MIDA

MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY

Sustainable Investments For Growth

MALAYSIA INVESTMENT PERFORMANCE REPORT 2022

MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY

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1.0

YEAR IN REVIEW

"Much more investment is needed, but the current rate isn't enough even to maintain capital stocks, much less increase them. Investment obstacles include the increasing cost of capital, the poor climate facing FDI, and the large fiscal demand on global capital by the governments of advanced economies."

David Malpass, World Bank Group President
(Opening remarks at the Launch of the January 2023 Global Economic Prospects Report)

1.1

OF CHALLENGES AND OPPORTUNITIES

The year started off on a more promising note as economies reopened but the continued recovery from two years of lockdowns across the world that affected lives and livelihood stumbled as growth slowed down on the Russia-Ukraine war and persistent inflation. Amid tighter monetary policy, the uncertain geopolitical dynamics impacted trade and investment. Malaysia, which saw economic growth surge to a 22-year high, continued to seek opportunities to move up the value chain by offering incentives for the adoption of technology that can draw and sustain investments over the longer term.

A Globally Tough Year

The anticipated recovery of the global economy after two years of intermittent lockdowns across the world to curb COVID-19 received a setback with the Russia-Ukraine war. Inflationary pressure caused by volatile commodity markets together with tightening monetary policy in response to rising prices and lingering pandemic-related concerns as well as repeated lockdowns in The People's Republic of China (PRC) to curb COVID-19 continued to have an adverse impact on the global economy and market sentiments.

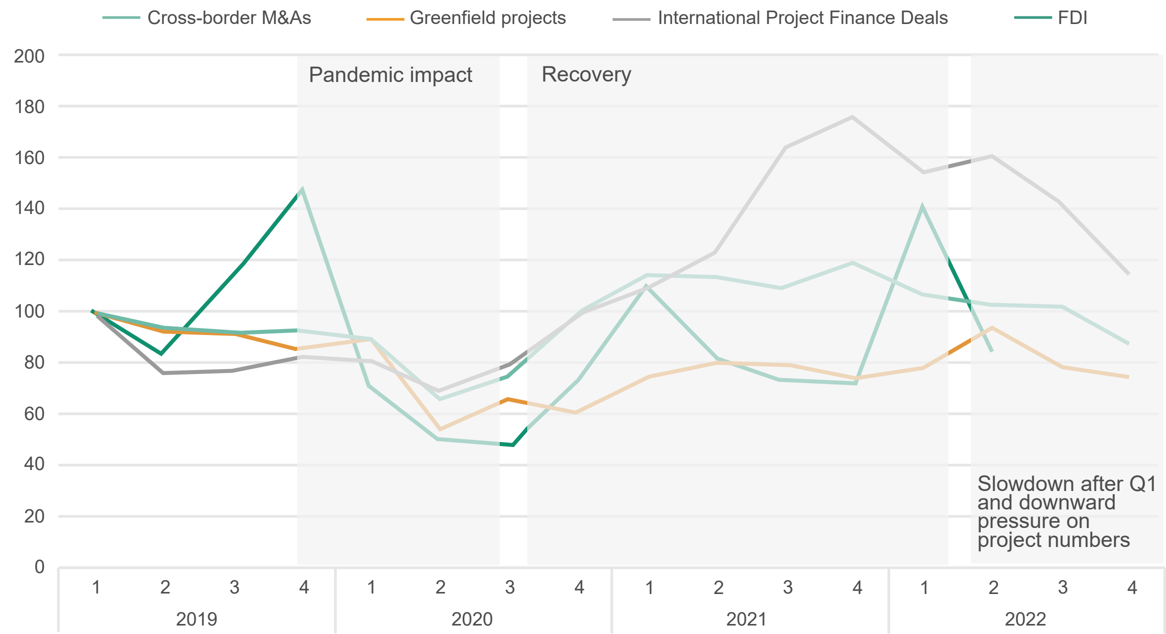
The International Monetary Fund (IMF) in the January 2023 update to the World Economic Outlook (WEO) projected global GDP to expand by an estimated 3.4 per cent in 2022, which is 0.2 percentage points higher than the October 2022 update. This reflects resiliency in the economies of the USA, euro-area, major emerging markets and developing economies from stronger-than-expected private consumption and investment amid tight labour markets and greater-than-anticipated fiscal support.

The January 2023 WEO update noted that while third-quarter 2022 real GDP came in surprisingly strong for these economies, the momentum seemed to have faded in the fourth quarter in most but not all major economies. While growth in the USA remained stronger than expected, economic activity in the PRC slowed in the fourth quarter amid multiple large COVID-19 outbreaks in urban areas, until the relaxation of COVID-19 restrictions in November and December paved the way for a full reopening.

Although signs point to tighter monetary policy starting to rein in demand and inflation, core inflation has not peaked in most economies and remained well above pre-pandemic levels. Nonetheless, core inflation has persisted amid second-round effects from earlier cost shocks and tight labour markets with robust wage growth as consumer demand has remained resilient.

The IMF projected growth of 2.7 per cent for advanced economies in 2022, with the USA estimated to grow by 2 per cent, GDP in the euro-area projected to expand by 3.5 per cent and GDP in Japan projected at 1.4 per cent. For Asian emerging market and developing economies, growth is projected at 4.3 per cent, with GDP in the PRC estimated at 3 per cent on a slowdown in the fourth quarter implying a 0.2 percentage point downgrade and India's GDP expected to grow by 6.8 per cent. For the ASEAN-5 (Indonesia, Malaysia, Philippines, Singapore and Thailand), GDP is expected to grow by 5.2 per cent, an upgrade from 3.8 per cent in the October WEO update.

INVESTMENT TRENDS 2019-2022



Source: UNCTAD, FDI/MNE database (www.unctad.org/fdistatistics) for FDI, information from the Financial Times Ltd, fDi Markets (www.fDimarkets.com) for announced greenfield projects and Refinitiv SA for international project finance.

Note: Project data for 2022 in this monitor are preliminary; greenfield data is estimated based on 11 months. Full-year FDI data, normally presented in the January monitor, are not included because of significant ongoing revisions for 2021 and incomplete 2022 availability – 2022 FDI data will be included in the *World Investment Report* 2023.

On the global trade front, the IMF noted in the October WEO update that global trade has slowed down sharply to a projected 4.3 per cent compared with the 10.1 per cent growth in 2021 reflecting mainly the decline in global output growth. Supply chain constraints have weighed on growth, largely due to a decrease in supply delivery times from the PRC that could continue. The US dollar's appreciation of about 13 per cent in nominal effective terms as of September 2022, compared with the 2021 average, has also likely been a factor in the world trade growth slowdown due to the currency's dominant role in trade invoicing and the implied pass-through in consumer and producer prices outside the USA.

Weaker Global FDI- Spotlight on Renewables

As a gauge of investor sentiment globally, 2022 was not a good year, with data from the United Nations Conference on Trade and Development (UNCTAD)'s Investment Trend Monitor released in January 2023 showing downward pressure on project investments after the first quarter of 2022 due to the Russia-Ukraine war, inflationary pressures and debt woes.

UNCTAD did not release the full year's FDI figures, citing significant ongoing revisions for 2021 and incomplete 2022 data. FDI data for 2022 will be released together with the World Investment Report 2023 in mid-2023. From the preliminary data for 2022, greenfield announcements, international project finance (IPF) deals, and cross-border mergers and acquisitions (M&As) were all affected after the first quarter of 2022.

While preliminary data for global greenfield announcements still showed six per cent growth due to mega projects in the renewables sector contributing to a strong first half of the year, the same cannot be said for IPFs and cross-border M&As, which were six per cent and 30 per cent lower respectively.

The USA saw the value of M&A deals, which make up a large share of FDI flows, fall by 53 per cent. New greenfield projects were down 15 per cent in Europe while in PRC, there was a 31 per cent decline in new greenfield projects, although IPF numbers were up 11 per cent.

India stood out with a doubling of new greenfield projects and a 34 per cent increase in IPF deals while among ASEAN economies, M&A deals declined 74 per cent and new greenfield projects grew 21 per cent.

UNCTAD noted that greenfield mega projects announced in 2022 demonstrated the key trends in global FDI with three of the 10 largest announcements on semiconductor chip factories and six of the top 10 project announcements in renewables, with four of the announcements made in Egypt during the COP27 United Nations Climate Change Conference in November 2022. Despite the emphasis on renewables in 2022, the recovery of Sustainable Development Goals (SDG)-related investment sectors after the 2020 slump remains fragile with the number of projects across all SDG sectors increasing by just three per cent while values shrank slightly.

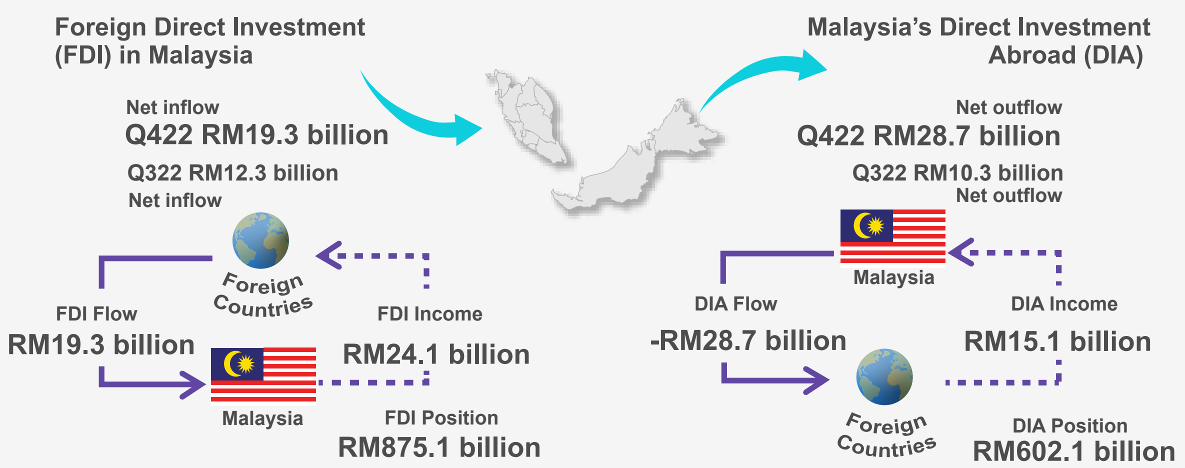
Despite the higher number of greenfield projects in renewables, IPF deals, which form the bulk of climate change mitigation investment in recent years in the sector, were downwardly impacted– UNCTAD data underscored this decline wherein IPF numbers in renewables were down five per cent and values by almost 40 per cent. This has had a deleterious effect on overall international investments in climate change mitigation and adaption, which shrunk by more than nine per cent in terms of announced values and by six per cent in project numbers. In contrast, there were several large projects in extractive industries, coal and, oil and gas (O&G), announced in response to the ongoing energy crisis.

Encouraging Economic Performance Amid Challenges

Notwithstanding these challenges, Malaysia managed to rake in RM73.3 billion in net inflows for 2022 compared with RM48.1 billion recorded in 2021. For the fourth quarter, Department of Statistics Malaysia (DOSM) data showed the country receiving RM19.3 billion in net inflows mostly into the manufacturing sector and financial services sub-sector of the services sector.

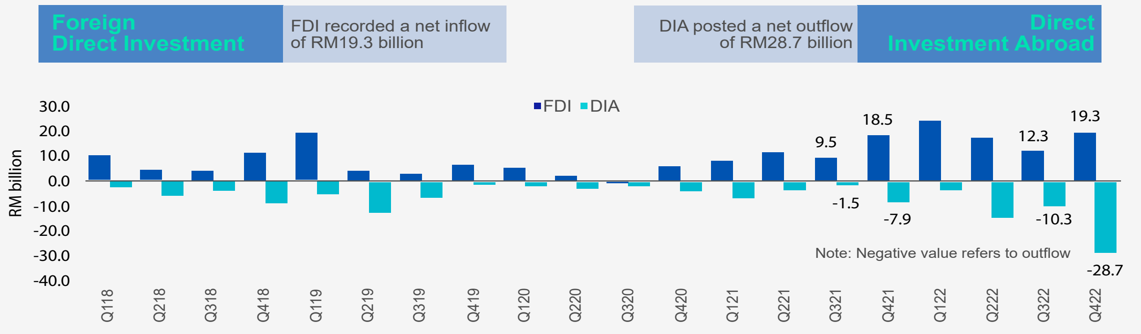
DOSM data showed that the total stock of FDI in Malaysia expanded by RM14.4 billion to RM875.1 billion as at the end of the fourth quarter, with the manufacturing sector maintaining its position as the largest recipient of FDI at RM380.6 billion or 43.5 per cent of the total FDI position. Financial activities came in second with RM205.3 billion or 23.5 per cent of the total followed by wholesale and retail trade at RM53.8 billion or 6.1 per cent of the total. The top five investors were Singapore (20.5%), the USA (11.5%), Hong Kong (10.6%), Japan (10.2%) and The Netherlands (6.9%).

FDI AND DIA PERFORMANCE 2022



Source: Department of Statistics (DOSM)

FDI AND DIA FLOWS, Q1 2018-Q4 2022



Note: Negative value refers to outflow

Source: Balance of Payments, Department of Statistics Malaysia (DOSM)

The country's total direct investment abroad (DIA) position increased to RM602.1 billion in the fourth quarter compared with RM601.9 billion in the third quarter. DIA flows to financial activities recorded RM250.3 billion or 41.6 per cent of the total, followed by mining and quarrying at RM76 billion and manufacturing at RM59.5 billion. The top three DIA destinations were Singapore at RM126.8 billion or 21.1 per cent, Indonesia at RM63.5 billion or 10.5 per cent and the Netherlands at RM38.8 billion or 6.5 per cent.

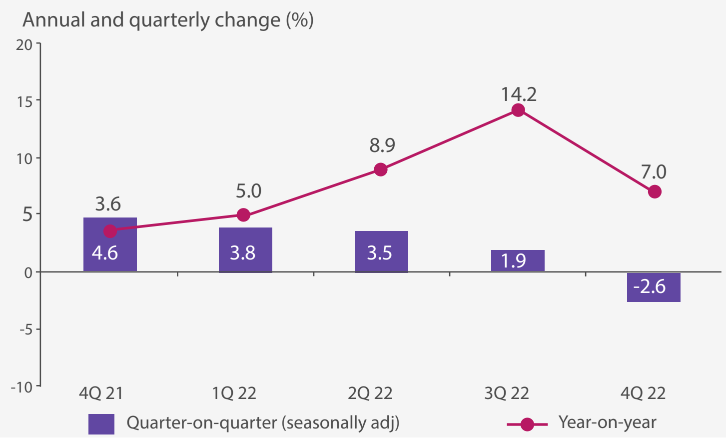
GDP Growth at 22-Year High

For the whole of 2022, the country's GDP grew 8.7 per cent compared with 3.1 per cent in 2021 following a 7.0 per cent expansion in the fourth quarter, with full-year growth at a 22-year high. Data from DOSM showed that economic performance for the fourth quarter surpassed the pre-pandemic level by 7.2 per cent. The services sector was the main contributor to growth at 8.9 per cent in the fourth quarter, followed by more moderate growth of 3.9 per cent from the manufacturing sector, the mining and quarrying sector expanded by 6.8 per cent, the construction sector maintained double-digit growth of 10.1 per cent and the agriculture sector grew 1.1 per cent.

Private final consumption, which contributed 58.2 per cent to GDP, grew 7.4 per cent while gross fixed capital formation (GFCF) rose 8.8 per cent, with both public and private sectors recording an increase. Both exports and imports grew at a more moderate pace of 9.6 per cent and 8.1 per cent respectively due to slower growth in goods and services. Net exports increased by 23.4 per cent in the fourth quarter compared with 18.7 per cent in the third quarter. Government final consumption expenditure moderated to 2.4 per cent supported by slower growth in spending on supplies and services.

Bank Negara Malaysia (BNM) noted that the fourth quarter 2022 GDP growth was above long-term average of 5.1 per cent while on a quarter-to-quarter seasonally adjusted basis, the economy registered

REAL GDP GROWTH 4Q 2021-4Q 2022



1 The low base effect originated from the decline in economic growth in the third quarter of 2021 (-4.5%), partially contributing towards a high growth a year later, 14.2% in the third quarter of 2022

2 Average from 1Q 2011 to 4Q 2019

Source: Bank Negara Malaysia (BNM) and Department of Statistics Malaysia (DOSM) a decline of 2.6 per cent. The services sector was supported by consumer-related subsectors amid better labour market conditions and the continued recovery in tourism activities as well as improvements in real estate and business services activities.

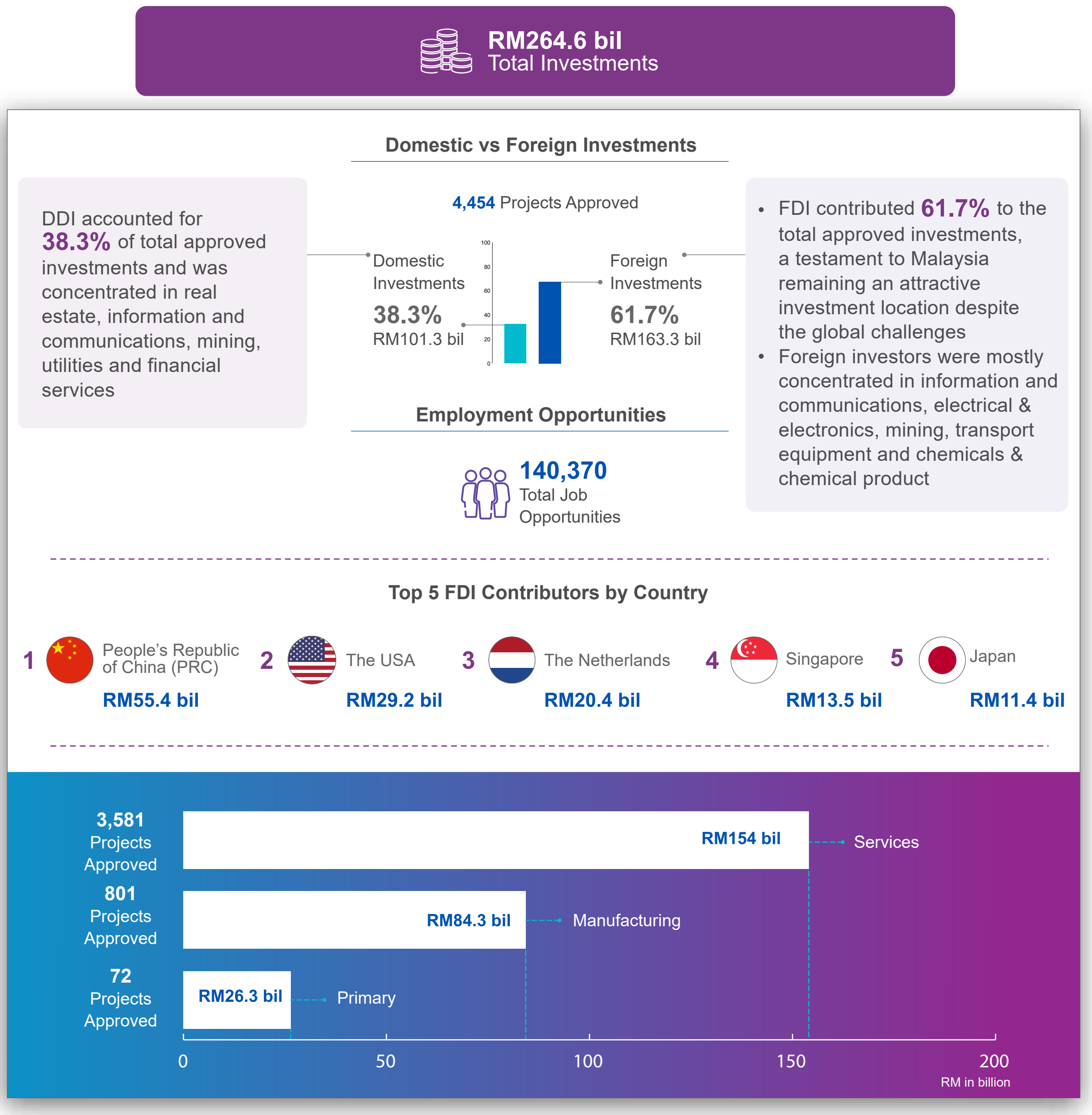
The manufacturing sector's E&E cluster continued to expand amid fulfilment of existing backlog in orders. BNM also noted that the construction sector's growth was supported by continued progress of large infrastructure, commercial and industrial projects in the civil engineering and non-residential subsectors, the mining sector's expansion is attributable to sustained improvements in crude oil and natural gas production while the agriculture sector was supported by growth in oil palm output, as yields benefitted from higher rainfall earlier in 2022 amid easing labour shortages.

Gross Fixed Capital Formation (GFCF)

Malaysia's investment in fixed assets as measured through GFCF at constant 2015 prices stood at RM297.5 billion in 2022 compared with RM278.7 billion in 2021.

The value of GFCF in each quarter of 2022 has been higher than the corresponding quarter in 2021, with the private sector contributing 77.9 per cent of Malaysia's GFCF and the public sector contributing 22.1 per cent.

OVERALL PRIVATE INVESTMENTS IN MALAYSIA IN 2022



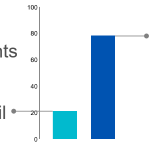
DOMESTIC VS FOREIGN INVESTMENTS BY SECTORS IN 2022

Manufacturing Moves Up the Value Chain

801 Projects Approved

Total **RM84.3 bil**

Domestic Investments
21.7%
RM18.3 bil



Foreign Investments
78.3%
RM66 bil

Employment Opportunities

76,093
Total Job Opportunities

Malaysia's economy is transforming across the board, with the manufacturing sector moving up the value chain by emphasising investments that bring in new technology and creating highly-skilled jobs

Contrary to the previous year, for 2022, the manufacturing sector came in second, contributing to 31.9% of the total approved investments in the country, surpassed by the services sector mostly due to three huge data centre projects

A challenging 2022 stemming from global economic uncertainties saw **801** projects approved for the sector worth **RM84.3 billion** compared with 702 approvals worth RM195.1 billion in 2021

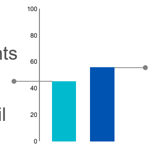
These approved manufacturing projects are expected to create **76,093** job opportunities in various managerial, technical and skilled craft positions

Services in the Spotlight

3,581 Projects Approved

Total **RM154 bil**

Domestic Investments
44.9%
RM69.1 bil



Foreign Investments
55.1%
RM84.9 bil

Employment Opportunities

63,464
Total Job Opportunities

The services sector was the **largest contributor** of approved investments for the year, accounting for **58.2%** of total approved investments worth RM154 billion; an increase of **RM57 billion** as compared to 2021

The main contributors for the sector came from the Information and Communications sub-sector with five data centre and cloud computing services projects totalling **RM72.4 billion**. Other top services sub-sectors were real estate, financial services, utilities and distributive trade

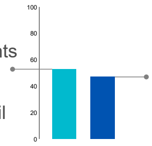
The digital economy has become the theme for business success in the services sector and the key criterion for future investments is sustainability which includes adhering to ESG principles and practices. Among major initiatives undertaken by MIDA for the services sector in 2022 include the Data Centre Investment Coordination Task Force (DCICTF)

Soaring Primary Sector Investments

72 Projects Approved

Total **RM26.3 bil**

Domestic Investments
52.9%
RM13.9 bil



Foreign Investments
47.1%
RM12.4 bil

Employment Opportunities

813
Total Job Opportunities

A total of **72** projects were approved in 2022 with investments of **RM26.3 billion**, an increase of **52%** from the approved investments of RM17.3 billion in 2021. Of the total, 52.9% or RM13.9 billion were from domestic sources while the rest were foreign investments amounting to RM12.4 billion or 47.1%

Global commodity prices improved to pre-pandemic levels in 2022 following the rapid recovery in demand with international borders opening, and supply disruptions. Additionally, crude palm oil (CPO) prices also performed well in 2022

The positive impact of the global backdrop is reflected in all three primary sub-sectors namely plantation and commodities, agriculture and mining which recorded significant increases in total approved investments as compared to its performance last year. Out of the three sub-sectors, mining contributed **90.9%** of total investments in the primary sector

MALAYSIA'S PRAISEWORTHY INTERNATIONAL RANKINGS

Globally Connected Economy

1st
Top Emerging Southeast Asia for FDI by Milken Institute's Global Opportunity Index 2022 (Bloomberg)

8th
2023 International IP Index (in Asia) by Center for Market Education (CME)

18th
2022 Global Peace Index by Institute for Economics and Peace

3rd
Kuala Lumpur - Startup Ecosystem Index 2022 (in Southeast Asia) by StartupBlink

Top 10
Kuala Lumpur - Smartest City in Asia by Sustainability Magazine, 2022

6th
Digital Quality of Life Index (DQL) 2022 (in Asia) by Surfshark

1st
Global Islamic Finance Development Indicator (IFDI) by Islamic Corporation for the Development of the Private Sector (ICD)-Refinitiv IFDI Report 2022

8th
Network Readiness Index (NRI) 2022 (in Asia & Pacific) by Portulans Institute and Said Business School, University of Oxford

1.2

ROBUST DOMESTIC DRIVE

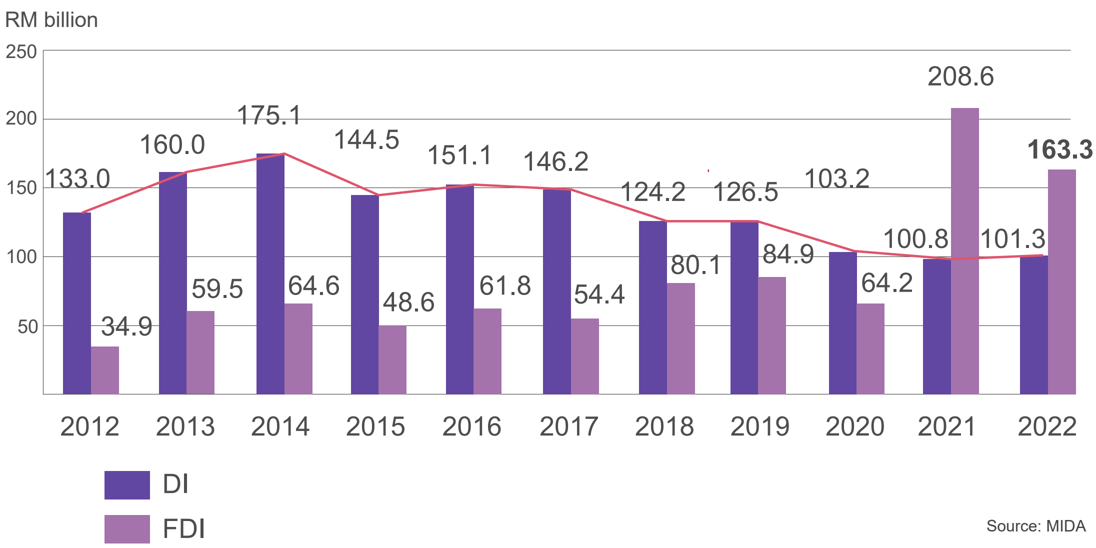
As Malaysia remains resilient and presses on, the Government is prioritising targeted policies and initiatives in sustainability aligned with ESG principles and practices. The National Investment Aspirations (NIA) which provides the framework for the New Investment Policy (NIP) is set in motion to review investment-related policies and restructure the country's investment strategies aimed at securing more high-quality, high-impact and capital-intensive projects for the nation.

Malaysia's Vigorous Plans

MIDA's efforts to boost domestic direct investments (DDI) have yielded many positive results in recent years shaped by strategies embedded in the NIA. Other strategic measures introduced to boost domestic investments over the past decade include strategic funds and incentives focused on Industry 4.0 technologies as well as COVID-19-related stimulus measures.

Between the period of 2012 to 2022, DDI contributed the lion's share in the services sector by 79.7 per cent or RM1.1 trillion, compared with foreign direct investment (FDI) contribution of 20.3 per cent or RM275.4 billion. DDI was also a major contributor to the total approved investments in the same period, accounting for 61.3 per cent or RM1.5 trillion.

DOMESTIC VS FOREIGN INVESTMENTS (2012-2022)



Source: MIDA

MIDA's Investment Strategies

As the country's principal investment promotion and development agency, MIDA continues to identify and empower domestic companies with the potential to grow into conglomerates. With MIDA's wide local and global networks, the agency continues to encourage MNCs operating locally to embrace outsourcing opportunities for Malaysian companies with vast potential, further intensifying technology acquisition support for local companies, and scaling them up to successfully achieve international standards and certifications.

DOMESTIC INVESTMENT STRATEGIES

To strengthen and deepen domestic investments, MIDA continually undertakes these targeted strategies:

Focus on Industry 4.0 (IR4.0) technologies

- Assist local companies to adopt new technologies and achieve Industry 4.0 status through facilitation of various incentives and assistance provided by the Government – reducing dependence on low-skilled labour

Digital adoption

- Encourage local companies to digitise production processes by embracing the Internet of Things (IoT) for online product marketing
- Reduce logistics and labour costs to optimise operational costs in the long term

Domestic linkage enhancements

- Encourage the use of domestic inputs to expand and grow domestic supply chains
- Enable the integration and extension of domestic supply chains into the region's economy and further into the global value chain

Develop unique, high-value products and services

- MIDA envisions a highly complex Malaysian economy built on skills-based industries with significant productive capabilities
- Equip local companies to develop sophisticated products and services through triple helix collaborations between the Government, industries and universities or technical institutes

Environmental, social, and governance (ESG) adoption

- Advocate the importance of embracing ESG and sustainability programmes to ensure local companies remain globally competitive and relevant

Performance of MIDA's Initiatives in 2022

Support for the country's growth and advancement is summed up in the New Investment Policy (NIP) which outlines six strategic thrusts and 22 national-level initiatives aimed at achieving sustainable economic growth by providing high-value and high-skilled employment opportunities as well as improving people's lives and livelihoods and securing shared prosperity.

The NIA's Quality Investment Indicators

NIP Goals

The NIP identified the E&E, pharmaceutical, digital economy, aerospace and chemicals subsectors as priorities for investment due to comparative advantage and their alignment with the National Investment Aspiration (NIA) framework as well as the 12MP and SDG 2030

Key NIP Goals

- Sustained GDP growth of 4.5 per cent to 5.5 per cent per year
- Sustained gross national income growth of 5.5 per cent to 6.5 per cent per year
- Reinvigorated investment ecosystem with four per cent to five per cent GFCF per year.

The NIA provides a forward-looking growth framework for the NIP while streamlining all national policies related to investments. The NIA enables MITI together with MIDA and other agencies under its purview to lead the effort in reviewing investment-related policies as well as restructuring the country's investment strategies.

With the main thrust of the NIA set to attract quality and strategic investments, reduce dependency on unskilled labour and spur technology transfer, MIDA will evaluate investment applications by identifying areas that increase economic complexity. These areas include investments that support the economy's move up the value chain, R&D intensity, level of capital investment per employee (CIPE), technology/Industry 4.0 adoption, export orientation and IP creation.

From these evaluations, MIDA can ensure that these investments create high-skilled jobs for Malaysians at the managerial, technical and supervisory levels, encourage internships in projects to expose students to new technologies and industries, and raise productivity levels. Under the NIA, MIDA also seeks to extend domestic linkages by encouraging local sourcing and collaboration with local universities or research institutes that can further develop existing clusters or create new ones. These domestic linkages include the Vendor Development

Programme (VDP) in which MIDA assists local vendors to develop and upgrade their services in collaboration with MNCs.

Inclusivity in terms of equitable economic development across the country is also emphasised under the NIA, with MIDA leveraging its state offices and collaborating with each state's IPAs to promote these states based on their particular strengths and ecosystem.

Local-to-Foreign Employment Ratio

The regulation announced in 2016 for companies to comply with the local-to-foreign employment ratio of 80:20 by 31 December 2022 has been deferred to 31 December 2024 as industries are still recovering from the impact of the pandemic and the shortage of workers. MITI currently provides more flexibility to companies in regard to compliance with this regulation for new expansion, diversification, and regularisation projects as well as exemption of the manufacturing licence.

While acknowledging that foreign workers have contributed to the economy, the Government believes that over-reliance on them may affect export-reliant industries, discouraging companies from adopting automation or other technologies that improve productivity and are less labour-intensive.

Despite the deferral, efforts to monitor companies continue, with the Government actively encouraging them to reduce dependency on foreign workers; adopt automation for processes that are dangerous, dirty and difficult (3D) and; ensure employees in 3D jobs are satisfactorily protected.

Moving Towards the Endemic Phase

Malaysia has positioned itself as an alternative base in Asia, ensuring the resilience of companies' supply chains. This is backed by a local ecosystem of companies that are well integrated into global MNCs' supply chain networks.

MIDA, guided by the NIA, which provides the framework for the NIP, is forging ahead to secure more high-quality, high-impact and capital-intensive projects in 2023 by undertaking investment promotion programmes including trade and investment missions, working visits, flagship programmes and regular engagements with investors locally and abroad.To ensure a smooth and efficient process for investors, MIDA's online submission and processing platform, InvestMalaysia, will continue to act as the single processing window for all approvals for manufacturing licence, incentives and exemptions from customs duties. The platform works closely with the Project Acceleration and Coordination Unit (PACU) to ensure timely end-to-end facilitation for all projects approved.

The Rise of ESG Investing

MIDA, together with MITI, is also pushing for targeted policies and initiatives in sustainability in line with the growing importance of ESG considerations among investors. A key initiative currently undergoing development is the ESG framework for the manufacturing sector as a guide for businesses and to encourage speedier adoption of ESG principles in order to attract FDI as well as integrate local companies into the global supply chain.

To this end, MIDA will continue to support and facilitate investments in the adoption of clean energy sources and technologies, and development of the halal and smart farming subsectors as identified under the 12MP. Other ESG considerations to take note of are deforestation, labour standards, corporate governance and transparency in trade policies.

With an increasing focus on ESG, Bursa Malaysia announced in August 2022, the launch of two ESG-themed indices, the FTSE Bursa Malaysia Top 100 ESG Low Carbon Select Index (FBM100LC) and the FTSE Bursa Malaysia Top 100 ESG Low Carbon Select Shariah Index (FBM100LS). This initiative by Bursa Malaysia is an important step in encouraging ESG and low-carbon adoption in the local capital market ecosystem.

MIDA's advocacy will ensure that local companies remain relevant in the global supply chain. According to a survey by UK-based Proxima, a procurement and supply chain consultancy, businesses without sustainable supply networks will likely receive fewer investments and see a decline in share values over the next 10 years. The survey showed that 84 per cent of respondents from the US and the UK cited that the absence of ESG standards and lack of supply chain sustainability posed a financial risk to their investments.

MIDA Facilitates Malaysia-Türkiye Crossflow Investments Via New Istanbul Office

- Becoming operational on 30 September 2022, MIDA's new office in Istanbul, Republic of Türkiye (Türkiye) will provide both Malaysia and Türkiye new economic opportunities, driving the steady growth of Malaysia-Türkiye bilateral trade relations
- MIDA Istanbul will serve as a gateway for aspiring investors from both countries who wish to expand their businesses in the other country

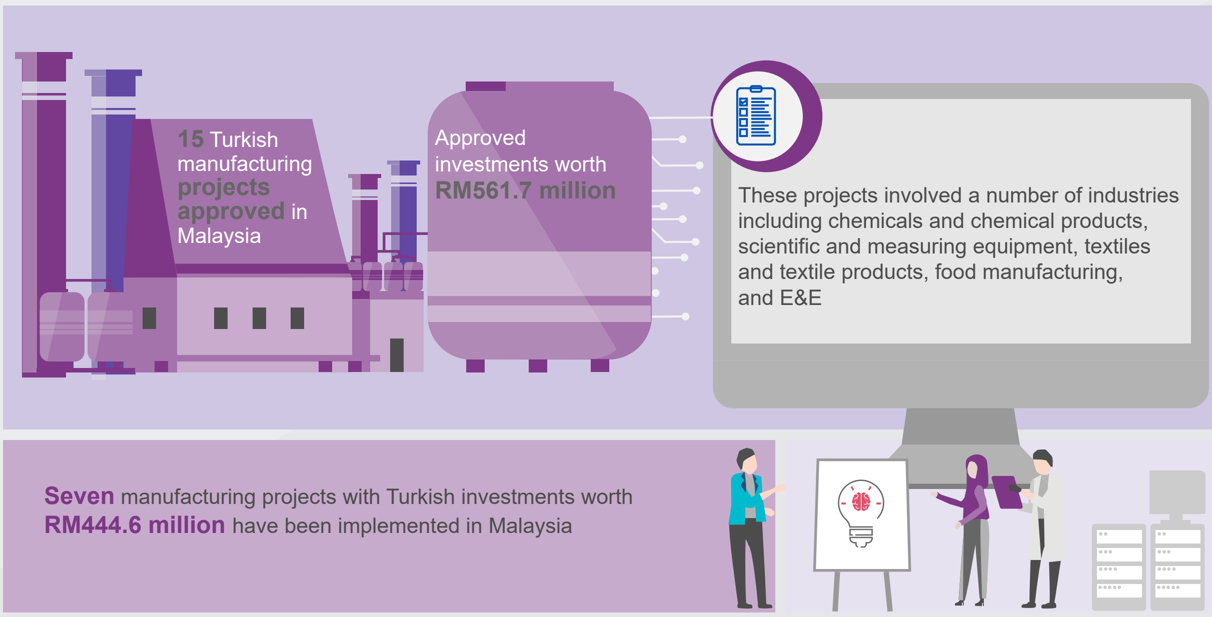
Through this new office, Malaysia hopes to attract more Turkish investments in the targeted sectors such as machinery and equipment (M&E), electrical and electronics (E&E), aerospace, ICT, digital economy, pharmaceutical, chemicals, and food manufacturing (including the halal segment) industries. Turkish investors will benefit from Malaysia's excellent infrastructure, telecommunication services, financial and banking services, supporting industries, skills, trainable workforce, and pro-business policies. Both nations will also benefit from each other's strategic locations; Malaysia is centrally located within Southeast Asia and can serve as the prime gateway for Turkish investors to access the ASEAN market, while Türkiye is similarly strategically located at the crossroads of Europe, Central Asia, the Middle East, and North Africa. Hence, Malaysian companies could consider using Türkiye as a base to tap into the European market, as well as the emerging markets of Central Asia and the Middle East.

The MIDA office in Istanbul will support and encourage the exploration of new opportunities and collaborations between Malaysian companies and Türkiye's trading partners such as Greece, Cyprus, Azerbaijan and Georgia, while further enhancing bilateral trade and cross-border investments between Türkiye and Malaysia. Additionally, Turkish investors will be able to keep themselves up-to-date on the latest investment policies and opportunities in Malaysia, as well as have MIDA facilitate joint-venture partnerships and technological collaborations with Malaysian businesses.

EXPANDING AND EXTENDING THE MALAYSIA-TÜRKIYE FREE TRADE AGREEMENT (MTFTA)

On 28 September 2022, Türkiye and Malaysia signed the First Protocol to amend the MTFTA between the two nations, this being the legal instrument expanding the MTFTA to include investment, trade in services, and e-commerce chapters.

APPROVED TURKISH MANUFACTURING PROJECTS IN 2022



The original MTFTA was signed in 2014, and entered into force on 1 August 2015. The MTFTA included chapters on market access for trade in goods, rules of origin, customs procedures and cooperation, sanitary and phytosanitary measures, technical barriers to trade, trade remedies, economic and technical cooperation, transparency, institutional provisions, and dispute settlement. The MTFTA allowed both Malaysia and Türkiye to benefit from the elimination and binding of duties of 70 per cent on the tariff lines.

