while coastal development and land reclamation activities will be reviewed to assess the environmental and ecological impact on the ecosystem.

Green spaces, such as urban forests and recreational parks, as well as blue spaces, including wetlands and lakes, in urban areas will be continuously expanded to regulate microclimate and support biodiversity. In line with this, an action plan for urban biodiversity conservation will be formulated to guide local authorities in enhancing the liveability of urban areas. New townships will be encouraged to establish more green areas with endemic plant species to rehabilitate their biodiversity.

Strategy B2

Protecting and Conserving Species and Genetic Resources

Malaysia is recognised as one of the megadiverse countries and home to various fauna and flora species. Among these are 15,000 species of vascular plants, 306 species of mammals, 742 species of birds, 242 species of amphibians, 567 species of reptiles, 449 species of freshwater fish, 1,619 species of marine fish and more than 150,000 species of invertebrates[23]. There is an urgent need to protect and conserve these diverse biological resources to prevent further species loss and genetic depletion. Therefore, species and genetic resources will be protected by strengthening management and enhancing conservation. These efforts will ensure wild species of fauna and flora in the country are protected, in line with Goals 14 and 15 of the 2030 Agenda.

Strengthening Species Management and Conservation

The management and conservation of key terrestrial and marine species will be improved through the revision of existing action plans as well as the introduction of new plans. In supporting this, a comprehensive inventory and vulnerability assessment on species and their habitat, particularly the national red list species, will be conducted through multi-stakeholder collaboration to provide baseline information for species distribution mapping. In addition, *in-situ* and *ex-situ* conservation measures will be enhanced, among others, through the establishment of new sanctuaries as well as enhancement of existing wildlife conservation centres and prey recovery programmes. The component of wildlife and marine resources assessment in the existing EIA will be strengthened to minimise the impact of new development projects on the natural habitat.

[20] A concept that encourages better management of marine resources for sustainable development. It aims to improve human wellbeing and social equity, while significantly reducing environmental risks and ecological degradation.
[21] Forests containing special attributes that make them particularly valuable for biodiversity and people.
[22] Oceans which need special protection through intervention by the International Maritime Organization (IMO) because of their significance for recognised ecological or socioeconomic or scientific reasons, and which may be vulnerable to damage by international maritime activities.

[23] Source: Sixth National Report of Malaysia to the Convention on Biological Diversity, 2019

Strategic joint enforcement programmes at the national and state levels will be intensified to combat poaching and illegal wildlife trade. Regional enforcement collaboration to control cross-border encroachment and poaching as well as conservation programmes will be strengthened. In supporting these efforts, the capacity and capability of enforcement agencies will be enhanced to combat illegal activities related to wild fauna and flora, including online illegal trading as well as unreported and unregulated fishing activities.

Enhancing Conservation of Genetic Resources

The current cryopreservation efforts and the existing gene banks to conserve the diverse biological and genetic resources will be strengthened by establishing an integrated gene and specimen centre. In addition, a botanical garden network for flora conservation and genetic preservation will be established. The Biosafety Act 2007 will be reviewed to incorporate liability and redress elements, while the capacity and capability of relevant agencies will be enhanced in strengthening the management and enforcement of biosafety. Awareness programmes will be stepped up to increase understanding on GMO. Emphasis will also be given to improve the management of alien species to prevent the species from being invasive. This will be undertaken through increased stakeholder engagement and capacity building. In addition, studies on the ecological and economic impact of alien species on the ecosystem will be undertaken.

Strategy B3

Ensuring Sustainable Utilisation and Benefits Sharing

Natural resources must be sustainably utilised throughout the whole value chain to optimise their values. The benefits from the utilisation of these resources must also be distributed equitably among different segments of society. In this respect, efforts will focus on strengthening the sustainable utilisation of natural resources, enhancing mineral resources management, diversifying conservation funding as well as ensuring fair and equitable sharing of benefits. These initiatives will ensure benefit sharing and sustainable use of natural resources, in line with Goals 2, 14 and 15 of the 2030 Agenda.

Strengthening Sustainable Utilisation of Natural Resources

Sustainable forest management will be strengthened by improving existing plans and systems, while the inventory of forest resources will be updated. In addition, a sustainable fisheries management plan will be developed to ensure ocean resources are used sustainably and the livelihood of the fishing communities is improved. Periodic assessments of marine resources will be undertaken to support the plan. In order to promote sustainable tourism, an assessment on the carrying capacity of terrestrial and marine tourism sites will be conducted. Industry players will be encouraged to adopt green practices to ensure the tourism activities are sustainable. A sustainable geopark management plan will also be formulated to optimise geological resources.

Enhancing Mineral Resources Management

A more accurate geospatial map for strategic minerals will be prepared for states to optimise the utilisation of the resources and land-use planning. Laws related to minerals and mining activities will be strictly enforced to minimise environmental degradation from these activities. Standard operating procedures on sustainable mining practices will be developed, while mining operators will be further encouraged to subscribe to sustainability rating. The adoption of new technologies will be encouraged to enhance efficiency in planning and monitoring as well as adopt best practices in mineral exploration and processing. The governance of the minerals subsector will be reviewed to ensure the development of a sustainable industry throughout the entire value chain. A mineral industry development board will be established to regulate and drive the development of a sustainable mineral subsector.

Diversifying Conservation Funding

A resource mobilisation plan will be developed to identify innovative and sustainable financing mechanisms beyond public funding. In relation to this, economic instruments, including the payment for ecosystem services[24] (PES) scheme will be expanded. In addition, partnerships between agencies and relevant stakeholders will be expanded to co-manage protected areas. Fees and charges for entry into national and state parks and other protected areas will be reviewed to incorporate the fair value of natural resources and eventually help increase revenues. In order to incentivise states in

[24] A situation when a beneficiary or user of an ecosystem service makes a direct or indirect payment to the service provider.

conserving protected areas, the EFT implementation mechanism will be set up. The management of existing trust funds, including the National Conservation Trust Fund will also be strengthened. Meanwhile, the REDD Plus mechanism (Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forest and Enhancement of Carbon Stocks in Developing Countries)[25] will be implemented.

Ensuring Equitable Benefit Sharing from Natural Resource Utilisation

Act 795 will be enforced to ensure revenues generated from the commercialisation of biological resources and traditional knowledge are fairly and equitably shared among resource providers. In this regard, the capacity and capability of the Competent Authorities at all levels will be enhanced. Simultaneously, education and awareness programmes on access and benefits sharing will be enhanced for ILCs. Existing traditional knowledge will be documented to safeguard the rights of the ILCs, while R&D&C&I and investment in bioprospecting activities will be encouraged to realise the value of traditional knowledge.

Strategy B4

Enhancing Conservation of Water Resources

Water is vital for a healthy ecosystem and survival of all living things as well as fundamental for sustainable development. Hence, it is crucial to ensure the availability and sustainability of water resources for current and future generations. Conserving water resources and addressing water pollution is critical in ensuring sustainable clean water resources, in line with Goal 6 of the 2030 Agenda.

Strengthening Water Resource Governance

The gazetting and protection of water catchment areas will be intensified, while riparian forests and wetland habitats will be conserved and protected to ensure sustainability of water resources as well as reduce disaster risks. Furthermore, the adoption of the IRBM approach will be accelerated in line with the Integrated Water Resources Management (IWRM) to maximise socioeconomic benefits, while conserving the freshwater ecosystem. In this regard, states will be encouraged to review and harmonise their respective water-related legislation based on the Water Resources Bill 2016 to ensure coherence and comprehensiveness of water resources management. Governance of water-related agencies at the Federal level will be improved to strengthen the implementation of IWRM.

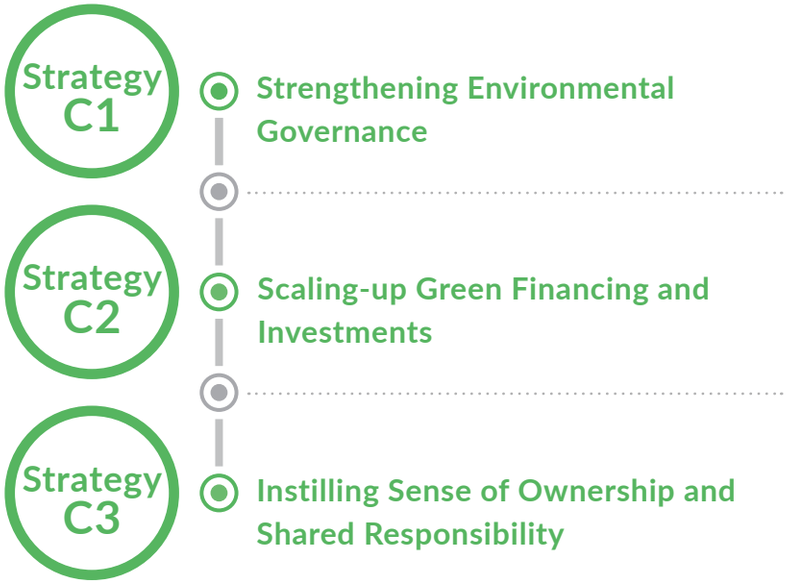
Addressing Water Pollution

Integrated wastewater treatment plants will be constructed to improve the management and control of effluent discharge, especially in newly developed industrial areas. Existing laws, including Act 127, will be reviewed to incorporate provisions on emerging pollutants, mainly chemicals found in pharmaceuticals, pesticides, industrial and household products. TMDL studies, which determine the loading capacity of river segments, will be expanded to cover more river basins in guiding state governments and local authorities to evaluate existing and new development proposals along river corridors. A smart monitoring system will also be put in place to enable real-time monitoring and early warning as well as in strengthening enforcement. River trails will be built as a nature-based solution to prevent encroachment and pollution of rivers.

Priority Area C

Strengthening the Enabling Environment for Effective Governance

A supportive enabling environment is fundamental to effectively implement the clean, green and resilient development agenda, and accelerate green growth. It will encompass robust policies, legislation and institutional frameworks as well as sustainable financing and a sense of shared responsibility among all stakeholders. The Twelfth Plan will focus on strengthening environmental governance, scaling-up green financing and investments as well as instilling a sense of ownership and shared responsibility.



[25] A mechanism developed by UNFCCC to create a financial value for the carbon stored in forests. This will incentivise reduction of carbon emissions from forested lands as well as promote investment in low-carbon paths and sustainable development.

Strategy C1

Strengthening Environmental Governance

Environmental governance will be strengthened to enable better management of the environment and natural resources. Efforts will be undertaken to improve policies, legislation and institutional frameworks as well as strengthen the capability of local authorities. The implementation of these initiatives will ensure effectiveness in managing environment-related issues, in line with Goals 11, 12, 13, 14 and 15 of the 2030 Agenda.

Improving Policy and Legislation

New policies, legislation and blueprints will be formulated, while existing ones will be reviewed and benchmarked against international standards and best practices. The National Policy on the Environment 2002, the National Policy on Climate Change 2009 and the National Policy on Biological Diversity 2016-2025 will be reviewed to ensure coherence and comprehensiveness. This is to address emerging environmental issues and support implementation of the clean, green and resilient development agenda. A legislation on climate change will also be formulated to enable more coordinated and effective climate action at all levels. In addition, environment-related enforcement activities will be strengthened to ensure effective implementation of legislation in deterring activities that are damaging to the environment and biodiversity.

Strengthening Institutional Framework and Human Capital

A strong institutional framework is imperative to ensure effective and coordinated management and implementation of environment-related policies and legislation. State governments will be recommended to establish a task force on sustainable development to monitor, assess and report the implementation and performance of sustainable development initiatives, including conserving biodiversity, addressing climate change and pollution as well as reducing disaster risks. Centres of excellence on environment and climate change as well as biodiversity will be established by leveraging existing institutions. These centres will undertake inter-disciplinary research, encourage science-policy interface, and provide support for environmental and natural resource-related advocacy, education and awareness. In addition, climate change governance will be strengthened and aligned with Malaysia's obligations to the UNFCCC as well as the 2030 Agenda.

Comprehensive evidence-based and risk-informed decision-making is fundamental in addressing cross-cutting environmental issues. As such, the one stop environment-related data centre will be strengthened by improving data sharing among various stakeholders, including the private sector and CSOs to support better decision-making. In line with this, a GHG accounting model and database will be established, while the disaster-related repository will be enhanced. A green economic model will be developed by leveraging the Green Economy Indicators and the System of Environmental-Economic Accounting for Malaysia to support macroeconomic planning and impact analysis.

Efforts will be undertaken to develop talent that possess knowledge and skills in sustainable development to advance green growth. Both the public and private sectors will be encouraged to invest in developing talent with multiple skillsets, especially in green financing and environmental economy. In addition, triple-helix collaboration will be encouraged to enhance academic programmes in these areas.

Engagements and collaboration with the private sector, academicians and CSOs will be intensified to ensure there are concerted and accelerated actions by all stakeholders in achieving the 2030 Agenda. Cooperation and policy dialogues on sustainable development at the regional and international levels will also be promoted to complement national efforts in accelerating the implementation of the 2030 Agenda. In addition, collaboration among ASEAN countries to achieve net zero carbon emissions will be initiated. Data for SDG indicators will continue to be expanded and strengthened to monitor progress of the SDGs at the national, state and local levels.

Strengthening Local Authorities

Local authorities play an important role in ensuring a safe and healthy environment through effective and coordinated implementation of the national sustainable development agenda and the Local Agenda 21. In this regard, local authorities will be encouraged to establish a task force on sustainable development to mirror the structure at the Federal and state levels. The capacity and capability of local authorities will be enhanced to enable effective planning, implementation, monitoring and evaluation of sustainable development initiatives. In addition, sustainable development elements in the *Sistem Penarafan Bintang Pihak Berkuasa Tempatan* will be further enhanced to assess the commitments and improve the performance of local authorities. This will complement the existing sustainable development initiatives, including *Bandar Lestari-Anugerah Alam Sekitar* and Malaysian Urban-Rural National Indicators Network for Sustainable Development. Local authorities will be encouraged to leverage funding from private and international entities, including matching grants to support the implementation of sustainable development initiatives.

Strategy C2

Scaling-up Green Financing and Investments

Green financing and investments will be scaled-up to support the implementation of the clean, green and resilient development agenda. Hence, relevant policies will be developed to meet the funding requirements of this agenda. Emphasis will be placed on enhancing domestic green financing and investments, leveraging bilateral and multilateral financing, enhancing environmental economic instruments and promoting disaster risk financing. These initiatives will spur green financing and investments in supporting the achievement of Goals 6, 7, 11, 12, 13, 14 and 15 of the 2030 Agenda.

Enhancing Domestic Green Financing and Investments

The public and private sectors, including financial institutions will be encouraged to adopt the SDGs and ESG principles. These include integrating climate change and green growth into macroeconomic policies, fiscal planning, budgeting, investment management and procurement practices. The utilisation of green financing and investments will be encouraged for all sustainable and climate-friendly development projects, including projects implemented through the public-private partnerships approach and by the GLCs. Targeted strategies with clear accountability to further grow the share of investments that are aligned with the 2030 Agenda will be developed. Appropriate performance measurement framework will be put in place to monitor and evaluate the implementation of these strategies. For the public sector, this will also entail developing a budget-tagging system that is linked to the sustainable development objectives.

The Sustainable and Responsible Investment Roadmap for the Malaysian Capital Market will scale-up capital formation by businesses that adopt sustainable practices and provide green investment opportunities for investors. The Roadmap will also broaden the use of green and sustainability *sukuk* and bonds across various economic sectors as well as encourage the use of alternative finance to the underserved segments in the green sectors. In April 2021, Malaysia issued the world's first sovereign United States (US) dollar sustainability *sukuk*, upsizing the offering from an initial target of USD1 billion to USD1.3 billion. The *sukuk* was oversubscribed by 6.4 times. This indicates investor confidence in Malaysia's growth recovery strategies in building back better. Proceeds from this *sukuk* will be used for eligible social and green projects aligned to the SDGs.

Financial institutions will be encouraged to incorporate sustainability elements into their business portfolios and processes as well as develop scorecards to support sustainable development projects. In supporting this, the Joint Committee on Climate Change, and the climate change and principles-based taxonomy that categorises economic activities based on their impact on climate change will be leveraged. This taxonomy will facilitate financial flows to activities that support the advancement of green growth. Financial institutions will be urged to network internationally with relevant platforms and institutions, such as the United Nations Principles for Responsible Investment. These institutions are strongly encouraged to adopt recommendations of the Task Force on Climate-related Financial Disclosures to improve transparency in integrating climate risks for decision-making. Financial institutions will strengthen their capabilities to enable effective evaluation of green project proposals and advocate sustainable practices among clients.

The COVID-19 pandemic has thrust the concept of ESG into the spotlight as companies worldwide realise the need to adopt more sustainable practices to avoid financial and environmental risks in the long run. As such, the ESG considerations are increasingly being integrated into decision-making by financial institutions, institutional investors and other investors. In Malaysia, there is growing acceptance and acknowledgement by industry leaders of the need for stronger ESG adoption. The EPF recently launched its sustainable investment policy and announced its intention to have a fully ESG-compliant portfolio by 2030. The Bursa Malaysia has also strengthened efforts to bring public listed companies on the ESG journey.

Leveraging Bilateral and Multilateral Financing

The transition towards clean, green and resilient development requires substantial financial resources. Therefore, appropriate mechanisms to enhance transparency, accountability and investment worthiness will be strengthened to leverage bilateral and multilateral financing in addressing the domestic financing gaps. A centralised mechanism will also be established to coordinate and mobilise bilateral and multilateral financing, leverage private sector investments, enhance coordination across sectors, and improve the effectiveness of fund usage. These financing facilities will be aligned with national priorities for effective and sustained outcomes.

Enhancing Environmental Economic Instruments

The application of environmental economic instruments based on the user-pay and polluter-pay principles will be augmented to promote the circular economy, minimise environmental pollution and prevent ecosystems damage. Therefore, it is vital to ensure that policies among different levels of government are consistent. In this respect, a comprehensive study on the options of economic instruments, including PES and carbon pricing, as well as related costs and benefits will be carried out. Existing environment-related fees and charges will also be revised to reflect fair value and the proceeds will be utilised to support environmental protection and conservation efforts. Meanwhile, environmentally harmful subsidies will be replaced with subsidies that promote environmental sustainability.

Promoting Disaster Risk Financing

Post-disaster liabilities will be managed effectively to reduce the financial burden on the government. Meanwhile, additional financial resources will be sourced from alternative disaster relief funds contributed by the private sector, CSOs and individuals. A study will be undertaken to assess the feasibility of a flexible social protection system through disaster risk transfer[26] mechanisms, including disaster risk insurance. In addition, climate resilient and environment-friendly financing and investment will be scaled-up to support disaster risk reduction efforts.

Strategy C3

Instilling Sense of Ownership and Shared Responsibility

A sense of ownership and shared responsibility among stakeholders in environmental protection and conservation is the key enabler in ensuring smooth and effective implementation of the clean, green and resilient development agenda. In line with the whole-of-nation approach, efforts will focus on steering behavioural changes, including adopting the behavioural insights[27] approach. In addition, stakeholder collaboration will be increased in protecting and conserving the environment. Implementation of these efforts will enhance awareness as well as change the mindset and behaviour of society to adopt a more sustainable lifestyle, which will support Goals 6, 7, 11, 12, 13, 14 and 15 of the 2030 Agenda.

Increasing Awareness to Steer Behavioural Change

Communication, education and public awareness (CEPA) initiatives will be intensified to encourage mindset and behavioural changes as well as enhance shared responsibility in environmental protection, biodiversity conservation and disaster risk reduction. A holistic and targeted CEPA action plans will be developed, while environmental champions will be identified and empowered as agents of change. Advanced technologies will also be utilised to effectively implement CEPA initiatives. Experiential learning among students will be enhanced through the expansion of environment-related curriculum to ensure early exposure to sustainability and environmental awareness. Youth will be encouraged to actively participate in advocating environmental awareness and sustainability programmes, while teachers and local community leaders will be equipped with appropriate skills through training of trainers' programmes.

Amanah Lestari Alam, a company limited by guarantee, will be leveraged to support the implementation of environment and sustainability-related education initiatives in schools and higher education institutions as well as awareness programmes. This company will mobilise funding from the public and private sectors as well as international organisations. The *Amanah Lestari Alam* will help nurture and spark mindset and behavioural changes across all generations, while instilling a whistle-blowing culture to deter environmentally damaging acts.

The behavioural insights approach will be adopted to steer mindset and behavioural changes, mainly through the provision of appropriate facilities, product labelling and reward system as well as incorporation in faith practices. This will further elevate environmental awareness and contribute to sustainable lifestyles. Collaboration with various stakeholders will be strengthened to promote the adoption of behavioural insights.

Promoting Inclusive Stakeholder Collaboration

Existing dialogues and knowledge-sharing platforms will be enhanced, and new ones will be created to promote a shared vision on environmental protection and conservation. These platforms will promote volunteerism and stronger collaboration among stakeholders. In addition, the involvement of communities and the private sector in environmental protection and conservation programmes will be further encouraged, including via technological innovations and social media. The ILCs will also be empowered in the conservation of natural areas through community-based resource monitoring and citizen science[28]. The success of the Friends of River initiative by the community in supporting the protection, restoration and sustainable use of rivers will be replicated. Contributions from the private sector, including financial institutions will be better coordinated to support efforts in implementing various conservation activities.

[26] Shifting the responsibility or burden for disaster loss to another party through legislation, insurance or other means.

[27] An inclusive approach to policy-making that combines insights from psychology, cognitive science and social science with empirically tested results to discover how people actually make choices.

[28] The practice of public participation and collaboration in scientific research to increase scientific knowledge.

Conclusion

During the Eleventh Plan, measures were undertaken to pursue green growth by strengthening governance, conserving natural resources, addressing climate change and reducing disaster risks. Nonetheless, challenges remain in terms of unsustainable consumption and production practices, loss of biodiversity and lack of a supportive enabling environment. The Twelfth Plan will advance green growth by implementing the clean, green and resilient development agenda through the whole-of-nation approach. The key strategies will include increasing resilience against climate change and disasters, embracing the circular economy, mainstreaming SDGs and ESG principles in investment decision, sharing responsibilities in moving towards a low-carbon nation, implementing evidence-based and risk-informed strategies, ensuring equitable benefit sharing and steering behavioural changes. Effective execution of policies and strategies under the clean, green and resilient development agenda, supported by mindset and behavioural changes, will contribute to sustainable growth and better planetary health as well as the achievement of the 2030 Agenda.

Chapter 9

Enhancing Energy Sustainability and Transforming the Water Sector

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9

Introduction

Energy and water are fundamental in supporting economic growth. The energy sector revolves around the energy trilemma principle of energy security, affordability and environmental sustainability. The water sector focuses on ensuring water security for life sustenance and supporting the development of the industrial sector. During the Eleventh Plan, emphasis was placed on improving the coverage of energy and water services, providing quality infrastructure, conserving water resources and combating the impact of climate change. Nevertheless, the energy sector still faces several issues and challenges, such as fragmented policies, impediments in the domestic oil and gas market as well as non-competitive fuel procurement in the electricity subsector. Issues in the water sector include lack of effective stakeholders' involvement in water resources management, unconsolidated data, inadequate infrastructure and limited water-based technology innovation.

In the Twelfth Plan, the sustainability of the energy sector will be further enhanced through the liberalisation of the gas market. Accelerating the adoption of the Integrated Water Resource Management (IWRM) will be the foundation in transforming the water sector. This agenda aims to transform the sector from being an economic enabler to becoming a dynamic growth engine by 2040. Energy sustainability and water sector transformation will continue to contribute towards sustainable economic development and wellbeing of the *rakyat*.

Performance of the Eleventh Malaysia Plan, 2016-2020

In the Eleventh Plan, despite the increase in energy demand, energy supply remained secure. Efforts were undertaken to ensure sustainability of the energy sector through resource diversification, continuous investment in new infrastructure and technology enhancement. In the water sector, the financial sustainability of service providers was strengthened. Existing infrastructure was upgraded, while new ones were built to support increasing demand and improving access in rural areas. Furthermore, a number of physical and non-physical initiatives were implemented to strengthen river management and coastal protection.

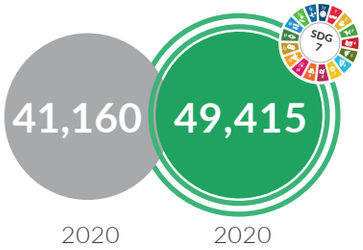
Performance of Selected Targets

Nine targets were set in bridging the urban-rural development gap, combating climate change and providing quality infrastructure, as shown in *Exhibit 9-1*. Three targets were achieved, namely houses supplied with electricity, additional capacity of oil refining and installed power generation, while six targets were underachieved due to various challenges. The plan to introduce a demand side management (DSM) masterplan was replaced with the formulation of the energy efficiency and conservation bill. Geographical challenges limited the expansion of water supply coverage in the rural areas, mainly in Sabah and Sarawak. The time-consuming implementation of projects led to the underperformance of targets on renewable energy (RE) installed capacity, coverage of connection to sewerage services in main cities and non-revenue water (NRW) reduction.

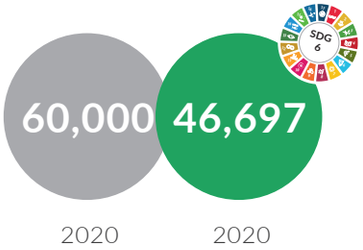
Exhibit 9-1

Eleventh Malaysia Plan: Performance of Selected Targets

Bridging Urban–Rural Development Gap

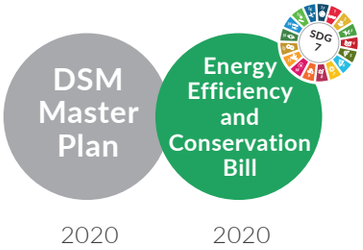


Number of Houses Supplied with Electricity

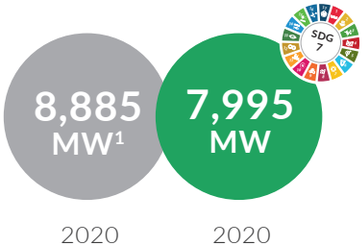


Number of Houses Supplied with Clean and Treated Water

Combating Climate Change

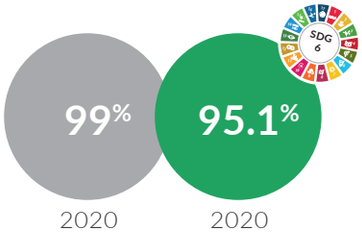


Formulation of a Comprehensive Demand Side Management (DSM) Master Plan

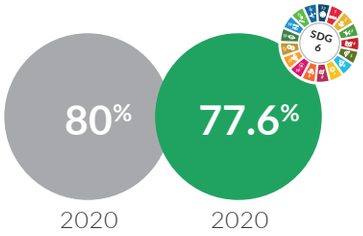


Renewable Energy Installed Capacity

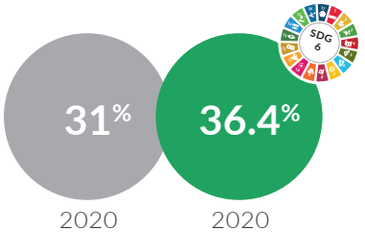
Providing Quality Infrastructure



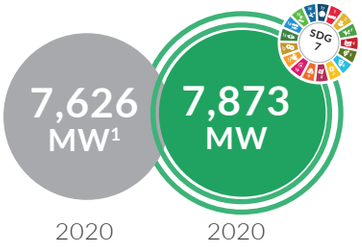
Population Served by Clean and Treated Water



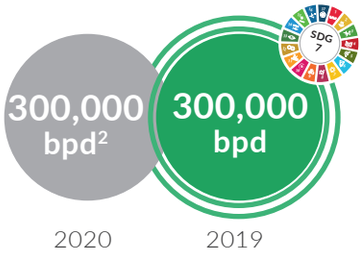
Sewerage Connected Services Coverage Especially in Main Cities



Non-Revenue Water Level



Additional Power Generation Installed Capacity in Peninsular Malaysia



Additional Oil Refining Capacity



[1] megawatts
[2] barrels per day

Performance of Selected Initiatives

Reduction of Urban-Rural Development Gap

Development disparities between urban and rural areas were reduced through the expansion of electricity and water supply as well as sewerage services. Until 2020, an additional 49,415 rural houses received electricity supply under the Rural Electricity Supply Programme (BELB). This resulted in 98% out of 2,085,140 rural houses having access to electricity since the inception of the programme. Meanwhile, the rural water supply coverage achieved 96.8% through the implementation of various programmes, including the Rural Water Supply Programme (BALB) as well as the Water Supply and Environmental Sanitation (BAKAS) programme. The BAKAS programme also contributed towards achieving 95.9% coverage of the sanitation system in the rural areas.

Conservation of Water Resources

Various efforts to conserve water resources were undertaken to ensure water quality, reliability and sustainability. As at 2019, a total of 86.6% of water catchment forests in Peninsular Malaysia had been gazetted under the National Forestry Act 1984 as protected areas. The groundwater quality standard was also developed under the Environmental Quality Act 1974 to improve monitoring and to ensure safe consumption. Community-driven river rehabilitation activities were implemented to enhance river stewardship among the society, including the Friends of Rivers (FoR) programme. The FoR was conducted at more than 30 rivers through various activities, including the building of river trails, parks and gardens.

Climate Change Mitigation

Cleaner fuels continued to be promoted towards reducing greenhouse gas emissions to combat climate change. The B10[1] biodiesel blend, which contains 10% palm methyl ester (PME) was introduced in 2019 for the transport sector and the B7[2] biodiesel blend, which contains 7% PME, for industries. The higher fuel standards of EURO 4M for RON95 were gazetted in 2020 to reduce pollution.

The RE installed capacity reached 7,995 megawatts (MW) in 2020, equivalent to 22.4% of the total installed capacity for electricity generation. A total of 856 MW of RE was channelled to the grid through the Large Scale Solar (LSS) and Net Energy Metering (NEM) programmes, which were introduced in 2016. While LSS focuses on commercial RE generators, NEM allows consumers to sell excess electricity generated from solar photovoltaic (PV) to utility companies.

Several initiatives were undertaken to improve energy efficiency (EE), including the formulation of the Energy Efficiency and Conservation bill in 2020 to regulate energy demand on electricity and thermal use. The EE labelling initiatives were intensified through the expansion of the Minimum Energy Performance Standard (MEPS) and the National Building Energy Intensity (BEI). The labelling for domestic appliances under MEPS was extended to include microwave ovens and electric rice cookers, making it eight in total. A total of 200 government buildings were labelled under the BEI programme.

A total of 28 government premises were retrofitted, which included 18 hospitals, as part of the EE initiatives for buildings during the Eleventh Plan. This initiative contributed to a total electricity savings of 31.5 million kilowatts hour (kWh), which is equivalent to RM12.4 million or 24 kilo tonnes of carbon dioxide equivalent ($ktCO_2eq$). A total of 108 industrial and 109 commercial buildings were also audited and retrofitted, which contributed to a total electricity savings of 545 million kWh, equivalent to RM215 million or 318 $ktCO_2eq$.

Provision of Quality Infrastructure

In 2019, the commissioning of the Refinery and Petrochemical Integrated Development (RAPID) facility in Pengerang, Johor, increased oil refining capacity by 300,000 barrels per day (bpd), raising the total refining capacity in the country to 900,000 bpd. This additional capacity enabled the country to fully meet domestic diesel demand and significantly reduced the import of petrol. RAPID also enhanced the capacity to produce higher value-added downstream products, particularly specialty chemical products.

[1] Biodiesel with blend of 10% palm methyl ester (PME) and 90% diesel.
[2] Biodiesel with blend of 7% PME and 93% diesel.

Petroliam Nasional Berhad (PETRONAS) completed the construction of the second floating liquefied natural gas (FLNG) facility, the PFLNG DUA in August 2020 with commercial operations commencing in February 2021, making it the only company in the world to own and operate two FLNG facilities. The PFLNG DUA is designed to extract natural gas from deepwater gas reservoirs at depths of up to 1,500 meters, which enables the production of 1.5 million tonnes per annum of liquefied natural gas (LNG). Its state-of-the-art technology enables the monetisation of marginal and remote natural gas resources, which would otherwise be technically and commercially challenging to be developed. This achievement demonstrates the strong position of Malaysia in the global LNG industry, leading the way in innovative solutions to ensure a reliable and secure supply of LNG.

A total of nine new power plants in Peninsular Malaysia were commissioned in the Eleventh Plan, bringing the total installed capacity to 7,873 MW, exceeding the initial target of 7,626 MW. These facilities comprised combined cycle gas, ultra-super critical coal, hydroelectric and cogeneration power plants, subsequently increasing generation diversity and technical response options of the grid system. The increased generation capacity further enhanced national grid security and reliability.

In expanding the coverage of water supply, efforts were undertaken to upgrade existing and construct new water infrastructure. These contributed to an additional 657 million litres per day (mld) of water treatment plants capacity, 210 million litres service reservoirs capacity as well as the installation and replacement of 367 kilometres (km) water distribution pipes.

Sewerage connectivity in main cities was improved through the upgrading and constructing of seven regional and centralised sewage treatment plants with 195 km length of sewer network during the Eleventh Plan. The requirement for resource recovery facilities was also incorporated into the development of regional and centralised sewage treatment plants. This is to encourage the implementation of waste-to-wealth initiative that complements the closed-loop water cycle management.

Irrigation and drainage infrastructure, particularly for paddy cultivation, were upgraded and better maintained to ensure sustainability of the agriculture sector. This resulted in an additional 10,422 hectares of irrigated paddy areas in the integrated agriculture development areas located in Rompin and Pekan in Pahang, Kota Belud in Sabah as well as Batang Lupar in Sarawak. In addition, 1,152 farmers were trained in water management to promote responsible water usage.

Improvement of Services

The arrangement under the third-party access (TPA) system was finalised to ensure third parties have access to the gas facilities. In this regard, the first trial of LNG cargo delivery was implemented in October 2019 by *Tenaga Nasional Berhad* (TNB). The successful delivery of 3,600 million British thermal unit (mmBtu) of gas to the TNB power stations in Port Dickson, Negeri Sembilan and Klang, Selangor generated a total savings of RM6 million. This marked a major milestone for the implementation of TPA in Malaysia and paved the way for others to bring LNG cargo into the country.

Significant improvements were recorded in the productivity and efficiency of electricity supply services. The System Average Interruption Duration Index (SAIDI) for Peninsular Malaysia improved to 45 minutes/customer in 2020, compared to the target of 50 minutes/customer. This performance is among the best in the region. SAIDI for Sarawak registered 79 minutes/customer in 2020, compared to the target of 157 minutes/customer. SAIDI for Sabah improved from 379 minutes/customer in 2015 to 189 minutes/customer in 2020.

The electricity bill rebate programme was implemented to ease the burden of the *rakyat*. The RM20 Electric Bill Rebate Programme was improved to be more target-specific with the introduction of RM40 Electric Bill Rebate Programme in 2019, that waived monthly electricity bill of up to RM40 for the poor and hardcore poor households registered in the Sistem eKasih. This programme was also extended to the same target group under the Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA) and Department of Orang Asli Development (JAKOA).

In reducing the burden of the *rakyat* due to COVID-19 pandemic, a discount on monthly electricity bills starting from 1 April to 30 September 2020 was given under the Prihatin Rakyat Economic Stimulus Package (PRIHATIN). Domestic customers were given an extended electricity bill discount until 31 December 2020. A total of RM2.72 billion was allocated to ease the burden of customers. In addition, several state also adopted water charge discounts and exemptions for a period of between one to three months.

Issues and Challenges

During the Eleventh Plan, efforts were put in place to enhance energy sustainability and ensure water security, mainly through the provision of quality infrastructure. However, both sectors still face cross-cutting and subsector-specific issues. These issues include ineffective governance and limited understanding related to policy implementation. Meanwhile, the COVID-19 pandemic impacted both the energy and water sectors with demand falling significantly following the decline in economic activities, especially from high-intensity consumers. Additionally, some upstream investments and projects in the oil and gas subsector experienced delays.

Issues and Challenges

Constraints in the Energy Sector to Support Growth

Ineffective Management of the Water Sector

Constraints in the Energy Sector to Support Growth

The common issues in the oil and gas subsector and electricity subsector are fragmented energy policies and a lack of understanding of policy implementation among industry players. Moreover, the oil and gas subsector is saddled with other issues such as high dependency on imports of petroleum products, barriers to cleaner fuel usage and the absence of a long-term plan for the natural gas industry. Meanwhile, the electricity subsector faces an uncompetitive fuel market, low share of RE and the absence of EE legislation.

Fragmented Energy Policies and Limited Understanding of Energy Ecosystem

There is no single overarching energy policy that provides long-term strategic direction for the country. Currently, the energy sector is governed by various ministries with different sectoral policies and priorities. This has caused inefficient energy consumption in various sectors, primarily transportation, industrial and commercial. In addition, consumers have a limited understanding of the energy ecosystem, including the long-term benefits of subsidy rationalisation. Lack of coordination in communicating market reforms in the energy sector causes discontent among consumers.

Impediments in Domestic Oil and Gas Market

The domestic petrochemical industry needs to shift from commodity-based chemicals to specialty chemicals that are less vulnerable to market downturn and where margins are more attractive. However, the lack of infrastructure readiness and market attractiveness hampers investment in value-added downstream petrochemical products. In addition, the absence of a long-term direction affects the overall development of the petrochemical industry. There is no policy to prioritise the procurement of locally produced petroleum products. As a result, oil companies continue importing petroleum products despite the availability of domestic supply.

The uptake of higher blending biofuel is still not encouraging despite Malaysia being the second largest palm oil producer in the world. This is due to low infrastructure readiness as well as resistance from vehicle and original equipment manufacturers to adopt higher blending biofuel. Moreover, the lack of incentives for biofuel conversion and higher biofuel cost compared to conventional fuel discourage the higher blend of palm oil in biofuel.

Currently, 83% of local oil and gas services and equipment (OGSE) companies are small and medium enterprises. These companies are highly dependent on the domestic market and most of them have not been successful in undertaking complex jobs and venturing into the international market. This is mainly due to limited financial and technological capabilities as well as insufficient knowledge of the global market ecosystem.

There is a limited number of suppliers in the domestic gas market due to demand uncertainty despite there being a supportive ecosystem. This is further exacerbated by the absence of a long-term gas industry masterplan, which has hampered market liberalisation efforts in ensuring a sustainable gas industry. Moreover, Malaysia has not leveraged its position as one of the major LNG exporters in the world to become a regional gas market hub.

Non-competitive Fuel Procurement and Non-optimal Reserve Margin

The supply of coal and gas for the electricity subsector in Peninsular Malaysia is currently provided only by a few firms which are capable of bulk purchasing. This has hindered efforts to create a more competitive tariff. Meanwhile, the electricity reserve margin for 2020 in Peninsular Malaysia is at 32%, Sabah at 27.6%, Sarawak at 31.4%, which exceed the optimal range of 25% to 27%. Under the existing power purchase agreement (PPA), power producers are paid regardless of power generation output, thus contributing to the high generation cost.

Lack of Network Resilience in Sabah

Generation mismatch coupled with a single double-circuit transmission line resulted in supply imbalances and frequent disruptions in the electricity grid in Sabah. The Sabah grid has a suboptimal network configuration as the majority of the network is focused in the west coast of Sabah. Load centres and economic development are mainly concentrated in the west coast. In addition, the power supply from the west to the east coasts of Sabah is limited as it is only connected through a single 275 kilovolt (kV) double-circuit transmission line. This has led to frequent breakdowns, resulting in high SAIDI.

Low Share of Renewable Energy in Total Installed Capacity

The total RE installed capacity is currently dominated by large hydro and solar sources and there is a need to diversify into other RE sources. However, the remote location and inconsistency of feedstock supply for RE sources, particularly biomass and biogas, pose a major challenge to increase the contribution of non-solar RE. The limited RE funding under the Feed-in Tariff (FiT) mechanism, intermittency of RE supply, lack of energy storage technology and stringent requirements by financial institutions also hinder the rapid development of RE.

Absence of Energy Efficiency Legislation

There is no EE-specific legislation to encourage the shift towards EE. Currently, the EE initiatives are implemented under different sectoral policies, leading to uncoordinated enforcement. In addition, with the absence of effective legislation, some of the industry players are reluctant to adopt the Enhanced Time of Use (EToU) tariff as an alternative to the Special Industrial Tariff (SIT), which impedes the implementation of energy-saving initiatives.

Ineffective Management of the Water Sector

The water sector continues to face numerous issues and challenges concerning people, governance, information, finance, infrastructure and technology. These issues resulted in ineffective management of water resources, which affected the supply and quality of water. Moreover, the low water service charges in most states affected the financial sustainability of water service providers.

Ineffective Involvement of Stakeholder

Among the issues in the water sector are ineffective participation by various stakeholders as well as a lack of sense of ownership and ability to protect and conserve water resources. Currently, there is an absence of a clear platform for inclusive local community involvement in water governance. This has led to a lack of need-based policies and decision-making. The low appreciation of the importance of water as a limited resource by the *rakyat* has led to wastage. This is evidenced by the high domestic consumption of water at 245 litres per capita per day (lcd) compared with the recommended usage of 160 lcd by the World Health Organization.

Inefficient Water Sector Governance

The water sector is faced with ineffective management, poor enforcement and a lack of scope for punitive action. Legislations to govern water resources at the Federal and state levels are outdated. In addition, pollution from point and non-point sources are governed under different laws, including the Environmental Quality Act 1974, State Water Resources Enactment, Local Government Act 1976 and Water Services Industry Act 2006. These have resulted in inadequate penalties for polluters, inability to regulate emerging pollutants and poor enforcement.

The IWRM is not effectively implemented due to different sectoral policies by the Federal, state and local governments. This is further exacerbated by the absence of a water resources management authority in most states. The uncoordinated approaches in managing water resources pose a challenge in ensuring water security at all levels and sectors. There is also the lack of quantitative management strategy to ensure sustainable utilisation of water by two biggest users, namely the agriculture and energy sectors.

Lack of Data-Driven and Science-Based Decision-Making

The lack of data-driven and science-based decision-making have also contributed to inefficient management of the water sector. This is due to the absence of a centralised database to integrate water-related data and information on research, development, commercialisation and innovation (R&D&C&I) activities undertaken by various agencies. Furthermore, the availability and reliability of water resources are not taken into account in development planning due to lack of data. Limited expertise among water technologists and scientific community also impedes sustainable development of the water sector.

Limited Financing Capacity

The development of water infrastructure is capital-intensive and highly dependent on government funding. There is also a lack of innovative financing mechanisms to mobilise alternative financial resources. This is mainly due to the undervaluation of water resources, which has not been recognised as a strategic commodity. As a result, most of the water-related service providers are financially unsustainable, which contribute to the inefficiency of services delivery. In addition, less priority is given by the authorities to protect water resources because of the competing needs for land-use to generate income from other economic activities.

Infrastructure and Technology Constraints

Water services infrastructure is insufficient, particularly in rural areas and islands. The NRW level remains high, mainly due to leakages from the ageing infrastructure, including pipes and tanks. Several existing infrastructures, including the regional sewage treatment plants and irrigation systems, are underutilised. Infrastructure for resource recovery of water and wastewater treatment is unable to support waste-to-wealth initiatives. The water sector also has not fully leveraged advanced technologies, which is crucial to efficiently manage water resources and use. Utilisation of technology for alternative water resources exploration, such as groundwater, lakes and flood ponds are not optimised, particularly in water-stressed areas. The cost-effective nature-based technology to address water-related disasters, mainly floods and coastal erosions, is also underutilised resulting in high dependency on expensive conventional engineering approaches.

Way Forward: Twelfth Malaysia Plan, 2021-2025

In the Twelfth Plan, emphasis will be given to the sustainable utilisation of energy and water to ensure security of supply as well as to create more economic opportunities. Efforts will be undertaken to improve institutional and regulatory frameworks. A comprehensive national energy policy will be introduced to strengthen the oil and gas and electricity ecosystems. Management of the water sector will be improved by encompassing multidimensional approaches. Measures will be undertaken to enhance stakeholder participation, governance and decision-making as well as financial and infrastructure sustainability. Energy sustainability and water sector transformation will support growth in attaining development for all, in line with the WKB 2030 as well as Goal 6 and 7 of the 2030 Agenda.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Enhancing Energy Sustainability and Transforming the Water Sector

Priority Area A

Ensuring Sustainable Energy for All

Strategy A1
Enhancing the Energy Sector

Strategy A2
Ensuring Sustainable and Progressive Oil and Gas Subsector

Strategy A3
Enhancing the Electricity Subsector

Priority Area B

Transforming the Water Sector

Strategy B1
Empowering People

Strategy B2
Strengthening Governance at All Levels

Strategy B3
Enhancing Capability in Data-Driven Decision-Making

Strategy B4
Ensuring Sustainable Financing

Strategy B5
Developing Sustainable Infrastructure with Cost-Effective Technology



Twelfth Malaysia Plan: Selected Targets

Ensuring Sustainable Energy For All



2021-2040

Introduction of a Comprehensive National Energy Policy



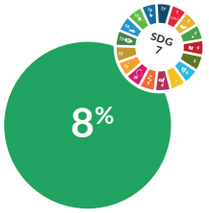
2021-2030

Establishment of OGSE Industry Blueprint



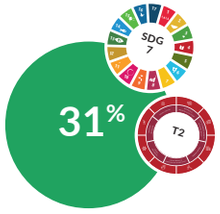
2021-2030

Framework for Establishment of Regional Gas Market Hub



2025

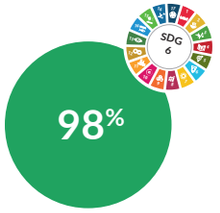
Reduction in Electricity Consumption



2025

Renewable Energy of Total Installed Capacity

Transforming the Water Sector



2025

Coverage of Access to Clean and Safe Water in Rural Area



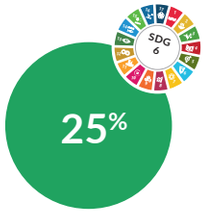
2025

Total Maximum Daily Load Study Conducted for Critical Rivers



2025

Establishment of an Integrated Centre for Water Data and R&D&C&I



2025

Non-Revenue Water Level



2025

Coverage of Safely Managed Sanitation System in Rural Area

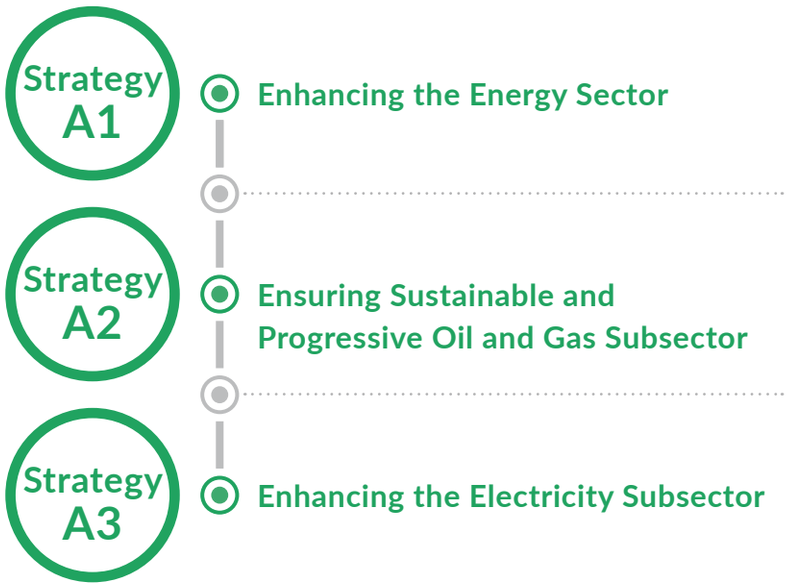
Target
SDG
WKB 2030

[1] Oil and Gas Services and Equipment
[2] Total Maximum Daily Load

Priority Area A

Ensuring Sustainable Energy for All

Initiatives will be focused to enhance the sustainability of the energy sector. This will include ensuring the healthy growth of the oil and gas industry. The reinforcement of generation, transmission and distribution systems will further strengthen the electricity supply industry. A comprehensive communication plan on market liberalisation will also be developed to provide clear information to the energy fraternity and the *rakyat*.



Strategy A1

Enhancing the Energy Sector

Two key initiatives will be implemented to address the energy cross-sectoral predicaments, namely the formulation of a comprehensive single energy policy and the establishment of a systematic communication plan. The new policy will consolidate the existing energy-related policies. A more systematic communication plan will ensure better engagement and allow for effective energy sector reform.

Formulating a Comprehensive National Energy Policy

The existing energy-related policies will be streamlined and harmonised to formulate a long-term comprehensive single energy policy. This policy will provide guidance and direction to address various issues across energy-consuming sectors as well as respond to the global trends on energy transition. Under this policy, the prospect of future growth related to energy, particularly on the potential of new energy from clean and sustainable sources including hydrogen will be explored. This new energy would allow Malaysia to chart its long-term low-carbon target in the energy sector. All facets of the energy sector and environmental sustainability will also be better addressed with the implementation of the new policy.

Establishing a Comprehensive Communication Plan

The energy sector is in a constant state of flux in terms of development, which poses risks and requires a systematic approach to communicate energy reforms to stakeholders. Thus, a comprehensive communication plan will be developed to strengthen collaboration with stakeholders as well as facilitate efforts to educate consumers and increase awareness of the rationale for market liberalisation. This plan will ensure better acceptance by stakeholders and allow for the successful implementation of energy industry reforms.

Strategy A2

Ensuring Sustainable and Progressive Oil and Gas Subsector

Several initiatives will be implemented to ensure progressive and sustainable development of the domestic oil and gas subsector. The use of domestically produced petrol and diesel will be prioritised, high value investment in the petrochemical industry be promoted and biofuel usage be scaled-up. In addition, the capabilities of local OGSE companies will be enhanced, while a natural gas roadmap will be developed.

Prioritising Consumption of Local Petrol and Diesel

Oil companies and retailers will be urged to utilise the substantial volume of petrol and diesel available from four local refineries, namely Pengerang in Johor, Sungai Udang in Melaka, Kerteh in Terengganu and Port Dickson in Negeri Sembilan. Efforts will be undertaken to develop a mechanism to prioritise the utilisation of locally produced petrol and diesel through engagement with stakeholders. This will improve the overall trade balance, stimulate economic activities as well as ensure sustainability of the oil and gas industry value chain and enhance security of supply.

Attracting High Value Investment in the Petrochemical Industry

The petrochemical industry will be repositioned to be more competitive and sustainable to attract and spur quality investments as well as reduce dependency on imported products. A chemical industry roadmap will be developed to ensure that the industry will leverage technology and innovation as well as establish a conducive ecosystem to produce specialty products. Consequently, the industry readiness will be assessed in terms of infrastructure, feedstock and skilled workforce availability as well as R&D capability.

Scaling Up Biofuel Usage

The biodiesel blend for the transportation sector will be continuously upgraded from B15[3] to B20[4] and eventually to B30[5]. Assessment will be conducted to identify the gaps and costs required to upgrade blending depots to be B30-compliant. In addition, more engagement with stakeholders will be held to address issues of manufacturers' acceptance of B30. For the industry sector, the biodiesel programme will be expanded from B7 to B10. This will promote greater usage of cleaner fuel.

Enhancing the Capability of Local Players in Oil and Gas Services and Equipment Subsector

Concerted efforts will be undertaken to enhance the capability of local OGSE small and medium enterprises through establishing consortia, increasing collaborations and promoting strategic partnerships. This will enable local OGSE small and medium enterprises to be more competitive and better equipped to undertake complex jobs domestically as well as internationally. These efforts will be aligned to the National OGSE Industry Blueprint 2021-2030, which provides the strategic direction to improve the competitiveness, efficiency and technological capability of local OGSE players.

