FORGING FORWARD

MALAYSIA INVESTMENT PERFORMANCE REPORT 2017

MIDA
MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY
Malaysia : Your Profit Centre in Asia™

MIDA

MALAYSIAN INVESTMENT DEVELOPMENT AUTHORITY

Malaysia : Your Profit Centre in Asia™

CONTENTS

3 Collaboration Towards Attracting Quality Investments

4 Going Forward

1

Year in Review: 2017

> "The projection for GDP growth and global investment is that 2017's rousing performance could leave the doors to continued growth open, provided policy uncertainty recedes and financing conditions remain favourable, thereby boosting confidence."

- World Bank's Global Economic Prospects, January 2018

1.1

A Word from MIDA

MIDA remains prudent alongside the Government, in staying ahead of the curve in the face of changing times. Crafting a future-focussed business landscape means rising to the challenge of productivity and competitiveness to set the stage that will herald Malaysia into a new era of innovation and growth

The boom that was

The world economy was at its healthiest in 2017, a year in which global GDP escalated from 2.4 per cent in 2016 to 3.0 per cent. Global investment growth contributed to three-quarters of this widespread recovery, across both advanced economies and emerging markets and developing economies (EMDEs).

What was initially forecasted to be a challenging year for trade turned out to be a year of trade boom, as the volume of trade goods and services shot to the highest in six years, up to an estimated 4.2 per cent from 2.4 per cent in 2016, according to the International Monetary Fund (IMF). This marks the first time trade outpaced growth since 2014, sending it back to its former pre-crisis days when such an outpacing was nothing out of the ordinary.

Being trade dependent, some major EMDEs (particularly Europe and Central Asia, East Asia and Pacific) benefitted from 2017's stronger-than-expected pace of global investment and export growth.

A moderate 2018

Seeing as most headlines heralded 2017 as a year of high base whence the rise in global economy fuelled trade growth and sent commodity prices, trade activities, external demand and exports of goods and services upwards, 2018 is off to a good start.

However, a broad slowdown affecting economies that contribute to more than 65 per cent of the world's GDP is looming on the horizon due to years of slowing productivity growth, weaker investments, and an ageing labour force.

Global economic growth is predicted to blip marginally upwards to 3.1 per cent, mainly led by the EMDEs. The bustle of commodity exporters and its recovery is expected to galvanise growth in the EMDEs to 4.5 per cent in 2018. Meanwhile, a slight moderation to 2.2 per cent is projected for advanced economies.

In the East Asia and Pacific region, growth is forecasted to decline to 6.2 per cent in 2018, from an estimated 6.8 per cent in 2017. Owing to China's structural slowdown, it is anticipated that growth will moderate to 6.4 per cent from 6.8 per cent in 2017, thereby potentially offsetting a modest cyclical pickup in the region. Since China is one of the key drivers of global growth and demand, its slowdown will have an impact on exporters of commodities to China.

In the South Asia region, growth is expected to increase by 0.4 per cent, from 6.5 per cent in 2017 to 6.9 per cent in 2018. Policy reforms and infrastructure upgrades, strong consumption and recovering exports are among contributing factors. Growth in India is expected to climb to 7.3 per cent in fiscal year 2018/2019 from 6.7 per cent in 2017/2018. Following an estimated growth of 3.7 per cent in 2017 in Europe and Central Asia, the region's growth is projected to dip to 2.9 per cent in 2018 largely driven by the counterbalancing of a gradual slowdown in the west due to subdued economic activities in the Euro area and the mending in the east contributed by commodities exporting economies.

To round things off, going forward, the projection for GDP growth and global investment is that 2017's rousing performance could leave the doors to continued growth open, provided policy uncertainty recedes and financing conditions remain favourable, thereby boosting confidence.

Though balanced, risks are skewed downside due to major risks the likes of rising trade protectionism and geopolitical tensions, disorderly financial market movements, and unpredictable policy changes. Meanwhile, trade growth is anticipated to be negatively coloured by the inward looking policies of major economies, the slowdown in China, and a possible mild recession in the near future of the US economy.

However, two trade liberalisation and economic partnerships could potentially lend some light at the end of the tunnel for trade growth: namely, the resurrection of the Trans-Pacific Partnership (TPP) free trade agreement (former partners sans the USA will ink a new deal known as the Comprehensive and Progressive Agreement for Trans Pacific Partnership - CPTPP in 2018), and the economic partnership agreement between the EU and Japan in December 2017.

Let the rankings speak

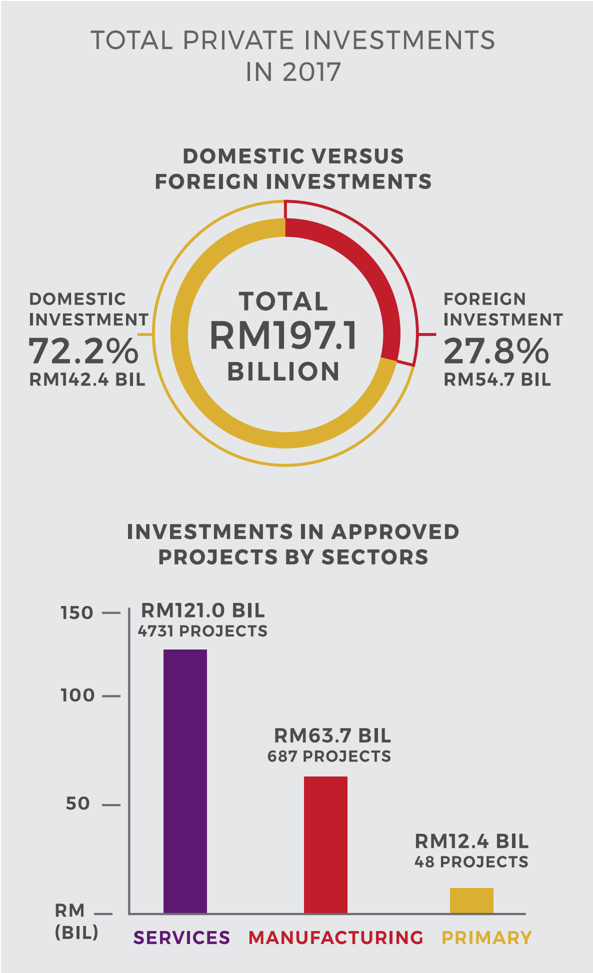
Malaysia's business-friendly climate, well-diversified economy, stable economic and political environment, sound infrastructure, solid economic fundamentals, and its strategic location within the vicinity of the large ASEAN and Asia Pacific markets are just some of the reasons the nation continues to maintain its draw as an attractive investment destination.

The nation's improved macro and micro economic fundamentals were stamped by some global rankings in 2017. In the World Economic Forum's (WEF) annual Global Competitiveness Report 2017/2018, Malaysia ranked 23rd out of 137 countries, an improvement of two notches from last year. Rankings rose in financial market development (16th place), infrastructure (up two places to 22nd), and most in the health and primary education pillar (up by 14 positions to 30th). Malaysia surfaced as the most competitive among emerging economies in the East Asia and Pacific region and was also placed among the 20 economies transitioning from efficiency-driven to innovation-driven.

The country also received positive affirmation on its efforts for developing human capital as it climbed nine spots to 33rd place (out of the 130 countries rated) in the WEF's list of top nations for developing human capital in 2017. Malaysia came in second place after Singapore among the ten Southeast Asian countries that were rated.

“Malaysia's business-friendly climate, well-diversified economy, stable economic and political environment, sound infrastructure, solid economic fundamentals, and its strategic location within the vicinity of the large ASEAN and Asia Pacific markets are just some of the reasons the nation continues to maintain its draw as an attractive investment destination.”

A 2017 survey by US News and World Report, Y&R's BAV Consulting and the Wharton School of University of Pennsylvania named Malaysia the best country to invest in. The scores were primarily based on a compilation of eight equally weighted country attributes: namely, corruption, dynamism, economic stability, entrepreneurialism, favourable tax environment, innovation, skilled labour force and technological expertise. The Malaysian economy emerged as the second-most competitive economy among ASEAN countries, according to the World Competitiveness Yearbook (WCY) 2017, by the Institute for Management Development (IMD). Malaysia was recognised as the most attractive emerging market in Asia and 5th most attractive in the world for 2018 by Bloomberg's Emerging Market Scorecard.



MIDA at the helm of a future-focussed business landscape

Being the country's principal investment promotion agency charged with the responsibility of overseeing overall investment into Malaysia, MIDA targets quality investments that will propel the nation towards its goal of becoming a developed nation by 2020 by leveraging on mega trends, which include Industry 4.0 and the digital economy. Embracing these strategies are in line with our efforts to graduate from being a low-cost production hub to an innovation-driven economy.

MIDA continues to spearhead the national investment agenda through its strategic ecosystem approach. This approach is an effective tool to enhance the attractiveness of Malaysia as an investment destination.

As such, MIDA re-engineers itself by staying proactive and adaptive to the needs of its stakeholders in anticipation of creating long-term inclusivity and sustainable prosperity for the rakyat. The challenge is for MIDA to continuously improve its services and intensify engagement efforts. As Malaysia moves up the value chain, the country is in hot pursuit of innovation-based, knowledge-intensive projects within high-growth, high-value industries. This initiative will draw more quality investments with spill-over effects for the prosperity of Malaysians, thereby creating a sustainable, future-focused business landscape. Ultimately, MIDA seeks to continuously translate these efforts into more opportunities for local businesses and high-skilled quality jobs for Malaysians.

For the year 2017, Malaysia managed to attract investments in the manufacturing, services and primary sectors to the tune of RM197.1 billion in 2017, thanks in part to the strong industrial ecosystems built over time to accelerate and sustain the nation's economic growth. With a contribution of 72.2 per cent, domestic direct investments (DDI) accounted for the bulk of it at RM142.4 billion; foreign direct investments (FDI) brought RM54.7 billion, which made up for 27.8 per cent of the total.

Performance overview

Manufacturing is said to remain as the mainstay of the economy as it has the biggest multiplier effect on the nation's activities and growth, such as forward and backward linkages, the development of cluster industries, the transfer of new technologies and research and development (R&D), employment, and skills development to name a few. The current emphasis is for Malaysia to focus on smart manufacturing to drive innovation. The rapid changes in the business landscape call for all industry players to be continuously proactive to stay ahead of the curve.

The manufacturing sector's performance rose by 8.9 per cent and stood at RM63.7 billion, against investments of RM58.5 billion in 2016. The sector drew 687 projects and created 56,421 job opportunities. Domestic investments led the way as it accounted for 66.1 per cent (RM42.1 billion) of total investments approved, which was 35.6 per cent higher than the RM31.1 billion recorded in 2016. Majority of the investments (62.0%) were new projects while the remaining 38.0 per cent were from expansion/diversification projects. There were nine capital-intensive projects of at least RM1 billion or more – totalling RM34.7 billion altogether – which contributed 54.5 per cent to the total investments approved. These were from petroleum products (including petrochemicals), natural gas, electronics & electrical products, non-metallic mineral products, transport equipment and scientific and measuring equipment.

Foreign investments in manufacturing amounted to RM21.5 billion and accounted for 33.8 per cent of approved investments. Out of the 339 approved projects, investors were mostly active in expansion / diversification projects, which stood at RM13.8 billion and made up 64.3 per cent of the total. The remaining 35.7 per cent (approved investments worth RM7.7 billion) were from new projects.

Carrying on its lead, the services sector was once again the highest contributor to the total investments approved in 2017. The sector raked in 4,731 approved projects with investments totalling RM121.0 billion. DDI accounted for RM92.2 billion and FDI stood at RM28.8 billion.

The primary sector outdid itself as approved investments rose by 50.9 per cent to RM12.4 billion from 48 projects. The domestic base took two-thirds of the share at RM8.1 billion, while the foreign landed at RM4.3 billion. Contributing 32 projects, the mining sub-sector came out tops with approved investments worth RM11.7 billion. Plantation and commodities followed with investments of RM672.0 million, while the agriculture sub-sector accounted for the rest.

Total Realised Private Investments (GFCF)

In 2017, realised private investments measured in terms of Gross Fixed Capital Formation (GFCF) stood at RM234.8 billion in current prices which was a rise of 11.1 per cent versus the RM211.3 billion recorded for the same period in 2016.

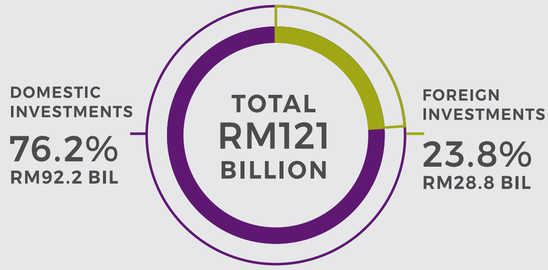
Under the 11MP, Malaysia targeted 9.4 per cent of average growth of real private investment and an annual average private investment of RM291 billion in current prices. Based on the 11.1 per cent growth of private investments recorded in 2017, Malaysia is on track to achieve 11MP's target by the year 2020.

The Eleventh Malaysian Plan (11 MP)

The 11MP was set in 2016 as a five-year plan to charter Malaysia's economic course through to 2020. Its end goal is for the country to attain high-income economy status with a gross national income (GNI) per capita of US$15,000 (RM54,100) by 2020. Based on the World

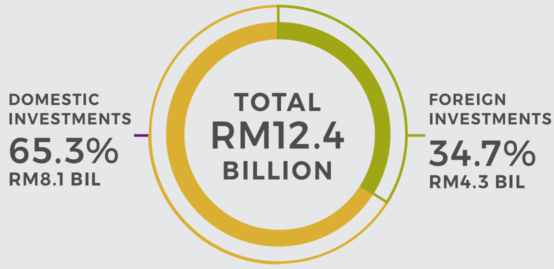
DOMESTIC VERSUS FOREIGN INVESTMENTS BY SECTORS

SERVICES SECTOR



MANUFACTURING SECTOR

PRIMARY SECTOR



Due to rounding, numbers presented throughout this document may not add up precisely to the total provided and percentages may not precisely reflect the absolute figures.

Bank's Malaysian Economic Monitor report that was launched on 14 December 2017, Malaysia's GNI per capita is projected to pass the threshold for high-income at some point between 2020 and 2025. According to their definition, high-income economies have a GNI per capita of US$12,236 or more. In 2017, Malaysia's GNI per capita stood at US$9,660, which is US$2,576 short of attaining the defined threshold level.

Malaysia's stance in diversifying its economy and not relying solely on commodity – to whit, not putting all its eggs in one basket – was a key point of the Eleventh Malaysia Plan (11MP). To that end, the Plan outlined three catalytic sub-sectors of E&E, Machinery and Equipment, and Chemicals, as well as the two additional growth sub-sectors of Aerospace and Medical Devices.

These "3+2" catalytic and growth sub-sectors were also earmarked as having potential to expand local manufacturers' export activities. MIDA is also focussing on promoting more niche and complex products for the manufacturing sector, and upping investment into the areas of Principal Hubs, logistics, the ecosystem surrounding e-commerce, green technology, renewable energy, and waste management.

Changing times

Businesses in Malaysia are not alone when it comes to dealing with technological disruption and the intense competition arising from it. Industries everywhere are at risk of obsolescence should they fail to heed these times of change that demand for businesses to dig in their heels and turn challenges into opportunities in order to future-proof themselves for the road ahead.

The time is critical now for Malaysia as a nation to race towards its goal of attaining the prized high-income status. The increasingly intense competition from both developed and developing economies means every effort must be made to prepare local industry players in sustaining their competitiveness.

In light of the nation's aspiration to become a hub of global chains, industries must rise above the competition by embracing advanced technologies and new ways of doing business. To adapt to the change, there is a need to integrate products and services and upskill the workforce as the change necessitates.

Malaysia's continued competitiveness hinges upon the strengthening of the manufacturing and services sectors. Businesses that are able to grasp emerging technologies and incorporate them into their future strategy, development and innovation processes will stay at the leading edge and reap profitability, energy and productivity gains.

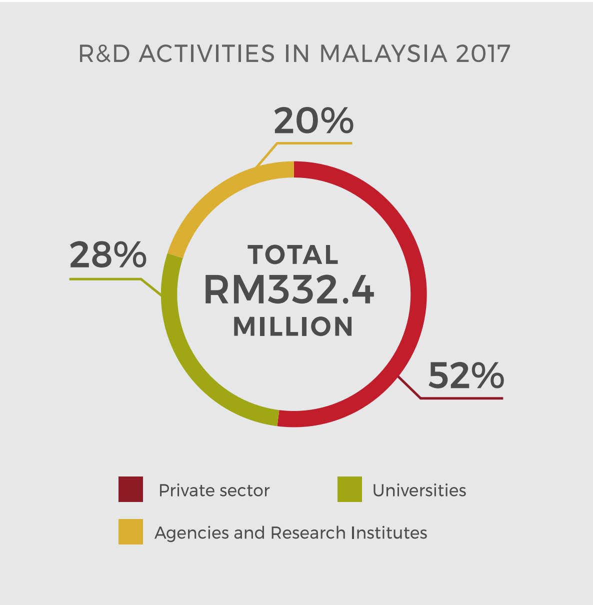
To stay competitive, some local players are already in the thick of initiatives such as R&D, engineering design, innovation, system integration, and the development of proprietary machinery and equipment for global exports.