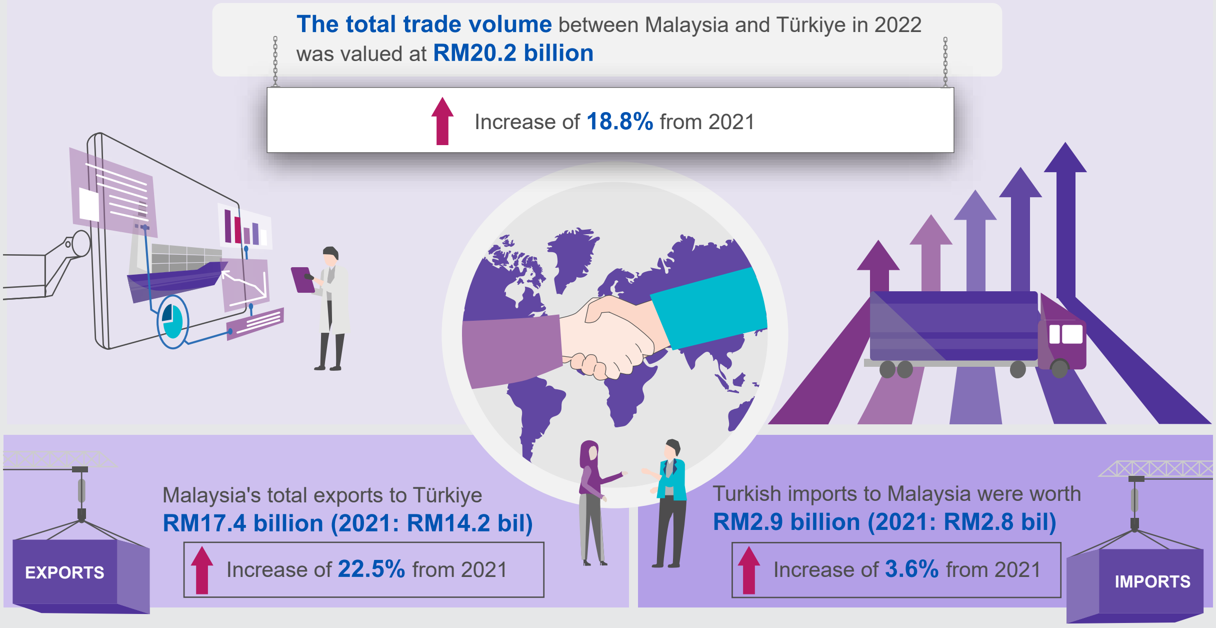
The expanded MTFTA will provide the following benefits:

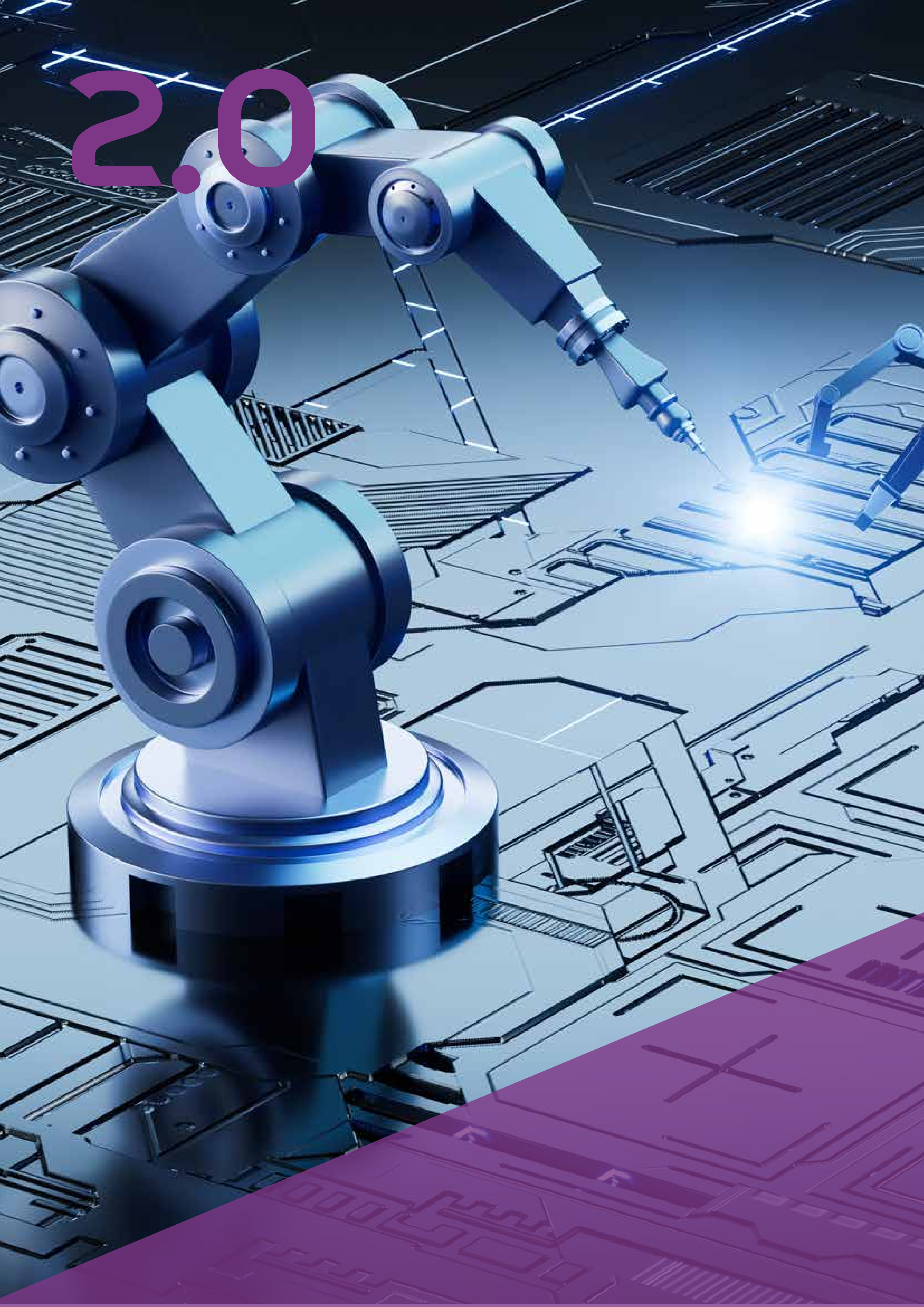
- Transparent and predictable operating conditions, as well as the removal of key barriers to trade in services
- Enhanced accessibility of investments and improved mobility for professionals between Malaysia and Türkiye
- Access for micro, small, and medium enterprises (MSMEs) to perks from the e-Commerce Chapter, aiding them to boost their participation in international trade
- Foster greater consumer confidence in online transactions through harmonisation of rules and adoption of facilitation mechanisms

By 1 January 2023, 99 per cent of Turkish exports to Malaysia and nearly 86 per cent of Malaysian exports to Türkiye will be duty-free. This will enable exporters of manufactured goods to gain tangible benefits from the MTFTA.

The expanded MTFTA will strengthen collaboration in high-value sectors, retaining and enhancing anti-dumping measures to help ensure fairer competition. This will make Malaysia more resilient, business-friendly, competitive, and dynamic.

MALAYSIA-TÜRKIYE TOTAL TRADE VOLUME IN 2022

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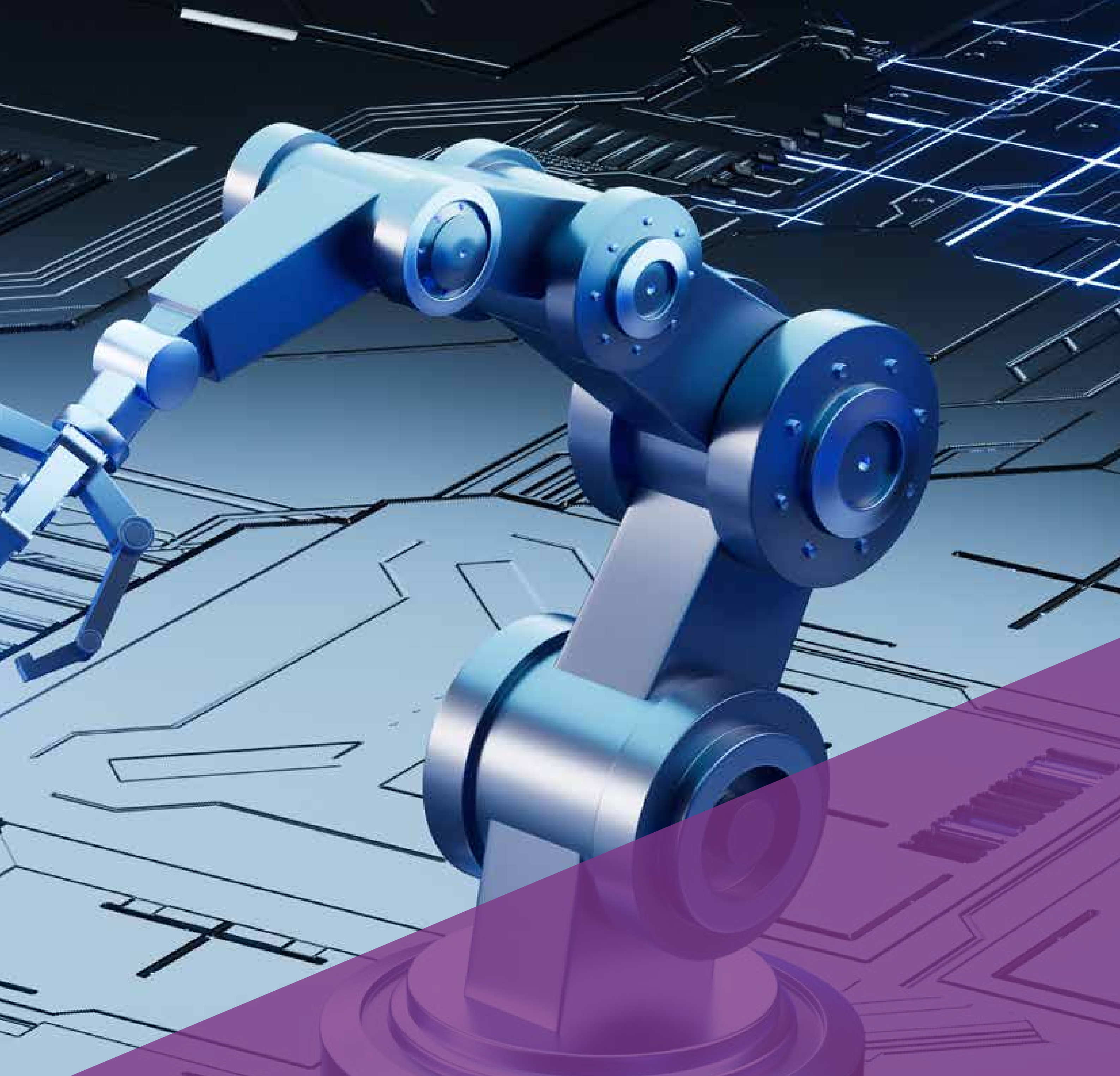


PERFORMANCE OF THE MANUFACTURING SECTOR

Repositioning ESG priorities from risk to opportunity is the first step to generate meaningful progress and create lasting growth for all stakeholders.

Kent Kaufield, ESG Markets Leader and Chief Sustainability Officer, EY Canada
(Excerpt from article titled '5 ways manufacturing companies can tackle ESG now', 26 July 2022)

2.1

SUSTAINABLE RESILIENCE

Malaysia's manufacturing sector powered on through the headwinds of the past COVID-19 pandemic and the ongoing Russia-Ukraine conflict as it gears up to meet environmental, social, and governance (ESG) compliance requirements. Foreign investments continue to flow into the country, making up nearly 80 per cent of all manufacturing investments, while domestic investment appetites grew by over a fifth.

Most of the countries throughout the world reopened their borders gradually and loosened COVID-19 restrictions in 2022 with the notable exception of the People's Republic of China (PRC), where its COVID-zero policy was only lifted in December.

However, despite the move towards endemicity, repercussions from the last two years of lockdowns continued to have an impact in the form of labour shortages, supply chain disruptions, and – more positively for the manufacturing sector – a shift towards digital transformation and 'intelligent factories'. The Russia-Ukraine conflict also exacerbated the supply chain disruption issue, as well as introduced challenges of its own, such as energy crises and material shortages.

Manufacturing trends from previous years continue to hold true in 2022, as businesses large and small benefitted from the transformations that they had undertaken in response to the various challenges that had affected the sector, with many of these trends expected to accelerate well into 2023 and beyond.

For instance, industrial digitalisation and the transformation into the 'smart factory' is expected to become more capable with the adoption of the Industrial Internet of Things (IIoT), powered by private 5th-generation mobile broadband (5G) networks, complemented by the use of digital twins. This will help manufacturers optimise and improve their production processes, reduce machine downtime and provide stakeholders with real-time detailed information on their operations.

Sustainability, as part of the ESG agenda, remained high on the radar of the manufacturing scene worldwide. With governments of many developed nations – especially in the European Union (EU) – having made ESG commitments and imposing more regulatory scrutiny, 2022 had seen significant movement on the ESG front. This undoubtedly has had an impact on global manufacturers who wish to export their goods to destinations that have ESG compliance regulations.

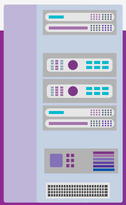
The Government is cognisant of the importance of adherence to ESG guidelines, ensuring that these commitments are reflected in the nation's investment and economic policies (for more details, go to page 112 - Chapter 5).

Globally, United Nations Industrial Development Organization (UNIDO) reported that world manufacturing production in 2022 continued to grow positively at a solid 3.6 per cent year-on-year in the third quarter of 2022. Malaysia, which UNIDO categorises as a middle-income industrial economy, saw manufacturing output grow an impressive 13.4 per cent year-on-year during the same period.

Malaysia's sterling performance is due in part to the country's supply chain resilience, which the nation was able to strengthen by capitalising on the advantages of its domestic value chain. The manufacturing sector continued its post-pandemic recovery throughout the year, supported by a robust industrial ecosystem, rising domestic demand, and easing of containment measures.

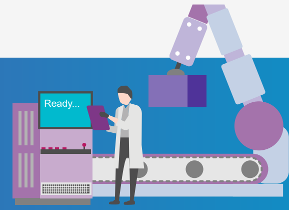
The New Investment Policy (NIP) launched on 6 October 2022 testifies to the Government's intent to drive sustainable economic growth and strengthen Malaysia's foundation in adopting ESG principles. The strategies outlined in the NIP prioritise the nurturing of innovative, high-impact, and high-technology investments conducive to creating high-skilled jobs. Hence, prospective investors are encouraged to make targeted investments that are aligned with the intentions of the NIP.

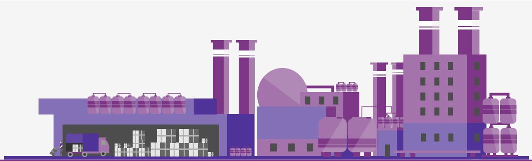
KEY HIGHLIGHTS OF THE MANUFACTURING SECTOR FOR 2022



Steady, Stable Performance

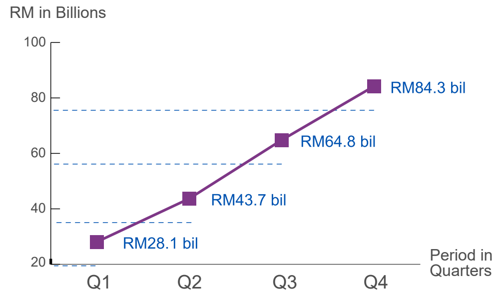
By the end of 2022, the manufacturing sector contributed **RM84.3 billion**, or a noteworthy **31.9%** of the total approved investments of RM264.6 billion. Foreign investments dominated the manufacturing sector, accounting for **78.3%** of total manufacturing investments, demonstrating the rebounding confidence that foreign investors had in the manufacturing sector





RM84.3 bil
Total Investments

Quarterly Breakdown (Cumulative Figures)

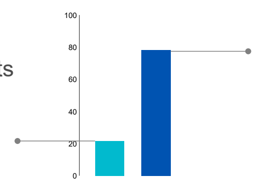


The year started out strongly for the manufacturing sector; the first quarter of 2022 saw it bring in RM28.1 billion worth of investments across 185 projects, with foreign direct investments (FDI) being the major contributor with **RM25 billion**, or **89%** of the quarter's total investments in the sector

While growth in the manufacturing sector slowed in the second quarter of 2022, with investments of RM15.6 billion, it continued to gain momentum in the third quarter, bringing in an additional **RM21.1 billion** worth of investments

Domestic vs Foreign Investments

Domestic Investments
21.7%
RM18.3 bil



Foreign Investments
78.3%
RM66 bil

Major Contributors of High-Value Projects in 2022

- Electrical and Electronics (E&E) — **106 Projects**
- Food Manufacturing — **93 Projects**
- Plastic Products — **82 Projects**
- Fabricated Metal Products — **79 Projects**
- Machinery and Equipment (M&E) — **72 Projects**

STRONG FDI RESULTS

FDI has continued to be the cornerstone of total approved investments in the manufacturing sector in recent years, illustrating that the Government's pro-business policies and initiatives to encourage foreign investments have been successful

RM66 bil
Foreign Investments

Expansion/ Diversification vs New Projects

38.2%	RM25.2 bil	New Projects
61.8%	RM40.8 bil	Expansion/ Diversification Projects

Top 7 Foreign Investments

Electrical and Electronics (E&E)
RM27.9 bil (42.3% of Total FDI)

Transport Equipment
RM6.6 bil

Chemicals and Chemical Products
RM5.7 bil

Petroleum Products (including Petrochemicals)
RM5.6 bil

Non-Metallic Mineral Products
RM5.3 bil

Machinery and Equipment (M&E)
RM5.3 bil

Scientific and Measuring Equipment
RM4.6 bil

Top 5 Foreign Investing Countries

Singapore
RM9.6 bil

People's Republic of China (PRC)
RM9.6 bil

Japan
RM9.2 bil

The Netherlands
RM8.8 bil

Germany
RM8.8 bil

These 5 countries contributed **RM46 billion** (**69.7%**) of total foreign participation in the manufacturing investments approved in 2022

THE DOMESTIC TURF

While FDI formed the majority of investments in the manufacturing sector in 2022, domestic direct investment (DDI) also played a crucial role in the growth of Malaysia's economy

RM18.3 bil
Domestic Investments

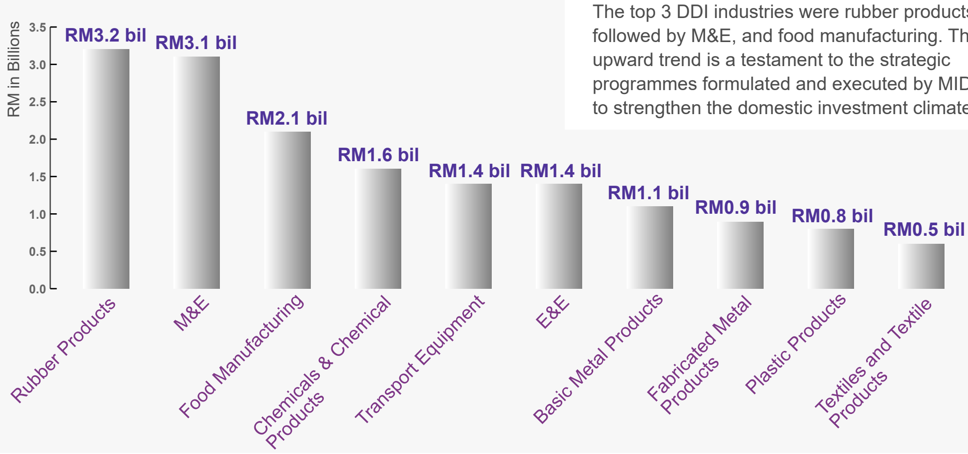
18.1% increase
(2021:RM15.5 bil)

Expansion/ Diversification vs New Projects

53.6%	RM9.8 bil	New Projects
46.4%	RM8.5 bil	Expansion/ Diversification Projects

Sources of Domestic Investments in Approved Manufacturing Projects

The top 3 DDI industries were rubber products, followed by M&E, and food manufacturing. This upward trend is a testament to the strategic programmes formulated and executed by MIDA to strengthen the domestic investment climate



DOMINANT INDUSTRIES

Malaysia is a major global E&E manufacturing hub. Given the acceleration of global digitalisation over the past few years, as well as the industry having ramped up in response to the global shortage of semiconductors, it comes as no surprise that the E&E industry secured the highest level of investments in the Malaysian manufacturing sector

At **RM29.3 billion**, **E&E** accounted for **34.8%** of total manufacturing investments

Other high-performing industries are in areas identified under the NIP as ripe for investment transformation based on their comparative advantage in the current global environment. These areas include E&E, chemicals and chemical products, pharmaceuticals, and aerospace accounted for **43.7%** of total approved manufacturing investments

Leading Industries of the Manufacturing Sector in 2022

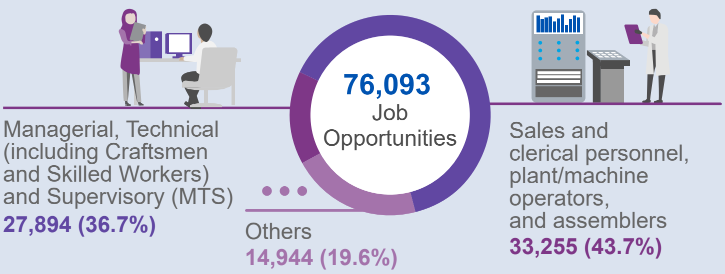
- Machinery and Equipment (M&E) **RM8.4 bil**
- Transport Equipment (excluding aerospace) **RM7.9 bil**
- Petroleum Products (including Petrochemicals) **RM5.9 bil**
- Non-Metallic Mineral Products **RM5.8 bil**
- Scientific and Measuring Equipment **RM4.7 bil**
- Rubber Products **RM3.6 bil**
- Food Manufacturing **RM3.5 bil**

These 7 industries comprised **47.2%** of total approved investments

- Chemicals and Chemical Products (excluding pharmaceuticals) **RM7.1 bil**
- Pharmaceuticals **RM266.8 mil**
- Aerospace **RM146.8 mil**

These areas show substantial promise of growth moving forward, which potentially boosts the delivery of the NIP pillars

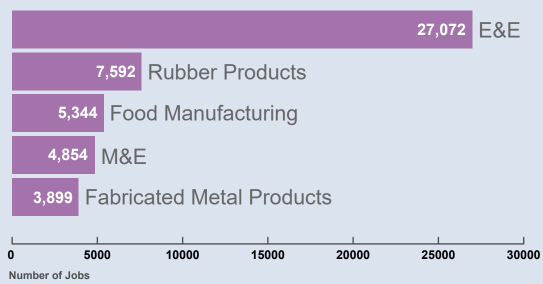
SURGING DEMAND FOR TALENT



Job Opportunities created for Malaysians **63,942 (84%)**

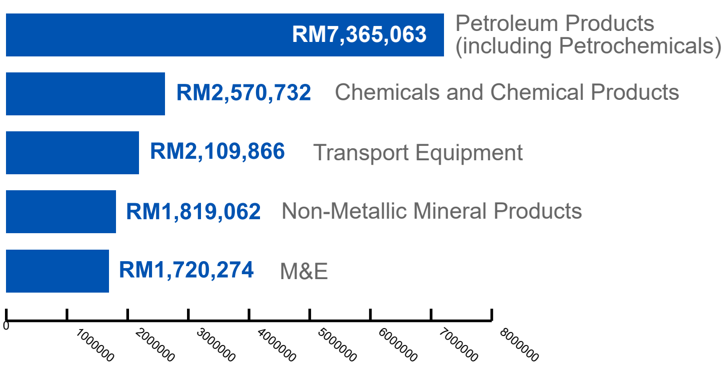
- MTS **41.4%**
- **15.7%** Earning more than **RM5,000**

Top 5 Industries with Most Job Opportunities



These industries contributed a significant **64.1% (48,761 jobs)** to overall total potential employment in 2022

CAPITAL INVESTMENT PER EMPLOYEE (CIPE) COMPLEMENT QUALITY PROJECTS



The capital intensity (as measured by CIPE) of projects approved in the manufacturing sector in 2022 was **RM1,107,514** (2021: RM2,615,996)

HIGH-FLYING STATES

- Selangor, Johor, and Pulau Pinang remained the states with the highest number of projects approved in 2022

These **3** states accounted for **70.7%** of all projects approved

- Under the 12th Malaysia Plan (12MP), six states were identified as Less Developed States (LDS); namely, Kedah, the autonomous regions of Sabah and Sarawak, Kelantan, Terengganu and Perlis

RMK12

In line with the NIP's inclusivity pillar, **RM23 billion** worth of investment was approved in the LDS. This investment will generate **11,163** employment opportunities in the states

- Projects approved in the LDS ranged across resource-based and non-resource-based manufacturers

Approved projects related to NIP sub-sectors made up **48.3%** (**RM11.1 bil**) of the approved investments in the LDS

Overall Investment Value by States

The highest investments were contributed by **Johor (RM14.6 bil)**; followed by **Pulau Pinang (RM13.7 bil)**; **Selangor (RM12.2 bil)**; **Kedah (RM12 bil)**; and **Sabah** (**RM8.4 bil**). These 5 states contributed **72.2%** of the total investments approved in 2022

Other states that also contributed to the overall investment value for the manufacturing sector include **Negeri Sembilan (RM7.1 bil), Melaka (RM7.1 bil), Perak (RM3.9 bil), Pahang (RM2.5 bil), Sarawak (RM1.3 bil), Kelantan (RM992.5 mil)** and **Terengganu (RM310 mil)**. Additionally, Kuala Lumpur and Labuan collectively raked in investments worth **RM142.7 million**

IMPLEMENTED PROJECTS

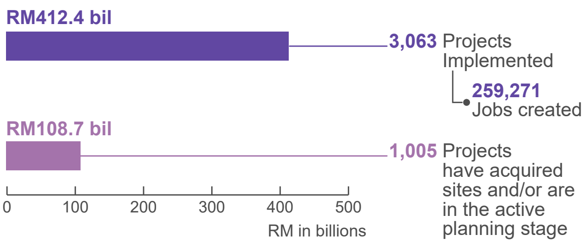
Approved Manufacturing Projects (2018-2022)

RM540.7 bil
Total Approved Investments

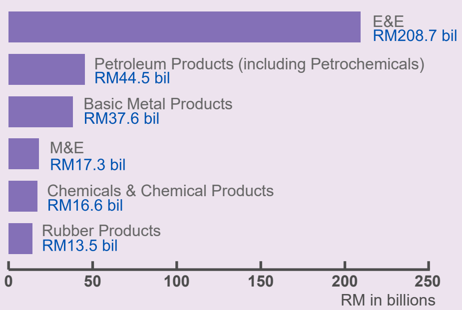
4,261
Projects Approved (801 projects in 2022)

368,787
Total Job Opportunities

4,261 Projects Approved (2018-2022)



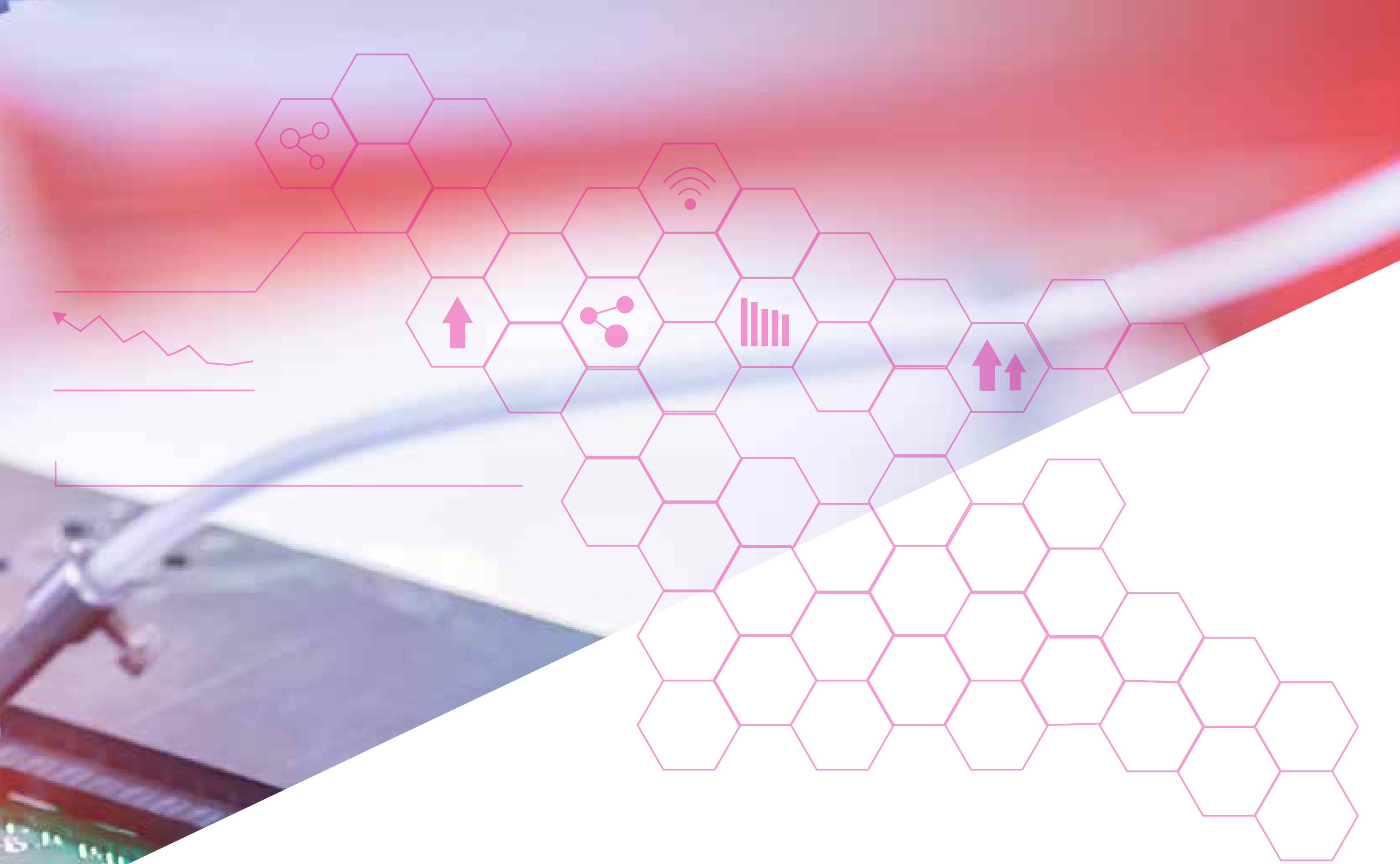
These major industries made up **82%** of the implemented projects' total investment value



2.2

GEARING UP TOWARDS ESG

Manufacturers in Malaysia prepare to comply with developed nations' ESG regulations, and hence to improve their global competitiveness and enhance their standing. Advanced technologies continue to pave the way for ESG compliance, while improving efficiency, effectiveness, and productivity



Electrical and Electronics Industry (E&E)

Malaysia's E&E industry is an integral part of the manufacturing sector, and has been a key economic pillar for the nation over the past 50 years. The country continues to position itself as a go-to investment destination with a holistic E&E ecosystem, which consists of top technology multinational companies (MNCs) that have expanded their capabilities and aspiring domestic industry players keen on building efficiency, thereby enabling front-end and back-end semiconductor manufacturing operations that have become a key node of the global value chain.

E&E components are critical to current and future technologies, even as research and development (R&D) activities in semiconductor technology have made electronic devices more compact, faster, more reliable, and greater in storage capacity. Companies in the E&E industry have been working closely with local universities and training centres to establish more industrial training and learning programmes that meet industry demand in response to the shortage of skilled labour in the workforce.

In 2022, E&E products contributed 38.2 per cent or RM593.5 billion to Malaysia's total export volume of manufactured goods of RM1.6 trillion. The growth of the E&E industry in Malaysia remained positive despite inflationary concerns, recession risks, and the impact of the (now-eased) PRC COVID-19 lockdown. While easing to some degree, semiconductor chips and equipment remained in short supply globally as demand for higher-end chips used in new technology applications such as electric vehicles (EVs), autonomous driving, 5G, and the Internet of Things (IoT) is still strong.

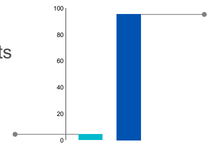
This demand will continue to grow with the world's greater reliance on digitisation and digitalisation. Global E&E industry players are expected to continue to expand their production capacities as a result, including in Malaysia, where the Government is focused on accelerating the adoption and adaptation of advanced factory automation and digitalisation to transition manufacturing facilities into 'intelligent factories'.

E&E INDUSTRY HIGHLIGHTS IN 2022

RM29.3 bil Total Investments

106 Projects Approved

Domestic Investments
4.8%
RM1.4 bil



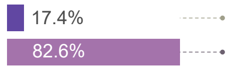
Foreign Investments
95.2%
RM27.9 bil

Major Sources of Foreign Investments

Germany | The Netherlands | Hong Kong

Expansion/ Diversification vs New Projects

RM29.3 bil Total Investments



27,072 Total Job Opportunities

Jobs generated from the projects include highly-skilled positions such as managerial positions, engineers and technicians

Electronic Components

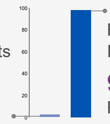
The projects approved were for wafer fabrication, semiconductor devices, integrated circuits, printed circuit boards (PCBs), and sensors

40 Projects Approved

RM23.7 bil Total Investments

17,498 Total Job Opportunities

Domestic Investments
0.8%
RM0.2 bil



Foreign Investments
99.2%
RM23.5 bil

Electronic components formed the largest share of investments in the E&E industry at **80.9%**

Consumer Electronics

4 Projects Approved

RM254 mil Total Investments

1,134 Total Job Opportunities

Core activities of this sub-sector are computer entertainment systems, headphones, earphones, speakers and video doorbells

Industrial Electronics

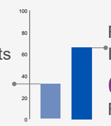
18 Projects Approved

RM1.8 bil Total Investments

Increase of **200%** over 2021's figure of RM0.6 billion

2,574 Total Job Opportunities

Domestic Investments
33.3%
RM0.6 bil



Foreign Investments
66.7%
RM1.2 bil

Double the RM0.3 billion from 2021

4X the amount brought in during 2021 (RM0.3 billion)

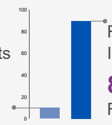
Electrical Components

21 Projects Approved

RM2 bil Total Investments

3,490 Total Job Opportunities

Domestic Investments
15%
RM0.3 bil



Foreign Investments
85%
RM1.7 bil

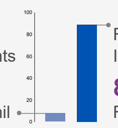
Electrical Appliances

8 Projects Approved

RM742.7 mil Total Investments

1,690 Total Job Opportunities

Domestic Investments
13.3%
RM98.5 mil



Foreign Investments
86.7%
RM644.2 mil

Industrial Electrical

15 Projects Approved

RM811.5 mil Total Investments

686 Total Job Opportunities

Dominated by FDI amounting to **RM628.5 million**, while domestic investments totalled **RM183 million**

NOTEWORTHY E&E PROJECTS IN 2022

Expansion Project — **Inari Technology Sdn. Bhd.**

Investment amount: RM397 mil

4,133 additional job opportunities

Malaysian company

Packaging of 5G RF systems in Pulau Pinang; R&D and industrial attachment programmes in collaboration with local institutions

Expansion Project — **TF AMD Microelectronics (Penang) Sdn. Bhd.**

Investment amount: RM1.2 bil

4,000 additional job opportunities

Majority PRC-owned company

Testing and assembly of cutting-edge semiconductors in Pulau Pinang

Transport Equipment

Malaysia's transport equipment industry contributes significantly to the nation's economy by providing jobs for a large number of people involved in vehicle production and through its role in the country's logistics network. Malaysian transport equipment industry players are capable of producing vehicles and components for all modes of travel.

Automotive

The automotive sub-sector employs approximately 710,000 people and contributes almost RM30 billion to the nation's gross domestic product (GDP). Malaysia is an attractive base for global automotive manufacturers who leverage their presence in the country to cater to buoyant regional demand.

In 2022, the Malaysian automotive sub-sector produced 702,275 motor vehicles, a 45.8 per cent increase over 2021's figure of 481,651. This figure is further broken down to 650,190 passenger vehicles and 52,085 commercial vehicles. A total of 720,658 motor vehicles were sold, or 41.6 per cent more than the 508,911 sold in 2021, comprising 641,773 passenger vehicles and 78,885 commercial vehicles.

COVID-19 had significantly impacted the automotive industry, due to a global shortage of microchips. Technologies such as autonomous driving, EVs, in-car infotainment, and other driver-assistance functions have resulted in microchips becoming integral for automobiles, with automotive electronics expected to constitute nearly a third of the total cost of a vehicle. Manufacturers also use microchips to help regulate and improve fuel economy and emission control.

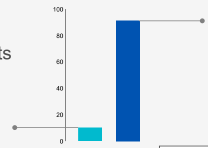
APPROVED INVESTMENTS IN THE AUTOMOTIVE SUB-SECTOR IN 2022

Domestic vs Foreign Investments

42 Projects Approved

Total **RM7.5 bil** — **294.7%** increase (2021:RM1.9 bil)

Domestic Investments **12%** RM0.9 bil



Foreign Investments **88%** RM6.6 bil

RM5.5 bil more than 2021

Expansion/Diversification vs New Projects

RM7.5 bil Total Investments

RM0.4 bil 5.3% — **16** New Projects

RM7.1 bil 94.7% — **26** Expansion/ Diversification Projects

Employment Opportunities

3,590 Total Job Opportunities — Nearly **double** the job creation (2021:1,851 jobs)

In 2022, Malaysia secured **13** investment projects related to the manufacturing and assembly of EVs and their components with investments worth **RM6.5 bil** and created **1,729** job opportunities

NOTEWORTHY AUTOMOTIVE PROJECT IN 2022

Expansion Project

Samsung SDI Energy Malaysia Sdn. Bhd.

Investment amount: RM6.2 bil

1,303 additional job opportunities

Republic of Korea-based company

Manufacture of EV battery cells – Phase II

As such, the industry experienced a decrease in production due to the shortage. For instance, according to Auto Forecast Solutions (AFS), factories in the USA cut nearly 1.1 million vehicles from production schedules in 2022 as a result, and this could rise to more than 3.8 million by year-end. Zhejiang Geely Holding Group Co., Ltd's profits also more than halved during the first half of the year.

To ensure sustainable semiconductor production, MIDA encourages more investments in the automotive-based sub-sector, especially projects with strong linkages to E&E. MIDA welcomes interested investors and stakeholders to engage with the industry in Malaysia and collaborate through various facilitations offered by the Government.

With governments worldwide, especially those in developed nations, adopting the 'green agenda', Malaysia's commitment to driving sustainability and inclusivity is outlined in the 12MP, and the automotive sub-sector has a significant role to play. In tandem with Malaysia's goals of achieving net-zero greenhouse gas (GHG) emissions by 2050 under the United Nations Framework Convention on Climate Change (UNFCCC), the National Automotive Policy (NAP) 2020 emphasised the need for the adoption of Energy Efficient Vehicles (EEVs) including EVs, and outlined specific initiatives to strengthen the EEV and EV (collectively xEV) ecosystem, spur technology transfer, and develop the local automotive industry's technical expertise.

Prospective investors are therefore encouraged to consider entering Malaysia's xEV ecosystem, which is expected to become a growth area over the coming years. As a leading E&E manufacturing hub in Southeast Asia, Malaysia can take the lead in producing high-value E&E parts and components for EVs, and even support the manufacturing and assembly of EVs and autonomous vehicles (AVs). Presently, Malaysia is a producer of materials related to EV battery manufacturing. The country has reputable local companies equipped with factory automation lines for battery cell and battery pack production, and a comprehensive E&E ecosystem particularly for end-to-end semiconductor manufacturing activities.

The Government has many policies in place to encourage both the growth of xEV manufacturing as well as the take-up of xEVs domestically. For instance, under the Low Carbon Mobility Blueprint (LCMB) 2021-2030 introduced by the Ministry of Environment and Water (KASA), xEV production is targeted to be at least 15 per cent of total industry volume (TIV) by 2030, and up to 38 per cent of TIV by 2040 in the National Energy Policy 2022-2040.

Led by MITI, another initiative is the National Electric Vehicle Task Force (NEVTF), which includes members from various ministries, agencies including MIDA, and industry representatives. The NEVTF aims to spearhead EV development holistically, help encourage EV manufacturers to make Malaysia their regional hub, and propel the adoption of EVs by local consumers.

Several incentives have been introduced since Budget 2022 to support EV manufacturers and encourage EV ownership. Amongst them are full exemptions on import duties, excise duties, and sales tax for locally-assembled EVs until 31 December 2025, and full exemptions on import duties and excise duties for imported EVs until 31 December 2023. Other related incentives included road tax exemptions of up to 100 per cent on EVs on top of individual income tax relief of up to RM2,500 for the purchase, installation, rent, hire purchase and subscription fees for EV charging facilities. Special tax incentives were also made available for the development of critical EV components.

Shipbuilding & Ship Repairing (SBSR)

The SBSR industry in Malaysia is key when it comes to maritime sector development that complements the oil and gas industry. Malaysian shipyards can build various types of small- to medium-sized vessels, and boast repairing capabilities for vessels of more than 600 tonnes of displacement.

PETRONAS, Malaysia's national petroleum company, conducts production operations and drilling projects throughout Malaysian waters, which supports the steady demand for marine vessels and a stable outlook for the industry. The PETRONAS Activity Outlook 2020-2022 reveals a demand for nearly 150 vessels across all weight categories to support production operations, particularly for new-built offshore vessels (OSVs) for production and as the replacement of ageing OSVs.

The year 2022 sees Malaysian shipyards being affected by the global supply disruption resulting from COVID-19 and the Russia-Ukraine conflict. Simple parts and components, which used to be off-the-shelf products, require long lead times to acquire. Adding to this challenge is a shortage of qualified personnel, as older generations of the workforce have retired while talent replacement is scant.

Prospective investors will be pleased to note that tax incentives for the SBSR industry have been extended for five years until 31 December 2027. This is meant to further support and enhance the competitiveness of Malaysia's maritime industry, as well as to stimulate the industry's growth in terms of capacity and capability to make Malaysia into Asia's premier SBSR hub.

The shipping industry's transition to a low-carbon future paves the way for Liquefied Natural Gas (LNG)-powered engine technology vessels. Demand for LNG-powered vessels is rapidly growing as global shipping companies gravitate towards them. This new technology bodes well for Malaysian shipyards that are ready to capitalise on the market.

The first green OSV to be built in Malaysia is the result of a strategic partnership between three Malaysian shipyards (Shin Yang Sdn. Bhd., Muhibbah Marine Engineering Sdn. Bhd., and Grade One Marine Shipyard Sdn. Bhd.) and a Singapore-based ship designer. This initiative aligns well with the nation's aim to have net-zero carbon emissions by 2050, and to integrate ESG guidelines into the SBSR industry.

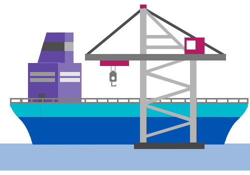
APPROVED INVESTMENTS IN THE SBSR INDUSTRY IN 2022

5 Projects Approved

Total **RM363 mil**

4 new projects and
1 expansion/diversification project

451.7% higher
(2021:RM65.8 mil)



These were **all** projects from wholly-Malaysian-owned companies

Employment Opportunities

183 Total Job Opportunities

Aerospace

The 12MP recognises the aerospace sub-sector as one of the new growth areas slated to accelerate Malaysia's transformation into a high-income nation by 2025. Despite the past two years' challenging economic landscape, the country's aerospace sub-sector remains competitive and resilient. Malaysian companies secured RM572.6 million worth of business deals at the Farnborough International Airshow 2022.

MIDA continued to promote investment in aerospace through participation in domestic and international exhibitions throughout 2022, in collaboration with NAICO Malaysia and MATRADE. These included the Malaysia Aerospace Summit 2022, Singapore Airshow 2022, MRO Asia Pacific 2022, and Farnborough Airshow 2022. MIDA also organised a supply chain conference for Spirit Aerosystems Malaysia Sdn. Bhd., a USA-based Tier 1 aerospace supplier, which served as a platform to reach out to local companies to become part of its global supply chain.

The Government will continue to facilitate the growth of the aerospace industry and compliance with ESG. The National Investment Aspirations (NIA) encourages advanced technology and high-value investments that are ESG-compliant and are essential to revitalising Malaysia's investment climate.

As a result of the strong pent-up demand for travel across most major markets and regions, and robust global cargo traffic volumes, the aerospace sub-sector benefitted from the recovery of the global commercial aircraft market after the previous two years of unprecedented disruption across the aviation industry. This continuing recovery is expected to reach pre-pandemic levels by 2023, followed by full recovery in 2024, despite rising oil prices placing downward pressure on profitability.

Aerospace industry players are now playing catch up with the significant backlog of aircraft orders, and doing their best to match demands of aircraft original equipment manufacturers (OEMs) and airlines, as they work to minimise the post-pandemic effects of financial constraints and manpower shortages on their operations.

Moving forward, according to the Airbus Global Market Forecast 2022, the next 20 years will see the need for 31,620 single-aisle and 7,870 widebody passenger and freighter aircraft. The demand for these new aircraft will progressively shift from fleet growth to accelerated replacement of older, less fuel-efficient aircraft, and by end-2040, the vast majority of commercial aircraft in operation will be newer aircraft. This bodes well for Malaysian aerospace players in the aerostructure, engine manufacturing, and maintenance, repair, and overhaul (MRO) segments, as this is an opportunity for them to further increase their market penetration.