Developing a Comprehensive Natural Gas Roadmap

Malaysia is liberalising the gas market to create a sustainable gas industry and ensure the security of supply to become a regional gas market hub. A comprehensive natural gas roadmap will be developed for this purpose to provide medium- and long-term directions, focusing on liberalising the gas market and increasing domestic gas demand. A study will be carried out to formulate strategies in developing Malaysia as a gas market hub for the region, to attract new suppliers and increase competitiveness.

Strategy A3

Enhancing the Electricity Subsector

The electricity subsector will be enhanced by implementing various initiatives. These include creating a resilient electricity supply industry, strengthening the Sabah electricity supply system, enhancing the grid system, expanding rural electricity coverage, increasing RE installed capacity and enhancing EE. The implementation of these initiatives is expected to improve the sustainability of the electricity subsector.

[3] Biodiesel with blend of 15% PME and 85% diesel.
[4] Biodiesel with blend of 20% PME and 80% diesel.
[5] Biodiesel with blend of 30% PME and 70% diesel.

Creating a Resilient Electricity Supply Industry

The electricity supply industry will be enhanced to be more digitalised and future-proof. The current industry structure will be reviewed, which includes improving the energy market under the New Enhanced Dispatch Arrangement (NEDA) as well as enhancing the transparency of the Single Buyer and Grid System Operator. The review also aims to allow third party access to the grid.

Strengthening Electricity Supply System in Sabah

The electricity supply system in Sabah will be further reinforced through the construction and upgrading of generation facilities as well as transmission and distribution networks. This will include construction of a new power plant on the east coast. Initial work for the Southern Link Project will begin under the Twelfth Plan. Moreover, the Incentive-based Regulation (IBR) framework will be introduced to improve the quality and efficiency of electricity supply. These initiatives will enhance the resilience and reliability of the grid system, thus improving SAIDI performance.

Enhancing the Grid System

Investment in generation capacity and reinforcement of transmission and distribution networks will be continued to ensure the security of electricity supply. New gas-fired power plants with a total capacity of 3,441 MW will be commissioned in Peninsular Malaysia to replace power plants that will be decommissioned. A 1,285 MW hydroelectric plant in Sarawak, which is under construction, will be completed by the end of the Twelfth Plan to increase installed capacity. The construction of 500 kV and 275 kV transmission lines will be undertaken in Peninsular Malaysia and Sarawak, which will support future load growth. In addition, the existing Lao PDR-Thailand-Malaysia power transfer under the ASEAN Power Grid (APG) and new transboundary interconnections will be explored to ensure better connectivity.

Expanding Rural Electricity Coverage

The rural electrification programme will be continued to provide electricity to an additional 28,000 houses towards achieving the 99% target of electricity coverage in rural areas. Collaboration between the Federal and state governments as well as utility companies will be intensified to ensure holistic planning and effective implementation. Most of the rural electrification projects will involve grid connection, while alternative systems such as small hydro, solar hybrid as well as solar PV will be deployed in remote areas.

Increasing Renewable Energy Installed Capacity

The development and utilisation of RE resources will be intensified to meet the target of 31% RE of the total installed capacity. Apart from large hydro and solar, the focus will also be on increasing the contribution from other renewable sources including biomass and biogas. Existing and new technologies such as cogeneration, solar thermal and fuel cells will be leveraged to provide more options for the industry. Several bioenergy clusters will be established as centralised collection points to ensure sustainable supply of feedstock and to enable electricity generators to minimise cost.

A new mechanism for green energy will be explored to encourage corporate consumers to buy energy directly from RE generators to meet their environmental, social and governance (ESG) commitment. The implementation of existing mechanisms such as Green Tariff Rider[6] and Renewable Energy Certificate[7] will be further promoted to create more options for consumers and industries as well as spur investment. Efforts will be intensified to encourage waste-to-energy generation and development of floating solar projects as well as to deploy more rooftop solar PV through existing financing options, including solar leasing programme and PPA. The adoption of new technologies comprising the energy storage system will be further promoted to address the intermittency issue in RE.

[6] Mechanism that enables consumers to customise the energy mix attributed to RE sources.
[7] Mechanism that enables consumers to have a choice to procure RE through green tariff offerings, known as MyGreen+ as well as the opportunity to track and trade RE through Malaysia Green Attribute Tracking System platform.

Enhancing Energy Efficiency

Energy efficiency is fundamental to ensure prudent and smart use of energy. In this regard, the use of energy by high-intensity consumers in the industrial and commercial sectors will be regulated through the formulation of an act related to energy efficiency and conservation. This is to ensure compliance with the prescribed standards and BEI labelling in selected private buildings, such as hospitals, offices, hotels and shopping complexes. Meanwhile, the Energy Audit Conditional Grants (EACG) will continue to be given to selected industrial and commercial sectors to enhance energy efficiency. The energy audit and retrofitting activities will be expanded to more government buildings through the Energy Performance Contracting (EPC) initiative to accelerate the implementation of EE programmes. These efforts are in line with the target of National Energy Efficiency Action Plan, 2016-2025 to achieve 8% savings in electricity consumption.

Priority Area B

Transforming the Water Sector

The water sector transformation agenda will be introduced in the Twelfth Plan through the adoption of the whole-of-nation approach to increase efficiency in water management, realise the potential of the water sector to generate wealth and create new job opportunities as described in *Box 9-1*. The first phase of the water sector transformation will focus on accelerating the adoption of IWRM, while laying the foundation for the execution of the remaining phases. In this regard, five strategies will be employed which include empowering people as drivers of water sector transformation, strengthening governance, enhancing data-driven decision-making, ensuring sustainable financing as well as developing sustainable and cost-effective infrastructure. The implementation of these strategies will contribute towards ensuring water security and sustainability as well as unlocking the economic potential.



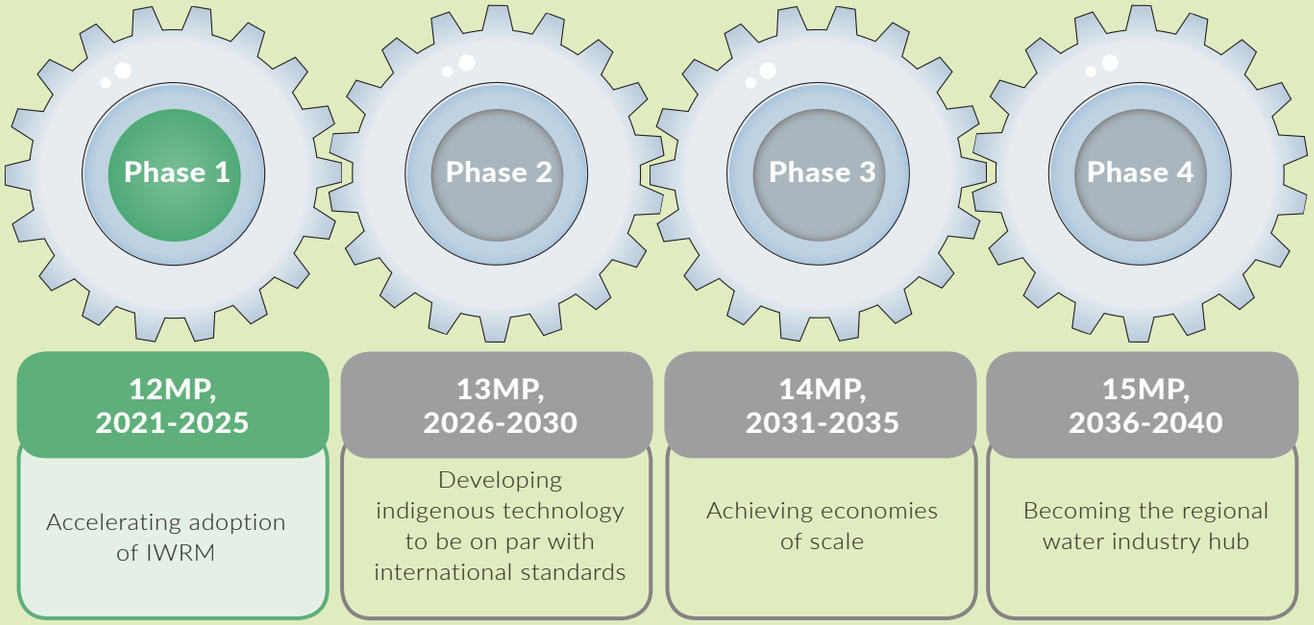
Box 9-1

Water Sector Transformation 2040

Managing water resources as natural capital for higher levels of economic growth, environmental quality and social development is an important aspect of green growth. The water sector will be restructured to enable it to be a significant contributor to national growth and wealth creation through a 20-year transformation agenda. The Water Sector Transformation 2040 (WST 2040) will be developed to set the strategic direction towards positioning the sector as a dynamic growth engine, while ensuring water security for all. By 2040, it is envisaged that Malaysia will become the regional water industry hub. The transformation will be carried out through four phases under Malaysia Plans with specific focus in every phase, as described in *Figure 1*.

Figure 1

The Four Phases of Water Sector Transformation 2040



A roadmap will be developed to outline strategies, initiatives and programmes for each phase to ensure the success of the transformation. In Phase 1 (2021-2025), the adoption of IWRM will be accelerated. This is the most critical phase that will lay the foundation for the transformation.

A dedicated task force comprising members from the public and private sectors will be established under the National Water Council. The task force will guide, coordinate, monitor and report progress as well as review, realign and provide recommendations for the successful implementation of the WST 2040 agenda.

Strategy B1

Empowering People

Collaborative effort among all stakeholders is crucial in transforming the water sector. *Rakyat* will be empowered to drive the transformation through the establishment of public consultation platforms, implementation of awareness-raising, advocacy and capacity-building (AACB) programmes as well as expansion of community-driven conservation activities. The aim is to instil a sense of ownership among the people in protecting and conserving water resources.

Establishing Public Consultation Platforms

Public consultation platforms will be established at the state and district levels for active engagement as part of the water management system. These platforms will be leveraged to support the National Water Council decisions. Capabilities and skills of members will be enhanced, particularly in conflict resolution and negotiation to ensure the effectiveness of the platforms. A strategic communication plan will also be developed for the effective implementation of the water sector transformation.

Implementing Comprehensive Awareness, Advocacy and Capacity-Building Programmes

Efforts to enhance understanding of the IWRM will be intensified through the implementation of comprehensive AACB programmes. To ensure its effectiveness, structured modules will be developed for specific target groups. In the agricultural sector, farmers' involvement in water resource management will be enhanced through their participation in the operation and maintenance of irrigation infrastructure. The implementation of AACB programmes will help in decision-making for development, particularly in land-use change.

Expanding Community-Driven Conservation Programmes

Community-driven programmes in environmental conservation will be increased to empower people to protect and conserve water resources as well as create socioeconomic activities. Various successful initiatives including the Tagal system and FoR programmes will also be expanded. Campaigns to inculcate water-saving habits and precise water use among domestic users and farmers will be intensified. Environmental-related education, especially experiential learning, will be further enhanced through collaboration among educational institutions, civil society organisations (CSOs), the private sector and government agencies. Reports on the status of water resources will be published periodically. These initiatives will instil a sense of ownership among people to appreciate water as a fundamental source of livelihood.

Strategy B2

Strengthening Governance at All Levels

Governance of the water sector at the Federal, state and district levels will be strengthened to ensure more integrated and effective water management. In this regard, water-related legislations will be harmonised, pollution control measures enhanced and the water-energy-food nexus institutionalised. Through these initiatives, physical development will be streamlined with IWRM.

Strengthening Water Resources Management

States will be encouraged to review the respective water-related legislation in line with the Water Resources Bill 2016. This is to ensure coherence and comprehensiveness of the state legislations in strengthening the management of water resources. The revision will also provide a legal basis for the establishment of a water resources management authority in all states. This authority will ensure effective implementation of IWRM and assist land-use planning at state and district levels. To strengthen the implementation of IWRM and to integrate existing water-related agencies, single water management agency at the Federal level will be established. The accounting and auditing methods for water resources management will also be improved. In addition, the scope of the Regional Planning Committee, established to look into the commonalities of inter-state or inter-sectoral policies, planning, implementation and monitoring of development activities, will be expanded to incorporate water resource management.

Mitigating Water Pollution

Existing legislation will be strengthened to intensify measures in reducing water pollution. In this regard, several laws will be revised to regulate emerging pollutants and increase penalties based on the polluter-pays principle. In addition, 10 Total Maximum Daily Load (TMDL) studies will be carried out to determine the loading capacity of river segments. The TMDL will guide state governments

and local authorities in evaluating existing development and new development proposals along river corridors. It will also facilitate authorities in undertaking actions to protect rivers. The enforcement capacity of relevant Federal and state agencies will be fortified through various measures, including the use of smart technologies. Coordination between enforcement agencies will be enhanced. To contain pollution from sewage, efforts will be intensified to connect premises to existing regional sewage treatment plants and undertake periodic desludging of individual septic tanks. Sewerage services operators will also be mandated to comply with existing effluent discharge standards.

Institutionalising the Water-Energy-Food Nexus Approach

The water, energy and food sectors will be managed integrally to address challenges related to urbanisation, land-use and climate change. The water-energy-food nexus is a vital element in ensuring comprehensive water resource management and water security across the sectors. This nexus will provide a framework that determines the appropriate distribution of water resources to all sectors. Going forward, the water-energy-food nexus approach will be institutionalised, while technical expertise of relevant ministries and agencies will be enhanced to ensure effective implementation.

Strategy B3

Enhancing Capability in Data-Driven Decision-Making

Data-driven decision-making capabilities will be enhanced to support strategic planning and management of the water sector. The water research institute will be strengthened to serve as a one-stop centre for water-related data and R&D&C&I. Furthermore, the capacity of water industry players and the scientific community will be heightened to support the development of indigenous water technology.

Strengthening Water Data and Research Centre

The water research institute will be strengthened as a centre to undertake comprehensive water-related analysis and provide accessibility to appropriate data that meets the needs of stakeholders. The centre will also actively conduct water-related R&D&C&I activities as well as coordinate and provide strategic direction to other relevant organisations. The utilisation of the National Water Balance Management System (NAWABS) will be broadened to provide comprehensive real-time data to assess and balance the current and future water demand and supply. The long-term goal of these initiatives is to develop local data-driven decision-making support system (DMSS) based on comprehensive data as well as innovative water technologies that will enable local industries to explore the global market.

Enhancing Capacity of Water Industry Players and the Scientific Community

The capacity of professionals, skilled workers and the scientific community will be improved to enable data-driven decision-making in embracing the 4IR. Competency certification and relevant tertiary education programmes will be continuously developed to increase the competency of water-related professionals in the public and private sectors. Similarly, water-related TVET programmes will also be introduced to meet the future demand for skilled workers in the industry. Local scientists will be encouraged to keep abreast with current research to develop home-grown and innovative water technologies that are on par with international standards. Strategic collaboration among scientists at regional and international levels will be intensified.

Strategy B4

Ensuring Sustainable Financing

Financial sustainability is imperative in ensuring the successful transformation of the water sector. In this regard, the financial sustainability of water services providers will be strengthened and innovative financing mechanisms will be introduced. This is to ensure the value of water resources reflects the cost incurred and benefits provided. This will also encourage strategic investments to strengthen the water industry.

Strengthening Financial Sustainability of Water Services Providers

The financial sustainability of the water services provider is crucial in ensuring sustainable and reliable services to meet current and future demand. The Tariff Setting Mechanism (TSM) for water supply and sewerage services will be implemented to achieve operating costs recovery and improve the financial capabilities of service providers. Water services providers will also be urged to explore alternative non-tariff revenues, particularly from water recycling and wastewater treatment by-products.

The economic potential of the water sector will be harnessed to achieve cost recovery and economies of scale. The water services industry will adopt relevant strategies and be benchmarked against the energy sector, which is financially independent, market-driven and technologically efficient. Best practices from other countries in the water services industry will also be considered.

Promoting Innovative Financing

Innovative financing mechanisms will be explored to reduce dependence on government funds for water sector development. The establishment of a licensed entity to build new sewerage infrastructure through alternative financing models will be considered. The private sector will also be encouraged to invest in water sector transformation projects such as wastewater resource recovery, R&D&C&I and smart technology applications.

The ecological fiscal transfer mechanism will be institutionalised by providing adequate funds and introducing an appropriate distribution mechanism. This mechanism will be based on the commitment of states to protect and conserve forests, especially water catchment areas. To ensure development activities along the river corridors do not jeopardise river water quality, state governments and local authorities will be encouraged to conduct assessments of the river ecosystem services[8] before decisions are made on land-use change. In addition, a mechanism will be established to ensure the payment for ecosystem services commensurates with the benefits derived and costs incurred from the services. The existing Green Technology Financing Scheme will also be leveraged to inculcate water saving habit and promote circular economy practices among water-intensive industries.

Strategy B5

Developing Sustainable Infrastructure with Cost-Effective Technology

Sustainable infrastructure with cost-effective technology will be further developed to optimise resources in the water sector. The initiatives that will be implemented include adopting alternative systems for water services, optimising cost-effective water infrastructure, emphasising the nature-based approach as well as implementing the circular economy concept. These will ensure that investments in the water sector are fully utilised for water security and sustainability.

Adopting Alternative System for Water Services in the Rural Area and Island

Access to clean and safe water supply as well as sanitation systems will be improved to achieve 98% coverage especially for rural and island communities. Reticulation and alternative systems with locally suited technology will be adopted. A national committee will be established to coordinate and oversee the overall implementation of water supply and sanitation projects in achieving the provision of water services for all.

Reducing Non-Revenue Water

NRW reduction programme will be prioritised by providing financial assistance to state governments based on the current NRW level. Infrastructure for preventive measures including leak sensors and pressure management tools to reduce water loss will be installed, particularly in the new distribution systems. In addition, agencies and public institutions will be encouraged to implement water auditing to identify the amount of water loss within the premises, such as military camps, universities and schools. This will enable more targeted measures to be undertaken in addressing water losses due to leakages and inefficient use. The implementation of these programmes will contribute towards the reduction of NRW level to 25%.

[8] The benefits *rakyat* obtain from the river ecosystem such as raw water, fishery resources and flood control.

Optimising Water Resources through Cost-Effective Infrastructure

The utilisation of groundwater as an alternative water source will be increased, especially in water-stressed areas to ensure water security. In this regard, groundwater aquifers based on river basins will be mapped out. Advanced techniques and technologies will be utilised for the exploration, development and management of groundwater sources, including underground dams. Detailed feasibility studies on underground dams will be undertaken to identify potential, risks and cost-effectiveness.

Development of multi-use water infrastructure will be promoted to ensure optimisation of resources. The construction of new dams will be for multi-use, such as for water supply, power generation, irrigation and flood mitigation. In addition, flood retention ponds will also be utilised for raw water storage and aquifer recharge. Off-river storage and inter-state water transfer as a water supply resource alternative will continue to be developed according to suitability. Studies on both approaches will be implemented to determine the feasibility of water resource projects in water-stressed states.

Emphasising Nature-Based Approach

Application of nature-based technology in addressing various water-related issues, such as water pollution, floods and droughts will be promoted. Constructed wetlands (CWs) with appropriate bio-engineering techniques will be built to treat wastewater and water collected in retention ponds as well as improve effluent quality before being released to the river system, as described in *Box 9-2*. Natural flood management techniques that emulate the regulating function of wetlands will also be adopted in project development planning and design along riverine and coastal areas. These techniques aim to protect and restore the areas as well as manage the risks of flooding. The techniques also promote the concepts of making room for water and bringing back the beaches. In addition, enabling policies and legislation for nature-based approaches and eco-friendly construction in development planning will be formulated.

Box 9-2

Constructed Wetlands

Constructed wetlands (CWs) are built to emulate the functions of natural wetlands. In CWs, specific vegetation will be planted for different treatment purposes, such as for the removal of pollutants, purification of water, control of erosion, filtration of sediments and reduction of water flow. Apart from the wetland functions, CWs are also cost-effective in terms of operation and maintenance in treating wastewater, particularly in low density areas. In addition, water from CWs can also become an alternative source of water supply.

Putrajaya Wetlands is a successful Government-initiated wetland project completed in 2002 to mitigate flood risks as well as provide alternative water source and conducive habitat for flora and fauna. Several hoteliers have also undertaken this initiative and succeeded in treating wastewater for reuse.



Putrajaya Wetlands



A wetland constructed by a hotelier in Langkawi

Implementing Circular Economy in Water Sector

The circular economy concept will be implemented in the entire water sector value chain. Enabling policies and legislations will be introduced and strategic collaboration and R&D&C&I activities will be promoted to provide the ecosystem for the circular economy. Resource recovery from water and wastewater treatment including sludge, bio-sludge, bio-effluent and biogas will be promoted to create economic opportunities and advance green growth. Recovery centres will be built to manage, treat and convert sludge for safe and beneficial use. Integrated wastewater treatment plants will be built in new eco-industrial parks. These plants will be equipped with resource recovery technology and supportive infrastructure to treat and reuse both domestic and industrial wastewater. Efforts will also be intensified to promote acceptance and the use of by-products from resource recovery.

Scaling Up Efficient Use of Water

The use of water-saving equipment labelled with Water Efficient Product Labelling Scheme (WEPLS) will be scaled up in government premises as well as promoted among domestic and industrial users. Fiscal incentives and rebates will also be considered to further encourage usage of water-efficient products. The green rating for buildings will be leveraged to encourage water-saving practices and water reuse in commercial premises, including hotels and shopping complexes.

Smart technologies such as digital meters and sensors, geographic information systems as well as supervisory control and data acquisition system will be incorporated to improve water management and services efficiency. This will enhance the interconnectivity of service providers and sustainability of infrastructure. Smart technologies will also be utilised to promote the closed-loop water cycle concept which mitigates wastage. In addition, smart applications will be developed to establish direct and fast communication between water services providers and consumers. To demonstrate the benefits of smart technology in the sector, a pilot water-smart city project will be implemented. In the agriculture sector, modern and automatic irrigation systems using smart technologies will be utilised to reduce wastage, improve efficiency, enable more accurate water distribution and increase productivity.

Conclusion

During the Eleventh Plan, concerted efforts were undertaken to enhance the energy and water sectors to bridge the urban-rural development gap, conserve water resources and combat climate change. However, there are several constraints that need to be addressed including inefficient governance, unsustainable financing and inadequate quality infrastructure. In the Twelfth Plan, priority will be given to transform the energy market through market liberalisation of the gas and enhance the resilience of the electricity supply industry to be future-proof. The water sector will be strengthened through the adoption of the whole-of-nation approach by accelerating the implementation of IWRM which lays the foundation in achieving water sector transformation by 2040.

Policy Enablers

Policy Enablers



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Overview

The achievement of targets set under the three themes of the Twelfth Plan are supported by four catalytic policy enablers focusing on developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure, and strengthening the public service.

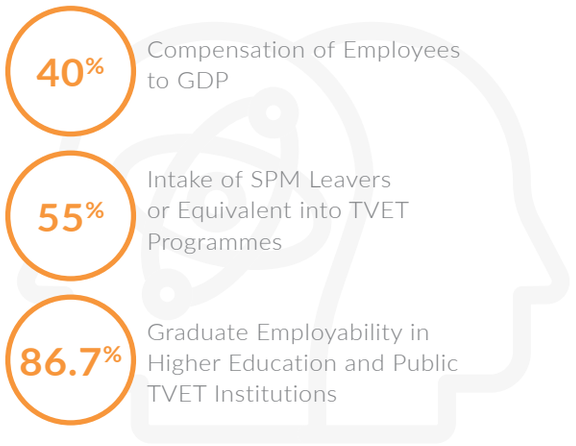
Policy Enabler 1: Developing Future Talent

The growth targets set in the Twelfth Plan will require the development of highly skilled talent to support the demands of a growing economy. Initiatives put in place to accelerate human capital development during the Eleventh Plan contributed to the improvement in minimum wages, better compensation of employees (CE), increased school enrolment, increased intake by technical and vocational education and training (TVET) institutions and improvement in the quality of universities. However, the labour market and the education sector continue to face a number of challenges. These include low CE, inefficient labour market, lack of access to quality education and weaknesses in the governance of educational institutions. The COVID-19 pandemic has caused a spike in the unemployment rate and has brought about new norms in the way people work and businesses operate.

Hence, the Twelfth Plan will focus on developing future talent by realigning the labour market in meeting industry demand and further improving the quality of education. Among the key initiatives to be undertaken to realign the labour market are promoting more equitable CE and higher female labour force participation as well as strengthening the labour market support system. In addition, elevating the quality of education and leveraging emerging technologies will be key initiatives in improving the education and training system. The implementation of these initiatives will lead to a more flexible labour market and an improvement in the *rakyat's* standard of living.

Selected Key Performance Indicators

Policy Enabler 1
Chapter 10: Developing Future Talent



A strong TVET ecosystem is a key catalyst in Malaysia's socioeconomic development which will address a number of issues, including dependency on foreign workers, low CE and high youth unemployment. In this regard, emerging technologies such as virtual reality (VR), augmented reality (AR) and artificial intelligence (AI) will be leveraged to complement existing hands-on teaching and learning activities as well as research and development conducted in laboratories and workshops. A strong TVET ecosystem will be a game changer that will create future-ready talent in meeting industry demand. A ranking system for TVET institutions will be introduced whereby the allocation of funds will be based on a number of components in this ranking system including employability, wage levels of graduates, industrial engagement and the implementation of social initiatives in the rural areas. Among the key outcomes expected are an increase in TVET programme intake from *Sijil Pelajaran Malaysia* (SPM) leavers and equivalent qualifications, an increase in the number of Fourth Industrial Revolution (4IR) related courses offered and the creation of new jobs through entrepreneurship.

Policy Enabler 2: Accelerating Technology Adoption and Innovation

Malaysia needs to evolve and innovate continuously in order to become a digital nation that is prosperous and resilient. Digitalisation, technology adoption and innovation are essential in ensuring sustainable economic growth. However, there are issues and challenges in adopting advanced technology and digitalisation. These include insufficient digital infrastructure and services, fragmented governance, widening digital divide and insufficient research, development, commercialisation and innovation (R&D&C&I) capability.

In the Twelfth Plan, the adoption and application of digital and advanced technology will be accelerated in creating and unlocking new opportunities to reap the benefits of the digital economy as well as to achieve inclusive, responsible and sustainable growth. This policy enabler focuses on accelerating digitalisation and promoting the adoption of new and advanced technology in all

Selected Key Performance Indicators

Policy Enabler 2
Chapter 11: Boosting Digitalisation and Advanced Technology

25.5%	Contribution of Digital Economy to GDP
10.5%	Contribution of eCommerce to GDP
2.5%	Gross Expenditure on R&D (GERD) to GDP
Top 20	Ranking in the Global Innovation Index

sectors. The supply of talent and skills required to drive both the digital economy and 4IR technology adoption will be increased, while R&D&C&I will be intensified. Malaysia will also focus on mainstreaming digitalisation for inclusive development and attracting more investments to become the regional champion in the digital economy. This policy enabler will realise the targets of 25.5% contribution of digital economy and 10.5% contribution of eCommerce to GDP, 100% 4G coverage in populated areas, wider 5G coverage, 2.5% gross expenditure on R&D (GERD) to GDP, 50 locally accredited sharing economy platforms and 2,000 patent applications by Malaysians in 2025.

This policy enabler identifies two game changers in accelerating technology adoption and innovation, which will enhance digital connectivity for inclusive development as well as align research and development towards commercialisation, wealth generation and economic growth.

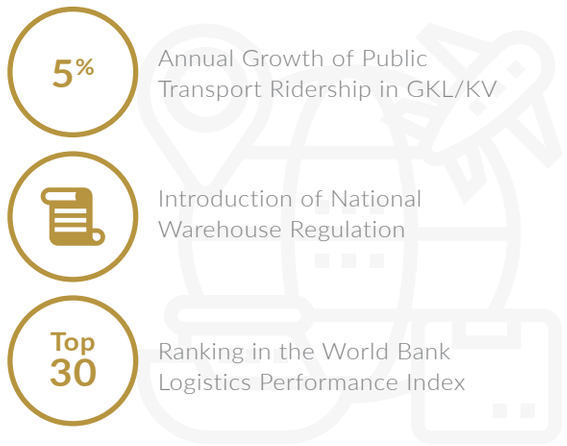
Policy Enabler 3: Enhancing Connectivity and Transport Infrastructure

The transportation and logistics sectors are important drivers in moving towards a high-income nation. Further efforts will be undertaken to improve first- and last-mile connectivity in facilitating trade activities and resolve issues related to governance in transport and logistics. In this regard, this policy enabler focuses on enhancing the efficiency of transport and logistics infrastructure to provide safe, reliable, affordable and sustainable services.

In the Twelfth Plan, the integration of different transport modes will be improved to create seamless connectivity in serving the needs of people and industry. Concerted efforts will be undertaken to improve last-mile connectivity through the integration of rail and road networks connecting airports, ports, industrial areas and cities. Meanwhile, the capacity of port infrastructure and services will be increased through the upgrading of facilities and equipment as well as improvement of processes. This will enable handling of larger vessels and provide efficient cargo handling services to port users.

Selected Key Performance Indicators

Policy Enabler 3
Chapter 12: Enhancing Efficiency of Transport and Logistics Infrastructure



Transforming the logistics services will serve as a game changer in ensuring greater efficiency as logistics is the backbone to other sectors. Among the initiatives that will be given focus are accelerating digitalisation, centralising planning and development of logistics hub and creating a national regulatory framework for warehousing and maritime economy. In addition, logistics players will be encouraged to adopt the multimodal cargo movement approach to enhance logistics services capability and reduce the cost of distribution. This will also expand access to remote areas and enable real-time shipment tracking, resulting in improved service availability, reliability, and efficiency. The successful implementation of these initiatives will ensure better reliability and efficiency of transport and logistics services.

Policy Enabler 4: Strengthening the Public Service

This fourth policy enabler underpins all themes and the three policy enablers as well as serves as the overall facilitator of Malaysia's development. Efficient and effective public service delivery is crucial in meeting the expectations of the *rakyat*, supporting project implementation and ensuring optimisation of resources. However, there are challenges that need to be addressed in talent development, governance ecosystem and project management mechanisms. These challenges include the mismatch between qualifications and placement of civil servants, online services which are not comprehensive, low digital technology adoption as well as weak collaboration and coordination in project monitoring. In addressing these issues, the adoption of the whole-of-government approach will be enhanced through better collaboration among Federal Government, state governments and local authorities to ensure the alignment of development priorities.

In the Twelfth Plan, the public service will be transformed and future leaders in the civil service will be developed. The whole-of-government approach will be enhanced in improving government administration and operational efficiency, enabling

Selected Key Performance Indicators

Policy Enabler 4
Chapter 13: Strengthening Public Sector Service Delivery

Top 30	Ranking in the Corruption Perceptions Index
80%	End-to-End Online Federal Government Services
90%	Local Authorities Achieve 4-Star Rating
-3.5% to -3.0%	Percentage of Fiscal Balance to GDP

better decision-making and innovation as well as strengthening the governance ecosystem. In addition, project management and budgeting will be improved by reviewing the budgeting framework and processes as well as improving the effectiveness of project implementation.

Under this policy enabler, the structures and functions of ministries and agencies will be reviewed and streamlined to establish a flatter organisation and reduce bureaucracy in the government administration. The increasing demands and expectations for an efficient and transparent government require civil servants to be apolitical and neutral in implementing all duties and responsibilities. A public service act will be introduced to ensure a clear demarcation of powers between Members of the Administration and civil servants. It is also essential to ensure civil servants are knowledgeable and have the right attitude and personality as well as good leadership skills. In this regard, strengthening the mechanism for the selection of key leaders will improve the overall performance of the public service. The mechanism for the recruitment of professional and managerial officers in various schemes will also be improved. This improvement is important in attracting the best talents towards a more efficient, effective and excellent public service. In addition, accelerating digitalisation and implementation of the Malaysia Digital Economy Blueprint initiatives in the public sector will further enhance public service delivery. The outcome of this enabler will help position Malaysia in the top 30 of the Corruption Perceptions Index and top nine in the Government Efficiency sub-index of the IMD World Competitiveness Yearbook as well as increase end-to-end online Federal Government services to 80%.

Successful implementation of the four policy enablers will provide the foundation and building blocks for Malaysia's development over the next five years and beyond. An effective and efficient civil service is key to realising Malaysia's aspiration to be a high-income nation and achieve the objectives of the WKB 2030.

Game Changer X
Improving TVET Ecosystem to Produce Future-Ready Talent

Why is TVET important?

A strong TVET ecosystem is one of the main pillars of Malaysia's socioeconomic development. Having this ecosystem will:

- Address issues of dependency on foreign workers, low compensation of employees (CE) and student dropouts.
- Reduce the gap between the quality of graduates and industry expectations.
- Increase the quality of TVET institutes and encourage more industry collaboration.
- Upskill communities in the rural areas.
- Enable TVET to become the preferred choice for students.

How will this be achieved?

Efforts to build a future-ready TVET ecosystem will encompass the following holistic initiatives:

- Establishing a National TVET Council.
- Promoting a single brand to represent all public TVET institutions and private providers.
- Leveraging emerging technologies such as virtual reality, augmented reality and artificial intelligence.
- Introducing ranking system based on employability, wage levels of graduates, industrial engagement and the implementation of social initiatives in the rural areas.
- Funding to be based on a ranking system.

What will success portray?

- TVET graduates meeting industry demands.
- More collaborative initiatives with key industries.
- Increase in programme intake of SPM leavers to 55% and offering more 4IR related courses.
- Qualified TVET graduates recognised as professionals by the Malaysia Board of Technologists (MBOT).
- More new jobs created through entrepreneurship.
- Dependency on foreign workers reduced.
- Higher CE.

Game Changer XI
Enhancing Digital Connectivity for Inclusive Development

Why is enhancing digital connectivity important?

Digital connectivity is a key enabler to achieve inclusive and sustainable growth. It will enable the country:

- Address the issue of low quality digital connectivity, unaffordable broadband services and digital devices as well as inequitable access.
- Narrow the differences in policies and procedures related to the provision of digital infrastructure among states.
- Address the problem of industries outside selected industrial zones which do not have access to gigabit-speed broadband connectivity to adopt emerging and the 4IR technologies.
- Address the issue of vulnerable groups who are unable to participate in remote learning.

How will this be achieved?

Malaysia aims to accelerate its digital connectivity by embarking on the following initiatives:

- Introducing telecommunication services as a public utility under the Uniform Building By-laws and other relevant laws.
- Accelerating digital infrastructure development by encouraging more private sector investment.
- Exploring the feasibility of introducing the pay-per-use concept.
- Expanding access to digital devices and complimentary data packages for students from selected groups through a people, private and public partnership approach.

What will success portray?

- 100% 4G coverage in populated areas.
- Wider 5G coverage.
- Speed of mobile broadband more than 100Mbps.
- 100% of households subscribing to internet.
- Nine million premises passed for fixed broadband service.
- All students have internet connectivity and access to digital devices.

Game Changer XII
Aligning Research and Development towards Commercialisation, Wealth Generation and Economic Growth

Why is aligning R&D important?

Investment in R&D is still low. To achieve high-income nation status, it is important to commercialise R&D. The realignment of R&D towards commercialisation will achieve the following objectives:

- Increase commercialisation as well as spur innovation and growth.
- Produce more high value-added and industry-driven products and solutions.
- Address the low investment in R&D&C&I.
- Improve productivity and move up the value chain.
- Address the low percentage of experimental development research.

How will this be achieved?

Aligning R&D towards commercialisation, wealth generation and economic growth will require highly targeted initiatives that include:

- Ensuring 50% of research funding will be focused on experimental development with high commercialisation potential.
- Ensuring R&D&C&I activities are in line with national priorities with the newly established Research Management Unit (RMU).
- Establishing a one-stop centre for technology commercialisation and transfer to scale up home-grown technologies.
- Increasing investment by the private sector in R&D&C&I and access to alternative financing.
- Establishing an endowment fund to source funds from industry, matching grants, crowdfunding and *waqf*.
- Creating more local talent as technology developers and creators.

What will success portray?

- 2.5% GERD to GDP.
- Top 20 ranking in the Global Innovation Index.

Game Changer XIII
Transforming Logistics Ecosystem for Greater Efficiency

Why do we need to transform this sector?

Malaysia has established a solid foundation for logistics infrastructure. Achieving greater efficiency will enable Malaysia to optimise its existing assets and achieve its twin goals of:

- Be an effective enabler supporting other industries in enhancing economic growth as well as providing employment.
- Address competitiveness issues in this sector.

How will this be achieved?

The Twelfth Plan aims to achieve transformation via the following initiatives:

- Centralising the planning and development of logistics hubs.
- Accelerating digital adoption to enhance efficiency in logistics services.
- Encouraging mergers and acquisitions to create more resilient and competitive service providers.
- Enhancing trade facilitation by establishing a single border agency.
- Creating a national regulatory framework for warehousing and maritime economy.

What will success portray?

- Improved import and export clearance efficiency, timeliness, tracking and tracing.
- Top 30 in World Logistics Performance Index from 41st in 2018.
- Transportation and storage subsector contribution to GDP to reach RM54.8 billion.
- Resilient and competitive logistics service providers.
- Increased international trade competitiveness.
- Improved and coordinated governance structure.

Game Changer XIV
Transforming the Public Service through the Whole-of-Government Approach

Why is transforming the public service important?

The Twelfth Plan aims to make the public service a role model of efficiency, credibility and competency. The transformation will aim to:

- Ensure an efficient and effective public service delivery.
- Enhance credibility of the civil service, promote the wellbeing of the *rakyat*, regain trust and confidence from stakeholders and the *rakyat*.
- Ensure the delineation of roles and responsibilities between Members of the Administration and civil servants.
- Strengthen the mechanism for the selection of key leaders in ensuring a more effective public service delivery.
- Accelerate the adoption of digital technology.
- Strengthen the civil service through the whole-of-government approach.

How will this be achieved?

A whole-of-government approach requires the implementation of comprehensive initiatives. These include:

- Reviewing and streamlining structures and functions of ministries and agencies to establish a flatter organisation, reduce bureaucracy, increase transparency and optimise the use of resources.
- Introducing a public service act to ensure more effective checks and balances between executive, legislative and judicial powers.
- Strengthening the mechanism for the selection of key leaders.
- Improving the mechanism for recruitment of professional and managerial officers in various schemes in attracting the best talents.
- Accelerating digitalisation in the public sector.

What will success portray?

- Top 30 in the Corruption Perceptions Index.
- Top nine in the Government Efficiency sub-index of the IMD World Competitiveness Yearbook.
- 80% end-to-end online Federal Government services.
- A clear demarcation of powers between the executive, legislative and judicial branches.
- An efficient, accountable and apolitical public service.
- Optimisation of existing resources as well as preservation of rights and obligations of civil servants.
- A solid foundation for a prosperous, inclusive and sustainable nation.

Chapter 10

Developing Future Talent



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10

Introduction

Human capital is a key driver of economic growth and socioeconomic development. During the Eleventh Plan, the development of human capital focused on four areas, namely improving the quality of education, transforming technical and vocational education and training (TVET), strengthening lifelong learning (LLL) and increasing the efficiency of the labour market to meet industry demand. Efforts to accelerate human capital development succeeded in increasing school enrolment and TVET intake as well as improving the quality of universities and labour productivity. The quality education delivered by the various learning institutions remains a priority for Malaysia as it forms the foundation in building a resilient economy. A high quality education system will produce a high-calibre talent pool which possess relevant industrial skills and is highly adaptable. However, there are still issues that persist in the labour market and in the education system that needs to be addressed. These issues include low compensation of employees (CE), inefficient labour market, limited access to quality education and weaknesses in the governance of educational institutions. The COVID-19 pandemic has caused a spike in the unemployment rate and new norms in the way people work and businesses operate. This necessitates the realignment of the labour market as well as the education and training landscape.

The Twelfth Plan will focus on realigning the labour market for inclusive and sustainable growth as well as developing future-ready talent. The focus will be on increasing job opportunities for Malaysian, achieving equitable CE, improving labour participation and strengthening labour market support. Strategies to produce future-ready talent will include improving the quality of academic and training programmes, ensuring equitable learning outcomes, leveraging on emerging technologies and strengthening the governance.

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, Malaysia continued to record full employment, improved labour productivity and higher graduate employability. Enrolment in schools, higher education institutions (HEIs) and TVET institutions also increased. However, the unemployment rate increased and labour productivity declined in 2020 due to the Movement Control Order (MCO) and economic contraction. Efforts were undertaken to reform the labour market, improve labour efficiency, provide greater access to quality education and training as well as foster stronger industry-academia linkages. These contributed towards increasing the quality and resilience of human capital and enable Malaysia to better position itself in an increasingly competitive global economy.

Performance of Selected Targets

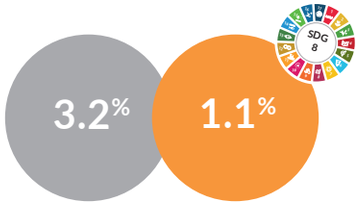
Nine targets were set under the policy pillar of empowering human capital, as shown in *Exhibit 10-1*. Three of the targets were achieved, namely monthly median salaries and wages, revision of labour laws and TVET graduates employability. Two targets set for reforming the labour market were not achieved, namely labour productivity growth and share of CE to gross domestic products (GDP). This was partly a result of the slower economic growth, mainly due to the COVID-19 pandemic, and high dependency on low-skilled foreign workers. Although there was an increase in the scores for the Programme for International Student Assessment (PISA)[1] and Trends in International Mathematics and Science Study (TIMSS)[2], both scores were still below the international average. Only one university was ranked in the top 100 of the Quacquarelli Symonds World University Rankings (QSWUR). Student enrolment rates for preschool[3] and secondary levels were below the universal enrolment of more than 95%. The intake of *Sijil Pelajaran Malaysia* (SPM) leavers into TVET programmes was lower than the target of 225,000 students, partly due to the public perception of TVET as a second choice and the fragmented TVET landscape.

[1] PISA is conducted by Organisation for Economic Co-operation and Development (OECD) once every three years since 2000.
[2] TIMSS is conducted by International Association for the Evaluation of Educational Achievement (IEA) once every four years since 1995.
[3] Schooling for children age 5+ years.

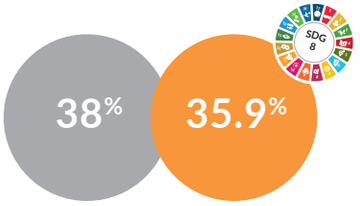
Exhibit 10-1

Eleventh Malaysia Plan: Performance of Selected Targets

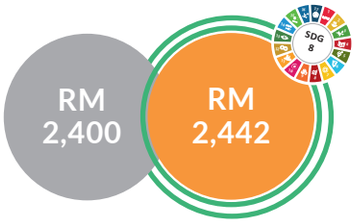
Reforming the Labour Market



Growth of Labour Productivity per Worker

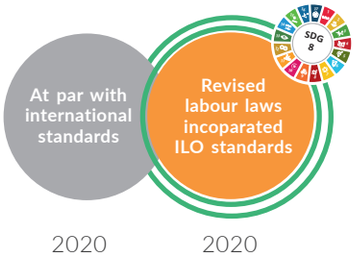


Compensation of Employees to GDP



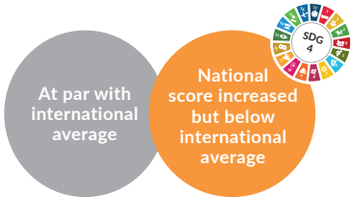
Monthly Median Salaries and Wages

Improving Labour Efficiency and Productivity

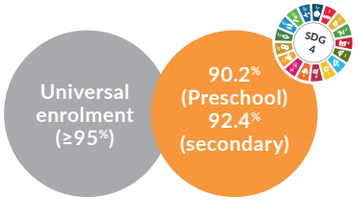


Review Labour Laws: Employment Act 1955, Trade Union Act 1959 and Industrial Relations Act 1967

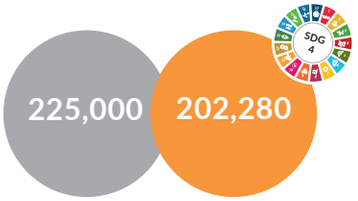
Enhancing Access to Quality Education and Training



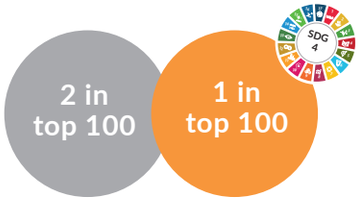
At Least on Par with the International Average in PISA and TIMSS Assessment[1]



Student Enrolment for Preschool and Secondary Levels

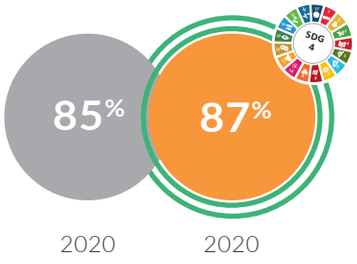


Intake of SPM Leavers into TVET Programmes



2 Universities in the Top 100 of the QSWUR

Fostering Greater Industry-Academia Linkages



TVET Graduates Employed within Six Months of Graduation



Note: [1] PISA assessment in 2018 and TIMSS in 2019.

Performance of Selected Initiatives

Labour Market Reform to Improve Efficiency and Productivity

The labour force increased by 1.8% per annum from 14.5 million persons in 2015 to 15.7 million persons in 2020. Labour force participation rate (LFPR) increased annually by 0.12 percentage points to 68.5% in 2020 from 67.9% in 2015. The unemployment rate increased from 3.1% in 2015 to 3.3% in 2019, remain at full employment. However, the unemployment rate increased to 4.5% in 2020 mainly contributed by the COVID-19 pandemic which surged the rate to its peak at 5.3% in May 2020.

An average of 220,800 jobs were created per annum for the period of 2016 to 2020. This did not achieve the 1.3 million net job creation target in the Eleventh Plan, which is equivalent to 256,000 net job creation per annum. Majority of the jobs were created in the services sector, totalling 213,000 jobs per annum, followed by the manufacturing sector amounting to 34,600 jobs per annum. However, the highest annual decline in jobs creation was recorded in the construction sector, amounting to 24,000 followed by 2,000 jobs in the agriculture sector and 1,000 jobs in the mining and quarrying sector.

The composition of skilled workers increased from 25.5% in 2015 to 28.2% in 2020 but was still below the Eleventh Plan target of 30.1%. At the same time, the share of low-skilled workers reduced from 13.8% in 2015 to 11.9% in 2020. These improvements were partly due to efforts to accelerate automation and reduce dependency on low-skilled foreign workers.

Labour market reform was monitored through three key variables namely CE, monthly median salaries and wages as well as labour productivity. CE and labour productivity achievements for the period of 2016 to 2020 were below target. The share of CE to GDP was 35.9% in 2019, below the target of 38%, while labour productivity per worker registered an average annual growth of 1.1%, below the target of 3.2%. The monthly median salaries and wages at the national level reached RM2,442. However, the disparity in salaries and wages among the states remains wide, as shown in *Exhibit 10-2*.

Box 10-1

Population and Demographics

Malaysia's population increased from 31.2 million in 2015 to 32.7 million in 2020[1]. Meanwhile, the total fertility rate (TFR)[2] decreased from 2.0 in 2015 to 1.8 in 2019. Since 2013, the national TFR was below the replacement level of 2.1, indicating that the average number of babies born per woman throughout her reproductive life was insufficient to replace both parents.

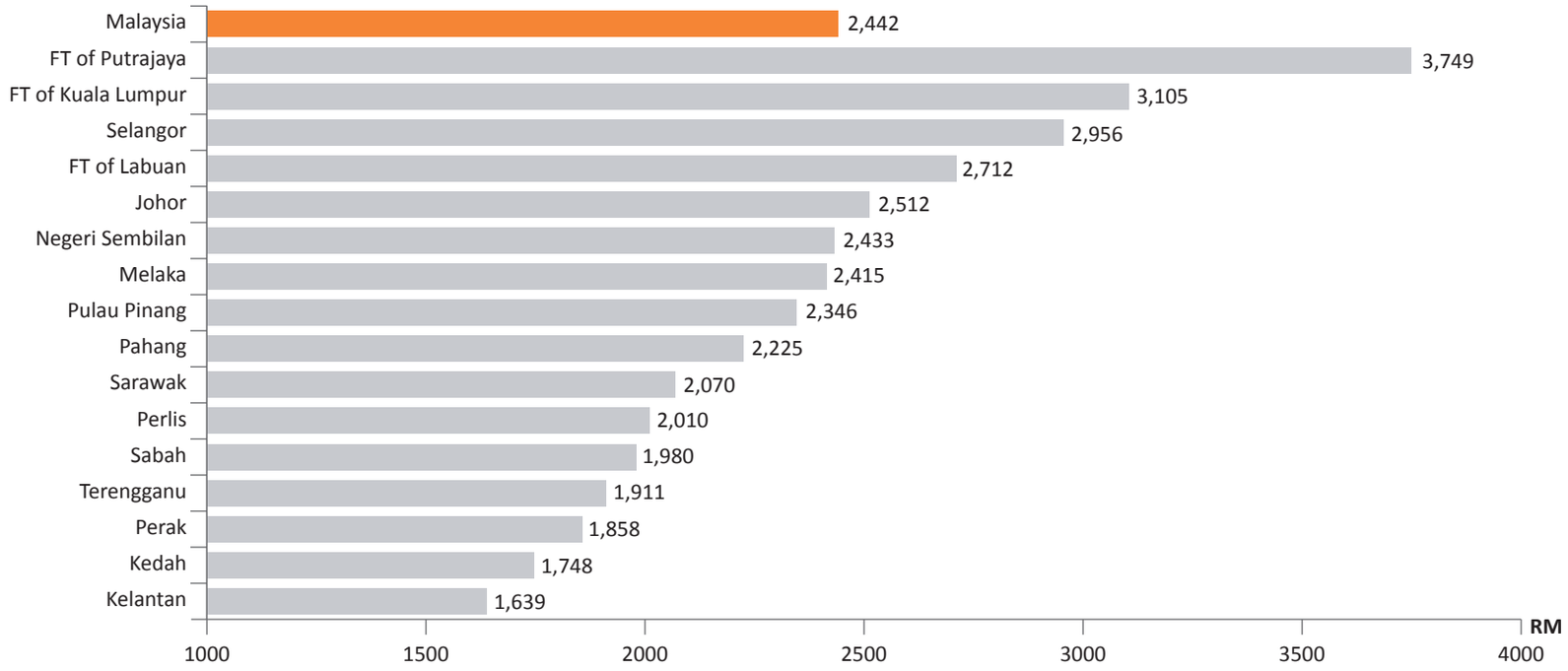
The young population, aged up to 14, declined from 7.8 million in 2015 to 7.6 million in 2020. Meanwhile, the working age population, aged 15 to 64, increased from 21.6 million to 22.8 million during the same period, contributing to a demographic dividend[3].

The older population, aged 65 and above, increased from 1.8 million in 2015 to 2.3 million in 2020. Based on the population projection 2010 to 2040, Malaysia will become an aging nation[4] in 2030 when the population aged 60 and above represents 15% of the total population.

1 Based on population estimates by the Department of Statistics Malaysia.
2 The average number of children born to women of reproductive age 15 to 49.
3 The economic growth potential that can result from shifts in a population's age structure, mainly when the share of the working age population aged 15 to 64 is larger than the share of non-working age of the population aged 14 and younger as well as 65 and older.
4 Based on *Dasar Warga Emas Negara*.