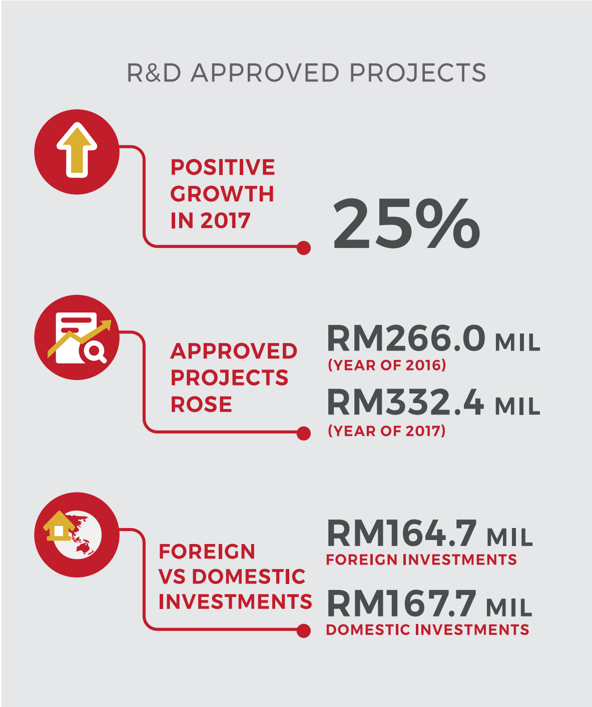
The R&D innovation link

Since the beginning of time, R&D has held the key to innovation. Through the innovative creation of new products and services, trail-blazing organisations and nations are set up for success as they lead and conquer new markets. With international competition closing in from all sides, it is paramount to invest in R&D to stay ahead of the curve. In fact, a study by the Pricewaterhouse Coopers (PwC) entitled, 2017 Global Innovation 1000 Study alludes to the fact that R&D activities for new products and services can potentially lead to a future of job, growth and wealth creation.

In 2017, the total spending on R&D worldwide is estimated to be US$2.06 trillion with the USA, PRC and Japan being the top economies accounting for 54.7 per cent of the total. On the domestic front, according to the Malaysian Science and Technology Information Centre (MASTIC), there has been a steady increase in the nation's gross R&D Expenditure (GERD) from the year 2000 onwards. As it stands, Malaysia's GERD has been on the rise since 1996, which then stood at a mere 0.22 per cent of GDP. The highest GERD recorded was in 2015, which was at 1.3 per cent and the nation aspires to achieve 2 per cent GERD by 2020.

Most of the R&D activities in Malaysia (52%) can be attributed to the private sector. Universities contributed 28 per cent and, agencies and research institutes made up the rest (20%), according to the latest survey by MASTIC. As far as approved investments in R&D go, the nation witnessed a positive growth of 25 per cent in 2017; a sign of rising investor confidence in Malaysia's capacity for innovation. R&D approved projects (January to December 2017) rose from RM266 million to RM332.4 million (RM164.7 million foreign investments and RM167.7 million sourced from domestic investors.)





Digital transformation

The dawn of the digital economy is a key driver for growth and development as it synchronously boosts competitiveness, sets up new opportunities for business and entrepreneurial activities, opens up new avenues for global markets and makes way for local players to step up and be a part of global e-value chains. It also provides new tools to tackle teething and development issues. The challenge, however, lies in dealing with a host of policy changes and complex internet-specific regulatory problems, and learning how to bridge the digital divide.

For developing countries, these challenges mask the seeds for opportunities of continued success as the digital economy brings with it positive implications for investment which in turn is crucial to digital development. This cycle leads to innovation, skills upgrading, job creation and, by default, rising productivity and efficiency quotients. Another positive outcome is that it can boost household incomes, thereby lifting living standards and nudging the nation closer to its aspirations of becoming a developed nation.

In Malaysia, embracing Industry 4.0 would pave the way for the nation to join the ranks of the high tech global supply chain. Reduced dependency on foreign labour, the aggregation of information through entire supply chains via smart manufacturing, robotics and automation, the adoption of high-tech production value chains and a skilled workforce are ways for the nation to stride towards becoming a leading industrial hub for high-tech products and activities in the ASEAN region.

As Malaysia aligns itself to Industry 4.0 by spring-boarding off its strong manufacturing base, hurdles are to be expected. In light of the challenges to transition to this stage, the Government is working hard to support local business circles through a gamut of initiatives. (Turn to page 30 to read more on Malaysia's Industry 4.0 initiatives)

Forging forward with local players

With so many efforts set up to increase the competitiveness of local SMEs, the expectation is for them to contribute 41 per cent to GDP by 2020. To do so, they are encouraged to collaborate with multinational corporations (MNCs) and leverage off their expertise to adopt and produce new technologies, processes and products via smart technologies.

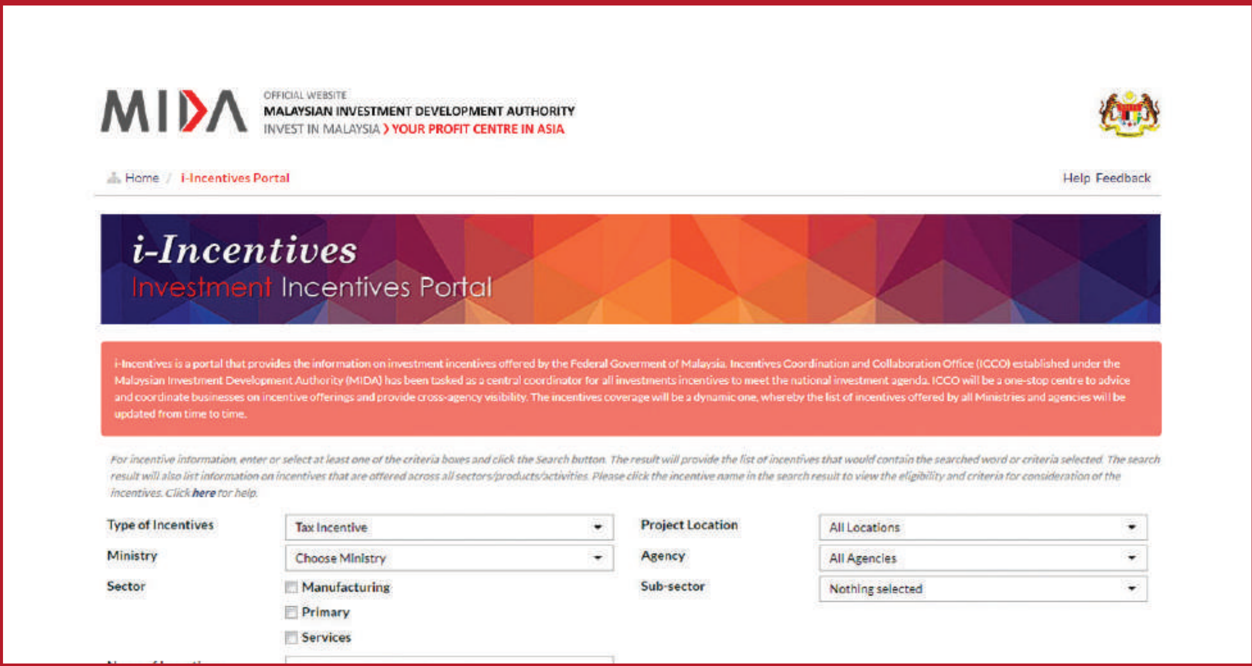
MIDA has opened up opportunities for SMEs to penetrate global markets and also encouraged MNCs to support the usage of local products and services. Through the various supply chain conferences held countrywide, more local players should be able to build up their capacities by integrating themselves into MNC supply chains. SMEs must, however, pull their own weight by raising their efficiency levels, strengthening inter-firm linkages, and responding in a timely manner to market changes in order to remain relevant and competitive.

With Malaysia's high internet penetration rate linking businesses to over 620 million consumers in the region, new growth sectors such as e-commerce can be expected to increase in prominence when it comes to developing the country's technology and logistics infrastructure. The aim is for the Digital Free Trade Zone (DFTZ) to propel Malaysia's digital roadmap and double e-commerce growth from 10.8 to 20.8 per cent by 2020 MIDA envisions for SMEs to adopt digital business models to double their growth so that 6,000 jobs may open up for Malaysians by 2025.

The National E-Commerce Strategic Roadmap has tasked MIDA as the lead agency to transform the country into an e-fulfilment hub. For this transformation to come to fruition, MIDA urges local logistic players to invest in ICT systems and smart logistics in order for them to be competitive by handling fully fledged e-fulfilment activities.

As MIDA toils on to craft targeted investment policies in tandem with the nation's goals and aspirations, the road ahead calls for all quarters in the country – whether industry, academia, Government, or private or public institutions – to forge forward to set the stage for this new era of growth and innovation together.

i-Incentives Portal: The gateway to investment incentives information



Malaysia's continued competitiveness is dependent on strengthening its economic sectors and accelerating the shift to innovation-led industry. A special focus is required to strengthen innovation and deliver new or enhanced products or processes into global markets towards enhancing economic growth and competitiveness.

Moving forward, innovation, technology and productivity will be the key in ensuring that Malaysia continues to develop its high technology industries, in-line with the proposed new national policy framework on Industry 4.0 which is currently being formulated by the Government.

For Malaysia to remain a competitive investment destination in the region and to attract new breed of quality investments, competitive incentive offerings will continue to be used as a strategic planning tool to achieve the national investment agenda.

These incentives, especially for high impact and strategic businesses, are aimed to encourage and support industries to move up the value chain. As the number of high-quality investments rise and new growth areas spring up, so too will the demand for highly skilled workers, thereby raising the nation's income levels.

Information pertinent to investment incentives must be managed well to provide greater visibility, and to ensure a more cohesive investment strategy. In light of this, the Government has come up with the establishment of Incentive Coordination and Collaboration Office (ICCO) in MIDA through the

Services Sector Blueprint which was announced by the Prime Minister in 2015. This office aims to improve the central coordination of all incentive offerings and to enhance the effectiveness of the Government's incentive mechanism by increasing transparency, eliminating duplication and linking investment incentives to performance.

> "Currently, 121 incentive offering packages can be found on the portal which is managed by 12 ministries and 28 agencies. It offers a comprehensive range of information on the incentives relating to all three sectors of the economy, namely the manufacturing, services and primary sectors."

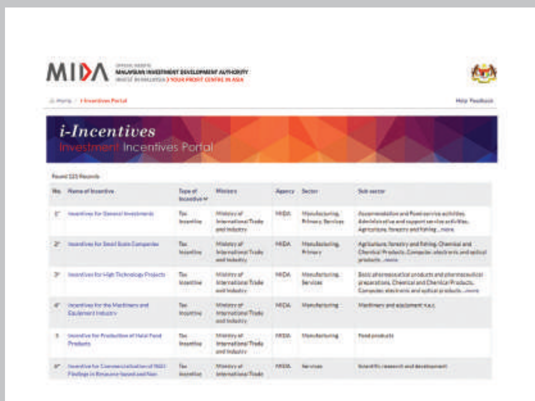
In 2016, the first phase of the ICCO's development was marked by the creation of the i-Incentives Portal, which can be accessed via www.incentives.mida.gov.my. Through the portal, investors can obtain information on all incentives offered by various Federal Government Ministries and Agencies. Initially, the portal contained information from the Ministry of International Trade and Industry (MITI), its related agencies and selected Investment Promotion Agencies (IPAs) alongside the East Coast Economic Region Development Council (ECER), Iskandar Regional Development Authority (IRDA) and Sabah Economic Development and Investment Authority (SEDIA).

Currently, 121 incentive offerings can be found on the portal which is managed by 12 ministries and 28 agencies. The portal features comprehensive information on the incentives concerning all three sectors of the economy, namely the manufacturing, services and primary sectors.

Other incentives offered by the Government, featured on the portal include tax exemptions, grants, soft loans and other types of incentives such as equity funding, regional establishment status, training and other facilitation programs.

Majority of the incentives cater to the services sector (55%) followed by manufacturing at 33 per cent and, the primary sector at 12 per cent.

Currently, ICCO is collaborating with participating ministries and agencies to compile a database of companies that were granted incentives. Moving forward, the implementation of a centralised approval database management system is expected to further enhance the central coordination and the management of incentives dished out by the Government.



Ultimately, ICCO serves to be a one-stop centre with the i-Incentives Portal as a platform to create a more effective and performance-driven incentive management system, thereby fortifying a cohesive incentive strategy in drawing quality investments into the country.

Malaysia's
Investment vis-à-vis
Global Investments
Scenario

1.2

Bouncing Back

The accelerated growth of the world's economy and its synchronised upturn in 2017 points to a bounce back of global foreign direct investments in 2018. Despite an estimated 16 per cent decline in global FDI in 2017, moving forward, a hopeful rise looms for the coming year

Key takeaways

The stronger than expected year 2017 brought with it the widespread comeback of global economic growth as three-quarters of the world's economies recorded positive global growth trends for the first time this decade. Macroeconomic variables the likes of global GDP and trade growth took an upward swing juxtaposed against just a year before when the global economy was caught in a slump of the great recession of 2007-2009 and Europe mired in a debt crisis. Globally, monetary policy remained extremely loose whilst inflation stayed low and, commodities are much cheaper now than a decade ago.

However, nestled amidst this rosy picture is the obvious decline in global foreign direct investment (FDI) numbers. According to UNCTAD's Global Investment Trends Monitor Issue No 28, global FDI inflows slid by 16 per cent in 2017, dipping to an estimated US$1.52 trillion, from a revised US$1.81 trillion in 2016. Slipping by 27 per cent to an estimated US$810 billion, developed countries, being the hardest hit, were the main source of this decline. Europe and North America recorded decreases of 27 and 33 per cent respectively. The double-digit downturn of inflows for both these regions is reported to be attributed to their return to pre-2016 levels; following the jarring peak performances of the United Kingdom (owing to a few large megadeals) and the United States in 2016 (caused by pointed reductions in inflows from offshore financial centres).

Only three out of the seven regions recorded positive FDI flows namely, developing Asia and Oceania, Latin America and the Carribean, and other developed countries. The 11 per cent rise in FDIs in other developed economies was driven by a strong recovery of investments in Australia, which remained stable amongst the developing regions.

The varied regional performance caused the share of the developed economies in the global FDI flows as a whole to fall by an estimated 53 per cent of the world's total. The United States kept its draw as the world's largest FDI recipient, with inflows estimated at US$311 billion, followed by China at US$144 billion.

FDIs parked under the umbrella of developing economies stayed stable at an estimated US$653 billion, which is two per cent more than in 2016. Flows were flat in Africa and blipped marginally upwards in 2017 in developing Asia (up 2% from 2016) and Latin America and the Carribean (up 3% from 2016). At an estimated inflow of US$459 billion in 2017, developing Asia regained its position as the largest FDI recipient region globally, followed by the European Union (US$370 billion) and North America (US$330 billion). FDI to the transition economies took a 17 per cent hit and rode behind with an estimated US$55 billion.

Following three years of growth in 2014, 2015 and 2016, cross-border mergers and acquisitions (M&A) value saw a contraction of 23 per cent in 2017 (value of US$869 billion in 2016 against US$666 billion in 2017), largely brought on by a 30 per cent slump in developed economies. The resulting effect of this was an almost 40 per cent tumble of equity investments globally. M&A value activities however, rose by 44 per cent in developing economies to US$100 billion. Natural resources experienced especially weak cross border M&A sales; manufacturing and services both witnessed slowdowns too with the latter accounting for 60 per cent of sales value in 2017.

The value of announced greenfield FDI projects which slid by 32 per cent, recorded a preliminary figure of US$571 billion; its lowest level in 14 years. This figure, if confirmed is said to be a negative indicator in the long run; the concern is with developing economies where a steep 49 per cent decline in the value of announced projects was recorded. Reaching US$261 billion, majority of the countries charted sharp declines.