APPROVED INVESTMENTS IN THE AEROSPACE INDUSTRY IN 2022

2 Projects Approved

Total **RM146.8 mil**

All projects are from wholly-Malaysian-owned companies

Employment Opportunities

42 Total Job Opportunities

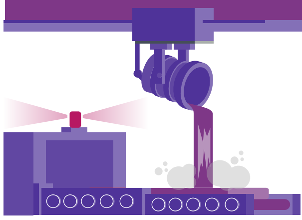
As ESG considerations become more prominent, and given manpower shortages, aerospace manufacturers and MRO players have had to invest in new skills as well as innovative technologies. MRO service providers have also expanded their geographical reach to become regional and global full-service providers.

Technologies related to Industry 4.0 such as digitalisation, predictive maintenance, additive manufacturing (AM) or 3D printing, artificial intelligence (AI)-backed inventory management, usage of robotic systems, and computer vision will help industry players increase their efficiency and improve the quality of their products and services.

Basic Metal Products

BASIC METAL PRODUCTS

Malaysia's basic metal products industry is a key source of inputs and raw materials for many other manufacturing industries, including M&E, transport equipment, medical devices, energy, communication devices, and scientific equipment



The industry encompasses the non-ferrous metal products sub-sector, which includes the production of metals and alloys that do not contain iron, such as aluminium, copper, and lead, and other rare or precious non-ferrous metals including gold, silver and lithium. Several of these non-ferrous metals are used in high-end industries and niche markets; for instance, copper in electrical devices, aluminium in structural applications, and zirconium as a refractory material

The ferrous metal products (also known as iron and steel) sub-sector is well-established and mature, with products primarily used in infrastructure, construction and manufacturing

In 2021, global steel demand, which previously was growing at a significant pace, stood at 1.85 billion tonnes, lower than the World Steel Association's initial 2021 forecast of 1.89 billion tonnes that it made back in 2018. Despite the reduction in steel demand of 10.6 per cent in 2020 as compared to the year before (from 80.3 million metric tonnes (MT) to 72.0 million MT), Southeast Asia remains one of the largest steel-consuming regions in the world.

According to the World Steel Association, global steel demand was expected to diminish by 2.3 per cent in 2022 to reach 1.8 billion tonnes after increasing by 2.8 per cent in 2021, and is expected to grow by one per cent in 2023 to 1.81 billion tonnes. This was lower than previously forecasted, likely due to persistently high inflation and rising interest rates globally. Other factors that led to a difficult 2022 included monetary tightening and PRC's economic slowdown, although infrastructure demand is expected to lift steel demand in 2023.

In order to ensure the sustainability and resiliency of Malaysia's ferrous metal products sub-sector, the Government's revised policy aims to complete the domestic supply chain and fill in the ecosystem gap, especially for products used for high-end and sophisticated purposes, such as stainless steel and alloy steel. To this end, the policy emphasises the importance of flat steel products and encourages more investments in this area. Given the unused installed capacity of established steel products (or 'liked products') in Malaysia, the policy currently restricts the undertaking of such projects. The Government also completed a foresight study on the sub-sector in 2022, the results of which will be used to inform the Government's decision-making in the near future.

Demand for non-ferrous metal products will be largely driven by the Government's initiative to develop the local EV ecosystem. For instance, copper is commonly used in the production of EV batteries. Aluminium also plays a crucial role due to its characteristics of high strength and light weight, which makes it suitable for use in the production of the vehicle chassis. Given the relatively small domestic market and the competition from more prominent existing industry players in the ASEAN region, especially those in Vietnam, Thailand, and Indonesia, prospective investors can be assured that the Malaysian Government will continue to develop the non-ferrous metal sub-sector.

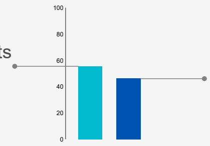
APPROVED INVESTMENTS IN THE BASIC METAL INDUSTRY IN 2022

Domestic vs Foreign Investments

31 Projects Approved

Total **RM2 bil**

Domestic Investments
55%
RM1.1 bil



Foreign Investments
45%
RM0.9 bil

Expansion/ Diversification vs New Projects

RM2 bil Total Investments

RM0.9 bil	45%	**14** New Projects
RM1.1 bil	55%	**17** Expansion/ Diversification Projects

Employment Opportunities

2,894 Total Job Opportunities

NOTEWORTHY BASIC METAL PRODUCTS IN 2022

New Project

Indium Corporation (Malaysia) Sdn. Bhd.

Investment amount: RM344 mil

88 new job opportunities

US-based company

Production of advanced soldering materials used in E&E for electronic assembly of products in the M&E, automotive, defence, mobile, medical devices, power modules, and thermal management areas.

Will help develop local supply chains for ancillary materials, tools and die, makers, automation integrators, and packaging supplies

Given that 1.9 tonnes of CO2 are produced per tonne of crude steel, Malaysia's ferrous metal products sub-sector was estimated to have produced 12.5 million tonnes of CO2, or 4.5 per cent of total national CO2 emissions in 2020 (approximately 272.6 million tonnes).

To achieve carbon neutrality by 2050, industry players are looking to transform and improve existing manufacturing processes and facilities. Specific sustainable technologies being explored include new ironmaking technology using hydrogen and electricity as the main reduction agent, in contrast to the conventional blast furnace steelmaking process using coal and iron ore; or hybrid furnace technology, which replaces the usage of coal with hydrogen. These require the availability of a consistent and stable supply of commercially viable 'green hydrogen' and low-emission sources of electricity.

On the non-ferrous metals front, copper, nickel, aluminium, lithium and rare earth element have been identified as the 'Commodities of the Future', and the demand for these products is expected to grow exponentially over the next two decades. There are vast opportunities in the production of 'green metals', and prospective investors are invited to explore the various opportunities in the industry.

Prospective investors should also be apprised of the mandate for all companies listed in the Main and ACE markets of Bursa Malaysia to prepare annual sustainability reports or statements. Among industry players that have already adopted ESG principles and begun their respective sustainability transformations are Press Metal Aluminium Holdings Bhd., Ann Joo Resources Bhd., Southern Steel Bhd., and Malaysia Steel Works (KL) Bhd. (Masteel).

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Machinery and Equipment (M&E)

STANDARD INTERNATIONAL TRADE CLASSIFICATION: MACHINERY AND EQUIPMENT

High-technology M&E is vital to various manufacturing industries, such as E&E, automotive, aerospace, medical, oil and gas (O&G), and food manufacturing. As these industries grow due to continuous inflows of both FDI and DDI, so does the M&E industry.

Malaysia's M&E industry is among the largest and strongest in ASEAN, capable of supplying domestic and international manufacturers of all sizes with customised products, end-to-end manufacturing, and even total solutions from design to logistics. Over 85 per cent of the companies involved in M&E are small and medium enterprises (SMEs). There are approximately 120 major companies in Malaysia that are capable of producing fully-automated advanced handling systems incorporating intelligent robots, including Machine-to-Machine (M2M) communication. The industry is a high-technology and modern one, employing a highly-skilled, highly-paid workforce. On average, over 70 per cent of those employed in the industry are in managerial, supervisory, or technical posts.

Total Solution Providers

Internet of Things | Big Data Analytics | Cloud Computing | Robotics | Additive Manufacturing | Simulation

Malaysia's M&E industry players export their products mostly to ASEAN countries such as Singapore, Indonesia, and Thailand, as well as the USA and the PRC. Typical products that are exported include pumps, rotating electric plants and parts, semiconductor machines, and mechanical appliances. There remains room for prospective investors in terms of expanding Malaysia's export destinations to global top M&E markets, as well as exploring further development of trade relations with other countries.

Globally, the M&E industry is expected to be worth RM19.8 trillion in 2023, growing at an expected rate of 6.4 per cent per annum (p.a.) from 2023-2027. The biggest growth in M&E sales is projected to be from the Asia Pacific (APAC) region, fuelled by increasing demand from ASEAN countries and the PRC. Factors that impact the growth of the industry include higher quality requirements and labour costs, increasingly stringent safety requirements, and the emerging market for mid-range performance machinery. In Malaysia, the industry is expected to outpace global growth at 10.1 per cent p.a. from 2023-2027.

Prospective investors in the M&E industry are encouraged to explore opportunities in the areas of semiconductor manufacturing M&E, as well as EV battery production M&E.

Global semiconductor equipment sales grew five per cent year-over-year to US$24.7 billion in the first quarter of 2022, according to the Worldwide Semiconductor Equipment Market Statistics Report. The industry's aggregate annual growth could average from six to eight per cent a year up to 2030. Malaysia possesses very high capabilities in producing specialised back-end semiconductor manufacturing M&E, with local companies providing design, software programming, vision inspection, as well as automation solutions in compliance with international quality standards.

However, local companies still rely on importing advanced components and parts; hence, opportunities abound when it comes to producing front-end semiconductor manufacturing M&E that can be supplied to leading OEMs within the region.

The market for EV batteries is set to grow tremendously, with demand for batteries ramping up at 30 per cent year-over-year growth worldwide, reaching an expected 3,900 gigawatt-hours (GWh) in 2030. Battery cell demand will remain highest in the PRC, followed by Europe and the USA. In response, 60 new giga factories with an average production capacity of 25 GWh are being planned for construction globally by 2030. Some giga factories may become even larger, in some cases reaching up to 100 GWh. Giga factory construction is complex, requiring the integration of numerous types of infrastructure, such as different machine types, among others.

Hence, prominent Malaysian M&E manufacturers for EV (battery packs & battery cells, assembly machines), such as Greatech Technology Berhad and Genetec Technology Berhad, have significant room for growth in this regard.

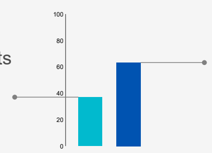
APPROVED INVESTMENTS IN THE MACHINERY AND EQUIPMENT (M&E) INDUSTRY IN 2022

Domestic vs Foreign Investments

72 Projects Approved

Total **RM8.4 bil**

Domestic Investments
36.9%
RM3.1 bil



Foreign Investments
63.1%
RM5.3 bil

NOTEWORTHY MACHINERY AND EQUIPMENT (M&E) PROJECTS

New Project — **Ferrotec Manufacturing Malaysia Sdn. Bhd.**

- Investment amount: RM766 mil
- 821 new job opportunities
- Foreign-owned (Japan, USA, PRC) company
- Production of modules, machined parts and components for semiconductor M&E industry

New Project — **VAT Manufacturing Malaysia Sdn. Bhd.**

- Investment amount: RM384 mil
- 500 new job opportunities
- Swiss company
- Production of vacuum valves, chambers for vacuum process equipment, modules and related components, and refurbishment of chambers for vacuum process equipment

Expansion Project — **Cohu Malaysia Sdn. Bhd.**

- Investment amount: RM379.3 mil
- 56 additional job opportunities
- Foreign-owned (USA & Switzerland) company
- Production of automated industrial equipment and components thereof

In order to be fully compliant with ESG requirements, companies need to examine their entire value chains, including R&D, design and development (D&D), manufacturing processes, and the supply chain. This is where M&E industry players come in, as they can contribute to ESG initiatives by producing both ESG-compliant products as well as products that can help with ensuring ESG compliance.

In particular, by pioneering technologies and solutions in advanced manufacturing, not only are new opportunities being opened in the industry to measure and report accurate and consistent ESG programmes, but profitability and sustainability can be supported in areas such as product innovation and lifecycle, workforce empowerment, supply chain sourcing and logistics, net-zero energy and emissions, and operations and maintenance.

SOLUTIONS IN ADVANCED MANUFACTURING

1 Supply Chain Sourcing and Logistics

Optimise supplier landscape and logistics systems to increase resilience enabled by transparency and traceability allowing companies to accurately track and report on ESG metrics.

Use Cases:
- Digital Sustainability Twin Simulation Ecosystem
- Logistics Optimisation
- Physical climate risk
- Supply Chain Management
- On-Time Deliveries
- Inventory Management
- Transparency and Traceability
- Risk management

2 Circular Economy

Advance innovation in product design and services to enhance time to market, availability, sustainable portfolio management and remanufacture, repair, low-carbon circular solutions.

Use Cases:
- Product Carbon Footprint
- Life Cycle Analysis
- New process design
- Virtual machine commissioning

3 Net-Zero Energy and Emissions

Expand use of efficient and low-carbon energy systems enabled by new solutions to reduce costs, track emissions, and accelerate transition towards net-zero for scope 1 and 2.

Use Cases:
- Carbon accounting reporting
- Microgrid with energy storage
- Power purchase agreements
- Industrial energy management
- Smart water management
- Variable frequency drives for energy efficiency
- Continuous emissions monitoring

4 Operations and Maintenance

Advanced visualisation and control connected equipment and systems to increase efficiencies, improve quality and productivity through better decision process while tracking progress towards ESG goals.

Use Cases:
- Real-time asset performance monitoring and visualisation
- Quality sensing
- Process Optimisation
- Overall Equipment Effectiveness
- Predictive Maintenance
- Remote monitoring
- Paperless operation

5 Empowered Workforce

Empower workers through technology, new tools and solutions, to foster a productive and inclusive manufacturing ecosystem, while increasing engagement and retention

Use Cases:
- Operator Training
- Work Process Analysis
- Virtual Training
- Work Instructions Assistance
- Safety Compliance
- Hazard Alerts/Detection
- Emergency Shutdown
- Inspect AR for debugging
- Mitigating ergonomic risks
- Immersive visual learning

Source: The World Economic Forum

Malaysian M&E companies, including Vitrox Corporation Berhad, Greatech Technology Berhad, Favelle Favco Berhad, and UWC Berhad, have adopted the ESG agenda, and this is expected to create value for their companies' brand growth and provide better market and financial access, especially in developed countries.

Fabricated Metal Products

The fabricated metal products industry plays a key role in supporting the manufacturing and services sectors, especially through its engineering supporting sub-sector (ESI), and is an important driving force for the growth of M&E and other manufacturing industries.

Internationally recognised for world-class manufacturing standards, fabricated metal products industry players in Malaysia possess the expertise and experience to supply products and services that are high-quality, competitively priced on the global market, and can be delivered on time anywhere in the world.

The over 1,000 industry players in Malaysia include integrated/total solution providers that are well-positioned to supply low-volume, high-mix products as well as various parts and modules that cater to the outsourcing and procurement needs of high-technology industries.

A majority number of companies in Malaysia's fabricated metal industry have increasingly now become 'one-stop centres' offering integrated services ranging from product conception to serial production, and managing the entire process flow to cover a wider scope including procurement, logistics, packaging, testing and certification. To achieve this, they have upgraded their facilities and acquired the required technologies to meet the stringent requirements of OEMs for parts, components, and precision engineering services.

The future direction of the industry lies in strengthening services and enhancing capabilities as well as the quality of production to provide total solutions. Prospective investors should note that the industry is preparing itself to gain international certification for the supply of parts and components for the O&G, aerospace, medical, and solar/ photovoltaic sectors.

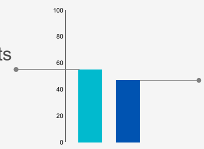
APPROVED INVESTMENTS IN THE FABRICATED METAL PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

79 Projects Approved

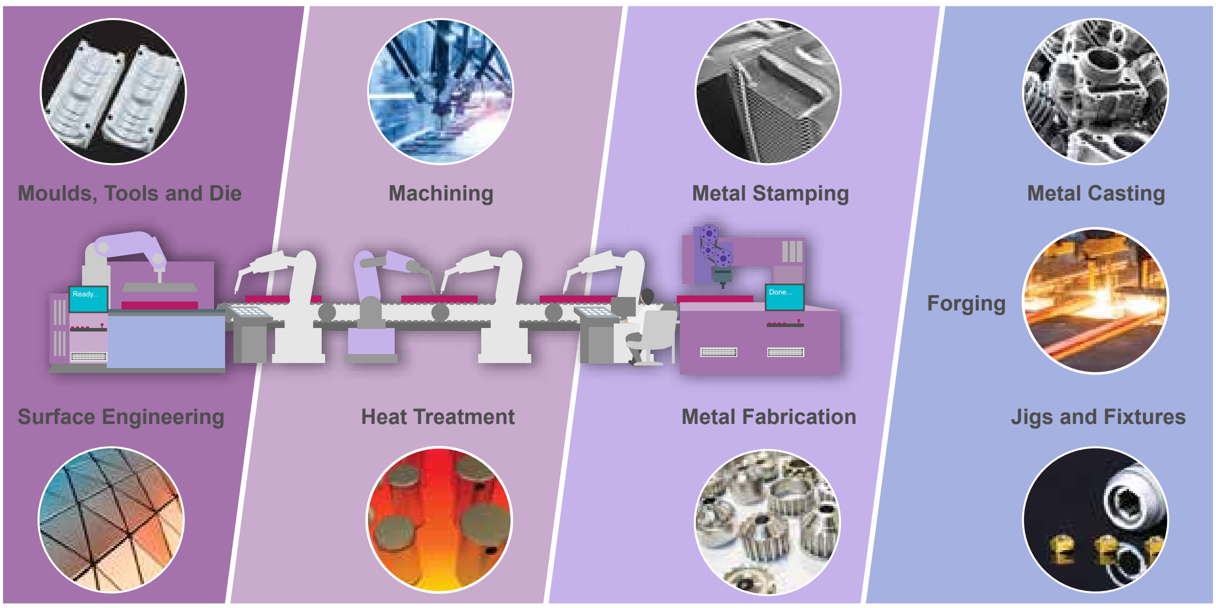
Total **RM1.7 bil**

Domestic Investments
52.9%
RM0.9 bil



Foreign Investments
47.1%
RM0.8 bil

FABRICATED METAL PRODUCTS



Textiles and Textile Products

The global textile market size was valued at US$993.6 billion in 2021 and is anticipated to grow at a compound annual growth rate (CAGR) of four per cent from 2022 to 2030.

The slowdown in the industry is in part due to the Russia-Ukraine conflict, which disrupted global economic recovery from the COVID-19 pandemic, at least in the short term, resulting from economic sanctions on multiple countries, rapid rises in commodity prices, and supply chain disruptions, affecting many markets across the globe.

Following the severe drop in sales caused by the pandemic, Malaysia's textiles and textile products industry has since recovered, with manufacturers having restructured their sourcing and distribution channels, and worked on enabling digital solutions. Revenue in the Malaysian apparel market is expected to reach US$5.2 billion in 2023, with the industry expected to grow at a rate of more than four per cent over the next few years to 2027.

The Malaysian textiles and textile products industry is highly competitive, with local manufacturers capable of producing a wide range of high-quality textiles and textile products.

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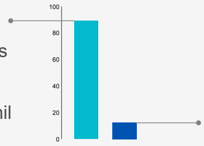
APPROVED INVESTMENTS IN THE TEXTILES AND TEXTILE PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

19 Projects Approved

Total **RM596.9 mil** — **101.9%** increase (2021:RM295.7 mil)

Domestic Investments
87.9%
RM524.6 mil



Foreign Investments
12.1%
RM72.3 mil

Employment Opportunities

1,274 Total Job Opportunities — Over **3X** increase (2021:304 jobs)

NOTEWORTHY TEXTILES AND TEXTILE PRODUCTS PROJECTS IN 2022

Expansion Project — **Ramatex Textiles Industrial Sdn. Bhd.**

- Investment amount: RM245.5 mil
- 325 additional job opportunities
- Malaysian company
- Production of cotton tape, yarn and polyester tape

New Project — **TS Continental Impex Sdn. Bhd.**

- Investment amount: RM51.9 mil
- 45 new job opportunities
- Majority Malaysian-owned company
- Production of industrial textiles and synthetic fabrics

GLOBAL ESG INITIATIVES UNDERTAKEN BY THE TEXTILES AND TEXTILE PRODUCTS INDUSTRY

DeTox My Fashion Campaign — Year: 2011

Aim: Get fashion companies to stop polluting waterways with hazardous chemicals from clothing production

Outcome: 80 companies took the pledge to phase out these chemicals from their production lines by 2020

Zero Discharge of Hazardous Chemicals (ZDHC) — Year: 2011

Aim: Eliminate harmful chemicals from the fashion industry's global supply chain by 2020 by building the foundation for more sustainable manufacturing

Outcome: 30 signatory brands, including Nike, Adidas, H&M, Ralph Lauren, Converse, Calvin Klein, Lacoste, Nautica, and Macy's

98% of facilities following ZDHC guidelines and solutions have met ZDHC requirements as of November 2019

MALAYSIAN COMPANIES WITH ESG INITIATIVES

Kloth Cares

- Fabric recycling campaign that keeps old clothes out of landfills
- Distribute unwanted garments to partners (Life Line Clothing and Selangor Youth Community) to be repurposed
- First and only socially responsible company in Malaysia to be awarded MyHijau Mark certification under the textiles and waste sector category
- The Green Scarf Project : Company's partnership with Coca-Cola to produce eco-friendly hijabs (head coverings for Muslim women) made from recycled plastic bottles and 100% recycled polyester
- Certified by Global Recycling Standard

Ramatex Textiles Industrial

- Using raw materials from recycled textile waste such as recycled cotton, recycled polyester, PET chips, and fabric waste
- Invested in a biomass project to completely replace fossil fuels (coal and fuel oil) used in production

Leather and Leather Products

Leathermaking in Malaysia goes back hundreds of years, involving products such as musical instruments and footwear. Due to environmental concerns caused by the tannery process and the limited local supply of quality raw animal hides, most companies in the industry opted to concentrate on manufacturing leather products back in the early 1990s.

Malaysia primarily imports leather from Indonesia, India, Pakistan, and Vietnam. Approximately 65 per cent of all leather manufactured is made from cowhide, with 15 per cent coming from sheepskin, 11 per cent from pigs, and nine per cent from goats.

Growth in the leather and leather products industry is supported by increased demand for trendy and premium leather products and government support for the leather industry. The global leather goods market reached a value of US$350.2 billion in 2021, and both Mordor Intelligence and IMARC Group expect the market to grow at a CAGR in excess of six per cent between 2022 and 2027, with the market reaching a size of over US$623.44 billion by 2028.

Revenue from the luxury leather goods sub-sector in Malaysia is expected to reach US$540 million in 2023. The market is expected to grow annually by a CAGR of 3.7 per cent until 2027.

NOTEWORTHY LEATHER AND LEATHER PROJECT IN 2022

New Project

Seremban Selatan Industries Supplies Sdn. Bhd.

Investment amount: RM3.8 mil

16 new job opportunities

Malaysian company

Design, production, and distribution of high-quality leather and PVC footwear to the construction industry, hospitals, agricultural and industrial companies, petrol stations, hotels, and restaurants in Selangor

Certified by Prüf- und Forschungsinstitut Pirmasens e. V. (PFI)

Non-Metallic Mineral Products

The non-metallic mineral products industry in Malaysia focuses on critical products used across a variety of other industries, including glass, ceramics and clay-based products, cement and concrete, high-purity alumina, and other products such as quicklime, marble and granite. Non-metallic minerals are mostly used in manufacturing as well as the construction of buildings and infrastructure; this accounts for almost 50 per cent of global material usage. Malaysian industry players export their products to the rest of the world, primarily Singapore, the USA, the PRC, India, and Australia.

Driven by increasing demand for non-metallic mineral products in new areas such as the energy sector, the market for such products is predicted to rise considerably between 2022 and 2028.

Other factors, such as rapid urbanisation across developing countries, have led to increasing demand for construction materials, and increased demand for sustainable packaging solutions amidst stringent regulations on plastic usage worldwide, also drive growth in the industry. The global market is projected to grow at an estimated CAGR of 3.8 per cent between 2021 and 2030.

Prospective investors in Malaysia's non-metallic mineral products industry may be interested in the area of sustainable and environmental-friendly manufacturing operations. Many industry players are currently facing the challenge of maintaining ESG compliance; for instance, cement and limestone powder operations produce dust, while activated clay and ceramic substrate operations produce acidic and toxic material waste. Hence, opportunities exist in the space of waste disposal and management.

Malaysia has some of the best ingredients or raw materials such as high-quality silica sand for the development of specialty glass and smart glass. MIDA encourages investments into this area as applications range across various areas such as optical, augmented and/or virtual reality, pharmaceuticals, and semiconductors.

APPROVED INVESTMENTS IN THE NON-METALLIC MINERAL PRODUCTS INDUSTRY IN 2022

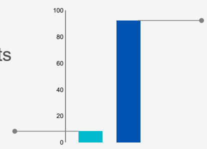
Domestic vs Foreign Investments

29 Projects Approved

Total **RM5.8 bil**

Over **13X** increase (2021:RM0.4 bil)

Domestic Investments
8.6%
RM0.5 bil



Foreign Investments
91.4%
RM5.3 bil

Employment Opportunities

3,201 Total Job Opportunities

Over **3X** increase (2021:782 jobs)

NOTEWORTHY NON-METALLIC MINERAL PROJECTS IN 2022

New Project → **SBH Kibing Solar New Materials (M) Sdn. Bhd.**

- Investment amount: RM1.8 bil
- 1,600 new job opportunities in 2 phases
- Subsidiary of China-Hunan Kibing Solar Technology Co. Ltd.
- Production of solar photovoltaic glass in Sabah

Expansion Project → **Nippon Electric Glass (Malaysia) Sdn. Bhd.**

- Investment amount: RM1.8 bil (5 year plan)
- 327 additional job opportunities
- Subsidiary of Japan-based Nippon Electric Glass Co. Ltd.
- Production of glass fibre and glass tubing products in Selangor
- Currently the only manufacturer of glass fibre and glass tubing for pharmaceutical and medical use in ASEAN

Industrialised Building System (IBS)

The Malaysian construction market is expected to grow at a CAGR of approximately 6 per cent from 2022 to 2027, according to Mordor Intelligence. While the industry was severely affected by COVID-19, the pandemic also presented an opportunity for greater adoption of IBS by industry players, given the shortage of foreign labour and ever-increasing material costs.

Prospective IBS investors should look to the adoption of automation, digitalisation, and ESG policies, as well as upskilling and expertise training, which will help transform the industry and allow it to keep abreast of emerging demands. IBS adoption is meant to increase productivity in the construction industry, with the various facilitations and incentives that the Government gives to companies undertaking the manufacturing of IBS products designed to further improve technology adoption in the construction sector.

Going beyond, the implementation of Building Information Modelling (BIM) in the IBS industry benefits the whole project delivery process from design to installation, as well as improved cost performance. BIM adoption could be a key factor in the breakthrough development of the construction industry, in terms of productivity and efficiency of the project delivery process.

A special incentive was introduced for manufacturers adopting any of the seven recognised systems, which include the precast concrete system, formwork system, steel framing system, block work system, timber framing system, innovative system, and IBS modular system/components.

One specific area that investors could consider is the use of additive manufacturing (AM)/3D printing, which can shorten the IBS supply chain by autonomously manufacturing components directly from a digital design model involving the least possible human intervention. This increases efficiency, reduces human error, and improves construction sites' carbon footprints.

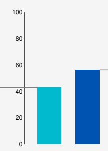
APPROVED INVESTMENTS IN THE INDUSTRIALISED BUILDING SYSTEM (IBS) INDUSTRY IN 2022

Domestic vs Foreign Investments

5 Projects Approved

Total **RM321.9 mil** — Over **6X** increase (2021:RM41.1 mil)

Domestic Investments
43.4%
RM139.6 mil



Foreign Investments
56.6%
RM182.3 mil

Nearly **3X** increase (2021:RM36.7 mil)

Employment Opportunities

301 Total Job Opportunities — Over **8X** increase (2021:33 jobs)

NOTEWORTHY IBS PROJECTS IN 2022

Expansion Project — **Scandinavian IBS Sdn. Bhd.**

- Investment amount: RM194.5 mil
- 1,200 additional job opportunities
- Swedish company
- Production of modular IBS components

New Project — **Dynamic Building System Sdn. Bhd.**

- Investment amount: RM43.5 mil
- 68 new job opportunities
- Malaysian company
- Company has promoted the use of the pre-engineered steel portal frame system in the construction of factories, warehouses, and multi-storey structures throughout Malaysia.
  Production of pre-fabricated steel frames in Negeri Sembilan

AM has been designated as one of the pillars under the Industry4WRD policy, allowing all initiatives and incentives under Industry4WRD to be leveraged to promote and encourage the adoption and development of AM. Other incentives such as Automation Capital Allowance, Reinvestment Allowance and the Digital Ecosystem Acceleration Scheme may also apply.

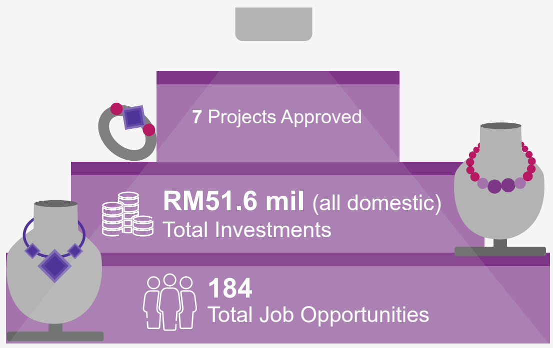
Miscellaneous

Miscellaneous industries and sub-sectors refer to investments that are not categorised under other industries, such as gold jewellery, resin cutting and resin grinding wheels, PVC floats, swimming caps, elastic webbing and drawing, gasket cup lip seals and stationeries.

The gold jewellery sub-sector in Malaysia comprises over 100 gold jewellery manufacturers of all sizes, feeding a domestic gold demand that is fourth in size amongst ASEAN countries. Over 90 per cent of Malaysian gold jewellery sold is 22 karat gold (a purity of 916), with a majority of gold jewellery being exported.

The global jewellery market size was valued at US$249 billion in 2021, and was expected to expand at a CAGR of 8.5 per cent from 2022 to 2030, thanks to increasing disposable income and innovative jewellery designs offered by manufacturers.

APPROVED INVESTMENTS IN THE MISCELLANEOUS PRODUCTS INDUSTRY IN 2022



NOTEWORTHY MISCELLANEOUS PROJECT IN 2022

New Project

TKC Aurum Manufacturing Sdn. Bhd. (formerly known as Toung Kok Chew Enterprise Sdn. Bhd.)

- Investment amount: RM23.2 mil
- 96 new job opportunities
- Malaysian company
- Production of contemporary design fashions as well as classic styles of gold jewellery, primarily chains, pendants, rings, earrings, necklaces, bracelets, and sets in Pulau Pinang

Scientific and Measuring Equipment

The scientific and measuring equipment industry in Malaysia is a growing, vibrant industry that contributes significantly to the healthcare sector and R&D through the production of laboratory diagnostics platforms and measuring instruments and apparatus. Technological advancements and product refinements of such equipment allow research to be carried out efficiently, often shortening the turnaround time or improving the accuracy of results.

In Malaysia, the industry's main driver is the medical devices sub-sector, which is home to more than 290 businesses and includes 10 of the top 30 worldwide medical devices corporations. Malaysia stands out as one of the most notable investment destinations for the sub-sector outside the USA, Ireland, and Costa Rica, particularly for the production of advanced medical devices, including implants, smart health monitoring devices, medical consumables, and point-of-care diagnostics.

Malaysia's appeal to investors is due primarily to the unique synergy between its world-class E&E, Engineering Supporting Industries/Services (ESI/ESS) and plastic products industries; the nation's strategic location intersecting global trade routes; and the readiness of the local workforce to meet industry demands.

The global medical devices market size was valued at US$489 billion in 2021. The market is projected to grow from US$495.5 billion in 2022 to US$718.9 billion by 2029, which represents a CAGR of 5.5 per cent.

The domestic medical devices market in Malaysia was anticipated to be worth US$2 billion in 2022 with a CAGR of 7.5 per cent between 2018 and 2022. Malaysia currently imports around 95 per cent to satisfy its domestic demand for medical devices.

Moreover, according to research analysts at Fitch Solutions, the total healthcare expenditure in Malaysia was forecasted to exceed RM69.2 billion in 2021 and increase at a CAGR of 7.6 per cent through 2025. This shows that Malaysia is looking to continually reform its healthcare system, with a focus on funding domestic research facilities for diseases and vaccines.

According to IMARC Group, the scientific and measuring equipment industry was worth US$39.4 billion in 2021, and is expected to have a CAGR of 5.5 per cent from 2022 to 2027 mainly due to significant demand for speedy and accurate diagnostics capabilities in the healthcare industry as well as increased collaboration between governments, manufacturers, and research institutes to create solutions that address and mitigate existing and future pandemic risks. Additionally, there was an increased awareness of the need for early detection of diseases to mitigate the steady increase in healthcare expenditures worldwide.

This entails enormous spending in healthcare, especially in R&D, to develop and produce more advanced medical devices. Statista expects the average expenditure on R&D by the top 10 global medical technology companies to increase by 35 per cent in 2028 from 2021's figure of US$1.7 billion, reaching up to US$2.3 billion.

Malaysia continues to be at the forefront in this industry, as demonstrated by her steady increase in medical device exports. Malaysia will keep working towards her goal of becoming the premier ASEAN nation and production hub of medical devices, serving both domestic and international markets by introducing newer technologies and increasing the uptake of investments.

NOTEWORTHY SCIENTIFIC AND MEASURING EQUIPMENT PROJECTS IN 2022

New Project — **Insulet Malaysia Sdn. Bhd.**

- Investment amount: RM900 mil over a 5 year period
- More than 500 new full-time job opportunities once the facility is operating at full capacity
- Acton, Massachusetts, USA-based company
- Production of tubeless insulin pumps

New Project — **Reszon Diagnostics International Sdn. Bhd.**

- Investment amount: RM42.2 mil
- Production of high-quality and accredited 'Made in Malaysia' diagnostic test kits for use in healthcare

APPROVED INVESTMENTS IN THE SCIENTIFIC AND MEASURING EQUIPMENT INDUSTRY IN 2022

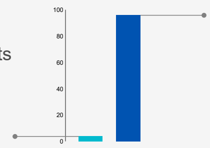
Domestic vs Foreign Investments

25 Projects Approved

Total **RM4.7 bil**

All of which came from the **medical devices sub-sector**

Domestic Investments
4.3%
RM0.2 bil



Foreign Investments
95.7%
RM4.5 bil

Expansion/ Diversification vs New Projects

RM4.7 bil Total Investments

RM3.7 bil	78.7%	**9**	New Projects
RM1 bil	21.3%	**16**	Expansion/ Diversification Projects

Employment Opportunities

3,389 Total Job Opportunities

Prospective investors may want to explore new or niche areas of advanced diagnostics and point-of-care, minimally/non-invasive solutions and convergence medical technologies as well as cloud-connected smart monitoring systems, intelligent implantable electronic devices, high-precision robotic surgical solutions, and complex bioartificial medical devices.

Other areas that Malaysia welcomes investors to explore include additive manufacturing (AM)/3D printing, as well as automation and IoT. AM enables the development and manufacturing of scientific instruments that were previously impossible due to design and material constraints. When integrated with the latest in imaging technology, AM can also improve the efficiency of day-to-day scientific processes and coming out with the prototyping of new products. Automation and digital connectivity in scientific equipment has resulted in quicker turnaround times for processes and diagnoses, especially within the research and medical fields, making processes more efficient and real-time data more readily available. Integration of high-technology products in this industry with automation and IoT is potentially cutting-edge.

Exports of manufactured scientific and measuring equipment, under which the medical devices sub-sector falls, totalled RM63.4 billion. This figure represents an increase of RM22 billion (53.1%) from 2021's figure of RM41.4 billion, showcasing the growing strength of the industry in Malaysia. The country continues to show a positive balance of trade in this sector, with imports of optical and scientific equipment amounting up to 10 per cent (RM29.5 billion) of the total imports for 2022.

The sector realises the increasing importance of ESG, especially in the USA and Europe, and has adopted sustainable practices in manufacturing activities. Malaysian companies are encouraged to review and realign their business operations to accelerate their preparedness for ESG adoption and to remain competitive in the global value chain.

For instance, Cochlear Malaysia Sdn. Bhd., a medical devices company from Australia has expanded its site to manufacture and maintain the latest and most advanced cochlear and acoustic implant sound processors. On-site manufacturing is powered by 100% renewable energy, which is part of Cochlear's global target of reaching net-zero emissions by 2030.

Food Manufacturing

Globally, the food market is expected to reach US$6.4 trillion in 2022, growing to US$8.9 trillion in 2026 at a CAGR of 8.7 per cent. The nation's multicultural population plays an important role in supplying the vast regional and global demands for food and beverage products, with its processed food exports gaining market share in over 150 countries, while its certified halal products are well-received amongst the 1.8 billion Muslims worldwide.

According to Statista, the food market in Malaysia is projected to grow at a CAGR of approximately eight per cent from 2023 to 2027, resulting in a market volume of US$69.4 billion by 2027.

As part of the expansion of their Asian presence, global food and ingredients players are strengthening their position in Malaysia through expansion or diversification of the food products they produce here. In particular, Malaysia's halal food business revenue hit US$31 billion in 2021 and is expected to reach US$47.6 billion by 2025. Fortifying and strengthening the halal industry locally and creating strong competition would be instrumental in capturing a larger portion of the halal market share globally.

Given the prominence of global food security, and the production of substitute protein options becoming more pressing, there is a wide array of investment opportunities available in areas such as 'smart farming' for vegetable and fruit-based production; 'alternative meat' ingredients; aquaculture with processed by-products; controlled-environment agriculture to ensure the sustainability of processed food ingredient supply; and by-product recycling for animal feed.

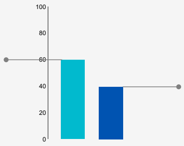
APPROVED INVESTMENTS IN THE FOOD MANUFACTURING INDUSTRY IN 2022

Domestic vs Foreign Investments

93 Projects Approved

Total **RM3.5 bil**

Domestic Investments
60%
RM2.1 bil



Foreign Investments
40%
RM1.4 bil

Out of these approvals, **6 projects worth RM132.8 million** were specific to animal feed products

Employment Opportunities

5,344 Total Job Opportunities

MALAYSIA'S HALAL FOOD PRODUCTS OUTREACH

Countries referencing Malaysia as a main source	150
Halal knowledge trained personnel	250,000
Foreign certified recognitions for JAKIM Halal Certification	84
Global Muslim population	1.8b

**Source: http://mrem.bernama.com/viewsm.php?idm=37026*

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NOTEWORTHY FOOD MANUFACTURING PROJECTS IN 2022

Expansion Project — **Dindings Poultry Processing Sdn. Bhd.**

Investment amount:
RM950.4 mil

Joint venture between existing local manufacturer of processed poultry products in Perak and a global company based in the USA

Processing of poultry

Expansion Project — **Givaudan Flavours & Fragrances Malaysia Sdn. Bhd.**

Investment amount:
RM131.8 mil

75 additional
job opportunities

Swiss company

Production of food ingredients in Melaka

Expansion Projects — **Custom Food Ingredients Sdn. Bhd.**

Investment amount:
RM55.3 mil

80 additional
job opportunities

Malaysian company

Production of cereal products, malted milk products and honey powder in Penang

In light of the low self-sufficiency levels of Malaysia's milk-based products, prospective investors may also consider venturing further downstream into the processing of dairy-based or plant-based milk products to cater to the needs of domestic and regional consumers.

Companies in Malaysia's food manufacturing industry, ranging from MNCs and local conglomerates to domestic SME food players, are already implementing ESG initiatives to fulfil export requirements. These initiatives include recycling packaging materials, installing solar panels for heating and energy generation purposes, initiating rainwater harvesting, and controlling the amount of waste generated, while using less energy and water in their production processes. The Government is fully committed to facilitating entrepreneurs along the food supply chain to meet ESG compliance goals.

Palm Oil-based Food Products

As the most-used vegetable oil globally currently, palm oil accounts for more than 35 per cent of all vegetable oil production. Crude palm oil (CPO) demonstrated significant record-breaking performance and acceptance amidst the challenging global backdrop. CPO prices remained above RM5,000 per tonne throughout 2022, also an indication of the global acceptance of the Government's long-term initiatives to promote and counter global smear campaigns.

The high CPO prices and subsequent recovery in revenue encouraged palm oil plantations in Malaysia to continue R&D to increase CPO yield per hectare through precision agriculture, genomic technologies and improved breeding programmes, pest and disease control, as well as farm mechanisation.

In terms of the sector's midstream activities, improvements in milling processes have resulted in the reduction of the environmental impact of milling operations. Downstream, this versatile and productive oil crop can contribute to global food security due to its nutrition-rich nature.

The outlook for the sub-sector is encouraging with higher projections for refined palm oil activities, given the recovery in the tourism and hospitality sector resulting in greater demand for food products (including palm-oil-based food products). Demand for palm-oil-based food products is also expected to increase in light of global food security concerns arising from the Russia-Ukraine war, which has resulted in a shortage of other vegetable oil and fat products. Malaysia is committed to promoting value-added palm-oil products and increasing the palm-oil-based phytonutrients as ingredients in food products, which will open new market segments in the global food security chain.

Among the projects approved were the production of cocoa butter, blended cooking oils with minerals and vitamins, nutrient-enriched olein and stearin, fat-filled milk products, and non-dairy creamers.

Malaysia's palm oil industry players have already started to address and embrace ESG principles as part of their day-to-day operations.

Malaysia has already established a sustainability framework record through the Malaysian Sustainable Palm Oil Certification (MSPO) that has successfully covered over 90 per cent of the oil palm areas in the country. Efforts will continue both to raise awareness of the importance of ESG amongst palm oil consumers and to push producers to increase their ESG compliance.

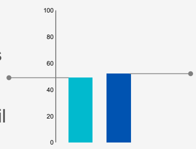
APPROVED INVESTMENTS IN THE PALM OIL- BASED FOOD PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

9 Projects Approved

Total **RM725.3 mil** — Investments increased (2021:RM45.6 mil)

Domestic Investments
48.5%
RM351.7 mil



Foreign Investments
51.5%
RM373.6 mil

Investments increased
(2021: DDI: RM32.3 mil; FDI: RM13.3 mil)

Employment Opportunities

502 Total Job Opportunities (primarily in downstream palm-oil-based food production activities) — **4X** increase (2021:99 jobs)

Beverages and Tobacco

The global beverage market is expected to grow from US$1.6 trillion in 2020 to US$1.9 trillion by 2026, increasing at a CAGR of 2.5 per cent. The growing per-capita global consumption of drinks in major developing regions such as Asia Pacific, which is expected to hold a dominant share in the global beverages market, is due to rising disposable incomes and changing preferences of consumers towards ready-to-drink (RTD) beverages. Key market players are investing in mergers, acquisitions, and product launches to gain a competitive advantage.