Exhibit 10-2

Monthly Median Salaries and Wages by States, 2019



Source: Salaries and Wages Survey 2019, Department of Statistics Malaysia

Amendments were made to a number of labour laws with a view to strengthen the labour market and improve the rights of workers. The Industrial Relations Act 1967 [Act 177] was revised in 2019 to expedite decision-making by delegating the power of the Minister and reducing the discretionary power of the Director General. The Employment Act 1955 [Act 265] and Trade Union Act 1959 [Act 262] are being amended in line with recent developments in the labour market and to adhere to international labour standards. The proposed amendments to Act 265 includes increasing the duration of maternity leave, reducing working hours and enabling flexible work arrangements, while amendments to Act 262 will improve the freedom of association.

The Self-Employment Social Security Act 2017 [Act 789] and Employment Insurance System Act 2017 [Act 800] were also introduced to improve labour market efficiency. Act 789 provides protection to self-employed insured persons for personal injuries caused by an accident or an occupational disease arising from the course of his self-employment activity, which also includes work purpose travels. Act 800, which was enforced in January 2018, provides several benefits and a re-employment placement opportunity under active labour market policies for insured persons in the event of loss of employment.

The Minimum Wages Order was revised three times during the Eleventh Plan. The first revision which came into effect on 1 July 2016 increased the minimum wages in Peninsular Malaysia from RM900 to RM1,000 while in Sabah, Sarawak and the Federal Territory of Labuan from RM800 to RM920. The second revision in 2018 harmonised the different minimum wages in the country to RM1,100, effective 1 January 2019. The third revision which came into effect on 1 February 2020 increased the minimum wage to RM1,200 in 16 city councils, which comprised 14 state capitals, Kuala Lumpur and Bandar Iskandar Puteri, and 40 municipal councils. These revisions were made to assist workers to cope with the rising cost of living.

Enhancement of Access and Quality Education to Improve Student Outcome

In the Eleventh Plan, significant improvements in enhancing access to quality education through various initiatives were achieved to improve student outcomes. Preschool enrolment rate was at 90.2%[4] in 2020, supported by the increased number of preschool classes from 47,994 in 2015 to 52,907 in 2020. The *Kurikulum Standard Prasekolah Kebangsaan* (KSPK) was revised in 2017 to ensure a comprehensive and integrated curriculum was available to cater for physical, emotional, spiritual, intellectual and social development of students.

Enrolment rate in primary education improved from 97.2% in 2015 to 98.2% in 2020. Enrolment rate at secondary level increased from 88.3% in 2015 to 92.4% in 2020. There is also no gender gap in school enrolment. The increase in enrolment rate was partly due to the higher number of dropout[5] students returning to school. The dropout rate reduced from 1.50% in 2016 to 1.13% students in 2020. The Zero Drop-Out programme initiated in 2018 showed positive results, with 287 dropout students returning to school in 2018 and 3,440 in 2020.

Various efforts were undertaken to further improve quality of education to be at par with international standards. Among the efforts include improving teaching and learning methods, student assessment system, school environment, competency of teachers and quality of school leaders. These efforts contributed to improved student performance in international assessments. Malaysia's performance in PISA 2018 was better compared with the previous cycle in 2012, with a score of 415 points in Reading, 440 points in Mathematics and 438 points in Science. Meanwhile, for paperTIMSS 2019[6], Malaysia scored 473 points in Mathematics and 469 points in Science compared with 465 in Mathematics and 471 in Science in TIMSS 2015. For eTIMSS, Malaysia scored 461 points in Mathematics and 460 points in Science. In summary, Malaysia recorded an improvement in all content domains with a significant score for both Science and Mathematics subjects.

The Dual Language Programme (DLP) in Mathematics and Science and Highly Immersive Programme (HIP) were introduced in 2016, to inculcate a positive learning culture and encourage the use of the English language. The number of schools that adopted the DLP increased from 379 in 2016 to 2,304 in 2020. Meanwhile, all 10,207 public schools adopted the HIP as at 2018 and the programme was further expanded in 2020 to 116 other educational institutions consisting of vocational colleges and institutes of teacher education (IPG).

Several initiatives were carried out to improve teaching and learning by encouraging the use of digital platforms for online learning and expanding access to the virtual learning environment (VLE) in schools. As of June 2019, a total of 9,823 schools and 328 education offices were connected to the internet under the 1Bestarinet programme. Three internet service providers (ISP) were appointed to provide internet connectivity to 10,207 schools and education offices for an interim period after the 1Bestarinet programme ended on 30 June 2019. A new digital learning platform known as the Digital Educational Learning Initiative Malaysia (DELIMa) was launched in July 2019 to enhance digital learning in schools. This platform was used extensively to ensure continuous access to learning during pandemic. The utilisation of DELIMa by teachers reached 98% by end of 2020.

Administration of schools was further decentralised to improve the quality of delivery and governance. In this regard, the State Education Departments (JPN) and District Education Offices (PPD) were empowered to allow for district level decision-making. Selected educational leaders and officers were trained to become full-time School Improvement Specialist Coaches (SISC+)[7] and School Improvement Partners (SIPartner+)[8]. A total of 6,064 principals and 20,145 teachers were coached by SISC+ and SIPartner+.

Enhancement of Access to Quality Higher Education

Efforts undertaken to implement the 10 Transformational Shifts of the Malaysia Education Blueprint 2015-2025 (Higher Education) or MEB (HE) resulted in notable progress. These efforts were focused on improving the quality of programmes and academic staff, strengthening industry collaboration as well as promoting good governance. Greater access to higher education was provided through 595 HEIs, comprising 20 public universities, 36 polytechnics and

[4] Preschool enrolment in Peninsular at 90.2%, Sabah at 89.6% and Sarawak at 90.6%.
[5] Any student who is in the schooling system but leaves school for any reason before completion of education.
[6] TIMSS 2019 has introduced computer-based assessment, eTIMSS, which Malaysia also participated. Participating countries of eTIMSS also need to administer the study in paperTIMSS as part of the transition process from paperTIMSS to eTIMSS. In Malaysia, this study was administered on 16 October 2018 to 1 November 2018, involving a total of 9,637 students. Out of this total, 1,560 students were involved for paperTIMSS and 8,077 for eTIMSS.
[7] SISC+ is responsible to coach teachers to ensure dimensions of curriculum, assessment and pedagogy are aligned.
[8] SIPartner+ is responsible to coach the school leadership team on effective school administration and management.

104 community colleges as well as 435 private HEIs. The tertiary participation rate[9] of the population aged 18 to 22 years decreased from 45.6% in 2015 to 43.1% in 2019 due to a lower number of SPM candidates. Enrolment of students in HEIs in 2015 and 2020 is shown in *Exhibit 10-3*. Total enrolment declined by 0.2% due to a negative growth of master's, diploma and certificate. A large declined in certificate level was due to the significant drop of enrolment in private HEIs by 29.1%.

Measures were also undertaken to enhance access to quality higher education by introducing diverse learning and teaching approaches. These included work-based education and virtual learning programmes. Among the programmes introduced were the two years in the university and two years in the industry (2u2i) and the three years in the university and one year in the industry (3u1i). A total of 17 public universities offered either the 2u2i or 3u1i programme to provide better working experience for students. As of 2020, a total of 83 academic programmes were offered in these modes. In addition, a total of 1,376 Massive Open Online Courses (MOOCs) programmes were offered by public universities, benefiting 554,101 students as of December 2020. The MOOCs with credit transfer was introduced to enhance the quality of academic programme delivery. Seven public universities agreed to offer MOOCs with credit transfer.

The Entrepreneurship Action Plan of Higher Education Institutions 2016-2020 was launched in 2016 to produce graduates equipped with appropriate values and skills as well as entrepreneurial acumen. Entrepreneurship education was embedded in the curricula to inculcate an entrepreneurial mind-set and to harness business skills. As of December 2020, 100% of HEIs students participated in structured and holistic entrepreneurial programmes, an increase of 40% compared with 2016.

Academic staff are required to fulfil the qualification of a Doctor of Philosophy (PhD) to improve the quality of learning and teaching in HEIs. The percentage of academic staff with PhD qualification in HEIs increased from 25% in 2015 to 35.1% in 2020. Public universities showed significant improvement, from 13,925 of their academic staff possessing PhD qualifications in 2015 to 17,560 in 2020. All five research universities (RUs) exceeded the 50% target set for 2020 and fourteen out of the 15 non-research universities exceeded the 30% target.

Exhibit 10-3

Enrolment of Students in Higher Education Institutions, 2015-2020

Item	Number of Students		% to Total		Average Annual Growth Rate, %
	2015	2020	2015	2020	2016-2020
Enrolment	**1,236,164**	**1,224,098**	***100.0***	***100.0***	***-0.2***
Citizenship:					
Local	1,122,757	1,134,603	*90.8*	*92.7*	*0.2*
Foreign	113,407	89,495	*9.2*	*7.3*	*-4.6*
Level of Study:					
PhD	36,967	47,424	*3.0*	*3.9*	*5.1*
Master's	84,329	82,924	*6.8*	*6.8*	*-0.3*
Bachelor's	592,149	641,189	*47.9*	*52.4*	*1.6*
Diploma	401,009	370,217	*32.4*	*30.2*	*-1.6*
Certificates	78,241	26,766	*6.3*	*2.2*	*-19.3*
Others[1]	43,469	55,578	*3.5*	*4.5*	*5.0*

Note: [1] Professional, post graduate diploma, advanced diploma, matriculation and others.
Source: Ministry of Higher Education

[9] Source: Ministry of Higher Education

During the Eleventh Plan, the governance of the HEIs was further enhanced to provide better quality higher education, more academic freedom as well as freedom of speech and association. All 20 public universities obtained autonomous[10] status, which empowered them to be more flexible in the decision-making process. The moratorium period for the establishment of private HEIs was extended to 31 December 2020. This was to rationalise underutilised capacity, address quality issues and improve governance of the private higher education sector. Meanwhile, the University and University Colleges Act 1971 [Act 30] was amended in 2018 and subsequently enforced in 2019 to allow on-campus political activities among students.

Efforts were also undertaken to promote industry-academia collaboration in research and development (R&D). As of September 2020, four additional clusters of Industry Centres of Excellence (ICoE)[11] were established, focusing on the areas of logistics and transport, agriculture, rail and maritime. With these additional four clusters of ICoE, there are now 14 clusters of ICoE which has benefitted 63,741 students and 3,274 academic staff. Meanwhile, six centres of excellence in HEIs were given recognition as Higher Institution Centres of Excellence (HICoE)[12] during the Eleventh Plan. This brings the total number of HICoE to 21. This recognition is to boost research excellence at HICoE in the designated fields of thrust. A total of 519 projects were implemented under the Public-Private Research Network (PPRN) programme. From this total, 426 projects were fully completed.

Initiatives undertaken to enhance the quality of higher education contributed to improvement in graduate employability (GE) and global rankings of universities. The GE rate exceeded the 80% target set for 2020, reaching 84.4% from 76.1% in 2015. In addition, the ranking of public universities in QSWUR continued to improve. In 2021, University of Malaya (UM) remained in the top 100 in the world, which is at the 65th position. Four other RUs also improved their rankings and remained in the top 200 in 2021, namely *Universiti Putra Malaysia* (UPM) at 143rd, *Universiti Kebangsaan Malaysia* (UKM) 144th, *Universiti Sains Malaysia* (USM) 147th and *Universiti Teknologi Malaysia* (UTM) 191st position.

Transformation of Technical and Vocational Education and Training

During the Plan period, TVET was transformed to develop quality human capital by strengthening governance as well as enhancing the quality and delivery of programmes. TVET was also rebranded to increase attractiveness, particularly among SPM leavers. Based on the TVET Graduate Tracer Study introduced in 2018, the GE rate was 87% in 2020, compared to the 85% target in 2020.

Efforts were undertaken by the Malaysian Qualifications Agency (MQA) and Department of Skills Development (DSD) through the Joint Technical Committee on Single Quality Assurance of TVET to harmonise the accreditation systems and to improve the learning pathways for TVET graduates. The Code of Practice for TVET Programme Accreditation (COPTPA) was published in 2019 as the national reference for TVET programme accreditation. In addition, the online rating system was developed in 2017 in accordance with the National Skills Development Act 2006 [Act 652] to evaluate the quality of TVET institutions and programmes. The quality and delivery of TVET programmes were enhanced by mainstreaming the National Dual Training System (NDTS) and Special NDTS. These systems offered industry-oriented training programmes to school leavers involving 478 companies and 215 training institutions in 2020. A total of 5,695 trainees completed their training in 2020 compared to 12,298 in 2015. The number of trainees were lower in 2020 due to the COVID-19 pandemic that affecting the enrolment of trainees. Changes were made to the structure of programmes, in which period of training was extended to enable trainees to complete Malaysian Skills Certificate level 1 to 3 and Malaysian Skills Diploma.

TVET programmes were rebranded to focus on improving the quality of instructors and recognising TVET professionalism. The eProfiling System, which was established to collect information on skills and competencies of TVET instructors, registered 33,458 instructors across 675 public training institutions at the end of 2020. In addition, the Malaysia Board of Technologists (MBOT) was established in 2016 to recognise technicians and technologists as professionals. As at the end of 2020, there were 29,443 registered MBOT members.

[10] Autonomous status is a delegation of power given to University Board of Directors to make decisions on institutional governance, finance, human resource management and academic governance.
[11] The ICoE programme provides an avenue for industry players to establish laboratories and teaching facilities within the universities to provide students with exposure to the latest technologies.
[12] HICoE status is given to research centres of excellence with high potential and capabilities in terms of expertise, infrastructure and output produced to further expand the designated niche research areas.

Issues and Challenges

There are several issues and challenges that need to be addressed to further develop human capital in meeting the current and future requirements of the nation. Among the key issues and challenges on the demand side are inequality in compensation and labour participation, inefficient labour market as well as displacement of labour due to the COVID-19 pandemic. Issues on the supply side include low student outcomes, lack of coordination and governance, unconducive ecosystem for innovation and limited accessibility for students with special education needs (SEN)[13] and Orang Asli students.

Issues and Challenges

- Inequality in Compensation and Labour Participation
- Inefficient Labour Market
- Labour Displacement due to the COVID-19 Pandemic
- Low Student Outcomes
- Lack of Coordination and Governance
- Unconducive Ecosystem for Innovation
- Limited Accessibility for Students with Special Education Needs and Orang Asli Students

Inequality in Compensation and Labour Participation

Since 1996, the Government consistently advocated the adoption of Productivity Linked Wage System (PLWS) as one of the measures to increase wages. Although 88,986 employers adopted PLWS, which benefitted 4.8 million employees representing 43% of total employees in the private sector, it has yet to be translated into higher salaries and wages. The share of CE to GDP for Malaysia was at 35.9% in 2019, which is lower compared with South Korea at 46.8% and Singapore at 40.2%. In addition, the National Wage Index (NWI) published in 2019 was unable to provide a reliable guide to capture the dynamics of salaries and wages in the country.

There is a potential to increase labour supply based on untapped talent from women outside the labour force and the Malaysian diaspora. Malaysia's female labour force participation rate (FLFPR) in 2020 stood at 55.3%. In 2019, Malaysia was among the lowest in ASEAN at 55.6% compared with Vietnam at 71.8%, Singapore at 70% and Thailand at 66.6%. This was partly due to 67% of female with secondary education were outside the labour force. Of this, 63% stated housework and family responsibilities as reasons for not participating in the labour force. Another untapped labour supply is the Malaysian diaspora. However, the lack of comprehensive and accurate data constrained efforts to capitalise on the Malaysian diaspora.

As at the end of 2020, the number of registered foreign workers was 1.48 million or 9.9% of the total workforce. The presence of a large pool of foreign workers disincentivised industry to adopt automation and mechanisation as well as move up the value chain. In addition, lax enforcement and the absence of an effective mechanism to manage the low-skilled foreign workers contributed to the increase in the number of illegal immigrants. Many of the illegal immigrants were originally documented workers who remained in the country without renewing their work permits. According to the World Bank study in 2019, the total number of foreign workers was estimated between 2.96 million to 3.26 million in 2017. Of these, 1.23 million to 1.46 million were estimated as illegals.

[13] Students who cannot perform simple daily tasks by themselves and generally require constant supervision and support from various parties throughout their entire lives.

At present, there are three categories of expatriate in the country. Out of the total of more than 92,000 expatriates as at the end of 2020, 56% were in Category I whose earnings exceeded RM10,000 per month. The balance 44% of expatriates were in Category II[14] and Category III[15] earnings between RM3,000 to RM9,999 per month. The presence of a large number of expatriates in these two categories, which do not require specialised skills, have reduced opportunities for local graduates who are also equally qualified.

A large number of graduates are underemployed[16] due to a mismatch between the graduates' skills and employers' requirements. In 2020, only 69.7% graduates were employed in skilled jobs, while 28.2% were in semi-skilled jobs and 2.1% were in low-skilled jobs. This has resulted in underutilisation of local talent.

Inefficient Labour Market

The current labour market is inefficient as manifested in the huge imbalance between demand and supply. Labour Market Information (LMI) plays a crucial role in identifying and rectifying skills imbalance in the labour market. However, there are a number of agencies that are currently involved in collecting and disseminating data which has resulted in fragmentation, thus creating difficulty in policy formulation.

There are 29 legislations related to the labour market. They cover matters pertaining to minimum wage, discrimination in the workplace, workers' rights and unfair dismissal. Low awareness among employers and employees was identified as one of the main causes of non-compliance of labour laws and regulations. This is further exacerbated by the lack of capacity and capability of the enforcement agencies in undertaking enforcement activities.

The current standard classification of occupations does not specify the skill sets that each occupation requires, making it difficult to design proper upskilling and reskilling programmes. As changes in technology will require more skilled workers, the tendency of employers to focus training on this category of employees will deepen polarisation among the different groups of employees.

Labour Displacement due to the COVID-19 Pandemic

The economic disruption due to the COVID-19 pandemic caused massive changes to the labour market landscape. The number of unemployed persons stood at 711,000 in 2020. This is an increase of 39% or 202,800 persons compared with 2019. In addition, number of persons in the inactively unemployed[17] category increased by 54,800 during the same period to record 196,800 in total. Those in the time-related underemployment[18] category increased by 74% to 334,000 persons in 2020 compared with 191,600 persons in 2019. The unemployment rate peaked at 5.3% in May 2020 and moderated to 4.6% in September 2020.

Changes in the structure of the economy led to steady redeployment of labour among economic sectors and altered the labour market landscape. However, the process of redeployment was inefficient due to lack of comprehensive and integrated public employment services. The new norms created by the COVID-19 pandemic including the need for physical distancing and other standard operating procedures will accelerate the take up of automation by industries, leading to more redeployment.

Job losses and reduced incomes are some of the impacts of the pandemic. Many displaced workers transitioned into informal employment. In 2019, the number of workers in this category was reported at 2.54 million[19]. Those in informal employment did not enjoy standard employment term which is characterised by long-term employment with a single employer and being paid full-time wage. They also did not enjoy social protection, in particular social insurance related to pensions, disability and unemployment.

Low Student Outcomes

The enrolment rate of preschool and secondary school has yet to meet the universal target of 95%. This is due to the absence of mandatory participation and lack of accessibility, particularly for

[14] Expatriates who earn a basic salary of RM5,000 to RM9,999 per month, excluding any other allowances. They are allowed to hold the pass for a maximum of 24 months and may bring in their dependents.
[15] Expatriates who earn a basic salary of RM3,000 to RM4,999 per month, excluding any other allowances. They are allowed to hold the pass for a maximum of 12 months which can be renewed a maximum of two times. They are not allowed to bring in their dependents.
[16] Workers in the semi-skilled and low-skilled occupations with tertiary education.

[17] This category includes:
- persons who did not look for work in the reference week because they believed no work was available or that they were not qualified;
- persons who would have looked for work had they not been temporarily ill or had it not been for weather condition; and
- persons who had looked for work prior to the reference week and persons who were waiting for result of job applications.

[18] Defined as those who were employed less than 30 hours per week due to the nature of their work or because of insufficient work but were able and willing to work additional hours.
[19] Source: Informal Sector Workforce Survey 2019, Department of Statistics Malaysia

students with SEN as well as Orang Asli students and those residing in remote areas. The transition rate from primary to lower secondary school was 97.9% in 2020, not including students who opted out or switched to privately run Islamic schools such as *sekolah pondok* and *tahfiz* schools. Students outside of the mainstream education system were unable to be traced due to the absence of an integrated monitoring system.

Malaysia's performance in international assessments such as PISA and TIMSS has improved since 2012 and this has narrowed the country's performance gap against the international average. However, the level of student learning outcomes remained below their full potential. The results in the PISA 2018 indicated that knowledge application and reasoning in complex and unfamiliar situations among secondary school students were still below the international average.

The participation rate in science, technology, engineering and mathematics (STEM) at the upper secondary level is lower than the targeted 60:40 ratio. The enrolment of upper secondary students in STEM education programme declined with the ratio decreased from 49:51 in 2015 to 47:53 in 2020. Students lacked interest in learning STEM related subjects due to inadequate hands-on activities such as science experiment. In some schools, science labs were not well-equipped. Currently, out of the total 12,060 science labs, 255 labs are considered unsafe, 329 labs have security issues and 1,672 labs are not able to fully function.

There is a need for the higher education system to be more flexible and responsive towards changes and disruptive innovation brought upon by the Fourth Industrial Revolution (4IR). Several academic programmes lack the flexibility to cater to the changing requirements of the industry, specifically in terms of structure as well as learning and teaching delivery. Some members of academic staff face challenges in optimising new technologies in their teaching activities. This is further exacerbated by the absence of an integrated database to enable targeted capacity building for academic staff.

The student assessment mechanism based on Cumulative Grade Point Average (CGPA) is not holistic as it does not consider employability dimension. As such, the Integrated Cumulative Grade Point Average (iCGPA) was piloted in 2015 as a new mechanism to evaluate both academic performance as well as the development of soft-skills. However, the implementation of iCGPA was made optional in June 2018 leading to HEIs reverting to the previous CGPA mechanism.

TVET institutions face challenges, particularly in learning and teaching delivery, technology mismatch and knowledge gap among instructors. The equipment in the institutions is outdated, which impedes the teaching of current technology relevant to the industries. In addition, there is still a lack of understanding about the potential of TVET. TVET education is still perceived as the second or last choice and only ventured by those who do not have excellent academic qualifications. As a result, high achievers in school are more inclined to academic pathways instead of TVET.

Lack of Coordination and Governance

There is an overlap of functions among ministries and agencies with respect to public and private early childhood care and education (ECCE)[20]. This resulted in unsynchronised curricula and differences in quality of teachers, teaching and learning methods, as well as poor governance. These led to inconsistency in the outcomes of ECCE programmes.

Most of private *tahfiz* schools are not registered with the Ministry of Education (MOE) causing unsynchronised curricula which have led to the inability of students from these schools to sit for standard national examinations. As such, these students will not be able to secure appropriate jobs when they graduate as they do not meet the minimum qualification set by the job market. In addition, issues on safety of building and student living conditions of private *tahfiz* schools have been highlighted.

In 2020, about 39.5% of primary schools were classified as Under Enrolled School (UES), of which recorded an enrolment of less than 150 students per school. The teacher-student ratio in UES is 1:6, compared with the national average of 1:13, resulting in higher operating cost per capita at seven times more than non-UES. As such, there is a need to rationalise UES while ensuring access to education for all is not jeopardised.

Currently, there is lack of a centralised and integrated database of all education providers. The absence of a centralised database constraints effective human resource and infrastructure development planning. Data sharing among various ministries, agencies and private education providers is limited by existing legislation.

All public universities have been granted autonomous status, which allows for greater flexibility in terms of institutional and academic governance as well as finance and human resource management. Nonetheless, public universities are still highly dependent on government funding. Despite the autonomous status, these institutions still need to adhere to Government regulations. This poses some limitations for effective governance.

[20] Education programmes involving preschools for children aged 4+ to 5+ years old and daycare centres for younger children.

As of December 2020, there were 640 public TVET institutions, 633 private TVET institutions and 22 state TVET institutions, offering multiple programmes across levels one to six of the Malaysian Qualifications Framework (MQF). These TVET institutions are governed by various ministries resulting in the duplication of programmes and underutilisation of resources. TVET in Malaysia is not regulated by any act. Hence, issues related to the management of TVET institutions by various ministries cannot be addressed effectively.

Perbadanan Tabung Pendidikan Tinggi Nasional (PTPTN) faces sustainability issues due to low repayment collection and heavy debt obligations. The amount of repayment received is only 65.7% of the scheduled dues. As of December 2020, there were about 1.26 million borrowers with outstanding debt arrears amounting to RM8.6 billion, of which 30.5% borrowers have yet to pay their loans. This is further aggravated by moratorium given for loan repayment due to the COVID-19 pandemic. All borrowers were eligible for a nine-month deferment until end of 2020, amounting to RM1.13 billion. Targeted deferment for six months was given to eligible borrowers in the period of January 2021 to October 2021.

Unconducive Ecosystem for Innovation

The Malaysian education system aspires to narrow the digital divide. Nevertheless, the implementation of digitalisation in schools faces limitations due to the lack of infrastructure, infostructure and coordination among government agencies. The current programmes also do not take into account the different levels of school readiness.

The COVID-19 pandemic has made digitalisation of the education system more crucial. The introduction of online learning as an interim solution faces several limitations. The ability and capacity of students, academic staff and institutions to use appropriate digital equipment varies, resulting in unequal access as well as affecting learning and teaching. In addition, students have to bear additional costs due to the need for data usage and related equipment for online learning. Access to internet and infrastructure to support online learning and teaching is limited, especially in some remote areas.

Research activities in HEIs encompass the full range of research from fundamental to applied that enable knowledge creation, talent development and academic excellence. In this regard, five public universities were granted RU status, which among others, aimed to inculcate R&D activities and enhance commercialisation. However, in 2019, the commercialisation rate of R&D in public universities was at 4.3%[21], which was still below the international level of 5%. This is attributed to, among others, the mismatch of R&D with industry needs, lack of communication and networking, limited financial resources and inadequate infrastructure.

Limited Accessibility for Students with Special Education Needs and Orang Asli Students

The enrolment of students with SEN increased annually, however in 2020 only 9.27% of schools with special education programmes are equipped with four basic disabled-friendly facilities comprising railing, parking, toilet and ramp, thus limiting accessibility. In addition, school leaders, teachers and student aides are not adequately trained in special skills to manage students with SEN. The current *Kurikulum Standard Prasekolah Kebangsaan Pendidikan Khas* (KSPK PK) is inadequate to address the multifaceted needs of students with SEN as it is not early intervention-based.

The number of Orang Asli students and students residing in remote areas who completed schooling and enrolled in tertiary level education is extremely low. This is partly due to the limited number of the Comprehensive Special Model School 9 (K9), which offers nine years of schooling up to Form Three. The geographical location continued to pose a challenge for Orang Asli students to gain access to secondary education. Schools are commonly not located within the vicinity of these communities.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The Twelfth Plan will focus on developing future talent for a dynamic labour market while addressing the employment-related issues caused by the COVID-19 pandemic. In this regard, the labour market will be realigned to be more inclusive and sustainable while future-ready talent will be developed. Emphasis will be given in promoting equitable CE and labour participation, strengthening the labour market support system, elevating the quality of education, as well as leveraging emerging technologies. The implementation of all these initiatives will lead to a flexible labour market that can meet industry demand and improve the *rakyat's* standard of living.

[21] Source: Malaysian Research Assessment System (MyRA), Ministry of Higher Education

Way Forward: Twelfth Malaysia Plan, 2021-2025

Developing Future Talent

Priority Area A

Realigning the Labour Market for Inclusive and Sustainable Growth

Strategy A1

Promoting Equitable Compensation of Employees and Labour Participation

Strategy A2

Strengthening the Labour Market Support System

Priority Area B

Developing Future-Ready Talent

Strategy B1

Raising the Quality of Education

Strategy B2

Strengthening Governance

Strategy B3

Leveraging Emerging Technology

Strategy B4

Ensuring Equitable Learning Outcomes

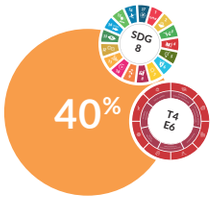
Strategy B5

Addressing Overlap in TVET Governance



Twelfth Malaysia Plan: Selected Targets

Realigning Labour Market



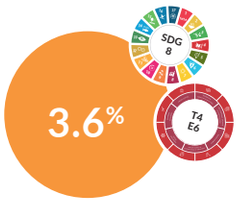
2025

Compensation of Employees to GDP



2025

Monthly Median Salaries and Wages



2021-2025

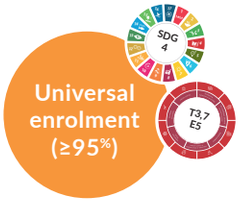
Labour Productivity Growth per Worker

Developing Future-Ready Talent



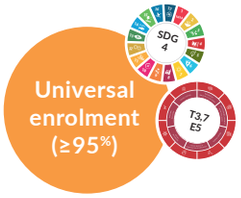
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PISA and TIMSS Score



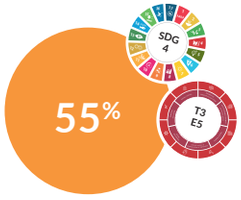
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Enrolment of Preschool Students



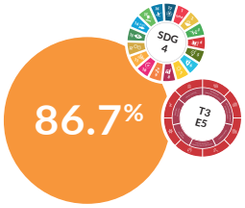
2025

Enrolment of Secondary School Students



2025

Intake of SPM Leavers or Equivalent into TVET Programmes



2025

Graduate Employability in HEIs and Public TVET Institutions



2025

Public Universities in Top 100 of the QSWUR



Priority Area A

Realigning the Labour Market for Inclusive and Sustainable Growth

In the immediate term, measures will be introduced to address job losses due to the COVID-19 pandemic. Over the longer term, realignments of current policies and support systems will be undertaken to build an inclusive, resilient and sustainable labour market. Among the measures to be undertaken during the Plan period include promoting equitable CE and labour participation as well as strengthening labour market support system, as shown in *Exhibit 10-4*. These measures will contribute towards increased employability of local talent and reduced skills mismatch in the labour market, which are in line with Goal 8 of 2030 Agenda.

Exhibit 10-4

Initiatives to Increase Compensation of Employees





Strategy A1

Promoting Equitable Compensation of Employees and Labour Participation

Concerted efforts will be undertaken to promote equitable CE and improve labour participation. The focus will be on strengthening the labour market to improve the standard of living of workers and provide equal access to employment opportunities. New initiatives will be introduced to address the dependency on foreign workers. The participation of more females in the labour force will be encouraged to improve employment sustainability.

Strengthening Labour Market

Measures will be undertaken to reconcile different methods of calculating PLWS to allow self-assessment by employers. Self-assessment will enable a more targeted approach to standardise the various methods in adopting PLWS. In addition, new indicators, which measure the linkage between profit, wage and productivity, will be introduced to monitor the effectiveness of this system.

Best practices of high road firms characterised by their emphasis on workers' welfare and low differentiation between earning levels of employees, will be adopted to increase CE. For this purpose, guidelines will be developed and disseminated to firms especially micro, small and medium enterprises (MSMEs). The guidelines will facilitate employers to reorganise their work systems to improve CE.

Firms will also be encouraged to adopt new models for better distribution of profits. Such models include the employee ownership trust (EOT), whereby the holdings of the firms are placed under a trust controlled by employees. In addition, a model to mandate profit

sharing of firms based on a minimum number of employees will be introduced. These new models of ownership will ensure profits are broadly shared, while the workers are given a stake in the firms.

Efforts to increase membership in trade union will be intensified to enable stronger bargaining power in wage negotiations. Co-determination approach will be introduced to allow worker representatives at the decision-making level. These measures will facilitate better involvement and engagement of employees with employers in determining the compensation structure of firms.

Continuous efforts to provide wage benchmarking will be undertaken by enhancing NWI. The scope of NWI will be expanded to cover academic qualification, work experience, skills and other factors that contribute to wage differences. The NWI will be improved by incorporating administrative data to capture the dynamics of wages on a real-time basis.

Facilitating Labour Force Participation

Efforts will be undertaken to reduce the dependency on foreign workers and promote greater local participation in the labour market. The efforts will include reviewing the multi-tier levy mechanism every two years to make it more business-friendly. This mechanism is scheduled to be implemented by 1 January 2022.

A specific policy will also be introduced to reduce dependency on foreign workers to ensure that they leave the country after a certain period. Employers will adhere to this policy through an undertaking as a prerequisite for permit approval. This undertaking states the plan to reduce the number of foreign workers within five years either through employment of locals or automation. Employers hiring expatriates will also be subjected to the specific policy. In this regard, the salary scale of expatriates in all categories will be revised upwards to ensure that only jobs with skillsets that are not available locally are offered to expatriates.

The excess levy collected through the implementation of multi-tier levy mechanism will be channelled to industry for the purpose of increasing job opportunities and implementing upskilling and reskilling programmes for locals. Among the initiatives that can be funded include industry automation and mechanisation. The fund will also be used to incentivise employers to create a more conducive working environment to attract locals.

More deterrent measures will be introduced to reduce the number of illegal workers, where majority of them are over stayers. The current insurance guarantee mechanism will be replaced with a new mechanism, which requires deposit equivalent to total deportation cost, to prevent foreign workers from overstaying. This effort will be implemented together with the Holistic Enforcement Plan for Illegal Immigrants, the Foreign Workers Action Plan and the Recalibration Plan for Illegal Immigrants.

Efforts will continue to be undertaken to ensure employers in all economic sectors protect the welfare of the workers and comply with the international obligations related to labour. These include undertaking stricter enforcement of the Employment Act 1955 [Act 265] and Anti-Trafficking in Persons and Anti-Smuggling of Migrants Act 2007 [Act 670], strengthening cooperation with trade unions and other relevant organisations in promoting workers' rights and increasing awareness among the employers on preventing trafficking in persons and forced labour as well as promoting good practices related to human rights. Enforcement under the Employees' Minimum Standard of Housing, Accommodations and Amenities Act 1990 [Act 446] will be enhanced to ensure employers provide safe and suitable accommodation to the workers. These initiatives are expected to improve the country's position in the Trafficking in Persons Report by the US State Department and other related international reports.

Measures to increase FLFPR will be undertaken by introducing more supportive social policies. Females with secondary educational attainment will be encouraged to participate in labour market through home-based economic activities while continuing with household responsibilities. In addition, a new law will be introduced to mandate employers to provide childcare facilities, of which penalties will be imposed for those who failed to comply.

A mechanism to leverage on Malaysian diaspora expertise will be devised. The Returning Expert Programme (REP) will be enhanced to make it compulsory for all Malaysians who are working, are going to and are coming back to report to the government. A comprehensive database for the Malaysian diaspora will be established to better utilise available talent for the national interest.

Strategy A2

Strengthening the Labour Market Support System

Systems to support labour market will be strengthened by enhancing labour market information infrastructure and promoting responsive workforce training. Measures will also be undertaken to introduce social protection for gig workers and increase compliance with labour laws and regulations. These efforts will improve the efficiency of the labour market.

Enhancing Labour Market Information Infrastructure

A sound labour market information infrastructure is crucial to strengthen the labour market. In this regard, a labour market data framework will be developed to guide planning, development and implementation of labour market policies and initiatives. The framework will facilitate collection and harmonisation of data from traditional and emerging sources for central analytics, as shown in *Exhibit 10-5*. The labour market information infrastructure will also include an analytics platform to provide insights for empirical-based policy decision. This platform will incorporate predictive modelling, which uses machine learning technology to better understand the dynamics of the labour market. This will also assist policy makers in addressing labour market challenges, including skills mismatch, as well as the needs for better employment forecast based on sectors or region and tracking of foreign workers.

Exhibit 10-5

Central Analytics Platform for Labour Market Support



Promoting Responsive Workforce Training

The Human Resource Development Corporation levy reimbursement mechanism will be revised to support more training for low- and semi-skilled workers who are susceptible to be displaced with the emergence of 4IR technologies. Micro and modularised programmes that target all skill levels, particularly those in the lower skill category, will be expanded. This will allow employees to complete the programmes in a staggered manner and gain a recognised credential.

An extensive review of the current standard classification of occupations to incorporate information on skills requirement will be undertaken to establish a comprehensive and dynamic national skills framework[22]. This framework, which requires continuous updating, will be used as a guide to equip existing workforce with new skills requirements. As this effort needs the cooperation of industries in identifying skills, an extensive network of cooperation between the government, industries and training providers will be established. This framework will facilitate academia to formulate academic programmes, thus enabling locals to be employed in new skilled jobs created. Additionally, the number of places to train workers who specialise in niche areas and skills will be increased in meeting the new demands from industry. These jobs include design engineers and researchers, software architects and big data scientists in the fields of electrical and electronics, computer and information technology as well as the creative industry.

The issue of underemployment of graduates will be addressed through the continuous support for bridging programmes that enhance the employability of graduates. This will equip them with the right attitude, skills and knowledge to perform as high potential talent. Courses that focus on creative and analytical thinking, organisational adaptability as well as communication and networking skills will be intensified. Besides bridging programmes to gain employment, those with affinity towards entrepreneurship will also be nurtured based on their interest.

Addressing Labour Displacement due to COVID-19 Pandemic

Recovery from the COVID-19 pandemic needs intensive intervention to create more job opportunities. In this regard, initiatives by various stakeholders will be coordinated by the newly established National Employment Council (NEC) chaired by the Prime Minister. The council

[22] National skills framework will mirror the efforts of the European Commission's European Skills, Competences, Qualifications and Occupation (ESCO) and the US Department of Labor, Employment & Training Administration in developing O*Net.

will oversee the implementation of strategies in creating 500,000 employment opportunities by the end of 2021 as well as in addressing issues related to skills mismatch in the labour market.

The employment services portal will be enhanced to enable redistribution of the workforce disrupted by the COVID-19 pandemic besides redeployment of displaced workers due to automation. The portal, powered by artificial intelligence (AI), will integrate all components involved in an employment life cycle. The portal will comprise features such as job matching through psychometric testing, opportunities for upskilling and reskilling as well as funds that are available.

Efforts to move industry to higher value-added activities through automation will be continued. The related incentives will be reviewed to incorporate components in facilitating necessary training for employees to effectively work with new automation technologies. For employees who are displaced, upskilling and reskilling will be provided through the labour market support system to enable them to remain in the labour market.

Providing Decent Work for Gig Workers

Efforts will be undertaken to ensure the wellbeing of those in informal employment are in accordance with the pillars of decent work[23] agenda. In this regard, a social protection scheme, which includes unemployment and health benefits, as well as retirement savings, will be enhanced. In addition, an innovative approach by leveraging existing intermediaries or platform providers to capture information on gig workers will be explored. This will include introducing specific provision in the existing laws in tapping information from intermediaries on gig workers to facilitate access to social protection. A training fund for gig workers will be established to assist in upgrading their skills in order to move to a more favourable employment.

Psychosocial risks, especially work-related stress faced by gig workers, including those working in international platforms in different time zones, will be addressed. Appropriate measures will be formulated to enable these workers to work in a safe and conducive environment. For this purpose, international best practices will be applied.

Encouraging Shared Responsibility

The capacity of and collaboration among employers, employees and enforcement officers will be strengthened to promote shared responsibility in complying with labour laws and regulations. An existing facility will be upgraded as a dedicated training hub for learning, knowledge sharing, and capacity building for the employers, employees and enforcement officers. This hub will also provide certification to employees from the private sector as human resource practitioners in undertaking firm level assessment on compliance with the labour laws and regulations.

Priority Area B

Developing Future-Ready Talent

Developing future-ready talent is imperative to meet the changing skills required by industry and to embrace the rapid change in technology. Emphasis will be given to raise the quality of education and training programmes, strengthen governance, leverage emerging technology, ensure equitable learning outcomes and address overlap TVET governance. These measures will improve access as well as enhance the delivery of education and training, which are in line with Goal 4 of 2030 Agenda.



[23] Employment creations, rights at work, social protection and social dialogue.

Strategy B1

Raising the Quality of Education

Quality education is crucial in ensuring that talent produced meets industry requirements and is versatile to adapt to changes. In this regard, the quality of education will be elevated by improving learning outcomes and promoting flexible higher education system. The method of assessment will be reviewed, TVET programmes enhanced while industry collaboration and enculturation of LLL strengthened.

Improving Learning Outcomes

Efforts to improve learning outcomes will include widening access to education, enhancing teaching and learning as well as improving school environment. Existing incentives will be reviewed and awareness programmes will be enhanced to increase preschool enrolment. The quality of ECCE teachers will be upgraded to improve teaching and learning. Towards this end, all public and private ECCE teachers will be required to have at least a diploma qualification in ECCE by 2025. The Diploma in ECCE offered by IPG will be extended to these teachers.

Compulsory schooling will be extended from six to 11 years by making secondary education compulsory for all Malaysian citizens. This is in line with the strategy outlined under the Malaysia Education Blueprint 2013-2025. This initiative will improve enrolment of students at the lower and upper secondary levels as well as address the issue of students dropping out of the education system.

STEM education will be strengthened to prepare students to embrace 4IR. Two teacher training programmes in inquiry-based education, namely Inquiry-Based Science Education (IBSE) and Inquiry-Based Mathematics Education (IBME) will be rolled out to improve teaching and learning approaches. In addition, new and advanced STEM curriculum embedded with digital technologies will be introduced. The STEM For All programme will be further promoted by facilitating linkages between schools and industries. The per capita grant for subjects under the STEM programme will be revised to provide adequate materials for students to conduct science experiments. The science labs will be upgraded to ensure teaching and learning processes include hands-on science activities, which will be made compulsory.

The current education system will be continuously reviewed to allow more opportunities for exploratory and project-based learning as well as to provide a holistic assessment of students' performance. In this respect, curriculum as well as the assessment standard will be reviewed to nurture critical thinking, creative learning and problem-solving skills. The abolishment of *Ujian Pencapaian Sekolah Rendah* (UPSR) in 2021 will be a significant milestone towards more holistic assessment based on the enhanced School-based Assessment (PBS). In addition, *Pentaksiran Tingkatan Tiga* (PT3) examination has been cancelled since 2020 due to the impact of COVID-19 pandemic. Thus, the lower secondary students will be assessed based on their performance in the PBS which comprised Classroom Assessment (PBD), Psychometric Assessment (PPsi) and Physical Activities, Sports and Co-curricular Assessment (PAJSK). Malaysia will continue to participate in international assessments such as PISA and TIMSS to further improve the quality of education at all levels.

A student tracking system from preschool to upper secondary levels will be developed to monitor the mobility of students throughout the school system. Information from the system will be used to provide timely intervention including in reducing the dropout rate from the education system. In addition, student support programmes such as parental and community involvement for poor students and students at risk will be enhanced to ensure students remain in the school system. In this regard, focus will be given in providing social and emotional support for students as well as assisting those with learning difficulties, in order to build an inclusive school environment.

In an effort to raise the quality of teachers, the emphasis will be on continuous professional development among school teachers and lecturers at IPG. All English language teachers will be required to attain at least C1 level in the Common European Framework of Reference for Languages (CEFR)[24] whilst lecturers of English language at IPG will be required to obtain C2 level in CEFR.

English proficiency among students will be further improved to enhance student learning outcomes. A structured monitoring system will be developed to evaluate the effectiveness of the programmes under the English Language Education Reform in Malaysia: The Roadmap 2015-2025. In addition, the CEFR will be expanded to all stages of education. The evaluation of English proficiency at the end of secondary and primary school levels will be aligned to the CEFR starting 2021 and 2022, respectively.

Professional development and pedagogy training will be extended to *tahfiz* teachers through a standardised teaching curriculum offered by IPG. In this regard, IPG *Kampus Pendidikan Islam* will be positioned as

[24] CEFR is an international standard for describing language ability. It describes language ability on a six-point scale, from A1 for beginners, up to C2 for those who have mastered a language.

a training hub to produce qualified and quality *tahfiz* teachers. Efforts will also be undertaken to increase the adoption of the Integrated Curriculum *Tahfiz* among *tahfiz* schools nationwide to enhance the quality of teaching and learning as well as improve student outcomes.

Quality assurance will be enhanced to ensure effective delivery of teaching and learning in schools. The inspectorate of schools will be given greater autonomy to increase operational flexibility. Their role is not only to inspect, but also to guide and support school administrators and teachers in their works. The current inspection processes will be improved to ensure every school is inspected at least once in every two years. The training of trainers for inspectorate will be extended to *Taman Bimbingan Kanak-kanak* (TABIKA) under the Community Development Department (KEMAS), Department of National Unity and Integration (JPNIN) and Department of Orang Asli Development (JAKOA) to ensure consistency of student outcomes.

Apart from academic achievement, the importance of instilling the right set of values, attitudes and behaviour among students will be emphasised. In this regard, good values will be incorporated in all subjects beyond Islamic Education, Moral Education as well as Civic and Citizenship Education. Value-based teaching will be applied to inculcate character building and social interaction among students. In addition, the related short- and long-term strategic plans will be reviewed to instil values and develop student character holistically. Student participation in sports, associations and uniform bodies will be promoted to foster greater unity and understanding among students.

Measures will be undertaken to enhance the infrastructure of schools and vocational colleges in improving the teaching and learning environment. The focus is to address issue of dilapidated buildings in school. All schools which are classified under the scale of six and seven in the School Building Condition Index[25] and verified as unsafe by the Public Works Department will be rebuilt.

The UES Roadmap Initiative will be strengthened to enhance the management of under enrolled schools and reduce operating expenditure. The implementation of combined classes will be expanded where Year Two will be merged with Year Three, and Year Four with Year Five. In addition, continuous efforts will be undertaken to rationalise UES. This exercise will be implemented based on several criteria, including schools that are of similar type and located within a five-kilometre radius.

Promoting a Flexible Higher Education System

Concerted efforts will be undertaken to promote a more flexible higher education system. This will include opening up more diverse education and training pathways, offering transdisciplinary programmes and redesigning existing programmes to incorporate more innovative approaches. These measures will enable HEIs to offer a more flexible and dynamic curriculum, which can be updated and reshaped, as and when necessary according to industry demand. In addition, enrolment will be made flexible across universities, where students are allowed to pursue subjects at another HEIs during the course of their study.

HEIs will be encouraged to enhance entrepreneurship education to inculcate entrepreneurial values among students. In this regard, the Entrepreneurship Action Plan Higher Education Institutions 2021-2025 and MOHE Guide to Entrepreneurship Integrated Education, which was launched in 2021, will be the main reference for HEIs to provide structured and holistic entrepreneurship education to students. This initiative will transform entrepreneurial landscape in HEIs from need-based to opportunity-based and nurture students into becoming entrepreneurs who are able to compete in the global market.

The policy on industrial training will be reviewed to ensure optimal industrial exposure for students. Students will also be encouraged to pursue professional qualifications and certification programmes. These measures will prepare graduates for better employment opportunities including self-employment.

The effectiveness of learning and teaching depends on the quality and capability of academic staff to transfer knowledge and skills to the students. In this regard, the current learning and teaching delivery will be strengthened by incorporating self-determined, peer-oriented, virtual-based and experiential learning approaches. Academic staff will also be encouraged to pursue professional qualifications or certification programmes to stay abreast with the latest standards and technology. In addition, cross-sector academic mobility programmes will be expanded to enrich the knowledge of academic staff. Capacity building and progress tracking of academic staff will be enhanced to improve their competency in emerging technologies.

Various measures will be undertaken to upgrade outdated and unsafe infrastructure and equipment to ensure a conducive environment in HEIs. Such measures will support the development of future-ready talent and quality research, as well as ensure HEIs achieve their full potential. In addition, these will improve HEIs reputation and branding, attract more students, and ultimately generate income for the HEIs.

[25] School Building Condition Index is an index developed by the Ministry of Education for describing the building condition in schools. It describes the building condition on a seven-point scale, from scale one for comfortable up to scale seven for those which are unsafe.

Strengthening Assessment Approach

Measures will be undertaken to strengthen assessment of students in HEIs by introducing an alternative assessment to produce holistic, entrepreneurial and balanced graduates. This new assessment will emphasise elements such as emotional quotient, soft skills, personal attributes and problem-solving skills, besides academic achievement. The assessment will be more integrated and personalised.

Strengthening Industry Collaboration

HEIs will be encouraged to strengthen collaboration with industry players in research, development, commercialisation and innovation (R&D&C&I) activities. This will lead to better funding and investment from the industry, resulting in a higher rate of innovation and commercialisation. In addition, focus areas in R&D activities will be expanded to meet the industry needs, including emerging technologies such as psychotechnology, robotics and AI. Allocation for RU and HICoE as well as Fundamental Research Grant will continue to be provided to intensify R&D activities as well as develop research-inspired teaching and learning activities. Furthermore, a research management system will be developed to support research activities in HEIs.

Enhancing TVET Programme

The Centres of Excellence and Centres of Technology will be expanded to spur innovation and knowledge creation as well as enhance technical skills among students. In addition, the Teaching Factory model that provides real production or manufacturing environment will be rolled out to more TVET institutions to enable students to use industry equipment in campuses. Industry within the proximity of TVET institutions will be leveraged to provide students with better exposure to the latest technology as well as gain industrial experience. These initiatives will align skills produced to the needs of industry.

Strengthening Enculturation of Lifelong Learning

Greater emphasis will be given to strengthen the enculturation and implementation of LLL programmes to develop a learned society. Focus will be given to develop and enhance innovative LLL programmes in ensuring more opportunities for the *rakyat*. Efforts will also be intensified on promoting impactful branding to ensure better perception of LLL.

Strategy B2

Strengthening Governance

Education governance will be strengthened to support the development of future-ready talent. This will include enhancing governance and coordination of the schooling system as well as fostering effective governance and providing greater financial independence to HEIs. These initiatives will enhance the delivery of education and training by schools, HEIs and TVET institutions.

Enhancing Governance and Coordination of the School System

Efforts will be undertaken to improve the quality and management of preschool education by strengthening collaboration among various service providers. In this regard, the implementation of initiatives to streamline preschool education will be expedited. The current national committee on preschool education will be tasked to review the curriculum standard, student outcomes, teaching and learning materials, infrastructure and quality of teachers for all *Taman Asuhan Kanak-kanak* (TASKA) and TABIKA under KEMAS, JPNIN and JAKOA.

A coordination platform between the public and private providers of *tahfiz* schools will be established to promote the adoption of standardised curriculum as well as improve the quality of teachers. Efforts will also be undertaken to encourage more *tahfiz* schools to register as *Sekolah Agama Bantuan Kerajaan* (SABK). These SABKs will receive government assistance to enhance the quality of education as well as ensure adherence to the building safety guidelines and provision of proper living conditions.

An enterprise data warehouse as well as a data analytics platform will be established to enable data sharing, support reporting and decision-making across ministries and agencies. At the same time, private education providers will be encouraged to share data on student enrolment status. This will enable a comprehensive tracking of students' enrolment, including those in private schools.

Continuous professional development will be maintained to improve leadership quality. Education leaders from schools, JPNs, PPDs and divisions will be trained under a structured programme to improve capacity and capability to manage education institutions. In this regard, the National Professional Qualification for System Leaders (NPQSL)[26] programme will be introduced. The National Professional

[26] NPQSL is a training programme for system leaders to ensure officers appointed at district education officers, state officer and division officers are competent.

Qualification for Educational Leaders (NPQEL)[27] programme will also be strengthened and tailored for different types of schools, particularly Orang Asli, special education, religious schools as well as technical and vocational education.

The role of Parent-Teacher Associations (PTAs) will be strengthened to play more active role in supporting the school governance. Engagements with the broader community, private sector, civil society organisations and education training providers will be spearheaded by PTAs based on programmes identified by schools. This empowerment of PTAs will facilitate sourcing of external funding, provision of additional manpower and expertise to improve the quality of schools. Meanwhile, *Yayasan Didik Negara* was established in 2021 as an official body to govern collection, distribution and management of donation from various local and foreign sources in a more systematic and holistic way.