The world's largest FDI host region

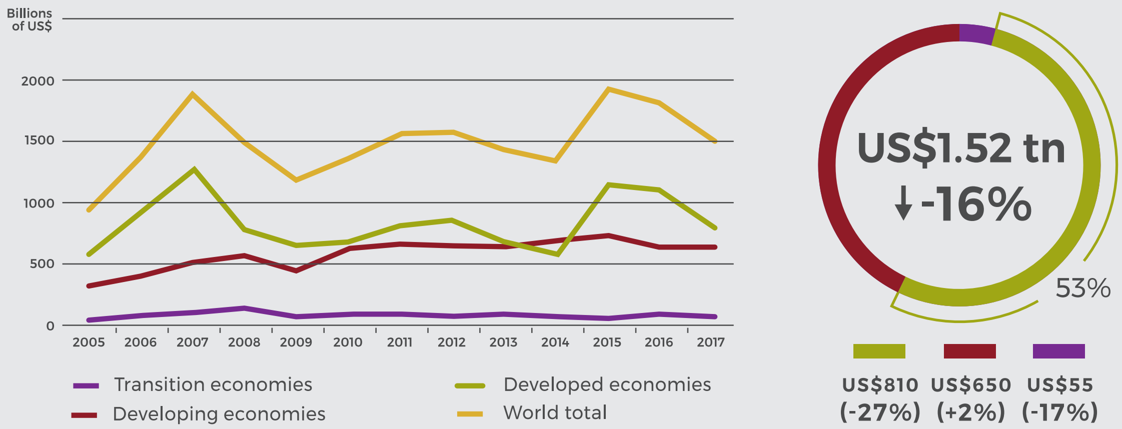
While global FDI declined, developing Asia's share of global inflows rose by five per cent from 25 per cent in 2016 to 30 per cent in 2017. The top three leading beneficiaries were; China with inflows of US$144 billion, followed by Hong Kong (China) at US$85 billion and Singapore at US$58 billion. China maintained its position as the largest FDI recipient among developing countries and where the world is concerned, is second behind the United States. Indonesia, where inflows shot by a stunning six folds, contributed to the one-third rise of FDI inflows to ASEAN, which was recorded at US$130 billion. Latin America and the Carribean had their first rise of FDI flows, which rose by 3 per cent to an estimated US$143 billion, in five years. The source of higher inflows to this region hinged on the marked increase of 73 per cent in the value of cross border M&A sales which scaled to US$73 billion in 2017 from US$42 billion the year before. The activities of foreign companies from India, Hong Kong (China) and Singapore contributed the most to this spike; especially India's close to three-fold hike in cross border M&A sales from US$8 billion to US$22 billion, which was catapulted by a few large deals.

A hopeful rise

The growth acceleration in the world economy in 2017 was spring-boarded by an almost all-at-once favourable financing costs, rising profits and positive business sentiments across the globe. Based on the year's macroeconomic fundamentals and given its accelerated growth pace, global FDI flows are projected to recover in 2018, to almost US$1.8 trillion. The upward economic growth trend in major economies, improving commodity prices and positive profit prospects could spur investor and business confidence resulting in further investment led growth.

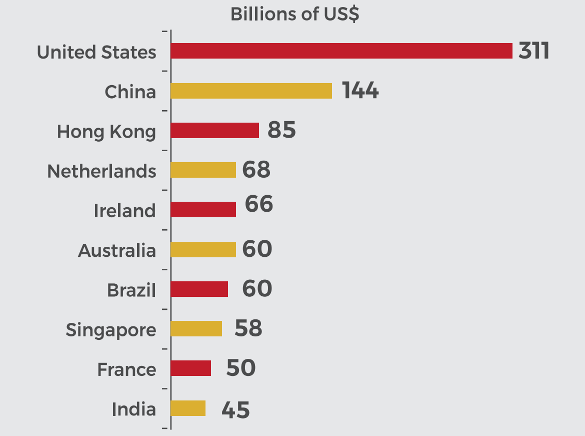
The World Bank, in its January 2018 Global Economic Prospects, projects that GDP in 2018 stands just over 3.1 per cent, after a robust performance in 2017. GDP is predicted to rise across the board in all developed economies, including the United States and European Union. Among emerging economies, India is earmarked to take the lead, whilst the rest are predicted to do well. World trade is forecasted to expand quicker, charting above three per cent, albeit existing uncertainties. Trade in Asia and North America imports is predicted to remain solid. While most economic variables point to more promising FDI inflows in 2018, uncertainties remain at large. Natural disasters, policy uncertainty, rising protectionism translating into trade restrictive actions

FDI INFLOWS GLOBAL AND BY GROUP OF ECONOMIES (2005-2017)



Source: UNCTAD * Preliminary estimates.
Note: Excluding Caribbean offshore financial centers. Percent changes are calculated for each region relative to 2016

ESTIMATED FDI INFLOWS:
TOP 10 HOST ECONOMIES, 2017



Source: UNCTAD * Preliminary estimates.
Note: IFDI estimations in this Trends Monitor are based on quarterly FDI data derived from the (extended) directional principle. For a few countries data following the asset/liability principle was used for estimation.

and elevated geopolitical risks are some of the factors that could warp the shape of FDI recovery in 2018. The global investment patterns of US MNCs could potentially be coloured by the tax reforms, which remains to be seen.

Net FDI by sectors in Malaysia in 2017

Malaysia's FDI recorded inflows of RM39.2 billion or 2.9% of the GDP, a decline from RM47.2 billion or 3.8% of GDP in 2016 due mainly to lower equity capital injections. The major recipients of FDI inflows are Mining and Quarrying, Manufacturing and Financial and Insurance / Takaful Activities sectors for 2017. Direct investments abroad (DIA) net outflows amounted to RM26.8 billion or 2.0% of GDP, a decline from net outflow of RM33.1 billion or 2.7% of GDP in 2016. For the international investment position, inward direct investment stock recorded a net inflow of RM565 billion at end of 2017, a 3.4% rise from the previous year. On the assets side, outward direct investments stock recorded a net outflow of RM522.5 billion.

A well lit path at home

The World Bank predicts that Malaysia's significant progress in 2017, with a year-on-year growth of 5.8 per cent is set to continue well into 2018. GDP growth rate is expected to remain at a solid 5.2 per cent for the year. The robust expansion of private consumption in 2017 is expected to remain as a main growth driver, alongside stable market conditions and income growth.

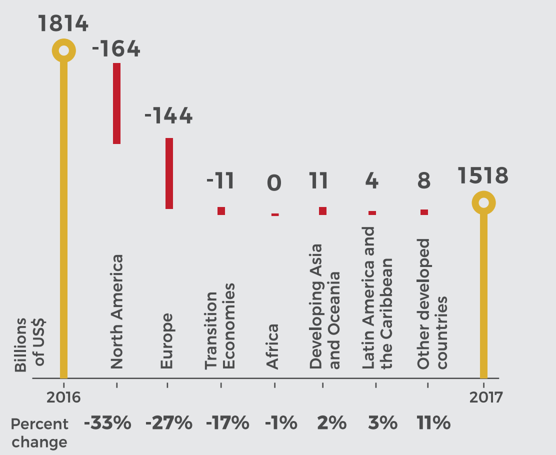
On the export side of things, expansion is said to be prevalent during the first half of 2018, albeit at a lower rate. Barring unforeseen downside risks on global trade and Malaysia's external front especially on protectionist threat, geopolitical tensions, downward change in commodities prices and policy uncertainties in developed countries, the country's growth fundamentals appear solid for the year 2018 as it rides on the back of mending global fundamentals and rising oil prices.

The support from rising investment spending, private consumption and trade are likely to keep the nation's growth on track. Being a net-exporter of crude oil, higher oil prices in 2018 will prove to be a boon for continual growth. Added to that is the recent Budget 2018, being an expansionary one for growth and domestic consumption, is also set to forge Malaysia further forward.

Elsewhere, investors' sentiment concerning Malaysia remains positive. In the World Economic Forum's (WEF) annual Global Competitiveness Report 2017/2018, the country was ranked in the top 10 in 10 indicators for inflation (first), strength of investor protection (third), Government procurement for advanced technology products (fourth), burden of Government regulation and pay & productivity (fifth for both).

With a track record in 2017 of accelerated growth owing to strengthening domestic demand, improved labour market conditions, wage growth as well as improved demand for Malaysia's manufactured products and commodity exports, the country is working hard at hitting all the right buttons within its control to journey into a cautiously optimistic year.

REGIONAL CONTRIBUTION TO CHANGES IN GLOBAL FDI FLOWS, 2016-2017



Source: UNCTAD * Preliminary estimates.
Excluding Caribbean offshore financial centers. Percent changes are calculated for each region relative to 2016

2

Performance of the Main Sectors

> "In today's environment, we have to be creative and innovative, forward-looking and forward-acting, and at the same time we must deliver results."
>
> \- Dato' Azman Mahmud, CEO MIDA at the National Investment Seminar 2017

Performance of the
Manufacturing Sector

2.1

Moving on Up

Malaysia's improved manufacturing sector performance in 2017 demonstrated its move up the value chain, attracting strategic and quality investments into industries that are preparing themselves to embrace Industry 4.0

Revolutionising manufacturing

The manufacturing sector continues to evolve as a response to the advancement in technologies today, with more companies adopting new ICT and industrial automation innovations to stay ahead. A McKinsey report highlights the fact that by 2025, consumption will mainly be driven by developing economies, creating opportunities and potential that did not exist before.

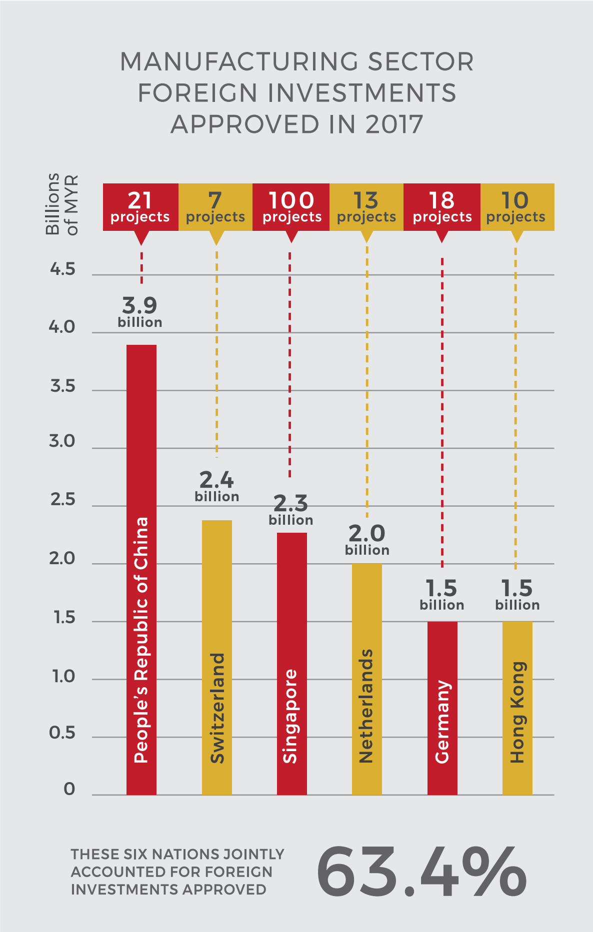
Other trends that continued to impact global manufacturing include sustainable manufacturing, additive manufacturing (3D printing), and the adoption of innovations introduced by the Fourth Industrial Revolution (Industry 4.0) and 'smart manufacturing'. Malaysia is embracing Industry 4.0 in its manufacturing sector, as it prepares to increase automation in currently-labour-intensive industries.

The Cushman & Wakefield 'Manufacturing Risk Index 2017' report published at the beginning of 2017 had ranked Malaysia as the most attractive market for locating manufacturing facilities, with a relatively high level of productivity and quality of infrastructure. The report, which ranks 30 of the largest countries by manufacturing output, also observed that given its trade and transport infrastructure quality, Malaysia had a higher rank than many other middle-income countries in terms of overall logistics performance.

Strategically, the nation's manufacturing sector is shifting up the value chain; from producing raw materials and commodities, it is now moving to higher value-added activities. Additionally, the Government Green Procurement (GGP) policy and the MyHIJAU certification programme underscores the Government's commitment to sustainable manufacturing and procurement.

The Government offers various facilities for businesses, particularly for high-impact and strategic projects that can move industries to greater heights, and drive Malaysia's transformation. Foreign and domestic investors can take advantage of them in order to make long term investments in Malaysia. These include the Pioneer Status (PS) and Investment Tax Allowance (ITA), as well as the Automation Capital Allowance (ACA) which has been extended in the Budget 2018.

Through an allocation of RM452.7 million for 2018 under the High Impact Fund, MIDA will continue to drive economic and employment growth through attracting quality private investments, with a focus on the catalytic and high-growth sectors identified under the 11MP. This includes the chemical, electrical & electronic products (E&E), machinery & equipment (M&E), medical devices, and aerospace industries. Moving forward, the manufacturing sector will emphasise technology transfer and creation of high-skilled jobs for Malaysians, as evidenced by the further allocation of RM200 million to MIDA under Budget 2018's High Impact Strategic Fund.



Rosier numbers for manufacturing in Malaysia

Malaysia's investment performance in the manufacturing sector ended 2017 on a positive note, despite a relative decline during the first half of the year compared to the same period in 2016. Investments picked right back up in the second half, with 16 projects worth over RM100 million approved in December 2017 alone. This is due to stronger demand projections and higher business confidence among the manufacturing community.

In terms of numbers of projects approved in 2017, there was a 6.3 per cent decrease from 2016's figure of 733 approvals. However, the sector saw investments totalling RM63.7 billion in 2017; 8.9 per cent higher than 2016's figure of RM58.5 billion. This indicates that the approved projects were more capital-intensive, aligning with the nation's strategic push towards more strategic and higher-quality investments. New projects made up 62 per cent of total manufacturing projects approved, with investments worth RM39.5 billion.

In 2017, the manufacturing sector's biggest foreign investing country was the PRC, with RM3.9 billion across 21 projects. This was followed by Switzerland (RM2.4 billion in seven projects), Singapore (RM2.3 billion across 100 projects), the Netherlands (RM2.0 billion across 13 projects), Germany (RM1.5 billion across 18 projects) and Hong Kong (RM1.5 billion in 10 projects). These six nations jointly accounted for 63.4 per cent of foreign investments approved in 2017. Most of the foreign projects approved involve the production of high-technology, high-value-added goods; a notable step towards achieving Malaysia's industrial ambitions.

The promise of capital intensity

As measured by the capital investment per employee (CIPE) ratio, the capital intensity of projects approved in the manufacturing sector in 2017 was RM1,128,742, which is a noteworthy increase of 23.7 per cent from the CIPE of RM912,239 in 2016. The industry with the highest CIPE was petroleum products including petrochemicals (RM9,344,028), followed by non-metallic mineral products (RM1,581,899), and chemicals and chemical products (RM1,499,266).

The manufacturing sector also featured nine projects approved with investments of RM1 billion or more, totalling RM34.7 billion and making up 54.5 per cent of total investments approved in the sector. This is a marked improvement on 2016's figures of RM27.5 billion and 47 per cent of total investments respectively.

These nine projects were in petroleum products including petrochemicals and natural gas (three projects with investments of RM25.5 billion), electrical and electronic products (two projects worth RM3.8 billion), non-metallic mineral products (two projects worth RM2.8 billion), transport equipment (one project worth RM1.4 billion), and scientific and measuring equipment (one project worth RM1.2 billion). In total, there were 80 projects approved in the manufacturing sector with investments of at least RM100 million, making up RM52.4 billion (82.3%) of all investments approved in this sector, a clear indication that capital-intensive projects dominated Malaysia's manufacturing landscape.

Labour-intensive industries are being encouraged to take advantage of the extension of the ACA, which is meant to further promote automation in the manufacturing sector, ensuring that manufacturers in such industries stand to benefit from Industry 4.0 advances.

Industry stars shine forth

In terms of the top performing industries for 2017, the petroleum products including petrochemicals and natural gas recorded the highest total investments approved (RM26 billion), a clear increase of over RM6.5 billion from 2016 (RM19.5 billion). The performance was accounted to three lumpy projects namely PETRONAS Refinery & Petrochemical Corporation (PRPC)'s project in Johor, Petronas Floating LNG 1's project in Sarawak, and a natural gas project by the Malaysian Refining Company in Melaka.