In Malaysia, revenue from beverages is projected to reach US$51.7 million in 2023, with an annual CAGR of 10.2 per cent, reaching a projected market volume of US$76.1 million by 2027.

Beverage industry players have taken note of the rising health concerns regarding the sugar content of RTD beverages, as well as with regards to alcohol consumption, both of which could impact the market. Prospective investors could therefore consider studying the feasibility of introducing new products in the non-alcoholic segment, such as more health-focused drinks, plant-based alternatives, and zero-sugar/calorie beverages

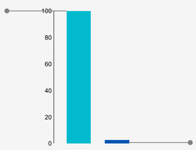
APPROVED INVESTMENTS IN THE BEVERAGES AND TOBACCO INDUSTRY IN 2022

Domestic vs Foreign Investments

8 Projects Approved

Total **RM112.9 mil** — Nearly **3X** increase (2021:RM28.7 mil)

Domestic Investments
99.2%
RM112 mil



Foreign Investments
0.8%
RM0.9 mil

Employment Opportunities

431 Total Job Opportunities — **10X** increase (2021:38 jobs)

Note: The Government no longer approves tobacco-related projects since December 2005,with the same decision applying to new alcoholic beverage projects since 2006

Furniture and Fixtures

Malaysia's furniture and fixtures industry (which is ranked among the top five furniture exporters in Asia) comprises mouldings and builders' joinery, carpentry (i.e. doors and windows), as well as furniture and associated components.

Currently, the country's furniture exporters are entrenched in 160 countries while displaying an increment in both population and infrastructural reach, as Malaysian furniture products find new homes in the United Arab Emirates, Saudi Arabia, the Philippines, Russia, as well as the emerging economies of Algeria, Greece, Puerto Rico, and Libya. In 2022, Malaysia's export of furniture made of wood, plastic, metal and parts recorded RM13.9 billion, an increase from RM12.6 billion in 2021.

The global furniture market size is expected to reach US$1,070.9 billion by 2030, according to a new report by Grand View Research, Inc. The market is anticipated to expand at a CAGR of 5.7 per cent from 2022 to 2030. The vast majority (90%) of industry players in Malaysia are SMEs, which have benefitted from Government support to encourage further automation in their technology processes through the Smart Automation Grant (SAG) and Industry4WRD Intervention Fund (IIFC). MIDA received 16 project proposals for the IIFC and another 47 for the SAG from furniture manufacturers keen to upgrade their manufacturing plants to remain competitive and abreast of Industry 4.0 technologies.

Greater awareness and consciousness of ESG priorities has led more environment-conscious global consumers and businesses to consider exploring options in the green furniture market segment. This has encouraged Malaysian industry players to research, develop, and innovate new material compositions (comprising wood, plastic, and metal) as well as promote the production of trendy products catering to both commercial (e.g. business/office, education, healthcare, hospitality, smart warehouses) and residential (bedroom, kitchen, dining room) spaces.

APPROVED INVESTMENTS IN THE FURNITURE AND FIXTURES INDUSTRY IN 2022

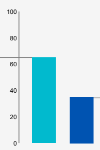
Domestic vs Foreign Investments

34 Projects Approved

Total **RM501.7 mil**

More than **double** (2021:RM244.6 mil)

Domestic Investments
65.2%
RM327 mil



Foreign Investments
34.8%
RM174.7 mil

Expansion/ Diversification vs New Projects

RM501.7 mil Total Investments

RM215.1 mil 42.9% **16** New Projects

RM286.6 mil 57.1% **18** Expansion/ Diversification Projects

Employment Opportunities

1,484 Total Job Opportunities

Over **450** more jobs created (2021:1,033 jobs)

NOTEWORTHY FURNITURE AND FIXTURES PROJECT IN 2022

Expansion Project

Dexion Asia Sdn. Bhd.

Investment amount: RM82.7 mil

90 additional skilled jobs

Foreign-owned company

Design and manufacture of smart intralogistics solutions: mobile-base storage systems, speedlock racking and shelving

Wood and Wood Products

Malaysia's wood and wood products industry encompasses the production of sawn timber, veneer and panel products (i.e. plywood, medium-density fibreboard, particleboard, and chipboard).

The Malaysian timber industry remained resilient. In 2022, Malaysia's export of wood and wood products (excluding wooden furniture) increased by 15 per cent to RM7 billion as compared to RM6.1 billion in 2021.

Asian countries, most notably Japan, India, Thailand, and the PRC, were the largest export markets for Malaysia's timber products of logs, sawn wood, and plywood.

Asia's wood-based industries, including Malaysia's, stand to gain from opportunities especially in the area of wood chip and pellet production catering to rising renewable energy demand as a result of international sanctions on Russia, the world's largest exporter of softwood timber. At the same time, the supply of wood and wood products from Belarus has been curtailed while supply from Ukraine has been severely hampered. These three countries account for a quarter of the worldwide timber trade.

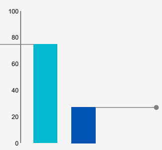
APPROVED INVESTMENTS IN THE WOOD AND WOOD PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

22 Projects Approved

Total **RM229.8 mil**

Domestic Investments
67.7%
RM155.5 mil



Foreign Investments
32.3%
RM74.3 mil

Expansion/ Diversification vs New Projects

RM229.8 mil Total Investments

RM167.2 mil	72.8%	**11** New Projects
RM62.6 mil	27.2%	**11** Expansion/ Diversification Projects

Employment Opportunities

791 Total Job Opportunities

On the ESG front, the use of wood as a building material in construction can help reduce the use of concrete and steel, contributing towards lowering the 10 per cent of global carbon dioxide emissions generated by the construction sector. This has to be balanced against the Sustainable Development Goals (SDGs) and the usage of forestry resources. To ensure they remain ESG-compliant suppliers, wood-based product manufacturers in Malaysia are exploring initiatives to fulfil similar requirements to those of the Programme for the Endorsement of Forest Certification (PEFC), thus maintaining transparency of supply chain data within the forestry and timber sector.

Palm Biomass-based Wood Products

Malaysia has attracted and continues to attract investments in circular economy projects that process and use commodity by-products to produce value-added products, generating new income streams and increasing market outreach.

The Biomass Action Plan under the National Agricommodity Policy 2021-2030 (NAP 2030) is being developed to attract new industry players to venture into biomass downstream activities from two main sources; namely, oil palm biomass and timber and wood-based biomass. This empowers the agricommodity sector to transition from a linear economy to a circular economy by reducing, reusing, and recycling resources in production and manufacturing, while limiting waste.

Additionally, opportunities abound for oil-palm-based, timber, and wood-based product companies in Malaysia to reuse wood waste and recycle by-products in their manufacturing processes to produce wood/fuel pellets, high-grade agriculture soil, nutrients, and fertiliser.

In 2022, six projects were approved for producing wood pellets, eco-processed pozzolan, and fertiliser amounting to RM86.3 million, with FDI making up slightly more than half (52.5%) at RM45.3 million. These products use biomass as their raw materials.

Paper, Printing and Publishing

Since its establishment in the 1960s, Malaysia's paper, printing, and publishing industry has continued to adjust to the ever-changing market conditions, consumer preferences, and technological advancements.

Industry players remain cognisant of developments in alternative paper sources, ink compounds, print and digital technology, and deliverable logistics in the changing trends and technologies. With the rapid developments in digital media as compared with physical printed and published materials, as well as the meteoric rise of e-commerce, the industry continues to transform and pivot to meet market demand, especially to adopt more sustainable practices.

As a result, the industry in Malaysia has been relying on recovered paper as the main raw material in the production of recycled pulp, kraft paper, test liner, corrugated medium paper, and paperboard, which is then mostly used to produce tissues, diapers, corrugated cartons, and paper packaging. One such innovation involved using paper to construct the heavy-duty corrugated pallets that replaced wooden pallets used in industrial product packaging and movement of goods.

From 2017 to 2021, Malaysia received a sizeable number of investments from the PRC to establish manufacturing facilities for paper and paper-based products. In total, global players including Best Eternity Recycle Technology Sdn. Bhd., Jianhui Paper Kuantan (Malaysia) Sdn. Bhd., Jingxing Holdings (M) Sdn. Bhd., XSD International Paper Sdn. Bhd., and ND Paper (Malaysia) Sdn. Bhd. have invested RM10.4 billion over the past 10 years. Local companies have also expanded their operations; some through foreign equity acquisition, such as GS Paperboard & Packaging Sdn. Bhd., which together with Japanese shareholders launched a RM1.2 billion plant using advanced paper-making technology (Paper Machine 3) in Banting, Selangor in 2022, an investment that was approved in 2019.

Earlier in 2022, the Government introduced specific Guidelines for Importation and Inspection of Waste Paper, which came into effect on 10 January 2022 in response to substantial developments in paper milling activities and in anticipation of a huge amount of waste paper importation given the large production capacity that had been approved. To further streamline manufacturing, manage the environmental impact of the industry's operations, and ensure the sustainable development of the paper and packaging industry, a temporary two-year moratorium on the issuance of Manufacturing License (ML) or 'Confirmation Letter for Company Exempted from ML' (ICA10) was also imposed, and came into effect on 15 March 2022 for new and expansion/diversification projects alike in paper and packaging products that utilise waste paper as their raw materials.

Existing players have already initiated and implemented sustainable and green infrastructure, including waste water treatment plants and installation of solar panels.

The outlook of the industry remains optimistic, with the global market for paper packaging materials projected to reach US$323 billion by 2026, growing at a CAGR of 5.9 per cent. The COVID-19 outbreak highlighted the safety, hygiene, and integrity of goods delivered as a result of e-commerce activities. The demand for innovative packaging materials surged as merchants sought to minimise the risk of product loss, damage, and contamination on the way to the end-users.

Hygienic paper-based products such as wet wipes, sanitary towels, and tissues were also in high demand throughout the pandemic. As Malaysia started to move into the endemic phase, hygiene and sanitation products remained in demand by the general public, as well as the private and public sectors. Beyond that, the imposition of anti-plastic-bag initiatives motivated by governments has benefitted the paper industry, as the market moves towards eco-friendly alternatives.

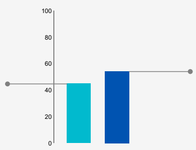
APPROVED INVESTMENTS IN THE PAPER, PRINTING AND PUBLISHING INDUSTRY IN 2022

Domestic vs Foreign Investments

42 Projects Approved

Total **RM1.1 bil** — **120%** increase (2021:RM0.5 bil)

Domestic Investments
45.5%
RM0.5 bil
25% increase (2021:RM0.4 bil)



Foreign Investments
54.5%
RM0.6 bil

Expansion/ Diversification vs New Projects

RM1.1 bil Total Investments

RM0.7 bil	63.6%	**29** New Projects
RM0.4 bil	36.4%	**13** Expansion/ Diversification Projects

Employment Opportunities

2,400 Total Job Opportunities — **69.9%** increased job creation (2021:1,413 jobs)

NOTEWORTHY PAPER, PRINTING AND PUBLISHING PROJECT IN 2022

Expansion Project

GS Paperboard And Packaging Sdn. Bhd.

Investment amount: RM182.5 mil

207 additional job opportunities

Foreign-Owned Company
Country of origin: Japan

Activity : Engaged in paper-converting activities
Product : Corrugated boards

Chemicals and Chemical Products

There has been an increase in demand for chemicals and chemical products in 2022 and the industry is well on the road to recovery from the impact of the COVID-19 pandemic on the supply chain, logistics and foreign labour. Increasing demand can be seen in industries ranging from healthcare, cosmetics, personal care, and pharmaceuticals to E&E and transport.

Prospective investors in the chemicals and chemical products industry would be heartened by the prospects of rapid growth in related sectors, with industries within the chemicals and chemical products value chain being able to expand their market size and reach, as well as develop their operations based on several global trends that are expected to continue impacting the global industrial production landscape through 2023.

These trends include (but are not limited to) the acceleration of digitalisation and implementation of Industry 4.0 technologies in the manufacturing sector, largely as a result of the constraints imposed during the COVID-19 pandemic; the 'greening' of industrial production, which is starting to get traction in terms of government policies worldwide; and the shifting of global industrial production from the North Atlantic toward East Asia (the PRC, Japan, Republic of Korea).

In order to ensure that the industry remains responsive to global trends, and to ensure the sustainability and stability of its supply and value chain, the Government developed the Chemical Industry Roadmap (CIR) 2030 as the industry's definitive and guiding industrial roadmap for the 10 years from 2021 to 2030.

Prospective investors are highly encouraged to align their investments with the intentions of the CIR. This will ensure the establishment of a globally competitive ecosystem in Malaysia's chemical and chemical products industry while developing Malaysia's socioeconomic profile.

Malaysia also welcomes investments into other segments of the chemical industry which were not highlighted in the CIR. Investments into R&D and new product development are welcome as well.

One such area where investments are welcome is in energy storage, particularly in the fields of 'green hydrogen' production and battery-related technologies, both of which show great promise when it comes to improving the generation of renewable energy. Green hydrogen provides a cost-effective storage solution by converting renewable energy sources into hydrogen via electrolysis, while improved battery technologies provide more reliable and scalable systems that can be easily installed near intermittent renewable energy sources such as wind turbines or solar farms.

Investors should take note that Malaysia has positioned itself as a prospective manufacturing hub for green hydrogen and its subsequent derivatives (green ammonia and green methanol, methylchlorohexane), which act as energy carriers as they are easier to be handled and infrastructurally-ready, with interest seen in East Malaysia, where new hydroelectric plants are being constructed.

In the arena of battery technologies, Malaysia welcomes investments in the manufacturing of lithium-ion batteries and their components (anodes, cathodes, separators, and electrolytes), especially when it comes to filling up the gaps in the midstream and upstream of the battery ecosystem.

Investors can also consider the production of rare-earth elements (REEs), which are used in – among others – the production of electric motors, night vision goggles (military use), smartphones, Global Positioning Satellite systems, and generators.

Malaysia is the second-largest producer of REEs after the PRC, and is focusing on developing the downstream value chain for REEs.

Another area ripe for investment in the chemicals and chemical products industry is in second-generation biofuels such as hydrogenated vegetable oil (HVO). HVO can be fully produced from the hydrocracking or hydrogenation of renewable raw materials such as used cooking oils, and unlike first-generation biofuels, has a quite similar chemical composition to traditional diesel and can be used in existing diesel engine vehicles. HVO is considered a high-quality diesel substitute and is therefore often referred to as renewable diesel. Demand for HVO is expected to increase in the future as it can be upgraded to sustainable aviation fuel (SAF). Investments are especially welcomed in the area of ensuring a consistent local source of feedstock for HVO, as the collection of used cooking oils in the country is currently insufficient.

Chemicals

Exports of chemicals and chemical products in 2022 amounted to RM60.4 billion, an eight per cent decrease compared to the RM65.6 billion worth of exports in 2021, while imports totalled RM96.3 billion, an increase of 23 per cent compared to RM77.9 billion in 2021.

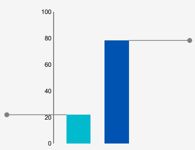
APPROVED INVESTMENTS IN THE CHEMICALS SUB-SECTOR IN 2022

Domestic vs Foreign Investments

53 Projects Approved

Total **RM5.4 bil**

Domestic Investments
22.2%
RM1.2 bil



Foreign Investments
77.8%
RM4.2 bil

Expansion/ Diversification vs New Projects

RM5.4 bil Total Investments

RM5.2 bil	96.3%	**29** New Projects
RM0.2 bil	3.7%	**24** Expansion/ Diversification Projects

Employment Opportunities

1,787 Total Job Opportunities

Cosmetics and Toiletries

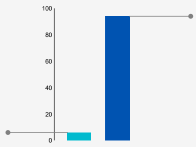
APPROVED INVESTMENTS IN THE COSMETICS AND TOILETRIES SUB-SECTOR IN 2022

Domestic vs Foreign Investments

4 Projects Approved

Total **RM296.5 mil**

Domestic Investments
6%
RM17.7 mil



Foreign Investments
94%
RM278.8 mil

Expansion/ Diversification vs New Projects

RM296.5 mil Total Investments

RM296 mil	99.8%	**3** New Projects
RM0.5 mil	0.2%	**1** Expansion/ Diversification Projects

Employment Opportunities

340 Total Job Opportunities

Pharmaceuticals

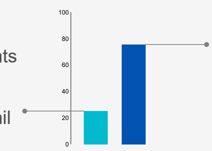
APPROVED INVESTMENTS IN THE PHARMACEUTICALS SUB-SECTOR IN 2022

Domestic vs Foreign Investments

5 Projects Approved

Total **RM266.8 mil**

Domestic Investments
32.2%
RM85.9 mil



Foreign Investments
67.8%
RM180.9 mil

Expansion/ Diversification vs New Projects

RM266.8 mil Total Investments

RM80.2 mil	30.1%	**3** New Projects
RM186.6 mil	69.9%	**2** Expansion/ Diversification Projects

Employment Opportunities

187 Total Job Opportunities

NOTEWORTHY CHEMICALS AND CHEMICAL PRODUCTS PROJECTS IN 2022

Expansion Project — **EcoCeres Renewable Fuels Sdn. Bhd.**

Investment amount: RM887.2 mil

Hong Kong company

Production of HVO, SAF, and Bio-Naphtha

Expansion Project — **Graphjet Technology Sdn. Bhd.**

Investment amount: RM442.5 mil

Malaysian company

Production of palm-based artificial graphite and graphene

Expansion Projects — **Halagel Plant (M) Sdn. Bhd.**

Investment amount: RM13.7 mil

Malaysian company (Bumiputera)

Production of soft gelatine capsules

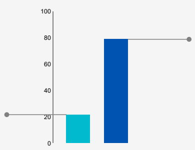
APPROVED INVESTMENTS IN THE OLEOCHEMICALS SUB-SECTOR IN 2022

Domestic vs Foreign Investments

9 Projects Approved

Total **RM1.4 bil**

Domestic Investments
21.4%
RM0.3 bil



Foreign Investments
78.6%
RM1.1 bil

Expansion/ Diversification vs New Projects

RM1.4 bil Total Investments

RM1.1 bil	78.6%	**4** New Projects
RM0.3 bil	21.4%	**5** Expansion/ Diversification Projects

Employment Opportunities

546 Total Job Opportunities

Oleochemicals

The tremendous growth in global oleochemical demand is because of the increasing need for green products in industries such as personal care, pharmaceuticals, and cleaning products including soaps and detergents. The Malaysian market remains one of the largest global markets in the oleochemical sub-sector (the second-largest market for Malaysian palm oil since 2019). Additionally, it remains one of the largest producers and exporters of oleochemical products worldwide, contributing approximately 20 per cent to global capacity.

In 2022, oleochemicals recorded total exports of RM37.2 billion, a 26 per cent increase from 2021's figure of RM29.5 billion, while imports increased by 33 per cent to RM10.9 billion as compared to RM8.2 billion in 2021.

Malaysian chemical and chemical products industry players are deeply aware that they have significant roles to play when it comes to ESG considerations. The industry is heavily involved in the manufacturing and transportation of materials, which inherently emit a significant amount of GHGs. As such, ESG initiatives typically involve the sustainable sourcing of raw materials and chemicals and the recycling of unwanted and unusable materials.

Leading chemical companies that have pledged to adapt to ESG initiatives include Linde, BASF, and Arkema S.A., undertaking steps to reduce GHG emissions across their supply chain such as by introducing more energy-efficient and clean fuels like green hydrogen, which will eventually also be implemented in Malaysia.

Oleochemicals industry players are similarly dedicated to integrating sustainability practices into their core operations and complying with all applicable legislation and codes of practices, including the implementation of leading ESG standards and guidelines for environmental management, human rights, workplace conditions, community development, and social impact. In particular, companies can ensure that their palm-oil-based products are sourced from sustainable materials by obtaining Roundtable on Sustainable Palm Oil (RSPO) supply chain certification. Having a vertically-integrated supply chain means that the operations span the entire chain from oil palm plantations to product manufacturing, including refineries and oleochemical plants. This helps in creating an advantage in sourcing certified materials for oleochemical production, and in demonstrating supply chain visibility, including transparency and traceability.

Petroleum Products (including Petrochemicals)

As one of the leading industries in Malaysia, the petroleum products including petrochemicals industry is highly developed, as the nation is a major exporter of petrochemical goods including olefins, polyolefins, aromatics, ethylene oxides, glycols, and polystyrene. These products remain essential to many commodities used in daily life, such as plastics, fertilisers, and apparel.

Despite the challenges from COVID-19, as well as slower demand growth, increasing capacity due to expansion, and a declining value pool, the worldwide petrochemical market was expected to be worth US$725.4 billion in 2022, increasing to US$950.1 billion by 2028 with a CAGR of 4.6 per cent over the forecasted period. In Malaysia, the Malaysian Petrochemicals Association president Akbar Md. Thayoob expected the industry to record an average CAGR of between five to six per cent, which is higher than the country's GDP, despite numerous external economic uncertainties.

Industry players have been pivoting and responding to changes in their markets resulting from global governments driving the transition towards renewable energy sources and implementation of the circular economy, alongside growing stakeholder sentiment and recent technological innovations.

One such response is in undertaking decarbonisation initiatives to diminish the use of stationary combustion (burning fossil fuels for heat) while performing fractional distillation as it accounts for the majority of refineries' emissions, and instead, pursue electrification of such processes using renewable or clean energy. Many petrochemical players have pledged to decarbonise, recycle, and recover resources. PETRONAS, Malaysia's national oil company, declared its aspiration to achieve net-zero carbon emissions by 2050.

Investors should consider focusing on improving resource and energy efficiency in production processes in the petroleum products including petrochemicals industry. Other new and innovative technologies that prospective investors are welcome to implement in Malaysia include green hydrogen; carbon capture, storage, and utilisation (CCSU); and advanced chemical recycling.

The production of 'green' hydrogen from renewable energy (RE) sources, which currently accounts for just approximately 0.1 per cent of all hydrogen production, becomes more realisable as the cost of renewable electricity and electrolyser technology continues to decline. This is critical as hydrogen is used in the production of fertiliser, and can replace the use of fossil fuels in transportation, heating, and electricity generation. 'Turquoise' hydrogen is an additional area worth considering.

Carbon capture, transport, storage, and utilisation using CCSU technologies are applicable throughout the whole energy value chain, with one such mechanism being to inject captured carbon dioxide into depleted offshore reservoirs for storage. The stored carbon dioxide can then be converted into useful chemicals and fuels, or for enhanced oil recovery.

Petrochemical companies in Malaysia have also ventured into advanced chemical recycling, such as the recovery of oil from plastic waste through pyrolysis instead of conventional recycling of plastic waste to produce recycled resin/plastic. Pyrolysed oil can then be used to produce virgin-quality polymers, which can be marketed as certified circular polymers. This allows petrochemical companies to play a pivotal role in reducing plastic deposits in landfills and leakage into the environment, while allowing them to recover valuable hydrocarbons in the process.

MITI, together with MIDA, are spearheading national-level efforts to put in place all necessary policies, facilitation, and support to ensure that Malaysia is ready to host new green investments coming into the industry over the next few years.

PETROLEUM PRODUCTS (INCLUDING PETROCHEMICALS) HIGHLIGHTS IN 2022

RM5.9 bil Total Investments

9 Projects Approved

29.5X The amount invested in 2021 (RM0.2 bil)

Expansion/ Diversification vs New Projects

RM5.6 bil — 94.9% — 6 New Projects

RM0.3 bil — 5.1% — 3 Expansion/ Diversification Projects

Employment Opportunities

805 Total Job Opportunities

Over **4X** increase in job creation (2021:147 jobs)

Total Exports **RM163 bil** in 2022

Increase of **69.8%** compared to 2021

Total Imports **RM148.7 bil** in 2022

Increase of **66.1%** compared to 2021

NOTEWORTHY PETROLEUM PRODUCTS (INCLUDING PETROCHEMICALS) PROJECTS IN 2022

New Project — **Petroventure Energy Sdn. Bhd.**

Investment amount: RM5.1 bil

Approximately 500 new job opportunities

Production of petroleum products, including petroleum, kerosene, benzene, liquefied petroleum gas, acrylic, sulphur, slurry, fuel oil, and diesel

Will help spur Sabah's economy, as the products from the refinery will create a new supply chain that benefits many businesses

Expansion Project (Phase 3) — **ATT Tanjung Bin Sdn. Bhd.**

Investment amount: RM266.3 mil

19 additional job opportunities for Malaysians as permanent staff

Production of bitumen

Plastic Products

Malaysia's plastic products industry remained ebullient throughout 2022, maintaining its growth trajectory from previous years. This is in line with the industry's outlook globally, which is expected to expand at a CAGR of 3.7 per cent from 2022 to 2030.

Exports of plastic products reached RM17.3 billion in 2022, compared to the RM15.9 billion achieved in 2021, an increment of 8.8 per cent. Meanwhile, total trade reached RM32.8 billion, an increase of 11.6 per cent compared with 2021's figure of RM29.4 billion. This excludes the indirect export of plastics as parts and components of E&E products, automotive components, building materials, textiles, and other products.

Together with the Malaysian Plastics Manufacturers Association (MPMA) and other stakeholders, MIDA continually reached out to plastic products manufacturers, SMEs in particular, throughout 2022. For instance, a series of engagements with MPMA was held to update its members on MIDA's role to facilitate and boost the plastic industry in Malaysia, including the adoption of Industry4WRD and automation. The MIDA-MPMA Conference 2022 was held to apprise MPMA's members of various Government facilities and assistance that focused on the plastic products industry. The industry was advised to strengthen its competitiveness through the acquisition of technologies, enhancing skills training for staff across the board, and improving marketing capabilities.

Together with the Malaysian Plastics Manufacturers Association (MPMA) and other stakeholders, MIDA continually reached out to plastic products manufacturers, SMEs in particular, throughout 2022.

Moving forward from 2023 and beyond, there are significant investment opportunities in terms of diversifying into high-end plastic products and engineering plastics, considering undertaking plastics recycling (coupled with high-technology waste management infrastructure) can improve the overall sustainability of the industry, especially in terms of ESG compliance.

In particular, investments are welcomed into the areas of enhancing mechanical and molecular recycling. Currently, mechanical recycling is limited to certain types of plastics and would greatly benefit from products or technology that improve the flexibility and durability of plastic types that can be recycled and/ or reused. Molecular recycling, which includes purification, depolymerisation, and conversion technologies that can process a wide range of plastic waste including packaging, textiles, healthcare plastics, and wind turbine blades, help to recirculate plastics that currently do not have end-of-use recovery solutions. The recycling of plastic waste is a promoted activity under the Promotion of Investments Act 1986, and investors may be eligible for either Pioneer Status or Investment Tax Allowance.

In support of the ESG agenda being driven by governments worldwide, and to improve plastics sustainability, plastics industry players have been working on a range of initiatives to reduce energy, increase recycling, and reduce plastic waste. Aside from addressing plastic debris at the regional level, the Malaysian Government developed a Circular Economy Roadmap to fight poorly managed plastic waste on a national level. The Malaysia Plastic Sustainability Roadmap, 2021-2030 was released in December 2021 by KASA.

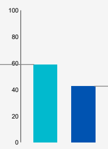
APPROVED INVESTMENTS IN THE PLASTIC PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

82 Projects Approved

Total **RM1.4 bil** — Nearly **double** (2021:RM0.8 bil)

Domestic Investments
57.1%
RM0.8 bil



Foreign Investments
42.9%
RM0.6 bil

Employment Opportunities

3,788 Total Job Opportunities

88.8% increased job creation (2021:2,006 jobs)

Rubber Products

The rubber products industry in Malaysia is a long-standing, well-established one, even before the nation itself came into being. Today, Malaysia is the world's seventh-largest producer and eighth-largest consumer of natural rubber. Malaysia manufactures rubber products for use in three major categories: tyres, industrial custom rubber products, and consumables such as gloves and shoes. Much of domestic-grown natural rubber goes to tyre applications; hence, Malaysia is a major importer of natural rubber from Thailand.

The rubber products industry continues to be significant for Malaysia due to its importance as an export product. The nation is a major global contributor in the production of synthetic rubber and medical gloves (examination and surgical gloves), condoms, and catheters. To date, there are approximately 190 Malaysian manufacturers in these segments, whereby 65 per cent of gloves are exported globally.

Demand for rubber products remained promising in 2022 from the glove and catheter producers despite a significant 43 per cent reduction in demand from Asia, rubber's biggest market. Meanwhile, rubber automotive components, engineering applications, consumer products and the emergence of rubberwood for biomass purposes, is predicted to rise as well. Price reductions and a higher minimum wage (which increased up to 36 per cent in May 2022) in Malaysia, as well as increased competition from PRC and higher natural gas prices as a result of the Russia-Ukraine conflict, are among challenges the industry currently faces.

World rubber consumption, as reported by Singapore-based International Rubber Study Group (IRSG) in its biannual World Rubber Industry Outlook, grew by 11 per cent year-on-year to 29.9 million tonnes in 2021, wherein overall rubber demand (including natural rubber and synthetic rubber) was estimated to have grown by only 1.8 per cent in 2022.

Simultaneously, the production of natural rubber had increased. For instance, from August to September 2022, global production increased by 71,000 tonnes to 2.7 million tonnes as compared to the same period in 2021, while global demand only reached 2.5 million tonnes during the same time. This, too, had an impact on rubber prices in 2022.

In 2023, however, Malaysia's global exports of rubber and rubber products are expected to double from the RM71 billion achieved in 2021, or reach approximately RM140 billion.

The Malaysian Rubber Glove Manufacturers Association (MARGMA) expects glove demand to grow by 12 to 15 per cent next year, while the export value for rubber gloves from Malaysia would grow 10 per cent annually from 2023 onwards.

The output of other rubber-based products is also projected to rise, due to the increase in the production of tyres and tubes, following the buoyant global demand for motor vehicles.

Future developments, such as the East Coast Latex Corridor, digitalisation via the My Rubber Online platform, and the RRIM Niaga smartphone application by the Malaysian Rubber Board (MRB) will add support to the industry's growth. Through constant research, Malaysia is able to ensure continual product improvement and development, producing innovations that have elevated made-in-Malaysia rubber products as best-in-class, complying with stringent international standards.

Exciting times lie ahead for the rubber products industry, especially for intrepid companies venturing into new and niche growth areas such as the manufacture of premium rubber products; for example, automotive parts, household products, engineering rubber products, industrial products, rethreading materials, tyres, and construction materials (seismic bearings for use in earthquake-prone countries) that are needed for constructing and assembling finished products.

Such ventures will undoubtedly involve additional R&D activities and adoption of more sophisticated production technology related to automation and Industry 4.0, and Malaysian rubber products industry players are ready for the challenge. According to MARGMA, their members have so far automated about 85% of their glove production operations.

One sterling example of product R&D is from Meditech Glove Sdn. Bhd., which is currently collaborating with Cranfield University in the United Kingdom to develop a new generation of rubber composite for the manufacture of aerospace balloons, the first of its kind in the world. The research has shown tremendous potential for commercialisation in the future and will encourage Malaysia to produce higher-grade rubber products.

The Malaysian Government fully supports the rubber products industry in terms of formulating favourable policies, engaging multilaterally with other rubber-producing nations, and putting in place the necessary enabling infrastructure for the industry's success and growth.

Rubber is noted as one of the six agricommodity products that will benefit directly under the implementation of the NAP 2030, which plans to extend the use of rubber in Malaysia to road construction and the production of new and value-added products based on rubber such as seismic bearings and rubber gloves. Malaysia will also cooperate with Thailand and Indonesia under the framework of the International Tripartite Rubber Council (ITRC) to strengthen and stabilise international rubber market prices. To capitalise on the abundance of rubber in the border areas between Malaysia and Thailand, the Kedah Rubber City was initiated to serve as a catalyst for socioeconomic development by cultivating stronger regional cooperation and integration between the two countries.

In terms of environmental impact, rubber plantations in Malaysia are second only behind oil palm plantations, underscoring the serious need for ESG compliance throughout the whole industry value chain from material sourcing up to production, to remain competitive and be linked to the global value chain. MNCs are monitoring their end-to-end manufacturing compliances to be aligned with ESG requirements.

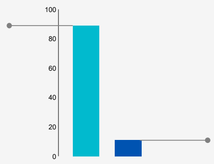
APPROVED INVESTMENTS IN THE RUBBER PRODUCTS INDUSTRY IN 2022

Domestic vs Foreign Investments

16 Projects Approved

Total **RM3.6 bil**

Domestic Investments
88.9%
RM3.2 bil



Foreign Investments
11.1%
RM0.4 bil

Expansion/ Diversification vs New Projects

RM3.6 bil Total Investments

RM2.3 bil	63.9%	4	New Projects
RM1.3 bil	36.1%	12	Expansion/ Diversification Projects

Employment Opportunities

7,385 Total Job Opportunities

NOTEWORTHY RUBBER PRODUCTS PROJECT IN 2022

New Project

Yato Precision Engineering Sdn. Bhd.

Investment amount: RM24.3 mil

100 new job opportunities

Wholly-owned Malaysian company

Production of rubber moulded products

22% of production to be exported to the USA, Sweden, Singapore, and the Netherlands

It is encouraging to see industry players being responsive to global ESG trends and taking appropriate measures. For instance, Mölnlycke Health Care Sdn. Bhd., through its shared value creation WeCare roadmap, aims to contribute towards Malaysia's sustainability goals, such as energy usage reduction, wastewater management, economic growth, and innovation in infrastructure. WeCare is Mölnlycke's sustainability roadmap for the company's growth, innovation, and productivity drive.

As Malaysia embraces the reasoning behind green growth and sustainable development of the natural rubber industry in Malaysia, necessitating the use of non-toxic chemicals and green fillers, prospective investors may wish to consider leading R&D into ways of making these more cost-effective and hence, more commercially viable.

The NAP 2030 highlights five key thrusts to make Malaysia a leading exporter of quality and sustainably produced rubber products; these are sustainability, technology, value-added creation, inclusivity, and sharing of resources and wealth. Industry players are encouraged to embrace Industry 4.0 by adopting technology to enhance rubber production processes and create value-added engineered rubber products, as well as to increase the usage of green rubber.

Malaysian players that are thinking of increasing the level of automation in their production processes and undergoing digital transformation to commercialise new products are provided assistance via schemes such as the Industry4WRD Intervention Fund and Automation Capital Allowance incentives. These schemes have helped to ease the labour shortage problems and increased process automation. There were two rubber product companies approved for the Automation Capital Allowance in 2022.

The assistance provided by these incentives will result in fundamental changes that improve production efficiency, economies of scale, and reskilling of workers; all important elements and a good start towards ESG compliance.

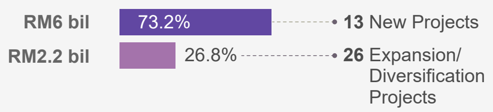
APPROVED INVESTMENTS IN THE RUBBER-BASED MEDICAL DEVICES SUB-SECTOR IN 2022

39 Projects Approved

Total **RM8.2 bil** — **6.5%** increase (2021:RM7.7 bil)

Expansion/ Diversification vs New Projects

RM8.2 bil Total Investments



Employment Opportunities

10,452 Total Job Opportunities

NOTEWORTHY RUBBER-BASED MEDICAL DEVICES PROJECT IN 2022

Expansion Project

Mölnlycke Health Care Sdn. Bhd.

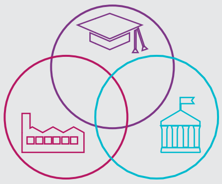
Investment amount: RM410.6 mil

376 additional job opportunities

Sweden-based company

Production of surgical gloves

Adopting the Triple Helix of Innovation in the Electrical and Electronics (E&E) Industry



- The triple helix model of innovation refers to strategic collaborations between academia, industry and government, to accelerate economic and social development through research and development (R&D)
- Theorized by Henry Etzkowitz and Loet Leydesdorf in the 1990's, this model has been adopted by both developed and developing economies as an integral policy making tool to enhance innovation and promote economic development

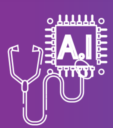
To support, catalyse and ultimately accelerate the growth of the E&E industry in Malaysia, the Economic Council formed a collaborative platform called 'Collaborative Research in Engineering, Science and Technology (CREST)' in 2012, adopting the triple helix model, which encourages strategic collaborations between academia, industry and government through R&D to enhance innovation and promote economic development.

CREST has been mandated to promote and undertake industry-led and market-driven R&D activities for the National Key Economic Area (NKEA) of E&E. Malaysia's Economic Planning Unit (EPU), MITI and MIDA are the three main government entities that facilitate the organisation of CREST with the provision of financial grants and industry-academia collaborations for their pre-determined R&D activities. CREST's platform connects project leaders of these R&D projects, as approved by its Board members – which is chaired by MIDA's CEO, YBhg. Datuk Wira Arham Abdul Rahman.

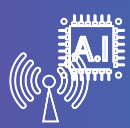
MIDA plays a significant role in ensuring the success of CREST's triple helix model. Through MIDA's comprehensive industry player network in the E&E sector, the agency has been able to identify the appropriate R&D activities for innovation that would benefit the industry's ecosystem. MIDA's involvement in CREST includes ensuring that the disbursement of funds reflects the industry's needs for R&D projects and facilitating collaborations with local and foreign industry players and researchers from local universities.

These R&D collaborative projects have benefitted both the MNCs and SMEs, as well as technology startups, and collectively contribute positively towards the E&E industry development in the country.

SUCCESSFUL R&D PROJECTS CONDUCTED THROUGH CREST



The world's first AI-enabled stethoscope



AI assisted system for RFID antenna design

The GaN-on-GaN programme, the first LED integrated facility in Malaysia which has attracted FDI worth **RM4.88 billion** and DDI of **RM15 million**

The R&D projects undertaken by CREST have enabled MIDA to promote them to local investors. Based on a PricewaterhouseCoopers (PwC) study on CREST's effectiveness, to date, CREST has successfully completed 129 R&D projects in seven main E&E technology clusters namely advanced material and packaging, drone driverless and autonomous vehicle, embedded systems and IoT, IC design, test and validation, Industry 4.0 smart manufacturing, opto-electronics, LED and solid-state lighting, and other electrical projects. These 129 R&D projects, of which 100 are in Technology Readiness Level (TRL) 3-6, with level 3 involving effective R&D and validation of predictions, and level 6 requiring the production of a prototype and demonstrating it in a simulated environment.

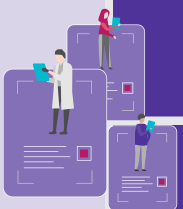
Besides being the platform for collaboration for industry-led R&D projects, CREST has also generated a pipeline of highly skilled local talents in the E&E technology cluster that have been subsequently employed by E&E companies. This success proves that the collaborative R&D programme based on the triple helix model has played a significant role in enabling the employability of graduates.

MIDA believes the triple helix model adopted by CREST can be extended to and adopted by other industries to accelerate innovation through R&D collaboration or cross-border collaborations with foreign R&D institutions such as France's CETIM (Technical Centre for Mechanical Industries) or Belgium's Interuniversity Microelectronics Centre as well as other regional and local institutions and businesses.

MIDA will continue to support and facilitate such collaborations as part of its commitment to the country's aspirations in line with the National Investment Aspirations (NIAs) and ESG practices.

TRIPLE HELIX MODEL ELEVATES EMPLOYABILITY

From 2012 to 2020, a total of **72** full time Master's and **37** full time PhD graduates were produced from collaborative R&D programmes



Approximately half of the graduates were subsequently employed by the E&E industry

The others pursued interests in the academic sector, R&D and other industries

Ensuring Malaysia's Food Security Well into the Future

- Malaysia's commitment towards the United Nations' Sustainable Development Goals (SDGs) places food security initiatives at the core of the country's nation-building efforts. Between 2010 and 2050, total global food demand is expected to increase by 30 per cent to 62 per cent
- Having just emerged from the ravages of COVID-19, most governments have put up more trade barriers to safeguard national food security
- Amidst the world economic slowdown, there is a renewed focus on domestic social security, taking into account the increased inequality within their populations

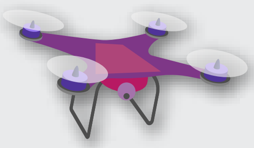
Malaysia ranked 41 on the Global Security Food Index (GSFI) in 2022 among 113 countries. The nation relies heavily on imports for essential food products, and its agricultural productivity is 45 per cent of the average for high-income countries. According to Department of Statistics Malaysia (DOSM), imports of agriculture goods and processed food (excluding palm oil products) reached RM81.9 billion in 2022, compared to exports of RM44 billion; coupled with current food shortages (vis-à-vis chicken and eggs) within the country, food security concerns are further compounded by a limited supply of fertiliser and agricultural materials, stemming from issues surrounding the Russian-Ukraine conflict and flood-prone countries battling climate change.

Malaysia's agricultural sector has long focused on cash crop exports, with increasing food crop production being a distant second priority in the past. The sector is still dominated by structural issues of agriculture land availability, labour shortages and low technology.

In response to these issues, quality of produce and high dependence on manual and foreign labour, the Malaysian Government designed its National Food Security Framework with regards to availability, accessibility, utilisation, and sustainability of basic foods. These components will be supported by policy analysis, coordination of enablers, and structural planning across Government agencies and ministries, to cover the most crucial aspects of food resource sustainability, employment, climate change effects, as well as financial and business expansion.

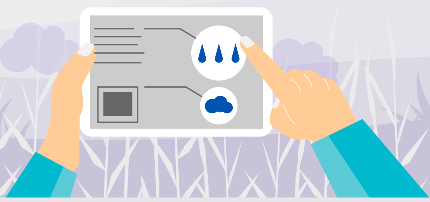
Transforming the agricultural sector to boost production through 'smart farming' entails the use of new technology such as agricultural automation, big data analytics, drones, and artificial intelligence. Beyond that, by consolidating small farms so that they can be managed efficiently to

RELEVANT AGENCIES RALLY SUPPORT



As the Government is gravely addressing the food security agenda, relevant agencies are committing their support through various initiatives, such as:

1. Agrofood financing scheme with low interest rate for agrifood entrepreneurs to increase production by Bank Negara Malaysia
2. Agrovest investment programme for agriculture startups by Agrobank
3. Funding assistance for smallholder farmers by Khazanah Nasional
4. Digital Agtech programmes for smallholders' farmers by MDEC
5. Agrifood SMEs to undertake automation and digitalisation through Skim Jaminan Pembiayaan Perniagaan Berhad
6. Ministry of Agriculture and Food Security (MAFS) extending tax facilitation for the production of agrifood and controlled environment agriculture activites
7. Automated Capital Allowance for agriculture-based companies
8. Bionexus status facilitation by Bioeconomy Corporation

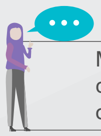


promote economies of scale, farmers can experience higher profitability, and simultaneously, more food-processing interest.