Fostering Effective Governance and Greater Financial Independence of Higher Education Institutions

Concerted efforts will be undertaken to review, streamline and formulate relevant policies and legislations that govern the higher education ecosystem to increase the efficiency and effectiveness of HEIs. Guidelines on Good Practices (GGP) on international students in HEIs will be formulated to improve the management of international students. In addition, GGP on international accreditation will be developed as an initiative to improve quality and strengthen niche programmes. This initiative will ensure programmes offered are up-to-date, industry relevant, in line with international best practices and accredited by international organisations.

The financial sustainability of HEIs will be strengthened. These will include reviewing fees and prioritising R&D activities. Existing facilities in HEIs including teaching hospitals, will be utilised for income generating services. HEIs will also be encouraged to expand alternative financial pathways. This will include refining and facilitating the management of funds sourced from *waqf*, endowment, donations and crowdfunding. For this purpose, a comprehensive policy and GGP on a financing model will be formulated and a mechanism to monitor income generating activities and programmes will be developed. In addition, HEIs will be urged to develop a new financing model to source contributions from the industry, multinational companies (MNCs), MSMEs, financial institutions and the community. The *MyWakalah* initiative will be further enhanced as an alternative source of funding for HEIs. TVET institutions will also be encouraged to diversify and expand funding sources, which include *waqf* and endowment.

The PTPTN will review its policy on student funding to be more sustainable in the long term, including funding for courses that have high employability to ensure higher loan repayment rate by borrowers. The repayment collection strategies will be strengthened to address defaulters and those who have yet to pay their loans, including enforcement of the law, reintroduction of travel bans and data sharing with other government agencies. Efforts will be taken to promote higher savings among potential borrowers to reduce the burden of repaying education loans after graduation. Apart from that, PTPTN will explore other initiatives for higher education funding such as educational *waqf* and endowment.

Strategy B3

Leveraging Emerging Technology

The 4IR brings with it technologies such as AI, digitalisation, high speed mobile internet, big data analytics (BDA) and internet of things (IoT), that will impact education and training. During the Twelfth Plan, initiatives to leverage emerging technology in education will focus on optimising the digital learning ecosystem, strengthening TVET through digital learning and strengthening industry collaboration for greater innovation. These initiatives will contribute towards creating an effective learning ecosystem, impactful R&D as well as ensuring that institutions are future-ready.

Optimising Digital Learning Ecosystem

The Digital Education Strategy will be introduced to accelerate digitalisation in the education agenda. This strategy aims to produce a generation that is digitally fluent and promote innovation using digital technology. Teaching, learning and assessment using digital technology will be expanded by strengthening the capabilities and knowledge of teachers. The DELIMa, a digital platform for teachers to share educational content and resources will be enhanced. Under this platform, computational thinking and computer science skills that enable students to deal with complex problems will be integrated to the curriculum.

Learning loss is an issue that needs to be addressed, especially during and post COVID-19 pandemic. The standardised remote learning methods and materials will be extended. Teachers will be trained and

[27] NPQEL is an in-service training programme for leadership and management to train principles and headmasters.

equipped with devices to conduct and record live classroom sessions. The school inspectorate will actively conduct online classroom audits to ensure quality teaching and to improve the participation of students in the virtual classroom. Students from the B40 group will be given assistance in obtaining devices. At the same time, getting children back to school is also important to ensure zero dropout. The PTAs will be empowered to assist community monitoring initiatives.

Learning of the Design and Technology (RBT) subject will be made more effective and engaging with adequate access to digital facilities and infrastructure. As such, RBT workshops will be equipped with the required equipment including portable computers and robotics components. Hands-on activities will be emphasised to nurture creativity and innovative learning among students in carrying out projects and PBS.

Digital infrastructure will be provided to schools to support digital teaching and learning. This will include improving internet connectivity, upgrading local area network (LAN) and provisioning 'fit-for-purpose' digital equipment for schools and students. The MyGov*Net, a Government shared initiative by the Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) will be expanded to provide wide area network (WAN) to education offices. Schools will be provided with access to broadband connectivity through the *Pelan Jalinan Digital Negara* (JENDELA) initiative.

The closure of HEIs due to the COVID-19 pandemic has shifted learning and teaching activities from face-to-face interactions to online learning. This has necessitated HEIs to change in their learning and teaching delivery to ensure quality education. The HEIs will strengthen remote learning approaches to ensure continuity in learning and teaching. Academic staff and students of HEIs will be equipped with digital skills to further improve learning outcomes. Measures will also be undertaken to improve the Rating for Higher Education Institutions (SETARA) and Malaysian Quality Evaluation System for Private College (MyQUEST), by incorporating technology indicator in the assessment criteria.

All on-campus activities will also be geared towards creating a smart campus environment which include smart classrooms and labs, interactive learning and teaching using augmented reality (AR) and virtual reality (VR) technologies as well as digital student administration. In addition, the usage of learning spaces, including laboratories within HEIs, will be reviewed to promote sharing of resources and co-creation across disciplines and institutions through digital means. These initiatives will enhance education experience and operational efficiency as well as improve capacity of HEIs to meet future needs.

Strengthening TVET through Digital Learning

The use of emerging technologies such as VR, AR and AI will be leveraged to complement hands-on teaching activities, research and development conducted in laboratories and workshops. Pedagogies that embed these technologies will be incorporated in TVET curriculum. Meanwhile, collaboration between TVET institutions and industry will be intensified to provide more opportunities for instructors and students to apply latest technologies as well as experience actual industry operations and challenges.

Strategy B4

Ensuring Equitable Learning Outcomes

Improving access to a more conducive and safe learning environment will improve learning outcomes. Efforts will be undertaken to ensure equal access to quality education for students with SEN, Orang Asli students and those residing in remote areas. Initiatives will include improving teaching and learning as well as providing the necessary infrastructure.

Increasing Accessibility to Inclusive and Quality Education

Accessibility to inclusive and quality education will be improved through the implementation of Education for All Policy including students with SEN. The Zero Reject Policy, which was introduced in 2019, assures that students with SEN are provided placement in either public schools or SEN-ready public schools, depending on their level of disabilities and will be assisted with necessary intervention, rehabilitation and support.

Quality of education for students with SEN will be improved by enhancing competency of teachers and student aides. Support systems for these students will be strengthened to improve early detection and intervention. In addition, a specific guideline covering different categories and levels of disability will be introduced to enhance the implementation of the Special Education Curriculum and TVET programme. Efforts will be undertaken to provide age-appropriate learning tools such as sensory-processing tools, gym balls and Braille to promote effective intervention programmes. At the same time, vocational colleges for students with SEN will be expanded. The co-curriculum for students with SEN will also be improved based on student potential in non-academic fields.

The accessibility for students with SEN in schools will be enhanced through improvement of disabled-friendly facilities. At least one school in every district will be equipped with a set of basic facilities for the

disabled. In addition, Special Education Service Centres, which provide screening, intervention, rehabilitation and consultation services to students with SEN and parents, will be upgraded to provide better services and expanded to cover more areas.

To ensure more children with autism receive early intervention and education, the GENIUS Kurnia Centre will be established in every state. This is to meet the increasing demand from parents with autistic children as well as to educate parents and communities in managing children with autism. Each GENIUS Kurnia Centre will provide three programmes to assist the development of children with autism, namely Daily Programme, Family Support Programme and Community Education Programme.

A special programme named Bringing School to the Community will be introduced for Orang Asli students to increase their participation in formal learning. This is a collaboration programme between the government, universities and civil society organisations. Graduates and SPM leavers from the local community will be recruited and trained to assist in teaching. Focus on teaching and learning is on basic 3M skills, namely reading, writing and counting. This programme will prepare the students to cope with the mainstream school environment.

K9 schools will be expanded and existing K9 schools will gradually be transformed into Comprehensive Special Model School 11 (K11) schools to ensure students complete their 11 years of education. The K11 schools will also be extended to cover not only Orang Asli students but also those residing in remote areas. The introduction of K11 schools will provide the opportunity for Orang Asli students and those in remote areas to pursue tertiary education. Focus will be given to enhance skills development of these students by strengthening the delivery of TVET programmes.

Strategy B5

Addressing Overlap in TVET Governance

TVET institutions are currently governed by different ministries, state agencies and private organisations. Thus, efforts will be undertaken to align the diverse systems of TVET institutions to ensure students' pathways to higher education and future careers are streamlined. The TVET governance will also be revamped by coordinating and consolidating various TVET governance systems, promoting the TVET brand, enhancing quality programmes and creating a TVET database to meet industry demand.

Revamping the TVET Governance Systems

A TVET ecosystem framework will be formulated to revamp the current fragmented TVET governance while safeguarding the interests of various stakeholders. Under this framework, an establishment of National TVET Council will optimise the utilisation of resources and minimise duplication of programmes as well as to coordinate and consolidate various TVET governing systems.

The synchronisation of TVET programmes will create a stronger TVET image. Concerted efforts will be undertaken to promote TVET as a preferred choice for students. For instance, the Buddy Programme which leverages successful TVET alumni will be introduced to motivate and guide TVET students and graduates in career, education and business.

Promoting the TVET Brand

A single TVET brand representing both public and private TVET providers will be introduced. Elevating the image of TVET requires consensus and building of a strong alliance from all the providers. These efforts will accelerate the paradigm shift among the society and industry to view TVET as the mainstream choice.

Enhancing Quality Programmes

The quality of programmes at all TVET institutions will be enhanced through accreditation, recognition and certification from related professional and industry lead bodies, locally and internationally. Upskilling and reskilling programmes will be expanded to include micro credentials, industrial attachments, training and cross-fertilisation. TVET graduates will be provided with the opportunity to acquire professional status by MBOT, thus enabling them to pursue professional career pathways. In addition, a ranking system will be introduced to categorise the TVET institutions based on a number of components, including employability, wage levels of graduates, industrial engagement and the implementation of social initiatives in the rural areas. Allocations for TVET institutions will be based on their performance in this ranking system. Underperforming TVET institutions will be required to rapidly implement best practices to improve their rankings.

Creating TVET Database

A TVET database will be developed to enable BDA to support effective policy formulation and programme development and delivery. This database will be a platform to harmonise, centralise and integrate all data pertaining to TVET pathways, jobs as well as job matching. This database can be accessed by ministries, industries, instructors, prospective trainees and public based on compliance with classified data security.

Conclusion

Efforts undertaken to accelerate human capital development during the Eleventh Plan recorded several notable achievements. These include improvement in minimum wages, better CE and revision of labour laws to improve the labour market. In addition, the enrolment rate for pre-school and secondary levels as well as TVET increased, while global ranking of several universities improved. The Twelfth Plan will focus on developing future talent by realigning the labour market and improving the quality of education and training programmes. These efforts will contribute towards more equitable CE, higher labour productivity and stronger labour market support system. It will also enable greater accessibility, more efficient governance as well as delivery of higher quality education, all of which will prepare Malaysian talent to meet future demand.

Chapter 11

Boosting Digitalisation and Advanced Technology



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11

Introduction

The advancement of technology and the ever-changing global economy has highlighted the urgency for the nation to adopt a more agile and proactive approach in moving towards a high technology-based economy. The Fourth Industrial Revolution (4IR) through the intensification of digitalisation and the emergence of new technologies is affecting human life in unprecedented ways. During the Eleventh Plan, measures were undertaken to accelerate innovation and technology adoption as well as provide quality infrastructure to support economic growth. However, the challenges remain in embracing digitalisation such as lack of digital infrastructure, fragmented governance, insufficient capacity and capability as well as unaffordability to access digital services. These challenges have led to the slow growth of the digital economy and widened the digital divide. Low technology adoption, insufficient investment in research, development, commercialisation and innovation (R&D&C&I) as well as lack of talent have affected progress in modernising the economy. The emergence of disruptive technologies also needs to be managed to harness the economic potential while safeguarding the interest of the *rakyat*.

The COVID-19 pandemic has changed how businesses and governments function and how people work, interact and manage their lives. It has also accelerated the need to adopt digitalisation and 4IR technologies. During the Twelfth Plan, initiatives to boost digitalisation and advanced technology adoption will be emphasised. The focus will be on advancing the digital economy, mainstreaming digitalisation for inclusive development, accelerating R&D&C&I as well as capitalising on the potential of emerging technologies. The initiatives are expected to enhance national competitiveness and resilience, thus preparing Malaysia to be a high technology-based economy.

Performance of the Eleventh Malaysia Plan, 2016–2020

Various initiatives were implemented to increase the provision of digital infrastructure as well as accelerate innovation and technology adoption. Priority was given to improving digital infrastructure in ensuring accessibility, affordability and quality of services is at par with developed economies. Several initiatives were put in place to promote innovation and technology adoption including providing incentives, expanding talent upskilling and reskilling programmes, and enhancing the role of intermediaries. These provided an enabling environment for the growth of the digital economy as well as encouraging the commercialisation of products and services.

Performance of Selected Targets

Six targets were set to accelerate innovation and technology adoption in the industry as well as provide quality digital infrastructure. Three of the targets were achieved, as shown in *Exhibit 11-1*. The National Policy on Industry 4.0 (Industry4WRD) was introduced in 2018 to leverage Industry 4.0 in the manufacturing sector. The coverage of broadband infrastructure in populated areas reached 95.5%, exceeding the target of 95% in 2020. Digital terrestrial television achieved full coverage. However, the fixed broadband cost fell short of the 1% target to the gross national income (GNI) per capita due to the slow reduction in subscription costs. Gross expenditure on R&D (GERD) to gross domestic product (GDP) was 1.04% in 2018, compared with the target of 2% in 2020, due to low R&D expenditure by business enterprises (BERD) at 43.9% of the total GERD.

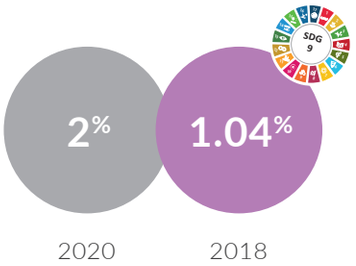
Exhibit 11-1

Eleventh Malaysia Plan: Performance of Selected Targets

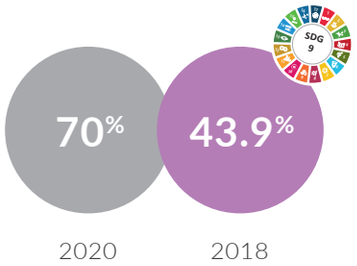
Accelerating Innovation and Technology Adoption



Developing Industry 4.0 Policy

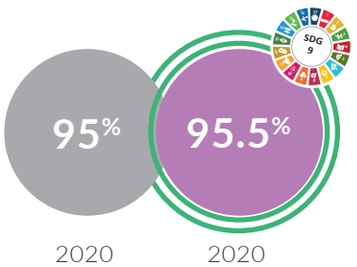


Gross Expenditure on R&D (GERD) to GDP

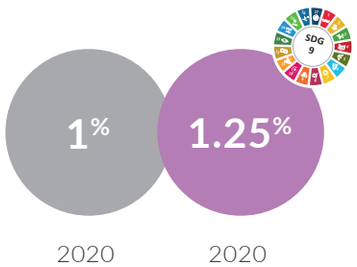


Business Expenditure on R&D (BERD) to GERD

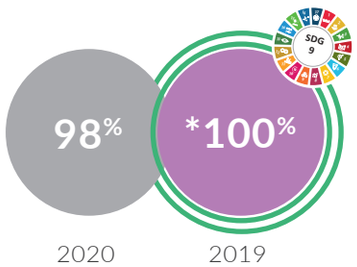
Providing Quality Infrastructure



Broadband Coverage in Populated Areas



GNI per capita for Fixed Broadband Cost



Digital Terrestrial Television Coverage Nationwide

*inclusive of Direct to Home (satellite) technology



Performance of Selected Initiatives

Provision of Digital Infrastructure and Services

Two initiatives implemented in the Eleventh Plan to improve digital infrastructure were the High Speed Broadband (HSBB) and the Suburban Broadband (SUBB). The HSBB and SUBB projects, together with wireless broadband connectivity increased the broadband penetration rate[1] from 99.7% in 2015 to 127.4% in the first quarter of 2020. The penetration rate for mobile broadband also increased from 90.5% to 118.1%, while the rate for fixed broadband increased from 9.2% to 9.3% in the same period. The implementation of the Mandatory Standards on Access Pricing (MSAP) reduced average broadband prices by 49% and resulted in the introduction of higher broadband speed packages. The speed of entry-level fixed broadband packages increased from 10 megabits per second (Mbps) to 30Mbps while the monthly subscription rate reduced from RM139 to RM79.

Acceleration of Research, Development, Commercialisation and Innovation

Several initiatives were implemented to accelerate innovation-driven growth, particularly through public-private collaboration in R&D&C&I. The Malaysia Commercialisation Year (MCY) introduced in 2016 was leveraged as a platform for joint collaboration in commercialising products and services as well as support local R&D activities. As of 2019, 343 R&D products, technologies and services were commercialised through this platform generating RM386.5 million in revenue. In addition, the implementation of the Nanotechnology Commercialisation Programme, based on the triple helix model, resulted in 55 potential intellectual properties. Out of these, 12 patents, seven copyrights and one utility innovation were filed. Among the innovative products were the on-site generated hydrogen technology using hydrides and wireless charging technology using radio frequencies. Hydrogen technology is cheaper than fossil fuels and has high potential in revolutionising the design of future electronic devices and electric vehicles. Since the inception of the Collaborative Research in Engineering, Science and Technology (CREST) programme in 2012, a total of 156 R&D projects were approved and 73 projects were completed. This programme has produced 593 industry talent and technopreneurs, 24 technology start-ups as well as 8,230 trained graduates.

During the Eleventh Plan, higher education institutions (HEIs) played a prominent role in undertaking R&D activities through an allocation of RM1 billion. As at 2019, 6,919 research projects were undertaken, producing 5,607 postgraduate students, 15,607 publications and 563 intellectual properties. HEIs research outputs were mainly indexed journals, conference proceedings and other publications. A total of 136 patents and technology know-how were licensed by HEIs in 2018, generating RM40.7 million in revenue, compared with 92 patents and technology know-how licensed with a revenue of RM4.5 million in 2016. Efforts were also undertaken to promote HEI-industry collaboration in R&D through the establishment of the Higher Institution Centre of Excellence (HiCoE). A total of 21 HiCoEs were established with the aim of expanding the research niche areas and intensifying collaboration with prominent global HEIs, research institutions and industry leaders.

Improvement in Technology Adoption

Efforts were undertaken to improve technology adoption, especially among the micro, small and medium enterprises (MSMEs). A total of 1,159 MSMEs benefitted from technology intervention projects in terms of productivity improvements under the SIRIM-Fraunhofer programme. Additionally, 528 MSMEs underwent technology audit for intervention assessment. The intervention projects involved mechanisation and automation, technology enhancement, localisation of technology, packaging and labelling, training and consultancy for standards compliance as well as export-related technical advisory. The Electrical and Electronic Equity Fund was introduced to promote technology transfer and encourage technological advancement by investing in companies with growth potential. A total of 124 intellectual properties were filed, 259 jobs created and RM1.2 billion revenue generated from activities financed through this fund. The Malaysia Debt Venture Technology Acceleration and Commercialisation Scheme (MDV-TACT) was also introduced to promote the development and adoption of new technologies and increase the commercialisation of new technologies. A total of 11 companies benefitted from the fund amounting to RM51 million. Revenues from these companies increased more than 300% post-financing.

[1] Penetration per 100 inhabitants for both fixed and mobile broadband.

Issues and Challenges

During the Eleventh Plan, although efforts were undertaken to accelerate innovation and technology adoption as well as improve digital infrastructure and services, several challenges remain. The issues related to digitalisation are the slow growth of digital economy mainly due to lack of infrastructure and fragmented governance, which contributed to the widening of the digital divide and exacerbated by the unaffordability of digital services among the low income. Low technology adoption, insufficient investment in R&D&C&I and lack of talent hampered efforts to adopt advanced technology in embracing 4IR.

Issues and Challenges

- Slow Growth of Digital Economy
- Widening Digital Divide
- Insufficient Investment in Research, Development, Commercialisation and Innovation
- Challenges in Adopting the Fourth Industrial Revolution Technologies

Slow Growth of Digital Economy

Digital technologies are transforming every sector, creating new opportunities as well as posing challenges for businesses. While Malaysia was ranked 26th out of 63 countries in the Institute for Management Development (IMD) World Digital Competitiveness Ranking 2020, the level of digitalisation within the industry is still low, especially among MSMEs. Digital adoption among MSMEs remains low due to the lack of awareness and high cost. This is compounded by the absence of a platform to resolve cross border eCommerce disputes.

The digital industry is still underdeveloped as local companies lack experience and readiness to go global. The low understanding of global market access and the inability to adapt and localise content for targeted foreign markets have resulted in a weak digital global presence. In addition, lack of motivation to go global, weak branding of products and services as well as unattractive products further hampered the penetration of Malaysian companies into the international market. Also, local digital solution providers lack the capability to upscale, especially in cloud computing services. This has resulted in the inability to meet domestic demand and compete with global players, especially in providing higher digital technology services. Low investments in cable landing stations prevented fixed broadband from being widely available to support increasing demand for high speed broadband including by data centres.

Lack of a clear digital governance structure and industry-ready digital talent as well as weak coordination in terms of implementation and funding impeded the growth of the digital economy. The regulatory framework and technology development initiative were fragmented. In addition, current policies and legal framework do not allow for full data sharing, which is fundamental for the progress of the digital economy. Meanwhile, the lack of training and low investment in talent development resulted in an insufficient supply of skilled workers and expertise, especially in the area of data science, cyber security, digital finance and content development.

The lack of awareness of the importance of cyber security has increased the vulnerability of businesses and society to cyber threats. High costs also hampered the adoption of cyber security measures. The number of cases of cyber crime activities was 14,214 in 2020, resulting in losses amounting to RM414 million.

Existing digital infrastructure provides limited accessibility while digital services remain unaffordable to certain segments of society. Industries outside selected industrial zones do not have access to gigabit speed broadband connectivity due to the lack of digital infrastructure. Providing digital services to rural areas is also a challenge as telcos are not motivated to provide broadband services in these areas due to high deployment costs, low returns on investment and lack of economies of scale.

End-to-end digital services in the Government sector are necessary for efficient public service delivery. The provision of end-to-end digital services was only 46.8% in 2020, indicating the need to accelerate digitalisation. Meanwhile, uneven distribution of digital facilities and services in the healthcare sector led to differences in the quality of service delivery. Efforts to digitalise public sector services are also hampered by the lack of competency of public servants. Public sector training programmes mainly concentrated on basic digital literacy, while upskilling programmes, particularly in data analytics were limited. The training modules were not customised according to the needs of the different agencies. In the private sector, efforts to reskill and upskill workers in digital-related technical skills were also inadequate.

Measures to promote digitalisation in education have been inadequate. The existing modules on digital learning in schools do not address the computational and analytical thinking skills required for digital readiness. In addition, insufficient digital infrastructure and devices hamper remote learning for students. Teachers are also not sufficiently trained and provided enough resources, thus affecting the quality of digital teaching and learning. Meanwhile, the technical and vocational education and training (TVET) programme focuses heavily on job-specific skills, with less emphasis on competencies and adaptability in using digital technology.

Widening Digital Divide

The digital divide among the *rakyat* has created inequality in economic opportunities and widened the rich-poor gap. Lack of accessibility is among the main factors contributing to the widening of the digital divide. The challenging geographical terrain in rural areas has constrained efforts in ensuring coverage of digital infrastructure and services, resulting in low participation in the digital economy among rural communities. The COVID-19 pandemic heightens the need to accelerate efforts to bridge the digital divide. Digitalisation has now become the new normal in socioeconomic activities.

Differences in policies related to digital infrastructure provision among states and the lack of data synchronisation have also contributed to the digital divide. Some states award exclusive rights to selected companies to manage and provide digital infrastructure and services, resulting in high permit charges as well as complicated and long approval processes. This has limited competition and deterred industries from investing in these states leading to the uneven provision of digital infrastructure in the country.

The digital divide is reflected in the percentage of broadband subscriptions among the various household income groups, with B40 at the lowest at 49.3%, M40 at 90.7% and T20 at 99.7%. Although offered at RM38 monthly, the lowest broadband package is still unaffordable to the vulnerable groups that may consider such services not a necessity. Despite a high mobile penetration rate, there are users, particularly among the B40, who still use feature phones (2G), which limits their access to the internet. As a result, this group is not able to meaningfully participate in the digital economy.

Insufficient Investment in Research, Development, Commercialisation and Innovation

Investment in R&D&C&I from both the public and private sectors is lacking compared with developed countries, which is reflected by the low percentage of GERD and BERD. The R&D expenditure of business enterprises declined from RM10 billion in 2016 to RM6.6 billion in 2018 with the share decreasing from 56.6% to 43.9%. This has hindered efforts to improve productivity and move up the value chain.

Experimental development research, which includes the pre-commercialisation stage, development of prototypes, proofs of concept and pilot projects, was low at 24.5% of the total research expenditure in 2018, affecting the rate of commercialisation. This was mainly due to a lack of collaboration between universities and industries. Innovation and technology adoption also remain low due to the lack of investment in high-end R&D, insufficient pool of talent in frontier technologies and poor coordination among agencies.

Malaysia ranked 65th out of 137 countries in the product innovation pillar of the Global Entrepreneurship Index (GEI) 2019, the lowest among the ASEAN countries. Malaysia's ranking in the Global Innovation Index also dropped from 32nd position in 2015 to 33rd in 2020 due to a lower score in creative outputs as well as knowledge and technology outputs pillars. Malaysia, therefore, needs to make a tremendous leap in terms of innovation to become a high technology-based economy.

The total R&D workforce dropped by 9.7%, from 136,683 in 2015 to 123,362 in 2018. As a result, the ratio of researchers per 10,000 labour force declined from 61.9 to 58.9 in the same period. In addition, most R&D activities were academic in nature as researchers in HEIs comprised 80.8% of the total number of researchers in 2018. Notwithstanding that R&D has increased knowledge creation in science, technology and innovation (STI), commercialisation is still relatively low.

The Critical Occupations List (COL) 2019/2020 identified 58 most demanded occupations across 18 economic sectors in Malaysia, taking into consideration the needs of 4IR. About 60% of these critical occupations are related to science, technology, engineering and mathematics (STEM) disciplines such as chemists, electrical and electronic engineers, system analysts, software developers and statisticians. The STEM enrolment in public universities stood at 49% in 2020, falling short of the 60% target. The inability to produce sufficient number and quality of STI talent will impede efforts to spur economic growth. In addition, the low public literacy and awareness of STI have affected efforts in translating it as a key enabler in wealth creation and improving the wellbeing of the *rakyat*.

Challenges in Adopting the Fourth Industrial Revolution Technologies

The 4IR has significantly altered the way consumers, businesses and industries operate. However, gaps remain in local capability to adopt, innovate and create 4IR solutions. Innovation-led mindset is lacking, while resistance to change remains an issue, limiting 4IR technology adoption especially among businesses. Local firms have been reluctant to invest in 4IR technologies despite the implementation of various initiatives in terms of funding, talent development and advisory services to encourage the adoption of such technologies. Most activities in the manufacturing sector, particularly among MSMEs are labour-intensive with a high dependency on low-skilled workers. The easy access to low-skilled foreign workers has further discouraged industry from innovating and investing in automation and technology upgrades. In addition, the high capital cost of technology adoption and the lack of access to finance have also deterred technology adoption and innovation.

The adoption of 4IR solutions is highly dependent on digital infrastructure. While the broadband penetration rate has increased steadily, the quality of services is still an issue. The average mobile download speed in Malaysia at 24.7 Mbps is significantly lower than the global average of 34.8 Mbps[2]. In addition, challenges in terms of access to basic hardware and digital infrastructure hinder efforts to support 4IR adoption in the public sector.

[2] Speedtest Global Index (August 2020), Ookla (a global leader company in fixed broadband and mobile network testing applications, data and analysis).

Fragmented governance across various ministries and agencies has impeded the implementation of 4IR initiatives. For instance, application for drone usage and development is regulated by at least four different authorities. In addition, a rigid governance structure in the public sector creates unnecessary bureaucratic processes and limits the potential for innovation and the creation of more technology start-up companies. This is reflected in the World Bank's Doing Business 2020 report, where Malaysia was ranked 126th out of 190 economies in the category of "Starting a Business".

As technology progresses, the demanded skill sets will also change. However, there is inadequate 4IR-ready talent to address current and future needs. The existing learning approach is insufficient to grow innovative talent. Malaysia ranked 68th out of 129 countries under the Education sub-pillar in the Global Innovation Index 2020, indicating a need to improve the education system to develop an ecosystem that nurtures innovation.

Way Forward: Twelfth Malaysia Plan, 2021-2025

The Twelfth Plan focuses on boosting digitalisation and advanced technology in building a high technology-based economy. This will be undertaken by advancing the digital economy, mainstreaming digitalisation for inclusive development, accelerating R&D&C&I and capitalising on the potential of advanced technology. The successful implementation of these measures will position Malaysia as a leading player in the global supply chain for complex and high value-added products and services. This will also enable Malaysia to improve the standard of living of the *rakyat* and achieve balanced and sustainable growth.



Way Forward: Twelfth Malaysia Plan, 2021-2025

Boosting Digitalisation and Advanced Technology

Priority Area A

Advancing Digital Economy

Strategy A1

Providing an Enabling Environment for the Growth of the Digital Economy

Strategy A2

Strengthening Provision of Digital Infrastructure and Services

Strategy A3

Developing Future-ready Digital Talent

Strategy A4

Positioning Malaysia as the ASEAN Digital Centre

Priority Area B

Mainstreaming Digitalisation for Inclusive Development

Strategy B1

Expanding Digitalisation

Strategy B2

Improving Digital Governance for Inclusive Digitalisation

Priority Area C

Accelerating Research, Development, Commercialisation and Innovation

Strategy C1

Strengthening Capacity and Capability in Research, Development, Commercialisation and Innovation

Strategy C2

Nurturing Quality Science, Technology and Innovation Talent

Priority Area D

Capitalising on Advanced Technology Potential

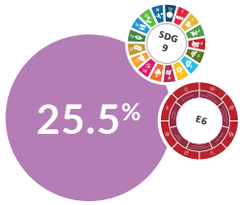
Strategy D1

Gearing up for the Fourth Industrial Revolution



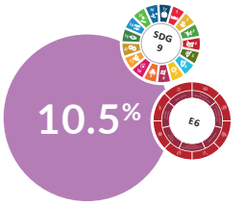
Twelfth Malaysia Plan: Selected Targets

Advancing Digital Economy



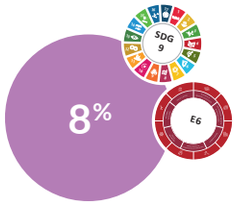
2025

Contribution of Digital Economy to GDP



2025

Contribution of eCommerce to GDP



2021-2025

Average Annual Growth Rate of Digital Content Export



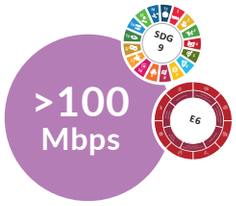
2025

IP Creation in Digital Content



2025

4G Coverage in Populated Areas[1]



2025

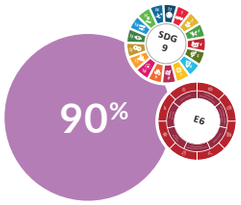
Speed of Mobile Broadband



2025

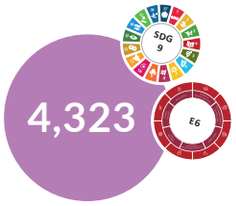
Access to Fixed Broadband Services

Mainstreaming Digitalisation for Inclusive Development



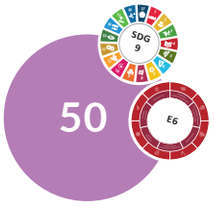
2025

Percentage of Internet Users



2025

Number of Points of Presence for Broadband Connectivity in Rural Areas



2025

Number of Locally Accredited Sharing Economy Platforms



2025

Percentage of Urban Households Subscribing to Internet



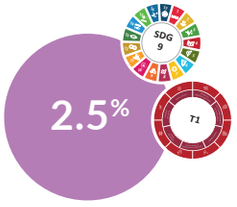
2025

Percentage of Rural Households Subscribing to Internet

Target
SDG
WKB 2030

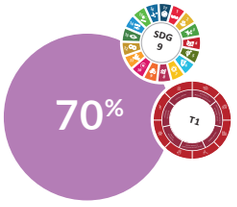
[1] Inclusive of the utilisation of appropriate technologies, which include broadband, fixed-wireless and satellites.

Accelerating Research, Development, Commercialisation and Innovation



2025

Gross Expenditure on R&D (GERD) to GDP



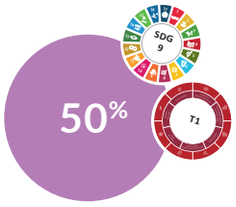
2025

Business Expenditure on R&D (BERD) to GERD



2025

Number of Researchers per 10,000 Labour Force



2025

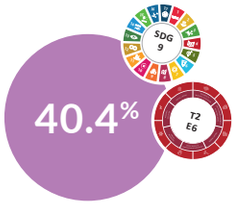
Experimental Development Research Expenditure to GERD



2025

Number of Patent Applications by Malaysians

Capitalising on Advanced Technology Potential



2021-2025

Multifactor Productivity Contribution to GDP Growth



2025

Ranking in the Global Innovation Index



2025

Number of Products/Solutions Commercialised through the National Technology and Innovation Sandbox (NTIS) and Malaysia Commercialisation Year (MCY)

Target

SDG

WKB 2030

Priority Area A

Advancing Digital Economy

Efforts to realise the digital economy agenda require a fundamental shift, particularly in harnessing the benefits of megatrends, such as globalisation, urbanisation and technological advancement. During the COVID-19 pandemic, the digital economy played a vital role in lessening the impact of the pandemic and sustaining the economy. Society is compelled to transition from conventional to online practices for purchasing, office work and education. As such, digital technology is increasingly important in ensuring efficient and uninterrupted service delivery, effective governance and sustaining economic development. Under the Twelfth Plan, efforts will focus on providing an enabling environment for the growth of the digital economy, strengthening the provision of digital infrastructure and services, developing future-ready digital talent as well as positioning Malaysia as the ASEAN digital centre.



Strategy A1

Providing an Enabling Environment for the Growth of the Digital Economy

Success in the digital economy requires changes in mindset, policies and legislations as well as better technologies and infrastructure. Measures will be undertaken to streamline digital governance, accelerate trade through eCommerce, expand the sharing economy and strengthen cyber security. These will ensure the *rakyat* have equal access to opportunities in the digital economy, without compromising the Malaysian culture, ethics and values. The digital economy journey in Malaysia is as shown in *Box 11-1*.

Box 11-1

Digital Economy in Malaysia

The journey towards a digital economy began with the launching of the Multimedia Super Corridor (MSC) in 1996 to make information and communication technology (ICT) the backbone in driving innovation and socioeconomic development. The MSC attracted ICT investments, resulting in the setting up of more than 500 technology companies in Cyberjaya. The contribution of ICT to GDP in 2019 was 19.1%. Further efforts to maximise the potential of the digital economy include the adoption of digital technologies across all economic sectors.

The Malaysia Digital Economy Blueprint was introduced in 2021 to position Malaysia as a regional leader to achieve inclusive, responsible and sustainable socioeconomic development by 2030. The Blueprint sets out six thrusts to steer the national digital initiatives, namely:

- Drive digital transformation in the public sector
- Boost economic competitiveness through digitalisation
- Build enabling digital infrastructure
- Build agile and competent digital talent
- Create inclusive digital society
- Build trusted, secured and ethical digital environment

Malaysia defines the digital economy as "economic and social activities that involve the production and use of digital technology by individuals, businesses and government". The digital economy will change the conventional approach of businesses as well as consumer practices in obtaining information, services and goods.

In advancing the digital economy, strategies and initiatives will embed Malaysian culture, ethics and values. It is envisaged that the successful implementation of the Blueprint will lead to several key outcomes. These include having an agile and data-driven government, spurring innovative digital economy growth as well as providing seamless and extensive digital connectivity. Furthermore, creating fit-for-purpose digital talent, establishing a secure and trusted digital environment as well as achieving a digitally responsible and inclusive society will be part of the Blueprint.



Streamlining Digital Governance

The implementation of digital initiatives will be led by the National Digital Economy and 4IR Council. The purpose of this Council, which was established in 2020 is to provide overall direction in planning, implementation and monitoring of digitalisation initiatives. It will also identify the roles and responsibilities of all stakeholders in the implementation of the National 4IR Policy and the Malaysia Digital Economy Blueprint. The Council adopts the quadruple helix model to enable greater interaction among the society, industry, academia and Government.

Change management is a key success factor in achieving the digitalisation agenda. The National Digital Economy and 4IR Council will be supported by the Strategic Change Management Office (SCMO) as a special entity to lead national level change management. The SCMO will develop strategic plans and initiatives, track progress and evaluate performance as well as facilitate coordination of all related committees under the Council. This entity will also drive the communication strategy including raising national awareness and branding.

In accelerating digitalisation, the Government plays a vital role in providing an enabling environment. The Malaysian Administrative Modernisation and Management Planning Unit (MAMPU) as the key agency will be transformed to respond proactively and drive the national digital agenda in the public sector. MAMPU will formulate policies and strategies as well as propose nationwide systems and tools relating to digital transformation, for both Federal and state governments.

A trusted platform for data sharing between the government and the private sectors as well as among government agencies will be developed to enable data-driven decision making. Data sharing between the public and private sectors is expected to improve accountability, impartiality, transparency and openness. It will also facilitate in designing programmes and delivering targeted services. A lead body will be identified to enhance data governance including the development of big data analytics infrastructure, data security and human capital.

Relevant regulations pertaining to data sharing will be put in place to address concerns relating to system interoperability, cyber security and technical standards. The cyber security ecosystem will be strengthened by reviewing and streamlining policies and initiatives across authorities. A risk-based approach in the development and acquisition of digital technologies, including network-ready products and solutions, will be adopted to identify potential risks and undertake mitigation measures. A study will be undertaken to recommend a regulatory framework in providing a conducive ecosystem for the development of the sharing economy including the gig economy.

Accelerating Trade through eCommerce

The eCommerce landscape is largely influenced by global megatrends and constantly advancing digital technologies. The National eCommerce Strategic Roadmap 2.0, 2021-2025 will be implemented to spur eCommerce activities. A national e-Invoicing framework will also be developed to enable trade partners to seamlessly transact using digital mechanisms, particularly in the export of digital products and services.

Local MSMEs will be encouraged to increase eCommerce trading through integration of existing one-stop centres to enable better access to funding, facilities and stewardship. This will address issues of fragmentation and provide clarity in resource allocation to minimise inclusion and exclusion errors. The centre will also coordinate intervention related to digital businesses and cross border trading to encourage local businesses in penetrating the global market. Additionally, regional collaboration and cooperation will be leveraged to encourage seamless cross border data flow, without compromising the sovereignty and security of the data.

Expanding the Sharing Economy

The sharing economy model enables assets and skills to be better utilised by two or more parties, and creates economic benefits to society by improving the distribution of wealth. The sharing economy also presents challenges, particularly related to social disruption, trustworthiness, quality, reliability and safety. To address these challenges and accelerate growth of the sharing economy, standards based on ISO International Workshop Agreement: Guiding principles and framework for the sharing economy (ISO-IWA 27:2017) will be adopted. This guideline encompasses elements of integrity; transparency; accountability; accessibility and inclusion; as well as continuous improvement. In addition, local platforms will be facilitated to be accredited with international sharing economy industry standards and platform certifications, for example ISO TC 324 on Sharing Economy and Fairwork Certification.

The growth of the sharing economy will be further expedited by fostering interregional collaboration and cooperation through cross border partnerships. Partnerships with international agencies will also be established for the exchange of knowledge and best practices, especially on regulations and standards. Local sharing platforms will also be encouraged to go global and attract foreign investment.

In the Twelfth Plan, efforts to increase awareness and participation of the *rakyat* in the sharing economy will be intensified. Industries including tourism, transportation and manufacturing will also be encouraged to adopt and leverage sharing economy models to improve productivity and competitiveness. Initiatives will also be implemented to promote sharing economy activities, including the gig economy among local communities to supplement their incomes. Partnerships between sharing economy players and TVET institutions will be developed to provide training programmes for the rural population.

Strengthening Cyber Security

The rapid development of the digital economy creates the need to form a safe, secure and reliable digital ecosystem. In this regard, the Malaysia Cyber Security Strategy (MCSS) will be implemented to spearhead efforts to manage cyber threats. MCSS focuses on enhancing the effectiveness of national cyber security governance through collaboration between agencies, industry and academia as well as adopting best practices and effective technologies. The cyber security legal framework will continue to be strengthened and the Cyber Security Act will be enacted. During the Twelfth Plan, MSMEs will be encouraged to adopt cyber security measures and a secure digital environment in line with increasing digital adoption to grow businesses.

Efforts to inculcate ethical usage of digital platforms will be intensified. This will include enhancing cyber security awareness initiatives through extensive promotional activities during the cyber security month, develop user guidelines for online and digital applications as well as increase training of the workforce on cyber security through a people-private-public partnership. In addition, the school curriculum will incorporate a module on the correct and acceptable ways to use the internet.

Strategy A2

Strengthening Provision of Digital Infrastructure and Services

A nationwide provision of digital infrastructure will enhance digital connectivity as well as unlock new economic potential and opportunities. In this regard, efforts will focus on ensuring equitable access and in facilitating the adoption of emerging and alternative technologies. This will accelerate the growth of the digital economy and further improve the wellbeing of the *rakyat*.

Ensuring Equitable Access

The National Fiberisation and Connectivity Plan (NFCP), which was launched in 2019 was subsequently reviewed and known as *Pelan Jalinan Digital Negara* (JENDELA) in 2020. The implementation of JENDELA will enable the development of a sustainable, inclusive and high quality digital infrastructure as well as a wider fifth generation technology standard (5G) coverage. The capacity and capability of the broadband network will be improved by attracting private capital to complement public investments. In this regard, rules and regulations will be streamlined to facilitate crowding-in private investment and the creation of new network infrastructure. Steps will be undertaken to introduce telecommunication services as a public utility, similar to water and electricity under the Uniform Building By-laws and other relevant laws. The feasibility of introducing the pay-per-use concept will be explored to increase accessibility and affordability of telecommunication services.

Policies on the planning and provision of digital infrastructure by both the Federal and state governments will be realigned to facilitate investment in state-of-the-art digital infrastructure and to ensure its optimum deployment. Meanwhile, digital-by-default laws will be introduced to enable the provision of digital services, protect consumers and promote innovation and competition. The Universal Service Provision programme will be restructured to increase transparency, flexibility and participation by a wider range of firms in network deployment. In addition, innovative funding mechanisms will be introduced by both commercial banks and government agencies to encourage more investment in the development of digital infrastructure.

Facilitating Adoption of Emerging and Alternative Technology

Digital infrastructure development and provision will incorporate elements of innovation as well as emerging and alternative technologies, while ensuring sustainability, aesthetics and future compatibility. For instance, the development of smart cities will take into consideration these elements in order to address issues pertaining to energy consumption, public transport as well as waste and disaster management. In line with the National 4IR Policy, incentives will be provided for industries to share best practices, conduct trials and adopt the sandbox approach in encouraging the adoption of emerging and alternative technologies.

Providing an Enabling Environment for Digital Infrastructure Development

The digital-by-default laws will be introduced to promote the development of digital infrastructure. The dedicated fund to expedite the expansion of digital infrastructure will continue to be allocated to state governments and local authorities while collaboration between Federal and state governments will be strengthened. Measures will also be undertaken to expedite the approval process at all levels in addition to soliciting cooperation from industry players to ensure effective implementation of digital infrastructure projects. Efforts to encourage investments in submarine cable landing stations will be intensified to improve fixed broadband services and promote the establishment of high-end data centres.

Strategy A3

Developing Future-Ready Digital Talent

Emerging technologies have created the demand for new skills and expertise. Continuous upskilling and reskilling efforts are imperative to ensure the workforce remains relevant. During the Twelfth Plan, measures will be undertaken to develop digital talent in promoting the digital economy and nurturing future-ready digital talent.

Developing Digital Talent to Promote Digital Economy

A conducive ecosystem will be provided to enhance the digital skills of the workforce. Cross-ministerial collaborations will be strengthened under the National Digital Economy and 4IR Council to ensure the digital talent initiatives are successful. A digital talent development strategy framework will be formulated to address related issues as well as guide and align all digital talent development initiatives. Sustainable and inclusive funding facilities will be provided for this purpose.

Digital social responsibility will be promoted to encourage organisations and individuals to contribute towards digital reskilling and upskilling programmes. Incentives such as tax exemptions and matching grants will be introduced to industry players that provide digital education and training programmes. In addition, companies will be encouraged to hire latent talent.

Expertise in cyber security will be strengthened to ensure a trusted, secure and reliable digital ecosystem. More local talent will be developed to reduce dependency on foreign cyber security experts. Collaborative efforts between the public and private sectors will be intensified to develop knowledge and skills in cyber security.

Industrial training will be enhanced and expanded to develop more digital content talent. Upskilling and reskilling programmes will be undertaken, particularly in the areas of animation, games and films that are globally marketable. Talent exchange programmes with established digital content-producing countries will be promoted to strengthen domestic capacity and capability.

Nurturing Future-Ready Digital Talent

Emerging digital technology will be incorporated into the school curriculum to mould digital talent from an early age. In this regard, digital facilities in schools will be upgraded to ensure quality digital education and learning. Adaptability skills, creative thinking and innovative mindset will be nurtured through activities and competitions related to digital making. In addition, efforts will be undertaken to incorporate digital accountability, ethics and cultural values in building a well-rounded and responsible talent.

The Continuous Professional Development programmes will be expanded for TVET instructors to obtain professional certificates in digital-related fields. This will equip the instructors with knowledge and skills related to digital technologies, thereby contributing to a better quality of TVET teaching and learning. Public-private partnerships, including through the teaching factory approach will be encouraged to provide industrial training on the latest technology.

During the Twelfth Plan, digital devices will be provided targeting students from selected groups through a people-private-public partnerships approach. A complimentary data plan will be provided to underprivileged students. Devices will be equipped with strict security settings, which will enable control and supervision by teachers and parents. This programme will ensure all students have better access to quality remote learning.

Strategy A4

Positioning Malaysia as the ASEAN Digital Centre

Malaysia aims to be the ASEAN digital centre given the nation's strong capability in cyber security solutions and digital content production. These, coupled with its rich and diverse cultural backgrounds and multi lingual society as well as highly adaptable workforce will enable the nation to be the regional digital centre. Efforts to position Malaysia as the ASEAN digital centre will focus on facilitating strategic and quality investment as well as digitalising MSMEs to broaden market access.

Facilitating Strategic and Quality Investment

Measures will be undertaken to improve the investment climate and encourage local and foreign venture capital in supporting a niche digital economy market. New value propositions to drive strategic investment in the digital economy will be created. These include reviewing the current MSC Bill of Guarantees to further increase competitiveness, promote a more vibrant digital ecosystem, and attract prospective high-technology and high-value investments. Additionally, sandboxes will be established to create a conducive environment for real-life testing, including regulatory sandboxes to drive investment and the adoption of catalytic technology.

The digital ecosystem will be improved to accelerate the growth of the digital content industry. The focus will be on developing talent, strengthening the industry value-chain and commercialising intellectual property to brand Malaysia as the digital content regional centre. Additionally, inter-agency collaboration will be strengthened to promote and attract high quality investments. Awareness programmes will be undertaken to promote digital content related opportunities, particularly among youth.

Efforts will be undertaken to position Malaysia as a regional centre for fintech, offering both conventional and Islamic fintech services. These will include the introduction of fintech accelerator programmes to encourage the setting up of fintech businesses in Malaysia. This programme will also facilitate networking, funding, mentorship and customer acquisition for early-stage fintech entrepreneurs to enable market expansion and accelerate innovation in digital financial services.

Initiatives will also be intensified to establish Malaysia as a regional cyber security centre. Attractive packages and business facilitation will be provided to attract investment in cyber security. Local businesses will be encouraged to obtain international certification to better commercialise digital products and solutions globally.

Branding and extensive promotional activities will be undertaken to position Malaysia as the regional digital centre. A single and transparent database of investment opportunities in digital technology will be developed to provide comprehensive information to local and foreign investors. Moreover, local digital technology players will be encouraged to participate in international events to promote networking and for local businesses to go global.

Digitalising Micro, Small and Medium Enterprises to Broaden Market Access

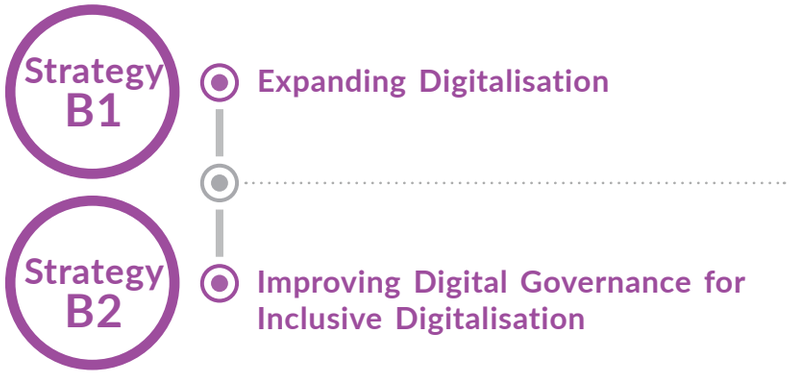
In the Twelfth Plan, MSMEs will be encouraged to adopt digital technologies in production, processes and business services, mainly in the back-end of business operations. Training and awareness programmes will be implemented for MSMEs to enhance readiness to digitalise and compete in the international market. Appropriate digital solutions will be identified and proposed to match the level of business readiness through digital adoption incentives.

A holistic financing mechanism will be provided to accelerate the adoption of digital solutions by MSMEs. The eBerkat[3] initiative will be further promoted to assist the MSMEs as well as entrepreneurs among the B40 households in acquiring knowledge, securing insurance and accessing micro-financing services. MSMEs and entrepreneurs digitalisation needs and peer-to-peer financing will be identified. This will enable the MSMEs to participate in bigger markets and expand their businesses internationally.

Priority Area B

Mainstreaming Digitalisation for Inclusive Development

Digital inclusion is vital in ensuring every *rakyat* has equal opportunities to participate and benefit from the digital economy. The importance of digitalisation is even more pronounced since the COVID-19 pandemic as digital platforms allow for socioeconomic activities to continue despite the movement control order. To mainstream digitalisation, measures will be implemented to expand digitalisation and improve digital governance.



[3] Initiative to facilitate MSMEs to financial sources in expanding businesses.

Strategy B1

Expanding Digitalisation

The expansion of digitalisation will broaden socioeconomic development and ensure digital inclusion. The emphasis will be on facilitating digital opportunities and creating more online business ventures. The initiatives will promote greater participation of the *rakyat* in the digital economy.

Facilitating Digital Opportunities

eCommerce activities will be expanded to scale up digital opportunities for vulnerable groups to exploit digital platforms. One-stop service centres will be established to guide and facilitate the on-boarding of the MSMEs to venture into business and go global. In addition, a comprehensive database will be developed to enhance the planning and monitoring of the MSMEs development.

Creating More Online Business Ventures

Initiatives to promote the creation of new business ventures including solopreneur[4] as well as global microenterprises will be enhanced. The coverage and effectiveness of eRezeki and eUsahawan programmes will be improved to increase the digital skills and opportunities for the targeted groups, including those involved in the sharing economy. Performance of existing programmes will be evaluated, while new business models and approaches will be introduced. An effective monitoring and evaluation mechanism will be utilised to ensure more effective implementation.

Sharing economy will be promoted for better inclusiveness. Several initiatives will be undertaken to facilitate the growth of this economy, including developing standards, setting up new platforms and fostering cross border activities. Awareness programmes will be implemented to further promote participation in the sharing economy, especially among the vulnerable groups.