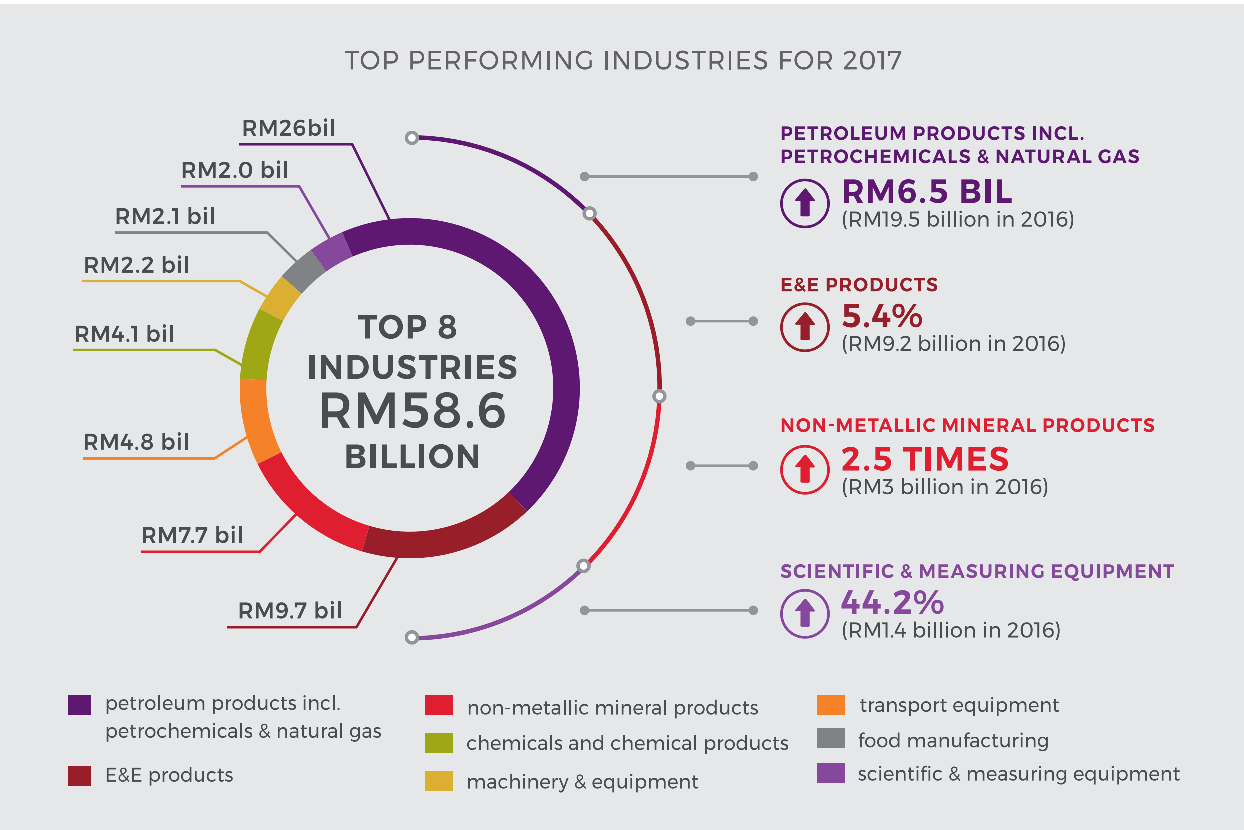
This was followed by E&E products (RM9.7 billion), increasing by 5.4 per cent from its 2016 investment figures of RM9.2 billion; non-metallic mineral products (RM7.7 billion), which is more than 2.5 times the amount invested in 2016 (RM3 billion); transport equipment (RM4.8 billion); chemicals and chemical products (RM4.1 billion); scientific & measuring equipment (RM2.0 billion), an impressive 44.2 per cent increase from RM1.4 billion in 2016; and machinery & equipment (RM2.2 billion), with food manufacturing not far behind (RM2.1 billion). These eight industries accounted for RM58.6 billion or 92 per cent of total investments approved in the manufacturing sector.

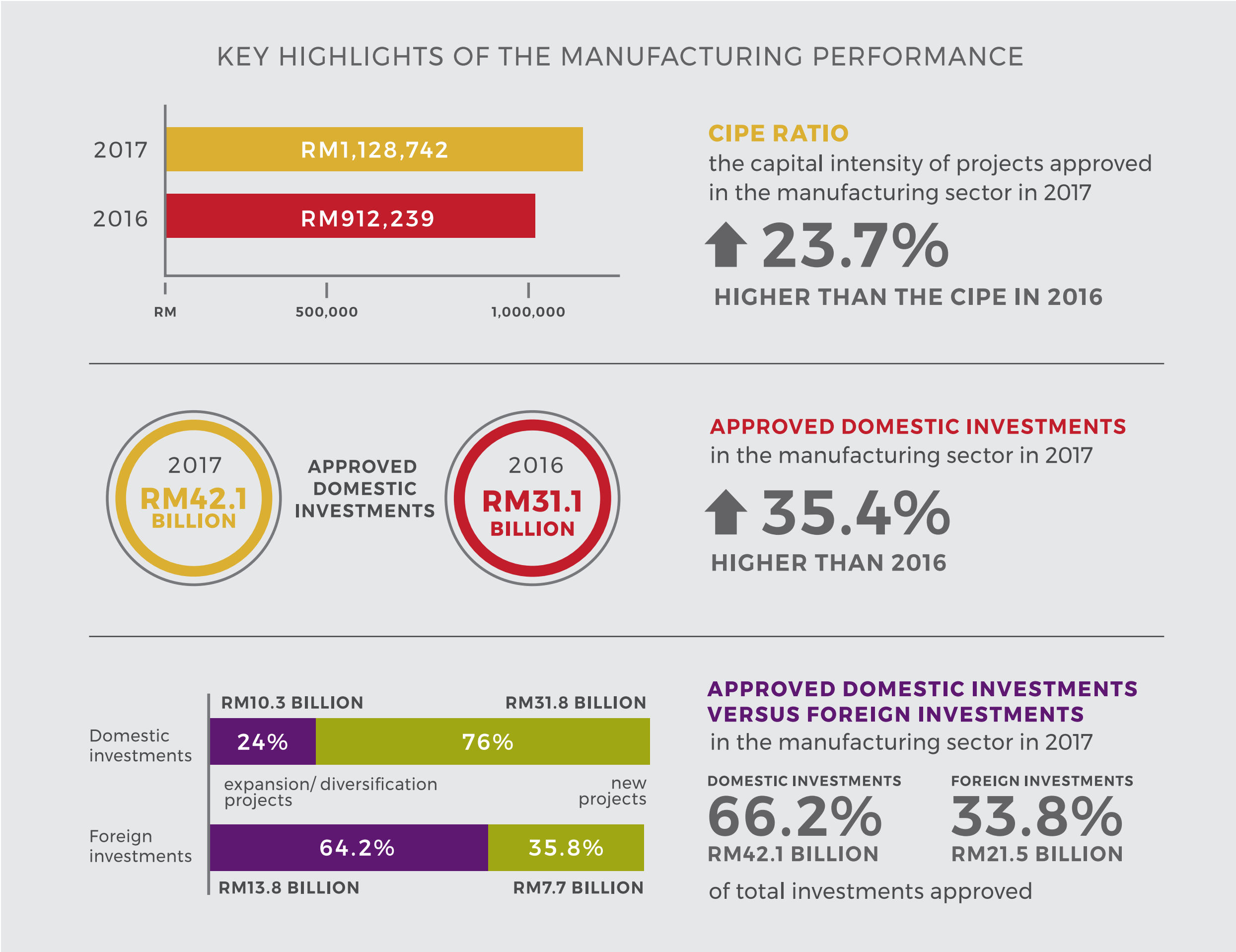
Out to the world

In 2017, a total of 224 export-oriented projects were approved with total investments of RM14.3 billion. These projects are defined as those which export at least 80 per cent of their output to international markets. Foreign investments made the majority of investments into these projects (RM10.7 billion, or 74.8 per cent of the total), with domestic investments making up the rest (RM3.6 billion or 25.2 per cent). Export-oriented projects were concentrated in the E&E (RM7.4 billion in 70 projects), chemicals and chemical products (RM1.8 billion in 15 projects), transport equipment (RM878 million in 13 projects), and scientific and measurement equipment (RM757 million in 16 projects) industries.

Deepening Malaysia's skilled talent pool

The projects approved in 2017 resulted in employment opportunities for 56,421 people. Of these, 14,155 (25.1%) were in managerial, technical, or supervisory roles, a clear increase over the 13,480 (21%) jobs in the same roles as recorded in 2016. A total of 9,870 (17.5%) were positions for skilled workers. Most of the jobs created were in the E&E industry (10,593 jobs), followed by transport equipment (9,112), and machinery and equipment (6,078).





There remains significant room for investing into the upskilling of workers in the manufacturing sector, as well as addressing the current shortage of qualified STEM graduates, especially as companies across several industries start embracing Industry 4.0 and conducting R&D to move themselves up the value chain.

MIDA in collaboration with the Institute of Labour Market Information and Analysis (ILMIA) conducted an 'environmental scan' (ES) study of human capital issues in M&E and advanced engineering sectors. This ES was completed in February 2017. Meanwhile, other ES studies for pharmaceutical, medical devices, chemical and chemical products, oleochemicals, petroleum products including petrochemicals, plastic products, and rubber products are currently being undertaken and are due for completion in May 2018. Among other things, the studies aimed to identify challenges and gaps faced by the industries, and to develop key strategic recommendations and implementable short-term/quick wins and longer-term action plans to overcome them.

Local players are bringing it home...

Because of the rising competition for global FDI from emerging and developing economies, having domestic investors assume a more central role to drive Malaysia's investment agenda becomes more important. It is encouraging to note that approved domestic investments into the manufacturing sector in 2017 increased to RM42.1 billion, accounting for 66.2 per cent of total investments approved, and a clear 35.4 per cent boost over 2016's figure of RM31.1 billion. Most (RM31.8 billion) of these domestic investments were in new projects, while RM10.3 billion went into expansion/ diversification projects. The industry that attracted the most interest from domestic investors was petroleum products including petrochemicals and natural gas (RM25.6 billion or 60.8 per cent), followed by non-metallic mineral products (RM3.5 billion), transport equipment (RM3.3 billion), chemical & chemical products (RM1.7 billion) and electrical & electronic products (RM1.5 billion).

...yet foreign investors remain significant

Foreign investors remained active in Malaysia's manufacturing sector, accounting for 33.8 per cent of all investments, or RM21.5 billion across 312 approved manufacturing projects in 2017, of which RM13.8 billion (64.2%) was for expansion/diversification projects, while the remaining RM7.7 billion (35.8%) was for new projects. The electrical and electronic products industry attracted the largest amount of foreign investments (RM8.1 billion) in 2017, while other industries with high levels of foreign investments were non-metallic mineral products (RM4.1 billion), chemicals and chemical products (RM2.4 billion), scientific and measuring equipment (RM1.6 billion), and transport equipment (RM1.5 billion).

> "The projects approved in 2017 resulted in employment opportunities for 56,421 people. Of these, 14,155 (25.1% an increase from the 21 per cent in 2016) are in managerial, technical, or supervisory roles, while 9,870 (17.5%) were positions for skilled workers."

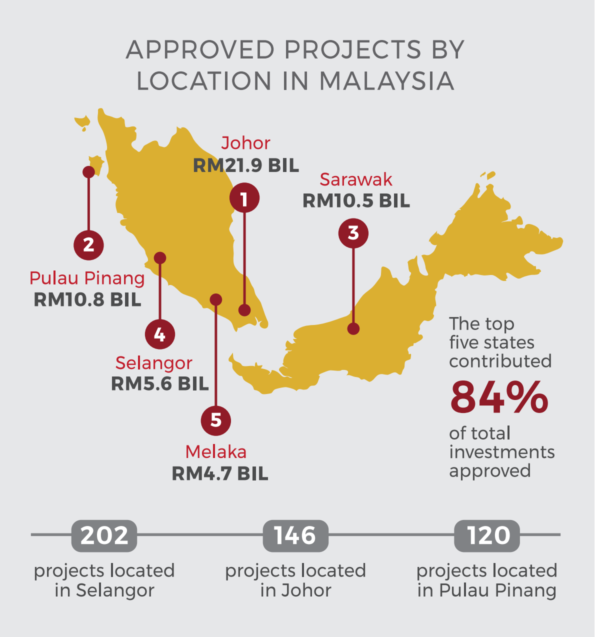
Location, location, location

Similar to 2016's performance, three states accounted for the majority (468, or 68%) of all approved projects in 2017; namely, Selangor (202 projects), Johor (146 projects) and Pulau Pinang (120 projects). In terms of value, the state of Johor (RM21.9 billion) received the largest investments, followed by Pulau Pinang (RM10.8 billion), the East Malaysian state of Sarawak (RM10.5 billion), Selangor (RM5.6 billion) and Melaka (RM4.7 billion). These five states contributed 84 per cent of the total investments approved in 2017.

Johor saw the largest investment of RM14.3 billion by a wholly Malaysian owned company in petroleum products (including petrochemical) industry at Pengerang. The largest investment in Sarawak was a new RM9.3 billion project by a Malaysian company to produce liquefied natural gas (LNG). In Pulau Pinang, major investments were the result of three expansion/diversification projects, comprising two projects from the electrical and electronic products industry (RM3.8 billion), and one from the medical devices industry (RM1.2 billion). Investments also jumped in Melaka, led by an expansion/diversification project by a Malaysian company in the petroleum products (including petrochemicals) industry (RM1.9 billion), and a foreign-owned company in the non-metallic mineral products industry (RM800 million).

Seeing the results on the ground

The addition of the 687 new projects in 2017 brings the total number of manufacturing projects approved during the five-year period of 2013 to 2017 to 3,698 projects. Around 2,920 of these projects have been implemented thus far, with 2,785 projects already in active production and 135 projects still undergoing factory construction and machinery installation. Total capital investments in these 2,920 projects amounted to RM201.4 billion. Another 45 projects with investments of RM6.3 billion have acquired sites for factories, while 575 other projects worth RM71.9 billion are in the active planning stage. When these 620 other projects are realised, total investments of these projects will amount to RM78.2 billion. The majority of projects implemented during the five-year period of 2013 to 2017 covered major industries such as E&E, machinery and equipment, fabricated metal, food manufacturing and chemicals and chemical products. Selangor has the largest number of implemented projects to date, followed by Johor, Pulau Pinang, Kedah and Perak.



Homeboys to Step up Supply Chains

One of the ways to reduce Malaysia's current account deficit is through the use of local supply chains: substituting imported raw materials or components with locally-produced or manufactured equivalents, particularly in large-scale mega construction projects. The creation of these local supply chains forms an important ecosystem to attract further quality investments, and increasing employment and business opportunities.

To promote sustainable business linkages between multinational companies (MNCs) and large local corporations (LLCs) with local businesses and SMEs, MIDA organised a series of supply chain conferences in Kuala Lumpur and the four main economic regions. These included the East Coast Region, comprising Pahang, Terengganu, and Kelantan, which focuses on the oil and gas, petrochemical, and automotive industries; the Northern Region, comprising Perlis, Kedah, Pulau Pinang, and Perak, which focuses on Industry 4.0 for the electrical and electronics, semiconductor, and medical devices & technology industries; the Southern Region, comprising Melaka and Johor, which focuses on the oil and gas, petrochemical, wood-based furniture, and food processing industries; and the East Malaysia Region, comprising Sabah and Sarawak, which focuses on high-energy-intensive industries such as aluminium production and solar power.

Business-matching sessions between anchor companies (MNCs and LLCs) and local businesses and SMEs were an integral part of the conference series. The sessions enabled these business entities to engage with each other to explore the potential for business collaborations and be a part of the anchor companies' supply chain networks. With this, MIDA expects higher utilisation of local products and services for projects and manufacturing activities undertaken by MNCs or foreign companies in Malaysia. The progress and outcome of these sessions are being closely monitored and followed up by MIDA.

"The scope of collaborations and outsourcing activities covers supply of parts, components, and raw materials; logistics; warehousing and shipping services; engineering and IT-related services; packaging services; maintenance services; and supply of machinery & equipment," Dato' Azman Mahmud, the CEO of MIDA, said during his keynote address at the national-level conference on 30th October 2017.

During the national-level conference held in Kuala Lumpur in 2017, the Minister of International Trade and Industry, Dato' Sri Mustapa Mohamed, witnessed the exchange of Memoranda of Understanding (MoUs) with regards to business collaboration between two anchor companies and local SMEs.

One of the MoUs was between Penang Automation Cluster Sdn. Bhd. (PAC) and Mercury Precision Components Sdn. Bhd., Allstar Manufacturing Sdn. Bhd., and Hock Tech Engineering Works, covering the exchange of information, best practices, benchmarking information knowledge, equipment, & expertise in relation to machining & fabrication; the exchange of ideas in developing an Industry 4.0 operation within PAC's premises; and common projects of interest in the promotion of PAC.

The other was between Vitrox Technologies Sdn. Bhd. and Nationgate Solution (M) Sdn. Bhd., covering the implementation of the V-One Smart Manufacturing Platform at Nationgate's SMT lines to maintain a real-time monitoring and proactive system, the exchange of information, best practices, enhancements, and expertise in relation to the adoption of the platform, and a 30 per cent downtime improvement through the adoption of the platform.