According to MAFS, Malaysia's utilisation of land for the purpose of growing food crops declined to 1.2 million hectares in 2020, compared with seven million hectares for oil palm and rubber trees. The Government intends to develop up to 800 acres of abandoned land belonging to federal government agencies such as FELDA, FELCRA, and RISDA, as well as agencies under MAFS.

Malaysia's food security agenda is supported by comprehensive reviews and state authorities to ensure its long-term sustainability. With continuing support and close engagement with Government stakeholders, the existing over 600 approved companies by MAFS in the agriculture sector and over 2,500 approved companies by MIDA in the food manufacturing industry are not only capable of leading and undertaking modernisation and expansion, they are also able to inspire more entrepreneurs to enter this vital and potential-filled industry.

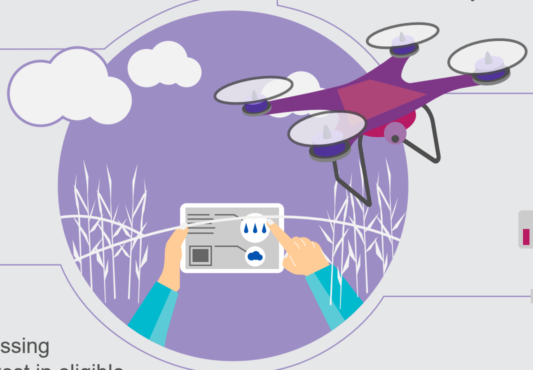
MIDA: MALAYSIA'S FOOD CHAIN VANGUARD



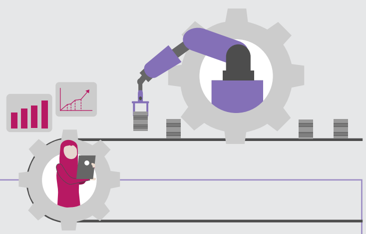
MIDA is committed to Malaysia's food security agenda by providing support for downstream food processing companies. Prospective investors looking into food manufacturing producing high-value-added food products or ingredients are eligible for one of the following incentive options:

Pioneer Status (PS) with **income tax exemption of 70%** of the statutory income for a period of five years for new projects

Investment Tax Allowance (ITA) of 60% on the qualifying capital expenditure incurred within five years from the date of the first qualifying capital expenditure is incurred. The allowance can be utilised to offset **70% of the statutory income** for each year of assessment

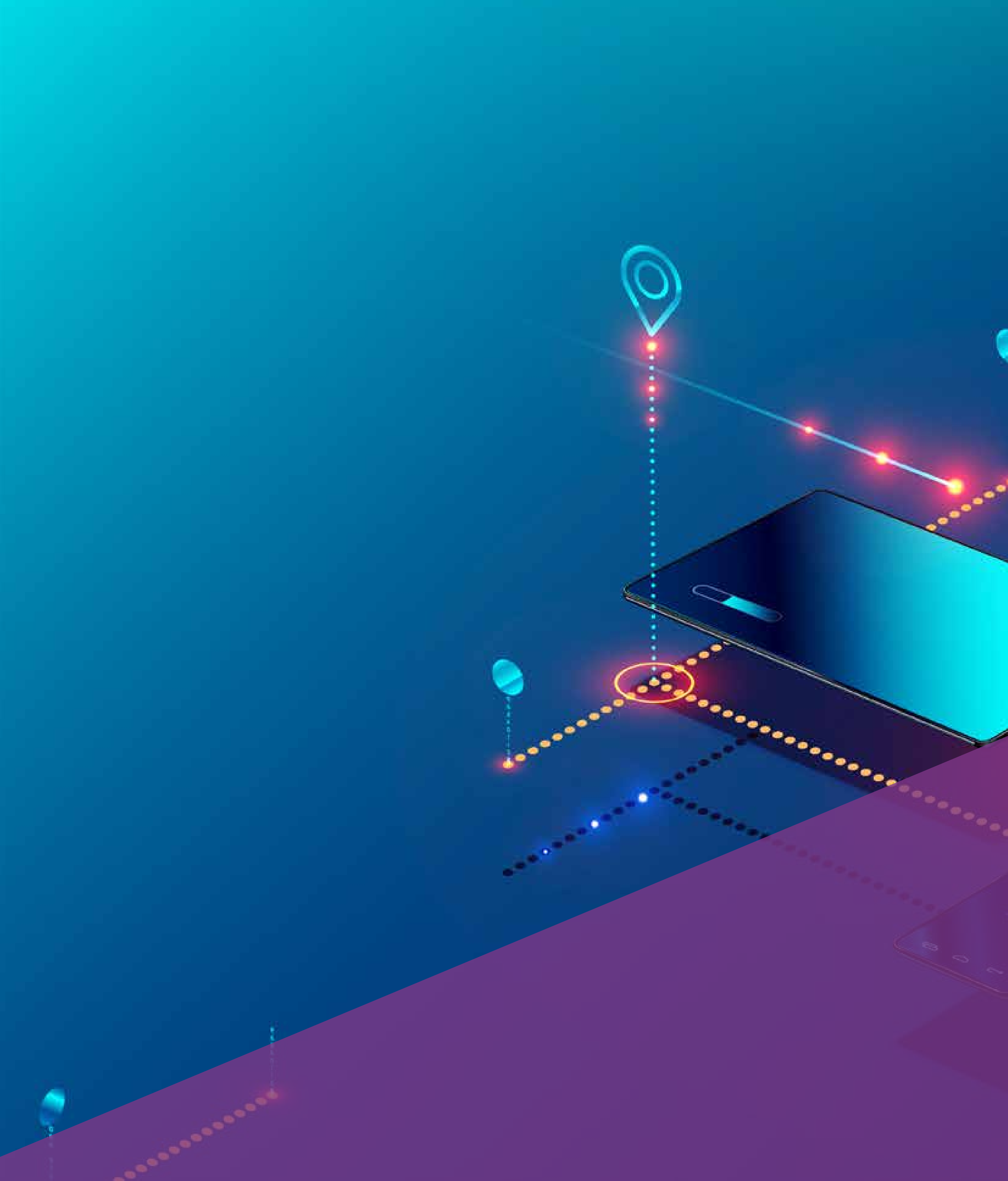


Existing companies in food processing and cold-chain facilities that reinvest in eligible projects may be eligible for PS with income tax exemption of 70% of the statutory income arising from the reinvestment for a period of five years or ITA of 60% on the additional qualifying capital expenditure incurred within a period of five years, which allowance can be offset against **70% of the statutory income** for each year of assessment



New investments in *halal* food production that use modern and state-of-the-art machinery and equipment (M&E) to produce high-quality *halal* processed food with global food safety compliance, and that have obtained *halal* certification from the Department of Islamic Development Malaysia (JAKIM), are eligible for ITA of **100% of qualifying capital expenditure** incurred within a period of five years

3.0



PERFORMANCE OF THE SERVICES SECTOR

IMF's Chief Economist stressed that the global economic outlook hasn't worsened but the road back to a full recovery, with sustainable growth, stable prices, and progress for all, is only starting. To sum up, barring new shocks, 2023 could be the year of turning points, with growth bottoming out and inflation decreasing.

Pierre-Olivier Gourinchas, IMF Chief Economist
(IMF World Economic Outlook January 2023 Update)

3.1

ENABLING THE WAY

The positive growth of strategic investments in the services sector empowers Malaysia to achieve economic growth, resource efficiency, environmental sustainability and social inclusion. The overarching digital economic growth theme is guided by the New Investment Policy (NIP) for the period of 2022-2027.

The global services market is expected to grow from US$12.58 trillion in 2021 to US$14.06 trillion in 2022 at a compound annual growth rate (CAGR) of 11.7 per cent, as projected by Research and Markets' Services Global Market Report 2022. The services sector is the enabler for other economic activities, including connecting supply chains and facilitating trade in goods. The increased adoption of digitalisation as a means for businesses to survive, recover and grow has also contributed to the expansion of the services market. Its expected value is projected to reach US$20.86 trillion in 2026 at a CAGR of 10.4 per cent.

Malaysia remains an attractive investment destination for businesses. The economy is normalising and heading towards endemicity after the reopening of the international borders in April 2022. Bank Negara Malaysia's Economic and Monetary Review 2021 projected that the services sector remains the key driver of growth in 2022 with real GDP growth of 6.9 per cent, a projection that was surpassed in the first half of 2022.

As investments in the services sector continue to support the economic development of Malaysia, the digital economy has become the theme for business success. The bottom line is, business is no longer business-as-usual, and the services sector is collectively heading towards this paradigm shift.

HIGHLIGHTS OF THE SERVICES SECTOR IN 2022

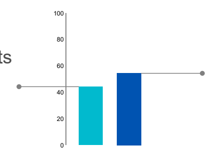
3,581
Total Projects Approved

RM154 bil
Total Investments

An increase of **RM57 bil** vs 2021

In Malaysia, this sector continues to be the cornerstone of the nation's economic growth, accounting for **58.2%** of total approved investments. The sector had an outstanding performance despite the pandemic

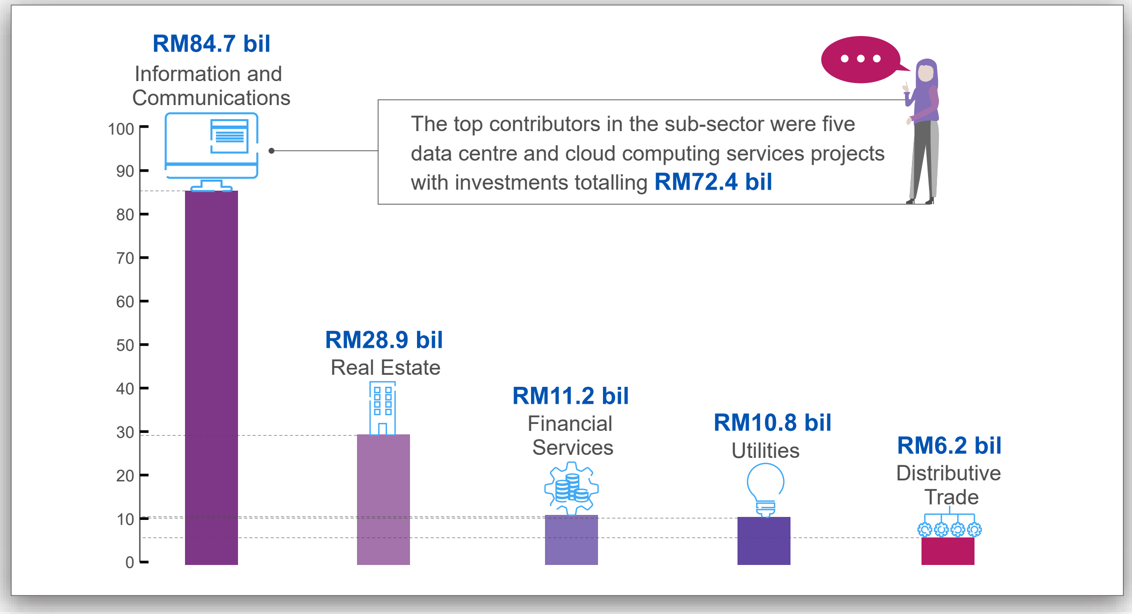
Domestic Investments
44.9%
RM69.1 bil



Foreign Investments
55.1%
RM84.9 bil

63,464
Total Job Opportunities

THE TOP FIVE CONTRIBUTORS OF APPROVED INVESTMENTS IN THE SERVICES SECTOR IN 2022



	Services Sector		Total Investments (RM million)	
			2022	2021
		Total	**153,966**	**96,984.3**
1		Information and Communications	84,707	11,037.6
2		Real Estate	28,888.3	28,811.7
3		Financial Services	11,196.1	12,029.7
4		Utilities	10,776.2	9,611.5
5		Distributive Trade	6,232.4	3,598.9

Sustainable Investments the Way Forward

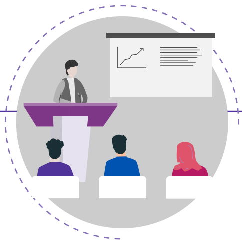
The key criterion for future investments is sustainability. The NIA has outlined a comprehensive framework to achieve this vision, which focuses on attracting high-value investments to accelerate the nation's growth.

The New Investment Policy (NIP) was crafted to achieve overarching national investment and development policies. In line with this policy, MIDA will facilitate the attraction of investments in the digital economy with innovation as the backbone to further increase economic complexity, as outlined among the priorities in the NIP.

MAJOR INITIATIVES UNDERTAKEN BY MIDA FOR THE SERVICES SECTOR IN 2022

1 Digital Investment Office (DIO) - Milestones and Achievement

By conducting engagement sessions with relevant digital stakeholders, the DIO is able to identify and address digital gaps in accelerating digital efforts in the country

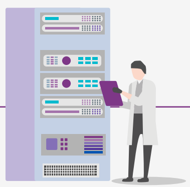


Continuous efforts including policy formulation are being undertaken to ensure that **Malaysia remains a preferred digital hub in the region**

Since its inception, the DIO has been on the right track to meet the KPI set which is RM70 billion investment in digitalisation projects by 2025, in line with the investment targeted in the MyDIGITAL blueprint

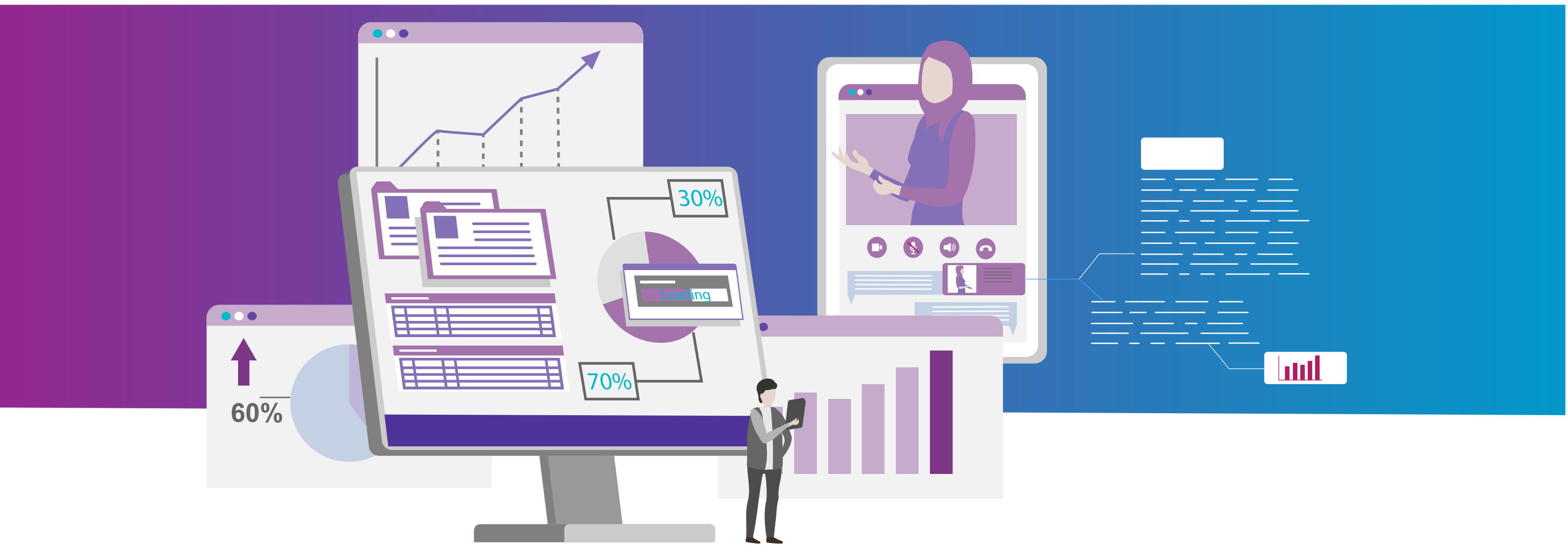
2 Data Centre Investment Coordination Task Force (DCICTF)

DCICTF is a platform to expedite the implementation of Data Centre projects and assist with formulating strategies for the development of the data centre industry



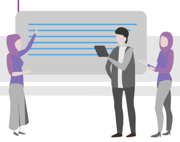
MIDA as the co-secretariat of this task force, together with Malaysia Digital Economy Corporation (MDEC) **ensures that issues and challenges related to the implementation of projects are proactively handled**

The results of the expedition will further strengthen Malaysia's digital infrastructure and connectivity

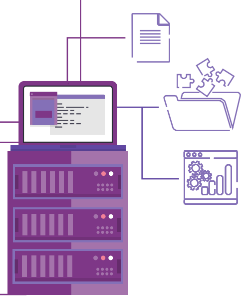


3 Exemption of Bumiputera Equity Condition on Land Purchase for Data Centre Projects

The Malaysian Cabinet on 20 July 2022 has granted exemption of 30 per cent Bumiputera equity condition on land purchase to facilitate the ownership condition for selected companies in acquiring land valued at more than RM20 million and above



This blanket approval is given until 2025, and the selected projects must be implemented within two (2) years



The exemption of the Bumiputera equity condition is hoped to bring a **positive charge towards facilitating digital investments in Malaysia**

4 Amendments to the definition of Contract R&D Company and R&D Company in the Promotion of Investments Act (PIA), 1986 including application for approval as a R&D Status Company

As per the Finance Bill 2021, effective from 1 January 2022, the definitions of ‘**Contract R&D Company**’ and ‘**R&D Company**’ under section 2 of the PIA require companies to be approved as a R&D Status Company by MITI. The approval of R&D Status Company will be granted for five (5) years and is eligible for extension subject to consideration by MITI and the Ministry of Finance (MOF)

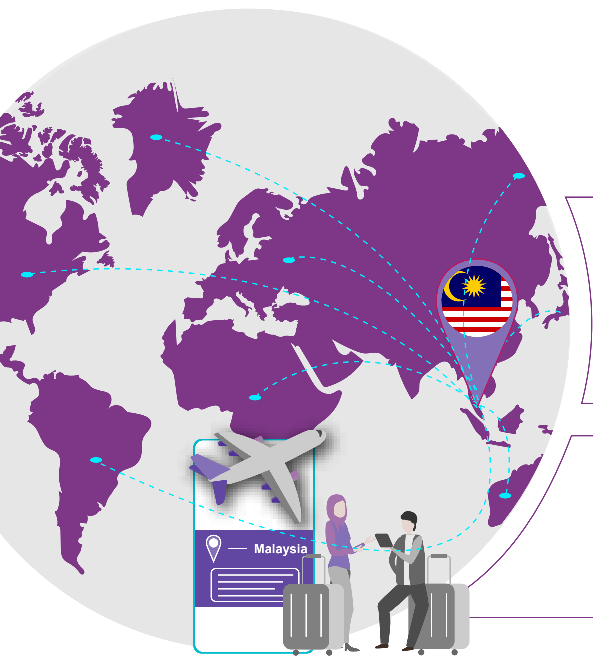
Companies in the business of providing R&D services, namely Contract R&D companies and R&D companies, wishing to apply for R&D tax incentives will be granted R&D status (subject to MITI’s approval) for a period of five (5) years. Companies approved with this status may apply for extension with MIDA. However, the granting of the approval is subject to consideration by MITI and the MOF

5 Special Tourism Investment Zone (STIZ)

The Government launched the National Tourism Policy (NTP) 2020-2030 to boost the country's tourism industry with the target of making Malaysia a top 10 global tourism destination in both arrivals and receipts

The main approach is to leverage public-private sector partnerships and **promote digitisation to drive innovation and competitiveness towards sustainable and inclusive development** in line with the Twelfth Malaysia Plan (12MP), National Ecotourism Plan 2.0 and the 17 Sustainable Development Goals (SDGs) of the United Nations

The policy will be implemented through six main strategic thrusts, including governance transformation, creating an inclusive tourism investment zone, and intensifying digitalisation in the tourism sector. Six sub-committees have been established to ensure these strategies are implemented



MIDA has been appointed to lead the Investment Sub-Committee *Jawatankuasa Kecil Pelaburan* (JKP) to develop Special Tourism Investment Zones (STIZ) through public-private partnerships and formulate strategies for the promotion of high-value tourism development at these STIZs

MIDA and the Ministry of Tourism, Arts and Culture Malaysia (MOTAC) have conducted a series of roadshows to engage stakeholders and authorities across Malaysia in identifying potential STIZ

3.2

ROARING SERVICES

The services sector has had a resounding success in attracting investors as the nation transitioned to endemicity. With the digital advancements underlining growth, sub-sectors that contributed the lion share of investment growth is led by information and communications, distributive trade, health, and R&D.

Global Establishments

In sync with today's evolving business needs, MNCs are reconfiguring their hub structures by relocating head office functions to strategically position themselves closer to their target markets and supply chains outside of their home territory. Malaysia, located in the heart of Southeast Asia, presents an attractive proposition for these MNCs, with its availability of global talent, competitive costs, as well as access to ASEAN markets and multiple bilateral trade partners.

New forces of change are bringing about 'leaner' hub structure models focused on the most strategic and innovative business functions. Instead of operating a command centre, the new breed of regional headquarters will serve as dynamic collaboration hubs, connecting professionals from cross-functional departments by infusing digital expertise and interactive solutions.

This development is aligned with the Malaysian Government's aspiration– as underscored in the 12MP to become a knowledge-based economy by enticing more companies to provide higher value-add services in making the country their Global Services Hub.

In support of the Government's commitments to achieve carbon neutrality by 2050, many distribution hubs are powered by solar panels on rooftops and adopt the usage of power monitoring systems for energy efficiency. Additionally, some even include rainwater harvesting systems for indoor and outdoor use. Together, these initiatives form part of a strategy for these hubs to achieve compliance with Leadership in Energy and Environmental Design (LEED) certifications, which is one of the most widely used green building rating systems.

Since the Principal Hub (PH) incentive was first introduced in May 2015, MIDA has approved a total of 46 PH projects to date, with companies committing to incur business spending of RM68.8 billion and creating 10,866 jobs in sectors such as electrical and electronics (E&E), transportation, chemicals and food technology.

Malaysia, located in the heart of Southeast Asia, presents an attractive proposition for these MNCs, with its availability of global talent, competitive costs, as well as access to ASEAN markets and multiple bilateral trade partners.

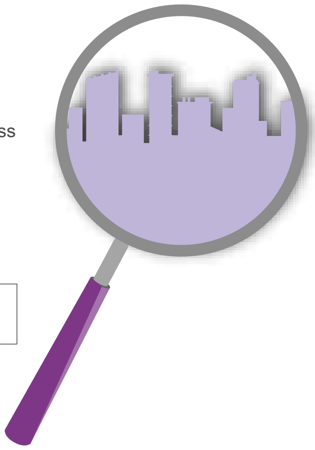
PRINCIPAL HUB PROJECTS APPROVED IN 2022

3 Principal Hub Projects Approved

RM1.8 bil Committed Business Spending

909 Job Opportunities

821 jobs for Malaysians



NOTEWORTHY PRINCIPAL HUB PROJECT IN 2022

Mamee Double-Decker Distribution (M) Sdn. Bhd.

For more than 51 years, Mamee has been specialising in the production of snack foods and beverages under household home-grown brands such as Mamee Monster and Mister Potato. Mamee recently set up their Regional Headquarters Hub in 2022 to distribute over 50 of its own products to more than 80 countries globally

- The Hub will manage and support Mamee's manufacturing facilities across Malaysia, Indonesia and Myanmar
- Involves supply chain services such as centralised procurement, marketing activities for the company to expand into new markets, and consolidated shared services functions for finance, IT and HR
- Will provide professional expertise and management support to Mamee entities across the region
- Will develop capabilities to source and integrate third party manufacturers into a vertically integrated global supply chain

Representative Office / Regional Office (RE/RO)

Foreign companies can set up Representative Offices/Regional Offices (REs/ROs) in Malaysia as a forward base to coordinate and support their operations in the Asia Pacific region. These REs and ROs are used to gather information and evaluate feasibility for their parent companies to make long-term investment commitment decisions.

REs/ROs HIGHLIGHTS OF 2022

99 REs/ ROs Projects Approved

62 RE Projects — **62.6%**

37 RO Projects — **37.4%**

RM188.9 mil Total Investments

314 Total Job Opportunities

222 positions for Malaysians

The approvals were mainly from:

- Singapore (14)
- Japan (13)
- Republic of Korea (12)
- Germany (12)
- Hong Kong (9)

Information and Communications

Malaysia is an increasingly popular digital business destination, with investment opportunities in digital infrastructure such as data centres and submarine cable, provision of IT services, creative content technologies and digital global business services. The Government recognises the need to develop high technology sectors towards improving the competitiveness and resilience of the Malaysian economy in tandem with the rapid evolution and growing use of information and communications technologies (ICTs).

The ICT sector is one of the fastest-growing sectors in the Malaysian market. Its contribution to the economy in 2021 expanded at a rate of 12.1 per cent compared to 10.5 per cent in 2020 with a value of RM359.3 billion, according to the Department of Statistics Malaysia (DOSM). Furthermore, the ICT sector contributed 23.2 per cent to GDP, of which gross value-added ICT Industry (GVAICT) contributed 14.0 per cent, while e-commerce of other industries contributed 9.2 per cent.

Emerging technologies such as Artificial Intelligence (AI), Internet of Things (IoT), big data analytics and blockchain is transforming the global economy and modern society. Companies today are strongly encouraged to embrace digitalisation and seize growing opportunities arising from these emerging trends.

Digital Driven Initiatives

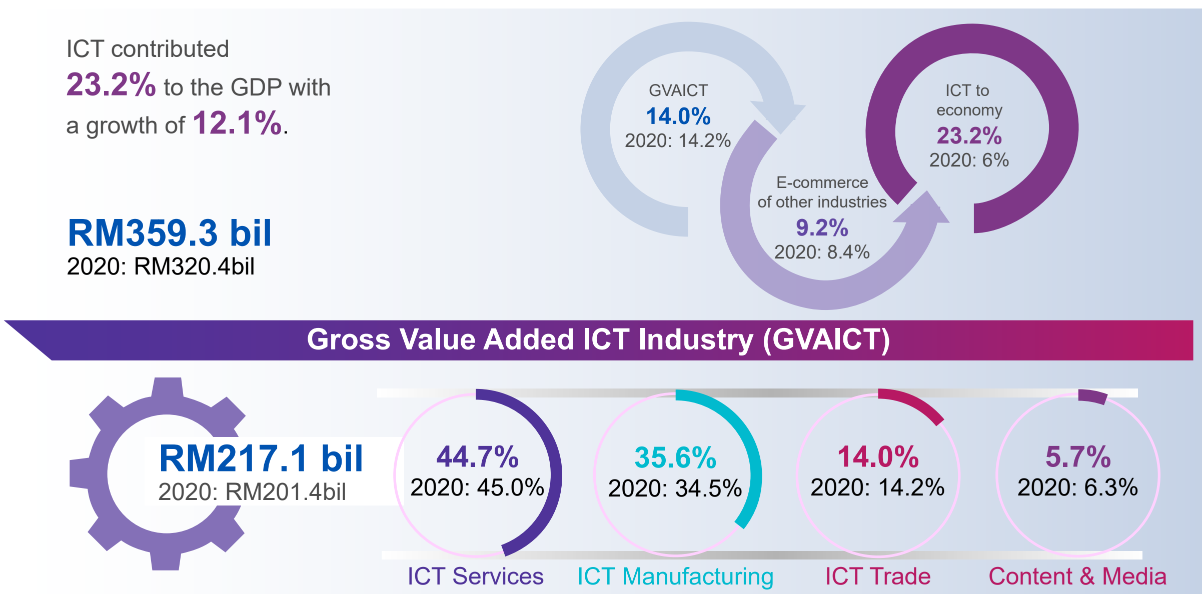
Concerted efforts by the Government to set a firm foundation for the country's digital economy include infrastructure expansion, policy development, investment promotion, sustainability awareness, and talent development. MIDA and Malaysia Digital Economy Corporation (MDEC) have established a Digital Investment Office (DIO) to coordinate and streamline digital investments into the country while providing end-to-end facilitation for investors and helping them realise their business expansion in Malaysia.

The DIO is committed to attracting digital investments embodying high-quality and sustainable technologies worth RM70 billion to accelerate digitalisation efforts by 2025. This initiative is timely and in line with the evolution of the global investment landscape towards digitalisation and Industry 4.0, creating unique and interesting value propositions for digital projects involving digital infrastructure such as data centres and submarine cables as well as digital technology projects utilising Industry 4.0 technology.

The DIO also advocates future-ready policies and guides on talent requirements, digital infrastructure networks while addressing operational issues faced by businesses beyond the pandemic. The efforts undertaken by MIDA through its respective branch offices locally and internationally as well as through its digital facilitation platforms with partner agencies are expected to contribute positively in serving the growing digital industries' needs.

To strengthen the country's digital ecosystem, the Digital Ecosystem Acceleration scheme (DESAC) was introduced through Budget 2022. MIDA recognises that agile policies and regulations are important in encouraging more digital investments. The existing regulatory framework has to be responsive to innovative next-generation business models arising from the growth of the digital economy and rapidly changing digital technology. DESAC aims to encourage quality digital infrastructure into the country to accelerate the development of the digital economy value chain.

INFORMATION AND COMMUNICATION TECHNOLOGY SATELLITE ACCOUNT 2021



Source: Department of Statistics Malaysia (DOSM)

On 4 July 2022, the Government launched the Malaysia Digital (MD) initiative to succeed the Multimedia Super Corridor (MSC) Malaysia, driven by the Ministry of Communications and Digital through MDEC. The MD initiative aims to create substantial digital economic spill-over via equitable access to digital tools, knowledge, and income opportunities.

Projects Approved in 2022

Malaysia's diversified services sector continues to embrace digitalisation to move up the value chain and boost operational efficiency through remote-working and automation, trends which accelerated as the country transitioned to endemicity and through deployment of IoT for new services.

The information and communications sub-sector covers activities related to ICT services, telecommunications, MSC status, MD status (formerly known as MSC status), computer software, broadcasting, and creative content.

Total approved investments for MSC status in 2022 was RM5 billion, almost equally contributed by domestic and foreign investments and are expected to generate 7,763 job opportunities. Meanwhile, approved MD status projects since its inception (in July 2022) for 2022 were RM43.1 billion, potentially creating 5,571 job opportunities. The total investments under MD status also includes projects approved under DESAC incentive schemes.

For the telecommunications sub-sector, based on the investment approval data provided by the Malaysian Communications and Multimedia Commission (MCMC), which covers only the first nine months of 2022, a total of RM3.7 billion were approved investments wholly driven by domestic sources.

APPROVED INVESTMENTS AND NOTEWORTHY PROJECTS IN ICT FOR 2022

5 Projects Approved

RM72.4 bil Total Investments

301 Total Job Opportunities

Job opportunities include network specialists, cloud architect, data scientists and community specialists in social networks

Noteworthy projects approved in digital services include a data centre and data hosting project between Bridge Data Centres, which is part of Nasdaq-listed ChinData Group Holdings Ltd and ByteDance Ltd, and another data centre project by YTL Power International Bhd (YTL Power). These projects are testament to Malaysia's readiness as an ideal data centre hub

YTL Power, through its subsidiary YTL DC

- Development of a 275-acre data centre campus in Kulai, Johor
- Features diverse network connectivity routes to Singapore
- Development of up to 500 MW data centre capacity
- The first data centre (Johor Data Centre 1) of 72 MW is expected to be ready for service in Q1 2024
- Offers end-to-end solutions to clients and partners
- Future plans include renewable energy, telecommunications and construction to develop new data centre campuses across Southeast Asia

Amazon Web Services (AWS), an Amazon.com, Inc. company

- Establishment of an infrastructure region in Malaysia (AWS Region)
- Consist of three Availability Zones that place infrastructure in separate and distinct geographic locations
- Each Availability Zone has independent power, cooling, and physical security, and is connected through redundant, ultra-low latency networks
- Developers, startups, and enterprises, as well as government, education, and non-profit organisations can run their applications and serve end users from data centres located in Malaysia
- Creation of high-quality jobs like Data Engineer, Data Scientist and Data Analytics and indirect employment for Malaysians
- Committed to support at least 1,000 local companies, including startups and SMEs, annually
- Committed to train at least 2,000 students for local schools and local institutes of higher learning by year 2027

Connectivity – The Driving Force Behind Digital Transformation

Going forward, the ICT sector is expected to expand by 4.6 per cent in 2023, mainly driven by the increasing digital adoption across all economic sectors. Phase 2 of the National Digital Network (JENDELA) is expected to boost digital connectivity through fixed wireless access utilisation. As at June 2022, 95.8 per cent of all populated areas have access to a 4G network under the JENDELA programme. Meanwhile, the broadband speed has increased to 47 megabits per second (Mbps) exceeding the 35 Mbps target as part of Phase 1, which ends in December 2022.

In this regard, 5G coverage will be extended to 80 per cent of the nation's populated areas by 2024. A total of 839 sites have satellite broadband deployed while 5G services are provided at selected areas in Cyberjaya, Putrajaya and Kuala Lumpur. Furthermore, high quality investment in digital-related infrastructure such as data centres and cloud computing services as well as continued growth in e-commerce and online entertainment activities will further boost the sub-sector.

ESG initiatives by Malaysia's Data Centres

As the acceleration of digital transformation continues, we expect the demand for computing and digital solutions to increase. The data centre market in Malaysia is expected to expand by US$2.08 billion (RM8.8 billion) between 2021 and 2026, according to Technavio, a London-based market research firm. This significant market growth will be driven by investments in expansion and construction of new data centre facilities.

As data centres consume lots of electricity, which also contributes to carbon emissions, data centre players are constantly seeking innovative ways to improve energy efficiencies and promote ESG. Proactively building greener data centres in accordance with Government policies will become critical in ensuring that the carbon footprint is well-managed.

The Government recognises the importance of data centre investment as a backbone to the country's digital infrastructure and has announced the allocation and distribution of 1,200 MW of RE for solar power, including electricity supply to data centres during the 5th International Sustainable Energy Summit (ISES) on 29 August 2022.

Global data centre companies have corporate targets to reduce their carbon footprint and the availability of RE is an important factor in attracting such investments. Malaysian MNCs are also doing their part, with YTL Power utilising solar energy to power its data centre campus.

Ultimately, forward-looking ESG practices are beneficial to the environment and society. By taking a proactive role in promoting and implementing sustainability initiatives, Malaysia's data centre industry will be best positioned to serve its essential role in connecting the global economy.

Research and Development (R&D)

The management and promotion of R&D investments is of key importance as Malaysia progresses towards its goal of being recognised as a knowledge-driven nation with socio-economic transformation and inclusive growth. In order to achieve the 12MP target of gross domestic expenditure on R&D (GERD) of 2.5 per cent by 2025, (compared to 1.44 per cent in 2019), focus must be directed at fostering collaborations between the private sector, academia and the Government, streamlining of R&D facilitation, and commercialisation of R&D.

The National Policy on Science, Technology and Innovation (NPSTI) 2021-2030 outlines the strategies and plans to achieve the nation's STI aspirations. Ten (10) science, technology, innovation and economy (STIE) leap programmes were formulated under this plan to reach the GERD goal of 3.5 per cent by 2030.

The participation of the private sector in terms of funding and buy-in is critical to the advancement of R&D, and 70 per cent of R&D expenditure is expected to come from venture capital funding, endowment funds and other international sources in order to spur sustainable economic growth. As of 2020, the ratio of R&D spending between the public and private sector is 35:65; and 40 per cent of GERD comprises experimental development research.

The commercialisation of R&D is the ultimate aim as it creates value and enables the country to compete in the world economy, through innovative and competitive products that can be exported.

The Government approved 99 research, development, commercialisation and innovation projects and programmes in 2021 and 2022 worth RM5.6 billion. Malaysia's commitment to reenergise R&D is also reflected in the 12MP with the creation of a Research Management Unit (RMU) under the Economic Planning Unit (EPU) of the Prime Minister's Department. Among its key functions is to monitor the quality of R&D investments and to ensure that at least half of R&D spending goes towards experimental development research with commercial potential. The RMU will also ensure that the tax benefits given to eligible companies are actually yielding the desired technology transfer.

The Government mandated MIDA to promote investments in R&D with incentives for various levels of R&D business operations. The main R&D incentives include R&D Status, Contract R&D Company, R&D Company and In-House R&D. An R&D company is a company that provides R&D services in Malaysia to related companies or to any other company. As a result, clients of R&D Status companies can enjoy double-deduction on R&D expenditure.

MIDA plays a key role in the collaboration of Collaborative Research of Engineering, Science and Technology Centre (CREST) and the E&E industry for market-driven R&D and commercialisation, talent development and industry network engagement. MIDA is committed to engaging with various industry players as well as relevant stakeholders within the technology ecosystem to facilitate strategic collaborations between industry players and R&D institutions along with universities in line with the triple helix model of innovation.

R&D HIGHLIGHTS FROM 2017 TO 2022

111 Job Opportunities

A total of **57** R&D projects were approved in 2022 with the investments valued at **RM139.3 million**. Out of this total investment, **5** projects were approved in MIDA with investment of **RM28.9 million**

Type	INVESTMENT OF R&D ACTIVITIES FROM 2017 TO 2021				
	No	**Employment**	**Domestic Investments (RM mil)**	**Foreign Investments (RM mil)**	**Total Investments (RM mil)**
Contract R&D	9	285	157.5	-	157.5
In-house R&D	6	76	20.8	130.3	151.1
R&D Company	3	39	1.4	22.5	23.8
R&D Pre-packaged	2	134	42.9	66.5	109.5
R&D Status	13	543	28.7	130.5	159.2
Total	**33**	**1,077**	**251.3**	**349.8**	**601.1**

Note: The above cumulative data are projects approved by MIDA for a period of five years

APPROVED INVESTMENTS OF R&D ACTIVITIES IN 2022 BY MIDA

Type	2022				
	No	Employment	Domestic Investments (RM mil)	Foreign Investments (RM mil)	Total Investments (RM mil)
R&D Status	3	91	20.8	3.5	24.3
R&D Company	1	5	-	4	4
Contract R&D	1	15	0.6	-	0.6
Total	**5**	**111**	**21.4**	**7.5**	**28.9**

The outlook for R&D investments in 2023 is positive as there are ample opportunities particularly in the E&E sector, in which semiconductors and electronics have been identified as common enablers across all potential growth areas for technology in various industrial sectors. The performance of Malaysia's E&E sector has defied downward global trends as shipments continued to outperform global sales in September 2022. The semiconductor industry plays a significant role in the development of key technological applications, including communications, computing, healthcare, defence systems, mobility, clean energy and many other deep tech applications.

Green Technology

The Government is committed to transforming its energy landscape from fossil fuels to a cleaner energy source, pledging to reduce its economy-wide carbon intensity by targeting reductions in Greenhouse Gas (GHG) emission becoming a carbon neutral nation by 2050. The introduction of the Malaysia Renewable Energy Roadmap (MyRER) further supports decarbonisation of the electricity supply sector with aims to increase the share of committed Renewable Energy (RE) installed capacity from the current 23 per cent (8.5 GW) in 2020 to a target of 31 per cent (12.9 GW) in 2025, 40 per cent (18 GW) by 2035.

The increase in RE capacity targets to reduce the intensity of carbon emissions in the electricity supply sector by 45 per cent in 2030 and 60 per cent in 2035. MyRER initiatives will generate an economic spillover of about RM20 billion by 2025, another RM33 billion by 2035, and create an estimated 47,000 jobs in the RE field. The country's current RE sources are derived from solar, biomass, biogas and hydropower.

To clarify the Government's priorities over the next 18 years, the National Energy Policy 2022-2040 (NEP) was published providing details for the energy sector encompassing affordability, sustainability, and energy security as well as optimising economic opportunities in line with trends in sectoral developments. A roadmap is included on how the country can achieve the NEP's Low Carbon Aspiration 2040 initiative with an annual contribution of RM13 billion to GDP, potentially creating more than 207,000 new job opportunities and attracting RM9.2 billion investments.

One of the main areas of the NEP's Strategic Thrust 1 is unlocking the potential of solar resources with increasing capital access for solar energy distribution, with rooftop aggregation, and promoting the economic benefits of distributed solar with peer-to-peer (P2P) and Virtual Power Purchase Agreements (VPPA). To facilitate RE100 corporations (global companies that have committed to 100 per cent RE utilisation) and those companies with similar green-consciousness to achieve their ESG and sustainability commitments, the Government has introduced the Corporate Green Power Programme (CGPP) as a platform for the purchase of RE virtually through the VPPA with mutually agreed terms and conditions from solar energy generators. A total of 600 MW was allocated for CGPP, and eligible companies need to enter into Corporate Green Entry Agreements.

APPROVED INVESTMENTS IN GREEN TECHNOLOGY IN 2022

684 Green Projects → Total Investments **RM2.7 bil**

2 Green Services → Total Investments **RM7.5 mil**

Approved Green Technology Projects and Services

666 Renewable Energy
Total Investments: **RM2.5 bil**

12 Energy Efficiency
Total Investments: **RM65 mil**

1 Integrated Waste Management
Total Investments: **RM101 mil**

5 Green Buildings
Total Investments: **RM25.7 mil**

2 Green Services
Total Investments: **RM7.5 mil**

697 Total Job Opportunities

Renewable Energy

APPROVED INVESTMENTS IN RENEWABLE ENERGY IN 2022

RM2.5 bil Total Investments
- **93.5%** Domestic Investments
- **6.5%** Foreign Investments

307 Total Job Opportunities

Solar Energy

652 Projects Approved

RM1.1 bil Total Investments

150 Total Job Opportunities

These projects comprised **646** solar self-consumption projects worth **RM559.1 million**, and **six** Large Scale Solar (LSS) projects by Ranhill Solar I Sdn. Bhd., Energy ES Sdn. Bhd., Suriamas Energy (Maritime) Sdn. Bhd., Sinarmas Energy (Api-Api) Sdn. Bhd., Serimas Energy (Manjung) Sdn. Bhd., and SDK Power Sdn. Bhd. with total capital investments of **RM486.4 million**

Mini-Hydro

5 Projects Approved

RM1.3 bil Total Investments

116 Total Job Opportunities

Five mini-hydro projects by RP Hydro (Kelantan) Sdn. Bhd.(three projects), SDF Hydro Sdn. Bhd. and Topaz Diamond Sdn. Bhd.