Strategy B2

Improving Digital Governance for Inclusive Digitalisation

Improved digital governance will provide a comprehensive digital ecosystem for the *rakyat* to reap opportunities from the digital economy. Data integration and privacy will be improved for a more efficient service delivery. This will encourage an inclusive growth of the digital economy and realise the development for all agenda.

Improving Data Integration and Privacy for Efficient Service Delivery

The ability to share and use available data is crucial in ensuring the success of the digitalisation agenda. A policy on data sharing will be formulated to improve the decision-making process, while protecting data privacy. Data will be synchronised and shared among different stakeholders to promote data-driven activities including evidence-based decision making. This will facilitate the targeted mechanisms for socioeconomic programmes as well as reduce inclusion and exclusion errors.

A national digital identification policy will be developed to provide a comprehensive framework for building trust and security for digital transactions and movement of data. The application of digital identity will facilitate the usage of new technologies, eCommerce and other administrative processes, as shown in *Box 11-2*. It will curb fraud and enhance the protection of individual rights. The Personal Data Protection Act will be reviewed to provide greater rights and control over personal data as well as clarity on personal data management using technology. It will also increase the accountability of organisations in safeguarding personal data and privacy.

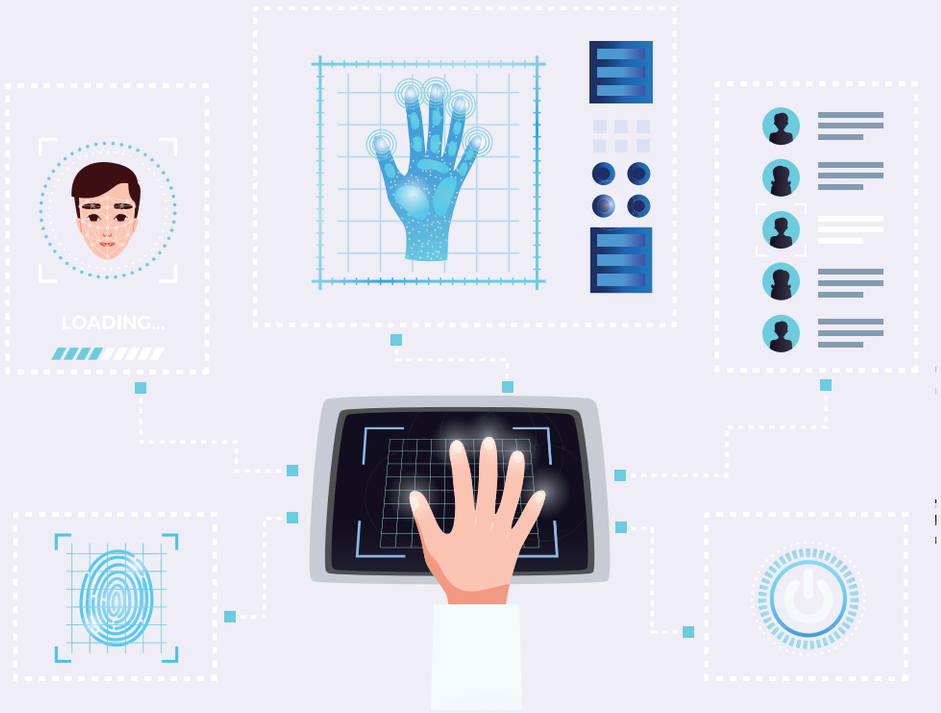
[4] A person who sets up and runs business individually.

Box 11-2

The National Digital Identity for Sustainable Economic Growth

A robust digital landscape and strong telecommunications infrastructure are important in supporting the growth of the digital economy and encouraging a digital lifestyle. Data shows that 87.1% of government services are provided online, while 87.4% of the population are internet users. The broadband penetration rate in populated areas is 127.4% in the first quarter of 2020. As technology forms an integral part of life, the need for a safe, secure and protected national digital identification platform becomes essential.

The national digital identification (NDI) serves as a secure and trusted electronic credential as well as a platform for authentication. This can improve convenience, promote inclusivity, reduce cost of access to services and enhance service delivery for online transactions. The public will no longer have to remember different usernames and passwords for various services or carry multiple tokens for digital transactions. The NDI will also enable innovative and value-added digital services that facilitate end-to-end business processes with digital signing. This will promote process improvements and enhance efficiency as the platform will be interoperable. The NDI will provide security and trust by leveraging robust technologies. In summary, the envisaged roll-out of the NDI in the Twelfth Plan will create value in the economy and further drive the digital inclusion agenda.



Priority Area C

Accelerating Research, Development, Commercialisation and Innovation

R&D&C&I plays a crucial role in fostering innovation and accelerating socioeconomic development towards ensuring a better quality of life. The Twelfth Plan will continue to place high priority in developing and leveraging STI by strengthening R&D&C&I capacity and capability. It will also nurture quality STI talent to improve R&D&C&I outcomes.



Strategy C1

Strengthening Capacity and Capability in Research, Development, Commercialisation and Innovation

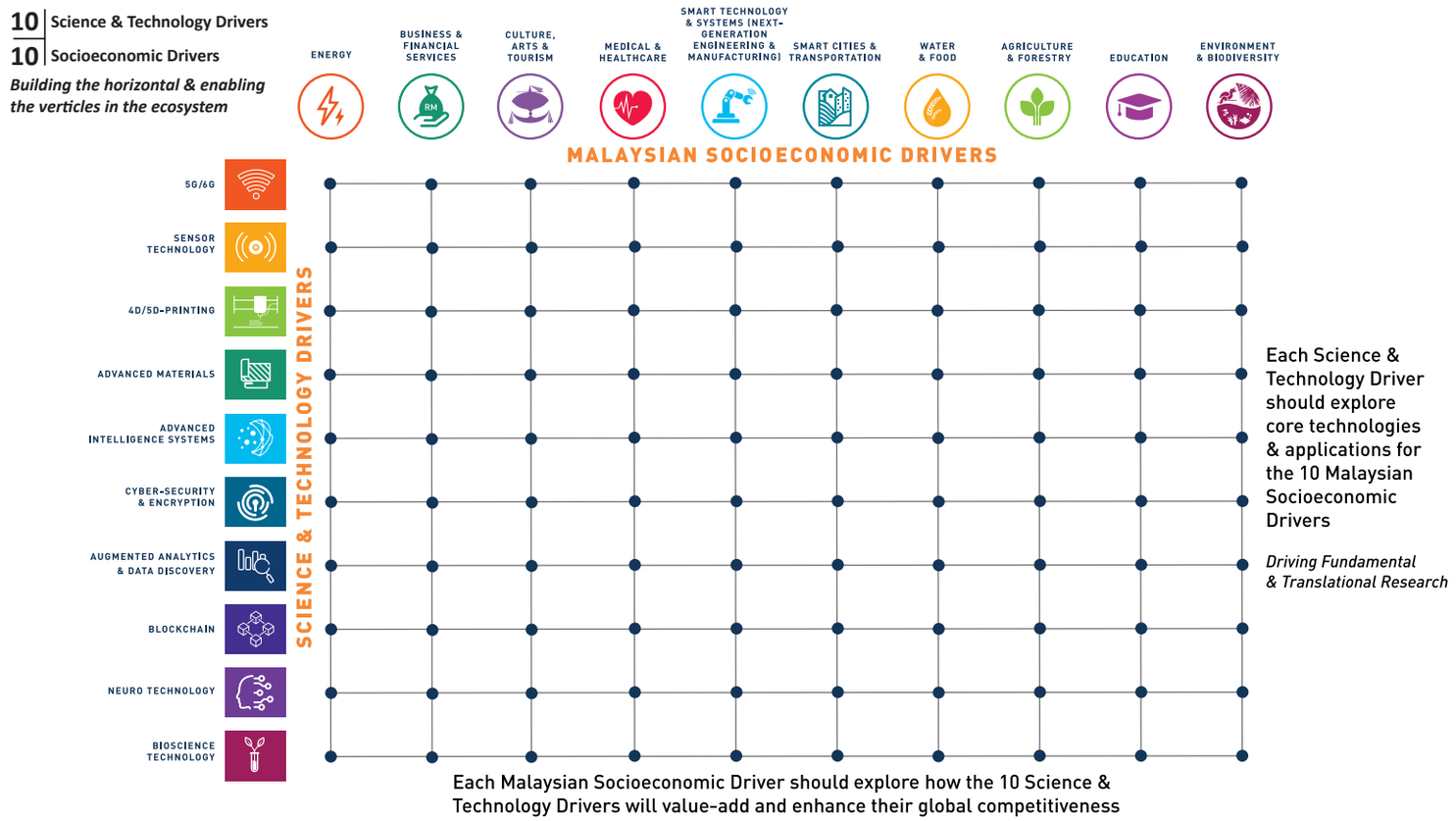
Greater emphasis will be placed on scaling up capacity and capability in R&D&C&I to create greater wealth. In this regard, efforts will be undertaken to streamline national STI priority areas, strengthen funding for R&D&C&I and translate R&D as well as intellectual property into high value-added products. The implementation of these initiatives will contribute towards innovation-led growth.

Streamlining National Science, Technology and Innovation Priority Areas

The National Policy on Science, Technology and Innovation (NPSTI) 2021-2030 will be implemented to harness STI and strengthen the R&D&C&I ecosystem in building a scientifically advanced and progressive society. Under NPSTI 2021-2030, niche areas for research will be identified based on the priority areas set under the 10-10 Malaysian Science, Technology, Innovation and Economy (MySTIE) Framework, as shown in *Exhibit 11-2*. These priority areas will drive the transformation of industry from technology users to technology developers and creators. Consequently, all the incentives and funding for R&D&C&I will be streamlined based on the niche areas in line with the national development priorities.

Exhibit 11-2

10-10 Malaysian Science, Technology, Innovation and Economy (MySTIE) Framework



Source: Academy of Sciences Malaysia and Monash University Malaysia, 2019

Strengthening Funding for Research, Development, Commercialisation and Innovation

The newly formed Research Management Unit (RMU), under the Economic Planning Unit of the Prime Minister's Department will coordinate and harmonise the funding mechanism for all R&D&C&I activities in ensuring these activities are in line with national priorities. The RMU will ensure at least 50% of total R&D expenditure in the Twelfth Plan is for experimental development research with high commercialisation potential. Measures will be undertaken to increase access to alternative financing including through venture capital and international funding. In addition, an endowment fund will be established to source funds from industry, matching grants, crowdfunding and *waqf*, for STI-related R&D activities. The implementation of these initiatives is expected to increase the percentage of GERD to GDP to 2.5% by 2025.

Private investors, including angel investors, corporate investors and multinational companies, will be encouraged to participate in the venture capital ecosystem to provide more funds for start-up companies. An improved tax structure will be introduced to strengthen the venture capital ecosystem and increase joint R&D efforts among industry, academia, government and international research institutions. This new structure will also encourage more

demand-driven R&D activities. In addition, banks and local venture capital companies will be incentivised to increase capacity and capability in evaluating technology financing.

Translating Research and Development as well as Intellectual Property into High Value-Added Products

The implementation of technology sandboxes will accelerate innovation and local technology development. Among others, the National Technology and Innovation Sandbox (NTIS) initiatives will be rolled out to allow researchers, innovators, start-up companies and high-tech entrepreneurs to test their innovation in a live environment. In addition, the Malaysia Commercialisation Year 2.0 (MCY 2.0) programme will be enhanced to increase commercialisation as well as improve the transfer rate of R&D outputs from lab to market. The improved MCY 2.0 will leverage collaboration and sharing of resources from various ministries and agencies that conduct R&D&C&I activities. A standardised intellectual property rights (IPR) valuation and licensing framework will be established to facilitate fair valuation. This will ensure successful commercialisation of IPR produced by universities and research institutions.

The effectiveness of intermediaries for industry-led technology adoption and intervention will be further enhanced through greater partnership with MSMEs in gearing towards commercialisation of R&D outputs. The Industrial Collaboration Programme (ICP) will also be further improved to enhance the capacities and capabilities of local firms to compete in targeted markets and participate in supply chains. In addition, a one-stop centre for technology commercialisation and transfer will be established to scale up home-grown technologies.

Strategy C2

Nurturing Quality Science, Technology and Innovation Talent

Malaysia will build a sufficient and competent STI talent pool to meet industry demand. Efforts will be undertaken to increase the supply of quality STI talent, and champion effective and fun non-formal STEM learning. The effectiveness of communication and awareness programmes will be improved. These initiatives are expected to develop knowledgeable, skilled and innovative STI talent to drive the economy.

Increasing Supply of Quality Science, Technology and Innovation Talent

The career path for STI talent including remuneration will be improved to make STI careers the preferred choice. In this regard, schemes for STI related occupations such as researchers, technology transfer officers and research managers will be improved to provide a competitive remuneration package. Furthermore, structured capacity-building programmes will be implemented to produce accredited and registered technology transfer professionals. Technology transfer professionals will be leveraged to unlock the potentials of R&D output through commercialisation to create wealth and jobs.

Public-private partnerships will be strengthened to increase the supply of STI talent. This will include encouraging more industries to participate in co-funding scholarships and providing internships and apprenticeships programmes. The technology assembly programme will be introduced to forge partnerships with companies to bridge the skills mismatch of graduates and the needs of the industry. In this regard, the existing two years in university and two years in industry (2u2i) programme will be leveraged to improve industry readiness of graduates. Continuous learning through cross-fertilisation programmes will be further enhanced to reskill and upskill the existing STI workforce. Meanwhile, the effectiveness of the Researcher-Industry Scientific Exchange (RISE) programme will be improved by extending the duration and number of public sector secondees.

Championing Effective and Fun Non-Formal Science, Technology, Engineering and Mathematics Learning

Interest in STEM will be inculcated to change mindsets and nurture STI culture at an early age. This includes providing a non-formal learning environment through outreach programmes, thematic exhibitions and interactive educational activities. Non-formal learning centres and STI enculturation spaces, particularly the National Science Centre and the National Planetarium will be transformed to be fully utilised in delivering effective and fun STEM learning. This transformation will also involve the establishment of more regional science centres. In addition, innovative and creative kids programmes, which provide hands-on non-formal learning will be introduced to foster creative thinking as well as instil inventing and entrepreneurial skills among school students.

Increasing Effectiveness of Communication and Awareness Programmes

The effectiveness of STI communications and awareness programmes will be enhanced through the establishment of a coordination committee that will streamline and integrate all public awareness messages produced by different agencies. Strategic engagements between government agencies, social enterprises and civil society organisations will be intensified to advocate the benefits of STEM education among the *rakyat*. In addition, promotion of STEM education through various platforms including social media, virtual reality programmes and gamification will be expanded to reach a wider audience. Meanwhile, the Youth Science Ambassador programme will be up scaled to encourage the take-up of STEM among youth. More young people will be trained as science communicators and appointed as ambassadors to stimulate and strengthen the development of peer mentoring and aspiration in STEM learning.

Priority Area D

Capitalising on Advanced Technology Potential

Strengthening technological capabilities will be critical to ensure sustained economic growth. A key component of this is to empower more local talent from merely being technology adopters to becoming technology developers and creators, focusing on the development and application of advanced technologies, including deep technology. Under the Twelfth Plan, efforts will be intensified to gear up for the 4IR, including adopting emerging technologies in new product development.



Gearing up for the Fourth Industrial Revolution

Strategy D1

Gearing up for the Fourth Industrial Revolution

The 4IR impacts all aspects of human life, presenting both risks and opportunities. If properly harnessed, 4IR technologies can catalyse economic growth and elevate social wellbeing. 4IR encompasses the total transformation of all economic sectors and society, which heralds the conversion of entire systems of production, management and governance as well as way of life. As such, initiatives will be put in place to seize the economic growth opportunities arising from 4IR, create a conducive ecosystem to harness its potential as well as establish trust and build an inclusive digital society. These initiatives will contribute to achieving balanced, responsible and sustainable economic growth.

The adoption of 4IR technologies has contributed in containing the COVID-19 pandemic outbreak and mitigating the associated socioeconomic impact. For instance, the utilisation of big data platforms that store information of residents from various sources enable tracking close contacts of diagnosed patients and the ability to take prompt action to break the transmission chain. 4IR and the digital economy will also enhance the resilience of the economy. A brief description of harnessing 4IR towards shared prosperity is illustrated in *Box 11-3*.

Box 11-3

Harnessing 4IR towards Shared Prosperity

4IR is shifting the way value is created, exchanged and distributed at an exponential rate rather than a linear pace. It is increasingly converging the digital, physical and biological realms and affecting not only the manufacturing sector but almost every industry in every country and various aspects of the government and society. To seize growth opportunities from 4IR, it is critical to provide a secure environment to encourage innovation. 4IR enables Malaysia to achieve a more balanced, responsible and sustainable growth, in line with the *WKB* 2030 and the 2030 Agenda. Malaysia will experience greater economic efficiency and productivity, enhanced quality of life and better management of climate change, provided 4IR is appropriately harnessed. Examples of how 4IR technologies benefit the country are depicted below.

Examples of challenges		How 4IR addresses these challenges	Benefits
City planning and development	Urbanisation rate projected at 85% by 2020	• Big-data-powered visualisation and simulation to optimise urban land, space and buildings	Liveability of cities
Transportation and logistics	Estimated 7 million vehicles in Klang Valley by 2020	• IoT-based system for predictive and real-time transport and traffic management • Cleaner vehicles and low-carbon mobility solutions	Productivity gain
Energy and utilities	Reduce GHG emissions intensity by 45% by 2030	• Intelligent grid management to monitor assets and ensure cost-effective operations • Advanced batteries for energy storage and electric vehicles	Energy efficiency gain
Resource management	38,000 tonnes waste/day; Use 28% more water than WHO recommendation	• Integrated municipal and industrial waste management • IoT-based life-cycle assessments of water quality, management and reuse	Environmental quality
Urban systems resilience	Natural disasters cost Malaysia RM8 billion in last 20 years	• Real-time, integrated and adaptive urban management systems • Disaster-ready urban infrastructure and buildings	Disaster control
Government service delivery	~RM25 billion average annual spending on social benefits and assistance	• Data-based decision making on policy and programmes • Autonomous process	Time saving and efficiency gain

Source: Fourth Industrial Revolution for the Earth (PwC 2017) and PwC Analysis

Seizing Economic Growth Opportunities Arising from the Fourth Industrial Revolution

Malaysia will capitalise on the strength of ASEAN to attract more investments in 4IR technologies, particularly from global unicorn companies. Efforts will be intensified to establish a conducive ecosystem, including by enhancing the capabilities of MSMEs and improving the coordination in implementing existing programmes and initiatives. This will further improve the ease of doing business in the country. The growth opportunities from 4IR and potential risks arising from megatrends necessitate the application of 4IR technologies in various sectors of the economy. For this purpose, 10 potential sectors will be given focus to facilitate a strategic shift in the economy, as shown in *Exhibit 11-3*.

Exhibit 11-3

Potential sectors for applications of the Fourth Industrial Revolution technologies



National strategies on artificial intelligence (AI) and blockchain will be developed to guide the growth of every sector in the economy. The National Internet of Things (IoT) Strategic Roadmap will be reinvigorated to ensure its implementation can fully bring benefits to the *rakyat*. In addition, 4IR innovation parks will be established to provide a secure testbed and pool together 4IR technology providers to stimulate new technology breakthroughs. The parks, supported by 5G-enabled key services, among others cloud computing and supercomputers, will provide access for MSMEs and innovators to develop products and solutions utilising emerging technologies such as AI, IoT and big data analytics.

Creating a Conducive Ecosystem to Harness the Potential of the Fourth Industrial Revolution

The World Economic Forum (WEF) Centre for 4IR will be established in Malaysia using the quadruple helix model involving government, industry, academia and society to co-design the policy framework and governance mechanism through global collaboration. The regulatory sandbox will be further expanded beyond fintech to other technologies in various sectors, which will allow start-up companies and innovators to test solutions under a controlled and supervised regulatory environment. In addition, performance-linked incentives related to 4IR technology adoption will be expanded to non-manufacturing sectors to reap the benefits of 4IR and capture economic growth opportunities. A dedicated tech fund will be established to encourage companies, especially MSMEs to adopt 4IR technology. A portion of funds will be sourced from the additional levy collected from the implementation of the multi-tiered levy on foreign workers. Training for 4IR-related skills will also be provided by various skills training institutions in collaboration with industry players to meet industry demand.

Establishing Trust and Building an Inclusive Digital Society

Measures will be initiated to facilitate and enable society to reap the benefits of 4IR. Open data sharing infrastructure will be upgraded to enable accessibility of digital information by the public and private sectors, academia and the *rakyat*. Meanwhile, guidelines and regulations on personal data protection and data sharing will be strengthened to ensure data is safeguarded against cyber-attacks and unethical uses. An ethical framework and standards on technology development, deployment and utilisation will also be introduced to ensure responsible use of technology. The implementation of the national cyber security response, surveillance and supervision will also be strengthened to protect the nation against any possible cyber threats.

Digital infrastructure and tools for modernisation of government operations and processes will be improved to ensure effective service delivery. Efforts will be intensified to develop interdisciplinary technical knowledge and data analytics skills of civil servants. Focus will also be given to embed 4IR technologies in healthcare services, public transport services as well as disaster management and prevention to improve the quality of life of the *rakyat*.

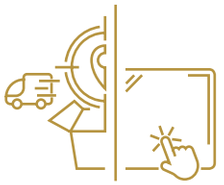
Conclusion

During the Eleventh Plan, measures to accelerate innovation and technology adoption contributed to the socioeconomic development of the country. However, the key to further progress will be getting more Malaysians to embrace digitalisation and adopt 4IR technologies. During the Twelfth Plan, concerted efforts will be undertaken to boost digitalisation and advance technology adoption to transform Malaysia into a high technology-based economy through, among others, strengthening the basic digital infrastructure with telecommunication services being introduced as a public utility, developing and nurturing future-ready talent to participate in the digital economy as well as increasing the commercialisation of R&D outputs and investments. The implementation of these initiatives will further enhance national competitiveness and resilience through inclusive participation in new areas of growth such as the digital and green economy.

Chapter

12

Enhancing Efficiency of Transport and Logistics Infrastructure



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12

Introduction

Transport and logistics infrastructure are among key enablers for socioeconomic development. Malaysia's transport policy is to provide safe, reliable, affordable and sustainable transport and logistics services. During the Eleventh Plan, the emphasis was on building an integrated needs-based transport system by enhancing connectivity across transport modes and regions, as well as improving efficiency. The logistics sector focused on improving freight infrastructure efficiency. All these initiatives resulted in better quality of transport and logistics services and improved connectivity, particularly in underserved areas. In addition, the utilisation of public transport also increased. However, challenges related to first- and last-mile connectivity, competitiveness and governance of the transport and logistics sectors continue to persist.

The Twelfth Plan aims to further enhance the efficiency of transport and logistics services by prioritising efforts to provide an integrated, affordable, reliable and seamless transport system. Additionally, the plan aims to increase industry competitiveness and strengthen the institutional and regulatory framework of the sectors. Enhanced efficiency of the transport and logistics services will contribute towards attaining sustainable economic development and increasing the wellbeing of the *rakyat*.

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, the transport infrastructure network was expanded, to provide better connectivity and quality of services. The enhancement in the transport system resulted in the improved capacity of ports and airports. Transport initiatives were streamlined through the introduction of the National Transport Policy (NTP), 2019-2030. Furthermore, efforts were also undertaken to strengthen trade facilitation, improve first- and last-mile connectivity and digitalise logistics services.

Performance of Selected Targets

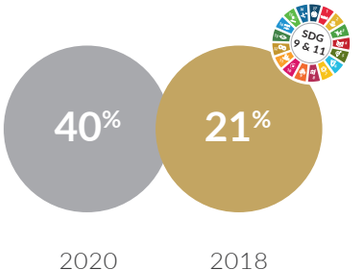
Five targets were set for the transport and logistics sectors as shown in *Exhibit 12-1*. Two out of five targets were achieved, namely the establishment of the Malaysian Aviation Commission (MAVCOM) in 2016 and the launching of the NTP in 2019. However, MAVCOM will be merged with the Civil Aviation Authority of Malaysia (CAAM) to rationalise the aviation sector. This merger will consolidate the technical and economic aspects under one entity.

The target of 40% public transport modal share in 2020 was not achieved due to inadequate connectivity, lack of accessibility and reliability of services, the reluctance of the public to switch from private vehicles as well as the impact of COVID-19. The annual growth of the transport and storage subsector was -3.9%, below the target of 7.3%, mainly due to impact of COVID-19, as well as the stiff competition from neighbouring countries, inefficient trade facilitation processes and slow global economic growth. Malaysia was ranked 41 out of 160 countries in the World Bank Logistics Performance Index (LPI) Report 2018. This was due to the decline in all six indicators, namely cargo clearance process, infrastructure, logistics services, tracking and tracing, pricing as well as timeliness. The development of the Ubiquitous Customs (uCustoms) system which was supposed to be completed in 2017 is delayed. This further affected Malaysia's ranking in the LPI.

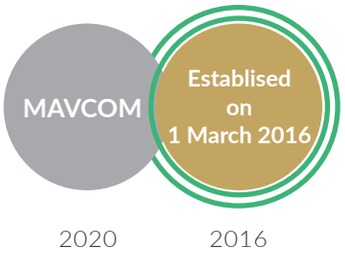
Exhibit 12-1

Eleventh Malaysia Plan: Performance of Selected Targets

Development of Integrated Needs-based Transport System

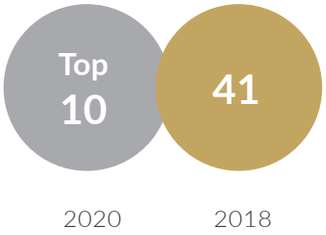


Public Transport Modal Share in GKL/KV

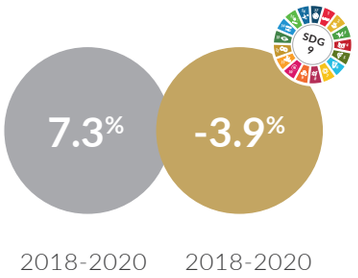


Malaysia Aviation Commission (MAVCOM) Established as a Regulator

Unleashed Growth of Logistics and Enhancement of Trade Facilitation



Ranking in the World Bank Logistics Performance Index



Annual Growth of Transport and Storage Subsector

Streamlined Initiatives through National Transport Policy



National Transport Policy (NTP), 2019-2030



Performance of Selected Initiatives

Streamlined Transport Initiatives

The NTP was introduced to streamline the fragmented transport initiatives among Federal and state governments, including ministries, agencies and transport authorities to ensure effective and efficient use of resources. Under the NTP, the implementation of various transport initiatives will be guided by five policy thrusts, namely governance, transport infrastructure maintenance, safety, green transport ecosystem and the internationalisation of transport services. The NTP's vision is to develop a sustainable transport sector that accelerates economic growth and promotes the wellbeing of the *rakyat*.

The Highway Network Development Plan (HNDP) 2030 was formulated in 2020 to provide a comprehensive and systematic masterplan for the upgrading and development of new roads. This plan will be a reference for federal, state and local development planning. HNDP will also support the seamless movement of people and goods, thus contributing to economic expansion and prosperity.

Enhancement of Connectivity Across Regions

Efforts to enhance connectivity across regions include the construction of highways and rail projects with underserved areas given priority. The Central Spine Road (CSR), to connect Bentong, Pahang and Kuala Krai, Kelantan, is being constructed in phases. Seven out of 26 subpackages for CSR from Merapoh to Seberang Jelai, Pahang were completed. The work progress was at 58.2% as at the end of 2020 and the construction of the remaining CSR alignment is expected to be completed by 2025. The construction of Kota Bharu-Kuala Krai (KBKK) highway in Kelantan is implemented in phases, where two out of eight subpackages from Pasir Hor to Ketereh were completed in 2019. The work progress was at 37.8% as at the end of 2020 and the remaining alignment from Ketereh to Kuala Krai is expected to be completed by 2025. Preliminary works such as soil investigation, land survey and traffic impact assessment of the Lebuhraya Pantai Timur 3 (LPT3), which started in 2020, is expected to be completed by second quarter of 2022. The proposed LPT3 will connect Gemuruh, Terengganu to Tok Bali, Kelantan and is expected to provide a smoother journey to the east coast while boosting economic activities along the corridor.

The Pan Borneo Sabah Highway was initiated in 2016 to provide road connectivity from Sindumin to Tawau. The work progress was at 44% as at the end of 2020, and 281 km of the highway is expected to be completed by 2024. The Pan Borneo Sarawak Highway from Telok Melano to Miri was 59.4% completed at the end of 2020 and is expected to be ready by 2022. Once completed, these highways will improve accessibility and connectivity as well as further promote economic development in Sabah and Sarawak.

Five highways are under construction to improve connectivity and ease congestion in the Greater Kuala Lumpur/Klang Valley (GKL/KV). These highways are Sungai Besi-Ulu Kelang Elevated Expressway (SUKE), Damansara-Shah Alam Elevated Expressway (DASH), East Klang Valley Expressway (EKVE), Setiawangsa-Pantai Expressway (SPE) and Putrajaya-KLIA Expressway (MEX II). All of these highways are scheduled to be completed by the fourth quarter of 2021. Meanwhile, West Coast Expressway (WCE) from Banting, Selangor to Taiping, Perak is expected to be completed by 2024.

Two major rail projects, namely the Electrified Double Track Gemas-Johor Bahru (GJB) and East Coast Rail Link (ECRL) were under different stages of construction in 2020. For GJB, the final stretch of the electrified double-track from Padang Besar, Perlis to Johor Bahru, Johor, which will offer Electric Train Services (ETS), is projected to be ready by 2023. This extension is aimed at expanding rail capacity by up to 10 times and reduce journey time. *Box 12-1* provides details on ETS. Meanwhile, the ECRL which re-commenced work in 2019, is currently under construction for the alignment from Dungun to Mentakab and is expected to be completed by 2026. These projects, which link the east and west coast regions, will reduce travel time and spur trade and economic activities along the alignment.

Box 12-1

The Success of Electric Train Service (ETS)

The Electric Train Service (ETS) operated by Keretapi Tanah Melayu Berhad was launched on 10 August 2010, providing faster passenger train services at 140 km/h between Kuala Lumpur and Ipoh. When the service first started, it was using five electric train sets, which consisted of six coaches per set and could accommodate up to 350 passengers. In 2011, ETS recorded an average of 2,500 passengers daily.

In 2015, additional train sets were added to the fleet, enabling more trips and wider train service coverage to meet increasing demand. With this addition, ETS services now cover major towns between Gemas and Padang Besar, connecting Kuala Lumpur, Ipoh, Butterworth and Alor Setar.

The number of ETS passengers increased by more than one-fold in 2015 reaching 5,500 daily compared to 2011. Two years later, the number surged to 11,000 passengers daily. ETS services have been enhanced to meet growing inter-city mobility demand. In 2019, nine new train sets were equipped with business class coaches. The services are expected to run up to 44 trips per day with targeted ridership to reach 12,000 daily by December 2020.

ETS is expected to extend the services up to Johor Bahru once the Gemas–Johor Bahru Double Track project is completed in 2023. These services will provide a more comfortable journey and improve connectivity for long-distance rail passengers along the west coast of Peninsular Malaysia, between Johor Bahru and Padang Besar.



The accessibility and capacity of ports were improved, to meet industry demand and to facilitate trade. The Port Klang Authority (PKA) deepened the south channel from 16.5 metres to 18 metres in 2016 to cater for bigger vessels of up to 18,000 twenty-footer equivalent units (TEUs). Capacity expansion works undertaken include the refurbishment of three wharves at the Northport and one new berth at Westports in Port Klang, Selangor. Meanwhile, an additional 12 new cranes were installed at Port of Tanjung Pelepas (PTP) in Gelang Patah, Johor to improve the efficiency of cargo handling. As a result, PTP handled a total of 9,077,485 TEUs in 2019, an increase of 13.1% in container volume from 2016. Efforts to improve ports accessibility and capacity enabled the ports to remain competitive. Port Klang maintained its ranking at 12th position since 2016 while PTP was ranked 19th in the World Container Port Ranking in 2019.

The development and continuous upgrading of airports and flight systems contributed to higher aircraft movement, safer aircraft landing and better quality of airport services. These efforts, among others, increased the total number of passengers handled to 102 million in 2018, an improvement of 12% from 2016. Among the projects implemented included the upgrading of Langkawi International Airport and the installation of the simple approach light system for Kuching International Airport, which was completed in 2018. In addition, the completion of the new Kuala Lumpur Airport Traffic Control Centre in August 2021 is forecasted to increase the number of aircraft movements per hour from 68 to 108. The construction of the new airport in Mukah, was completed in April 2021. Meanwhile, the upgrading of the Kota Kinabalu International Airport Traffic Control Center, which started in 2019 is expected to be completed by 2023. These constructions and upgrading activities will further increase the efficiency of airport services and air traffic management.

Increase in Public Transport Modal Share

Several projects were undertaken to increase public transport modal share, while addressing congestion problems in cities, particularly GKL/KV. Two main rail projects were completed, namely the Mass Rapid Transit Line 1 (MRT 1) and the Light Rail Transit Line 2 (LRT 2). MRT 1, from Sungai Buloh to Kajang, which was completed in 2017, was successful in reducing the traffic congestion in the city centre. In addition, the MRT feeder bus service was introduced as the first- and last-mile connectivity for passengers. LRT 2 from Putra Heights to Kelana Jaya and Sri Petaling was completed in 2016, creating a complete circle between the Kelana Jaya Line and Ampang Line. The construction

of MRT 2 from Sungai Buloh to Putrajaya, which commenced in 2018, is expected to be completed by 2022. MRT 2 will further increase public transport modal share with a projected ridership of 345,170 passengers per day after three years of operation. Meanwhile, the Subang SkyPark Terminal Extension, which commenced operations in 2018, has provided a rail-based public transport to connect commuters to Sultan Abdul Aziz Shah Airport, Subang, Selangor.

Another major effort undertaken to increase public transport modal share was the introduction of the My100 and My50 unlimited passes as incentives for train and bus passengers in 2019. A total of 1.5 million My100 passes and 43,137 My50 passes were sold since its introduction. The My30 unlimited passes initiative was introduced on 15 June 2020 for a period of six months to mitigate the impact of COVID-19 and reduce the cost of living. A total of 863,336 My30 passes were sold since its launch. In providing an alternative mode of public transport, a new regulatory framework for e-hailing services was fully enforced in October 2019 to safeguard the service providers and to ensure the safety of passengers.

Measures have been undertaken to enhance intercity rail connectivity, among others, by implementing the Klang Valley Double Track Project (KVDT) Phase 1 from Rawang to Salak Selatan. This project is scheduled to be completed in 2021 to shorten service intervals from 15 minutes to 7.5 minutes. Meanwhile, KVDT Phase 2 from Salak Selatan to Seremban and Simpang Pelabuhan Klang to Pelabuhan Klang commenced in 2020 and is expected to be completed by 2026. These upgrading works will improve the KTM Komuter services and increase the transportation of cargo via rail.

Digitalisation of Logistics Services

Measures have been taken to digitalise logistics services to further improve efficiency and competitiveness as well as ensure seamless movement of goods. The Digital Free Trade Zone (DFTZ) was launched in 2017 to provide physical and virtual zones to facilitate small and medium enterprises (SMEs) in capitalising the growth of the digital economy and cross-border eCommerce activities. There are 26 platform providers in DFTZ, such as Alibaba, Lazada and eBay with 9,200 export-ready local SMEs trading through the platforms. The eFulfillment Hub, managed by Pos Malaysia, has provided end-to-end logistics services comprising warehousing, order processing and delivery for eCommerce air cargo activities. Meanwhile, PKA has fully enforced the utilisation of Port Klang Net, which enables real-time tracking of movement of goods within the port areas. Similarly, the PTP and Johor Port have implemented the Marine Resource Management System and Vessel Traffic Monitoring and Information System since 2018.

Issues and Challenges

During the Eleventh Plan period, there was a significant improvement in transport and logistics services. Nevertheless, there is still a need to meet the demand for seamless connectivity and reliable transport and logistics services. Among the issues identified are inadequate first- and last-mile connectivity, uncompetitive and poor governance of the transport and logistics industry.

Issues and Challenges

- Inadequate First- and Last-Mile Connectivity
- Uncompetitive Transport and Logistics Industry
- Poor Governance in Transport and Logistics

Inadequate First- and Last-Mile Connectivity

Low On Time Performance (OTP), longer journey time and the absence of holistic travel demand management have affected the efficiency and reliability of public transport. In addition, inadequate first- and last-mile connectivity between modes of transport has hampered seamless travel. The utilisation of public transport remains below target. The reluctance to switch from private vehicles to public transport is partly contributed by the relatively low cost of car ownership. This is evidenced by the increase in the number of registered vehicles, by approximately 6% per annum, from 20.2 million in 2010 to 30 million vehicles in 2018[1]. The ratio of vehicles to the population, which stood at 0.9 in 2018 was one of the highest in the region.

[1] Transport Statistics Malaysia, 2018.

Road maintenance, whether implemented on a corrective or preventive basis, is still an issue due to lack of resources. The preferences for corrective maintenance over scheduled maintenance have aggravated the problem. This leads to the degradation of road conditions, thus limiting mobility and increasing accident rate, while reducing road lifespan and raising maintenance costs in the long run. During the Eleventh Plan, federal funding allocation was only sufficient to cover 25% of the total requirement for federal road maintenance. This indicates that there is still unmet demand for road infrastructure among others, due to resource constraints and other priorities.

Uncompetitive Transport and Logistics Industry

The key constraints in the logistics infrastructure are poor last-mile connectivity to major entry points, inadequate facilities at ports and airports as well as inefficient transport services. These cause delays and damage to goods, thus increasing handling and transportation costs. Morever, the deployment of vessels by major cargo ship liners with a capacity greater than 20,000 TEUs, poses a challenge in terms of channel depth in major ports such as Port Klang and PTP.

Demand for air travel over the next two decades is expected to double to 7.2 billion passengers by 2035[2] compared with 2016. However, the existing Communication, Navigation and Surveillance System (CNS) equipment and infrastructure that have been in operation for more than 15 years, affect the efficiency of air traffic management. Hence, the system and equipment will need to be updated to ensure efficiency and competitiveness of the aviation services.

The absence of a centralised database constrains overall planning, with each agency using administrative data within its purview. This leads to inefficiency and waste of resources in achieving the desired outcomes. It also limits the ability to perform data analytics for future planning.

The major ports, namely Port Klang, PTP and Johor Port have established their own individual port community systems. These systems assist in managing and facilitating cargo movement and vessel traffic. However, these systems are not integrated, which hinders the effective coordination and optimisation of ports and logistics services.

The utilisation of the current railway track capacity for the movement of cargo was at 30%. This was mainly due to the relatively higher cost of carrying cargo via rail compared to roads. It has been further aggravated by the limited scheduled trips for cargo trains. As a result, only 1.6% of total land cargo was transported by rail. Although there is available rail network in Port Klang, only 5% of cargo movement in the port used rail due to the inefficiency of railway services and the lack of door-to-door services. During peak times, the rail network from the north and south was congested, and priority was given to passenger trains. Trucks were therefore preferred to haul cargo, resulting in frequent plying of heavy vehicles and traffic congestion on roads connecting to the ports. In addition, there was untapped potential for using rail to transport bulk cargo, especially for dangerous and hazardous materials. Currently, these goods are being transported via road which poses risks to other road users and the surrounding areas.

Poor Governance in Transport and Logistics

Lack of coordination between the Federal and state governments remains a challenge, especially concerning the public transport policy, planning and development. This hampers the optimisation of infrastructure planning in the various states. The lack of coordination in terms of tariffs, regulations and port facilities among port authorities has resulted in unhealthy competition between ports. The National Logistics Taskforce (NLTF), which was established in 2015, lacks the capacity to monitor the implementation of the Logistics and Trade Facilitation Masterplan as well as to propose policy direction for the logistics industry. The development of airports is carried out without adequate planning due to the absence of an overarching masterplan to set the strategic direction for airports development. This led to underutilised terminal capacity in several airports.

Limited capacity and capability of the enforcement authorities has resulted in an increased in the number of overloaded movers. This led to road congestion and affected road conditions. Although many initiatives have been carried out to shift the movement of cargo from road to rail, road transport remains the preferred mode for freight forwarders.

[2] National Transport Policy, 2019-2030.

Multiple permit issuing agencies (PIAs) and manual documentation during cargo clearance have caused delays in the processing of imports and exports goods. These have contributed to congestion at the border. At most entry points, PIA officers are not stationed full time due to high operational costs and low cargo volume. This resulted in longer processing time and higher costs of doing business. The delay in the full implementation of uCustoms further impedes the efficiency of cargo clearance.

Several environmental standards have been introduced to promote sustainable transport. However, the adoption of these standards is done voluntarily, resulting in low adoption among the transport and logistics operators. Poor awareness and cost constraints also contributed to low compliance rate.

Warehouses provide support to local and foreign businesses that require cargo management, inventory control, storage and packaging. However, the requirements, fees and classification imposed by local authorities vary, thus causing difficulties and increasing cost of doing business. Although the warehouses are licensed by the respective local authorities, the quality of services provided at these warehouses is not monitored by them. Information relating to prices, location, type, space and size, utilisation rate and operators of warehouses is limited. This impedes effective logistics planning and decision-making.

International shipping regulations are limited to maritime safety, marine environmental protection, construction standards, navigational rules and crew competence criteria. Currently, commercial and economic matters are not regulated, thus resulting in market distortions. The cargo forwarders are subjected to unfair pricing in terms of container deposits, detention and demurrage charges.

Way Forward: Twelfth Malaysia Plan, 2021–2025

The Twelfth Plan will focus on providing efficient and inclusive transport infrastructure and logistics services. This will be achieved through ensuring integrated, affordable, reliable and seamless people mobility, enhancing the competitiveness of the transport and logistics industry, and strengthening institutional and regulatory framework. The main objective is to enhance the efficiency of these two sectors to support economic growth.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Enhancing Efficiency of Transport and Logistics Infrastructure

Priority Area A

Ensuring Integrated, Affordable, Reliable and Seamless People Mobility

Strategy A1
Improving Overall Accessibility of Public Transport

Strategy A2
Encouraging Behavioural Shift from Private to Public Transport

Priority Area C

Strengthening Institutional and Regulatory Framework

Strategy C1
Improving Governance

Strategy C2
Promoting Green Initiatives

Priority Area B

Driving Transport and Logistics Industry Towards Competitiveness

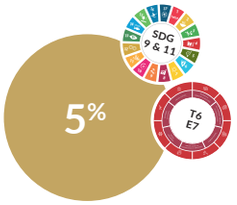
Strategy B1
Enhancing Efficiency of Services

Strategy B2
Leveraging Digitalisation in Services



Twelfth Malaysia Plan: Selected Targets

Ensuring Integrated, Affordable, Reliable and Seamless People Mobility



2021-2025

Annual Growth of Public Transport Ridership in GKL/KV



2025

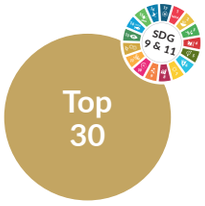
Increase in Air Transport Passengers

Driving Transport and Logistics Industry Towards Competitiveness



2025

Ranking in the World Container Port's Report



2025

Ranking in the World Bank Logistic Performance Index



2025

Increase in Cargo Volume via Rail, in Northern, Central and Southern Regions

Strengthening Institutional and Regulatory Framework



2025

Standardised Warehouse Regulation



2025

Formulation of Green Transport Index



Priority Area A

Ensuring Integrated, Affordable, Reliable and Seamless People Mobility

Measures will be undertaken to ensure integrated, affordable, reliable and seamless people mobility. These include improving the overall accessibility to public transport and encouraging the behavioural shift from private to public transport. The implementation of these measures will contribute to the growth of public transport ridership.



Strategy A1

Improving Overall Accessibility of Public Transport

Overall accessibility to public transport will be improved by integrating various modes of transport and encouraging transit oriented development (TOD). These initiatives will ensure effective intermodal connectivity as well as enhance efficiency of mobility and connectivity. It will contribute to reducing the dependency on private vehicles, improving productivity and enhancing the wellbeing of the *rakyat*.

Integrating Transport Modes

The integration of different modes of transport will increase efficiency and improve the ease of travelling in terms of time and cost as well as comfort and reliability. This initiative will be implemented by establishing a platform to coordinate and optimise schedules, whereby minimising the waiting time between different modes. An integrated and reliable journey planner will be developed through this platform. The sharing of real time data among public transport operators will be enhanced to ensure effective utilisation of the platform.

Rail and road networks will also be integrated to provide better connectivity between airports, ports, industrial areas and cities. In this regard, the ECRL will be connected to the current rail networks. It will also provide connectivity to existing airports and complement the road networks in the east coast region. The integration will increase land public transport ridership, air passenger and cargo movement.

Enhancing First- and Last-Mile Connectivity

Continuous efforts will be carried out to improve the first- and last-mile connectivity, particularly in ensuring accessibility to public transport. To minimise waiting and travelling time, the frequency of feeder buses will be increased and the routes will be realigned, while e-hailing services will be integrated with MRT and other transport services. This is expected to increase the ridership of public transport services.

Efforts to encourage the usage of alternative transportation will be undertaken in improving the first- and last-mile connectivity. The usage of micro-mobility[3] vehicles will be increased, while pedestrian lanes in the urban areas will be enhanced to increase the safety and confidence of users as well as promote active mobility. Infrastructure at primary public transportation nodes will also be upgraded to facilitate the use of micro-mobility vehicles for first- and last-mile connectivity.

Innovative and non-traditional public transport options will be considered in rural areas. An alternative community based public transport system that offers affordable services will be introduced. One of the options that will be considered is a 'dial-a-ride system', a phone call-based facility, providing door-to-door service for people who do not have access to conventional public transport amenities. This will improve connectivity and mobility as well as create job opportunities.

[3] Micro-mobility refers to the joining up of every different form of transport, especially smaller vehicles to ensure the journey is quick and as easy as possible, particularly for the first- and last-mile.

Encouraging Transit Oriented Development

TOD will be further emphasised to improve accessibility to public transport and provide good connectivity to other amenities. The TOD constitutes a high density and diverse range of mixed development within a walking distance of around 400 metres to a transportation hub. TOD will enhance the efficiency of mobility, reduce traffic congestion and improve first- and last-mile connectivity. TOD concept was successfully adopted in Kuala Lumpur Sentral. This concept will be embedded in the planning of rail projects in suitable new development areas, particularly along the major public transport alignment such as the MRT 2, GJB and ECRL. The development of TOD will also incorporate the element of inclusivity.

Strategy A2

Encouraging Behavioural Shift from Private to Public Transport

Behavioural shift from private to public transport will be encouraged by propelling the usage of public transport as the first choice. Collaboration between relevant authorities will be enhanced in ensuring effective enforcement of private vehicles entering city centres. Suitable transport modes will be identified to match the travel patterns of the *rakyat* in encouraging the behavioural shift.

Propelling Public Transport as the First Choice of Travel

The efficiency and connectivity of the public transport system will be improved in order to propel public transport as the first choice for travel. Dynamic fares will be expanded for ETS services to encourage the usage of inter-city rail transport, where fares will be determined by market demand. Higher fares will be charged for last-minute purchases compared to planned journeys. Besides, unlimited passes for train and bus passengers will be extended to further encourage ridership. Measures such as limiting parking spaces and imposing higher parking charges in areas with good public transport connectivity will also be implemented to manage the inflow of private vehicles into city centres. Collaboration between Federal and state governments as well as the local authorities will be strengthened to facilitate the planning and implementation of these measures.

Identifying Public Transport Modes

Travel patterns of *rakyat* will be continuously analysed to provide appropriate public transport services. Initiatives to promote the usage of public transport via mindset and behavioural change to use public transport will be undertaken. A study to review and identify the most efficient and viable integration of other modes of transport to link Putrajaya with Cyberjaya, Bangi and Kajang is currently being conducted. This study will also gauge the feasibility of utilising the rail infrastructure in Putrajaya. The outcome of this study will facilitate the identification of public transport solutions in Putrajaya and its vicinity.

Priority Area B

Driving Transport and Logistics Industry Towards Competitiveness

Malaysia aims to become a transport and logistics hub in the region by 2025. Initiatives will be introduced to enhance the competitiveness of the transport and logistics sectors. These include enhancing efficiency and leveraging digitalisation in transport and logistics services. Implementation of these initiatives will contribute towards improving cargo handling processes, increasing cargo volume and enhancing trade.



Strategy B1

Enhancing Efficiency of Services

Initiatives to enhance the efficiency of transport and logistics services focus on raising the capacity of ports infrastructure and services, improving last-mile connectivity, encouraging multimodal cargo movement, upgrading the aviation system and implementing preventive maintenance of roads and bridges. These initiatives will ensure processes at cargo terminals are efficient, systems used in the aviation sector comply with international standards and roads and bridges are in sound condition. Reliable and effective transport and logistics services will eventually contribute towards increasing competitiveness of businesses.

Increasing Capacity of Ports Infrastructure and Services

Port operators will be urged to provide better services for maintenance, repair and overhaul services (MRO) for ships under the guidance of port authorities. The port operators will continue to enhance the capacity of ports infrastructure and services to handle larger vessels as well as provide efficient cargo handling facilities. Proper parking facilities for prime movers will be provided to ease congestion during peak hours in the ports. Facilities and equipment of ports will be upgraded while processes will be reviewed to increase overall efficiency and competitiveness.

Improving Last-Mile Connectivity to Main Ports

Last-mile connectivity to main ports will be enhanced to address congestion and accommodate future growth in trade. The rail networks within the main ports and access roads to main ports will be upgraded. Cargo hubs at strategic locations adjacent to the ports will be identified to provide integrated logistics facilities. These hubs will reduce the frequency of trucks plying the ports by providing consolidation services for the cargo outside port areas.

Adopting Multimodal Cargo Movement

Logistics connectivity between rail, sea and air will be improved to position Malaysia as a vibrant cargo hub. The logistics industry will be encouraged to adopt the multimodal cargo movement approach to enhance logistics services capability and reduce the cost of distribution. A multimodal cargo movement approach uses multiple modes of transport with one transport bill of lading and a single transport service provider. Single service providers will be responsible for moving the shipment in all routes and modes. This will expand access to remote areas and enable real-time shipment tracking, resulting in improved service availability, reliability and efficiency. To accelerate its implementation, an action plan will be developed to provide clear directives for multimodal cargo movement.

Upgrading Aviation Systems and Equipment

In the aviation sector, outdated systems and obsolete equipment will be replaced and infrastructure will be upgraded. A mechanism will be established for proper maintenance of infrastructure and assets to ensure that airports and air traffic management systems comply with the International Civil Aviation Organisation (ICAO) standards. A centralised system will be developed to improve transmission of data and communication to ensure operational efficiency.

Implementation of Preventive Maintenance

Preventive maintenance approach will be adopted to extend the lifespan of roads and bridges. A number of pilot projects on preventive maintenance using advanced materials and innovative technology have proven that can increase the lifespan of roads. This approach will be gradually implemented in maintaining selected roads and bridges. Among the technology that will be applied includes an ultra-high performance concrete (UHPC) to support the higher allowable axle load of commercial vehicles. The UHPC will be used mainly in replacing and upgrading aged and narrow bridges.

Strategy B2

Leveraging Digitalisation in Services

A single-window transaction platform will be operationalised and an integrated database will be developed to leverage digitalisation in transport and logistics services. These initiatives will facilitate information sharing as well as reduce costs and processing time. These will also increase efficiency in the cargo clearance process and ensure compliance with international standards as well as promote better decision-making.