> "One of the ways to reduce Malaysia's current account deficit is through the use of local supply chains: substituting imported raw materials or components with locally-produced or manufactured equivalents, particularly in large-scale mega construction projects."

Dato' Sri Mustapa exhorted the local industry players present, particularly SMEs, to ramp up efforts in exploring every possible opportunity to engage with MNCs. "In the same manner, I also urge MNCs and industry players to leverage on this expanding local supply chain and create greater spill-over benefits for your operations as well as the local business community. Connectivity is two ways." Dato' Sri Mustapa pointed out that while the government has put in place several initiatives to foster local supply chain growth, industry players had to play their part in creating strong, inclusive, sustainable, and resilient economic growth in Malaysia.

All that Glitters on Industry 4.0

According to the World Economic Forum (WEF), the first Industrial Revolution used water and steam power to mechanise production; the second used electric power for mass production; and the third used electronics and information technology (IT) to automate production. The fourth Industrial Revolution (IR4.0) builds on the third, characterised by a fusion of technologies blurring the lines between the physical, digital, and biological spheres. According to Klaus Schwab, Founder and Executive Chairman of the WEF, IR4.0 is evolving at an exponential pace, disrupting almost every industry in every country, and heralding the transformation of entire systems of production, management, and governance.

In Malaysia, Industry 4.0 is expected to help increase productivity and lower costs for manufacturers, as well as eliminate their dependence on foreign labour. Through the use of the Internet of Things (IoT) and smart manufacturing, connected enterprises can aggregate information from the production, supply chain, and procurement business units (among others) to enhance efficiency and improve productivity.

As Malaysia moves towards strategic diversification to increase competitiveness – particularly in exports – the country is focusing more intently on complex and high-value products – also known as frontier products. As a result, the manufacturing sector stands to benefit significantly from Industry 4.0, particularly the Eleventh Malaysia Plan (11MP)'s '3+2' catalytic & high-potential-growth sub-sectors. To this end, the Government has introduced various initiatives. These include the Ministry of International Trade and Industry (MITI), the Ministry of Science, Technology & Innovation (MOSTI) and the Ministry of Higher Education collaborating to draft a National Industry 4.0 Policy Framework, which is expected to be tabled at Cabinet in the first quarter of 2018; establishing a high-level task force chaired by the Secretary-General of MITI to spearhead the Government's policy and strategy on Industry 4.0; and an industrial study on "Future of Manufacturing: Industry 3+2" by MIDA, which is expected to underscore the way forward for these industries vis-à-vis Industry 4.0.

The Government is also supporting Industry 4.0 via several incentive packages in Budget 2018, namely:

- A matching grant worth RM245 million under the Domestic Investment Strategic Fund (DISF) to assist Malaysian companies to automate and modernise their plants;
- Accelerated Capital Allowance of 200 per cent on the first RM10 million qualifying capital expenditure incurred in the 2018 to 2020 assessment years for manufacturing and manufacturing-related services sectors; and
- Capital Allowance for ICT Equipment and Software.

Other facilities that are already available include:

- Tax incentives for the production of robotics and factory automation equipment, and specialised production M&E for specific industries;
- Automation Capital Allowance (ACA) to encourage automation in the manufacturing industry; and
- Soft Loan Scheme for Automation and Modernisation (SLAM) to enhance manufacturing processes, upgrade production capability and capacity, and diversify into higher-value-added activities.

Collaboration with the private sector and academia in order to further grow the Industry 4.0 ecosystem have resulted in MITI and MIDA holding several seminars, dialogues, briefings, workshops, & conferences on smart manufacturing and other Industry 4.0-related issues. From the various engagements that MIDA has undertaken, many companies from a range of industries have indicated their plans to invest heavily in Industry 4.0. Companies that have already incorporated Industry 4.0 features into their operations include Jabil, Konica Minolta, WD, Infineon, Dell, ST Microelectronics, HP, Inari, Nationgate, Vitrox and VAT Manufacturing.

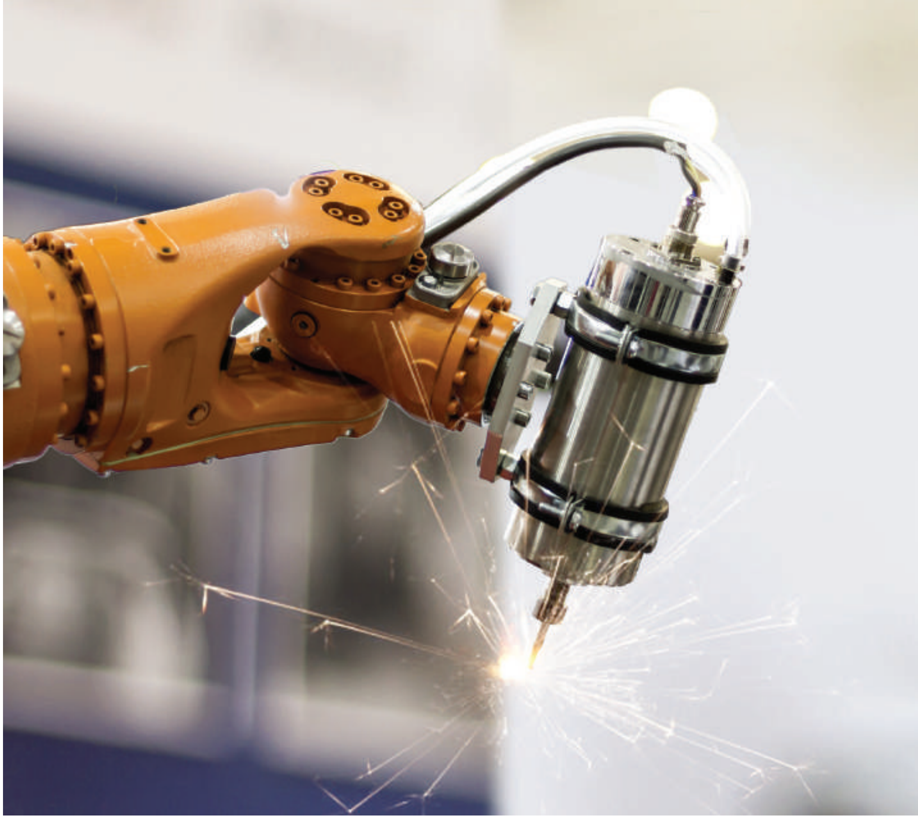
Companies that are in the process of implementing Industry 4.0 features include Top Glove, Sony, Smart Modular, Sandisk, Alliance Contract Manufacturing and Press Metal Bintulu. Some companies have also indicated their plans to implement in Industry 4.0 in the near future; namely, Panasonic, First Solar, Intel, Daikin, Proton, BASF Petronas Chemicals, and Mah Sing Plastics Industries.

Given this, it is evident that many major MNCs and large companies are moving fast into implementing Industry 4.0. It is crucial for local companies and SMEs to also move into this space, and integrate into the MNCs' global value chain in order to remain competitive in the long term.

By 2025, more than one million digital workers are forecast to be required, based on the current trajectory of Malaysia's digital economy expansion. These jobs include coders, application developers, software engineers, data scientists and other related digital employees.

To meet talent requirements, companies need to invest in the training and upskilling of their workforce. Companies that successfully transform their workplace cultures, and manage the change in their operations effectively, will be future-proof and ready to move towards Industry 4.0 – offering greater product customisation at lower costs, effectively becoming market leaders in their fields.

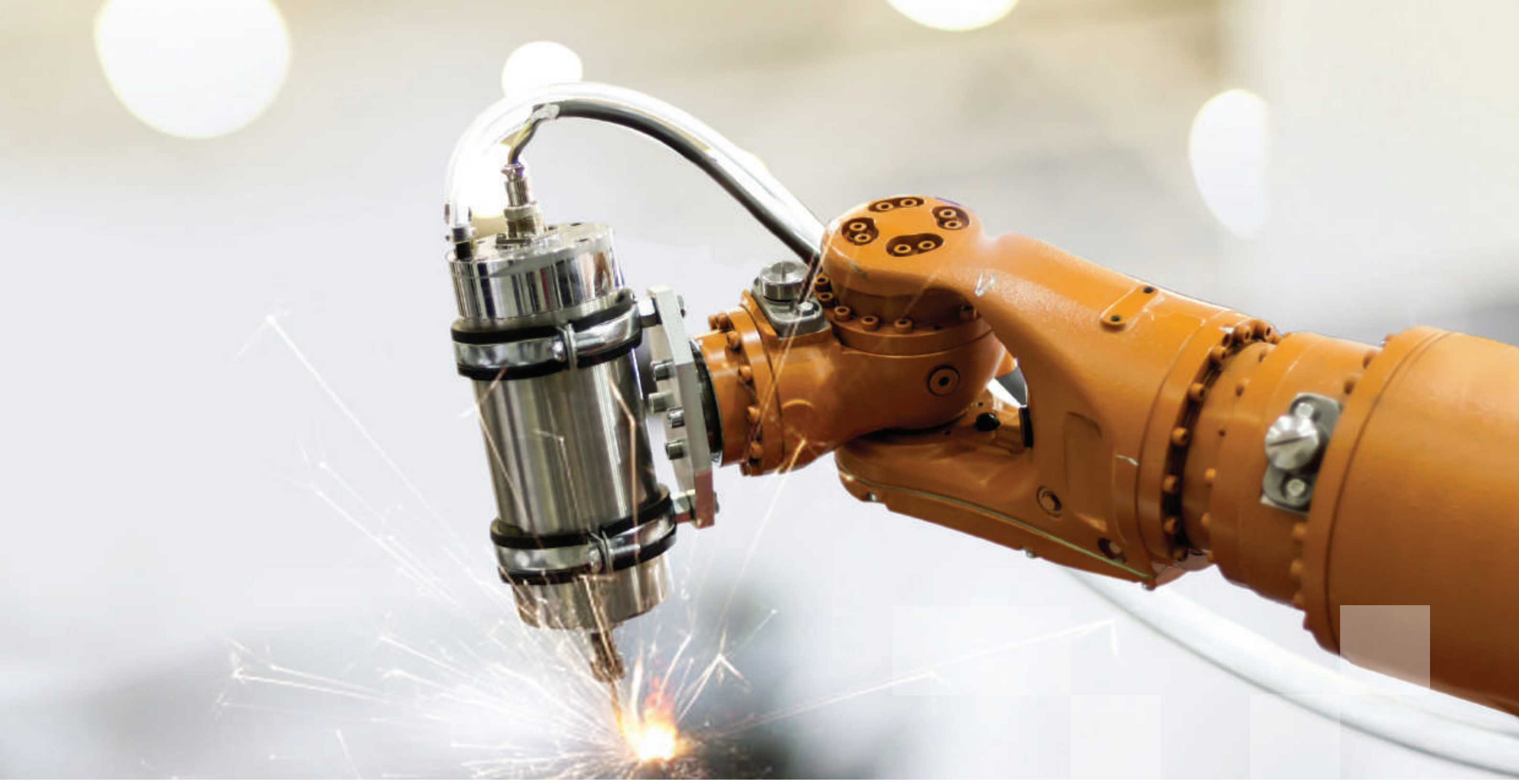
In support, Malaysian training institutions are offering programmes to upgrade talent skillsets, in order to ensure the nation is prepared for this new age of industry.



2.2

The take on Industries

An overview of how the local industries within the manufacturing sector fared in 2017. As the leading industries proved their mettle and stood tall, the rest strode on to keep pace



Electrical and Electronic Products

Malaysia's E&E industry has been a significant contributor to the nation's economy, having been identified in the 11MP as one of the '3+2' catalytic sectors. In 2017, the industry attracted the greatest amount of foreign investments (RM8.2 billion, or 84.5% of all investments in the industry), mostly from Singapore, the Netherlands, Japan, and Germany.

It also brought in the second-greatest amount of total investments (RM9.7 billion across 109 projects), and was the sixth-largest receiver of domestic funds (RM1.5 billion). This was a slight increase over 2016's performance, which saw the E&E industry attract RM9.2 billion in investments across 107 projects, with DDI accounting for RM1.3 billion of that.

Its success was further evidenced by being the country's largest export earner in 2017, totalling RM343 billion and accounting for 36.7 per cent of the total value of exports. Singapore, China, Hong Kong, Japan, the Netherlands, Germany and the USA were among the markets which registered significant increase in exports of E&E products.

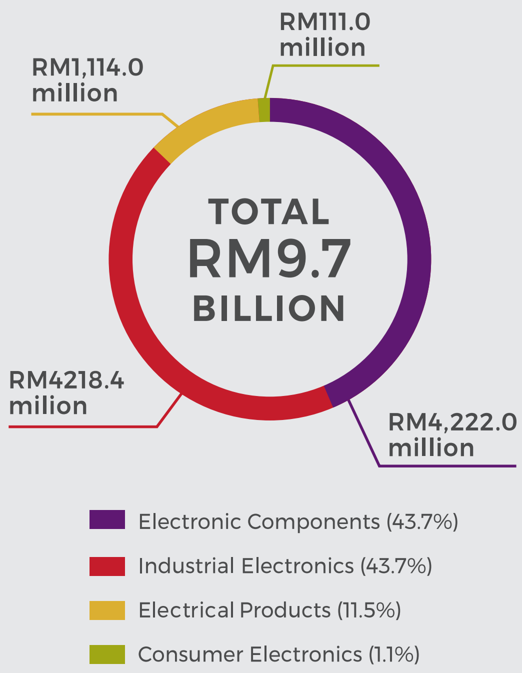
Of the 109 projects approved, 20 new projects brought in investments of RM1.4 billion, while 89 expansion/diversification projects had investments worth RM8.3 billion. Approximately 18.8 per cent of all new employment opportunities created in the manufacturing sector, or 10,593 jobs, were in the E&E industry, with 2,830 (26.7%) of them in being managerial, technical, or supervisory positions, and 827 (7.8%) in skilled occupations.

The E&E industry in Malaysia, particularly the semiconductor ecosystem, has critical cross-industry linkages and applications, including new growth in telecommunication and medical devices, as well as Internet-capable industrial technologies and mobile electronic systems, such as the Internet of Things (IoT), Virtual or Augmented Reality (VR/AR), automotive electronics, wearable electronics, and personal computing.

An exciting new area in the E&E sector is the use of flexible hybrid electronics (FHE), which underlies several new industrial technologies and wearable electronics. FHE makes it possible to produce lightweight, low cost, flexible, stretchable, and efficient smart products with a variety of applications. These include health-monitoring wearables and rugged sensors.

MIDA is ramping up efforts in developing the ecosystem to cater to the growing needs of the E&E industry in embracing Industry 4.0. These include investments in core focus areas such as FHE materials scale-up, thinned device processing, device/sensor integrated printing and packaging, system design tools, and reliability testing and modelling.

APPROVED INVESTMENTS IN THE E&E INDUSTRY BY SUB-SECTOR FOR 2017



Global mega trends will both impact, and be impacted by, the E&E industry. Such trends include Industry 4.0; pervasive robotics and automation in manufacturing facilities, logistics and warehousing, and the increasing adoption of intelligent home and building technologies; a move towards modernising 'lean' manufacturing; and the digital lifestyle/economy. As such, investors may consider capitalising on various strategic opportunities, such as financing R&D towards implementing Industry 4.0 and smart manufacturing. Another area of opportunity is in talent pool creation to support the E&E industry. MIDA is currently working with USAINS Holding Sdn. Bhd., the corporate arm of Universiti Sains Malaysia, on a talent development programme, focusing on advanced engineering subjects.

Electronic Components

Electronic components formed the largest share of investments in the E&E industry, representing 43.7 per cent of total investments. In 2017, a total of 45 approved projects brought in investments worth RM4.2 billion, a RM300 million increase over 2016. The projects approved involved the manufacture of electronic components (e.g. LED wafers, epitaxial wafers, and semiconductor devices). The sub-sector was largely driven by FDI, consisting of RM3.6 billion or 85.7 per cent of all investments, while DDI totalled RM656.1 million (14.3%). However, domestic participation has increased from 2016, which charted DDI figures of RM577 million, or 14.7 per cent of total investments. There were three new projects with total investments of RM76.9 million, and 42 expansion/diversification projects with investments of RM4.1 billion, creating a total of 6,237 job opportunities for this sub-sector.

Some of the significant projects approved included a RM1.1 billion expansion project by TF AMD Micro, a majority foreign owned company, with plans to employ 875 people to engage in wafer chip scale packaging and wafer bumping fabrication activities.