Biogas

7 Projects Approved

RM74.6 mil Total Investments

32 Total Job Opportunities

Biomass

2 Projects Approved

RM62 mil Total Investments

9 Total Job Opportunities

Waste Management

NOTEWORTHY PROJECT IN WASTE MANAGEMENT IN 2022

Borneo Waste Industries Sdn. Bhd.

In 2022, Borneo Waste Industries Sdn. Bhd. was approved to undertake integrated waste management at Kayu Madang Sanitary Landfill, Kota Kinabalu involving capital investments of RM101 million and is expected to generate 351 new jobs

- The activities will include waste collection, storage, recycling, recovery, and waste treatment with value-added by products such as alternative raw material pellets and refuse-derived fuel pellets
- This initiative is an example of a circular approach to waste management in working towards zero-waste production. This is also in line with the national target for a 40% recycling rate by 2025, with a current achievement of 33.17% in 2022

Energy Efficiency

In recent years, investments in energy efficiency (EE) / energy conservation (EC) projects have been very promising given the fact that demand and consumption for energy is growing rapidly for industrial and commercial sectors. Investments in EE present significant opportunities for industries to become more competitive as they obtain energy cost savings through the implementation of new EE technology and provide employment opportunities through international best practices.

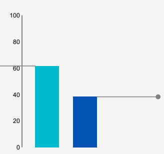
APPROVED INVESTMENTS IN ENERGY EFFICIENCY IN 2022

Domestic vs Foreign Investments

12 Projects Approved

Total **RM65 mil**

Domestic Investments
61.4%
RM39.9 mil



Foreign Investments
38.6%
RM25.1 mil

Green Building

Buildings are responsible for almost 50 per cent of annual global CO_2 emissions, and green building solutions have emerged to keep emissions in check while enabling greener large-scale urbanisation that reduces the negative impacts of development and provides positive impact with sustainable surrounding environments.

APPROVED INVESTMENTS IN GREEN BUILDING IN 2022

5 Projects Approved
- **4** in Klang Valley
- **1** in Johor

RM25.7 mil
Total Investments

Green Services

APPROVED INVESTMENTS IN GREEN SERVICES IN 2022

2 Projects Approved

RM7.5 mil
Total Investments

24
High-value Job Opportunities

The green services activities that were approved for renewable energy (solar) and service providers related to energy efficiency

The outlook for Green Technologies is promising in Malaysia especially with the increased global focus on renewable energy, energy conservation and saving the planet. Apart from Malaysia's established RE targets under MyRER, an Act on energy efficiency and conservation will also be introduced to regulate energy consumption by high intensity consumers in the commercial and industrial sector. This underscores that Malaysia's priorities are in line with global efforts' ongoing green growth, complemented by corporations and businesses adhering to ESG principles to be globally competitive.

Logistics Services

The global contract logistics market rebounded by 8.7 per cent in 2021 and is predicted to grow by a further 7.1 per cent in 2022 according to Transport Intelligence's (Ti-Insight) Global Contract Logistics 2022 report. Meanwhile, Ti's Global Contract Logistics Market Size and Forecasting 2023 interim report projects the Asia Pacific region as a key driver (growth forecast of 5.7% y-o-y) underpinned by strong manufacturing and retail industry growth, contributing to about 41.6 per cent of the global contract logistics market share.

In Malaysia, the Ministry of Finance's Economic Outlook 2023 reported that the transportation and storage sub-sector experienced a tangible rise of 30.7 per cent in the first half of 2022 amid the transition to endemicity. With borders reopening in April 2022, the growth of total cargo and container handled at ports increased due to strong external demand as the total trade increased by 28.2 per cent to RM1.35 trillion over that period.

The explosive growth of e-commerce has had a direct impact on the Malaysian logistics industry, especially for e-fulfillment and last-mile delivery players. Today's supply chain is increasingly being powered by emerging technologies incorporating high-technology ICT and IoT systems. With Malaysia experiencing a 68 per cent year-on-year boom in e-commerce in 2021, the nation is definitely an attractive market in Southeast Asia. The Commission Factory's (CF) 2022 article titled 'Malaysia eCommerce Statistics and Trends in 2022' reports that between the end of 2021 and the last quarter of 2022, Malaysia further added 1.2 million new digital consumers. Additionally, amongst Malaysian internet users, over 9 out of 10 are now digital consumers (90%) − coming second to Singapore in the Southeast Asia region which has some 97 per cent internet users as digital consumers.

In support of the nation's aspirations to become a transport and logistics hub in Southeast Asia by 2025, the Government has mandated in the 12MP, the development of the Logistics Sustainability

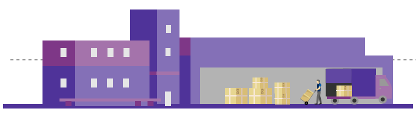
APPROVED INVESTMENTS IN LOGISTICS IN 2022

Integrated Logistics Services (ILS)
ILS comprises activities provided by logistics companies along the logistics supply chain such as freight forwarding, warehousing, transportation and other related value-added services i.e., distribution, product assembly/installation, consolidation, procurement, quality control, and supply chain management

2 Projects Approved

Total Investment Value
RM874.2 mil
All investments were from domestic sources

58 Total Job Opportunities



International Integrated Logistics Services (IILS)
IILS status is granted to logistics companies that provide integrated and seamless logistics services (door-to-door) along the logistics value chain as a single entity on a regional or global scale

24 Companies Approved for the IILS Status

Total Investment Value
RM321.2 mil
RM81.1 mil Domestic Investments
RM240.1 mil Foreign Investments

3,976 Total Job Opportunities

Performance Framework (LSPF) aims to increase productivity, performance and competitiveness, while addressing and mitigating problems faced in Malaysia's logistics industry.

Investment opportunities abound considering that the industry is focused on developing the capability and efficiency of logistics service providers, with expansions and upgrades to cutting-edge technologies such as Warehouse Management Systems (WMS) with embedded IoT systems, and smart logistics for enhanced competitiveness. Additionally, the demand for storage and distribution of vaccines in the cold chain industry has risen post-pandemic. Cold chain logistics service providers have been developing smart logistics facilities and infrastructures, embedded with cold chain refrigeration systems. Incoming investments from large logistics services providers catering to niche markets such as dangerous goods (DGs) continue to rise; several companies have already commenced building mega-sized warehouses to cater to this niche segment.

Malaysia is also well positioned to be an established regional and global distribution centre (RDC/GDC) for multinationals and foreign investors alike. Given the industry's current landscape, attractive incentives and grants available through various schemes under MIDA and other relevant agencies, the country continues to be a viable investment destination.

NOTEWORTHY PROJECT IN LOGISTICS IN 2022

Superb Cold Chain Logistics Sdn. Bhd.

- Investment value >RM50 million
- Initially involved in online freight forwarding services
- Expanded its business to become an integrated logistics service provider
- Provides cold chain transportation, distribution and warehousing services
- Expansion involves a new cold chain storage with multi-temperature refrigeration systems and automated warehousing systems
- Additional 28 job opportunities

Embracing ESG in the supply chain

The International Energy Agency (2019) reports that the transport sector is the second largest driver of CO2 emissions in Malaysia following electricity and heat production. The adverse effects of such levels of CO2 emissions urgently require companies to come up with strategies to optimise their logistics network by embracing ESG.

Some examples of the ESG elements already implemented in the logistics industry in Malaysia include the construction of green building index warehouses, installation of solar PV panels, smart lighting, and rainwater harvesting systems. Other ESG initiatives are the increased use of electric material handling equipment for warehousing operations such as electric forklifts, e-trucks for the daily transportation activities and the utilisation of electric container handling equipment in port facilities.

Health Services

The recovery of the healthcare sector in Malaysia is expected to gain further traction over the medium-term amid further less-tightening restrictions, with the challenges of the past two years revealing many areas for improvement. An article by UNICEF suggests efforts that could yield improvement in primary healthcare while addressing possibilities of future pandemics include establishing an effective virus outbreak surveillance and response system, building public trust in national health services, and strengthening the logistics and supply of vaccines.

Anchored on the public-private partnership (PPP) model, the successes witnessed in Malaysia's healthcare sector are based on efforts in all sectors of the industry. Together, Malaysia's dual healthcare system has cultivated a solid ecosystem, further positioning the country as a safe and trusted destination for healthcare travellers.

While most private healthcare providers solely operate in urban areas exclusively, the public healthcare sector is pivotal to the entirety of Malaysia's health ecosystem, catering to two-thirds of the nation's outpatient and inpatient cases. PPPs and the collaborations stemming from adopting such approaches proved beneficial in addressing overcrowding issues during the pandemic as well as the effective procurement and administration of the

COVID-19 vaccinations. As borders reopened, private hospitals continue to welcome foreign patients with active safety measures in place. This is expected to revitalise the country's medical tourism sector.

According to Straits Research's November 2022 'Medical Tourism Report', the global medical tourism market is expected to achieve a double digit compound annual growth rate (CAGR) of 30 per cent from 2022 to 2030 driven by higher patient demand for affordable healthcare choices with improved quality of services. The market size was estimated to be worth US$4.5 billion in 2021, and is projected to reach US$47.7 billion by 2030, with the majority of patients seeking healthcare treatment in the Asia Pacific region − a trend expected to continue during the projected period.

Malaysia's healthcare travel industry continues to exhibit signs of swift recovery with one private hospital reporting a five-fold increase in the number of medical tourists, and over 31,000 international patient visits recorded from January to July 2022. Top treatments sought by foreign tourists include procedures and care for cancer, blood disease, obstetrics and gynaecology, hepatology, orthopaedics, and otorhinolaryngology issues. The nation is a leading choice for foreign patients due to its reliable, safe, and effective treatments as well as its ease of access and competitive prices in the region.

MIDA looks forward to facilitating healthcare investments in potential growth areas and specialties such as healthcare services for seniors, traditional and complementary medicine (TCM), and digital healthcare/telemedicine.

STRATEGY HIGHLIGHTS IN HEALTH SERVICES

As Malaysia transitions into the Rebuild Phase in 2023, the focus will shift to strengthening the Malaysia Healthcare Brand to amplify brand presence in the region and scale up services and product offering in key markets

With these strategies set in place, the industry is expected to generate **RM2.4 billion by 2025** with estimated spillover to air travel, accommodation, food and beverage, and leisure activities

According to the Malaysia Healthcare Travel Council (MHTC), the Government is targeting hospital revenues (medical receipts only) from medical tourism to hit **RM1.2 billion** this year, increasing between the range of **RM1.7 to RM2 billion in 2024, and RM2 to RM2.4 billion in 2025**

APPROVED INVESTMENTS IN HEALTH SERVICES IN 2022

In 2022, a total of **four** new and **two** expansion projects for private healthcare facilities were approved by MIDA

RM2.1 bil
Total Investments

4,098
Total Job Opportunities

Investments in affordable digital solutions would improve productivity and efficiency, with benefits in both patient outcomes and cost. By fully embracing the digital transformation of healthcare systems, Malaysia will be better positioned to achieve the objectives of improving patients' experience, enhancing clinical experience and productivity, lowering healthcare cost per capita and improving population health and providing access to care as needed.

As borders reopened, private hospitals continue to welcome foreign patients with active safety measures in place. This is expected to revitalise the country's medical tourism sector.

NOTEWORTHY PROJECTS IN HEALTH SERVICES IN 2022

UCSI Hospital

- Bandar Springhill Port Dickson, Negeri Sembilan
- 130-bed healthcare facility
- A full-fledged private hospital with teaching hospital facilities
- Supported by experienced specialists in anesthesiology and critical care, emergency medicine, colorectal surgery, orthopaedics, trauma and radiology
- Aims to provide sustainable world-class healthcare and position the country as a global hub for medical and wellness
- ESG initiatives: Investing in renewable energy by installing solar panels, and implementing a no-plastic policy to increase awareness of the green lifestyle

Kuala Lumpur International Hospital

- Strategically located in the southern part of Kuala Lumpur
- Approved for 624 beds with a foundation to expand to 1,000 beds
- Provides services for all specialties that are required in a tertiary hospital
- Equipped with the latest cutting edge technology and medical equipment such as a hybrid angiography operating theatre, MRI Operating Theatre, 3 Tesla MRI, Cathlab with biplane and single plane angiography, 256 slice CT Scans and robotics
- ESG initiatives: hospital building is being built in accordance with the standards of recognised green building accreditation schemes; features an enterprise-wide water management strategy to reduce water consumption; and operates under good governance policies and principles

Strengthening the capacity of private healthcare institutions is crucial in complementing the Government's responsibility to provide quality healthcare services to the people. For example, during the COVID-19 pandemic, private hospitals took on the responsibility of caring for non-COVID-19 patients. The successful implementation of the COVID-19 vaccination campaign resulted in the active participation of 6,000 general practitioners from the private sector as well as 20,000 medical graduates assisting the Government.

Education Services

Education contributes both directly and indirectly towards the country's socio-economic growth, with human capital driving the nation’s economy. According to the Department of Statistics Malaysia (DOSM) press release titled ‘Graduate Statistics 2021’, the number of university graduates in Malaysia increased by 4.7 per cent in 2021, numbering 5.61 million, from 5.36 million graduates in 2020.

As part of a strategic plan titled ‘Way Forward for Private Higher Education Institutions (2020-2025)’ which was initiated in 2020, education as an industry serves to make Malaysia a world-class international higher education hub, targeting 250,000 foreign students by 2025.

However, international travel restrictions during the COVID-19 outbreak in 2020 and 2021 had a major impact on private higher education institutions (PHEI) which relied heavily on international student fees. In order to attract foreign students, the Government established Education Malaysia Global Services (EMGS), a company under the purview of the Ministry of Higher Education (MOHE) with the responsibility of promoting Malaysia as an international education hub. EMGS aims to make Malaysia one of the Top 10 education destinations globally.

EMGS ROAD TO 50K ENROLMENTS

Applications by institute types

Private Higher Institution	23,978
Public Institution	15,174
Language Centre	1,442
Skill Centre	55
Grand Total	**40,649**

Source: Education Malaysia Global Services

HIGHLIGHTS: EDUCATION MALAYSIA GLOBAL SERVICES (EMGS)

In the third quarter of 2022, EMGS reported that **40,649** foreign student applications were received

Making up **81%** of the targeted 50,000 enrolments for 2022

The majority of international students were from:

- PRC (45.63%)
- Indonesia (7.37%)
- Bangladesh (6.76%)
- India (2.92%)

Besides higher education institutions, the Government recognises TVET as part of mainstream education. Skilled and future-resilient TVET graduates would be integral additions to the workforce for Malaysia to develop into an advanced industrialised nation. In order to align TVET education with the current manpower needs of industry, the Government-Industry TVET Coordination Body (GITC) was established, providing a collaborative platform for the public and private sectors to drive the 12 identified hubs such as automotive, semiconductor, marine, aerospace, robotics, telecommunications, hospitality and tourism in TVET education.

Apart from incentives under the PIA, 1986 and the Income Tax Act (ITA), 1967, MIDA offers the Smart Automation Grant (SAG) to the education sector during the pandemic. This initiative is to encourage investors to continue investing in automation, in line with the national Industry 4.0 policy. For example, Vision Diagnostic Sdn. Bhd. benefitted from SAG in its purchase of a high-tech diagnostic ultrasound system for its teaching activities. PHEIs including TVET institutions may also apply for the Domestic Investment Strategic Fund (DISF) under PENJANA to support the adoption of technology and innovation.

The Government predicts that the education sector has the potential to boost the services sector to account for 70 per cent of GDP. It contributed RM31.5 billion to the Malaysian economy in 2018; and is expected to contribute RM84 billion by 2030 based on a growth rate of 5 to 6 per cent per annum.

APPROVED INVESTMENTS IN EDUCATION SERVICES IN 2022

236 Projects Approved

- **20** Private universities/ colleges
- **184** International schools/ pre-school/ tuition centres/ language centres
- **32** TVET institutions

RM618 mil Total Investments

1,246 Total Job Opportunities

Access to quality education is important to minimise social inequality, and in recognising this opportunity, PHEIs have opened opportunities for high school leavers to continue their studies even if they are not offered places in public higher education institutions. In fact, private TVETs such as the Penang Skills Development Centre (PSDC) has successfully attracted many students to further their education in industry-led courses that have high employability rates. Currently, the National Higher Education Fund Corporation (PTPTN) offers loan facilities to students who continue their studies in both public and private institutions.

Hotel and Tourism

Global tourism recovered robustly in the first half of 2022, with tourist arrivals almost tripling between January and July in comparison to the number of arrivals globally in the same period, according to United Nations World Tourism Organisation

(UNWTO). An estimated 474 million tourists travelled internationally over the period, compared to 175 million from January to July 2021, which translates to a recovery of almost 60 per cent from pre-pandemic levels.

The rest of 2022 however was challenging due to increased oil prices brought on by supply chain disruptions, strict zero-COVID policies of some countries and the Russia-Ukraine war – all of which had impacted the industry.

Locally, Malaysia's Ministry of Tourism, Arts and Culture (MOTAC) anticipates that the ongoing recovery in international tourist arrivals to pre-pandemic levels will last at least two to three years, which is ample time for full recovery, provided resources are available and accessible.

Tourism Recovery Framework (TRF) 2.0 (2022 to 2024)

To recalibrate and rejuvenate the tourism industry to become stronger and more resilient, MOTAC launched the Tourism Recovery Framework (TRF) 2.0 on 21 June 2022. The TRF 2.0 outlined five main strategies to re-invigorate the tourism industry, among them being the reinvention and enhancement of tourism and cultural products and services, and aligning tourism activities with sustainability and inclusiveness.

As it has been arduous to predict targets in respect of tourist arrivals, forecasts have been adjusted upwards several times based on the positive numbers of tourists recorded entering Malaysia. In September 2022, MOTAC optimistically predicted a total of 10 million international tourist arrivals, (up from an earlier estimate of 9.2 million), with RM26.8 billion in tourism receipts this year. This positive outlook follows further relaxation of conditions for tourist arrivals, making Malaysia a hassle-free country for travellers to visit.

The affordable ringgit will also likely attract more inbound tourists and strengthen the economy with the influx of foreign currencies. Malaysia has always been an economical tourist-spending destination, more so now with goods and services being even more affordable. Business tourism will benefit as well since the cost of hosting events like conferences and trade shows will be much more affordable in Malaysia and bolster more international participation. According to the Malaysia Healthcare Travel Council (MHTC), the Government is targeting hospital revenues (medical receipts only) from medical tourism to hit the forecasted figure of RM1.2 billion this year, increasing between the range of RM1.5 to RM1.7 billion in 2023, RM1.7 to RM2 billion in 2024 and between RM2 to RM2.4 billion in 2025.

Notwithstanding the recovery in passenger traffic and international travel, investments in the tourism sector have lagged behind globally. UNWTO and fDi intelligence's Tourism Greenfield Investment Report 2022 cites that while passenger traffic has picked up and international tourism continues to recover, investments in the tourism industry did not grow in tandem as operators replenished existing capacity in developed markets and reassessed risk exposure in developing economies.

Last year, a total of 250 FDI projects worth about US$9.5 billion (RM45.07 billion) were announced in the tourism cluster, a decrease of 8 per cent from the 271 projects worth US$17 billion (RM80.65 billion) announced in 2020.

APPROVED INVESTMENTS IN HOTEL AND TOURISM IN 2022

16 Projects Approved

RM2.1 bil
Total Investments

1,917
Total Job Opportunities

Under the National Tourism Policy (NTP) 2020-2030, one of the strategic thrusts is to 'Practice Sustainable and Responsible Tourism' in line with ESG principles. MIDA continues to encourage that sustainable measures in the construction and development of projects, such as the installation of solar panels, water-saving, usage of natural materials and native plants in the landscaping, are continually practiced and observed.

NOTEWORTHY PROJECTS IN HOTEL AND TOURISM IN 2022

The Regent Kuala Lumpur by Golden Eagle Majestic Sdn. Bhd.

- This 37-storey hotel boasts 259 rooms equipped with top-notch amenities
- Conveniently situated next to the iconic Tun Razak Exchange (TRX) project, which is poised to become the city's next financial hub. The Regent Kuala Lumpur is a prime location for a truly comprehensive experience in Kuala Lumpur

Skyline Luge Kuala Lumpur from New Zealand

- Located 15 minutes from downtown KL as a recreational part of Gamuda Garden's development
- Includes
  - 4 interlinked luge tracks (totalling 1,600 metres)
  - The world's longest and most extensive tunnel system
  - A 380-meter dual parallel zipline (with an innovative 'rail system' design)
- Committed to ESG principles
  - For example, a luge ride uses gravity instead of motors or electricity to reduce carbon emissions and the luge track will be designed based on the existing topography to reduce disruption of the natural landscape

Real Estate

The real estate sub-sector comprises housing and service apartment projects under the purview of the Ministry of Housing and Local Government Development.

Notwithstanding the challenges of the past year, real estate endured among the services subsectors, contributing significantly to the services sector with 18.8 per cent of the total approved investments in 2022, despite a moderation of the approved investments. In efforts directed at boosting the industry, the Government announced the elimination of the Real Property Gains Tax (RPGT) under Budget 2022 for property disposals by individuals comprising Malaysian citizens and permanent residents, starting from the sixth year. Hence, the RPGT rate for property disposals in the sixth and subsequent years after purchasing is zero per cent.

ESG plays an essential role in real estate. Buildings and construction are responsible for 39 per cent of carbon emissions globally, and effective programmes and roadmaps to mitigate these emissions are important. Constructing greener buildings with energy and saving features as well as planning housing projects with advances in innovation and technology are part of ESG initiatives taken by developers. This is in line with Malaysia's 12MP target to become carbon-neutral by 2050.

APPROVED INVESTMENTS IN REAL ESTATE IN 2022

754
Projects Approved

All driven by DDI

RM28.9 bil
Total Investments

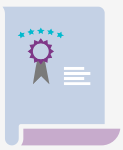
Financial Services

Banking, insurance and capital markets (brokerage, fund management, investment advisory, financial planning, clearing houses for securities or derivatives, advising on corporate finance) and venture capital, are the components under the financial services sub-sector.

According to Bank Negara Malaysia's (BNM) 2022 report 'Monetary and Financial Developments in May 2022', banks remained well-capitalised and able to support economic recovery as their resilience was underpinned by sound asset quality. The banking sector expects a decent loan growth in 2023 based on the 4.5 per cent GDP forecast, and RAM ratings believes that the domestic banking industry would remain fundamentally resilient despite the prevailing macroeconomic headwinds.

Domestic financial institutions are gearing towards more sustainable financing and operating practices by integrating ESG considerations into their governance, business strategy, operations, and risk management. This is aligned with the Financial Sector Blueprint 2022-2026, released by BNM earlier this year, anchored on efforts to foster market dynamism, support sustainable development objectives, and facilitate an orderly transition to a greener, more climate-resilient economy and financial sector.

APPROVED INVESTMENTS IN FINANCIAL SERVICES IN 2022

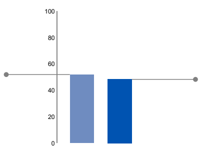


In 2022, approvals were from 49 projects, mainly from the insurance and banking segment, particularly from onshore conventional and Islamic banking activities

49 Projects Approved

RM11.2 bil Total Investments

Domestic Investments
51.8%
RM5.8 bil



Foreign Investments
48.2%
RM5.4 bil

Utilities

The utilities sub-sector comprises energy and water utilities services. Energy services encompass power generation, transmission, and electricity distribution by Tenaga Nasional Berhad (TNB), Sarawak Energy and Sabah Electricity Sdn. Bhd. (SESB). Water utilities services covers those provided by Suruhanjaya Perkhidmatan Air Negara (SPAN) and Pengurusan Aset Air Berhad (PAAB).

Government spending supported the sub-sector under Budget 2022, with RM485 million for infrastructure improvement projects such as rural electricity supply, and RM382 million for rural and alternative water supply, and other rural infrastructure development in remote areas, in Sarawak and Sabah that aims to reduce the urban-rural development gap nationwide. As a result, 2022 recorded a tremendous increment of investment in the water services industry compared to 2021.

The outlook for the utility sector in 2023 remains positive, with earnings resilience backed by regulated assets for power and gas utility companies. TNB has pledged to focus on RE and invest RM20 billion a year to achieve net-zero carbon by 2050. The national utility company uses both thermal power plants and hydroelectric power plants to generate electricity and is responsible in ensuring reliable supply and to carefully balance socio-economic considerations as well as environmental conservation as part of its sustainability strategy. It has already taken the first crucial steps in achieving this target by shutting down a 1,400 MW coal plant in Selangor sooner than its planned retirement in 2029.

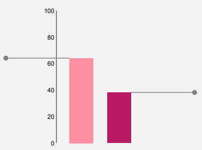
APPROVED INVESTMENTS IN UTILITIES IN 2022

RM10.8 bil
Total Investments

Total investments in 2022 is **12.1%** higher than 2021 at RM9.6 bil - all DDI

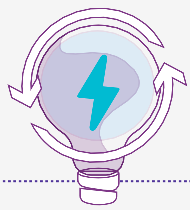
Breakdown of Utilities Projects in 2022

75.9% of the total investment were in the generation, transmission, and distribution of electricity



24.1% were from the development of the water services industry

The utilities sub-sector was the **fourth-highest** contributor to the total approved investments in the services sector



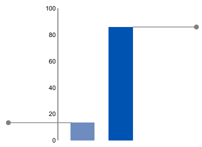
APPROVED INVESTMENTS IN DISTRIBUTIVE TRADE IN 2022

1,242 Projects Approved

RM6.2 bil
Total Investments

72.2% higher than 2021 (RM3.6 bil)

Domestic Investments
12.9%
RM0.8 bil



Foreign Investments
87.1%
RM5.4 bil

35,948
Total Job Opportunities

Largest employer in the services sector

Distributive Trade

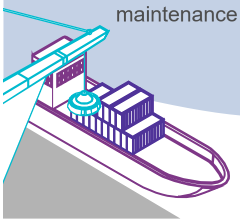
Distributive trade comprises wholesale and retail trade, hypermarkets and superstores, departmental stores and direct selling, which are regulated under the Ministry of Domestic Trade and Consumer Affairs (MDTCA). Apart from that, petroleum-related projects are approved under Petroleum Development Act 1974 (PDA), and franchising activities are under Perbadanan Nasional Berhad (PERNAS). Retail trade jumped to a new record high in May 2022 on higher tourism-led spending.

> Distributive trade comprises wholesale and retail trade, hypermarkets and superstores, departmental stores and direct selling, which are regulated under the Ministry of Domestic Trade and Consumer Affairs (MDTCA).

Transport Services

The transport services sub-sector consists of three main categories namely:

- Maritime covering all projects and activities related to ships, ports, maritime academy, and other seafaring projects
- Aviation, covering fixed and rotary wing aircraft, and airport infrastructure
- Roads covering transport terminals and highways, including construction and maintenance



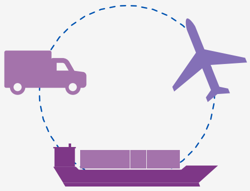
APPROVED INVESTMENTS IN TRANSPORT SERVICES IN 2022

29 Projects Approved

Maritime, aviation and road

RM1 bil
Total Investments

100% DDI



Other Services

The BioNexus status is awarded to qualified biotechnology companies undertaking value-added biotechnology and/or life sciences activities. BioNexus-status companies enjoy fiscal incentives, funds and other guarantees to support their growth. Apart from the overall benefits and support, BioNexus-status companies are also assured of a list of privileges as stipulated in the BioNexus Status Bill of Guarantees, which includes freedom of ownership, access to shared laboratories, research centres of excellence and other related facilities and continuous support and other assistance from the Malaysian Bioeconomy Development Corporation (MBDC), under the purview of the Ministry of Science, Technology and Innovation (MOSTI).

The newly launched National Biotechnology Policy 2.0 (NBP 2.0) will assist industries to move up the value chain by adopting cutting-edge technology to compete in global markets in the areas of agriculture and food security, healthcare and well-being, as well as industrial and the circular economy.

In driving the industry's growth, the Government encourages active participation from stakeholders such as the MBDC to enhance the BioNexus Bill of Guarantees; National Institutes of Biotechnology Malaysia (NIBM) to strengthen R&D facilities and services; local venture capital companies and government-linked companies (GLCs) to support the biotech industry's growth and explore participation in the global market; and commercial banks to offer financing. Further funding assistance of RM5 million was allocated to the Bio-based Accelerator (BBA) programme to boost the development of local companies in the biotechnology industry. The Government aims to attract more industry players, both local and foreign investors to participate in this burgeoning high-value, high-tech area.

APPROVED BIONEXUS STATUS IN 2022

RM139.3 mil
Total Investments

9 Malaysian companies awarded BioNexus status

Nearly **double**
(2021: RM76.2 mil)

Investing in Greener Malaysia for the Future

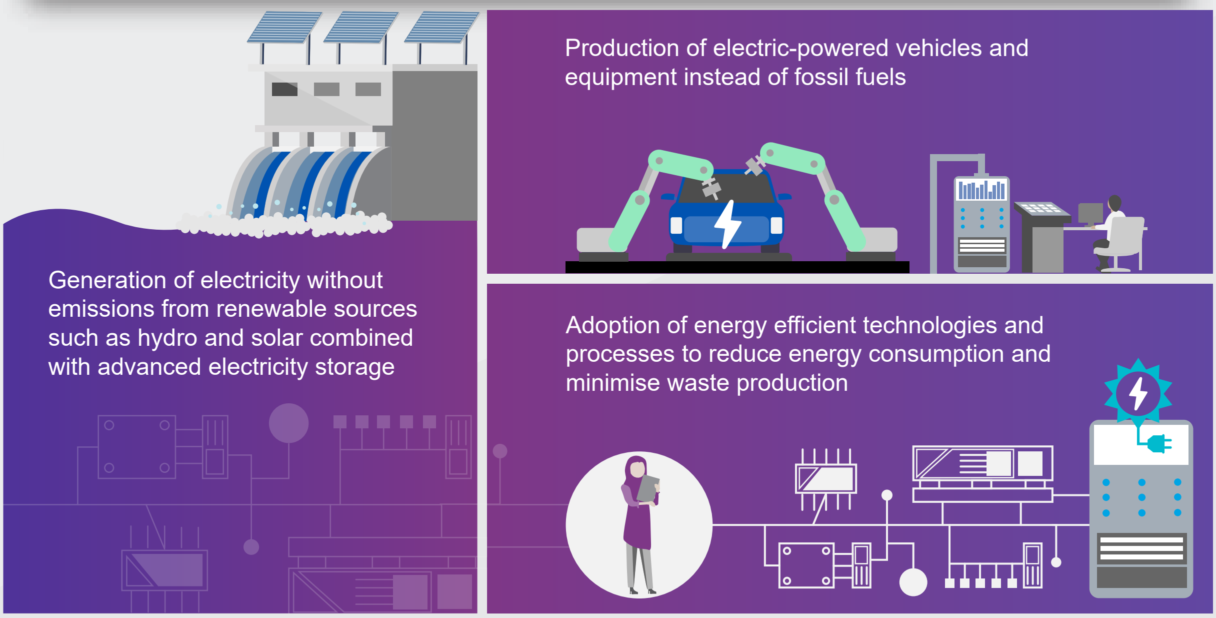
- Although there are several opinions on what construes as a green investment, the International Monetary Fund (IMF) defines a green investment as public and private investment that is necessary to reduce greenhouse gas (GHG) and air pollutant emissions-without significantly reducing the production and consumption of non-energy goods, whereas an OECD Working Paper on Finance, Insurance and Private Pensions, No.24 has categorised green investment as a sub-set of a broader investment theme or closely related to other investment approaches such as:
  - Socially responsible investing (SRI)
  - Environmental, social and governance (ESG) investing
  - Sustainable, long-term investing or similar concepts

Locally, Malaysia has been taking initiatives to spur the adoption of green technology via green tax incentives since 2001. Without tax incentives, the nation's green aspirations will remain unachievable with minimal to no participation from industry players. Recently, Malaysia announced the National Low Carbon Aspiration 2040 under the National Energy Policy 2022-2040 (DTN). There are nine targets to be achieved by 2040, contributing to the reduction of CO2 emissions aligning with the target to achieve net-zero GHG emissions by 2050. The 12MP also highlights Malaysia's commitment to becoming a net-zero carbon emission country by 2050.

Achieving net-zero emissions simply means releasing no greenhouse gas (GHG) into the atmosphere, or if some are still released, it is offset by removing an equivalent amount from the atmosphere and storing it permanently in soil, plants, or materials. Based on a joint study conducted by the World Wide Fund for Nature (WWF) and Boston Consulting Group (BCG), Malaysia's commitment to becoming a nation with net-zero GHG by 2050 would require RM350 billion to RM400 billion in cumulative investments.

PATHWAYS TO NET ZERO EMISSIONS

Green technology investments are the most feasible pathways to net-zero emissions and include the following:

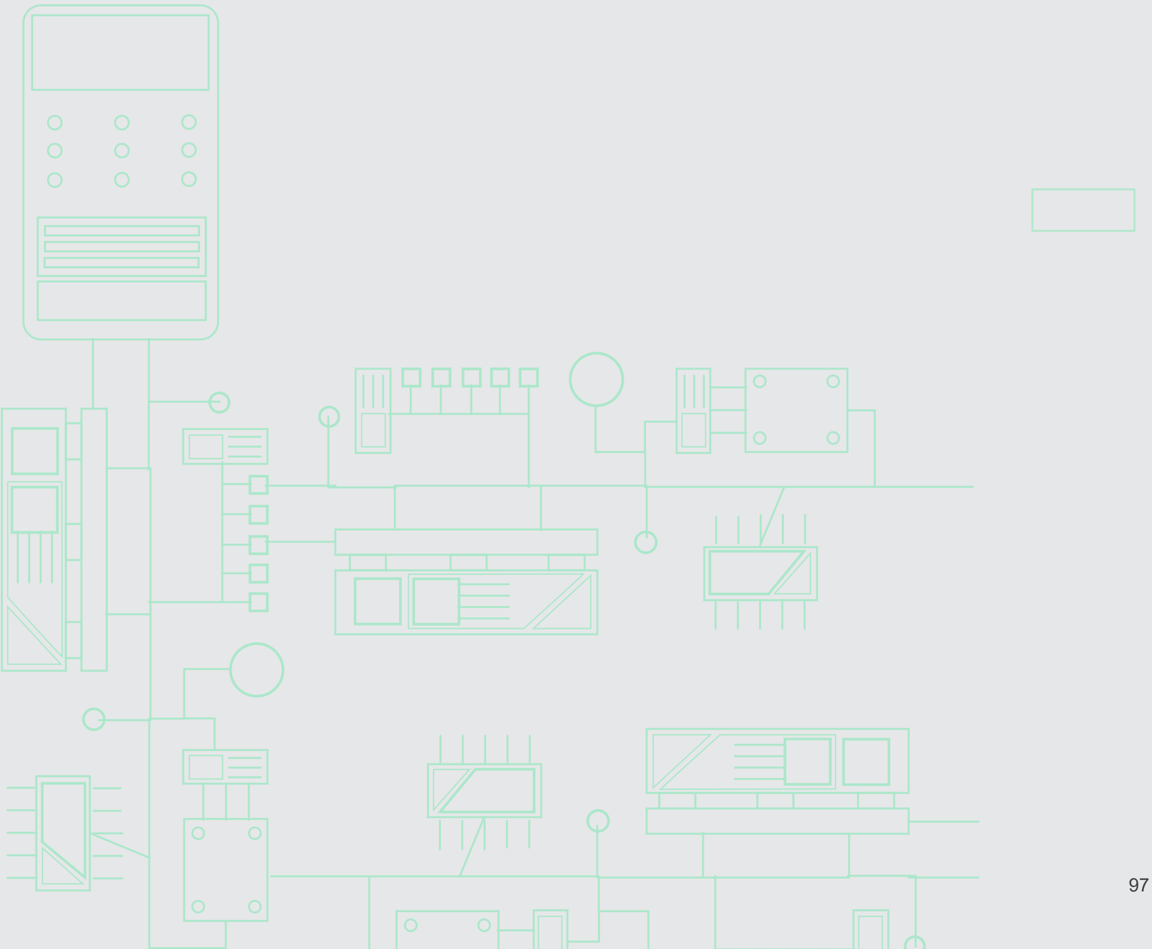


To facilitate these investments, the Government continuously offers various incentives to attract investments in catalysing the development of green technologies. It includes supportive regulatory frameworks to spur investments and transition into the green economy.

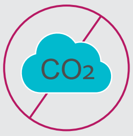
Companies are encouraged to invest in RE sources such as solar, biomass, biogas, mini-hydro, and other green technology activities. Other areas where investments are needed include energy efficiency (EE), green building, green data centres and integrated waste management.

The Government, through MIDA will also continue its journey to promote and further facilitate investments in green technology projects and services as well as to attract investments in the development of low carbon technologies. This will allow Malaysia to be a leader in high potential growth areas such as renewable energy (RE), energy storage, circular economy and low carbon mobility as laid out in the 12MP and NIAs in which RE and EE remain the major focal points of the country's sustainability goals.

Ultimately, the transition towards sustainability and meeting Malaysia's commitment to be net-zero earliest by 2050 has much spillover benefits, contributing to economic growth and job opportunities.



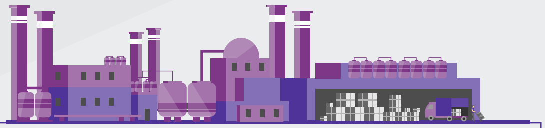
Making the Most of Malaysia's Emerging Carbon Market and Low-Carbon Economy



- Governments worldwide, especially from developed nations, have jumped on the bandwagon of climate change, and have put measures in place to reduce greenhouse gas (GHG) emissions in their respective nations through a series of conventions (e.g. Kyoto Protocol, Paris Agreement, SDG formation, UNFCCC, and COP26 & COP27)

While Malaysia contributed to less than 0.8 per cent of the world's CO2 emissions in 2020 (334 mega ton CO2 - MtCO2), the Government has nevertheless announced its ambitious goals to produce net-zero carbon emissions by 2050, and to reduce the CO2 intensity of its GDP by 45 per cent by 2030, as part of its Nationally Determined Contribution (NDC) pledge in COP26 that the country reaffirmed in COP27. One of the mechanisms to achieve its aim is the implementation of carbon pricing, which many economists and policymakers consider to be one of the best tools for combating excessive GHG emissions. When done correctly, carbon pricing can improve resource efficiency, stimulate investments in clean energy, and lead to lower GHG emissions.

CARBON PRICING INSTRUMENTS

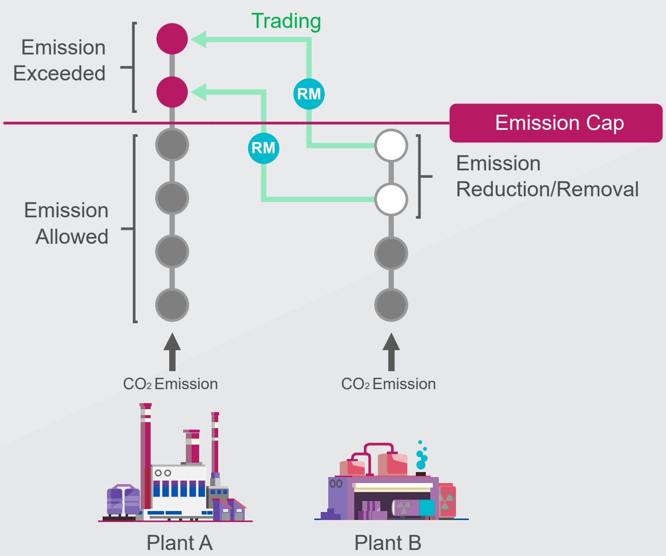


Governments can generally implement carbon pricing through a combination of three instruments: carbon tax, emission trading scheme (ETS) and carbon credit/market

A carbon tax imposes levies on GHG emissions; this 'polluters pay' approach is an effective way to reduce GHG emissions while increasing government revenue, and is less complicated to implement. The Government's intention for a carbon tax is outlined in the 12MP and is scheduled to be ready throughout the plan's implementation phase (2021-2025)

An ETS is a 'cap and trade' concept limiting how much CO2 is allowed to be emitted in any given sector. Entities that produce fewer emissions than the baseline can earn emission credits, which can then be traded to companies that emitted above the baseline. The carbon price would be determined by the credits' supply and demand. The ETS is designed to encourage companies to look into their overall operations and embark on energy efficiency, conservation, increased RE usage, and supply chain decarbonisation

EMISSION TRADING SCHEME (ETS)



Source : MIDA

Through Bursa Malaysia, Malaysia's stock exchange and one of the largest bourses in ASEAN, the country launched its first voluntary carbon market (VCM) in December 2022 as one of the instruments to address carbon emissions and achieve the pledge towards the 2030 and 2050 targets. This gives local companies a platform to offset carbon emissions while staying competitive by offering quality carbon credits generated by globally recognised carbon projects. As Malaysia is still 50 per cent covered by forest, this opens the opportunity for nature-based carbon projects and solutions. According to the National University of Singapore's Centre for Nature-based Climate Solutions, investable forest carbon for Malaysia can yield an ROI of RM10.8 billion yearly in nett present value.

According to McKinsey & Company, Malaysia has only two active carbon projects, accounting for less than one mega ton CO2 equivalent (MtCO2e) worth of carbon credit issuance. In contrast, Indonesia, Cambodia and Thailand have 85, 40, and 15 MtCO2e respectively. Abundant biomass can be used for RE, biofuel, and biogas, which can later be monetised for methane abatement, carbon credits, and Renewable Energy Certificates (RECs). The country also has a handful of local project developers, and validation and verification bodies (VVBs). Establishing a local carbon services capacity for project development is essential for implementing projects at competitive costs.

Beyond the VCM, Malaysia also plans to implement the ETS and a carbon tax as detailed in the 'Malaysia Environmental Sustainability Plan 2020-2030'. Implementing carbon pricing is essential for Malaysian producers to remain globally competitive, as many advanced economies have started efficiently managing their emissions.

For instance, the Carbon Border Adjustment Mechanism (CBAM) will take effect in 2023 in EU countries, leading to a mandatory addition of the cost of GHG emissions to products' value chain by producers, potentially rendering the products uncompetitive locally. Cement, iron and steel, aluminium, fertilisers, organic chemicals, plastics, electricity, hydrogen, and ammonia are currently proposed to be covered by the CBAM, and it is expected that the list of products will be further expanded. When it is fully activated, the CBAM will create trade barriers despite multiple free trade agreements, providing carbon pricing mechanisms are not adopted.