Operationalising a Single-Window Transaction Platform

The uCustoms, a single-window transaction platform, will be fully operationalised to further improve the ease of doing business by providing a web based, electronic end-to-end solution. The

platform will enable PIAs to use uniformed operating procedures. It will also enable cost savings and remote working. In addition, each port authority will develop its own integrated port community system by benchmarking against the Port Klang Net. These integrated systems will be linked to uCustoms, increasing efficiency and productivity as well as ensuring compliance to international standards.

Developing a Centralised Database

A centralised database for the transport and logistics sectors will be established. The database will comprise a comprehensive layered map and statistics related to roads, rail, aviation and maritime services. This database will also contain information on greening the transport sector. It will enhance evidence-based analysis as a guide to planning, monitoring, reporting and verification. It will also serve as a single point of reference for comprehensive information on the transport and logistics sectors to improve business decision-making.

Priority Area C

Strengthening Institutional and Regulatory Framework

Measures will be implemented to enhance the institutional and regulatory framework. The measures include strengthening governance and promoting the green agenda. The implementation of these measures will improve service delivery and enable the formulation of the Green Transport Index.



Strategy C1

Improving Governance

Concerted efforts will be undertaken to improve coordination among stakeholders, enhance enforcement and develop a national regulatory framework for warehouses. A governance mechanism will be introduced for the shipping industry and highway development will be restructured to optimise benefits for both customers and industry players. These initiatives are aimed at addressing challenges in policy planning, coordination and implementation. Thus, the role of various authorities will be clearly defined and enforcement will be enhanced.

Strengthening Coordination among Stakeholders

Effective policy implementation through better planning and coordination among various agencies is crucial to promote efficiency in the transport and logistics services sectors. In this regard, the planning and development of logistics hub will be centralised at the Federal Government. Policies and strategies formulated at this level will be cascaded down systematically to ensure comprehensive implementation. Coordination among the various stakeholders, particularly in project appraisal and evaluation will be enhanced to ensure optimisation of resources in infrastructure development.

A national port committee, which comprises representatives from port authorities and operators, will be established to coordinate the planning of ports development and develop standard operating procedures (SOPs) for port operations. The committee will also harmonise regulations and share best practices to increase operational efficiency and create a more conducive port environment.

The role of NLTF will be strengthened to ensure effective implementation of policies, strategies and initiatives. Key performance indicators will be set for NLTF to improve delivery as well as garner cooperation and collaboration among agencies and industry players. The capacity and capability of the taskforce will be fortified to ensure achievement of outcomes.

A study is being undertaken to establish a single border agency to oversee, strengthen and raise the standard of operations and security along national borders and entry points including ports and airports. The study covers three main domains, namely land, air and sea as well as the current laws and regulations of the existing border agencies and entry points. The establishment of a single border agency will enhance efficiency in trade facilitation through a single clearance mechanism.

A National Airports Strategic Plan will be formulated to provide policy direction for the development of airports to meet future aviation needs and strengthen the governance of the aviation industry. The masterplan will enhance coordination between the Federal government and state governments. It will also ensure sustainability of the airports and better returns on investment.

Improving Enforcement Mechanism

The Weigh-in-Motion (WIM) system will be used to improve enforcement of overloaded movers. The system will automatically capture and record gross vehicle weights as vehicles drive over a fixed measurement site, reducing the number of personnel required. The WIM system can also support mobile enforcement to increase coverage.

Developing National Warehousing Regulation

A national warehouse regulation will be developed to ensure uniformity in warehouse development. The regulation will cover parameters such as build-up, facilities, handling and storage as well as fire protection measures. In addition, suitable locations will be identified for the development of warehouses, approval processes will be improved and a national warehouse inventory website will be developed. The orderly development of warehouses will open up opportunities for Malaysia to be ASEAN's distribution centre, particularly for goods purchased online and courier services.

Introducing a Governance Mechanism for the Maritime Economy

Efforts will be undertaken to introduce a governance mechanism to facilitate the development of the maritime economy. The roles and functions of the existing maritime-related agencies will be reviewed to include governance for commercial and economic activities by amending the Merchant Shipping Ordinance. Capacity building of the agency will be enhanced to ensure efficient enforcement of the regulations. The introduction of this mechanism will ensure fairer charges for services rendered and discourage anti-competition practices.

Restructuring the Model for Highway Development

The current model for existing and new highway development will be reviewed to ensure that people will benefit from reasonable toll rates, while ensuring fair returns to investors. The restructuring aims to reduce the risk to the government while enabling concessionaires to undertake operations and maintenance of the highway and generate fair returns from toll collection. The government will also explore options to ensure the viability of existing and future highway projects. The HNDP 2030 will also provide a mechanism for prioritising new highways and available funding options.

Strategy C2

Promoting Green Initiatives

In promoting green initiatives for the transport and logistics sectors, the Low Carbon Mobility Blueprint action plan will be implemented, the adoption of environmental standards will be mandated and communication, education and public awareness (CEPA) will be enhanced. These efforts will contribute towards creating a cleaner and sustainable transport system. The implementation of these initiatives will support the goals in the 2030 Agenda.

Implementing the Low Carbon Mobility Blueprint

The Low Carbon Mobility Blueprint will be implemented to minimise unsustainable movement patterns. In the aviation sector, it will include developing cleaner fuel standards, which comply with the Carbon Offsetting and Reduction Scheme for International Aviation (CORSIA) by ICAO. In the land transport sector, the use of low carbon alternatives such as energy-efficient vehicles, hybrid and electric vehicles will be promoted. The implementation of the blueprint, through the various action plans, will be monitored closely to ensure the success of the low carbon mobility objectives.

Mandating Adoption of Environmental Standards

Mandatory adoption of environmental standards such as the National Green Standards for transport operators will be imposed to expedite the implementation of green practices in the transport and logistics sectors. Incentives will be provided to encourage the adoption of these standards. The Green Transport Index will also be introduced to promote clean and sustainable transport systems as well as resilient infrastructure for efficient mobility.

Enhancing Communication, Education and Public Awareness (CEPA)

Programmes to promote behavioural change are crucial to increase sustainable practices in the transport and logistics industry. CEPA programmes will be intensified, targeting transport operators, manufacturers, service providers and users of transport and logistics services. Therefore, collaboration among stakeholders will be strengthened in implementing CEPA to induce green behaviour among users.

Conclusion

During the Eleventh Plan, transport infrastructure and logistics services were enhanced to serve the needs of the people and industry. Emphasis was given to strengthen trade facilitation, improve first- and last-mile connectivity and digitalise logistics services. However, issues with respect to the provision of seamless connectivity and reliable transport and logistics services remain. The Twelfth Plan will address these issues. The Plan gives priority to improving transport infrastructure in providing seamless people mobility. It also focuses on enhancing competitiveness of the transport and logistics industry as well as its governance. These measures will improve national productivity, facilitate economic growth and improve the wellbeing of the *rakyat*.

Chapter 13

Strengthening Public Sector Service Delivery



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Introduction

During the Eleventh Plan, efforts were undertaken to transform the public sector to be more *rakyat-centric*, efficient and productive, with emphasis on integrity and transparency. A whole-of-government approach was adopted and improvements were made across the public sector. These improvements include rationalising the public sector, digitalising public service delivery, strengthening capacities and capabilities, improving project management governance and increasing stakeholder engagements. These initiatives resulted in better efficiency of public services, greater transparency in public administration and enhanced inclusivity. Nevertheless, public service delivery continued to face issues and challenges in talent development, the governance ecosystem and project management mechanisms.

In the Twelfth Plan, more focus will be given to building an effective and accountable public sector to meet rising expectations, due to advancements in technology as well as a growing middle-income class and population dynamics. The public sector needs to be more agile, expedite digitalisation, and cultivate innovation, particularly given the need to adapt to the new normal arising from the COVID-19 pandemic. In this regard, efforts to strengthen public sector service delivery will focus on developing a high-performing civil service, advancing the whole-of-government approach as well as enhancing budgeting and project management.

Performance of the Eleventh Malaysia Plan, 2016-2020

During the Eleventh Plan, various efforts were undertaken to improve productivity, integrity, accountability, and transparency in the public sector. These include improvements in governance, enhancement of integrity and accountability, prudent public finance management and improvement in public service delivery. As a result, Malaysia's position in the World Bank's Doing Business Report 2020 has improved to the 12th position among 190 global economies, from its 15th position in the previous year.

Performance of Selected Targets

Six targets were set in an effort to reform governance towards greater transparency and transform the public service to enhance service delivery and productivity. However, all six targets were not fully achieved due to the adverse external environment, slower economic growth, low rate of digitalisation, relatively high perception on the incidence of corruption as well as slow improvement in public service delivery. There was little progress in reinstating the Parliamentary Services Act 1963, which was repealed in 1992. The performance of the six selected targets is as shown in *Exhibit 13-1*.

Exhibit 13-1

Eleventh Malaysia Plan: Performance of Selected Targets

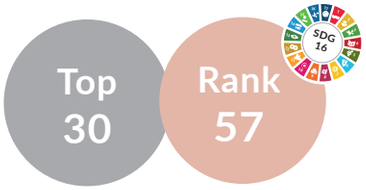
Improving Parliamentary Governance



2016-2020 2016-2020

Reintroduce Parliamentary Services Act 1963

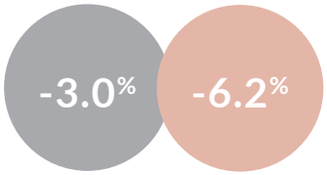
Elevating Integrity and Accountability



2020 2020

Corruption Perceptions Index by Transparency International

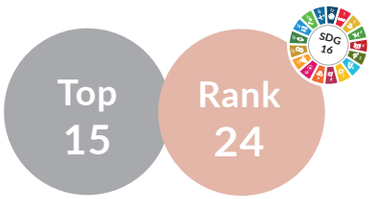
Prudent Public Finance Management



2020 2020

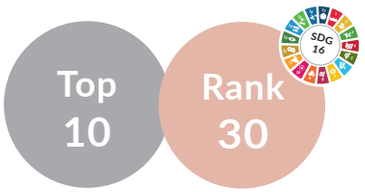
Percentage of Fiscal Balance to GDP

Enhancing Public Service Delivery



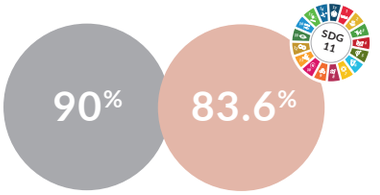
2020 2019

Online Service Sub-Index of the United Nations e-Government Development Index



2020 2020

Government Efficiency Sub-Index of the IMD World Competitiveness Yearbook



2020 2019

Achieve a Minimum 4-Star Out of 5-Star by Local Authorities



Performance of Selected Initiatives

Improvement in Governance

Various initiatives were undertaken in improving governance at all levels to increase public trust in government institutions. Among the initiatives include strengthening check and balance mechanisms, promoting healthy democratic practices as well as improving judicial efficiency. In this regard, the Electoral Reform Committee (ERC) was established in August 2018 to review election processes, procedures, and regulations to transform the electoral system and strengthen democratic practices. Nine Special Select Committees were formed by the *Dewan Rakyat* to provide checks and balances in the democratic process. In addition, the constitution was amended in July 2019, reducing the minimum voting age to 18 years old. The implementation of this amendment will enable youth to participate in the democratic process.

The judicial system was further improved during the Eleventh Plan with the adoption of technology in court operations and the establishment of special courts. In this regard, courts in Sabah pioneered the application of artificial intelligence (AI) in analysing data and decision-making for criminal trials. The cyber court was established in Kuala Lumpur to handle offences stipulated under cyber laws such as online gambling, fraud and defamation. In addition, Sexual Crime Court against Children were established in Putrajaya and Sarawak to accelerate the disposal of cases. These special courts are equipped with suitable facilities and a conducive environment for child witnesses.

Enhancement of Integrity and Accountability

Efforts to enhance integrity and accountability continued to be given priority in combating corruption in line with the initiatives to increase public trust in government institutions. The National Centre for Governance, Integrity and Anti-Corruption (GIACC) was established in 2018 to coordinate and monitor measures involving governance and integrity across various agencies. The National Anti-Corruption Plan 2019-2023 (NACP) was launched in 2019, outlining six strategies and 115 initiatives. These are monitored by the Special Cabinet Committee on Anti-Corruption (JKKMAR), which meets on a quarterly basis. This special committee, which is chaired by the Prime Minister, aims to make Malaysia graft-free by 2023.

In an effort to embrace transparency, Members of the Administration and Members of Parliament have been required to declare assets through the MyDeclaration portal of the Malaysian Anti-Corruption Commission (MACC). As at December 2020, 95 out of 102 Members of the Administration and 194 out of 220 Members of Parliament have completed their asset declarations. The Malaysian Anti-Corruption Commission Act 2009 was amended in 2018 to include a corporate liability provision for bribery and corruption under Section 17A, effective 1st June 2020. Under this section, organisations will be subjected to legal action if any individual associated with the organisation is involved in corrupt practices, including members of the board of directors, controllers, officers, and partners.

In addition, a total of 12,632 data sets were published in the Public Sector Open Data portal in line with the Open Government agenda to make information public and easily accessible. Meanwhile, the Public Complaints Bureau (BPA) introduced a mobile application known as the *Respon Rakyat 2.0* in 2019, enabling real-time feedback to improve service delivery. Complainants are able to submit and track the status of complaints through this mobile application.

Efforts to promote integrity and accountability among civil servants were further strengthened through the establishment of 268 Integrity Units in ministries, agencies, and statutory bodies. In addition, a total of 997 Certified Integrity Officers were appointed, comprising of public and private sectors as well as international representatives. Integrity and Governance Units were also set up in 311 government-linked companies (GLCs). Meanwhile, 73 companies have applied for Corporate Integrity Pledge as at December 2020, in which 23 companies including Indah Water Konsortium Sdn. Bhd., RISDA Ventures Sdn. Bhd. and Sime Darby Berhad have signed the pledge. Launched in 2017, the MS ISO 37001 Anti-Bribery Management System (ABMS), was implemented in three ministries, three state governments and three local authorities to effectively manage, enforce, evaluate, and improve anti-corruption measures. As at December 2020, 29 agencies had been awarded ABMS certification.

Prudent Public Finance Management

In the Eleventh Plan, the Government remained committed to ensuring prudent public spending and greater transparency in accordance with international good practices. The procurement

process was reviewed to further enhance public procurement governance in achieving best value for money as well as ensuring transparency and effective spending. The *ePerolehan* (eP) system was upgraded and the government procurement mechanism through eP was made compulsory, effective January 2018. In addition, the *Pekeliling Perbendaharaan PK 1.1 2020 Punca Kuasa, Prinsip dan Dasar Perolehan Kerajaan* was enforced in January 2020 to strengthen governance in public procurement and ensure value for money. This circular incorporates elements of integrity, technology transfer, monitoring and green initiatives.

The public-private partnership (PPP) framework was further strengthened with the introduction of the *Garis Panduan Proses Penjualan Tanah dan Pembangunan Fasiliti* in 2019, which is a guideline to improve the land swap method of privatisation. This guideline is aimed at increasing transparency and achieving value for money through open tender processes. Meanwhile, forensic audits on management and performance were conducted for 23 projects approved under the Facilitation Fund initiative to ensure adherence to the PPP framework. The findings from the said audits were reported in the Auditor-General's Report 2018 Series 2.

The Auditor-General's Report 2019 Series 1 was tabled in the *Dewan Rakyat* on August 24, 2020. The report focused on providing a comprehensive compliance audit in accordance with the respective risk profiles of the federal and state departments and agencies. The audit adopted the 3P1K approach, namely to identify the occurrence of wastage, misappropriation, embezzlement, and leakages of public funds. The report listed 23 recommendations to ensure that public funds and the Government's interest are well-guarded. The audit findings and the deliberation of follow-up actions on issues were presented to the Public Accounts Committee (PAC) on November 5, 2020. PAC is one of the most important committees established by the *Dewan Rakyat* to review allocations approved by Parliament for public expenditure and to investigate non-compliance highlighted in the auditor general's reports. This committee has played an important role in providing an effective check and balance as well as ensuring good governance in the public sector.

The requirement for Pre-Approved Plan (PAP) and Industrialised Building System (IBS) in government projects were enforced to expedite project implementation. At the end of the Eleventh Plan, the number of available PAP increased from 19 to 28 categories with 180 designs. All government projects valued RM10 million and above are required to comply with the minimum IBS score of 70%. In addition, the Public Sector Comparator (PSC) was also mandated to all ministries and agencies in enhancing the project evaluation and selection process. Project coordination and monitoring mechanisms were improved by upgrading MyProjek, formerly known as *Sistem Pemantauan Projek II* to better facilitate the implementation of *Arahan Perbendaharaan 182 rujukan kepada Jabatan Teknik*. Furthermore, *Arahan No. 1 2020* Mekanisme Penyelarasan Pelaksanaan *Pembangunan Negara* was issued replacing *Arahan No. 1 2018 Jentera Penyelarasan Pelaksanaan* to strengthen the coordination mechanism at the federal, state and district levels in improving governance, minimising project mismanagement and reducing financial leakages.

In terms of budget transparency, Malaysia was at a limited budget information stage with a score of 47/100 in 2019 based on the Open Budget Survey (OBS) by the International Budget Partnership in Washington DC. Malaysia only managed to publish six out of the required eight key budget documents. The Mid-Year Review report and Pre-Budget Statement have yet to be published.

Improved Public Sector Delivery

Initiatives to enhance public sector delivery were focused on the improvement of talent, work processes, evaluation system, and work-life balance. Access to government services was expanded through enhancement of digitalisation, including at the local authority level. As talent is the most important capital for the public sector, efforts continued to be undertaken in improving the recruitment process to ensure talent selected is competent and possess the highest levels of integrity. A guideline was introduced to empower ministries and agencies to design talent development programmes based on needs and priorities. Continuous learning and capacity building among employees under the support group were encouraged through the introduction of a full-pay study leave with scholarship programme in 2017. This initiative benefited 550 personnel annually to pursue technical and vocational education and training (TVET), diploma or degree programmes.

The competencies of the public service was further enhanced with the introduction of MyPortfolio in 2018, as a reference document that contains, among others, job description, work processes and organisation structure. MyPortfolio aims to streamline responsibilities and ensure clarity in performing tasks and thus, improve the service delivery of Government agencies. Meanwhile, the improved Public Service Human Resource Management Policy enables ministries and agencies to customise performance evaluation based on the respective ministerial roles and functions. A new performance evaluation system, known as MyPerformance, was piloted at the Public Service Department (JPA) and the Public Works Department (JKR) in 2018. This system aims to improve the reward system for high performers through a decentralised performance-based scheme.

Measures to improve the work-life balance of civil servants continued to be given emphasis by introducing flexible working hours. In this regard, a circular allowing flexible working hours, *Pekeliling Perkhidmatan Bilangan 5 Tahun 2019: Pelaksanaan Waktu Bekerja Fleksi (WBF) di Agensi Kerajaan Persekutuan* was introduced effective July 2019. It provides civil servants flexibility to complete nine working hours daily between 7.30 am to 6.00 pm. This is aimed at creating a more conducive environment and improve the work-life balance of civil servants.

In the Eleventh Plan, expansion of online services continued to be focused on providing greater accessibility and convenience to the *rakyat*. In this regard, an additional 222 mobile applications were developed and uploaded into the Gallery of Malaysian Government Mobile Applications to increase accessibility to public services and expand outreach. In addition, a total of 1,303 systems utilised MyGovCloud@PDSA, which enables facility sharing with secured access across government agencies. The MyGov*Net network in 375 educational institutions was upgraded to higher bandwidth with speed up to 100 Mbps, enabling secure and reliable connectivity. Moreover, the enhanced MyUPU portal was launched in 2020, under a single window and offer concept, as an integrated portal for entrance into all higher education and skills training institutions. Meanwhile, the MalaysiaBiz portal for micro, small and medium enterprises (MSMEs) was launched in 2019 to facilitate business registration and license applications.

Public service delivery at the local authority level was enhanced through the implementation of a star rating system or *Sistem Penarafan Bintang Pihak Berkuasa Tempatan* (SPB-PBT) in 2016 to create a culture of excellence among the local authorities. In addition, the One Stop Centre (OSC) 3.0 Plus Online was launched in 2019 to enhance the effectiveness of the delivery system in expediting the application and approval process for Planning Permission. Meanwhile, 20 new guidelines were approved by the National Council for Local Government and adopted by most local authorities to improve service delivery. In an effort to provide an effective feedback and complaints management system, the *i–Tegur* application was introduced in 2018, enabling the public to lodge complaints to local authorities through mobile applications.

Issues and Challenges

Efforts undertaken to ensure effective delivery in the Eleventh Plan resulted in improvements in public service delivery, governance, integrity and accountability. Nevertheless, taking into account the current socioeconomic environment, including the impact of the COVID-19 pandemic, there remain issues and challenges that need to be addressed in ensuring effective service delivery. The main issues and challenges are in talent development, governance ecosystem as well as project management. In moving towards a high-income nation, the public service needs to address these challenges.

Issues and Challenges

- Challenges in Talent Development
- Challenges in Governance Ecosystem
- Challenges in Project Management

Challenges in Talent Development

Effective talent development is vital in ensuring the public sector is equipped with the right talent to provide quality and efficient services to the *rakyat*. In developing talent in the public sector, a number of issues need to be addressed. These issues include the mismatch between qualifications and placement of civil servants, lack of capacity and capabilities as well as low motivation for innovation.

The current recruitment process by the respective service commissions uses a number of online application systems. The usage of different systems posed difficulties for candidates not only when submitting their applications, but also resulted in duplication of the

recruitment process and job offers. The absence of a centralised system led to mismatches between candidate profiles and jobs in the public sector, resulting in the inappropriate placement of talent. In addition, there is a lack of an effective exit policy, which hampered optimisation of talent and succession planning.

There are gaps in producing the right talent under the capacity building programmes of the Human Resource Development Policy (HRDP) framework, leading to the inability of civil servants to chart individual career development paths. Furthermore, promotions are mostly based on seniority. This has created dissatisfaction among the civil servants, affecting productivity and quality of delivery outcomes as well as demoralising high-performing civil servants. As technology forms an integral part of service delivery, civil servants need to be equipped with digital skills. Lack of training and investment in digital facilities as well as resistance to change have hampered digital transformation in the public service. The COVID-19 pandemic has created the need for most civil servants to embrace the new normal by adopting technology in order to work remotely and ensure effective public service delivery.

Initiatives to inculcate innovation in the public sector have encountered several challenges. These include a lack of structured training programmes at all levels, low awareness on the importance of innovation, lack of support and unconducive ecosystem for innovation. This has affected productivity and quality of services in the public sector.

Challenges in Governance Ecosystem

The whole-of-government approach has not been successfully implemented partly due to the ineffectiveness of the governance ecosystem. This was contributed by the relatively limited number of end-to-end online services and lack of digital technology adoption, gaps in implementation and monitoring as well as overlapping structures and functions of agencies. The government also faced challenges in implementing sound corporate governance principles in a number of the state-owned enterprises (SOEs). This has resulted in under performance with regard to creating value to the *rakyat*, continuous reliance on government funding and in meeting acceptable standards of corporate governance.

Online services and the adoption of digital technology are essential in providing efficient and effective services. The need to increase end-to-end online services became even more important with the COVID-19 pandemic. Although 78.8% of government services are available online as at the end of 2020, end-to-end online services represented only 50.3%. There are still challenges in providing online government services particularly due to lack of digital-related infrastructure, devices and services.

The absence of a legal framework on data sharing has hampered the full implementation of the open data policy. Incentives to encourage government agencies to share data with consumers in a timely and effective manner are also inadequate, leading to limited data sharing between government and other stakeholders. Awareness of value creation from open data is still low. This has discouraged the emergence of champions amongst data-owning agencies. In addition, the level of acceptance in embracing data sharing and utilisation of cloud services is still low.

Weaknesses in the implementation and monitoring mechanism continue to affect the efficiency of public service delivery. Internal and external factors, namely complacency, lack of commitment, political interference, corruption beyond borders as well as overlapping structures and functions of ministries and agencies, have affected the quality of public service delivery. The overlapping activities, especially in providing assistance to underprivileged groups as well as TVET and pre-school programmes, also affected the optimisation of existing resources.

Challenges in Project Management

Ineffective project management has impeded efforts to ensure effective delivery and contributed to wastage of financial resources. Issues and challenges faced in project management include poor project implementation and lack of maintenance of infrastructure and facilities due to insufficient funding. Weak collaboration and coordination, the lack of a proper mechanism to measure outcomes as well as shortage of talent in specialised areas, also affected the speed of project execution.

Ineffective collaboration and coordination within the three-tier government structure have resulted in differences in development priorities. In the Eleventh Plan, there were instances of a divergence between the priorities of ministries and states. In addition, the different enactments, rules and regulations among states and local authorities have also resulted in lack of effective collaboration and coordination.

The mechanism to measure development project outcomes is still lacking despite the introduction of outcome evaluation guidelines in 2012. The number of outcome evaluation reports on completed projects was relatively small, compared to more than 4,700 projects approved in the Eleventh Plan, as it was not mandatory for line ministries to conduct the evaluation. This resulted in the inability of ministries and agencies to properly assess the actual outcome of projects and identify implementation shortcomings.

Agencies have not been able to perform functional roles effectively partly due to the shortage of experts in specialised areas. The high turnover and unsuitable placement of employees in the management and professional categories, poor succession planning as well as limited subject matter experts in strategic areas have affected service delivery. Among the areas that require more specialised experts are economic planning, finance, procurement as well as project planning and management.

The existing Privatisation Master Plan is incomprehensive and lacks clear direction on the implementation of the PPP framework, particularly on procedures, execution of processes and types of projects. This has led to inefficiencies and the selection of projects which are not aligned with national priorities. In a number of cases, the business model adopted has increased the Government's fiscal burden.

Due to fiscal constraints, a lower priority has been accorded to infrastructure maintenance. As a result, more emphasis was given to corrective instead of preventive maintenance. Poor maintenance has affected the quality of infrastructure and posed risks to users. This resulted in extensive damage over time and ultimately contributed to higher costs of maintenance and restoration work.

The success of project delivery is highly dependent on the effectiveness of project management. Lengthy land acquisition processes, unnecessary changes in project scope, incompetent contractors and weak contract enforcement have resulted in project delays. In addition, non-adherence to procedures and guidelines caused by lack of knowledge and integrity affected both the quality and delays in project implementation. This has prevented the *rakyat* from fully enjoying the benefits of these projects.

Way Forward: Twelfth Malaysia Plan, 2021-2025

Efforts to strengthen the public sector require steadfast commitment from all parties, in ensuring greater efficiency, integrity and transparency. Four components, namely effective human resources management, prudent financial spending, efficient work processes, and technology adoption are critical in ensuring a world-class public service. Effectively mobilising all these components is crucial in enhancing the quality of the public service ecosystem. Moving forward, priority will be given to developing a high-performing civil service, advancing the whole-of-government approach as well as enhancing budgeting and project management.



Way Forward: Twelfth Malaysia Plan, 2021-2025

Strengthening Public Sector Service Delivery

Priority Area A

Developing High-Performing Civil Service

Strategy A1
Transforming the Public Service

Strategy A2
Developing Future Leaders

Priority Area C

Enhancing Budgeting and Project Management

Strategy C1
Reviewing Budgeting Framework and Process

Strategy C2
Improving Effectiveness of Project Implementation

Priority Area B

Advancing Whole-of-Government Approach

Strategy B1
Improving Government Administration and Operational Efficiency

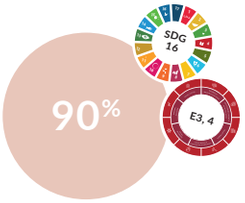
Strategy B2
Enabling Better Decision-Making and Innovation

Strategy B3
Strengthening Governance Ecosystem



Twelfth Malaysia Plan: Selected Targets

Developing High-Performing Civil Service



2025

Average Total Score of *Sistem Pengurusan Audit Nilai*



2025

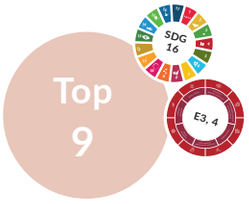
Civil Servants to be Digitally Literate



2021

One Circular on Flexible Working Arrangement

Advancing Whole-of-Government Approach



2025

Ranking in Government Efficiency Sub-Index of the IMD World Competitiveness Yearbook



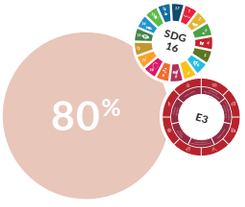
2025

Ranking in Online Services Sub-Index of the United Nation e-Government Development Index



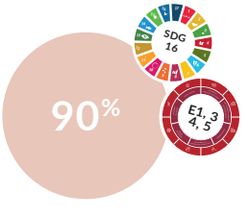
2025

Ranking in Corruption Perceptions Index of the Transparency International



2025

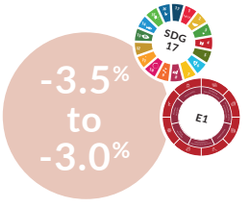
End-to-End Online Federal Government Services



2025

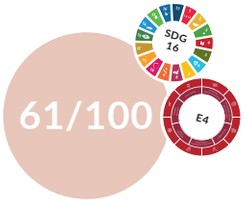
Local Authorities Achieve 4-Star Rating

Enhancing Budgeting and Project Management



2025

Percentage of Fiscal Balance to GDP



2025

Minimum Score in Open Budget Index of the International Budget Partnership



Priority Area A

Developing High-Performing Civil Service

The public sector needs to nurture agile and future-ready civil servants, equipped with leadership skills and innovative thinking who are able to face future challenges. In this regard, focus will be given to develop high performing civil servants by transforming the public service and developing high calibre future leaders. These measures will lead to higher competencies among civil servants. This will result in improved capabilities in providing quality services as well as increase the confidence of the *rakyat* in the public service.



Strategy A1

Transforming the Public Service

Human resources and central agencies play important roles in creating a holistic public service ecosystem. In this regard, human resource management will be enhanced, while the capacity and capability of central agencies will be strengthened.

Enhancing Human Resource Management

In the pursuit of excellence, civil servants need to be highly competent, innovative and versatile. They need to be well-trained, knowledgeable as well as possess good leadership, attitude and decision-making skills. Although the performance of Malaysian civil servants is at par with some regional peers, relative to high-income comparators and consistent with the aspiration to be a high-income nation, Malaysia needs to undertake a number of fundamental reforms to create a more efficient and effective public service in better meeting public expectations. The provision of structured training, a competitive remuneration system, clear succession planning and individual career path development will be able to attract and retain the best talent who are future-ready.

Moving forward, the training modules for civil servants will be further improved to ensure civil servants possess the traits of excellence required in effectively managing domestic and global challenges. The training programmes will include aspects of grooming, inculcating positive attitude, developing leadership skills as well as knowledge enhancement and exposure to ensure civil servants stay relevant and competitive. The availability of a large pool of high performing civil servants with the right attitude who are equipped with state-of-the art technology and skills is essential to enhance overall performance. With the acceleration of digital adoption, every civil servant is expected to be digitally literate by 2025.

Strengthening the Roles of Key Agencies

The transition towards a high-income economy requires Malaysia to transform the public service as well as enhance service delivery. In this regard, the ecosystem that supports an excellent public service, which includes human resources, work processes, technology, and financial resources need to be further strengthened. The role of central agencies, namely JPA, Malaysian Administrative Modernisation and Management Planning Unit (MAMPU), Ministry of Finance (MOF) and Economic Planning Unit (EPU) will be enhanced to effectively drive public sector transformation and ensure optimisation of resources.

Strategy A2

Developing Future Leaders

Talent is an essential asset to an organisation. Hence, efforts will be intensified to nurture and retain top talent in the civil service. In this regard, emphasis will be given on recruiting and retaining the best talent, priming premier leaders in the public service, inculcating good values and ethics as well as enhancing skills development.

Recruiting and Retaining Talent

Talent in the public sector will be strengthened through improved recruitment procedures and retaining competent personnel. In line with the public sector efficiency agenda,

a single-window recruitment platform for the public service will be developed to better coordinate recruitment systems. This platform will improve the efficiency of the recruitment process by matching candidate profiles with suitable vacant positions. The psychological assessment tool will also be enhanced to include integrity and competency evaluation components for all service schemes. This assessment will be conducted prior to entry into the civil service as well as throughout their service. In retaining and attracting talent, more flexible working arrangements will be introduced to provide options for employees who have constraints in working full time in the office.

A number of groups will benefit from flexible working arrangements, including women, single parents and persons with disabilities (PWDs). Flexible working arrangements include working part time, working remotely or a combination of both. Workplace flexibility enables employees to organise their working hours that meet the needs of both the employee and agency. In order to support flexible working arrangements, departments and agencies will provide the necessary digital infrastructure.

PWDs will be given priority for a number of job categories in the recruitment process, consistent with the government policy of providing equal opportunities for all. In this regard, ministries and agencies will be provided with disabled-friendly facilities and suitable job scopes as well as options for flexible working arrangements to attract more talent from this group. In addition, relevant assistive technology to support the PWDs will be provided.

The MyPerformance system, which includes a 360-degree evaluation mechanism[1] will be expanded across the public sector to improve the performance appraisal of civil servants, particularly at the management and professional levels. This appraisal system will provide the basis for promotion as well as appointments to specialised positions that require skills and experience in critical areas. The existing remuneration system will be enhanced to provide better performance-based reward packages that are customised to the specific schemes of service. This will enable the retention of talent and identification of high performers while the exit policy mechanism will be further improved to address the issue of low performance and promote a high performing culture in the public sector. The pension scheme will also be reviewed to be more sustainable.

Priming Premier Leaders in the Public Service

High performing civil servants are a prerequisite in achieving excellence in the public service. In this regard, the mechanism for selection of civil servants with outstanding leadership skills and personality traits to lead ministries and agencies will be strengthened. The mechanism of recruiting professional and managerial officers in various schemes of service will be improved to attract the best talent from various backgrounds as well as to enhance public service excellence. In addition, existing programmes to nurture future leaders such as the advanced professional development training will be strengthened.

Inculcating Good Ethics

It is crucial to have a right balance between good values and ethics as well as technological advancement within the public service to maintain a citizen-centric and efficient service delivery. Civil servants especially those dealing directly with the *rakyat*, need to be impartial, value-driven, ethical as well as possess a sense of urgency. The good values, patriotism and preparedness to serve beyond expectations will be instilled in the early stages of recruitment and periodically through-out the service.

Enabling Continuous and Comprehensive Learning and Talent Development

Continuous and comprehensive learning and talent development are vital to produce outstanding civil servants who are capable of delivering services efficiently and effectively. In this regard, the enhanced HRDP will be implemented to produce agile, resilient, creative, knowledgeable, and digitally skilled civil servants, who possess innovative and future-thinking skills. In addition, the Human Resource Management Information System (HRMIS) will be enhanced with a sub-module on talent repository that incorporates the skills and expertise of civil servants. Through this system, ministries and agencies will be able to select suitable talent for specific tasks. At the same time, the HRMIS will provide opportunities for civil servants to obtain exposure as well as enrich skills and knowledge for career development.

[1] Feedback gathered from supervisors, colleagues and subordinates about the officer's expertise.

Digital acculturation is an important element in supporting the aspirations of the Digital Government. In this regard, the digital culture will be inculcated in the early stages of a civil servant's career, while change management initiatives will be introduced to increase knowledge, skills and use of digital services. The successful implementation of initiatives under the Public Sector Digitalisation Strategic Plan 2021-2025 will further enhance digital capabilities and competencies of civil servants.

The upskilling and reskilling of civil servants will be continuously undertaken to ensure they keep abreast with advancements in technology. Training programmes will be customised based on the required capabilities and competencies identified under the Digital Government Competency and Capability Readiness (DGCCR) framework. This framework identifies 17 capabilities at the organisational level and eight competencies at the individual level to support the delivery of citizen-centric digital services.

More programmes will be undertaken to produce experts in specialised areas, such as in economic planning, finance, international relations and negotiations, procurement as well as project planning and management. In order to develop and nurture personnel in specialised areas, customised training and secondment programmes will be provided to enhance exposure and enable these personnel to acquire technical skills in the relevant areas. In addition, cross-fertilisation programmes between public and private sector personnel will be expanded to broaden knowledge-sharing and develop subject matter experts.

It is crucial for the public sector to be ahead of the curve. The ability to identify and forecast mega trends is vital for the public service to better plan and optimise resources, thus providing quality and effective services to the rakyat. Appropriate training will be provided to enable civil servants to be future-ready especially in performing new tasks and responsibilities arising from the advancement of technology. This training will be provided to civil servants at all levels, from managerial and professional to support staff. In this regard, all existing upskilling and reskilling training initiatives by different agencies will be regulated and coordinated by a single agency using a centralised platform.

Priority Area B

Advancing Whole-of-Government Approach

In the pursuit of a citizen-centric Government, efforts will be undertaken to transform the public service through whole-of-government approach. The public sector will continue to be strengthened by improving processes and systems. Focus will be on improving government administration and efficiency of delivery, promoting better decision-making and innovation as well as strengthening the governance ecosystem.



Strategy B1

Improving Government Administration and Operational Efficiency

Digitalisation will be fully leveraged in ensuring operational efficiency and adapting to the new normal, arising from the Fourth Industrial Revolution (4IR) as well as the COVID-19 pandemic. In achieving this, government administration and institutional structure will be improved, public service delivery will be enhanced, collaboration and coordination will be strengthened, while digitalisation initiatives will be expanded. The implementation of these initiatives is expected to elevate transparency and efficiency, thus increasing the quality of public service delivery and improving the livelihood of the *rakyat*.

Improving Government Administration

Civil servants are the backbone of a country's administration. The increasing demands and high expectations from the *rakyat* for an efficient and transparent government necessitate fundamental changes in the civil service. It is important to ensure civil servants remain apolitical, accountable and neutral in discharging their responsibilities to maintain the *rakyat's* trust. In order to achieve this objective, there is a need to have a clear demarcation of powers and responsibilities between Members of the Administration and civil servants. A public service act will be introduced to ensure more effective checks and balances between executive, legislative and judicial powers.

Streamlining Institutions

A flatter structure of administration will reduce bureaucracy, improve communication and promote a *rakyat*-centric and customer-focused culture. In addition, digitalisation of work processes will further reduce red tape, save resources, enhance accountability and transparency as well as improve public service delivery. Structures and functions of ministries and agencies will be reviewed and streamlined to optimise resource allocation and enhance efficiency of the public service. In this regard, a special committee to coordinate and minimise various overlapping structures and functions between ministries and agencies will be established. Meanwhile, the public service sandbox will be introduced to enhance innovation and produce solutions for better public service delivery.

Fostering Efficiency in Public Service Delivery

The key performance indicators (KPIs) of Secretaries General will be improved to enhance the effectiveness of programmes and project implementation as well as to ensure efficiency of the public service delivery. In achieving good governance, the organisational management and digitalisation of services by ministries will be evaluated through the Malaysian Government Performance Index (MyGPI). In addition, indicators in the SPB-PBT related to licensing, finance, enforcement and complaints will be expanded to provide vital information to local authorities in improving service delivery.

The COVID-19 pandemic has resulted in radical changes in the way work is done, necessitated the adoption of digital technologies and promoted flexible working arrangements. These developments have provided opportunities for civil servants to improve productivity while enhancing work-life balance. In this regard, policies and guidelines for flexible working arrangements will be enhanced.

A more agile working environment will contribute towards employee retention, boost employee morale and facilitate the achievement of cost-efficient measures. The foundation of an efficient and flexible working arrangement culture is based on trust, effective communication and clear job descriptions. Flexible working arrangements will enable employees to perform better, resulting in increased productivity and quality of work, while work-life balance will be enhanced.

Communication and dissemination of information within the civil service and to the *rakyat* will be enhanced to ensure effective service delivery. Clear guidelines and instructions will be delivered effectively within government agencies and across all levels of the *rakyat*, especially during times of crisis. Civil servants will also be encouraged to develop creative solutions in enhancing effective communication and information dissemination.

Strengthening Collaboration and Coordination among Stakeholders

Close collaboration between all stakeholders involved in socioeconomic development is a prerequisite to ensure national aspirations are achieved while eliminating redundancy and ensuring consistency. In this regard, collaboration and coordination between Federal, state and local authorities will be strengthened. As ministries are clustered into four areas, namely education and social, economy, security and infrastructure development, the lead cluster will coordinate cross-ministerial issues within the clusters to reduce overlapping of functions. In addition, local authorities will be encouraged to localise Agenda 2030 by expanding activities and programmes on sustainable development. This expansion will be undertaken by enhancing the involvement of the private sector, civil society organisations (CSOs) and local communities.

Concerted efforts will be undertaken in engaging states to streamline and coordinate development programmes and projects. In this regard, *Arahan No. 1 2020 Mekanisme Penyelarasan Pelaksanaan Pembangunan Negara* will be leveraged. Similarly, collaborative efforts between the public and private sectors as well as CSOs will be strengthened to promote the whole of nation approach.

Expanding Digitalisation Initiatives

Recognising the importance of digitalisation, the Government will take the lead in accelerating digitalisation in the public sector and MSMEs. In this regard, the establishment of the National Digital Economy and 4IR Council will strengthen the digital governance structure and spur growth of the digital economy. The council will provide overall direction in planning, implementation and monitoring of digitalisation initiatives. The government cluster under this Council is responsible in driving digitalisation in public sector. More smart partnerships between the public and private sectors will also be forged to boost the implementation of the Malaysia Digital Economy Blueprint initiatives.

Measures will be undertaken to expand end-to-end online services to provide greater accessibility and convenience for the *rakyat*. Single sign-on initiatives will be accelerated to provide seamless online services, including through mobile platforms. The existing land administration system will be further improved and expanded to states that have yet to adopt the system. In addition, a system that enables spatial data sharing will be developed. Meanwhile, chatbot applications will be utilised to allow interaction between customers and systems in providing real-time responses to enhance service delivery. Chatbot offers new opportunities to improve the customer engagement process and enhance operational efficiency. Moreover, the *Sistem Pengurusan Aduan Awam* (SISPAA) will be further enhanced by introducing a holistic and centralised system featuring chatbot and smart mobile application as well as cloud computing.

In an effort to build trust and confidence among the *rakyat*, cyber security will be strengthened for all online transactions. In addition, the national digital identification project will be introduced in early 2022 to accelerate the realisation of digital governance, promote inclusivity, reduce cost of access to services and enhance service delivery to the *rakyat*. The digital footprint will also be enhanced to ensure integrity, accountability and transparency are not compromised while accessing and sharing government documents online.

Local authorities will be encouraged to leverage on the existing MyGovernment portal to improve service delivery. This will enable the *rakyat* to access all online services provided by the federal government and local authorities through a single gateway. In this regard, it is important for local authorities to upgrade their digital infrastructure and online services. Agencies at both the federal and state levels will be encouraged to adopt e-payment methods. In addition, awareness on the security of cashless transactions will be enhanced to gain public trust.

Strengthening Open Data Governance

Data sharing will result in many economic spin-offs. In an effort to strengthen open data governance, a national data governance framework will be established to bolster data sharing among the public and private sectors. This framework will incorporate policies, guidelines, legal, and investment measures to obtain the data as well as the monetisation of data shared with the private sector. In developing this framework, international standards and best practices will be adopted. Adopting the International Open Data Charter will ensure Malaysia adheres to the principles of open by default, timely and comprehensive, accessible and machine readable as well as interoperable.

The Statistics Act 1965 is being reviewed to empower the Department of Statistics Malaysia (DOSM) in collecting and coordinating data from the public and private sectors. This review will strengthen the country's statistical system and empower DOSM in producing high-quality official statistical information to enable better quality decision-making. In ensuring the integrity and confidence in official statistics, DOSM is guided by the United Nations Statistical Commission's ten Fundamental Principles of Official Statistics.

The National Cloud Hub Policy will be introduced to ensure successful cloud adoption. This policy will enable the introduction of standard processes, consolidate cloud services as well as resolve fragmentation issues. A government hybrid cloud will be developed, combining both MyGovCloud@PDSA and other cloud services to leverage the latest technology in providing better services in the public sector. Furthermore, the usage of cloud storage provided by the Government will be promoted in accessing and reviewing documents through the Digital Document Management System.

Strategy B2

Enabling Better Decision-Making and Innovation

In the Twelfth Plan, priority will be given to enhance quality decision-making and encourage innovation to ensure public service delivery meets the expectations of the *rakyat*. The adoption of new mechanisms and innovative approaches will foster efficiency in public service delivery.

Enabling Quality Decision-Making

In order to enhance service delivery to the *rakyat*, the Behavioural Insights (BI) approach will be introduced to enable effective policy formulation and implementation. The application of BI will enhance policy effectiveness and optimisation of resource allocation, as the *rakyat* is enabled towards the desired or better outcomes. Several pilot studies are being undertaken in areas such as health, education and environment. Examples of benefits that can be derived from the application of BI are as shown in *Box 13-1*.

Box 13-1

Application of Behavioural Insights (BI) to Improve Public Service Efficiency

In the Twelfth Plan, the BI approach will be adopted as a complementary tool to enhance the Government's services to the *rakyat*. BI will be used to design and implement policies to guide the *rakyat* towards making better decisions. BI is an inclusive approach to policymaking that combines insights from psychology, cognitive science and social science with empirically tested results to discover how people actually make choices. This approach helps decision-makers understand how and why people act, react and make decisions. BI is widely adopted in countries such as the Australia, Canada, Colombia, Germany, India, Singapore, the United Kingdom, and the United States of America. BI is implemented in all areas including projects related to education, energy, health, poverty and the environment.

For example, in Sydney, Australia, roads and trains are congested during peak hours, pressuring the state of New South Wales (NSW) to find solutions in overcoming this issue. The NSW Behavioural Insights Unit developed a trial with two government agencies, namely, Transport for NSW and Department of Premier and Cabinet (DPC) by encouraging employees to travel to and from work outside of peak hours (between 8.15am to 9.15am, and 4.45pm to 5.45pm). The trial successfully encouraged employees to use existing flexible work policies, resulting in an increase of 8.6% in morning arrival outside peak times. Overall, the trial resulted in 550 additional instances per month where DPC employees avoided commuting to and from work during peak hours [1].

Application of BI in policy formulation and implementation will enhance the effectiveness of policies and allow optimal resource allocation, as citizens are nudged and enabled towards better outcomes. BI can be a cost-effective tool that is relatively easy to understand. Its implementation has yielded good results as evidenced from countries that have adopted and invested upfront in it, as opposed to spending on policy problems downstream. It will complement existing processes in policymaking and will also make the public service more cost-effective.

Although BI has high potential to be applied in the public sector, it needs to start small on specific targeted areas to develop skills, awareness and understanding. Small interventions can result in long-term cost savings, increased efficiency and enhanced service delivery. The application of BI in the public sector will be introduced in the Twelfth Plan through several initiatives by the Malaysia Productivity Corporation.



Source: NSW Behavioural Insights Unit, The Behavioural Insights Unit Report (April 2018)

Public participation in decision-making processes will be expanded to ensure effective and impactful policies as well as to promote participatory governance. This process, which will be conducted through digital engagements and townhall sessions, aims at instilling a sense of ownership as well as to promote accountability and shared responsibility in decision-making. Inputs from these engagements will provide useful insights into the real needs of the *rakyat* and will enable policymakers to formulate impactful policies and programmes.

In achieving quality decision-making, policy development will be driven by evidence-based data and supplemented with the outcomes from engagements with the *rakyat*. The usage of data analytics in policymaking will optimise the government's limited resources. The expansion of Malaysian Government Central Data Exchange (MyGDX) services will enable the Government to optimise data for better decision-making, thus achieving better outcomes for the *rakyat*.

A central depository system will be developed to coordinate information on selected programmes to enhance inclusivity. In this regard, information on services provided by ministries and agencies such as social assistance, TVET and pre-school programmes will be coordinated and made accessible to all government agencies. The system will enhance implementation and monitoring of programmes and projects as well as reduce inclusion and exclusion errors, thus ensuring services provided by the government reach the right target groups.

Promoting Greater Innovation

In the Twelfth Plan, a national blueprint on innovation will be introduced to provide guidelines and strategies to promote innovation. Current circulars, KPIs, procedures and processes will be reviewed to encourage innovation in the public sector. Further efforts will be undertaken to inculcate innovation as a norm in the public sector, including by incorporating innovation as part of the KPIs for the top management of ministries, departments and agencies. The development of the public sector innovation blueprint will ensure a balance between the management and technology approaches in innovation.

Strategy B3

Strengthening Governance Ecosystem

Malaysia is committed to instil integrity, transparency and neutrality in the public sector to enhance trust among the *rakyat*. In the Twelfth Plan, the focus will be to uphold integrity, transparency and neutrality at all levels, improve the electoral system, digitalise the judicial system as well as enhance corporate governance in SOEs. The success of these initiatives is fundamental in building a corruption free, fair, democratic and progressive nation.

Upholding Integrity, Transparency and Neutrality at All Levels

Efforts to uphold integrity and eradicate corruption will be enhanced to improve efficiency and effectiveness of the public service. In this regard, all government agencies will implement the Organisational Anti-Corruption Plan as outlined under the NACP to address governance, integrity and corruption issues within each organisation. Enforcement of the Malaysian Anti-Corruption Commission Act 2009 [Act 694] will be enhanced, while engagements through strategic partnerships with CSOs and political parties will be strengthened in combating corruption. Furthermore, a new legislation on Ombudsman of Malaysia will be introduced to enhance integrity and governance of public institutions.

The adoption of ABMS standard, which aims to reduce the risk of bribery and build trust among stakeholders, will be intensified. This standard will enhance compliance with internationally recognised standards and best practices on anti-corruption. Moreover, in promoting integrity and to safeguard the sovereignty of the country, civil servants are required to strictly uphold confidentiality in handling sensitive documents and disseminating information as well as honour the pledge under the Official Secrets Act 1972. The Malaysian Governance Index will be introduced to measure the country's governance performance as well as to emphasise good governance among public institutions. All these efforts will enhance public perception of the Government, thus improving Malaysia's ranking in the Corruption Perceptions Index (CPI).

Improving the Electoral System

The Election Commission will be strengthened to ensure a fair, independent and transparent election process. Rules, procedures and processes will also be reviewed and improved to ensure the independence and transparency of the electoral system. Digitalisation of the election management will be further enhanced through a more systematic system integration and development of new applications. This effort will enable more effective and efficient implementation of the 18 years old voter age eligibility and automatic voters' registration.

Digitalising Court Information Management System and Process

The information management system and processes in all courts will be digitalised to provide transparent, efficient and effective legal and judicial services. This will enhance interoperability, provide end-to-end solutions and expedite court procedures. In addition, AI will be used to assist judges and magistrates in making judgements for criminal trials.

The Malaysian Judiciary has embarked on a number of pilot projects to evaluate the efficiency of remote hearings during the Movement Control Order. These pilot projects have received positive responses. In view of the success and to facilitate remote hearings, the Courts of Judicature Act 1964, Subordinate Courts Act 1948, Subordinate Courts Rules Act 1955, Rules of the Federal Court 1995, Rules of the Court of Appeal 1994, and the Rules of Court 2012 will be reviewed and amended. This will expedite the disposal of cases and reduce Government expenditure.

Enhancing Corporate Governance in State-Owned Enterprises and Statutory Bodies

The legal framework, policies and processes in managing SOEs including GLCs, government-linked investment companies and statutory bodies will be reviewed to minimise Government exposure to risks and enhance transparency. In this regard, to raise the performance of these bodies and in meeting future challenges, more stringent processes will be put in place in the appointment of board members, based on merit, integrity, technical, financial and corporate governance skills.