Industrial Electronics

In 2017, approved investments of RM4.2 billion were spread across 33 projects, nearly a five-fold increase on the RM817.5 million of investments approved in 2016. Of those, 24 were for expansion/diversification with investments of RM3.4 billion (80.9%), while nine new projects attracted investments totalling RM809.2 million (19.1%). Foreign investments here played a large role, amounting to RM3.6 billion, while DDI totalled RM606.2 million.

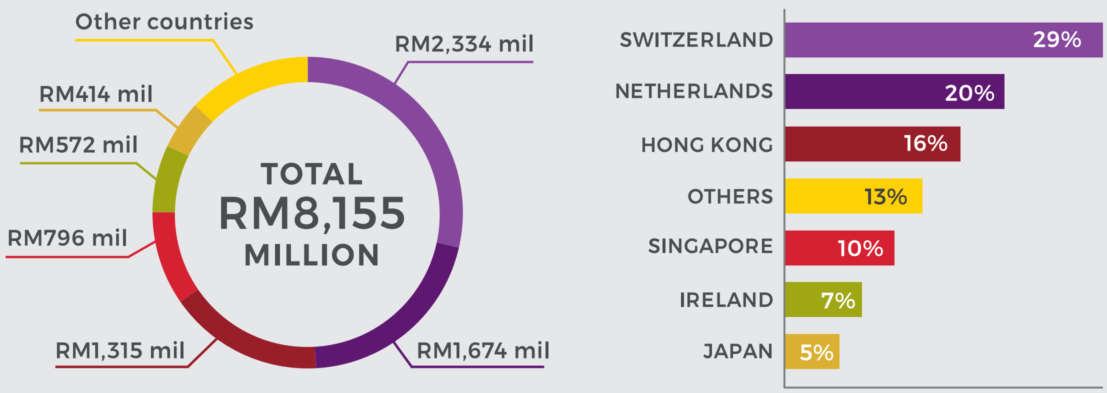
One of the major projects approved was an RM2.6 billion expansion project by Robert Bosch Malaysia, a wholly foreign owned company, to manufacture instrument cluster panels and connectivity modules that would create 194 high-value-added jobs.

Electrical

The electrical sub-sector saw 30 projects approved in 2017 with investments totalling RM1.1 billion. Of these, seven were new projects and 23 were for expansion/ diversification. This sub-sector was mainly dominated by FDI, with investments worth RM865 million (78%), while DDI totalled RM248 million (22%).

These projects were expected to generate employment opportunities for 1,992 people. A significant project approved was an RM150 million expansion by Success Electronics & Transformer Manufacturer Sdn. Bhd., a majority Malaysian owned company to manufacture smart lighting systems. This expansion project would create 175 new job opportunities.

APPROVED INVESTMENTS IN THE E&E INDUSTRY BY COUNTRY FOR 2017



Total investments approved manufacturing (E&E) projects with foreign participation by country

The Top 6 countries contributed 87.1 % to the total approved manufacturing (E&E) projects with foreign participation

Consumer Electronics

In 2017, one example is an investment of RM111 million from Pioneer DJ Technology Malaysia Sdn. Bhd., a wholly foreign owned entity. Core activities of this venture include the fabrication of DJ equipment products and accessories, PCB assemblies, jigs and fixtures and audio products. This project has created 700 new jobs.

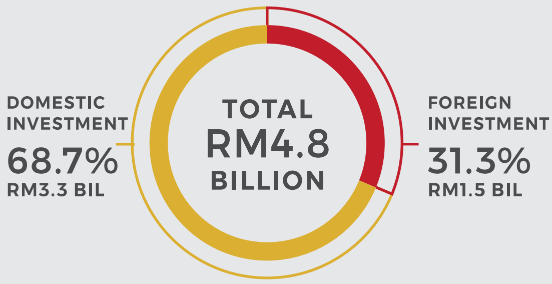
Transport Equipment

In 2017, exports of transport equipment totalled RM17.1 billion, of which aerospace sub-sector exports made up more than half that amount (RM8.5 billion), an indication of Malaysia's role in becoming an aerospace hub in the SEA region. This was closely followed by exports of road vehicles, which amounted to RM7.5 billion. Meanwhile, imports totalled RM42.9 billion, of which aerospace components amounted to RM14.2 billion.

Investments approved for the transport equipment industry covers the aerospace, automotive, rail and shipbuilding & ship repair sub sectors. A total of 79 projects were approved in 2017, accounting for RM4.8 billion worth of investments. DDI played the largest role here, amounting to RM3.3 billion (68.7%), while FDI totalled RM1.5 billion (31.3%). The approved projects generated 9,112 employment opportunities, with 1,867 managerial, technical, and supervisory positions, and

APPROVED INVESTMENTS IN TRANSPORT INDUSTRY FOR 2017

DOMESTIC VERSUS FOREIGN INVESTMENTS



EXPANSION/ DIVERSIFICATION VS NEW PROJECTS

46 expansion/ diversification projects

new projects 33

EMPLOYMENT OPPORTUNITIES

9,112 total employment opportunities

1,867 managerial technical and supervisory

1,506 skilled workers

1,506 skilled positions. There were 33 new projects, which accounted for 77.1 per cent (RM3.7 billion) of the total investments, and 46 expansion/diversification initiatives, which represented 22.9 per cent (RM1.1 billion).

Rail

The rail sub-sector comprises design, manufacturing, and assembly activities as well as maintenance, repair, and overhaul (MRO) activities. There are over 30 players involved in the designing, manufacturing, and assembling of rail-related products in the country, with more than 40 other local companies involved in MRO activities. The bulk of MRO activities are conducted in-house by the respective rail operators, such as Keretapi Tanah Melayu Berhad and Rapid Rail Sdn. Bhd. (owned by Prasarana Malaysia Berhad).

Future projects, both conceptual and under construction include the East Coast Rail Link (ECRL), Kuala Lumpur-Singapore High Speed Rail (HSR), Klang Valley Double Track (KVDT), Light Rapid Transit Line 3, Mass Rapid Transit Line 2, and Mass Rapid Transit Line 3 projects. The Malaysian Government expects to invest over RM160 billion by 2030 to construct advanced rail infrastructure and new lines, in order to help achieve its goal of having 40 per cent ridership on public transport in the Greater Kuala Lumpur/Klang Valley region.

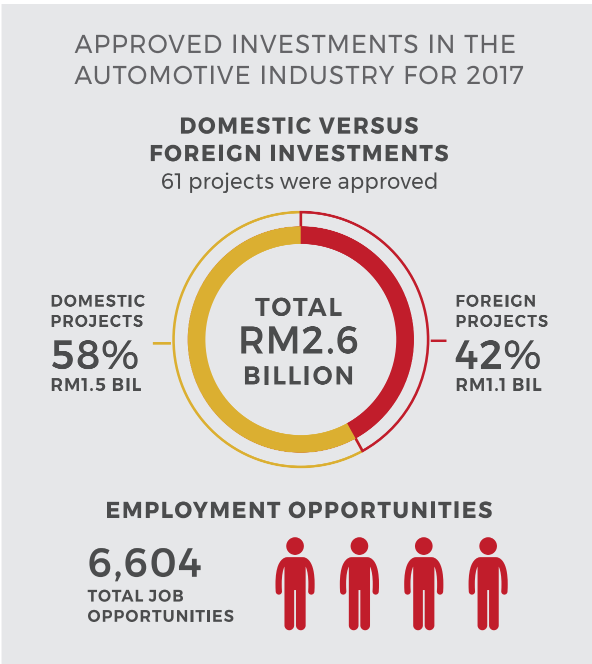
In 2017, the rail sub-sector employed 20,000 workers, and targets to have an estimated 68,000 workers by 2030. This was helped by the addition of new training programmes. In August 2017, the Technology Depository Agency Bhd (TDA) signed an agreement with Asian Rail Academy (ARA), and a Memorandum of Understanding (MoU) with the Human Resources Development Fund (HRDF) in connection with improving and upgrading training requirements for Malaysia's rail industry. ARA is a training partner of the British National Training Academy for Rail, and will provide industry-relevant certification programmes in traction, rolling stock, and railway safety.

Automotive

In 1983, Malaysia's first automotive manufacturer, PROTON Holdings Berhad (Proton), was established, followed by Perusahaan Otomobil Kedua Sendirian Berhad (Perodua) in 1993. Since then, the country has become a manufacturing hub for large automotive component makers.

There are currently over 690 automotive component manufacturers producing a wide range of components. The industry has boosted the development of engineering, auxiliary, and supporting industries, and contributed to skills development and the upgrading of technological capabilities, creating a highly experienced automotive workforce.

In addition to feeding domestic market demand, component manufacturers are increasingly exporting their products, especially to ASEAN countries, as well as the PRC. Domestic automotive players have been urged to move up the value chain, integrate themselves into increasingly competitive regional and global markets, delve into critical areas such as transmissions, engines, and control mechanisms (suspension, brakes, steering systems etc.), as well as invest in R&D.



In 2017, the Malaysian automotive sub-sector produced 499,639 motor vehicles, i.e. 459,558 passenger vehicles and 40,081 commercial vehicles. A total of 576,635 motor vehicles were sold, comprising 514,679 passenger vehicles and 61,956 commercial vehicles.

A highly anticipated development for the local automotive industry was the strategic partnership between Proton and PRC-based Geely Holdings (Geely), which had purchased 49.9 per cent of the former. With access to Geely's global presence, expertise, and financial support, Proton would likely be able to realise its aim of entering Geely's existing markets, as well as to continue developing the local automotive industry. Geely, which owns Volvo, would also gain access to the ASEAN market, making this partnership mutually beneficial.

> "Trends such as driverless vehicles, the transition away from internal combustion engines to electrically-powered and constant mobile Internet connectivity, will greatly influence the industry over the next 10 to 15 years."

Trends such as driverless vehicles, the transition away from internal combustion engines to electrically-powered and constant mobile Internet connectivity, will greatly influence the industry over the next 10 to 15 years. By leveraging Industry 4.0 and the technologies disrupting the automotive industry, Malaysia has the potential to grow and expand its capacities and capabilities within the SEA region, and across developing countries around the world.

Throughout 2017, a total of 61 projects were approved in the automotive sub-sector, with investments of RM2.6 billion. Domestic investments continued to be the primary contributor, with investments amounting to RM1.5 billion (58%), while FDI totalled RM1.1 billion (42%). The approved projects resulted in 6,604 job opportunities from 27 new projects accounting for 77 per cent (RM2 billion) of total investments, and 34 expansion/diversification projects worth RM600 million (23%).

Aerospace

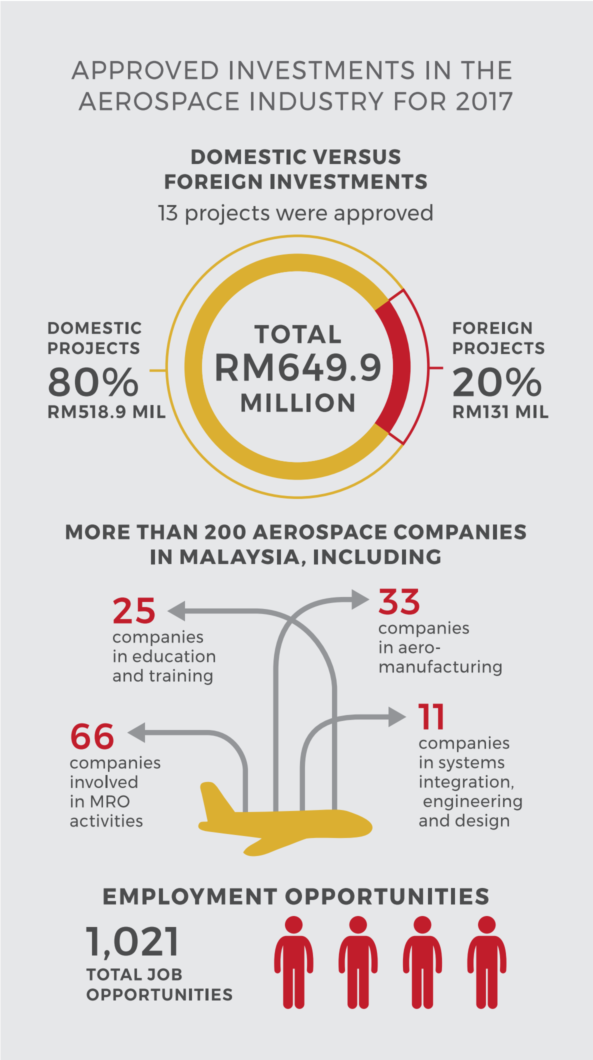
The Government has identified Malaysia's aerospace industry as one of the '3+2' strategic sectors with high growth potential. In recognition of its importance, the Malaysian Aerospace Industry Blueprint 2030 was launched during Langkawi International Maritime & Aerospace Exhibition (LIMA) 2015.

Malaysia is home to more than 200 aerospace companies comprising both international and local industry players. These include 66 companies involved in MRO activities, 33 companies in aero-manufacturing, 25 companies in education and training, and 11 companies in systems integration, as well as engineering and design.

In demonstrating their capabilities to meet global OEMs' stringent demands, local players like SME Aerospace, CTRM Aero Composite, Airod, and UMW Aerospace, have successfully involved themselves in the global aerospace supply chain. By 2030, the industry is projected to contribute revenues of RM20.4 billion for MRO, RM21.2 billion for aero-manufacturing, and RM13.6 billion for engineering and design services.

Recognising the need to develop talent for the aerospace industry, the Department of Skills Development (DSD) has jointly established an occupational framework with Ministry of International Trade and Industry's (MITI) National Aerospace Industry Coordinating Office (NAICO). The framework serves as a reference of the standards required for skills certification, and to guide skills training curriculum development so that it is in line with industry requirements. To fulfil the Blueprint's human capital targets, 29 job areas and 483 job titles were created.

To participate in the global supply chain, local companies need to meet international standards, accreditation and certification, especially from OEM companies and the respective countries' aviation authorities such as the USA's Federal Aviation Authority (FAA) and the European Aviation Safety Agency (EASA). UMW Aerospace Sdn. Bhd. is an example of a local company in a strategic partnership with Rolls Royce to manufacture fan cases for the Trent 1000 engines that power Boeing's 787 Dreamliner planes. This has positioned Malaysia as a producer of aero engine parts.



Within the aerospace industry, surface engineering is among the areas that have much potential to enable Malaysia's transformation towards churning out complex and diverse products. Surface engineering processes are overseen by the National Aerospace and Defense Contractors Accreditation Program (NADCAP), administered by the USA-based Performance Review Institute (PRI). Through PRI, NADCAP provides independent certification of manufacturing processes for the industry, and represents a standardised approach to quality assurance. While Malaysia already has companies that are able to offer NADCAP-certified coating and specialty secondary processes, there is still much room for growth.

SEA's dynamic regional aerospace market is gaining prominence, due in large part to facilities such as Singapore's Seletar Aerospace Park, and Malaysia's dedicated aerospace parks such as UMW High Value Manufacturing Park. Strong market demand has also accelerated the development of local aerospace supply chains. Malaysia is equipped with all the necessary ingredients to be an important player in the global aerospace market, and efforts undertaken to develop local clusters and other facilities that foster the growth of the aerospace industry, such as the KLIA Aeropolis, are likely to pay off in due course.

MIDA continued to carry out various initiatives to promote investments into the aerospace sub-sector. In 2017, one of the programmes undertaken was a special project mission to Japan. The mission's primary objective was to explore investment opportunities in aerospace parts and manufacturing, metal surface treatment, design and engineering, and aerospace support services in non-destructive testing.

During this mission, MIDA held a seminar on investment opportunities in the aerospace industry, co-organised with the Nagoya Chamber of Commerce and Industry and the Chubu Aerospace Industrial Technology Center. The seminar sought to establish a networking platform with potential companies/investors in Nagoya, and to introduce Malaysia as an investment destination to potential investors.

“SEA's dynamic regional aerospace market is gaining prominence, due in large part to facilities such as Singapore's Seletar Aerospace Park, and Malaysia's dedicated aerospace parks such as UMW High Value Manufacturing Park.”

In 2017, a total of 13 projects worth RM649.9 million were approved in the aerospace sub-sector. The majority of these investments (RM518.9 million or 80 per cent) were from domestic investors. FDI amounted to RM131.0 million. The approved projects will create 1,021 job positions. All approved projects were for aerospace manufacturers supplying to Tier One and Tier Two companies.

One significant project approved, was a new RM144.8 million initiative by majority Malaysian owned T7 Kilgour Sdn. Bhd. to develop a specialised metal treatment plant for the aerospace industry. The plant offers 95 job opportunities.