A 2021 report by the Commonwealth Secretariat highlighted that Malaysia had RM3.4 billion worth of CBAM-related exports to the EU in 2019. The bulk of it is from iron and steel (RM2.5 billion), aluminium (RM796 million), fertiliser (RM61 million) and cement (RM44 million). As products affected expand in range, the value and risk to Malaysian exporters will be higher. According to the University College London Institute for Sustainable Resources, trade volumes between Malaysia and EU countries worth more than RM112 billion may be adversely impacted if goods with greater GHG efficiency are not produced.

Beyond ESG compliance, adopting more environmentally-friendly production processes is beneficial economically from marketing perspectives, as more consumers make choices for greener brands. Identifying and mitigating the inefficiencies in production processes would be beneficial financially as well.

Malaysia envisions itself as the premier destination for ESG investments, focusing on high-value products, the low-carbon industry, decarbonisation, the circular economy, bioeconomy, and energy transition. Prospective investors in the ESG space are encouraged to contact MIDA's Circular Bioeconomy Unit for more information on how MIDA can help facilitate their investments in Malaysia.


4.0

PERFORMANCE OF THE PRIMARY SECTOR

"Invest in resilience. Shocks will continue to hit us. But it is clear is that if we invest in climate-resilient agriculture and low-carbon development, we can have higher standards of living for people everywhere."

Kristalina Georgieva, IMF Managing Director
(Remarks at the G20 Leaders Summit, 15 November 2022)

BRIGHT SPARK

Rapid recovery of global demand has seen most commodity prices improving to pre-pandemic levels despite the looming concern of global economic slowdown. Similarly in Malaysia, all three sub-sectors have recorded substantial growth in approved investments in 2022.

Musings on Primary

Global commodity prices improved to pre-pandemic levels in 2022 following the rapid recovery in demand with international borders opening, and supply disruptions resulting from Russia's invasion of Ukraine. Most commodity prices peaked after the start of the incursion between March and May, with Brent crude rising as high as US$128 per barrel on 8 March 2022, but has since declined to US$83.63 per barrel on 22 December 2022 amid growing concerns of a global economic slowdown.

Rising oil prices are a double-edged sword for Malaysia as, while oil revenue increases from taxes and capital expenditure increases for O&G projects, the value of subsidies paid out by the Government to mitigate inflation also increases in tandem. The impact is not only observed in energy prices but also on agricultural commodities vital to the food supply chain such as wheat and corn used for animal feed, which also rose to their highest levels in 2022 with negative spill over effects on increased cost for poultry and eggs.

Crude palm oil (CPO) prices performed well in 2022, reaching a high of RM6,270 a tonne in April and remaining at the RM6,000 per tonne level in the first half of 2022, due to competitive pricing compared to soybean oil and concerns about availability of palm oil after flooding in parts of Indonesia such as Kalimantan. The foreign labour shortage which adversely impacted the Malaysian palm oil industry is seeing a gradual improvement and will take time to normalise.

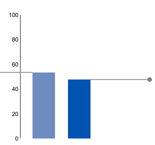
PRIMARY HIGHLIGHTS IN 2022

	Agriculture	Mining	Plantation and Commodities
Total Investments	RM154.4 mil	**RM23.9 bil**	RM2.2 bil
Potential Employment	279	153	381
Number of Projects	10	26	36

RM26.3 bil Total Investments

72 Total Projects Approved

Domestic Investments
52.9%
RM13.9 bil



Foreign Investments
47.1%
RM12.4 bil

813 Total Job Opportunities

Agriculture

To improve food production, 800 acres of abandoned land belonging to federal agencies such as the Federal Land Development Authority (FELDA), Federal Land Consolidation and Rehabilitation Authority (FELCRA), and the Rubber Industry Smallholders Development Authority (RISDA), as well as agencies under the Ministry of Agriculture and Food Security (MAFS) has been earmarked for food crop development, according to the Ministry of Finance (MOF).

A specific action plan to strengthen national food security has also been developed considering issues and challenges along the food supply chain ranging from agricultural inputs to food waste. The National Food Security Policy (DSMN Action Plan) 2021-2025 continues to be set in motion to ensure the sustainability of the country's food supply at all times. In addition to crops, the agriculture sub-sector covers livestock, and deep-sea fishing. The livestock industry is anticipated to grow further, backed by higher demand, particularly from households and food businesses.

AGRICULTURE IN 2022

Domestic vs Foreign Investments

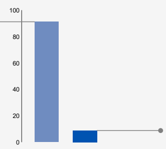
10 Projects Approved

Total **RM154.4 mil**

An increase of **651.4%** vs 2021

Domestic Investments **91.1%** RM140.7 mil

Foreign Investments **8.9%** RM13.7 mil



Employment Opportunities

279 Total Job Opportunities

Mining

The mining sub-sector is being positioned 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.

The National Mineral Industry Transformation Plan 2021-2030 is driving the development of the mineral industry holistically, improving governance and legislation as well as human capital and value chain development. Furthermore, international cooperation is being explored to facilitate technology transfers and foreign investment in the mineral industry and mineral-based manufacturing industry. In addition, a comprehensive chemical roadmap is being developed to address gaps in the downstream O&G ecosystem, particularly in petrochemicals. The roadmap will also provide the infrastructure support required to attract more quality investment. In 2023, the mining sub-sector is expected to expand by 1.1 per cent on account of higher natural gas output as the completion of new pipeline projects in Sarawak,

MINING IN 2022

Domestic vs Foreign Investments

26 Projects Approved

- **18** O&G projects **(RM23.9 bil)**
- **8** projects in other minerals **(RM50.4 mil)**

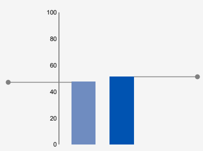
Total **RM23.9 bil**

An increase of **40.3%** vs 2021

- Amounting to **90.9%** of primary sector investments

Domestic Investments **48.1%** RM11.5 bil

Foreign Investments **51.9%** RM12.4 bil



Employment Opportunities

153 Total Job Opportunities

namely the Kasawari, Jerun and Timi, is anticipated to boost production, especially during the second half of the year. In addition, higher demand from major trading partners particularly Japan as well as new demand from domestic industrial and petrochemical segments are anticipated to further increase the production of natural gas.

Nevertheless, the output of crude oil and condensates is projected to moderate due to a decline in the production rate from the existing fields in Peninsular Malaysia. Softening global economic growth is expected to dampen energy demand, leading to a downward trend in world crude oil prices. Therefore, Brent crude oil price is expected to record a lower average of US$90 per barrel in 2023, in line with OPEC's anticipation of a slowdown in oil demand worldwide.

Plantation and Commodities

The plantation and commodities sub-sector, comprising oil palm, rubber, forest plantation, kenaf and pepper, has contributed significantly to the country's economic development for the past 50 years. Palm oil remains one of Malaysia's most important commodity crops and the country's main agricultural export.

Exports of agricultural goods are forecast to expand by 1.7 per cent in 2023, supported by higher demand for palm oil and palm oil-based agriculture products and natural rubber. The price of palm oil is forecast to average at RM4,300 per tonne in 2023 compared with RM5,000 per tonne in 2022, which is higher than the last 10 years average of RM2,685 per tonne, as the supply of global edible oils and fats is anticipated to remain tight.

Agricultural activities can have major adverse effects on the environment, however, with sustainable agricultural and land ecosystem management practices, we can capture greenhouse gases in crops and soils, reduce emissions, improve soil fertility, restore biodiversity as well as conserve natural resources. One such initiative is by Nano Malaysia Bhd which introduced the Biomass Innovation Circular Economy Programme (BICEP), an initiative for sustainable agriculture, by promoting the use of biomass waste materials from agricultural sources to produce high-quality advanced materials and products.

The Malaysian palm oil industry has also been addressing sustainability concerns, including ESG criteria as early as the 2000s, through Good Agricultural Practices such as Zero Burning policy and the introduction of voluntary sustainability schemes (e.g. the Roundtable on Sustainable Palm Oil, (RSPO). Plantation companies have since stepped up their sustainability commitments when the Malaysian Sustainable Palm Oil (MSPO) certification became a national agenda and was made mandatory by the end of 2019. The Malaysian palm oil industry is one of the few commodities with regulated and audited zero deforestation commitments reflected in its sustainability certification schemes.

The 'No Deforestation' criterion in MSPO and RSPO ensures that palm oil sourced from Malaysia is sustainably produced, and not from plantations involved in illegal deforestation. Traceability tools to verify that Malaysian palm oil is sourced from sustainably produced plantations are readily available and accessible, such as the MSPO Trace and the RSPO Palm Trace. The adoption of IR 4.0 technologies by the palm oil industry, such as blockchain, further reinforces the integrity and robustness of its traceability tools. It is important to ensure continuity and compliance with ESG criteria through the MPSO certification.

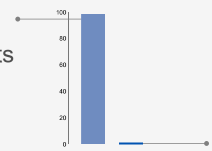
PLANTATION AND COMMODITIES IN 2022

Domestic vs Foreign Investments

36 Projects Approved — Most approved projects in oil palm **RM75 million**

Total **RM2.2 bil** — An increase of **958.5%** vs 2021

Domestic Investments
99.8%
RM2.2 bil



Foreign Investments
0.2%
RM4 mil

Employment Opportunities

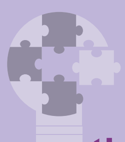
381 Total Job Opportunities

Raising Future Global Champions

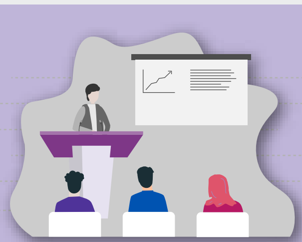
- Malaysia has long prided itself as a country blessed with conducive geographic, regulatory, economic, and demographic attributes
- However, to remain competitive in an increasingly global market, domestic industry players are urged to rise as global champions and compete within the international business ecosystem
- Cognisant of this, the Government continues to align strategic and enabling pathways that support local industry players as well as Malaysia's Domestic Direct Investment (DDI) and Cross Border Investment (CBI) agenda

Among noteworthy pointers for businesses aligned with the nation's ambitions for innovation-driven and technology-oriented ecosystems comprising high value-added industries include:-

INNOVATION, AUTOMATION AND FINANCIAL ASSISTANCE



Innovation

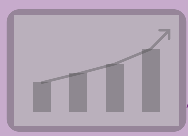


As MIDA has intensified its promotional efforts for collaborations between universities and industries to drive economic growth, and to shape Malaysia's future through R&D and innovation, businesses stand to gain through exploring the gamut of research outputs and innovations by such collaborations− especially those with potential to impact and transform their industries

Automation

While COVID-19 disruptions continually reconfigure global supply chains, accelerate digitalisation, and encourage technology adoption, companies opting to embrace factory automation and transition into intelligent factories gain enhanced flexibility, which optimises productivity and growth

SMEs should consider addressing key gaps and redesigning their supply chains as they navigate the region's diversity by incorporating advanced digital capabilities in efforts to futureproof supply chains and transform their workforce



Financial Assistance

As Malaysia's business activities ramped up post-pandemic, reopened borders have led to strong demand and raised customer orders. Business owners should consider investing in their businesses to meet these demands

Aside from conventional banking, SMEs could also seek alternative finance providers for quicker turnaround rates, with less-stringent approval criterion

THE CBI AGENDA - MIDA'S ROLE IN SUPPORTING CBI

CBI explained

- CBI is also known as direct investment abroad
- A business strategy where domestic firms expand operations overseas through:-
  - Greenfield investments
  - Acquisitions, and/or expansion of an existing foreign facility

CBI is critical to Malaysia's industrial development growth and is on MIDA'S list of initiatives

In 2002, MIDA was entrusted to undertake CBI's development and promotion by leveraging MIDA's outreach and its strategic linkages with global companies– facilitating inward investments for Malaysian companies as they expand their investments abroad

MIDA
MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY

- MIDA was mandated to undertake the CBI function from MATRADE on 17 August 2022
- To assist Malaysian companies seeking technology and investment opportunities abroad as it is embedded as one of MIDA's functions under the MIDA Act, 1965. During the preliminary stage, MIDA undertook these CBI programmes:-
  - Engaging and networking with Foreign Embassies, Chambers, Business Association, and Investment Promotions Agencies
  - Meeting local companies with potential for investments abroad
  - Collaboration events with Industrial and Commercial Bank of China Malaysia (ICBCM) and Bank of China (Malaysia) Berhad
  - Networking and attending events hosted by Foreign Embassies and Ambassador

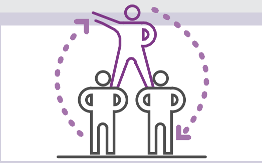
Going forward, to encourage and strengthen CBI investments, MIDA will:

- Conduct a study on CBI – including Cost Benefit Analyses to review its effectiveness in aligning and strengthening MIDA's function in attracting more CBI
- Develop an informative database on CBI targeted countries as well as Malaysian companies
- Organise capacity building programmes (e.g. seminars and missions)
- Forge close alliances with key partners (e.g. financial institutions, board of investments, investment promotion agencies, MIDA MOU partners, business associations and chambers, LLCs, and Malaysian companies invested abroad)
- Expand overseas presence (appointment of Investment Officer or Advisor and/or establishment of new overseas offices, especially ASEAN)

With MIDA undertaking the entire spectrum of CBI, future global champions may benefit from the more enhanced policy advocacy role of MIDA in facilitating inbound and outbound investments that contributes to the following areas:

- Generating financial earnings
- Enhancing exports
- Facilitating domestic investments
- Transferring know-how
- Nurturing innovation
- Upgrading industries
- Improving standards
- Enhancing productivity
- Facilitating access to resources and tangible assets
- Generating employment
- Promoting economic growth

Shaping Future Talent



There is a pressing need for rapid digital transformation that requires investment in new technologies due to the pandemic and ongoing changes in consumer behaviour, which reshaped the job landscape. Hence, demand is on the rise for skilled and competent talent who are proficient at operating current technologies

Apart from addressing the demand through industry-specific training, another approach is to strengthen human capital investment by periodic reskilling and upskilling programmes. This form of continuous improvement while developing future talent is one of the catalytic policy enablers under the 12MP. Identified priority areas under the 12MP include raising the quality of education, strengthening the governance of tertiary education, leveraging emerging technology, ensuring equitable learning outcomes and addressing overlap in TVET governance.

MIDA has continually engaged stakeholders to foster information exchange between the industry and higher learning institutes, and to develop the necessary skills aligned with Malaysia's economic requirements. In anticipation of new challenges in 2023, MIDA will continue its efforts to ensure the availability and readiness of local talent, focusing on industry-driven requirements.

SUMMARY OF MIDA'S ENGAGEMENT DIARY IN 2022

Nov2021-Feb2022

'Door-to-door' talent internship facilitation programme

- MIDA facilitated Airfoil Services Sdn
- Bhd, a German aerospace maintenance, repair and overhaul (MRO) company – collaboration between UniKL, College Yayasan Technical Sabah and Institute Kemahiran Belia Negara
- Benefitted 50 students with attractive internship programmes

22-23 Feb 2022

Outreach programmes to engage Malaysian students abroad

- Collaboration between MIDA and the Education and Training Office, Public Service Department (JPA) Seoul, and Simmtech Co. Ltd. (parent company of Sustio Sdn. Bhd.)
- Organised a briefing session for Malaysian students in the Republic of Korea through a recruitment programme for a Batu Kawan, Penang plant
- Collaboration between MIDA and JPA
- Attended the SK Nexilis Global Internship Programme closing ceremony
- Succeeded in beginning a collaboration between SK Nexilis, MIDA Seoul and JPA Seoul
- 10 Malaysian students shortlisted to participate in a 6-month internship programme
- Seven students accepted for permanent positions at SK Nexilis Malaysia – average monthly salary of RM6,000

March 2022

Facilitated collaboration between AT&S, an Austrian MNC, and local universities

- To set up an IC Substrate Institute for talent development
- To increase Malaysia's industry competitiveness

Aug 2022

Talent Outreach Programme: STMicroelectronics Sdn. Bhd. and JPA graduates

- A video conference session organised by MIDA's Talent Division and JPA
- 294 Malaysian engineering local and overseas university graduates participated – 400 resumes received by companies

2-3 Aug 2022

Career Crafting – Engineering and Technology Programme

- Co-organised by MARA and MIDA
- Provided 3,000 MARA students with 1,500 job opportunities
- Among participating companies: AT&S, Plexus, Proton, Micron and STMicroelectronics

14-15 Sep 2022

Exhibitor at Universiti Teknologi Petronas Career Fair in Seri Iskandar

- MIDA represented 14 companies to facilitate talent recruitment (119 positions and 1,181 vacancies)
- MIDA collected 120 resumes at the 2-day event

MIDA Career Fair: MITI Day 2022

- First post-pandemic physical career fair
- A platform for human capital supply facilitation for industry development
- To create awareness on the importance of job creation aligned with industrial development
- Job opportunities offered to around 3,000 Malaysians from 27 companies
- Among participating MNCs: AT&S, Panasonic, SK Nexilis, Lam Research, STMicroelectronic, Wistron, Wiwyn
- Among participating local companies: Proton, YTL Data Centers, UMW, UNISEM and Pentamaster
- Industries represented: E&E, automotive, mechanical & engineering and IT

New programme: Benchmarking Visit and Talent Outreach Programme

Benchmarking visits to Netherlands, Germany and Austria

- MIDA Munich and MIDA Frankfurt facilitated a visit to Brainport Industries Campus (BIC) at Eindhoven with Jabatan Pengajian Tinggi (JPT), Jabatan Pendidikan Politeknik, Kolej Komuniti (JPPKK) from the Ministry of Higher Education (MOHE), and MARA
- To learn and benchmark industry ecosystems (focus on talent supply and readiness)
- Engagements with Chambers of Industries: Industrie- und Handelskammer (IHK) - The Chamber of Industry and Commerce in Kassel, Germany and Wirtschaftskammer Österreich (WKO) - Austrian Economic Chamber in Vienna, Austria

Talent Outreach Programme

- Together with MARA and JPA, MIDA organised 2 outreach programmes for OSRAM Opto Semiconductors (Malaysia) Sdn. Bhd. at Munich and Frankfurt
- To introduce Malaysian students abroad with industry knowledge and job opportunities

Oct 2022 | Nov 2022 | Nov-Dec 2022 | 20 Nov 2020-31 Dec 2022 | 18 July-31 Dec 2022

Industry-Academia Dialogue Session

- Jointly organised by MIDA and Invest Kedah
- A platform for industries to share concerns on hiring local manpower
- Academia representatives: Department of Polytechnic and College Community, MOHE, MARA, PERKESO, and USM
- Industry representatives: 23 companies from Kedah and Pulau Pinang including OSRAM, First Solar, AT&S, Silterra, Everbest, Inari, Ibiden, SUSTIO, Pentamaster, Eko Metal and B. Braun

Talent development programme to support the E&E ecosystem

- Collaboration between MIDA and the Federation of Malaysian Skills Development Centres
- To prepare digital-ready talent
- Programmes offered: Big data engineering (E&E, data analytics, Industry 4.0 awareness and digitalisation in mechatronics)
- Identified 15 focus areas to meet the E&E industry needs
- Emphasis: Digital economy talent development

PENJANA upskilling and reskilling programmes

- Collaboration between MIDA and training providers
- 18 short-course programmes offered through training institutes: Selangor Human Resources Development Centre (SHRDC), Kedah Industrial Skills and Management Development Centre (KISMEC) and Kulim Advanced Technologies Sdn. Bhd. (KAT)
- To reduce the skill gaps and address unemployment of Malaysian graduates and retrenched workers
- Digitalisation readiness programmes: AI and Machine Learning Competence for Industry 4.0, Data Automation and Analytics for Industry 4.0, ICT Competence for Industry 4.0, Experiencing Sensor & IOT Technology and Industry Robotic & Automation
- Implementation outcomes: 1,176 participants (1,139 completed the course and 77% employed)

5.0

GOING FORWARD

Risks remain significant. In these difficult and uncertain times, policy has once again a crucial role to play: further tightening of monetary policy is essential to fight inflation, and fiscal policy support should become more targeted and temporary. Accelerating investment in the adoption and development of clean energy sources and technologies will be crucial to diversifying energy supplies and ensuring energy security. A renewed focus on structural policies will allow policymakers to foster employment and productivity, as well as to make growth work for all. In other words, it is in our hands to overcome this crisis. And if we choose to undertake the right set of policies, we will certainly increase our chances of success.

Álvaro Santos Pereira, OECD Chief Economist ad interim
(OECD Economic Outlook, Volume 2022 Issue 2, 22 November 2022)

GLOBAL CALL TO ACTION

Slower global growth and higher interest rates in response to inflationary amid geopolitical uncertainties is projected for 2023. Policy prescriptions range from macroprudential tools to climate change measures targeting current concerns to future worries. Malaysia remains committed to reforms through the New Investment Policy (NIP) that not only promotes inclusivity and sustainable development but also upholds the principles of integrity and good governance.

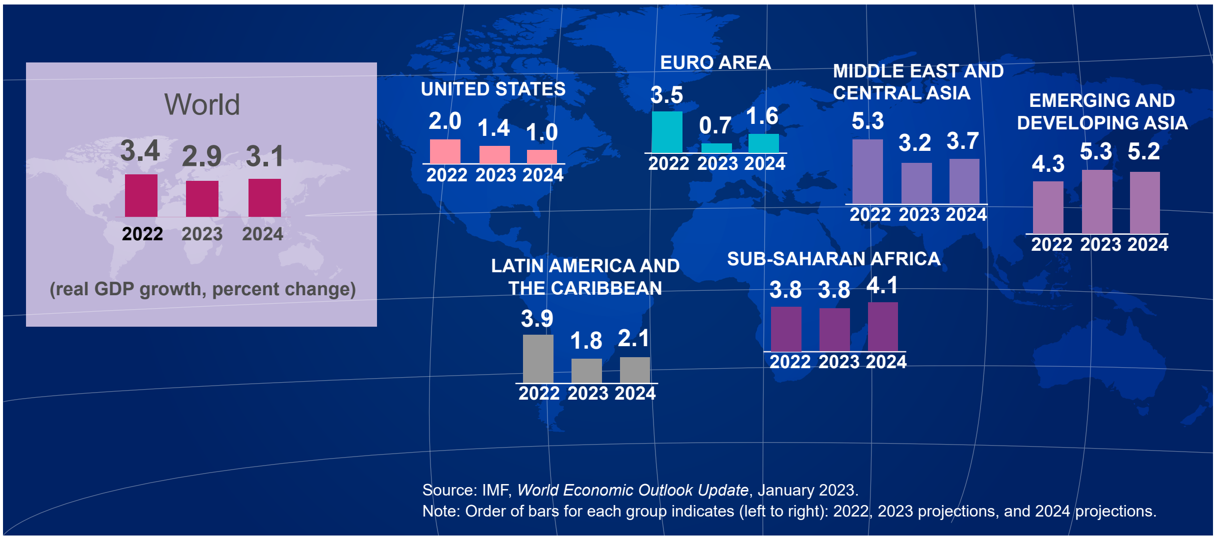
Malaysia is geared up to face the global headwinds in 2023 and remains on an action-oriented path by placing multi-tiered economic, social and governance policies, reforms, and initiatives to ensure equitable and sustainable economic growth, and increase the nation's attractiveness as an investment destination. As is the case with many other open-economy countries, Malaysia would likely be susceptible to a subdued global economic climate. The gamut of uncertainties, among others, contributed to gloomy global growth outlooks for 2023 by the International Monetary Fund (IMF), World Bank, Organisation of Economic Cooperation and Development (OECD), and UNCTAD.

In January 2023, the IMF projected global growth to slow down from 3.4 per cent in 2022 to 2.9 per cent in 2023, rising to 3.1 per cent in 2024 (0.2 percentage points higher than the October 2022 update but below 2000-2019's average of 3.8 per cent), with expectations of the PRC's reopening to pave the way for a sooner than expected recovery. Global inflation is forecasted to slide from 8.8 per cent in 2022 to 6.6 per cent in 2023 but remains above the 3.5 per cent estimated pre-pandemic levels.

Although adverse risks have moderated, the balance of risks remains tilted downwards. The upsides could be attributed to a stronger boost from pent-up demand in many economies and plausible faster decline in inflation.Downsides hampering global growth recovery include worsening health outcomes in the PRC, possible escalation of geopolitical tensions, and tightened global financing costs, leading to debt distress with financial markets potentially repricing in response to negative inflation news. These could possibly affect financial and debt stability amid the cost of living crises in many economies. For sustained inflation, the IMF noted the deployment of macroprudential tools and fortified debt restructuring frameworks as critical. Accelerating the PRC's COVID-19 vaccinations, targeting fiscal support for countries hit hard by rising food and energy prices, and withdrawing broad-based fiscal relief measures could safeguard recovery along with stronger multilateral cooperation as well as mitigating climate change by curbing emissions and raising green investment.

Meanwhile, the OECD's November 2022 Economic Outlook anticipates global growth to decline to 2.2 per cent in 2023, rebounding to a modest 2.7 per cent in 2024 with Asia dominating as the major growth engine amid decelerations in Europe, North America and South America. For a stronger recovery, OECD urged policymakers to take bold, essential steps towards investing in energy security and diversifying energy supplies, keeping markets open and international trade flowing, and fostering employment to boost potential growth while achieving a stronger and more inclusive recovery.

GROWTH PROJECTION BY REGION



DOWNGRADED FORECASTS FOR THE PRC AND EAST ASIA WEIGH ON REGIONAL GROWTH PROJECTIONS

GDP growth, %

	2022		2023	
	Sep Update	*Dec ADOS*	*Sep Update*	*Dec ADOS*
Developing Asia (DA)	**4.3**	**4.2 ↓**	**4.9**	**4.6 ↓**
DA excluding the PRC	**5.3**	**5.4 ↑**	**5.3**	**5.0 ↓**
East Asia	**3.2**	**2.9 ↓**	**4.2**	**4.0 ↓**
Hong Kong, China	0.2	-3.3 ↓	3.7	2.9 ↓
People's Rep. of China	3.3	3.0 ↓	4.5	4.3 ↓
Republic of Korea	2.6	2.6 –	2.3	1.5 ↓
Taipei, China	3.4	3.4 –	3.0	3.0 –
South Asia	**6.5**	**6.5 –**	**6.5**	**6.3 ↓**
India	7.0	7.0 –	7.2	7.2 –

	2022		2023	
	Sep Update	*Dec ADOS*	*Sep Update*	*Dec ADOS*
Caucasus & Central Asia	**3.9**	**4.8 ↑**	**4.2**	**4.2 –**
Kazakhstan	3.0	3.0 –	3.7	3.7 –
Southeast Asia	**5.1**	**5.5 ↑**	**5.0**	**4.7 ↓**
Indonesia	5.4	5.4 –	5.0	4.8 ↓
Malaysia	6.0	7.3 ↑	4.7	4.3 ↓
Philippines	6.5	7.4 ↑	6.3	6.0 ↓
SIngapore	3.7	3.3 ↓	3.0	2.3 ↓
Thailand	2.9	3.2 ↑	4.2	4.0 ↓
Vietnam	6.5	7.5 ↑	6.7	6.3 ↓
The Pacific	**4.7**	**5.3 ↑**	**5.5**	**4.8 ↓**

Note: Data for India are on fiscal year basis, with FY2022 ending 31 March 2023 ↑= forecast increased, ↓=forecast decreased, –= no change.
Source: *Asian Development Outlook database*

The World Bank, in its June 2022 Global Economic Prospects (GEP) report, forecasted a 3 per cent global GDP growth in 2023 but revised it downwards to 1.7 per cent in its latest January 2023 GEP, citing its latest forecast as the slowest pace since 1993, outside the 2009 and 2020 recessions. However, the report stated that growth in the East Asia and Pacific Region (EAP) could firm to 4.3 per cent (estimated at 3.2 per cent in 2022), with PRC easing its pandemic-related restrictions and allowing for gradual activity recovery – a figure below its June 2022 predictions of regional growth surpassing 5 per cent in 2023 to 2024.

Aside from EAP's weaker than expected goods export growth, the downward revisions are also broad-based and reflect COVID-related disruptions, as well as PRC's real estate sector's protracted weakness. Meanwhile, inflation is expected to ease mildly, after peaking in 2022.

The report also cited that EAP's marked slowdown in 2022 was almost wholly due to PRC, as it accounts for 85 per cent of GDP. However, Malaysia, the Philippines and Vietnam benefitted from the strong rebound of goods exports. Going forward in 2023, growth in these countries is expected to moderate (forecasted at 4 per cent for Malaysia), amid slowed export growth to major markets.

In its latest December 2022 supplement of the Asian Development Outlook (ADO), the Asian Development Bank (ADB) predicted GDP growth for Southeast Asia at 4.7 per cent in 2023. Despite attributing stronger consumption, exports, and services (in particular tourism) as contributing factors to its upward forecast for 2022 in December (from 5.1% in September to 5.5% in December), ADB noted that the region's growth rates in 2023 would likely be impacted by weakening global demand, hence downgrading growth in 2023 from 5 per cent (September 2022 projection) to 4.7 per cent in December 2022.

The ADB also downgraded Malaysia's 2023 forecast from 4.7 per cent (September 2022) to 4.3 per cent (December 2022), citing subdued global conditions despite the country's robust third-quarter growth in 2022 (14.2%) which was led by strengthened domestic demand as the economy normalised supported by improved labour market conditions, minimum wage increase policy measures and the Bantuan Keluarga cash aid programme to stimulate the economy. Additionally, eased mobility restrictions, as well as borders reopening in April 2022, further spurred consumer and leisure spending thereby reinvigorating the services sector.

Malaysia's Department of Statistics (DOSM) also expects moderate growth locally in 2023. In November 2022, Bank Negara Malaysia's (BNM) Governor Tan Sri Nor Shamsiah Mohd Yunus warned of a challenging economic climate in 2023, which could dampen growth due to worsening supply chain, geopolitical uncertainty and market volatility, alongside the primary risk of higher domestic inflation which could reduce investment activity and household expenditure. However, even as internal and external risks persist, she stressed that Malaysia will not be recession bound in 2023 and is forecasted to grow by 3 to 5 per cent, buoyed by domestic demand driven largely by private sector spending, thereby improving the job market further. Furthermore, the country's diversified export structure is also expected to cushion any downturn.

BNM noted in its recent 2022 fourth quarter bulletin (February 2023) that aside being supported by domestic demand and continued labour market recovery, the country's economic growth will be driven by the realisation of multi-year investment projects along with the growth of the services and manufacturing sectors. Meanwhile, the slowdown in exports following weaker global demand will be partially cushioned by higher tourism activity. Headline inflation is forecasted to remain elevated in 2023.

The Bursa Malaysia chairman, Tan Sri Abdul Wahid Omar also stated in September 2022 that a recession is unlikely, given the country's pragmatic and responsive policies and diversified economic structure which is less dependent on commodities. The agriculture and mining sectors, he noted, contribute only 14 per cent to Malaysia's GDP, while the services and manufacturing sectors account for 57 per cent and 24.3 per cent respectively. Additionally, Malaysia's economic resilience is bolstered by the country's diverse trading partners, without being over-dependent on a particular country.

In its Monetary Statement dated 3 November 2022, BNM cited that many central banks are expected to raise interest rates to mitigate inflationary pressures arising from strong demand, tight labour markets, and elevated commodity prices despite improved global supply chain conditions.

BNM increased the Overnight Policy Rate (OPR) four times in 2022, with the latest OPR (3 November 2022) reaching 2.75 per cent. At this OPR level, Malaysia's monetary policy stance remains accommodative and supportive of economic growth. As the central bank is not on a pre-determined course, monetary policy decisions going forward would depend on evolving conditions and their accompanying implications on the overall outlook to domestic inflation and growth, and further adjustments to the monetary policy settings would take place in a measured and gradual manner that supports sustainable economic growth in a stable-priced environment.

Earlier in October 2022, MIDF Research said that it expects inflation to remain subdued in anticipation of the Government's approach to the fuel subsidy mechanism. Moving into 2023, the research house projects inflationary supply-push factors to soften, hinging on the appreciation of the US dollar against the ringgit, moderating food prices, further easing global supply chain pressure, and lower commodity prices. MIDF forecasts (in December 2022) Malaysia's GDP growth to moderate to 4.2 per cent in 2023, due to the deceleration of external trade performances from softening global demand. Notwithstanding Malaysia's projected real export growth decline from 12.5 per cent in 2022 to 2.8 per cent in 2023, MIDF expects services exports to improve, supported in part by robust tourism activity, should PRC reopen sooner than expected*.

**PRC eased its zero-COVID policy on 7 December, 2023*

On the trade of goods side, MIDF foresees Malaysia benefitting from the export of commodities, as the average prices of palm oil, petroleum, Liquefied Natural Gas (LNG), Crude Palm Oil (CPO), and Brent crude are forecasted to remain elevated in 2023. The agriculture and mining sectors are expected to record an expansion rate of one per cent each, while manufacturing output could witness a modest three per cent growth in 2023.

All Hands on Deck at the Malaysian Front

Investors continue to show confidence in Malaysia as the new premier leadership is focused on strengthening the country's economic growth while retaining its reputation as a stable investment destination. MITI and its agencies will ensure that new investment opportunities also develop the appropriate capacity and talent base in targeted industries for the nation's economy sustainability going forward. Together with MITI, MIDA is actively working to attract investments in targeted industries from across the globe to upgrade Malaysia's industrial ecosystem and trade landscape. These initiatives include providing necessary business facilitation and value network to foreign, local, and start-up companies that would enable them to optimise operations in a dynamic market.

The Government remains resilient in discovering new growth areas and empowering businesses and local communities while upholding the principles of integrity, good governance, and the rule of law, in addition to promoting inclusivity and sustainable development through the New Investment Policy (NIP) under the umbrella of the National Investment Aspirations (NIA).

Reforms through the NIA

As the nation transitions into endemicity in a climate dotted with the evolving dynamics of the global industrial and trade landscape, the Government is fully cognisant of the importance to reinvigorate the nation's investment climate in order to seize opportunities arising from ongoing trade diversions. In line with this, the NIP was launched on 6 October 2022 as a forward-looking framework for navigating implementation reforms and spurring investments in existing and future growth areas. With a sharpened focus on attracting high economic impact investment projects, its framework is aligned with Malaysia's NIA developmental outcomes moving forward.

The NIP outlines 22 national-level initiatives anchored upon six strategic thrusts as follows:

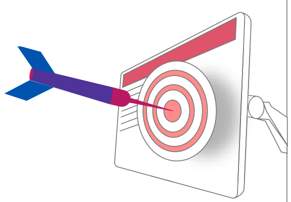
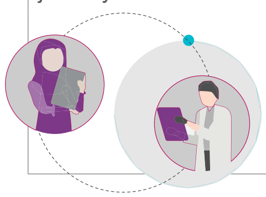
STRATEGIC THRUSTS TO STRENGTHEN MALAYSIA'S INVESTMENT ECOSYSTEM

A	Unified **investment strategy** to drive laser-focused delivery on NIA and ESG	Enable coordinated and whole-of-government approach in policy-making to attract high quality investments, de-risk ESG factors and capture new growth opportunities
B	Agile and forward-looking **incentive** packages that meets the needs of investors	Enhance attractiveness of incentive packages to accelerate high quality investments that deliver against national targets
C	**IPR landscape** with clear roles and responsibilities for simplified investor journey	Deliver outstanding investor services and simplified investor journey
D	Accelerated **innovation** ecosystem to nurture high qulity investments	Provide supportive environment, backed by strong ecosystem collaboration and enhanced IP protection regime to become an investment destination for next-generation innovation activities
E	Vibrant **talent** pool that meets the needs of labour market	Expand support system to better nurture local talent and enhance access to high-skilled foreign talent
F	Streamlined **business environment** for improved ease of doing business	Deliver improved investor experience operating in Malaysia with facilitative regulations, extensive trade links and world class government services

Source: New Investment Policy Public Report, MITI

MIDA is involved in the implementation of several key initiatives outlined in the NIP, especially on the ones that focus on the ease of doing business and address investors' evolving needs.

KEY INITIATIVES INVOLVING MIDA (IN COLLABORATION WITH OTHER MINISTRIES AND AGENCIES)

Strategic Thrust	Initiative	Details
Unified investment strategy to drive laser-focused delivery on NIA and ESG 	Harmonised investment strategy and policies	The Promotion of Investments Act 1986 to be reviewed to target investment opportunities beyond traditional sectors
	In-depth sectoral roadmaps to guide the transition towards national sustainability targets	Fiscal and financial incentives to be explored to assist companies transition towards sustainable practices (such as the adoption of green technologies) Awareness and training programmes will also be provided to support micro, small and medium enterprises (MSMEs) in adopting sustainable practice
Agile and forward-looking incentive packages that meet the needs of investors 	Tiered and pre-approved incentives with greater focus beyond fiscal and financial incentives	To align shifting investor priorities and incentives with broader value propositions, incorporating the use of non-fiscal and non-financial packages will be explored. These include access to green lanes for talent visas and special regulatory exclusions to ease doing business locally A tiered incentive system will be explored, whereby the level of incentives granted is based on the degree to which the investment projects drive towards the NIA
	Incentive review process overseen by National Committee on Investment (NCI) to ensure outcomes align with NIA targets	Feedback channels between investors and the NCI will be formalised to gather investors' feedback on the quality of support provided by MIDA and the relevant investment promotion agencies (IPA) during the project implementation and investor aftercare stages. This will also improve incentive monitoring to ensure investors deliver on their commitments and contribute to NIA targets
IPA landscape with clear roles and responsibilities for simplified investor journey 	Centralised national coordinating body for promotion and marketing	MIDA's role will be strengthened as the lead coordinator for all investor outreach efforts. This coordination model is adopted to synergise marketing activities across all IPAs
	Empowered PACU to accelerate investment implementation	The Project Acceleration and Coordination Unit (PACU) established under MIDA in 2020 to facilitate manufacturing projects approved by the NCI will be scaled up to expand its outreach to investors across all regions and provide facilitation for investment projects across all sectors

The NIA is underpinned by the need to enhance the environmental, social and governance (ESG) practices across the economy. In line with the NIP, the Government plans to step up its ESG efforts, targeting its policies and resources including manpower, capacity-building initiatives and funding towards investments strengthening the country's ESG positioning.

For fiscal and non-fiscal incentives for investors, MITI and MIDA particularly prioritise sustainable investment projects concerning the development and adoption of green technologies, the incorporation of digitalisation and automation as well as the adoption of the circular economy model. Other targeted projects include new green growth areas such as hydrogen technology, bioenergy, and electric mobility, which act as enablers of green adoption across sectors and as future economic engines.

To improve industry players' accountability and reporting of ESG practices, MITI has been consulting and engaging with local and international stakeholders to develop a National ESG Framework for the Manufacturing Sector by 2024. The framework would mainstream ESG elements in the development of the sector and includes four main components, namely ESG standards, financial support and incentives, capacity-building, and market mechanisms, including carbon trading and carbon pricing.

Guided by the NIA, MIDA is intensifying its efforts and is focused on attracting investments in high-technology, knowledge-intensive and innovation-driven activities that complement and further strengthen Malaysia's industrial ecosystem. MIDA also seeks to exploit new opportunities arising from global trends matching Malaysia's unique capabilities in the digital economy, electrical and electronics, pharmaceutical, aerospace, chemicals, medical devices and automotive sectors.