Priority Area C

Enhancing Budgeting and Project Management

A proper budgeting framework as well as efficient project management and implementation are important elements in achieving the desired outcomes. In the Twelfth Plan, a number of measures will be undertaken to review budgeting processes and to improve the effectiveness of project implementation. The implementation of these initiatives will enhance the management of public finance and efficient delivery of development outcomes.



Strategy C1

Reviewing Budgeting Framework and Process

The budgeting framework and process will be improved to promote good governance, transparency, efficiency, and effectiveness. Initiatives will be focused on enhancing budgeting transparency and aligning allocation priorities between various sectors, introducing the value gateway mechanism, reviewing the legal framework in government procurement, and improving PPP policy and governance. These initiatives will contribute to efforts in strengthening fiscal management and enhance the integrity in the public sector.

Enhancing Budgeting Transparency and Aligning Priorities

Budget transparency will be improved in line with international good practices and standards to reduce leakages and ensure efficient public spending. To enhance transparency, the Pre-Budget Statement and Mid-Year Review Report will be published. The publication of these documents will provide the *rakyat* with a more detailed insight into the national economic situation and fiscal status. This will increase Malaysia's score in the Open Budget Index.

Government allocations will prioritise high impact projects that generate higher multiplier effects in the economy. At least 50% of the development expenditure will be allocated to six less-developed states, namely Sabah, Sarawak, Kelantan, Terengganu, Kedah and Perlis, to ensure a more balanced regional growth and reduce development gaps. Most of the allocations will be channelled to improve connectivity and provide better access to basic infrastructure, amenities and services.

A new roadmap and action plan will be formulated to improve asset management and maintenance of government infrastructure and facilities. Sound maintenance practices will lower costs, reduce downtime and extend asset lifespan in the long run. In this regard, the existing Facility Management Unit in JKR will be strengthened to coordinate maintenance initiatives across ministries and agencies as well as ensure compliance with asset maintenance standards. In addition, allocations for the maintenance of roads, buildings and other public assets will be given higher priority. In implementing these maintenance projects, more opportunities will be provided to small contractors.

Introducing the Fiscal Responsibility Act

The Government is committed to ensure sound and sustainable public finance management. In this regard, the Fiscal Responsibility Act (FRA) will be introduced during the Twelfth Plan to enhance fiscal discipline as well as improve fiscal governance and transparency. Similar fiscal responsibility legislations are already in place in countries such as Australia, Brazil, Thailand, and the United Kingdom. The FRA will institutionalise good principles and practices of responsible fiscal management, particularly in managing fiscal risks, establishing fiscal rules, and ensuring prudent public debt management.

Introducing Value Gateway

The value management initiative will be enhanced through the introduction of the value gateway mechanism. This mechanism will enable a better evaluation of new development projects prior to project approval as well as establish viability, project readiness and best value for money. In this regard, implementation guidelines will be developed and made as a prerequisite for line ministries, departments and agencies in submitting development project proposals. This will expedite project implementation and improve public service delivery.

Developing a Legal Framework in Government Procurement

A legal framework will be formulated to improve governance, transparency, efficiency and effectiveness of government procurement. Under this framework, an independent regulatory body will be formed to ensure compliance and proper monitoring of government procurement. An online procurement system for physical projects will be developed, while the existing eP system for supplies and services will be enhanced. In addition, a complaints review mechanism will be established to address issues related to procurement. Collectively, these initiatives will improve efficiency and reduce corruption by reducing human intervention in the procurement process.

Improving Public-Private Partnership Policy and Governance

The Government will continue to encourage private sector participation in the national development agenda via the PPP approach. In this regard, the PPP framework will be improved to ensure efficiency and transparency in the implementation of PPP projects. A new PPP blueprint will be introduced to replace the existing 1991 Privatisation Master Plan. The blueprint will provide a comprehensive PPP policy framework which includes the revision of implementation and financing models as well as terms and conditions to ensure a fairer sharing of risks and benefits between the public and private sectors. This inclusive approach will enhance financial sustainability, commercial viability, good governance, and the adoption of international best practices.

Strategy C2

Improving Effectiveness of Project Implementation

In the Twelfth Plan, greater emphasis will be given to enhance project implementation and produce the best outcomes for the *rakyat*. The project delivery mechanism and monitoring system will be streamlined to ensure on-time completion, value-for-money and the fulfilment of intended outcomes.

Enhancing Project Delivery Mechanism

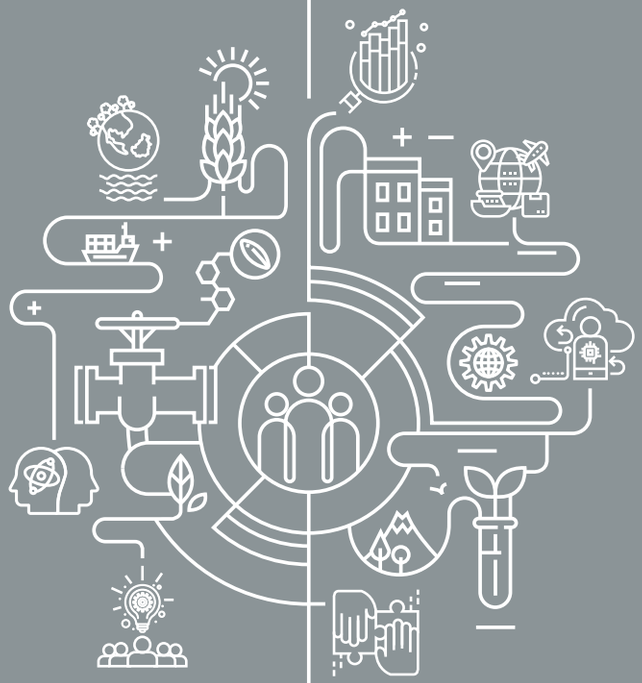
The effectiveness of development projects in promoting socioeconomic development will be enhanced by improving the delivery mechanism and revising the regulatory framework. Evaluation reports for completed projects will be made mandatory across line ministries. Administrative and legal action will be taken against controlling officers who implemented projects which deviated from the approved scope. Through this exercise, issues such as non-compliance, misconduct and inefficiency in project management will be detected early and appropriate remedial action can be taken.

Strengthening MyProjek

The MyProjek will be strengthened to facilitate better planning, monitoring, and evaluation of development programmes and projects. The project submission module will be modified to allow state governments to directly submit proposals to ministries through the system. This will enable central agencies to align the priorities of ministries and state governments. The MyProjek will also be integrated with other systems to provide comprehensive and real-time data for planning and monitoring purposes. The systems identified for integration are *Sistem Kawal dan Lapor* (SKALA), PSC, Integrated Government Financial Management Accounting System (iGFMAS) and MyResults as well as the Centralised Information Management System (CIMS).

Conclusion

The Eleventh Plan focused on enhancing efficiency and productivity of the public sector through a whole-of-government approach, with emphasis on integrity and transparency. Notable progress was made in a number of areas, namely on improving governance, enhancing integrity and accountability, making public finance more prudent as well as strengthening public sector delivery. Notwithstanding this, the public sector continues to face challenges in areas of talent development, governance ecosystem and project management. In the Twelfth Plan, a number of reforms will be undertaken in the public sector to improve delivery. These include nurturing a high-performing civil service, advancing a whole-of-government approach as well as enhancing budgeting and project management. A stronger public sector will create a more effective, accountable and efficient government machinery to fulfil the rising expectations of the *rakyat*. This will support the achievement of the Twelfth Plan objective, namely prosperity, inclusivity and sustainability.



Conclusion

The Twelfth Plan is transformational and built on the Government's clear recognition that Malaysia will need to emerge sustainably from the COVID-19 pandemic. The Twelfth Plan is aimed at further catalysing economic growth opportunities built on quality, resilience and sustainability.

The preparation of the Twelfth Plan has been a challenging exercise due to several circumstances including the impact of the COVID-19 pandemic, global geopolitical and economic uncertainties. With the changing global economic landscape, intense regional and global competition, growing middle class and the pandemic, the *rakyat* today demand fundamental changes in national policies and development plans. In responding to these challenges, Malaysia needs to transform itself to achieve a higher level of prosperity, inclusivity and sustainability, while laying a solid foundation to address future challenges.

The Twelfth Plan is formulated based on the strong foundation built since the implementation of the first national development plan, as well as lessons learnt in the last five decades. The Twelfth Plan represents the first half of WKB 2030 which is aimed at creating a united, prosperous and dignified Malaysia. Anchored on the objective to attain a **Prosperous, Inclusive and Sustainable** Malaysia based on the spirit of *Keluarga Malaysia*, the Twelfth Plan outlines measures that will enable Malaysia to reset its economy in light of the challenges brought about by the COVID-19 pandemic and the need to build a more resilient economy. The Plan is intended to achieve inclusive growth, across regions and states, whilst ensuring that the growth does not come at the expense of the environment. Developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure, as well as strengthening the public service are important enablers for Malaysia to realise these long-term aspirations.

The Twelfth Plan has taken the whole-of-nation approach, where extensive consultations were undertaken with all ministries, agencies, the private sector and civil society associations. The Government also consulted international organisations such as the World Bank to ensure this developmental agenda is aligned to global best practices. This approach is to ensure the inputs received were comprehensive as the Twelfth Plan is designed with the *rakyat* at heart, whilst ensuring Malaysia progresses in an increasingly competitive climate.

The Twelfth Plan embodies three themes, four policy enablers and 14 game changers. The themes, policy enablers and game changers represent new and innovative ideas to shift mindsets and fundamentally change the approach to national development. Throughout the five-year period, the implementation of the Plan will be reviewed periodically to take into account the dynamic and rapid changes in the domestic and global environment.

The first theme of **Resetting the Economy** aims to restore the growth momentum of all sectors, whilst accelerating the development of high-potential industries. The services, manufacturing, agriculture, mining and construction sectors will be rejuvenated by encouraging these sectors to move up the value chain by adopting 4IR technologies, digitalisation and the green economy. These in turn will improve quality, productivity and competitiveness. The electrical and electronics, global services, aerospace, creative, tourism, halal and biomass industries, as well as smart farming activities, will be enhanced as new sources of growth. During the Twelfth Plan, measures will be introduced to support all industries to move up the value chain.

Given the importance of MSMEs' contribution to the Malaysian economy, digitalisation of MSMEs will be a priority to enhance their competitiveness and resilience. The creation of a conducive and holistic ecosystem to support entrepreneurs and enterprises, as well as expansion of market access and international trade opportunities will enable MSMEs to be global, export-oriented and innovation-driven players.

The second theme will focus on the Government's role in **Strengthening Security, Wellbeing and Inclusivity** of the *rakyat*. Safeguarding national security and sovereignty through enhanced defence and security, crime prevention and emergency preparedness are among the priorities going forward. Focus is given on the implementation of a holistic action plan to enhance security at the border, introduction of a new policy for the defence and security industry, as well as wider usage of advanced technology in combatting crimes. The successful implementation of these initiatives will provide a more conducive environment for economic activities and safe living.

The COVID-19 pandemic has highlighted the importance of efficient healthcare service delivery in safeguarding the health and wellbeing of the *rakyat*. In this regard, strengthening healthcare preparedness for infectious diseases will be accorded high priority. In supporting this initiative, a healthcare facilities and human resource management masterplan will be developed, and the National Centre for Disease Control and Infectious Disease Hospital will be built. The healthcare system will be revitalised through the adoption of a whole-of-nation approach, optimising resources, redesigning and digitalising healthcare services, as well as introducing a more sustainable health financing model in promoting a healthy and productive nation. More quality and affordable housing will be constructed. Sports will be leveraged as a platform to build a nation with an active and united *rakyat*. Malaysia's diversity and noble values will also be leveraged to strengthen unity in building a prosperous and harmonious nation.

To ensure all *rakyat* enjoy the fruits of economic growth, poverty alleviation and the elimination of hardcore poverty will continue to be a priority. In this regard, initiatives will be implemented to uplift the standard of living of the *rakyat* through specific and targeted programmes, irrespective of gender, ethnicity, socioeconomic status and location. These will include the establishment of dedicated poverty units at the Federal and district levels as well as grassroot level poverty eradication solutions. The socioeconomic development of Bumiputera will continue to be given priority as a national agenda. Focus will be given in strengthening human capital development, enhancing business resilience and wealth creation as well as increasing sustainable Bumiputera corporate equity ownership.

Integrated efforts will be implemented to accelerate the reduction in rural and urban development gap. In allocating Federal Government funds, special attention will be given to Sabah, Sarawak and other less developed states to promote regional inclusion. The provision of better infrastructure and connectivity, as well as improved access to social services and enhancement of defence, security and public safety will contribute towards uplifting the socioeconomic status of the *rakyat*.

The third theme, **Advancing Sustainability**, focuses on efforts to advance green growth through the whole-of-nation approach by leveraging green technology as well as sustainable consumption and production practices, whilst ensuring environmental protection, addressing climate change and conserving natural resources for future generations. The transition to circular economy enables a systemic shift to generate more sustainable and responsible businesses and investments, create new economic opportunities and expand the green market. To ensure continuous access and affordable energy costs, the energy sector will be managed efficiently through the formulation of a comprehensive policy. These measures will result in prudent energy management to support economic growth and improve the wellbeing of the *rakyat*.

For the water sector, the Water Sector Transformation 2040 agenda will be introduced in the Twelfth Plan to transform this sector from being an economic enabler to a dynamic growth engine. Accelerating the adoption of the Integrated Water Resources Management (IWRM) will be the starting point in transforming this sector. The *rakyat* will be empowered to actively drive the water sector transformation. With the implementation of this agenda, the *rakyat* will enjoy reliable, safe and secure water supply whilst ensuring the natural resource is protected, conserved and utilised sustainably for present and future generations.

Supporting the three themes are four policy enablers, which encompass **developing future talent, accelerating technology adoption and innovation, enhancing connectivity and transport infrastructure**, as well as **strengthening the public service**. As the demand for high-skilled as well as technology and digital savvy workforce increases, the country's education system will be further improved by enhancing digital education and strengthening the technical and vocational education and training (TVET) ecosystem. The implementation of these initiatives will produce more future-ready talent, improve compensation of employees and reduce dependency on foreign labour.

The adoption of advanced technology and innovation needs to be accelerated as a high technology-based digital economy is a catalyst for economic growth. The newly established Research Management Unit (RMU) will play an important role to intensify investments in R&D&C&I. Priority will be given to commercialising high-value research, capitalising on emerging technologies and developing the required talent and skills for the digital economy and adoption of 4IR technologies. Digital inclusion will be enhanced through the provision of digital devices and the designation of telecommunication services as a public utility.

As the economy advances, it is crucial to increase the efficiency and reliability of transport and logistics services in meeting the growing demand. The Twelfth Plan aims to enhance the efficiency of transport and logistics services. This will be achieved through initiatives such as the integration of rail and road networks to provide better connectivity between airports, ports, industrial areas and cities. In addition, the capacity of port infrastructure and services will be increased and the multimodal cargo movement approach with a single service provider will be adopted. Public transport will also be enhanced to ensure better access to services and seamless connectivity for the *rakyat*.

The public sector plays a key role in supporting all the three themes and policy enablers. An efficient and transparent public sector will ensure effective public service delivery to the *rakyat*. In this regard, the public service will be transformed by further improving the mechanism for the selection of new officers and key leaders. Digitalisation in the public service will be intensified by providing adequate infrastructure. Collaboration and coordination will be enhanced to streamline the public service, avoid duplication of roles and optimise resources. The delineation of roles between Members of the Administration and civil servants through the introduction of Public Service Act will ensure integrity, accountability and transparency in public service delivery.

This Twelfth Plan has clearly outlined some of the strategies and initiatives to create ecosystems that are healthy for businesses and individuals to participate in this 4IR era and reap its benefits. Malaysia must adapt to the changes brought about by the 4IR to ensure that our economy remains competitive to achieve high-income status. In addition, the role of the private sector as an engine of economic growth will be strengthened to ensure more holistic and sustainable development. Rules and regulations will be reviewed to reduce bureaucracy at the Federal and state levels as well as at the local authority level in facilitating more robust private sector growth. The Government is committed to further enhancing collaboration between the public and private sectors to ensure the goals of this Plan are realised.

The Twelfth Plan will lay the foundation for economic recovery and ultimately position Malaysia as a high-tech and high-income nation by the end of this decade. The Plan encapsulates the multi-faceted goals which include:

- resetting the economy;
- eradicating hardcore poverty irrespective of ethnicity;
- strengthening national defence and security;
- strengthening unity for nation-building;
- increasing togetherness and strengthening the role of youth in the economic development;
- reducing regional imbalances, especially between Sabah, Sarawak and Peninsular Malaysia;
- strengthening the socioeconomic development of Bumiputera as a national agenda;
- accelerating growth of the digital economy;
- revitalising the healthcare system in handling future health crises;
- transforming the water sector;
- addressing climate change and transitioning to the circular economy;
- transforming the TVET ecosystem and embracing world-class standards;
- developing high-calibre and skilled talent to boost productivity growth; and
- transforming the civil service.

The Government is committed to transform the Malaysian economy over the next five years. This commitment is exemplified by the 14 game changers. These game changers are the highest in number compared with the previous Malaysia plans and comprehensively cover every theme and policy thrust of the Twelfth Plan. The goal will be to transform the implementation approach in achieving big, fast results.

In implementing the Twelfth Plan, the Government has decided that it will address the problems of implementation head-on. The Twelfth Plan has taken the lessons of the past, including the successes and shortcomings, as well as international best practices. These lessons will be incorporated into the implementation architecture so that the Twelfth Plan will be implemented in a way that is truly transformational. The collective leadership of the country is committed to make the implementation of the Twelfth Plan a success. No stones will be left unturned when it comes to the implementation of the Twelfth Plan, in line with the adoption of the whole-of-nation approach.

The implementation of initiatives and measures under the three themes and four policy enablers will propel Malaysia towards achieving its aspiration to become a prosperous, inclusive and sustainable nation. Every Malaysian needs to work together to build a better and prosperous future for all.

Appendices

Appendix

Tables

Gross Domestic Product by Expenditure Category, 2015-2025 (at constant 2015 prices)

Gross Domestic Product by Expenditure Category, 2015-2025 (at current prices)

Gross Domestic Product by Kind of Economic Activity, 2015-2025 (at constant 2015 prices)

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Incidence of Absolute Poverty by State, 2016 and 2019

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Table 1

Gross Domestic Product by Expenditure Category, 2015-2025 (at constant 2015 prices)

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Private Expenditure	**833,249**	**879,237**	**944,296**	**1,011,397**	**1,074,788**	**1,010,086**	**1,314,667**	***3.9***	***5.4***
Consumption	635,099	672,260	718,702	776,054	835,711	799,447	1,060,487	*4.7*	*5.8*
Investment	198,150	206,977	225,594	235,343	239,077	210,639	254,180	*1.2*	*3.8*
Public Expenditure	**260,295**	**260,853**	**269,949**	**270,279**	**262,584**	**250,334**	**295,732**	***-0.8***	***3.4***
Consumption	154,021	155,640	164,450	170,030	173,080	179,913	215,514	*3.2*	*3.7*
Investment	106,274	105,213	105,499	100,249	89,504	70,421	80,218	*-7.9*	*2.6*
Net Export	**88,592**	**88,925**	**85,493**	**90,768**	**100,925**	**87,806**	**102,628**	***-0.2***	***3.1***
Exports of Goods and Services	817,370	828,155	900,064	917,462	907,877	827,086	1,098,231	*0.2*	*5.8*
Imports of Goods and Services	728,778	739,230	814,571	826,694	806,952	739,280	995,603	*0.3*	*6.1*
Gross Domestic Product	**1,176,941**	**1,229,312**	**1,300,769**	**1,363,766**	**1,424,310**	**1,343,880**	**1,712,921**	***2.7***	***4.5 ~ 5.5***

Note: The added total may differ due to rounding.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 2

Gross Domestic Product by Expenditure Category, 2015-2025 (at current prices)

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Private Expenditure	**833,249**	**896,206**	**994,666**	**1,077,207**	**1,156,730**	**1,083,996**	**1,598,578**	***5.4***	***8.1***
Consumption	635,099	684,681	760,146	831,388	904,158	861,758	1,308,310	*6.3*	*8.7*
Investment	198,150	211,525	234,520	245,819	252,572	222,238	290,268	*2.3*	*5.5*
Public Expenditure	**260,295**	**264,393**	**276,742**	**277,835**	**271,160**	**258,363**	**316,324**	***-0.1***	***4.1***
Consumption	154,021	157,023	167,320	173,289	176,710	184,043	228,147	*3.6*	*4.4*
Investment	106,274	107,370	109,422	104,546	94,450	74,320	88,177	*-6.9*	*3.5*
Net Exports	**88,592**	**83,128**	**94,254**	**97,106**	**113,863**	**91,261**	**106,495**	***0.6***	***3.1***
Exports of Goods and Services	817,370	834,491	960,778	992,511	987,481	870,272	1,192,185	*1.3*	*6.5*
Imports of Goods and Services	728,778	751,363	866,524	895,405	873,618	779,011	1,085,690	*1.3*	*6.9*
Gross Domestic Product	**1,176,941**	**1,249,698**	**1,372,310**	**1,447,760**	**1,513,157**	**1,416,605**	**2,021,129**	***3.8***	***7.4***
Gross National Income	**1,144,829**	**1,215,105**	**1,333,652**	**1,402,677**	**1,473,662**	**1,388,021**	**1,979,868**	***3.9***	***7.4***
Gross National Income Per Capita									
RM	**36,710**	**38,412**	**41,647**	**43,316**	**45,311**	**42,503**	**57,882**	***3.0***	***6.4***
US$	**9,399**	**9,260**	**9,684**	**10,735**	**10,938**	**10,111**	**14,842**	***1.5***	***8.0***
Inflation, %	*2.1*	*2.1*	*3.7*	*1.0*	*0.7*	*-1.2*	*2.7*	*1.3*	*2.7*
Unemployment, %	*3.1*	*3.4*	*3.4*	*3.3*	*3.3*	*4.5*	*4.0*	-	-

Note: The added total may differ due to rounding.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 3

Gross Domestic Product by Kind of Economic Activity, 2015-2025 (at constant 2015 prices)

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Agriculture	**97,539**	**93,977**	**99,509**	**99,637**	**101,580**	**99,367**	**119,594**	***0.4***	***3.8***
Mining and Quarrying	**103,059**	**105,368**	**105,838**	**103,557**	**102,897**	**91,993**	**104,525**	***-2.2***	***2.6***
Manufacturing	**262,379**	**273,899**	**290,464**	**304,843**	**316,283**	**307,924**	**406,072**	***3.3***	***5.7***
Construction	**55,382**	**59,508**	**63,522**	**66,194**	**66,453**	**53,556**	**65,709**	***-0.7***	***4.2***
Services	**643,883**	**680,561**	**723,361**	**772,990**	**820,857**	**775,717**	**999,389**	***3.8***	***5.2***
Electricity, Gas and Water	31,710	33,412	34,396	36,109	38,297	37,802	47,684	*3.6*	*4.8*
Wholesale and Retail Trade, Food & Beverage and Accommodation	220,242	234,538	251,632	272,668	292,593	264,683	337,842	*3.7*	*5.0*
Transport, Storage and Communications	104,360	111,764	120,325	129,318	137,958	131,280	185,860	*4.7*	*7.2*
Finance, Insurance, Real Estate and Business Services	130,065	135,688	143,663	152,834	162,196	154,253	203,165	*3.5*	*5.7*
Government Services	99,783	104,620	109,694	114,891	118,901	124,229	148,902	*4.5*	*3.7*
Other Services	57,724	60,538	63,649	67,170	70,912	63,469	75,936	*1.9*	*3.7*
Plus : Import Duties	**14,699**	**16,000**	**18,076**	**16,546**	**16,240**	**15,324**	**17,631**	***0.8***	***2.8***
Gross Domestic Product	**1,176,941**	**1,229,312**	**1,300,769**	**1,363,766**	**1,424,310**	**1,343,880**	**1,712,921**	***2.7***	***4.5 ~ 5.5***

Note: The added total may differ due to rounding.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 4

Gross Domestic Product Based on Income, 2015-2025 (at current prices)

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020[1]	2025	2016-2020	2021-2025
Compensation of Employees	**412,240**	**444,489**	**487,764**	**517,927**	**542,790**	**526,718**	**808,452**	***5.0***	***8.9***
Gross Operating Surplus	**709,048**	**740,473**	**819,897**	**881,924**	**914,615**	**851,080**	**1,154,218**	***3.7***	***6.3***
Income of Capital Owners	446,224	452,086	512,799	553,134	589,926	553,952	768,001	*4.4*	*6.8*
Mixed Income	262,824	288,387	307,098	328,791	324,689	297,128	386,217	*2.5*	*5.4*
Taxes Less Subsidies	**55,653**	**64,735**	**64,648**	**47,908**	**55,752**	**38,807**	**58,459**	***-7.0***	***8.5***
Gross Domestic Product	**1,176,941**	**1,249,698**	**1,372,310**	**1,447,760**	**1,513,157**	**1,416,605**	**2,021,129**	***3.8***	***7.4***
Share to GDP, %									
Compensation of Employees	***35.0***	***35.6***	***35.5***	***35.8***	***35.9***	***37.2***	***40.0***	-	-
Gross Operating Surplus	***60.2***	***59.3***	***59.7***	***60.9***	***60.4***	***60.1***	***57.1***	-	-
Income of Capital Owners	*37.9*	*36.2*	*37.4*	*38.2*	*39.0*	*39.1*	*38.0*	-	-
Mixed Income	*22.3*	*23.1*	*22.4*	*22.7*	*21.5*	*21.0*	*19.1*	-	-
Taxes Less Subsidies	***4.7***	***5.2***	***4.7***	***3.3***	***3.7***	***2.7***	***2.9***	-	-

Notes: [1] Preliminary data
The added total may differ due to rounding.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 5

Gross Domestic Product by State and Kind of Economic Activity, 2015-2025 (at constant 2015 prices)

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Johor									
Agriculture	15,610	15,030	16,170	16,246	16,403	16,909	19,811	*1.6*	*3.2*
Mining and Quarrying	476	569	656	711	813	695	889	*7.9*	*5.1*
Manufacturing	32,359	34,122	36,465	38,338	40,125	38,645	51,463	*3.6*	*5.9*
Construction	7,269	8,978	8,407	9,217	6,700	4,176	4,640	*-10.5*	*2.1*
Services	53,058	56,266	59,999	64,402	68,584	66,286	85,842	*4.6*	*5.3*
GDP	**110,002**	**116,682**	**123,561**	**130,586**	**134,240**	**128,034**	**164,243**	***3.1***	***5.1***
GDP Per Capita	30,469	32,894	35,315	36,388	37,387	35,923	49,079		
Kedah									
Agriculture	5,423	5,202	5,465	5,468	5,647	5,545	6,398	*0.4*	*2.9*
Mining and Quarrying	83	96	110	115	125	118	148	*7.3*	*4.6*
Manufacturing	11,427	11,934	12,449	12,827	13,430	13,619	17,804	*3.6*	*5.5*
Construction	863	998	928	1,009	1,090	1,113	1,380	*5.2*	*4.4*
Services	21,465	22,604	23,808	25,104	26,337	25,401	36,153	*3.4*	*7.3*
GDP	**39,550**	**41,156**	**43,067**	**44,804**	**46,852**	**46,041**	**62,176**	***3.1***	***6.2***
GDP Per Capita	18,864	19,835	20,961	21,398	22,384	22,140	31,790		
Kelantan									
Agriculture	5,102	5,287	5,477	5,431	5,815	5,829	7,521	*2.7*	*5.2*
Mining and Quarrying	229	257	300	359	417	363	470	*9.7*	*5.3*
Manufacturing	1,147	1,172	1,278	1,281	1,300	1,234	1,590	*1.5*	*5.2*
Construction	445	575	521	324	383	396	464	*-2.3*	*3.2*
Services	14,455	15,159	15,899	16,721	17,545	17,375	24,747	*3.7*	*7.3*
GDP	**21,408**	**22,476**	**23,501**	**24,143**	**25,490**	**25,221**	**34,816**	***3.3***	***6.7***
GDP Per Capita	12,159	12,909	13,695	13,690	14,346	14,083	20,269		

Table 5

Gross Domestic Product by State and Kind of Economic Activity, 2015-2025 (at constant 2015 prices)–cont.

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Melaka									
Agriculture	4,141	4,312	4,625	4,567	4,433	4,598	5,533	*2.1*	*3.8*
Mining and Quarrying	44	53	57	62	68	61	77	*6.7*	*4.7*
Manufacturing	14,068	14,626	15,621	16,335	16,745	15,322	20,124	*1.7*	*5.6*
Construction	947	998	1,720	1,496	1,358	992	1,312	*0.9*	*5.7*
Services	16,811	17,655	18,613	19,731	20,924	19,952	24,672	*3.5*	*4.3*
GDP	**36,077**	**37,713**	**40,830**	**42,376**	**43,590**	**41,029**	**51,828**	***2.6***	***4.8***
GDP Per Capita	40,582	42,088	46,828	47,900	49,119	45,893	62,385		
Negeri Sembilan									
Agriculture	3,235	3,056	3,321	3,323	3,557	3,323	4,131	*0.5*	*4.4*
Mining and Quarrying	165	198	217	224	236	209	260	*4.8*	*4.4*
Manufacturing	15,678	16,133	16,654	17,208	17,630	16,761	21,531	*1.3*	*5.1*
Construction	1,339	1,466	1,716	1,916	1,843	1,370	1,777	*0.5*	*5.3*
Services	18,951	19,976	20,916	22,126	24,035	23,780	30,399	*4.6*	*5.0*
GDP	**40,186**	**41,771**	**43,816**	**45,694**	**48,033**	**46,309**	**59,061**	***2.9***	***5.0***
GDP Per Capita	36,908	38,744	41,739	43,017	45,391	43,859	61,442		
Pahang									
Agriculture	11,665	11,193	12,254	12,419	12,849	13,057	16,266	*2.3*	*4.5*
Mining and Quarrying	1,311	879	709	705	820	656	797	*-12.9*	*4.0*
Manufacturing	10,417	10,820	11,531	12,194	12,767	12,253	16,255	*3.3*	*5.8*
Construction	2,105	2,726	3,231	2,399	1,727	1,352	1,632	*-8.5*	*3.8*
Services	23,885	25,173	26,720	28,454	30,230	27,590	39,763	*2.9*	*7.6*
GDP	**49,450**	**50,875**	**54,591**	**56,290**	**58,448**	**54,984**	**74,800**	***2.1***	***6.3***
GDP Per Capita	30,754	32,688	35,751	35,577	36,568	36,107	52,105		

Table 5

Gross Domestic Product by State and Kind of Economic Activity, 2015-2025 (at constant 2015 prices)–cont.

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Pulau Pinang									
Agriculture	2,084	1,988	2,034	1,969	2,068	2,052	2,187	*-0.3*	*1.3*
Mining and Quarrying	124	135	144	156	171	148	182	*3.6*	*4.3*
Manufacturing	33,597	35,411	37,426	39,458	40,510	41,658	54,960	*4.4*	*5.7*
Construction	2,712	2,984	2,689	2,620	2,644	2,234	2,320	*-3.8*	*0.8*
Services	38,917	41,167	43,458	46,120	48,662	45,875	59,996	*3.3*	*5.5*
GDP	**78,146**	**82,493**	**86,768**	**91,234**	**94,666**	**92,631**	**120,404**	***3.5***	***5.4***
GDP Per Capita	46,020	48,633	51,130	52,921	55,215	54,718	78,212		
Perak									
Agriculture	10,352	10,151	10,942	10,994	11,314	11,476	14,170	*2.1*	*4.3*
Mining and Quarrying	354	414	438	461	505	458	567	*5.3*	*4.4*
Manufacturing	11,190	11,752	12,691	13,222	13,683	14,161	18,771	*4.8*	*5.8*
Construction	2,578	2,786	2,113	2,337	2,490	2,057	2,168	*-4.4*	*1.1*
Services	38,628	40,762	43,028	45,911	47,975	46,039	61,686	*3.6*	*6.0*
GDP	**63,176**	**65,958**	**69,337**	**73,031**	**75,999**	**74,242**	**97,434**	***3.3***	***5.6***
GDP Per Capita	25,610	27,343	29,341	30,302	31,716	31,456	45,002		
Perlis									
Agriculture	1,161	1,200	1,249	1,260	1,334	1,088	1,415	*-1.3*	*5.4*
Mining and Quarrying	32	28	31	33	33	30	35	*-0.8*	*2.9*
Manufacturing	458	449	459	466	470	444	541	*-0.6*	*4.0*
Construction	193	212	121	147	167	151	176	*-4.9*	*3.2*
Services	3,414	3,579	3,723	3,881	4,076	4,025	5,441	*3.3*	*6.2*
GDP	**5,353**	**5,570**	**5,695**	**5,885**	**6,152**	**5,779**	**7,657**	***1.5***	***5.8***
GDP Per Capita	21,540	22,588	23,596	24,408	25,521	23,582	33,838		

Table 5

Gross Domestic Product by State and Kind of Economic Activity, 2015-2025 (at constant 2015 prices)–cont.

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Selangor									
Agriculture	4,076	3,872	4,319	4,535	4,709	4,725	6,175	*3.0*	*5.5*
Mining and Quarrying	499	643	692	737	859	799	1,025	*9.9*	*5.1*
Manufacturing	75,537	78,710	84,964	91,133	95,942	95,346	127,931	*4.8*	*6.1*
Construction	16,674	16,243	17,580	18,646	20,664	18,653	22,871	*2.3*	*4.2*
Services	163,967	173,870	186,018	200,324	214,446	199,899	238,057	*4.0*	*3.6*
GDP	**268,825**	**281,839**	**302,186**	**323,215**	**345,147**	**326,841**	**404,018**	***4.0***	***4.3***
GDP Per Capita	43,513	45,506	49,048	51,547	55,052	51,966	68,799		
Terengganu									
Agriculture	2,765	2,681	2,921	2,847	3,016	2,914	3,590	*1.1*	*4.3*
Mining and Quarrying	146	159	174	183	201	185	228	*4.9*	*4.3*
Manufacturing	11,296	12,116	12,586	13,056	13,093	11,862	15,426	*1.0*	*5.4*
Construction	904	920	1,276	1,161	1,165	1,080	1,355	*3.6*	*4.6*
Services	15,965	16,207	16,916	17,527	18,512	17,884	25,988	*2.3*	*7.8*
GDP	**31,124**	**32,133**	**33,979**	**34,838**	**36,004**	**33,955**	**46,632**	***1.8***	***6.6***
GDP Per Capita	26,808	27,434	29,848	30,202	30,936	26,910	38,710		
Sabah									
Agriculture	14,817	13,255	13,883	13,836	13,720	12,820	15,573	*-2.9*	*4.0*
Mining and Quarrying	18,207	21,992	25,441	23,994	22,726	19,663	23,543	*1.6*	*3.7*
Manufacturing	6,266	6,037	6,362	6,514	6,472	6,050	7,408	*-0.7*	*4.1*
Construction	2,446	2,357	2,322	2,918	3,099	2,197	2,727	*-2.1*	*4.4*
Services	31,755	33,575	35,434	37,423	39,442	36,509	56,451	*2.8*	*9.1*
GDP	**73,776**	**77,518**	**83,793**	**85,012**	**85,647**	**77,506**	**106,038**	***1.0***	***6.5***
GDP Per Capita	19,830	21,169	24,639	25,832	25,375	21,484	30,943		

Table 5

Gross Domestic Product by State and Kind of Economic Activity, 2015-2025 (at constant 2015 prices)–cont.

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Sarawak									
Agriculture	16,988	16,632	16,728	16,614	16,580	14,915	16,675	*-2.6*	*2.3*
Mining and Quarrying	29,852	29,253	30,214	29,627	30,000	28,227	31,907	*-1.1*	*2.5*
Manufacturing	32,128	33,567	34,811	35,579	36,613	33,471	43,237	*0.8*	*5.3*
Construction	3,843	3,633	4,355	4,402	4,476	4,082	4,810	*1.2*	*3.3*
Services	38,370	40,982	43,541	46,312	48,768	46,033	67,254	*3.7*	*7.9*
GDP	**121,585**	**124,513**	**130,169**	**133,010**	**136,758**	**127,116**	**164,341**	***0.9***	***5.3***
GDP Per Capita	45,006	45,346	50,177	52,387	53,552	48,597	67,241		
FT of Kuala Lumpur[1]									
Agriculture	2	2	2	2	2	2	2	*2.1*	*3.8*
Mining and Quarrying	117	129	146	146	153	140	170	*3.5*	*4.0*
Manufacturing	5,641	5,795	5,871	5,868	6,119	5,731	7,239	*0.3*	*4.8*
Construction	12,915	14,509	16,406	17,446	18,470	13,541	17,882	*1.0*	*5.7*
Services	159,752	168,742	180,196	193,472	205,421	193,165	235,109	*3.9*	*4.0*
GDP	**180,865**	**191,641**	**206,175**	**220,359**	**233,889**	**216,362**	**265,224**	***3.6***	***4.2***
GDP Per Capita	97,060	103,506	113,358	121,509	129,724	120,600	157,815		
FT of Labuan									
Agriculture	118	114	119	126	133	115	147	*-0.5*	*5.0*
Mining and Quarrying	0	0	0	0	0	0	0	*0.0*	*0.0*
Manufacturing	1,168	1,256	1,296	1,365	1,384	1,368	1,793	*3.2*	*5.6*
Construction	148	121	136	156	177	163	195	*1.8*	*3.7*
Services	4,490	4,844	5,093	5,481	5,900	5,903	7,723	*5.6*	*5.5*
GDP	**5,999**	**6,412**	**6,790**	**7,245**	**7,625**	**7,590**	**9,915**	***4.8***	***5.5***
GDP Per Capita	63,069	66,348	70,705	74,271	77,817	76,792	107,376		

Notes: [1] Includes FT of Putrajaya.
The added total may differ due to rounding.
GDP per capita refers to value at current prices.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 6

Merchandise Trade, 2015-2025

Item	RM million							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Gross Exports	**777,355**	**786,964**	**934,927**	**1,003,587**	**995,072**	**980,979**	**1,252,011**	***4.8***	***5.0***
Agriculture	67,247	70,424	78,072	67,001	65,958	71,677	90,592	*1.3*	*4.8*
Mining	80,194	65,056	81,836	89,907	81,520	57,391	81,522	*-6.5*	*7.3*
Manufacturing	625,429	645,768	765,858	837,071	840,586	847,664	1,075,585	*6.3*	*4.9*
Others	4,485	5,717	9,161	9,608	7,007	4,247	4,313	*-1.1*	*0.3*
Gross Imports	**685,778**	**698,819**	**836,422**	**879,804**	**849,411**	**796,194**	**1,060,987**	***3.0***	***5.9***
Retained Imports	**582,594**	**584,851**	**693,622**	**680,552**	**677,823**	**608,961**	**819,149**	***0.9***	***6.1***
Capital Goods	95,551	100,245	115,567	112,453	100,179	90,369	118,308	*-1.1*	*5.5*
Intermediate Goods	399,526	399,033	478,932	462,212	467,211	422,921	578,170	*1.1*	*6.5*
Consumption Goods	62,430	66,977	71,036	73,053	74,155	73,912	96,012	*3.4*	*5.4*
Others[1]	25,087	18,596	28,087	32,833	36,277	21,759	26,659	*-2.8*	*4.1*
Imports for Re-exports	**103,184**	**113,968**	**142,800**	**199,252**	**171,588**	**187,233**	**241,838**	***12.7***	***5.3***
Total Trade	**1,463,134**	**1,485,783**	**1,771,349**	**1,883,391**	**1,844,483**	**1,777,173**	**2,312,998**	***4.0***	***5.4***
Share to GDP, %	*124.3*	*118.9*	*129.1*	*130.1*	*121.9*	*125.5*	*115.0*	-	-
Trade Balance	**91,577**	**88,145**	**98,505**	**123,783**	**145,661**	**184,785**	**191,024**	***15.1***	***0.7***

Note: [1] Dual use goods, goods not elsewhere stated and transactions below RM5,000.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 7

Balance of Payments, 2015-2025

Item	RM million						
	Actual						Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025
Goods and Services, net	**88,592**	**83,128**	**94,255**	**97,106**	**113,863**	**91,261**	**106,495**
Goods, net	**109,224**	**102,046**	**117,113**	**114,621**	**124,738**	**138,710**	**165,074**
Exports	681,275	686,896	801,394	830,137	817,260	777,665	1,020,960
Imports	572,051	584,850	684,281	715,516	692,522	638,955	855,886
Services, net	**-20,632**	**-18,917**	**-22,859**	**-17,515**	**-10,875**	**-47,448**	**-58,579**
Transportation	-24,565	-23,459	-29,622	-27,688	-25,925	-27,352	-38,126
Travel	26,941	31,515	32,470	30,218	30,833	-7,651	17,609
Other Services	-22,405	-26,309	-24,308	-19,287	-15,072	-11,842	-36,911
Government Transaction n.i.e.[1]	-603	-665	-1,398	-758	-711	-602	-1,152
Primary Income, net	**-32,112**	**-34,592**	**-38,658**	**-45,082**	**-39,496**	**-28,584**	**-41,261**
Compensation of Employees	-5,595	-5,606	-4,848	-7,657	-9,229	-8,125	-11,503
Investment Income	-26,517	-28,986	-33,811	-37,426	-30,267	-20,459	-29,758
Secondary Income, net	**-21,325**	**-18,629**	**-17,300**	**-19,729**	**-21,450**	**-2,670**	**-21,264**
Current Account Balance	**35,155**	**29,907**	**38,296**	**32,295**	**52,917**	**60,008**	**43,971**
% to GNI	*3.1*	*2.5*	*2.9*	*2.3*	*3.6*	*4.3*	*2.2*
Capital Account, net	**-1,136**	**102**	**-26**	**-89**	**371**	**-428**	-
Capital Transfers	-8	-5	-22	-97	6	-251	-
Non-Produced Non-Financial Assets	-1,127	107	-3	8	365	-177	-
Financial Account, net	**-55,350**	**-249**	**-4,730**	**11,430**	**-38,024**	**-74,949**	-
Direct Investment	-1,810	13,792	16,171	10,103	6,555	2,756	-
Abroad	-41,187	-33,233	-24,248	-20,638	-25,810	-11,883	-
In Malaysia	39,377	47,025	40,419	30,741	32,364	14,639	-
Portfolio Investment	-26,122	-14,203	-15,358	-49,396	-32,403	-48,202	-
Other Investment	-26,755	964	-5,346	49,742	-11,697	-31,116	-
Public Sector	-1,878	-3,033	-627	-313	-192	-324	-
Private Sector	-24,877	3,997	-4,719	50,055	-11,506	-30,792	-
Balance on Capital and Financial Account	**-56,486**	**-148**	**-4,756**	**11,341**	**-37,653**	**-75,377**	-
Net Errors and Omissions	-32,222	-23,899	-17,132	-35,878	-6,849	-2,721	-
Overall Balance	**-53,553**	**5,860**	**16,409**	**7,758**	**8,416**	**-19,297**	-
BNM International Reserves, net	**409,096**	**423,874**	**414,591**	**419,511**	**424,032**	**432,183**	-
Months of Retained Imports	8.4	8.7	7.2	7.4	7.5	8.5	-

Notes: [1] n.i.e. - not included elsewhere.
Numbers are calculated according to Balance of Payments Manual 6 (BPM6).
Source: Bank Negara Malaysia, Department of Statistics Malaysia and Economic Planning Unit

Table 8

Malaysian Wellbeing Index, 2015-2025

Item	Index							Average Annual Growth Rate, %	
	Actual					Estimate	Target	Eleventh Plan[1]	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Economic Wellbeing	**125.3**	**125.6**	**127.6**	**128.8**	**131.8**	**130.6**	**137.9**	***0.8***	***1.1***
Transport	126.5	127.6	128.9	134.4	139.6	136.7	147.9	*1.6*	*1.6*
Communications	128.7	128.3	130.0	130.0	130.9	132.5	140.6	*0.6*	*1.2*
Working Life	116.9	116.3	120.3	119.4	124.6	122.7	129.3	*1.0*	*1.1*
Income and Distribution	129.0	129.8	130.2	130.3	130.7	129.3	135.4	*0.1*	*0.9*
Education	125.7	126.0	128.8	129.6	133.2	131.5	136.5	*0.9*	*0.7*
Social Wellbeing	**112.6**	**112.1**	**114.9**	**115.6**	**114.9**	**114.4**	**121.6**	***0.3***	***1.2***
Social Participation	109.9	114.6	117.4	119.9	121.2	119.8	130.9	*1.7*	*1.8*
Environment	102.6	98.4	103.9	109.3	104.5	108.2	117.4	*1.1*	*1.6*
Health	102.9	100.7	103.6	102.4	106.6	106.4	114.1	*0.7*	*1.4*
Housing	114.3	115.9	117.6	119.0	120.3	119.5	127.5	*0.9*	*1.3*
Governance	117.8	118.1	122.9	120.2	122.7	123.6	130.9	*1.0*	*1.2*
Public Safety	127.1	126.8	129.3	130.7	132.3	131.8	139.0	*0.7*	*1.1*
Family	98.6	96.7	96.5	97.3	97.4	95.0	99.7	*-0.7*	*1.0*
Entertainment and Recreation	129.4	129.9	131.5	133.2	132.5	132.0	138.1	*0.4*	*0.9*
Culture	111.3	107.6	111.2	108.6	96.7	93.5	97.0	*-3.4*	*0.8*
Malaysian Wellbeing Index	**117.2**	**116.9**	**119.4**	**120.3**	**120.9**	**120.2**	**127.5**	***0.5***	***1.2***

Note: [1] Economic Planning Unit estimates.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 9

Labour Productivity by Kind of Economic Activity, 2015-2025 (at constant 2015 prices)

Item	RM Value Added Per Worker							Average Annual Growth Rate, %	
	Actual						Target	Eleventh Plan	Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025	2016-2020	2021-2025
Agriculture	51,984	52,940	54,102	54,040	54,229	53,254	60,270	*0.5*	*2.5*
Mining and Quarrying	1,303,562	1,380,564	1,313,956	1,367,042	1,363,694	1,247,616	1,341,880	*-0.9*	*1.5*
Manufacturing	110,305	114,554	119,147	121,869	123,897	120,696	148,710	*1.8*	*4.3*
Construction	36,496	39,714	42,422	43,859	45,421	38,279	46,170	*1.0*	*3.8*
Services	79,095	80,645	84,102	87,050	89,599	84,266	100,590	*1.3*	*3.6*
Overall	**84,114**	**86,694**	**89,981**	**92,084**	**94,164**	**89,025**	**106,060**	***1.1***	***3.6***

Source: Department of Statistics Malaysia and Economic Planning Unit

Table 10

Federal Government Financial Position, 2015-2025

Item	RM million						
	Actual						Twelfth Plan Target
	2015	2016	2017	2018	2019	2020	2025
Revenue	**219,089**	**212,421**	**220,406**	**232,882**	**264,415**	**225,075**	**272,020**
Operating Expenditure	**216,998**	**210,173**	**217,695**	**230,960**	**263,343**	**224,600**	**264,955**
Current Balance	**2,091**	**2,248**	**2,711**	**1,922**	**1,072**	**475**	**7,065**
Gross Development Expenditure	**40,768**	**41,995**	**44,884**	**56,095**	**54,173**	**51,360**	**76,080**
less: Loan Recoveries	1,483	1,346	1,852	788	1,603	1,259	500
Net Development Expenditure	39,285	40,649	43,032	55,307	52,570	50,101	75,580
COVID-19 Fund	-	-	-	-	-	38,019	-
Overall Balance	**-37,194**	**-38,401**	**-40,321**	**-53,385**	**-51,499**	**-87,645**	**-68,515**
% to GDP	***-3.2***	***-3.1***	***-2.9***	***-3.7***	***-3.4***	***-6.2***	***-3.5 ~ -3.0***

Source: Economic Planning Unit and Ministry of Finance

Table 11

Median Monthly Household Gross Income by Ethnic, Strata and State, 2009-2019

Item	Median Monthly Household Gross Income, RM				
	2009	2012	2014	2016	2019
Malaysia	**2,841**	**3,626**	**4,585**	**5,228**	**5,873**
Ethnic					
Bumiputera	2,534	3,282	4,214	4,846	5,420
Chinese	3,643	4,643	5,708	6,582	7,391
Indian	2,853	3,676	4,627	5,428	5,981
Others	2,162	2,762	4,372	3,780	4,181
Strata					
Urban	3,435	4,238	5,156	5,860	6,561
Rural	1,836	2,372	3,123	3,471	3,828
State					
Johor	2,958	3,650	5,197	5,652	6,427
Kedah	1,966	2,633	3,451	3,811	4,325
Kelantan	1,713	2,276	2,716	3,079	3,563
Melaka	3,005	3,923	5,029	5,588	6,054
Negeri Sembilan	2,711	3,575	4,128	4,579	5,005
Pahang	2,479	3,067	3,389	3,979	4,440
Pulau Pinang	3,200	4,039	4,702	5,409	6,169
Perak	2,094	2,665	3,451	4,006	4,273
Perlis	1,832	2,387	3,500	4,204	4,594
Selangor	4,306	5,353	6,214	7,225	8,210
Terengganu	2,096	3,034	3,777	4,694	5,545
Sabah	2,066	2,860	3,745	4,110	4,235
Sarawak	2,394	3,047	3,778	4,163	4,544
FT of Kuala Lumpur	4,409	5,847	7,620	9,073	10,549
FT of Labuan	3,498	5,063	5,684	5,928	6,726
FT of Putrajaya	5,450	6,486	7,512	8,275	9,983

Note: Data is based on Malaysian citizens.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 12

Incidence of Absolute Poverty by Ethnic, Strata and State, 2009-2019

Item	Incidence of Absolute Poverty, %				
	2009	2012	2014	2016[1]	2019
Malaysia	***3.8***	***1.7***	***0.6***	***7.6***	***5.6***
Ethnic					
Bumiputera	*5.3*	*2.2*	*0.8*	*9.7*	*7.2*
Chinese	*0.6*	*0.3*	*0.1*	*2.2*	*1.4*
Indian	*2.5*	*1.8*	*0.6*	*5.5*	*4.8*
Others	*6.7*	*1.5*	*0.9*	*20.5*	*13.5*
Strata					
Urban	*1.7*	*1.0*	*0.3*	*4.8*	*3.8*
Rural	*8.4*	*3.4*	*1.6*	*17.5*	*12.4*
State					
Johor	*1.3*	*0.9*	*0.0*	*6.2*	*3.9*
Kedah	*5.3*	*1.7*	*0.3*	*14.3*	*8.8*
Kelantan	*4.8*	*2.7*	*0.9*	*19.5*	*12.4*
Melaka	*0.5*	*0.1*	*0.1*	*2.6*	*3.9*
Negeri Sembilan	*0.7*	*0.5*	*0.4*	*6.4*	*4.3*
Pahang	*2.1*	*1.3*	*0.7*	*9.2*	*4.3*
Pulau Pinang	*1.2*	*0.6*	*0.3*	*2.2*	*1.9*
Perak	*3.5*	*1.5*	*0.7*	*8.2*	*7.3*
Perlis	*6.0*	*1.9*	*0.2*	*7.2*	*3.9*
Selangor	*0.7*	*0.4*	*0.2*	*0.8*	*1.2*
Terengganu	*4.0*	*1.7*	*0.6*	*6.8*	*6.1*
Sabah	*19.7*	*8.1*	*4.0*	*23.9*	*19.5*
Sarawak	*5.3*	*2.4*	*0.9*	*11.9*	*9.0*
FT of Kuala Lumpur	*0.7*	*0.8*	*0.1*	*0.8*	*0.2*
FT of Labuan	*4.3*	*1.1*	*1.1*	*6.8*	*3.1*
FT of Putrajaya	*0.0*	*0.0*	*0.0*	*0.0*	*0.4*