Shipbuilding & Ship Repair

The shipbuilding and ship repair (SBSR) sub-sector in Malaysia has been identified as an economic growth support sector under the IMP3, EPP6 of the ETP, and the Malaysian Shipbuilding/Ship Repair Industry Strategic Plan 2020. It is expected to generate RM6.4 billion in GNI and provide 55,000 jobs by 2020.

Presently, there are a total of 99 registered shipyards nationwide, in which 31 are located in West Malaysia and 68 in East Malaysia. In West of Malaysia, the main shipyards are located in Lumut (Perak), Port Klang (Selangor), Kemaman (Terengganu) and Pasir Gudang (Johor). In the East Malaysia, Sibu (Sarawak) is the main shipbuilding hub comprising of 40 small to medium-sized companies. There are 6 large shipyards in the country which have repairing capabilities of more than 600 tons displacement namely Malaysia Marine and Heavy Engineering (MMHE), Boustead Naval Shipyard, Sabah Shipyard, Sapura Kencana, Nam Cheong and Muhibbah Marine Engineering.

The sub-sector depended heavily on demand from the oil and gas (O&G) industry. In addition, local players were facing rising competition from yards in developing countries such as Vietnam and Thailand which offer lower labour costs. Recognising these challenges, MIDA established the SBSR Advisory Panel, a national level steering body, as a platform to oversee the development of the SBSR industry and progressively enhance the SBSR ecosystem in Malaysia. In 2017, five SBSR projects were approved, with investments totalling RM1.5 billion. DDI made up the vast majority of investments worth RM1.3 billion (87%), while FDI totalled RM219 million (13%). These projects created 1,487 employment opportunities, with managerial, technical and supervisory positions as well as skilled labour forming 639 (43%) of total employment. Of the five projects approved, two were new projects and three were expansion/diversification projects.

One of the new projects was an investment by Muhibbah Group, a company well known for its oil & gas, marine, infrastructure, civil, and structural engineering contract works. This project involved a total investment of RM1.4 billion for SBSR activities, to complement the development of the Kuantan Integrated Maritime Hub (KiMH).

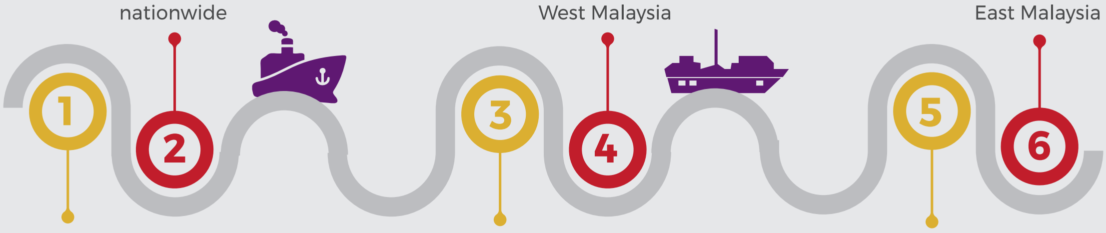
Incentives in the form of Pioneer Status (PS) & Incentive Tax Allowance (ITA) for the SBSR industry introduced in 2016 will boost industry growth and mitigate the impact from fluctuating oil prices. The continual improvement of the SBSR facilities, supporting infrastructure, and supply chain network in the country, enables the industry to diversify into new focus areas. These include the production of small vessels for recreation, sports and leisure boats; production of vessels of 30,000 deadweight tonnes (DWT) and below for coastal shipping; fabrication of off shore structures; and the production of tug boats and pusher crafts for export.

REGISTERED SHIPYARDS IN MALAYSIA INFO BYTES

99 registered shipyards nationwide

31 located in West Malaysia

68 located in East Malaysia



6 LARGE SHIPYARDS IN THE COUNTRY

- Malaysia Marine and Heavy Engineering (MMHE)
- Boustead Naval Shipyard,
- Muhibbah Marine Engineering
- Sabah Shipyard
- Sapura Kencana
- Nam Cheong

MAIN SHIPYARDS LOCATIONS

West of Malaysia
- Lumut (Perak)
- Port Klang (Selangor)
- Kemaman (Terengganu)
- Pasir Gudang (Johor)

East Malaysia
- Sibu (Sarawak)

MAIN SHIPBUILDING HUB

In the East Malaysia, Sibu (Sarawak) is the main shipbuilding hub comprising of 40 small to medium-sized companies.

Machinery and Equipment

The M&E industry serves to catalyse Malaysia's transition into a high-technology, Industry 4.0-ready nation, due to its linkages to various large-scale economic sectors such as manufacturing, construction and services. According to the IMP3, investments in the M&E industry is targeted to grow by an average annual rate of 3.7 per cent. By 2020, investments in the industry are projected to reach RM30.8 billion, while exports are expected to grow at an average rate of 6.7 per cent per annum, reaching RM48.3 billion.

There are currently 1,418 companies of all sizes in the M&E industry across multiple fields, including power generation, metal working, specialised-process M&E for specific industries, general industrial M&E, modules and industrial parts, and remanufacturing of M&E. These include 197 companies involved in the production of semiconductor M&E, and 143 companies involved in robotics and factory automation systems. Malaysia is the leading manufacturer of specialised-process machinery for the E&E industry and automation equipment in the SEA region.

Malaysian M&E companies are capable of providing a full range of world-class, international quality services, including design & development, test simulation and software programming, structure fabrication, module assembly and integration, as well as automation solutions. They are able to produce advanced machinery with full automation and robotics handling systems, and can easily integrate themselves into global supply chains, exporting their products worldwide. Notable companies in the industry include Advantest, SRM, Vitrox, Muehlbauer, Pentamaster, UMS and Multitest.

Driven by industry trends including Industry 4.0 and the Industrial Internet of Things (IIoT), M&E companies are currently revolutionising their production processes, adopting key Industry 4.0 technologies to increase the level of automation, connectivity, and big data analytics (BDA) required in a smart factory environment. This includes connecting cyber and physical systems via an enterprise resource planning (ERP) system, as well as employing remote monitoring, machine-to-machine (M2M) communication, and fully-robotic, automated assembly lines in their production floors. A local company have ventured into developing software and platforms as well as providing ERP, production monitoring and supply chain management services and solutions to manufacturing companies.

Innovation and R&D will catalyse the growth of more sophisticated M&E. Access to financing for this may prove to be a challenge; especially from the commercial financial sector, which usually evaluates such loan applications conservatively. This could be an area of interest for potential investors seeking to enter the market and help integrate industry players into the global supply chain through strategic collaborations.

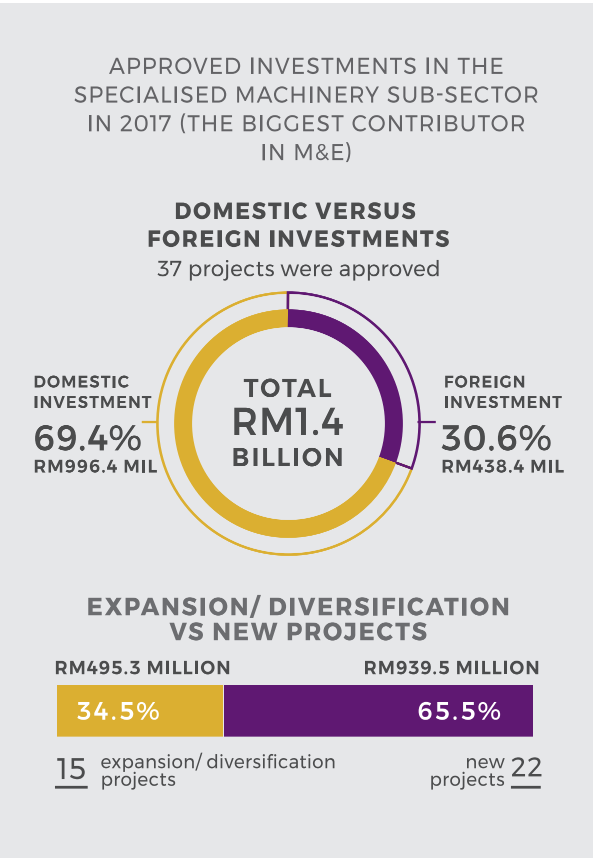
In 2017, a total of 77 projects with investments amounting to RM2.2 billion were approved. Of these, 39 were new projects (RM1.3 billion or 61.6%) and 38 were expansion / diversification projects (RM840 million or 39.4%). Compared with 2016, there were 11 fewer projects approved overall, but an additional RM650 million was invested – an increase of 42.3 per cent over the RM1.5 billion in 2016, and an indicator that the M&E sector is moving up the value chain and becoming more capital-intensive.

Both domestic investments, which totalled RM1.4 billion (63.6%), and foreign investments, which amounted to RM755 million (36.4%), have increased over 2016's figures (RM999.7 million and RM536.5 million respectively). These approved projects generated employment opportunities for 6,078 people; of which 1,485 are in the managerial, technical, or supervisory categories, and 2,546 are for skilled workers.

Overall, investments approved in 2017 showed that the core of Malaysia's M&E industry is transitioning from general machinery to specialised-process machinery, and reflect the emergence of Industry 4.0-ready firms. The number and type of projects approved in 2017 indicated that focussed promotional efforts have helped Malaysia attract quality investments in producing high-technology and high-value-added M&E. Among MIDA's ongoing initiatives was the Smart Manufacturing and Automation Technology 2017 event held on 12 January 2017 at MIDA's HQ. The event was attended by 356 participants, representing the private sector, industry associations, and government agencies.

The specialised machinery sub-sector was the biggest contributor for investments in 2017, accounting for a total of 37 approved projects with investments worth RM1.4 billion. These comprised of 22 new projects, with investments of RM939.5 million (65.5%), and 15 expansion/diversification projects, with investments totalling RM495.3 million (34.5%). Domestic investments in this sub-sector were worth RM996.4 million (69.4%), while foreign investments totalled RM438.4 million (30.6 %).

Of the approved investments in this sub-sector, 24.3 per cent involved semiconductor machinery, with a total of nine projects worth RM358.4 million. MNCs and LLCs operating in this field moved up the value chain by venturing into the production of front-end process



equipment, such as PVD (Physical Vapour Deposition) and CVD (Chemical Vapour Deposition) chambers, die sorters, and vision inspection & wafer probers.

This equipment is mainly for wafer processing and fabrication requiring higher-level cleanroom & vacuum environment, robotic calibration, and testing. Currently, there are only five companies producing front-end process equipment. Three projects worth RM257.3 million (71.8%) are from existing companies diversifying into front-end process equipment, which will further complement the front-end semiconductor ecosystem.

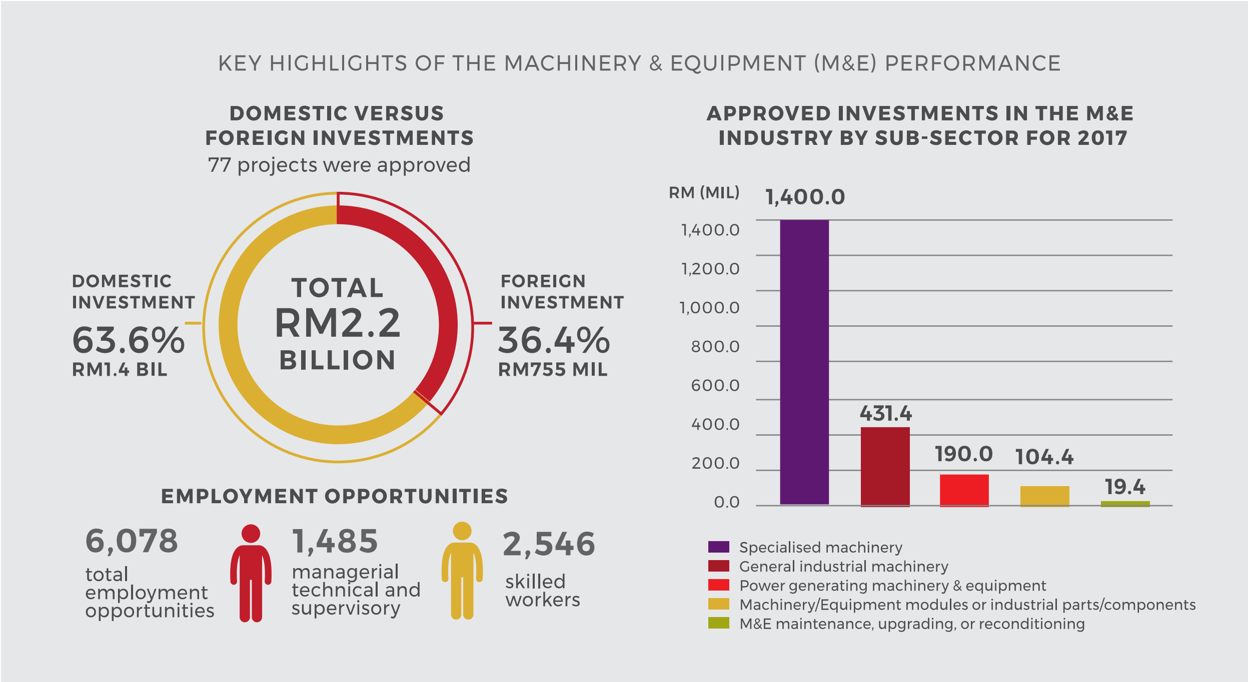
The general industrial machinery sub-sector ranked second in terms of investments approved for the same period. Investments amounted to RM431.4 million in 19 projects, of which 11 were new projects with investments worth RM193.8 million (44.9%) and the other eight were expansion / diversification projects with a total investment of RM237.6 million (55.1%).

Investments in this sub-sector were mainly driven by DDI of RM368.7 million (85.5%), while FDI totalled RM62.7 million (14.5%). Approved projects were mainly in the production of high - and high value-added M&E, such as industrial precision-cleaning equipment using ultrasonic and megasonic technologies, elevators, marking & inspection equipment, and environment-related equipment.

The investments approved in the machinery/equipment modules and industrial parts/components sub-sector totalled RM104.4 million. This included four new projects with investments worth RM23.6 million (22.6%) and nine expansion projects with RM80.8 million (77.4%) in investments. Foreign sources invested RM44.5 million (42.6%), while domestic investments totalled RM59.9 million (57.4%).

One expansion / diversification project and two new projects were approved in the power-generating M&E sub-sector, with foreign investments slightly higher than domestic investments at RM190 million and RM6.2 million respectively. All three projects were in the production of equipment for renewable energy generation.

Five expansion/diversification projects in the M&E maintenance, upgrading, or reconditioning sub-sector attracted foreign investments of RM19.4 million. The five projects mainly focused on the upgrading and reconditioning of material-handling machinery.



Two significant approved foreign projects totalling over RM160 million underscored foreign investors' trust in Malaysia's M&E sector. One of them was a RM81 million expansion project by a foreign company located in Pulau Pinang. The company has started manufacturing wafer deposition equipment and related modules for the front-end semiconductor industry in a facility equipped with a Class 1000 cleanroom and state-of-the-art machines to perform ultra-high-purity orbital welding and precision tube bending. The company relies on highly-skilled scientific and technical local personnel to support their production of innovative equipment. To date the company employs 112 people, of which 99 per cent are Malaysians. Of these, 80 (71.4%) are involved at managerial, technical and supervisory levels, with 37 people (33%) having salaries of more than RM3,000 and above.

The other was a new project by a wholly owned foreign MNC located in Pulau Pinang. The RM30.7 million project will manufacture precision cleaning equipment and megasonic precision cleaning equipment, which are used to clean fragile, complex, small, and miniature blind holes, and designed specifically for the medical devices and pharmaceutical industry. Megasonic technology produces uniform micro-bubble cavities, enhancing acoustic streaming to prevent (up to 99.9999%) microorganisms or macro-level dirt from sticking to equipment surfaces. Extensive R&D will be carried out in Malaysia with three dedicated R&D personnel in its initial phase; R&D expenditure is estimated to reach RM6.2 million over the next three years. Approximately 200 jobs will be created, with 78.5 per cent of them being positions at managerial, technical, and supervisory levels.

A diversification project from a local champion in M&E for the semiconductor industry brought in investments of RM6 million to manufacture wafer probers and related modules for the semiconductor industry. This additional investment will focus on front-end semiconductor M&E, which is highly promoted and in line with the Government's aspiration to encourage local companies to move up the value chain. The equipment will be used in the last cycle of front-end semiconductor wafer processing, to check on the functionality and physical appearance of 200mm-sized semiconductor wafers.

The prober is also embedded with Industry 4.0 technology to communicate with other modules for further analysis and predictive maintenance. This expansion is timely, as global business trends are changing towards the adoption of Industry 4.0 or smart manufacturing to optimise productivity and efficiency. The company is also doing extensive R&D to produce probers for 300mm wafers, integrated with robotic arms and increased transfer speeds from cassette to probe-chuck and vice versa. The company supplies to MNCs such as Avago, Infineon, Texas Instruments, Carsem, and Unisem. To date, the company employs eight people, of which five (62%) are involved in R&D and science and technical supervisory levels, with salaries of more than RM3,000 and above. The company will further engage a total of 44 Malaysians including nine people for R&D activity for this diversification project.