TARGET GOALS AND METRICS OF THE NEW INVESTMENT POLICY

Top-line targets

Sustained econmic growth
4.5-5.5% GDP growth per annum (3.6% CAGR 2011-2019)

Sustained national wealth growth
5.5-6.5% GNI per capita growth per annum (3.8% CAGR 2022-2019)

Re-invigorated investment ecosystem
4.0-5.0% private sector gross fixed capital formation per annum (3.8% CAGR 2015-2019)

Increase Economic Complexity

Regional R&D and Innovation Hub
- **Top 25** on Global Innovation Index (33rd in 2020)

Sophisticated exports with high economic value-add
- **Top 20** on Economic Complexity Index (24th in 2020)

Create High-Value Job Opportunities

Knowledge-intensive and highly skilled jobs
- ~**35%** knowledge-intensive employment (29% on 2021)

Extend Domestic Linkages

Enhanced Global Value Chains Integration
- ~**RM30Bn** avg. annual DIA[6] (23Bn for 2016-2020)

Deepened local supply chain integration
- ~**60%** domestic contribution to Mfg. Value-added (55% in 2015)

Internationally competitive SMEs
- ~**25%** of total exports from SMEs (18% in '19)

Develop New & Existing Economic Clusters

Expanded existing clusters
- Growth of export value in top 10 groups (3-digit MSIC codes)[5]

Accelerated growth of new clusters
- Average growth of export value in top 40 new product classes

Improve Inclusivity

Balanced economic development across states
- **>0.5** ratio of total investment (FDI & DDI) to % GDP contribution across all states[1]

Enhance ESG practices

De-risked ecnomy against ESG factors
Top 40 on Sustainalytics ESG factors ranking[2] (46th in 2021)

High compliance and quality ESG reporting
>95% PLC Avg. Compliance[3] (93% in 2020)
>75% PLC Avg. Reporting Quality[4] (63% in 2020)

1.Calculated as ratio of total investment in each state as a proportion to the state's GDP contribution; 2.Sustainalytics Country Risk Rating Report ESG factors score covering Natural and Produced Capital, Human Capital and Institutional Capital; 3.Average compliance by review of public-listed companies across sectors and market capitalisation; 4.Average quality measured by review of 300 publicly-listed companies across sectors and market capitalisation, with scoring 0-3 (0=general statements, 1=qualitative assessment, 2=quantitative assessment); 5.MSIC 2008 includes 238 groups; 5.Refers to Global Value Chains; 6.Refers to Domestic Investment Abroad

Source: New Investment Policy Report, MITI

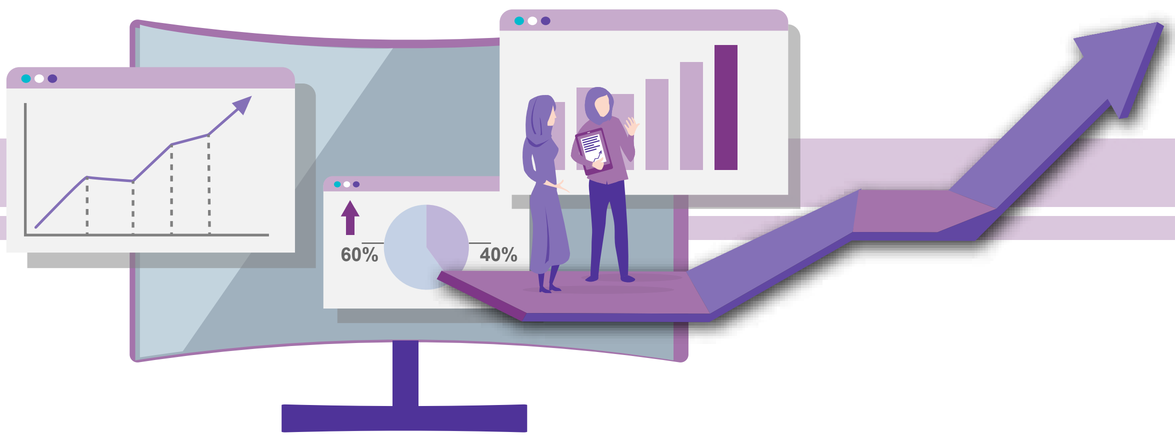
The Twelfth Malaysia Plan (12MP) – Mid-Term Review

The NIP complements the 12MP's overarching objectives to hone in on sustainability, ensuring balanced and inclusive economic growth. The Government has forged ahead with implementing strategies under the 12MP and is currently undertaking a Mid-Term Review to assess Malaysia's economic performance for 2021 and 2022, alongside identifying areas for improvement that could stimulate the country's economy in today's shifting global landscape. MIDA as one of the stakeholders of the Mid-Term Review will continue advocating the enhancement of policies, introduction of fiscal and non-fiscal packages as well as initiatives to strengthen domestic companies and talent, among others, which would support the growth of Malaysia's manufacturing and services sectors

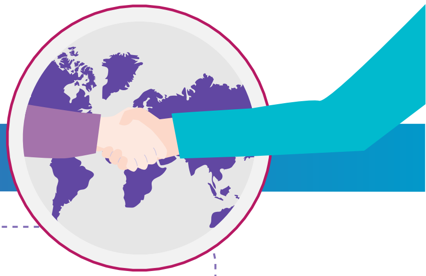
As part of the Mid-Term Review, several key infrastructure projects including integrated rail and road networks connecting airports and ports in industrial, urban and rural areas have been identified to be continued due to their strategic importance in catalysing economic activity, among which is the East Coast Rail Link Project (ECRL) which is expected to be completed in 2027. The ECRL project will help to contribute at least RM50 billion to the nation's GDP

Pro-Business Policies

The Government continues to adopt pro-business policies. Among efforts towards transforming Malaysia into a high-income nation driven by the services sector is the exemption of the 30 per cent Bumiputera equity condition introduced on 20 July 2022. This exemption applies to purchases of land for data centre projects that are approved by the Malaysian Cabinet for land acquisitions valued above RM20 million, and is valid until 2025. Data centre projects benefitting from this policy must be implemented within two years after the completion date of the title transfer. It is anticipated that this policy could further catalyse digital investments into Malaysia, and contribute positively towards the Government's target of attracting RM70 billion of digital investments by 2025



Promising Global Developments



Free Trade Agreement (FTA) Updates

Several landmark global developments in 2022 could impact Malaysia's way forward and influence the Government's economic policies, such as the strengthening of Malaysia's free trade agreements. On 29 September 2022, the Governments of Malaysia and Türkiye signed a protocol to broaden the Malaysia-Türkiye Free Trade Agreement (MTFTA) which initially came into force on 1 August 2015. With this, MTFTA's scope is expanded to include trade in services, investments, and e-commerce– a step that would further stimulate investment crossflows between Malaysia and Türkiye. Exporters from both countries are encouraged to leverage their strategic locations into the regional market

Malaysia also ratified the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP) on 30 September 2022. The ratification and implementation of the CPTPP are expected to bode well for Malaysia's prominence as a global trading economy, with exports projected to increase from US$256.78 billion in 2021 to US$354.7 billion in 2030, and trade balance forecasted to remain in strong surplus at 8.5 per cent of GDP for the same year. The ratification opens up export opportunities for Malaysian companies into new markets such as Canada, Mexico and Peru– countries previously not covered by any existing free trade agreement. In addition to this, the CPTPP, which currently boasts 11 countries as its members could be further expanded through the potential accession of additional countries such as the United Kingdom, the PRC, Chinese Taipei, Ecuador and Costa Rica, all of which have applied to join the trade pact

Additionally, Malaysia is also pursuing active negotiations to upgrade its existing regional FTAs, namely the ASEAN-China Free Trade Area (ACFTA), the ASEAN-Australia-New Zealand Free Trade Area (AANZFTA), and the ASEAN Trade in Goods Agreement (ATIGA)

Global Minimum Tax Rate (GMTR) Impact

Malaysia has always been responsive to globally-agreed tax standard reforms to foster a competitive business environment. In October 2021, Malaysia was among 136 countries and jurisdictions agreeing to a proposal developed by the OECD to establish a 15 per cent global minimum tax rate (GMTR) to curb tax evasion by MNCs shifting profits and tax revenues derived from intangible sources such as drug patents, software and royalties to low-tax countries to evade higher taxation in their home countries

The nation agreed in principle to implement the GMTR on selected MNCs and is actively involved in working group discussions to ensure participation in policies implemented by the OECD

In anticipation of the GMTR implementation in 2024, the Government is reviewing the possibility of introducing a Qualified Domestic Minimum Top-up Tax (QDMTT), which is a tax levied on the excess profits of group entities in Malaysia that have an Effective Tax Rate (ETR) of less than 15 per cent. The QDMTT will enable the Government to combat revenue leakages and profit-shifting activities, and allow Malaysia the first right to charge top-up taxes which would otherwise be ceded to other countries

BUDGET 2023

National Budget 2023 - 'Developing Malaysia MADANI'

The revised Budget 2023 announced on 24 February 2023, saw an **allocation of RM388.1 billion**, comprising RM289.1 billion operating expenditure and RM99 billion development expenditure. The budget focuses on **driving an inclusive and sustainable economy** as one of its objectives and is expected to strengthen Malaysia's position as a choice destination for investment and trade in the Asian region

Snapshot of Key Takeaways from Budget 2023

No.	Initiatives/ Incentives	Features	Benefits
1	**Income Tax Exemption and Investment Tax Allowance for Manufacturers of Charging Equipment for Electric Vehicles (EV)**	• **Income Tax Exemption of 100%** on statutory income from the year of assessment (YA) 2023 to YA 2032, enabling companies that make early investments to enjoy tax exemption for a period of **up to 10 years**. Companies that make investments after the YA 2023 are eligible to enjoy the remaining exemption period only; or • **Investment Tax Allowance of 100%** for a period of 5 years, which can be set-off against up to 100% of the statutory income for each YA	• Attract immediate high-value investment in the EV ecosystem
2	**Extension of Key Incentives under MIDA**	• **Incentive Package for the Aerospace Industry** (extended from 1 January 2023 until 31 December 2025) • **Special Tax Incentive (Relocation)** (extended for priority sectors for 2 years until the year 2024) • Incentive Package for the **Ship Building and Ship Repairing Industry** (extended from 1 January 2023 until 31 December 2027)	• Attract investments in strategic industries and activities
3	**Enhanced Automation Capital Allowance* (Automation CA) for Manufacturing, Services and Agriculture sectors** *For applications received by MIDA and Ministry of Agriculture and Food Security (MAFS) from 1 January 2023 until 31 December 2027	Automation CA has been improved by the: • Expansion of automation scope to include the adaptation of **Industry 4.0 elements** • Expansion of tax incentives to include **Agriculture sectors** • Aligning and increasing of capital expenditure threshold for categories 1, 2 and agriculture up to **RM10 million**	• Assist local companies to accelerate their digitalisation and automation journey
4	**Accelerating the National Digital Network Plan (JENDELA)**	• Malaysian Communications and Multimedia Commission (MCMC) allocated **RM725 million** for digital connectivity in 47 industrial areas and nearly 3,700 schools	• Improved internet connectivity nationwide
5	**Enhanced TVET Initiatives**	• **Direct collaboration with the industry**, especially government-linked companies (GLCs) such as PETRONAS, DRB-Hicom Bhd., Sunway Bhd. and Malaysian Resources Corporation Bhd. that will partially or fully take over the operations of TVET institutions • The **National Dual Training Scheme (SLDN)** allocated RM50 million to benefit more than 8,000 trainees • The **Academy-in-Factory programme** will be implemented to provide on-the-job training opportunities for over 50,000 trainees	• Address underemployment related to qualifications and salaries mismatches • Meet the skill requirements of the industry

Continued on next page

BUDGET 2023

No.	Initiatives/ Incentives	Features	Benefits
6	**Tax Incentives for Companies Undertaking Carbon Capture and Storage (CCS) Technology Activities**	• Tax incentives and import duty and sales tax exemption for:- ▪ **Companies undertaking CCS in-house activity and services** ▪ **Companies undertaking CCS services** • Tax deduction for allowable pre-commencement expenses for companies undertaking CCS in-house activity • Tax deduction on fees incurred by companies using CCS services	• Promote CCS as a new source of economic growth and enabler for achieving net zero GHG emissions
7	**Funding Provisions Embracing Sustainability Agenda**	• Loans by BNM up to **RM2 billion** to support sustainable technology start-ups and assist SMEs to implement low carbon practices • Khazanah to provide **RM150 million** to boost environmentally-friendly project development, including supporting the carbon market and reforestation • The Green Technology Financing Scheme (GTFS) is enhanced with the guarantee value increased to **RM3 billion** until 2025	• Promote green practices and principles among businesses

The Budget 2023 also highlighted measures to improve Government procedures to strengthen investment promotion and facilitation roles, ensuring that the spillover effects of the attracted investments benefit Malaysia. These measures include:

- Restructuring of Investment Promotion Agencies and investment incentives towards an outcome-based tiered-rate incentive, in line with the New Industrial Master Plan 2030 (to be launched by Q3 2023)
- Further strengthening of investment incentives monitoring to improve the effectiveness of the incentives and ensure beneficiary investors' comply with the incentives’ conditions and commitments
- The Invest Malaysia Council and National Committee on Investment (NCI) to lead efforts to speed up the approvals of high potential investments. This will accelerate investment efforts to stimulate high-impact and technological sector investment, in line with the NIP

Global Outlook

Several key global trends will influence the outlook of Malaysia's industries and investment focus such as the trends in the global semiconductor industry and its impact on Malaysia's E&E industry in 2023. According to technological research and consulting firm Gartner, the global semiconductor industry is projected to experience a decline in growth from 7.4 per cent in 2022 to -2.5 per cent in 2023 due to the weakening demand for personal computers and smartphones in the consumer market. The global semiconductor revenue from smartphones will decline from a growth of 24.5 per cent in 2021 to 3.1 per cent in 2022

However, while the consumer space will slow down, the demand in the data centre market will remain resilient, where global semiconductor revenue is expected to grow by 20 per cent in 2022, driven by continued cloud infrastructure investment. The automotive electronics segment will also continue to record double-digit growth over the next three years as semiconductor content per vehicle will increase due to the transition to electric and autonomous vehicles

Meanwhile, according to the International Energy Agency (IEA), rising energy prices and severe supply chain shortages due to the Russia-Ukraine war are expected to accelerate the world's transition to the adoption of greener energy. The war has also contributed to a sharp increase in food prices and affected global food security. In response, the Malaysian Government will accelerate investments in the adoption and development of clean energy sources and technologies, as well as continue the development of the Halal and Smart Farming industries which were identified as one of the Strategic and High Impact Industries under the 12MP

The Government also seeks to further strengthen Malaysia's digital ecosystem including 5G infrastructures and automation through initiatives such as MyDigital and the Malaysia Digital Economy Blueprint which aims to attract RM70 billion investments to accelerate digitalisation efforts by 2025. Among efforts is the Digital Ecosystem Acceleration (DESAC) scheme announced under the Budget 2022 to further boost digital investments, develop the local digital economy value chain and create high-income job opportunities for Malaysians

Appendix 1: Approved Manufacturing Projects, 2022 and 2021

	2022			2021		
	NEW	EXPANSION/ DIVERSIFICATION	TOTAL	NEW	EXPANSION/ DIVERSIFICATION	TOTAL
Number	416	385	**801**	386	316	**702**
Potential Employment	39,027	37,066	**76,093**	42,204	32,371	**74,575**
Total Capital Investment (RM million)*	35,019.7	49,254.4	**84,274.1**	153,381.7	41,706.2	**195,087.9**
- Domestic (RM million)	9,760.9	8,491.9	**18,252.8**	8,725.1	6,764.2	**15,489.3**
- Foreign (RM million)	25,258.9	40,762.5	**66,021.3**	144,656.6	34,942.0	**179,598.6**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 2: New Manufacturing Projects Approved by Size of Total Investment, 2022 and 2021

SIZE OF TOTAL INVESTMENT	2022					2021				
	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Less than RM 2.5 million	8	35	5.7	2.8	**8.5**	7	75	6.2	0.4	**6.6**
RM 2.5 million - < RM 5.0 million	25	410	74.4	21.5	**95.9**	22	357	86.2	0.4	**86.6**
RM 5.0 million - < RM 10.0 million	90	2,904	530.8	136.6	**667.4**	90	2,755	604.4	84.6	**689.1**
RM10.0 million - < RM 50.0 million	227	13,849	3,650.4	1,171.0	**4,821.4**	213	12,281	3,437.9	909.7	**4,347.7**
RM50.0 million - < RM100.0 million	29	3,490	1,199.8	842.6	**2,042.4**	16	1,770	564.6	566.7	**1,131.3**
RM100.0 million - < RM500.0 million	24	5,356	2,269.1	2,490.1	**4,759.2**	25	5,501	2,483.2	1,990.2	**4,473.4**
RM500.0 million - < RM 1.0 billion	7	4,840	0.0	4,758.1	**4,758.1**	1	1,884	0.0	663.1	**663.1**
RM 1.0 billion and above	6	8,143	2,030.7	15,836.2	**17,866.8**	12	17,581	1,542.5	140,441.5	**141,984.0**
TOTAL	**416**	**39,027**	**9,760.9**	**25,258.9**	**35,019.7**	**386**	**42,204**	**8,725.1**	**144,656.6**	**153,381.7**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 3: Approved Manufacturing Projects by Industry, 2022 and 2021

INDUSTRY**	2022					2021				
	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Electrical & Electronics	106	27,072	1,398.6	27,853.1	**29,251.7**	94	28,362	1,711.2	146,265.8	**147,977.0**
Machinery & Equipment	72	4,854	3,075.9	5,274.3	**8,350.2**	48	2,501	576.9	1,090.6	**1,667.6**
Transport Equipment	49	3,815	1,446.5	6,602.7	**8,049.1**	44	2,318	992.1	1,191.2	**2,183.3**
Chemicals & Chemical Products	71	2,860	1,627.4	5,724.9	**7,352.3**	89	3,048	2,276.5	3,483.4	**5,759.9**
Petroleum Products (Inc. Petrochemicals)	9	805	351.3	5,577.6	**5,928.9**	5	147	186.3	38.8	**225.1**
Non-Metallic Mineral Products	29	3,201	490.9	5,331.9	**5,822.8**	17	782	311.3	111.6	**422.9**
Scientific & Measuring Equipment	25	3,389	182.8	4,561.8	**4,744.6**	13	807	85.7	2,031.1	**2,116.8**
Rubber Products	22	7,592	3,183.6	418.3	**3,601.9**	40	12,229	4,865.8	891.1	**5,756.9**
Food Manufacturing	93	5,344	2,068.4	1,454.1	**3,522.5**	77	5,354	1,574.3	3,814.7	**5,389.0**
Basic Metal Products	31	2,894	1,083.8	900.3	**1,984.1**	22	9,283	264.7	19,173.3	**19,438.0**
Fabricated Metal Products	79	3,899	889.1	765.6	**1,654.7**	90	3,392	1,176.9	544.7	**1,721.6**
Plastic Products	82	3,788	806.9	615.1	**1,422.0**	45	2,006	488.6	288.5	**777.1**
Paper,Printing & Publishing	42	2,400	486.6	605.9	**1,092.5**	34	1,413	392.8	156.6	**549.4**
Textiles & Textile Products	19	1,274	524.7	72.3	**596.9**	15	304	54.7	241.0	**295.7**
Furniture & Fixtures	34	1,484	327.0	174.7	**501.7**	30	1,033	203.4	41.2	**244.6**
Wood & Wood Products	22	791	155.5	74.3	**229.8**	20	950	180.4	178.2	**358.5**
Beverages & Tobacco	8	431	112.0	0.9	**112.9**	6	38	28.6	0.1	**28.7**
Leather & Leather Products	1	16	3.8	0.0	**3.8**	1	75	31.8	0.0	**31.8**
Miscellaneous	7	184	38.1	13.6	**51.6**	12	533	87.3	56.8	**144.1**
TOTAL	**801**	**76,093**	**18,252.8**	**66,021.3**	**84,274.1**	**702**	**74,575**	**15,489.3**	**179,598.6**	**195,087.9**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Reporting of data is guided by the Malaysia Standard Industrial Classification 2008 (MSIC 2008)

Appendix 4: Approved Manufacturing Projects with Investments of RM100 million and above, 2022

INDUSTRY**	NEW					EXP./DIV.					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Electrical & Electronics	9	5,549	141.0	3,795.1	**3,936.1**	22	16,933	628.2	22,984.4	**23,612.6**	31	22,482	769.2	26,779.5	**27,548.7**
Transport Equipment	2	236	434.7	0.0	**434.7**	3	1,680	416.5	6,492.9	**6,909.3**	5	1,916	851.2	6,492.9	**7,344.0**
Machinery & Equipment	2	860	0.0	1,609.6	**1,609.6**	10	1,993	2,342.1	3,002.3	**5,344.4**	12	2,853	2,342.1	4,612.0	**6,954.0**
Chemicals & Chemical Products	7	1,404	972.1	5,129.6	**6,101.7**	2	101	106.2	180.8	**287.0**	9	1,505	1,078.3	5,310.4	**6,388.7**
Petroleum Products (Inc. Petrochemicals)	2	533	270.4	5,270.1	**5,540.5**	1	19	0.0	266.3	**266.3**	3	552	270.4	5,536.4	**5,806.8**
Non-Metallic Mineral Products	3	1,787	0.0	2,583.4	**2,583.4**	4	316	31.5	2,670.0	**2,701.5**	7	2,103	31.5	5,253.4	**5,284.9**
Scientific & Measuring Equipment	2	1,544	0.0	3,555.8	**3,555.8**	2	878	0.0	845.7	**845.7**	4	2,422	0.0	4,401.5	**4,401.5**
Rubber Products	2	3,920	2,186.9	0.0	**2,186.9**	5	2,686	664.9	410.6	**1,075.5**	7	6,606	2,851.8	410.6	**3,262.4**
Food Manufacturing	3	1,098	294.5	149.0	**443.5**	6	614	645.2	1,067.4	**1,712.7**	9	1,712	939.8	1,216.4	**2,156.2**
Basic Metal Products	2	608	0.0	492.5	**492.5**	3	324	384.7	181.9	**566.7**	5	932	384.7	674.4	**1,059.2**
Fabricated Metal Products	1	300	0.0	143.5	**143.5**	1	384	0.0	410.5	**410.5**	2	684	0.0	554.0	**554.0**
Plastic Products	2	500	0.0	355.8	**355.8**	-	-	-	-	-	2	500	0.0	355.8	**355.8**
Paper, Printing & Publishing	-	-	-	-	-	2	287	0.0	332.5	**332.5**	2	287	0.0	332.5	**332.5**
Textiles & Textile Products	-	-	-	-	-	1	325	245.5	0.0	**245.5**	1	325	245.5	0.0	**245.5**
TOTAL	**37**	**18,339**	**4,299.7**	**23,084.4**	**27,384.1**	**62**	**26,540**	**5,464.8**	**38,845.4**	**44,310.1**	**99**	**44,879**	**9,764.5**	**61,929.8**	**71,694.3**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Reporting of data is guided by the Malaysia Standard Industrial Classification 2008 (MSIC 2008)

Appendix 5: Approved New and Expansion/Diversification Manufacturing Projects by Industry, 2022 and 2021

INDUSTRY**	2022						2021					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*
Electrical & Electronics	45	5,036.8	61	24,214.9	106	**29,251.7**	26	126,978.8	68	20,998.2	94	**147,977.0**
Machinery & Equipment	28	2,137.8	44	6,212.4	72	**8,350.2**	27	912.0	21	755.6	48	**1,667.6**
Transport Equipment	20	795.2	29	7,253.9	49	**8,049.1**	21	678.8	23	1,504.5	44	**2,183.3**
Chemicals & Chemical Products	39	6,698.6	32	653.7	71	**7,352.3**	53	2,796.9	36	2,963.0	89	**5,759.9**
Petroleum Products (Inc. Petrochemicals)	6	5,649.0	3	279.8	9	**5,928.9**	4	221.1	1	4.0	5	**225.1**
Non-Metallic Mineral Products	20	3,043.9	9	2,778.9	29	**5,822.8**	11	220.1	6	202.9	17	**422.9**
Scientific & Measuring Equipment	9	3,706.3	16	1,038.3	25	**4,744.6**	6	2,015.5	7	101.3	13	**2,116.8**
Rubber Products	7	2,289.5	15	1,312.4	22	**3,601.9**	22	2,765.0	18	2,991.9	40	**5,756.9**
Food Manufacturing	65	1,509.6	28	2,013.0	93	**3,522.5**	61	4,818.9	16	570.0	77	**5,389.0**
Basic Metal Products	14	867.3	17	1,116.7	31	**1,984.1**	15	9,145.6	7	10,292.4	22	**19,438.0**
Fabricated Metal Products	46	874.5	33	780.2	79	**1,654.7**	52	1,283.4	38	438.2	90	**1,721.6**
Plastic Products	42	1,054.1	40	367.9	82	**1,422.0**	24	441.9	21	335.2	45	**777.1**
Paper, Printing & Publishing	29	659.1	13	433.4	42	**1,092.5**	21	373.5	13	175.9	34	**549.4**
Textiles & Textile Products	9	164.6	10	432.3	19	**596.9**	4	39.1	11	256.6	15	**295.7**
Furniture & Fixtures	16	215.1	18	286.6	34	**501.7**	14	183.9	16	60.7	30	**244.6**
Wood & Wood Products	11	167.2	11	62.6	22	**229.8**	18	347.5	2	11.0	20	**358.5**
Beverages & Tobacco	6	110.9	2	2.0	8	**112.9**	1	13.8	5	15.0	6	**28.7**
Leather & Leather Products	1	3.8	-	-	1	**3.8**	1	31.8	-	-	1	**31.8**
Miscellaneous	3	36.5	4	15.1	7	**51.6**	5	114.3	7	29.8	12	**144.1**
TOTAL	**416**	**35,019.7**	**385**	**49,254.4**	**801**	**84,274.1**	**386**	**153,381.7**	**316**	**41,706.2**	**702**	**195,087.9**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Reporting of data is guided by the Malaysia Standard Industrial Classification 2008 (MSIC 2008)

Appendix 6: Approved Manufacturing Projects with Malaysian Majority Ownership by Industry, 2022 and 2021

INDUSTRY**	2022						2021					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*
Rubber Products	7	2,289.5	13	901.2	20	**3,190.7**	20	2,737.3	12	2475.3	32	**5,212.6**
Machinery & Equipment	18	283.2	26	2,806.6	44	**3,089.8**	15	225.5	15	363.1	30	**588.6**
Transport Equipment	19	768.7	22	959.4	41	**1,728.1**	17	574.7	18	419.5	35	**994.2**
Chemicals & Chemical Products	29	1,440.0	16	199.6	45	**1,639.6**	41	741.2	20	1,131.4	61	**1,872.6**
Food Manufacturing	57	1,260.4	17	347.7	74	**1,608.1**	55	1,306.6	13	288.4	68	**1,595.0**
Electrical & Electronics	18	575.6	21	801.9	39	**1,377.5**	17	332.3	38	1,396.3	55	**1,728.6**
Basic Metal Products	6	247.4	14	769.6	20	**1,017.0**	10	242.7	2	3.4	12	**246.1**
Fabricated Metal Products	38	580.2	27	326.4	65	**906.5**	43	860.7	28	284.2	71	**1,144.9**
Plastic Products	36	553.3	32	226.7	68	**780.0**	21	330.3	13	141.9	34	**472.3**
Textiles & Textile Products	6	123.6	10	432.3	16	**555.9**	4	39.1	5	24.8	9	**63.9**
Petroleum Products (Inc. Petrochemicals)	4	527.8	2	13.5	6	**541.3**	3	171.1	1	4.0	4	**175.1**
Non-Metallic Mineral Products	16	450.4	4	31.1	20	**481.5**	10	182.7	5	179.6	15	**362.2**
Paper, Printing & Publishing	22	433.1	8	46.7	30	**479.8**	19	288.0	11	94.2	30	**382.2**
Furniture & Fixtures	12	172.6	12	156.8	24	**329.4**	12	147.2	14	56.2	26	**203.5**
Scientific & Measuring Equipment	4	55.5	10	132.4	14	**187.9**	4	56.2	2	29.9	6	**86.1**
Wood & Wood Products	9	103.8	10	53.1	19	**157.0**	14	163.2	2	11.0	16	**174.2**
Beverages & Tobacco	6	110.9	1	2.0	7	**112.9**	1	13.8	4	14.8	5	**28.6**
Leather & Leather Products	1	3.8	-	-	1	**3.8**	1	31.8	-	-	1	**31.8**
Miscellaneous	1	23.2	3	14.8	4	**38.0**	4	58.1	5	29.2	9	**87.3**
TOTAL	**309**	**10,003.0**	**248**	**8,221.7**	**557**	**18,224.7**	**311**	**8,502.2**	**208**	**6,947.6**	**519**	**15,449.7**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Reporting of data is guided by the Malaysia Standard Industrial Classification 2008 (MSIC 2008)

Appendix 7: Approved Projects in the Engineering Supporting Industry by Sub-Sectors, 2022

SUB-SECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Machining	14	1,190	142.3	249.1	**391.3**	12	814	157.0	419.6	**576.6**	26	2,004	299.2	668.7	**968.0**
Moulds, Tools & Dies	5	310	98.1	0.0	**98.1**	5	28	11.6	0.0	**11.6**	10	338	109.7	0.0	**109.7**
Stamping	5	197	37.2	10.2	**47.4**	2	93	50.0	2.2	**52.2**	7	290	87.2	12.5	**99.6**
Casting	3	215	53.2	0.0	**53.2**	2	57	12.6	21.6	**34.2**	5	272	65.8	21.6	**87.4**
Surface Engineering	6	258	63.9	17.6	**81.5**	-	-	-	-	-	6	258	63.9	17.6	**81.5**
TOTAL	**33**	**2,170**	**394.6**	**276.9**	**671.6**	**21**	**992**	**231.2**	**443.4**	**674.7**	**54**	**3,162**	**625.9**	**720.4**	**1,346.2**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 8: Approved Projects in the Machinery & Equipment Industry by Sub-Sectors, 2022

SUB-SECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Machinery Specialized For Specific Industries	6	296	130.1	23.1	**153.2**	16	2,226	2,584.4	2,750.8	**5,335.3**	22	2,522	2,714.6	2,773.9	**5,488.5**
Machinery/Equipment Modules or Industrial Parts/Components	6	989	50.2	1,510.7	**1,561.0**	10	197	27.7	455.6	**483.3**	16	1,186	77.9	1,966.4	**2,044.3**
General Industrial Machinery, Equipment & Parts	15	618	101.7	256.9	**358.5**	16	438	128.1	209.2	**337.3**	31	1,056	229.7	466.1	**695.8**
Power Generating Machinery & Equipment	1	10	0.0	65.0	**65.0**	-	-	-	-	-	1	10	0.0	65.0	**65.0**
Maintenance, Upgrading or Reconditioning of M&E	-	-	-	-	-	2	80	53.7	2.9	**56.6**	2	80	53.7	2.9	**56.6**
TOTAL	28	1,913	282.0	1,855.7	2,137.8	**44**	**2,941**	**2,793.8**	**3,418.6**	**6,212.4**	72	4,854	3,075.9	5,274.3	8,350.2

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 9: Approved Projects in Electrical & Electronics Industry by Sub-Sectors, 2022

SUB-SECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO.	EMPLOY-MENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Electronics Components	11	1,422	33.4	1,613.1	**1,646.4**	29	16,076	212.9	21,841.6	**22,054.5**	40	17,498	246.3	23,454.6	**23,700.9**
Electrical Components	12	2,929	210.2	1,565.3	**1,775.5**	9	561	105.4	98.1	**203.5**	21	3,490	315.6	1,663.4	**1,979.0**
Industrial Electronics	8	1,283	100.1	538.4	**638.6**	10	1,291	455.2	669.8	**1,125.1**	18	2,574	555.3	1,208.3	**1,763.6**
Industrial Electrical	9	542	147.6	115.7	**263.3**	6	144	35.4	512.8	**548.2**	15	686	183.0	628.5	**811.5**
Electrical Appliances	5	1,645	91.6	621.3	**713.0**	3	45	6.8	22.9	**29.7**	8	1,690	98.4	644.2	**742.7**
Consumer Electronics	-	-	-	-	**-**	4	1,134	0.0	254.0	**254.0**	4	1,134	0.0	254.0	**254.0**
TOTAL	**45**	**7,821**	**582.9**	**4,453.9**	**5,036.8**	**61**	**19,251**	**815.7**	**23,399.2**	**24,214.9**	**106**	**27,072**	**1,398.6**	**27,853.1**	**29,251.7**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 10: Approved Manufacturing Projects with Foreign Participation by Source, 2022 and 2021

COUNTRY ***	2022			2021		
	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*
Singapore	83	9,849	9,609.9	73	10,903	46,567.0
The People's Republic of China	46	6,193	9,554.9	43	13,898	16,604.2
Japan	35	4,659	9,184.7	25	3,318	7,536.5
The Netherlands	11	3,458	8,784.2	14	4,092	74,909.3
Germany	13	2,156	8,775.2	13	554	820.8
Korea,Rep.	3	1,344	6,275.4	7	1,210	7,334.1
Hong Kong SAR, China	20	7,959	4,848.3	8	774	194.3
USA	24	10,844	4,300.4	21	1,690	1,146.1
Switzerland	13	735	1,285.7	4	146	225.0
United Kingdom	11	1,021	659.7	13	1,297	142.2
Ireland	1	650	650.0	1	54	6.4
Taipei	20	2,201	572.3	15	1,571	648.5
Belgium	2	239	330.6	-	-	-
Sweden	1	109	163.0	-	-	-
Australia	6	489	146.4	9	317	117.6
Denmark	2	123	136.7	2	37	150.1
Afghanistan	1	75	112.6	-	-	-
Cayman Islands	1	40	87.5	-	-	-
Austria	2	132	68.5	3	7,086	18,920.4
Poland	1	19	64.7	-	-	-
Mauritius	1	13	64.0	-	-	-
India	4	158	60.5	6	208	52.1
United Arab Emirates	4	271	52.2	-	-	-
Türkiye	2	188	51.3	-	-	-
France	3	212	48.3	1	11	2.2
Thailand	2	63	46.0	2	63	11.4
Samoa	2	72	39.8	-	-	-
Luxembourg	1	109	12.9	1	500	250.0
Jordan	1	144	7.7	-	-	-
Syria	1	26	6.3	-	-	-
Liechtenstein	1	5	0.7	-	-	-
Yemen	1	0	0.0	-	-	-
British Virgin Islands	-	-	-	3	267	3,322.2
Macau SAR, China	-	-	-	1	26	7.3
Finland	-	-	-	1	0	21.3
New Zealand	-	-	-	1	81	11.6
Pakistan	-	-	-	2	22	2.7
Indonesia	-	-	-	2	329	14.1
Brunei	-	-	-	2	63	0.0
Canada	-	-	-	3	184	65.5
Bermuda	-	-	-	2	28	4.9
Others	8	376	20.7	14	909	511.0
TOTAL	**	**	**66,021.3**	**	**	**179,598.6**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
** : Number is not totaled due to avoid double counting
*** : Reporting of foreign investment is based on imediate investing country

Appendix 11: Approved Manufacturing Projects by State, 2022 and 2021

STATE	2022						2021					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*	NO.	TOTAL INVESTMENT (RM MILLION)*
Johor	90	11,333.0	76	3,249.5	166	14,582.5	59	3,239.9	75	3,713.4	134	6,953.2
Pulau Pinang	67	3,411.4	68	10,299.5	135	13,710.9	57	73,356.6	54	2,867.1	111	76,223.7
Selangor	138	4,485.7	127	7,722.1	265	12,207.7	152	2,992.2	95	4,518.8	247	7,511.0
Kedah	24	2,152.0	18	9,831.2	42	11,983.2	26	57,130.6	22	9,088.7	48	66,219.3
Sabah	17	8,342.6	6	38.6	23	8,381.2	11	4,848.0	3	13.4	14	4,861.4
Negeri Sembilan	16	610.2	17	6,521.8	33	7,132.0	15	605.0	15	2,296.1	30	2,901.2
Melaka	12	548.4	21	6,544.1	33	7,092.5	10	511.3	8	3,410.7	18	3,922.0
Perak	23	1,097.6	30	2,818.3	53	3,915.9	25	4,968.4	18	1,112.9	43	6,081.3
Pahang	6	2,513.9	7	23.5	13	2,537.3	7	2,020.5	7	8,469.9	14	10,490.4
Sarawak	4	36.6	4	1,249.1	8	1,285.7	2	49.4	4	5,618.5	6	5,667.9
Kelantan	4	54.5	3	938.0	7	992.5	3	90.7	-	-	3	90.7
Terengganu	8	298.0	3	12.0	11	310.0	7	3,365.0	5	466.4	12	3,831.4
W.P. Kuala Lumpur	6	132.7	5	6.7	11	139.4	10	166.5	7	111.8	17	278.4
W.P. Labuan	1	3.3	-	-	1	3.3	1	25.1	3	18.5	4	43.6
Perlis	-	-	-	-	-	-	1	12.3	-	-	1	12.3
TOTAL	**416**	**35,019.7**	**385**	**49,254.4**	**801**	**84,274.1**	**386**	**153,381.7**	**316**	**41,706.2**	**702**	**195,087.9**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 12: Approved Investments in Various Services Sectors, 2022 and 2021

SERVICES SECTOR	NUMBER		POTENTIAL EMPLOYMENT		TOTAL INVESTMENT (RM MILLION)*	
	2022	2021	2022	2021	2022	2021
Information and Communications	330	450	13,712	2,026	84,707.0	11,037.6
Real Estate	754	1,044	NA	NA	28,888.3	28,811.7
Financial Services	49	53	124	969	11,196.1	12,029.7
Utilities	20	27	NA	NA	10,776.2	9,611.5
Distributive Trade	1,242	908	35,948	14,392	6,232.4	3,598.9
Support Services	788	954	4,875	3,555	4,190.2	5,964.1
Health Services	6	5	4,098	869	2,138.9	741.0
Hotel and Tourism	16	29	1,917	2,949	2,066.1	3,449.2
Global Establishments	102	102	1,223	3,838	1,971.3	19,658.5
Transport Services	29	25	321	189	1,042.3	1,595.3
Education Services	236	202	1,246	934	618.0	410.5
Other Services	9	8	0	198	139.3	76.2
TOTAL	**3,581**	**3,807**	**63,464**	**29,919**	**153,966.0**	**96,984.3**

Note : NA - Data is not available
*Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 13: Approved Investments in Primary Sector, 2022 and 2021

PRIMARY SECTOR	NUMBER		POTENTIAL EMPLOYMENT		TOTAL INVESTMENT (RM MILLION)*	
	2022	2021	2022	2021	2022	2021
Mining	26	19	153	37	23,992.5	17,096.3
Plantation & Commodities	36	34	381	388	2,238.2	211.4
Agriculture	10	6	279	103	154.4	20.5
TOTAL	**72**	**59**	**813**	**528**	**26,385.1**	**17,328.3**

Note : * Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided

Appendix 14: Table of Approved Investments in Various Economic Sectors by State, 2022 and 2021

STATE	2022					2021				
	NO. OF PROJECTS	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*	NO. OF PROJECTS	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL INVESTMENT (RM MILLION)*
Johor	570	16,762	11,819.7	58,786.0	**70,605.7**	586	12,186	8,273.5	4,001.9	**12,275.4**
Selangor	1,375	41,669	27,021.7	33,030.2	**60,051.9**	1,319	27,409	25,735.4	3,284.6	**29,020.0**
Sarawak	166	1,564	15,759.9	12,398.2	**28,158.1**	139	3,422	16,275.9	9,409.2	**25,685.1**
W.P. Kuala Lumpur	641	29,611	15,408.3	9,635.7	**25,044.0**	498	8,888	19,627.1	18,041.9	**37,669.0**
Pulau Pinang	303	17,672	6,172.3	10,157.1	**16,329.4**	307	14,195	5,699.0	77,820.7	**83,519.7**
Kedah	195	6,072	1,983.7	11,147.0	**13,130.7**	208	13,023	2,210.6	66,094.5	**68,305.1**
Sabah	89	4,566	2,319.1	9,171.7	**11,490.8**	54	1,956	1,646.7	4,399.0	**6,045.7**
Negeri Sembilan	166	3,597	2,298.1	6,583.1	**8,881.3**	171	3,715	3,350.7	2,408.3	**5,758.9**
Melaka	160	4,705	2,037.9	6,536.8	**8,574.8**	169	3,948	2,119.3	3,701.8	**5,821.1**
Perak	294	7,682	4,322.5	2,283.0	**6,605.5**	314	6,511	4,281.9	4,311.0	**8,592.9**
Pahang	141	4,622	5,179.4	31.3	**5,210.7**	202	4,846	2,206.4	10,486.4	**12,692.9**
Kelantan	72	932	1,838.4	918.9	**2,757.3**	43	294	384.4	1.2	**385.6**
Terengganu	52	474	521.6	28.1	**549.7**	61	3,814	301.9	3,759.3	**4,061.3**
W.P. Putrajaya	17	244	522.0	1.1	**523.1**	15	152	248.7	2.8	**251.5**
W.P. Labuan	24	127	83.7	139.1	**222.8**	29	452	150.6	515.2	**665.8**
Perlis	11	65	67.7	0.2	**67.9**	20	73	281.1	0.9	**282.0**
Undecided**	178	6	3,933.8	2,487.8	**6,421.7**	433	138	8,023.8	344.6	**8,368.5**
TOTAL	**4,454**	**140,370**	**101,289.9**	**163,335.4**	**264,625.3**	**4,568**	**105,022**	**100,817.0**	**208,583.5**	**309,400.4**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Proposed state details not available

Appendix 15: Table of Approved Investments in Various Economic Sectors with Foreign Participation by Source, 2022 and 2021

COUNTRY ***	2022			2021		
	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*
The People's Republic of China	91	11,545	55,431.9	75	14,960	31,341.5
USA	51	12,717	29,160.0	42	2,216	4,876.0
The Netherlands	44	4,775	20,368.1	40	4,618	78,020.3
Singapore	250	24,905	13,466.8	411	15,838	47,307.2
Japan	174	17,218	11,396.3	180	5,664	9,939.1
Germany	41	2,599	9,560.3	38	1,185	1,534.5
Korea, Rep.	39	2,323	6,406.7	81	1,636	7,579.3
Hong Kong SAR, China	50	8,769	5,130.6	101	2,018	539.0
United Kingdom	36	3,071	1,462.1	17	1,302	194.5
Switzerland	26	1,102	1,378.2	27	521	307.3
Taipei	42	2,472	1,344.5	35	1,671	667.8
France	15	1,726	969.7	16	42	222.9
Ireland	2	780	711.9	4	72	9.5
British Virgin Islands	10	703	570.7	17	418	3,326.1
Thailand	13	364	386.8	20	748	424.7
Australia	16	917	367.3	24	536	556.7
Belgium	3	240	331.6	3	18	4.5
India	22	959	245.9	18	448	206.2
Sweden	5	1,553	194.0	37	1,081	17.9
United Arab Emirates	9	355	179.2	2	9	1.6
Türkiye	6	407	163.7	3	4	12.6
Denmark	7	316	149.1	7	184	172.9
Indonesia	15	147	115.9	9	348	19.1
Afghanistan	1	75	112.6	1	4	1.0
Cayman Islands	3	116	88.5	1	2	4.3
Austria	7	551	81.8	4	7,138	18,933.8
Bangladesh	8	415	67.6	6	48	5.4
Poland	1	19	64.7	-	-	-
Mauritius	1	13	64.0	1	1	1.1
New Zealand	2	71	63.0	1	81	11.6
Yemen	8	32	52.3	3	5	4.0
Vietnam	2	3	45.4	2	7	2.2
Italy	8	160	43.7	3	19	7.7
Finland	1	85	43.4	1	0	21.3
Sri Lanka	3	59	40.2	1	8	1.0
Samoa	2	72	39.8	-	-	-
Kuwait	1	0	31.1	1	0	88.7
Luxembourg	1	109	12.9	7	658	513.5
Norway	1	8	9.0	2	50	4.4
Liberia	1	134	8.5	-	-	-
Jordan	1	144	7.7	-	-	-
Spain	4	21	7.6	4	8	176.1
Syria	2	30	7.3	1	12	6.0
Marshall Islands	1	351	7.1	-	-	-
Canada	2	31	6.3	4	186	65.9
Philippines	1	1	5.0	1	1	5.0
Pakistan	3	13	3.0	4	28	4.7
Lebanon	2	7	2.0	-	-	-

Continue on the next page

COUNTRY***	2021			2020		
	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*	NO.	EMPLOYMENT	FOREIGN INVESTMENT (RM MILLION)*
Egypt	1	2	1.2	11	7	1.0
Maldives	1	7	1.0	-	-	-
Iran	1	4	1.0	-	-	-
Portugal	1	5	1.0	1	1	1.0
Bermuda	1	2	0.8	3	28	13.8
Liechtenstein	2	5	0.8	-	-	-
Russia Federation	1	2	0.4	-	-	-
Brunei	-	-	-	4	70	162.3
Cyprus	-	-	-	1	71	10.0
St. Kitt and Nevis	-	-	-	1	71	9.5
Macau SAR, China	-	-	-	1	26	7.3
Czech Republic	-	-	-	1	3	1.1
United States Virgin Islands	-	-	-	1	5	1.0
Sudan	-	-	-	1	2	0.6
Albania	-	-	-	1	48	0.5
Mexico	-	-	-	1	0	0.4
Seychelles	-	-	-	1	0	0.1
Others	263	1,464	2,923.2	72	2,952	1,236.1
Total	**	**	**163,335.4**	**	**	**208,583.5**

Note *: Due to rounding, numbers presented throughout this document may not add up precisely to the totals provided
**: Number is not totaled due to avoid double counting
***: Reporting of foreign investment is based on immediate investing country

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