Note: [1]Starting 2016 onwards, calculation of incidence of absolute poverty was based on 2019 PLI methodology.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 13

Population by Age, Ethnic and Strata, 2015-2025

Item	Actual		Estimate[1]		Forecast[2]		Average Annual Growth Rate, %	
	2015		2020		2025			
	Million	% to Total	Million	% to Total	Million	% to Total	Eleventh Plan 2016-2020	Twelfth Plan Forecast 2021-2025
Total Population	**31.2**	***100.0***	**32.7**	***100.0***	**34.7**	***100.0***	***0.9***	***1.2***
Age Structure								
0-14 years	7.8	*24.9*	7.6	*23.3*	7.5	*21.6*	*-0.5*	*-0.3*
15-64 years	21.6	*69.2*	22.8	*69.7*	24.5	*70.6*	*1.1*	*1.4*
65 years and above	1.8	*5.9*	2.3	*7.0*	2.7	*7.8*	*4.9*	*3.2*
Ethnic								
Citizen	**28.1**	***90.0***	**29.7**	***90.9***	**31.6**	***91.1***	***1.1***	***1.2***
Bumiputera[3]	19.2	*68.3*	20.7	*69.6*	22.2	*70.3*	*1.5*	*1.4*
Chinese	6.6	*23.6*	6.7	*22.6*	6.9	*21.8*	*0.3*	*0.6*
Indian	2.0	*7.1*	2.0	*6.8*	2.2	*7.0*	*0.0*	*1.9*
Others	0.3	*1.0*	0.3	*1.0*	0.3	*0.9*	*0.0*	*0.0*
Non-Citizen	**3.1**	***10.0***	**3.0**	***9.1***	**3.1**	***8.9***	***-0.7***	***0.7***
Strata								
Urban	23.2	*74.3*	25.0	*76.7*	26.8	*79.1*	*1.5*	*1.4*
Rural	8.0	*25.7*	7.9	*24.8*	7.9	*20.9*	*-0.3*	*0.0*
Total Fertility Rate, %	***2.0***		***1.7***		***1.5***			
Median Age, years	**27.8**		**29.2**		**30.7**			
Dependency Ratio, %	***44.5***		***43.5***		***44.2***			

Notes: [1] Department of Statistics Malaysia estimates.
[2] Economic Planning Unit forecast.
[3] Includes Malay and other Bumiputera.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 14

Labour Force, Employment and Job Creation, 2015-2025

Item	Actual				Target		Average Annual Growth Rate, %		Job Creation			
	2015		2020		2025		Eleventh Plan 2016-2020	Twelfth Plan Target 2021-2025	Eleventh Plan 2016-2020		Twelfth Plan Target 2021-2025	
	'000 person	% to Total	'000 person	% to Total	'000 person	% to Total			'000 person	% to Total	'000 person	% to Total
Total Employment[1]	**13,992.0**	***100.0***	**15,096.0**	***100.0***	**16,150.8**	***100.0***	***1.3***	***1.6***	**1,104.0**	***100.0***	**1,054.7**	***100.0***
Agriculture	1,876.0	*13.4*	1,866.0	*12.4*	1,984.4	*12.3*	*-0.4*	*2.3*	-10.0	*-0.9*	118.4	*11.2*
Mining and Quarrying	79.0	*0.6*	74.0	*0.5*	78.0	*0.5*	*-1.5*	*1.3*	-5.0	*-0.5*	4.0	*0.4*
Manufacturing	2,379.0	*17.0*	2,551.0	*16.9*	2,730.6	*16.9*	*1.1*	*1.4*	172.0	*15.6*	179.6	*17.0*
Construction	1,517.0	*10.8*	1,399.0	*9.3*	1,423.3	*8.8*	*-2.2*	*0.9*	-118.0	*-10.7*	24.3	*2.3*
Services	8,141.0	*58.2*	9,206.0	*61.0*	9,934.5	*61.5*	*2.3*	*1.6*	1,065.0	*96.5*	728.5	*69.1*
Total Labour Force	**14,518.0**		**15,667.7**		**16,823.4**		***1.5***	***1.4***				
Unemployed	**450.3**		**711.0**		**672.8**							
Unemployment rate, %	*3.1*		*4.5*		*4.0*							
Labour Force Participation, %	***67.9***		***68.4***		***69.7***							
Male	*80.6*		*80.6*		*81.7*							
Female	*54.1*		*55.3*		*57.0*							

Notes: [1] Labour Productivity Publication uses establishment and household approach.
The added total may differ due to rounding.
Source: Economic Planning Unit and Department of Statistics Malaysia

Table 15

Employment by Major Occupational Group, 2015-2025

Item	Employment by Major Occupational Group						Average Annual Growth Rate, %	
	Actual				Target			
	2015		2020		2025		Eleventh Plan	Twelfth Plan Target
	'000 person	% to Total	'000 person	% to Total	'000 person	% to Total	2016-2020	2021-2025
Skilled								
Managers	718.6	*5.1*	764.1	*5.1*	1,046.0	*6.5*	***1.2***	***6.3***
Professionals	1,462.0	*10.4*	1,933.8	*12.8*	2,417.4	*15.0*	***5.6***	***4.5***
Technicians and Associate Professionals	1,406.9	*10.0*	1,671.5	*11.1*	2,189.1	*13.6*	***3.4***	***5.4***
Semi-Skilled								
Clerical Support Workers	1,241.1	*8.8*	1,328.8	*8.8*	1,315.6	*8.1*	***1.4***	***-0.2***
Service and Sales Workers	3,188.9	*22.7*	3,538.3	*23.4*	3,398.4	*21.0*	***2.1***	***-0.8***
Skilled Agricultural, Forestry, Livestock and Fishery Workers	940.3	*6.7*	909.8	*6.0*	987.5	*6.1*	***-0.7***	***1.6***
Craft and Related Trade Workers	1,578.8	*11.2*	1,373.4	*9.1*	1,318.8	*8.2*	***-2.8***	***-0.8***
Plant and Machine Operators and Assemblers	1,585.2	*11.3*	1,731.6	*11.5*	1,701.6	*10.5*	***1.8***	***-0.3***
Low-Skilled								
Elementary Occupations	1,945.9	*13.8*	1,844.7	*12.2*	1,776.4	*11.0*	***-1.1***	***-0.8***
Total Employment	**14,067.7**	***100.0***	**15,096.0**	***100.0***	**16,150.8**	***100.0***	***1.4***	***1.4***

Note: The added total may differ due to rounding.
Source: Department of Statistics Malaysia and Economic Planning Unit

Table 16

Employment by Skills Category, 2015-2025

Item	Employment by Skills Category						Average Annual Growth Rate, %	
	Actual				Target			
	2015		2020		2025		Eleventh Plan	Twelfth Plan Target
	'000 person	% to Total	'000 person	% to Total	'000 person	% to Total	2016-2020	2021-2025
Skilled	3,587.5	*25.5*	4,369.3	*28.9*	5,652.5	*35.0*	***3.9***	***5.2***
Semi-Skilled	8,534.3	*60.7*	8,882.0	*58.8*	8,721.9	*54.0*	***0.8***	***-0.4***
Low-Skilled	1,945.9	*13.8*	1,844.7	*12.2*	1,776.4	*11.0*	***-1.1***	***-0.8***
Total Employment	**14,067.7**	***100.0***	**15,096.0**	***100.0***	**16,150.8**	***100.0***	***1.4***	***1.4***

Source: Department of Statistics Malaysia and Economic Planning Unit

Table 17

Students Enrolment in Education Institution, 2015-2020

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Pre-school, 4 to 6 years old					
Government School	**486,954**	***8.0***	**499,412**	***8.3***	***0.5***
Ministry of Education	198,574	*3.3*	208,459	*3.5*	*1.0*
Department of Community Development	219,481	*3.6*	218,258	*3.6*	*-0.1*
Department of National Unity and Integration	37,699	*0.6*	38,657	*0.6*	*0.5*
Malaysia Department of Islamic Development	31,200	*0.5*	34,038	*0.6*	*1.8*
Private School	**346,938**	***5.7***	**340,834**	***5.7***	**-0.4**
Private	338,140	*5.6*	332,909	*5.5*	*-0.3*
Muslim Islamic Youth Movement of Malaysia	8,798	*0.1*	7,925	*0.1*	*-2.1*
Total	**833,892**	***13.7***	**840,246**	***14.0***	***0.2***
Primary					
Government School	**2,710,899**	***44.6***	**2,798,124**	***46.5***	***0.6***
Government and Government Aided School (MOE)	2,683,992	*44.2*	2,741,995	*45.6*	*0.4*
State Religious Department	26,907	*0.4*	56,129	*0.9*	*15.8*
Private School	**56,891**	***0.9***	**75,257**	***1.3***	***5.8***
Total	**2,767,790**	***45.5***	**2,873,381**	***47.8***	**0.8**

Table 17

Students Enrolment in Education Institution, 2015-2020-cont.

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Lower Secondary					
Government School	**1,349,375**	***22.2***	**1,258,910**	***20.9***	***-1.4***
Government and Government Aided School (MOE)	1,290,690	*21.2*	1,186,023	*19.7*	*-1.7*
Malaysia Department of Islamic Development	39,648	*0.7*	51,766	*0.9*	*5.5*
MARA Junior Science Colleges	19,037	*0.3*	21,121	*0.4*	*2.1*
Private School	**81,237**	***1.3***	**79,423**	***1.3***	***-0.5***
Total	**1,430,612**	***23.5***	**1,338,333**	***22.2***	***-1.3***
Upper Secondary					
Government School	**817,894**	***13.5***	**779,148**	***13.0***	***-1.0***
Government and Government Aided School - Academic (MOE)	596,228	*9.8*	595,530	*9.9*	*-0.0*
Government and Government Aided School - Technical and Vocational (MOE)	185,244	*3.0*	138,932	*2.3*	*-5.6*
Malaysia Department of Islamic Development	20,603	*0.3*	28,570	*0.5*	*6.8*
MARA Junior Science Colleges	15,360	*0.3*	15,668	*0.3*	*0.4*
The Royal Military College	459	*0.01*	448	*0.01*	*-0.5*
Private School	**43,764**	***0.7***	**51,031**	***0.8***	***3.1***
Total	**861,658**	***14.2***	**830,179**	***13.8***	***-0.7***

Table 17

Students Enrolment in Education Institution, 2015-2020-cont.

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Post Secondary					
Government	**171,551**	***2.8***	**118,635**	***2.0***	***-7.1***
Government and Government Aided School - Form Six (MOE)	109,493	*1.8*	68,064	*1.1*	*-9.1*
Pre University (MOE)	185	*0.003*	232	*0.004*	*4.6*
Matriculation (MOE)	21,002	*0.3*	26,630	*0.4*	*4.9*
Form Six (JAKIM)	4,964	*0.1*	5,110	*0.1*	*0.6*
Institutes of Teacher Education (MOE)	35,907	*0.6*	18,599	*0.3*	*-12.3*
Private[1]	**11,432**	***0.2***	**14,316**	***0.2***	***4.6***
Total	**182,983**	***3.0***	**132,951**	***2.2***	***-6.2***
Overall	**6,076,935**	***100.0***	**6,015,090**	***100.0***	***-0.2***

Notes: [1] Form Six/Post Secondary.
Item in brackets refers to the ministry or agency responsible for the respective educational institution.
All data provided are as of 30 June 2020 except for the post secondary level data which is as of 30 October 2020. This is due to the delayed admission of Form 6 students due to COVID-19 pandemic.
Source: Ministry of Education

Table 18

Students Intake in Higher Education Institutions, 2015-2020

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Institutions					
Public Higher Education Institutions	**218,937**	***42.8***	**206,852**	***55.6***	***-1.1***
Public Universities	168,127	*32.9*	177,710	*47.8*	*1.1*
Polytechnics	37,971	*7.4*	23,743	*6.4*	*-9.0*
Community Colleges	12,839	*2.5*	5,399	*1.5*	*-15.9*
Private Higher Education Institutions	**292,217**	***57.2***	**165,158**	***44.4***	***-10.8***
Total	**511,154**	***100.0***	**372,010**	***100.0***	***-6.2***
Level of Study					
PhD	7,665	*1.5*	10,328	*2.8*	*6.1*
Master's	36,561	*7.2*	27,217	*7.3*	*-5.7*
Bachelor's	189,748	*37.1*	171,331	*46.1*	*-2.0*
Diploma	189,995	*37.2*	107,382	*28.9*	*-10.8*
Certificates	51,906	*10.2*	10,561	*2.8*	*-27.3*
Others[1]	35,279	*6.9*	45,191	*12.1*	*5.1*
Total	**511,154**	***100.0***	**372,010**	***100.0***	***-6.2***
Fields of Study					
General Programmes	43,236	*8.5*	24,762	*6.7*	*-10.5*
Education	27,327	*5.3*	22,510	*6.1*	*-3.8*
Arts & Humanities	37,183	*7.3*	33,753	*9.1*	*-1.9*
Social Sciences, Business & Law	186,530	*36.5*	129,341	*34.8*	*-7.1*
Science, Mathematics & Computing	56,119	*11.0*	49,672	*13.4*	*-2.4*
Engineering, Manufacturing & Construction	88,200	*17.3*	66,216	*17.8*	*-5.6*
Agriculture & Veterinary	6,920	*1.4*	4,864	*1.3*	*-6.8*
Health & Welfare	32,888	*6.4*	19,572	*5.3*	*-9.9*
Services	32,751	*6.4*	21,320	*5.7*	*-8.2*
Total	**511,154**	***100.0***	**372,010**	***100.0***	***-6.2***

Note: [1] Professional, post graduate diploma, advanced diploma, matriculation and others.
Source: Ministry of Higher Education

Table 19

Students Enrolment in Higher Education Institutions, 2015-2020

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Institutions					
Public Higher Education Institutions	**655,236**	***53.0***	**686,664**	***56.1***	***0.9***
Public Universities	540,638	*43.7*	584,576	*47.8*	*1.6*
Polytechnics	96,069	*7.8*	85,936	*7.0*	*-2.2*
Community Colleges	18,529	*1.5*	16,152	*1.3*	*-2.7*
Private Higher Education Institutions	**580,928**	***47.0***	**537,434**	***43.9***	***-1.5***
Total	**1,236,164**	***100.0***	**1,224,098**	***100.0***	***-0.2***
Level of Study					
PhD	36,967	*3.0*	47,424	*3.9*	*5.1*
Master's	84,329	*6.8*	82,924	*6.8*	*-0.3*
Bachelor's	592,149	*47.9*	641,189	*52.4*	*1.6*
Diploma	401,009	*32.4*	370,217	*30.2*	*-1.6*
Certificates	78,208	*6.3*	26,766	*2.2*	*-19.3*
Others[1]	43,502	*3.5*	55,578	*4.5*	*5.0*
Total	**1,236,164**	***100.0***	**1,224,098**	***100.0***	***-0.2***
Fields of Study					
General Programmes	50,339	*4.1*	34,023	*2.8*	*-7.5*
Education	76,117	*6.2*	83,183	*6.8*	*1.8*
Arts & Humanities	102,540	*8.3*	109,315	*8.9*	*1.3*
Social Sciences, Business and Law	430,581	*34.8*	433,903	*35.4*	*0.2*
Science, Mathematics and Computing	147,038	*11.9*	148,850	*12.2*	*0.2*
Engineering, Manufacturing and Construction	263,972	*21.4*	245,494	*20.1*	*-1.4*
Agriculture and Veterinary	21,400	*1.7*	14,579	*1.2*	*-7.4*
Health and Welfare	78,278	*6.3*	81,148	*6.6*	*0.7*
Services	65,899	*5.3*	73,603	*6.0*	*2.2*
Total	**1,236,164**	***100.0***	**1,224,098**	***100.0***	***-0.2***

Note: [1] Professional, post graduate diploma, advanced diploma, matriculation and others.
Source: Ministry of Higher Education

Table 20

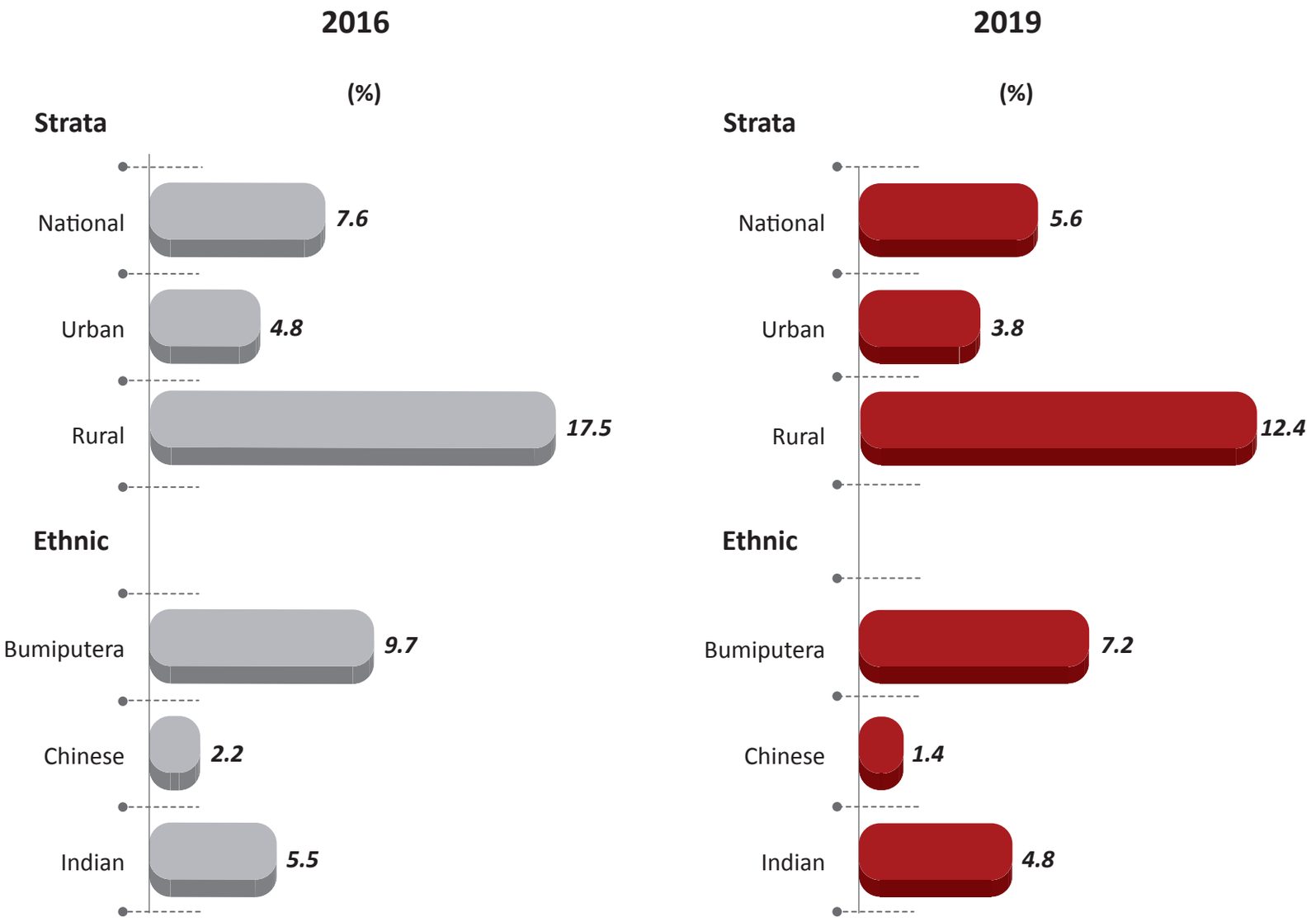
Students Output in Higher Education Institutions, 2015-2020

Item	2015		2020		Average Annual Growth Rate, %
	Number of Students	% to Total	Number of Students	% to Total	Eleventh Plan 2016-2020
Institutions					
Public Higher Education Institutions	**155,420**	***53.6***	**150,670**	***59.2***	***-0.6***
Public Universities	122,454	*42.3*	114,709	*45.0*	*-1.3*
Polytechnics	25,388	*8.8*	28,924	*11.4*	*2.6*
Community Colleges	7,578	*2.6*	7,037	*2.8*	*-1.5*
Private Higher Education Institutions	**134,374**	***46.4***	**104,018**	***40.8***	***-5.0***
Total	**289,794**	***100.0***	**254,688**	***100.0***	***-2.5***
Level of Study					
PhD	3,709	*1.3*	3,976	*1.6*	*1.4*
Master's	19,229	*6.6*	17,582	*6.9*	*-1.8*
Bachelor's	117,754	*40.6*	110,498	*43.4*	*-1.3*
Diploma	107,476	*37.1*	89,715	*35.2*	*-3.5*
Certificates	33,182	*11.5*	9,341	*3.7*	*-22.4*
Others[1]	8,444	*2.9*	23,576	*9.3*	*22.8*
Total	**289,794**	***100.0***	**254,688**	***100.0***	***-2.5***
Fields of Study					
General Programmes	24,101	*8.3*	20,049	*7.9*	*-3.6*
Education	29,871	*10.3*	12,683	*5.0*	*-15.7*
Arts and Humanities	19,481	*6.7*	23,927	*9.4*	*4.2*
Social Sciences, Business and Law	92,315	*31.9*	83,428	*32.8*	*-2.0*
Science, Mathematics and Computing	30,322	*10.5*	29,473	*11.6*	*-0.6*
Engineering, Manufacturing and Construction	55,211	*19.1*	54,789	*21.5*	*-0.2*
Agriculture and Veterinary	4,119	*1.4*	4,151	*1.6*	*0.2*
Health and Welfare	18,831	*6.5*	10,954	*4.3*	*-10.3*
Services	15,543	*5.4*	15,234	*6.0*	*-0.4*
Total	**289,794**	***100.0***	**254,688**	***100.0***	***-2.5***

Note: [1] Professional, post graduate diploma, advanced diploma, matriculation and others.
Source: Ministry of Higher Education

Chart 1

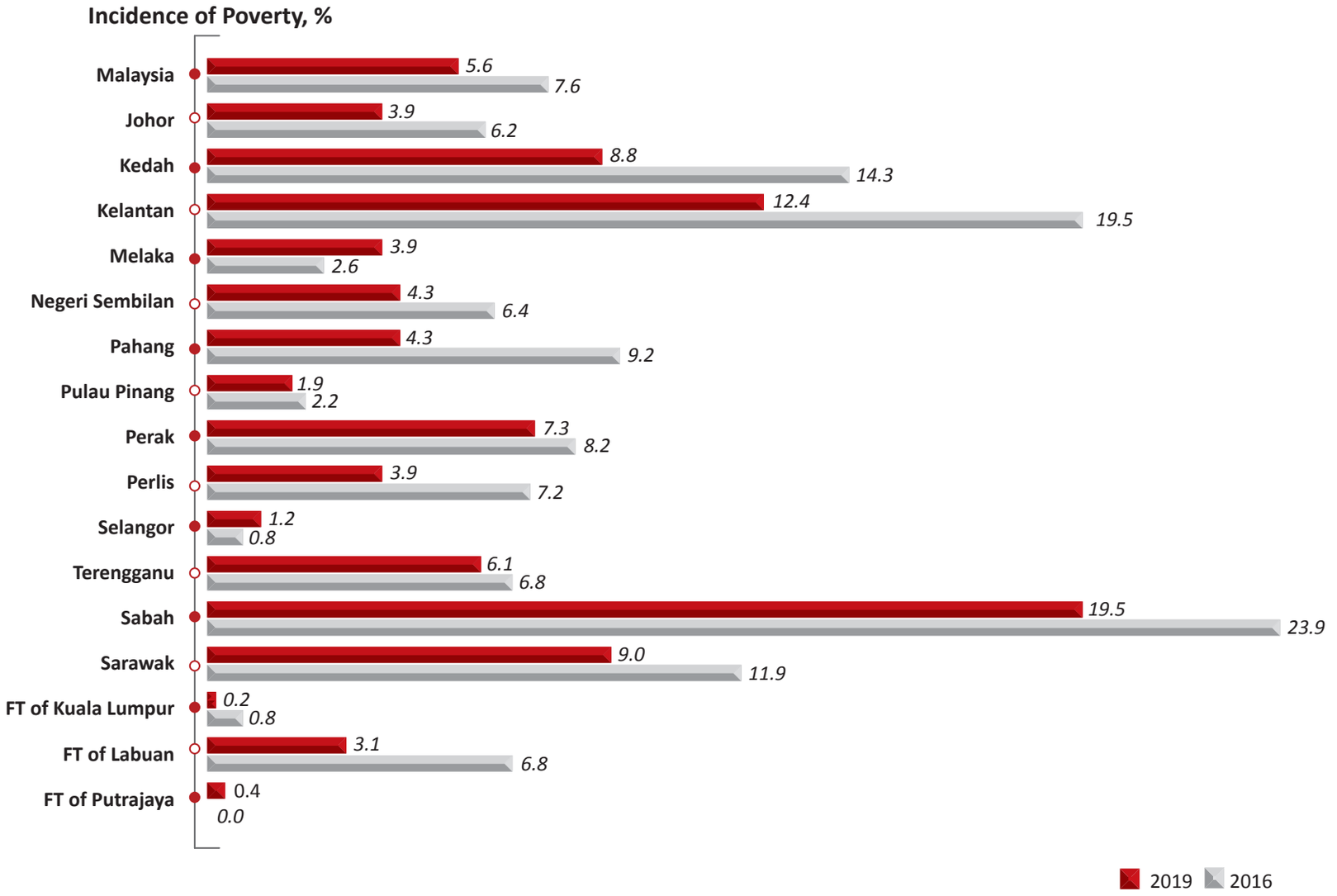
Incidence of Absolute Poverty by Strata and Ethnic, 2016 and 2019



Note: Calculation of incidence of absolute poverty is based on 2019 PLI methodology.
Source: Department of Statistics Malaysia and Economic Planning Unit

Chart 2

Incidence of Absolute Poverty by State, 2016 and 2019



Note: Calculation of incidence of absolute poverty is based on 2019 PLI methodology.
Source: Department of Statistics Malaysia and Economic Planning Unit

Glossary

2030 Agenda	2030 Agenda for Sustainable Development
2G	second generation wireless technology
2u2i	two years in the university and two years in the industry
3R	reduce, reuse and recycle
3u1i	three years in the university and one year in the industry
4G	fourth generation wireless technology
4IR	Fourth Industrial Revolution
4PL	fourth-party logistics
5G	fifth generation wireless technology
6R	Resolve, Resilient, Restart, Recovery, Revitalise and Reform
AACB	awareness-raising, advocacy and capacity-building
ABMS	Anti-Bribery Management System
Act 802	Private Aged Healthcare Facilities and Services Act
AEC	ASEAN Economic Community
AgF	Agriculture Flagship
AHB	*Amanah Hartanah Bumiputera*
AI	artificial intelligence
AMANITA	*Aman Wanita*
AOR	average occupancy rate
APEC	Asia-Pacific Economic Cooperation
APG	ASEAN Power Grid
AR	augmented reality
ASB	*Amanah Saham Bumiputera*
ASD	alternative service delivery
ASEAN	Association of Southeast Asian Nations
ASEAN-5	five major member countries of the Association of Southeast Asian Nations
ASN	*Amanah Saham Nasional*
ATM	Malaysian Armed Forces
AUM	Assets Under Management

B1	bottom 10% household income decile group
B10	biodiesel with mixture of 10% palm methyl ester and 90% diesel
B15	biodiesel with mixture of 15% palm methyl ester and 85% diesel
B20	biodiesel with mixture of 20% palm methyl ester and 80% diesel
B20	bottom 20% household income decile group
B2B	business-to-business
B30	biodiesel with mixture of 30% palm methyl ester and 70% diesel
B40	bottom 40% household income group
B7	biodiesel with mixture of 7% palm methyl ester and 93% diesel
BA100	*Barangan Asas 100*
BAKAS	Water Supply and Environmental Sanitation
BALB	Rural Water Supply Programme
BDA	big data analytics
BEC	Bumiputera Economic Community
BEI	Building Energy Intensity
BELB	Rural Electricity Supply
BERD	research and development expenditure by business enterprises
BI	Behavioural Insights
BIM	Building Information Modelling
BIMP-EAGA	Brunei Darussalam-Indonesia-Malaysia-Philippines East ASEAN Growth Area
BKB	Bumiputera Prosperity Division
BOP	balance of payments
bpd	barrels per day
CAAM	Civil Aviation Authority of Malaysia
CBD	Convention on Biological Diversity
CBOs	community-based organisations
CCMPs	City Competitiveness Master Plans
CCNCPU	Child Care Needs and Child Protection Unit
CDERT-C	Civil Defence Emergency Response Team-Community
CDs	communicable diseases
CE	compensation of employees

CEFR	Common European Framework of Reference for Languages
CEOs	Chief Executive Officers
CEPA	communication, education and public awareness
CFS	Central Forest Spine
CGPA	Cumulative Grade Point Average
CIDB	Construction Industry Development Board
CIMS	Centralised Information Management System
CIQ	Customs, Immigration and Quarantine
CITP	Construction Industry Transformation Programme
CNS	Communication, Navigation and Surveillance System
CO_2eq	carbon dioxide equivalent
COL	Critical Occupations List
COMBI	Communication of Behavioural Impact
COPTPA	Code of Practice for TVET Programme Accreditation
CORSIA	Carbon Offsetting and Reduction Scheme for International Aviation
COVID-19	Coronavirus disease 2019
CPI	Corruption Perceptions Index
CREST	Collaborative Research in Engineering, Science and Technology
CSOs	civil society organisations
CSR	Central Spine Road
CSR	corporate social responsibility
CWs	constructed wetlands
D&D	Design and Development
DAKN2030	National Agricommodity Policy 2021-2030
DAN 2.0	National Agrofood Policy 2021-2030
DASH	Damansara-Shah Alam Elevated Expressway
DCI 2.0	Development Composite Index 2.0
DE	development expenditure
DELIMa	Digital Educational Learning Initiative Malaysia
DFIs	Development Financial Institutions
DFTZ	Digital Free Trade Zone

DGCCR	Digital Government Competency and Capability Readiness
DigitalNiaga	Digital On-Boarding for Micro Businesses
DIKN	The National Creative Industry Policy 2010
DISF	Domestic Investment Strategic Fund
DKN 2030	*Dasar Keusahawanan Nasional 2030*
DLP	Dual Language Programme
DMSS	decision-making support system
DNB	*Digital Nasional Berhad*
DOSM	Department of Statistics Malaysia
DSD	Department of Skills Development
DSM	demand side management
DTAP	Digital Transformation Acceleration Programme
E&E	electrical and electronics
EACG	Energy Audit Conditional Grants
EBP	evidence-based policy
ECCE	early childhood care and education
ECF	equity crowdfunding
ECOSOC	United Nations Economic and Social Council
ECRL	East Coast Rail Link
eDKK	Sexual Offenders against Children in the Child Registry
EDOs	entrepreneur development organisations
EE	energy efficiency
EEVs	energy-efficient vehicles
EFT	ecological fiscal transfer
EIA	Environmental Impact Assessment
EIU	Economist Intelligence Unit
EKUINAS	*Ekuiti Nasional Berhad*
EKVE	East Klang Valley Expressway
Eleventh Plan	Eleventh Malaysia Plan, 2016-2020
EMR	Electronic Medical Record
EMS	Electronics Manufacturing Services

EOT	employee ownership trust
eP	*ePerolehan*
EPC	Energy Performance Contracting
EPF	Employees Provident Fund
ePPAx	Integrated Foreign Workers Management System
EPR	extended producer responsibility
EPU	Economic Planning Unit
EQA	External Quality Assurance
ERC	Electoral Reform Committee
ESCO	European Commission's European Skills, Competences, Qualifications and Occupation
ESG	environmental, social and governance
eTOD	equitable transit-oriented development
EToU	Enhanced Time of Use
ETS	Electric Train Services
EU	European Union
EURO 4M	Malaysian Emission Standards equivalent to European Emission Standards 4
e-waste	electrical and electronic waste
FACE	Family and Community Empowerment
FBO	Fixed Based Operator
FDI	foreign direct investment
FELCRA	Federal Land Consolidation and Rehabilitation Authority
FELDA	Federal Land Development Authority
FiT	Feed-in Tariff
FLFPR	female labour force participation rate
FLNG	floating liquefied natural gas
FoR	Friends of Rivers
FRA	Fiscal Responsibility Act
FT	Federal Territory
FTAs	free trade agreements
G2B	government-to-business
G2G	government-to-government

GBS	Global Business Services
GCAP	Green City Action Plan
GDP	gross domestic product
GE	graduate employability
GEI	Green Economy Indicators
GEI	Global Entrepreneurship Index
GERD	gross expenditure on research and development
GGP	government green procurement
GGP	Guidelines on Good Practices
GHG	greenhouse gas
GIACC	National Centre for Governance, Integrity and Anti-Corruption
GITA	Green Investment Tax Allowance
GITE	Green Income Tax Exemption
GJB	Electrified Double Track Gemas-Johor Bahru
GKL/KV	Greater Kuala Lumpur/Klang Valley
GLCs	government-linked companies
GLICs	government-linked investment companies
GMO	genetically modified organisms
GMP	Good Manufacturing Practice
GNI	gross national income
GoEx	Going Export
GOS	gross operating surplus
GP	Government Procurement
GPI	Global Peace Index
GRP	Good Regulatory Practices
GS	global services
GST	Goods and Services Tax
GTFS	Green Technology Financing Scheme
GTSP	Go to Safety Point
GVC	global value chain
HACCP	Hazard Analysis Critical Control Points

HARMONI	*Jawatankuasa Keharmonian Antara Penganut Agama*
HCFC	hydrochlorofluorocarbon
HDA	Highland Development Agency
HEIs	higher education institutions
HFC	hydrofluorocarbon
HICoE	Higher Institution Centres of Excellence
HIES&BA 2019	Household Income & Expenditure Survey and Basic Amenities 2019
HIMP 2030	Halal Industry Master Plan 2030
HIP	Highly Immersive Programme
HIV	Human Immunodeficiency Virus
HNDP 2030	Highway Network Development Plan 2030
HoB	Heart of Borneo
HPB	Halal Professional Board
HPMP	Hydrochlorofluorocarbons (HCFC) Phased-Out Management Plan
HPS	high performance sports
HPV	Human Papillomavirus
HRDP	Human Resource Development Policy
HRMIS	Human Resource Management Information System
HSBB	High Speed Broadband
IB	Inclusive Business
IBME	Inquiry-Based Mathematics Education
IBS	Industrialised Building System
IBSE	Inquiry-Based Science Education
IC	integrated circuits
ICAO	International Civil Aviation Organization
ICCO	Incentives Coordination and Collaboration Office
iCGPA	Integrated Cumulative Grade Point Average
ICoE	Industry Centres of Excellence
ICP	Industrial Collaboration Programme
ICQS	Immigration, Customs, Quarantine and Security
ICT	information and communication technology

IEA	International Association for the Evaluation of Educational Achievement
iGFMAS	Integrated Government Financial Management Accounting System
IIL	Institution-Industry Lab
ILCs	indigenous and local communities
ILKBS	*Institut Latihan Kemahiran Belia dan Sukan*
IMD	Institute for Management Development
IMO	International Maritime Organization
IMT-GT	Indonesia-Malaysia-Thailand Growth Triangle
Industry4WRD	National Policy on Industry 4.0
IoT	internet of things
IPG	institutes of teacher education
IPNas	National Unity Index
IPO	initial public offering
IPR	intellectual property rights
IPs	intellectual properties
IRBM	Integrated River Basin Management
ISO TC 324	The International Standards Organization (ISO) Technical Committee 324
ISO-IWA	The International Standards Organization-International Workshop Agreement
ISP	internet service provider
IWRM	Integrated Water Resources Management
JAKIM	Department of Islamic Development Malaysia
JAKOA	Department of Orang Asli Development
JENDELA	*Pelan Jalinan Digital Negara*
JKKMAR	Special Cabinet Committee on Anti-Corruption
JKKN	*Jabatan Kebudayaan dan Kesenian Negara*
JKMPKA	*Jawatankuasa Mempromosikan Persefahaman dan Keharmonian Antara Penganut Agama*
JKR	Public Works Department
JPA	Public Service Department
JPKK	*Jawatankuasa Pembangunan dan Keselamatan Kampung*
JPKKP	*Jawatankuasa Pembangunan dan Keselamatan Kampung Persekutuan*
JPN	State Education Departments

JPNIN	Department of National Unity and Integration
K9	Comprehensive Special Model School 9
K11	Comprehensive Special Model School 11
KBKK	Kota Bharu-Kuala Krai Highway
KEGA	Key Economic Growth Areas
KEMAS	Community Development Department
KHAZANAH	*Khazanah Nasional Berhad*
KITA PRIHATIN	PRIHATIN Supplementary Initiative Package
km	kilometre
KOSPEN	*Komuniti Sihat Pembina Negara*
KPDNHEP	Ministry of Domestic Trade and Consumer Affairs
KPIs	key performance indicators
KPKT	Ministry of Housing and Local Government
KSPK	*Kurikulum Standard Prasekolah Kebangsaan*
KSPK PK	*Kurikulum Standard Prasekolah Kebangsaan Pendidikan Khas*
$ktCO_2eq$	kilo tonnes of carbon dioxide equivalent
kV	kilovolt
KVDT	Klang Valley Double Track Project
kWh	kilowatt hour
LA21	Local Agenda 21
LAC	Limits of Acceptable Change
LAN	local area network
LCCF	Low Carbon Cities Framework
lcd	litres per capita per day
LED	light-emitting device
LFPR	labour force participation rate
LFS	Labour Force Survey
LLL	lifelong learning
LMI	Labour Market Information
LNG	liquefied natural gas
LPI	Logistics Performance Index

LPT3	East Coast Highway 3
LRT 2	Light Rail Transit Line 2
LSS	large scale solar
LULUCF	Land Use, Land-Use Change and Forestry
M&A	mergers and acquisitions
M40	middle 40% household income group
MA63	Malaysia Agreement 1963
MACC	Malaysian Anti-Corruption Commission
MaGIC	Malaysian Global Innovation and Creativity Center
MAIB 2030	Malaysia Aerospace Industry Blueprint 2030
MAMPU	Malaysian Administrative Modernisation and Management Planning Unit
MARA	*Majlis Amanah Rakyat*
MaTEx	Malaysia Tourism Excellence
MAVCOM	Malaysian Aviation Commission
MBOT	Malaysia Board of Technologists
Mbps	megabits per second
MCO	Movement Control Order
MCSS	Malaysia Cyber Security Strategy
MCY	Malaysia Commercialisation Year
MCY 2.0	Malaysia Commercialisation Year 2.0
MDG	Malaysian Dietary Guidelines
MDV-TACT	Malaysia Debt Venture Technology Acceleration and Commercialisation Scheme
MEB (HE)	Malaysia Education Blueprint 2015-2025 (Higher Education)
MEPS	Minimum Energy Performance Standard
MEX II	Putrajaya-KLIA Expressway
MFP	multifactor productivity
MiB300	*Majlis Belia Malaysia* in Business
MICE	meetings, incentives, conventions and exhibitions
mld	million litres per day
mmBtu	million British thermal unit
MNCs	multinational companies

MoAs	memorandum of agreements
MOE	Ministry of Education
MOH	Ministry of Health
MOOC	Massive Open Online Courses
MOTAC	Ministry of Tourism, Arts and Culture
MoU	memorandum of understanding
MPAs	Marine Protected Areas
MPB	Malaysia Productivity Blueprint
MPI	Multidimensional Poverty Index
MPV	Mobile Patrol Vehicle
MQA	Malaysian Qualifications Agency
MQF	Malaysian Qualifications Framework
MRO	maintenance, repair and overhaul
MRS	Manufacturing Related Services
MRSM	*Maktab Rendah Sains MARA*
MRT 1	Mass Rapid Transit Line 1
MRT 2	Mass Rapid Transit Line 2
MS	Malaysian Standard
MSAP	Mandatory Standards on Access Pricing
MSC	Multimedia Super Corridor
MSCF	Malaysia Smart City Framework
MSMEs	micro, small and medium enterprises
MSPO	Malaysian Sustainable Palm Oil
MUO	Malaysia Urban Observatory
MURNInets	Malaysian Urban-Rural National Indicators Network for Sustainable Development
MVV 2.0	Malaysia Vision Valley 2.0
MW	megawatts
MYCorps	Malaysian Youth Volunteering Programme
MyCREST	Malaysian Carbon Reduction and Environmental Sustainability Tool
MyDeposit	First House Deposit Financing Scheme
myGAP	Malaysia Good Agricultural Practice

MyGDX	Malaysian Government Central Data Exchange
MyHAC	Malaysia Halal Analysis Centre
MyHDW	Malaysian Health Data Warehouse
MyHome	My First Home Scheme
MyQUEST	Malaysian Quality Evaluation System for Private College
MyRA	Malaysian Research Assessment System
MYSED II	Malaysia Strategy Framework for Emerging Diseases and Public Health Emergencies II
MySPC	Malaysia Social Protection Council
MySTIE	10-10 Malaysian Science, Technology, Innovation and Economy
MyWI	Malaysian Wellbeing Index
NACCOL	National Cost of Living Council
NACP	National Anti-Corruption Plan
NAHP	National Affordable Housing Policy
NAICO	National Aerospace Industry Coordinating Office
NAP	National Automotive Policy
NAWABS	National Water Balance Management System
NCDs	non-communicable diseases
NCP	National Community Policy
NCR	Native Customary Rights
NDI	national digital identification
NDP	National Development Policy
NDTS	National Dual Training System
NEC	National Employment Council
NEDA	New Enhanced Dispatch Arrangement
NEM	Net Energy Metering
NEP	New Economic Policy
NFCP	National Fiberisation and Connectivity Plan
NFPCs	non-financial public corporations
NIA	National Investment Aspirations
NIH	National Institute of Health
NIP	National Integrity Plan

NLTF	National Logistic Taskforce
NOSS	National Occupational Skills Standards
NPP4	Fourth National Physical Plan
NPQEL	National Professional Qualification for Educational Leaders
NPQSL	National Professional Qualification for System Leaders
NPS	new psychoactive substances
NPSTI	National Policy on Science, Technology and Innovation
NRDA	Northern Region Development Agency
NRP	National Recovery Plan
NRW	non-revenue water
NSAs	national sports associations
NSC	National Security Council
NTIS	National Technology and Innovation Sandbox
NTP	National Transport Policy
NTP	National Transformation Policy
NUA	New Urban Agenda
NUP2	Second National Urbanisation Policy
NVP	National Vision Policy
NWI	National Wage Index
OBS	Open Budget Survey
OECD	Organisation for Economic Co-operation and Development
OECM	other effective area-based conservation measures
OEMs	original equipment manufacturers
OGSE	oil and gas services and equipment
OIC	Organisation of Islamic Cooperation
OPEC	Organization of the Petroleum Exporting Countries
OTP	On Time Performance
PAC	Public Accounts Committee
PAJSK	Physical Activities, Sports and Co-curricular Assessment
PAP	Pre-Approved Plan
PBD	Classroom Assessment

PBR	*Program Bantuan Rumah*
PBS	School-based Assessment
PCPs	Physical Connectivity Projects
PDK	*Pemulihan Dalam Komuniti*
PDRM	Royal Malaysia Police
PE	polyethylene
PeDAS	*Perkhidmatan e-Dagang Setempat*
PeKa B40	*Skim Peduli Kesihatan untuk Kumpulan B40*
PEKB	*Pemerkasaan Ekonomi Komuniti Bandar*
PEMERKASA	Strategic Programme to Empower the People and Economy
PEMERKASA+	Strategic Programme to Empower the People and Economy Supplementary
PEMULIH	*Perlindungan Rakyat dan Pemulihan Ekonomi*
PENJANA	National Economic Recovery Plan
PERHILITAN	Department of Wildlife and National Parks
PERMAI	*Perlindungan Ekonomi dan Rakyat Malaysia*
PES	payment for ecosystem services
PET	polyethylene terephthalate
PETRONAS	*Petroliam Nasional Berhad*
PFE	Permanent Forest Estate
PFLNG	PETRONAS Floating LNG
PHB	*Pelaburan Hartanah Berhad*
PhD	Doctor of Philosophy
PIAs	permit issuing agencies
PID	*Pusat Internet Desa*
PIK	*Pusat Internet Komuniti*
PIPs	Priority Infrastructure Projects
PISA	Programme for International Student Assessment
PKA	Port Klang Authority
PKD	*Pusat Komuniti Desa*
PKFZ	Port Klang Free Zone
PLCs	public listed companies

PLI	Poverty Line Income
PLWS	Productivity Linked Wage System
PMB	*Pelaburan MARA Berhad*
PME	palm methyl ester
PNB	*Permodalan Nasional Berhad*
PNK	*Persatuan Nelayan Kawasan*
PoP	points of presence
PP	polypropylene
PPA	power purchase agreement
PPAM	*Perumahan Penjawat Awam Malaysia*
PPB	*Piawaian Perumahan Berkualiti*
PPD	District Education Offices
PPISK	*Program Perolehan Impak Sosial Kerajaan*
PPK	*Pertubuhan Peladang Kawasan*
PPP	public-private partnership
PPP	*Program Peningkatan Pendapatan*
PPP	*Program Penyenggaraan Perumahan*
PPR	*Program Perumahan Rakyat*
PPRN	Public-Private Research Network
PPsi	Psychometric Assessment
PRC	People's Republic of China
PRE	Economic Stimulus Package
PRF	Permanent Reserved Forest
PRIHATIN	Prihatin Rakyat Economic Stimulus Package
PRIHATIN SME+	Additional PRIHATIN SME Economic Stimulus Package
PROSIS	*Program Siswa Sihat*
PSC	Public Sector Comparator
PSF	Post School Finishing
PT3	*Pentaksiran Tingkatan Tiga*
PTAs	Parent-Teacher Associations
PTP	Port of Tanjung Pelepas

PTPTN	*Perbadanan Tabung Pendidikan Tinggi Nasional*
PUNB	*Perbadanan Usahawan Nasional Berhad*
PUSH	*Pemangkin Usahawan Sosial Hebat*
PV	photovoltaic
PVC	polyvinyl chloride colloquial
PWDs	persons with disabilities
QLASSIC	Quality Assessment System for Building Construction Works
QSWUR	Quacquarelli Symonds World University Rankings
R&D	research and development
R&D&C&I	research, development, commercialisation and innovation
RAP	Readiness Assesment Programme
RAPID	Refinery and Petrochemical Integrated Development
RAS	Rural Air Services
RBC	Rural Business Challenge
RBT	Design and Technology
RCEP	Regional Comprehensive Economic Partnership
RE	renewable energy
RECODA	Regional Corridor Development Authority
RECs	regional economic corridors
REDD Plus	Reducing Emissions from Deforestation and Forest Degradation and the Role of Conservation, Sustainable Management of Forest and Enhancement of Carbon Stocks in Developing Countries
regtech	regulatory technology
REP	Returning Expert Programme
RIMUP	*Rancangan Integrasi Murid untuk Perpaduan*
RISE	Researcher-Industry Scientific Exchange
RMR	*Rumah Mesra Rakyat*
RMU	Research Management Unit
RNI	Recommended Nutrient Intakes
ROK	Republic of Korea
RON 95	Research Octane Number 95
RTC	Rural Transformation Centre

RTO	Rent-to-Own
RUs	research universities
SABK	*Sekolah Agama Bantuan Kerajaan*
SAIDI	System Average Interruption Duration Index
SBP	*Sekolah Berasrama Penuh*
SCMO	Strategic Change Management Office
SCORE	Sarawak Corridor of Renewable Energy
SCP	sustainable consumption and production
SDC	Sabah Development Corridor
SDGs	Sustainable Development Goals
SEA	strategic environmental assessment
SEDC	Sarawak Economic Development Corporation
SEDCO	Sabah Economic Development Corporation
SEDCs	state economic development corporations
SEDIA	Sabah Economic Development and Investment Authority
SEN	special education needs
SEs	social enterprises
SETARA	Rating for Higher Education Institutions
SIPartner+	School Improvement Partners
SISC+	School Improvement Specialist Coaches
SIT	Special Industrial Tariff
SKALA	*Sistem Kawal dan Lapor*
SMOKU	*Sistem Maklumat Orang Kurang Upaya*
SMPPs	small and medium professional practices
SOCSO	Social Security Organisation
SOEs	state-owned enterprises
SOHO	small office home office
SOPs	standard operating procedures
SPB-PBT	*Sistem Penarafan Bintang Pihak Berkuasa Tempatan*
SPE	Setiawangsa-Pantai Expressway
SPKPN	*Sistem Profil Kampung Peringkat Nasional*

SPM	*Sijil Pelajaran Malaysia*
SRI	Sustainable and Responsible Investment
SRN	*Sekretariat Rukun Negara*
SSB	Services Sector Blueprint
SST	Sales Tax and Service Tax
STEM	science, technology, engineering and mathematics
STI	science, technology and innovation
STOLport	short take-off and landing airstrip
SUBB	Suburban Broadband
SUDF	Sustainable Urban Development Framework
SUKE	Sungai Besi-Ulu Kelang Elevated Expressway
SULAM	Service Learning Malaysia - University for Society
suptech	supervisory technology
Sustainable INFRASTAR	Sustainable Infrastructure Rating Tool
T&CM	traditional and complementary medicine
T20	top 20% household income group
TABIKA	*Taman Bimbingan Kanak-kanak*
TAD	Transit Adjacent Development
TADIKA	*Taman Didikan Kanak-kanak*
TASKA	*Taman Asuhan Kanak-kanak*
TB	tuberculosis
TEEB	The Economics of Ecosystems and Biodiversity
TEKUN	*TEKUN Nasional*
TERAJU	*Unit Peneraju Agenda Bumiputera*
TEUs	twenty-footer equivalent units
TFR	total fertility rate
TIMSS	Trends in International Mathematics and Science Study
TKPM	Permanent Food Production Park
TMDL	Total Maximum Daily Load
TNB	*Tenaga Nasional Berhad*
TOD	transit oriented development

TPA	third party access
TPPM	*Tabung Penyelenggaraan Perumahan Malaysia*
TRANSKOM	Malaysian Cooperative Transformation Plan
TRM	Malay Reserve Land
TSM	Tariff Setting Mechanism
TVET	technical and vocational education and training
Twelfth Plan	Twelfth Malaysia Plan, 2021-2025
UAV	Unmanned Aerial Vehicle
UBBL	Uniform Building By-Laws
uCustoms	Ubiquitous Customs
UES	Under Enrolled Schools
UHPC	Ultra-high Performance Concrete
UK	United Kingdom
UKM	*Universiti Kebangsaan Malaysia*
UM	University of Malaya
UNDP	United Nations Development Programme
UNFCCC	United Nations Framework Convention on Climate Change
UNSC	United Nations Security Council
UPM	*Universiti Putra Malaysia*
UPSR	*Ujian Pencapaian Sekolah Rendah*
URB	*Unit Rondaan Bermotosikal*
URDA	Upper Rajang Development Agency
US	United States
USM	*Universiti Sains Malaysia*
UTM	*Universiti Teknologi Malaysia*
VBI	value-based intermediation
VDP	Vendor Development Programme
VLE	virtual learning environment
VR	virtual reality
VSN 2030	National Sports Vision 2030
VSP	Volunteer Smartphone Patrol

WAN	wide area network
WCE	West Coast Expressway
WEF	World Economic Forum
WEPLS	Water Efficient Product Labelling Scheme
WHO	World Health Organization
WIM	Weigh-in-Motion
WKB 2030	*Wawasan Kemakmuran Bersama 2030*
WST 2040	Water Sector Transformation 2040
YPPB	*Yayasan Peneraju Pendidikan Bumiputera*
ZIA	*Zon Industri Akuakultur*

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