An expansion project by a wholly Malaysian owned company attracted investments worth RM56 million to produce factory automation machines, and related modules and components. The company is currently in the process of expanding its operations, with three production facilities in Pulau Pinang, seven in Kedah, and sales and service support offices in the USA and the PRC. The company currently produces automated machines for the production of hard-disk drive assemblies, smart phones and tablets, and back-end solar processing machines.

Now, the company is diversifying into the production of automated machines for consumer IoT products, 3D printer assembly lines, and front-end solar automated handlers. The USA forms 90 per cent of its export market. To date, the company employs 256 people, of which 203 (79.3%) are involved in managerial, technical, and supervisory levels, with 104 people (51.2%) having salaries of more than RM3,000.

Engineering Support Industry

Malaysia's engineering support industry (ESI) encompasses companies carrying out a wide range of activities, including mould and die, machining, metal stamping, metal casting, surface engineering, heat treatment, and forging. It is a vital industry supporting the country's industrial development, due to its linkages to various economic sectors such as manufacturing, construction, transportation, and the primary industries.

Players in the industry have begun upgrading their facilities and acquiring technologies to meet the stringent requirements of OEMs for parts and components, as well as precision engineering services.

Leading Malaysian ESI companies that are capable of providing such solutions to meet ever-growing and sophisticated global demand include Alpha Master Sdn. Bhd., Atasmi Precision Machinist Sdn Bhd., UWC Holdings Sdn. Bhd., Lypometal Sdn. Bhd. and Kobay Technology Sdn. Bhd.

These companies develop and produce high value-added modular components, machine structures, precision engineering parts, sheet metal fabrication, and sub-assemblies, as well as undertake surface finishing for high growth industries such as medical devices, aerospace, and E&E (especially the semiconductor sub-sector).

Malaysia is encouraging companies to position themselves as 'one-stop centres' in providing total manufacturing solutions, as well as parts and components for high-applications in E&E, automotive, M&E, medical devices, O&G, aerospace, defence, and solar/photovoltaic. These one-stop centres would then offer integrated services, from product conception to serial production, and manage all the relevant processes, including procurement, logistic, packaging, and testing and certification.

Future ESI development will take place in the strengthening of the industry's services, and enhancing its capabilities and production quality to provide complete solutions. To that end, the industry as a whole is working towards meeting international certification standards for the supply of parts and components.

There is room for investment into the production or procurement of higher grade and exotic materials, such as Hastalloy, Inconel, Super Duplex, and Titanium, which are not available locally but are required by ESI companies. In order to reduce lead time and logistics costs, there must be easy access to these materials in the country. The presence of stockists for such materials is critical to sustain the growth of the industry.

A total of 36 ESI projects were approved in 2017, with investments totalling RM504.5 million. Of these, 18 were new projects worth RM357.3 million (70.8%), and another 18 were expansion/diversification projects totalling RM147.2 million (29.2%). Domestic investments were in the majority, amounting to RM358 million (71%) and foreign investments totalled RM146.5 million (29%). Projects approved in 2017 generated employment opportunities for 1,630 people.

The machining sub-sector saw total investments of RM238.4 million across 15 projects. Six were new projects, with investments of RM118.7 million (49.8%), and the other nine were expansion/diversification projects with investments totalling RM119.6 million (50.2%). FDI made up RM62.2 million (26.1%), while DDI totalled RM176.2 million (73.9%).

The casting sub-sector had one new project approved with domestic investments of RM63.7 million. The mould, tools and die sub-sector's 11 projects brought in investments worth RM80.7 million. These comprised of five new projects with domestic investments of RM46 million (71.3%) and foreign investments of RM18.5 million (28.7%), and six expansion/diversification projects worth RM16.2 million, of which FDI totalled RM12.8 million (79%), while DDI totalled RM3.4 million (21%).

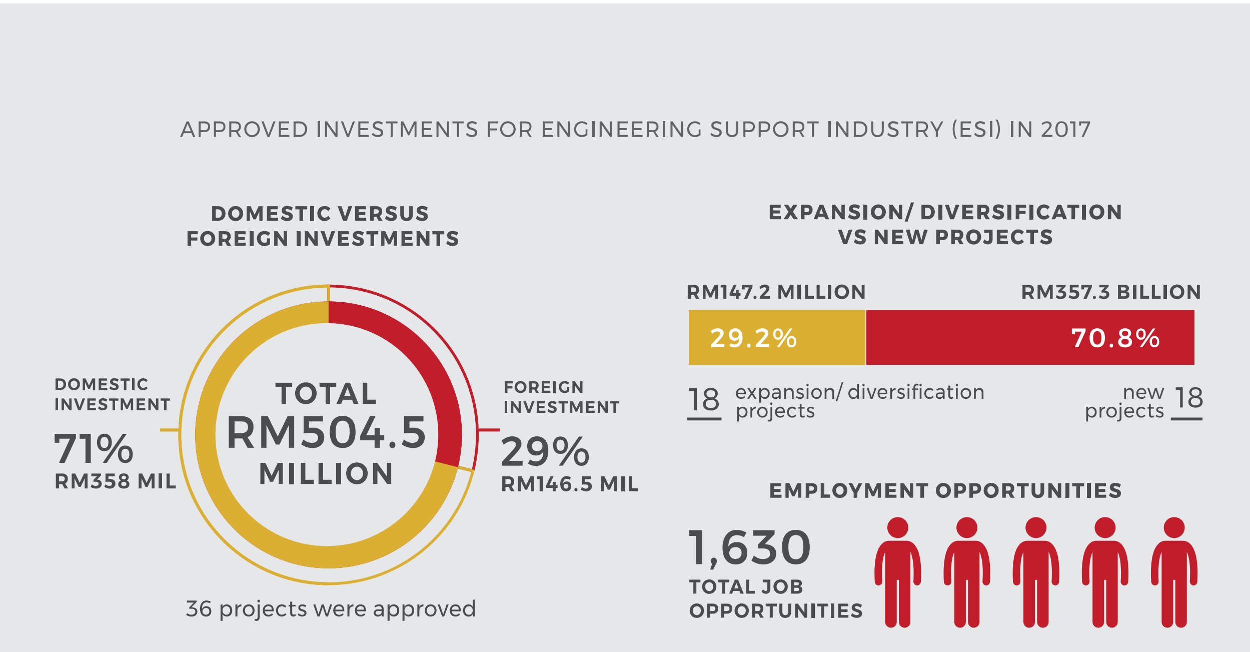
The stamping sub-sector had two new projects with approved investments of RM33 million. Foreign investments amounted to RM29 million (87.9%) while domestic investments totalled RM4 million (12.1%). There is an expansion project backed worth investments of RM3.5 million. There were five projects approved in the surface engineering sub-sector with investments of RM72.1 million, whereby three were new projects (RM64.1 million) and two were expansion/diversification projects (RM8.0 million). Foreign investments amounted to RM11.4 million (15.7%) while domestic investments totalled RM60.7 million (84.3%).

The jigs and fixtures sub-sector had one new project and one diversification project approved, with total investments of RM13.1 million, comprising FDI of RM9.2 million (70%) and DDI of RM3.9 million (30%). One of the more significant investments approved in this industry was a new project by a Malaysian owned company with investments of RM21.9 million, to manufacture non-flat imaging lenses for industrial usage. These lenses are widely used in high-end applications such as defence, satellites, bio-photonics, sensors and imaging, lasers, and optical solutions for the automotive, medical equipment, and E&E industries.

The company will undertake end-to-end manufacturing of these lenses; from tooling through the injection moulding, machining, and coating processes, and will export 80 per cent of its products. This is expected to be a catalytic project helping to attract further investments, especially from companies marketing high-end optical manufacturing solutions, such as those used for camera sensors and imaging products. This includes Nikon, Leica, Valeo and Continental.

Another significant investment was from a Malaysian-owned company which started with producing die-cast parts and components for the E&E and automotive industries. It is now diversifying to produce parts for the medical devices and O&G industries.

To meet increasing demands from these industries, the company has invested in several state-of-the art precision die-casting machines as well as vacuum systems. This RM52 million export oriented project will eventually produce zero porosity die-cast parts, which are crucial for the subsea O&G sector.



Fabricated Metal Products

Malaysia's fabricated metal products industry is a mature and well-established industry, comprising various value-added metal-shaping processes needed in the creation of machines, parts, and structures for various industries; hence, it is a critical cross-industry sub-sector.

Fabricated metal products are mainly used in four areas, namely offshore and onshore O&G industry; building and civil construction; processing and manufacturing plant fabrication and industrial machinery; and parts & components for M&E.

A total of 71 projects were approved in the fabricated metal products industry in 2017, with investments totalling RM1.1 billion. Of these, 43 were new projects (accounting for RM829.3 million or 74.2 per cent of total investments) and 28 were expansion/diversification projects (RM287.8 million or 25.8%). Domestic investments made up the majority of investments, totalling RM794.7 million (71.1%), while foreign investments amounted to RM322.4 million (28.9%). Projects approved in 2017 created employment opportunities for 3,787 people.

Basic Metal Products

The basic metal products industry in Malaysia plays a major role in the development of the manufacturing and construction sectors. The industry comprises the manufacturing of ferrous (iron and steel) and non-ferrous (aluminium, tin, copper etc.) metal products.

There are currently 832 projects implemented in the industry, with investments of RM62.4 billion and employing 75,127 workers. The Malaysian iron and steel sub-sector in particular has the potential to generate up to 6.5 per cent of GDP growth, and provide up to 225,000 job opportunities in 2020.

Malaysian companies in the basic metal products industry are active in upstream, midstream, and downstream activities, and produce both flat and long products. Flat products (e.g. slabs, hot rolled and cold rolled coils, and coated steel products) are used as intermediate raw materials for downstream applications in the sectors of E&E, automotive parts and components, oil and gas, furniture, machinery and equipment and fabricated products. Long products (e.g. billets, blooms and rebar) are primarily used in the construction and civil engineering industry.

The iron and steel sub-sector is supported by ferroalloy producers that supply the raw materials used in the steel making process. Notable ferroalloy producers in Malaysia include OM Materials Bintulu Sdn. Bhd., Pertama Ferroalloys Sdn. Bhd., and Sakura Ferroalloys Sdn. Bhd.

The Government is liberalising the industry to encourage production of higher grade and high quality steel locally. This requires the Government to provide incentives and support for R&D into more advanced metallurgy, processes, and technologies. The general construction industry, which primarily uses long products, is still dependent on imports to support it.

Investors can thus propose projects that further expand and diversify into the production of flat products to support other higher end manufacturing industries and sub-sectors, such as electrical and electronic products, aerospace, automotive, special-grade packaging, machinery and medical devices.

The iron and steel products sub-sector in Malaysia is currently moving towards Industry 4.0; a crucial step towards sustaining the sub-sector and remaining competitive in the long term. Both upstream and downstream processes are switching over to smart manufacturing, using the latest state-of-the-art technologies such as blast furnace steel making facilities that employ remote monitoring and alert systems, data collection via smart sensors and BDA, and fully-integrated production systems.

With the spread of the Industrialised Building System (IBS) in the construction industry, there are opportunities for steel producers to upgrade their technologies and produce new lightweight products, particularly for steel frame buildings, roof trusses, and formwork systems.

The Malaysian ferrous ecosystem is a mature one, with many companies that have ventured into the production of ferrous metals. There is significantly more room for growth with regards to the non-ferrous metals ecosystem, as there are only a few companies currently active in it, such as Press Metal Bintulu Sdn. Bhd., which produces aluminium ingots, and Alcom Malaysia Sdn. Bhd., which produces aluminium sheets/coils.

In 2017, there were 15 projects approved involving the manufacture of basic metal products with investments of RM183.2 million. Two thirds of these projects were expansion / diversification projects involving investments worth RM133.5 million, while the other five were new projects with investments of RM49.7 million.

The lion's share, or 93.6 per cent (RM171.4 million) of approved investments in this sub-sector, was contributed by domestic sources, while 6.4 per cent (RM11.8 million) came from foreign investments. This accords well with the Government's aspiration for domestic players to drive Malaysia's economic investment agenda. In total, these projects generated employment opportunities for 1,362 people.

There were three metal recycling projects approved for Shan Poornam Metals Sdn. Bhd., Bay Aluminium Industries Sdn. Bhd., and Asahi G&S Sdn. Bhd., with total investments of RM31.9 million and employing 67 people. Two of these companies are located in Pulau Pinang and one is in Selangor. These projects, which transform waste into higher value-added products such as the recycling of precious metals and secondary aluminium ingots, will help to mitigate issues in domestic waste management and reduce reliance on landfill services.

Another notable approved investment is a RM2.8 million expansion project by Ulvac Malaysia Sdn. Bhd. The company will be the first in Malaysia to produce target bonding materials, which are widely used in the surface treatment process.

This involves materials for the Physical Vapour Deposition (PVD) and Chemical Vapour Deposition (CVD) processes, which are usually used in making semiconductor wafers, and also as surface treatments for high-end parts and components for various industries. To date, the company employs 82 personnel, of which 45 (55%) are employed at a managerial, technical, or supervisory level, and 39 people (47%) have monthly salaries of more than RM3,000.

Textiles and Textile Products

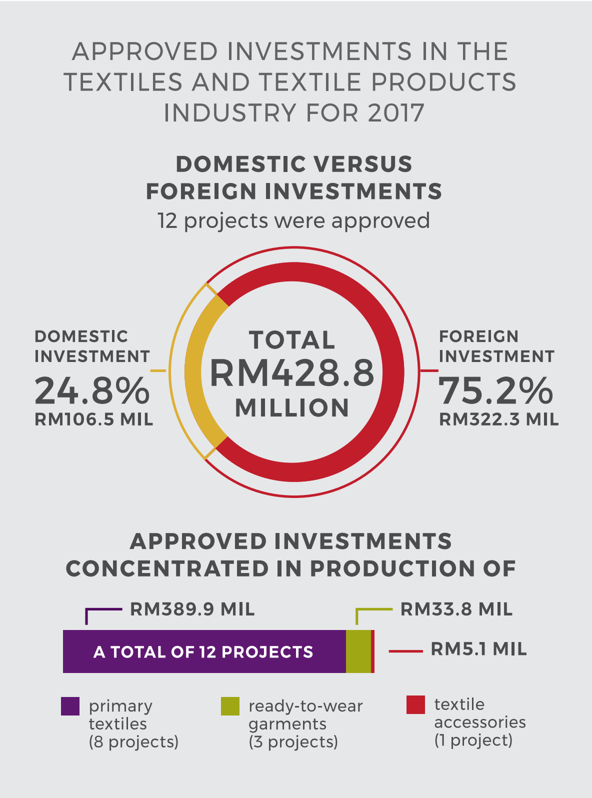
The Malaysian textiles and textile products industry is a mature one, featuring low barriers to entry and a highly competitive environment. It includes companies active across a broad range of upstream (production of natural and synthetic fibre and yarn, woven, knitted, and non-woven fabrics, as well as bleaching, dyeing, finishing, and printing) and downstream activities (manufacture of ready-to-wear garments, home and industrial textile products, and textile accessories).

The industry became the country's eleventh largest export earner in 2017, making up approximately RM15.3 billion (1.6%) to Malaysia's total exports of manufactured goods. The USA was still the leading export market for Malaysia's textile products, purchasing RM2.2 billion (14.6%) of the industry's total exports, followed by Japan and Turkey.

> "Malaysian textile producers have been encouraged to invest in the latest technology, for example automation to improve their efficiency and take full advantage of the ACA extension under Budget 2018."

Competition from developing economies with lower production costs, such as the PRC, Indonesia, Cambodia, Vietnam, Pakistan, Sri Lanka, and Bangladesh, has spurred manufacturers to push up the value chain, by developing and improving processes, focusing on higher value-added products, and improving efficiency through automation. This also entails increasing product quality, placing an emphasis on new designs and product differentiation.

In 2017, a total of RM428.8 million in investments across 12 projects were approved in the textiles and textile products industry. Foreign investors took the lead, bringing in RM322.3 million (75.2%). Domestic investments accounted for the other RM106.5 million (24.8%). Approved investments were concentrated in the production of primary textiles with eight projects (RM389.9 million). The production of ready-to-wear garments had three projects approved (RM33.8 million), while one project worth RM5.1 million was approved in the textile accessories sub-sector. These projects generated a total of 1,850 employment opportunities, which include skilled positions for engineers, quality controllers, and highly skilled technicians.



One notable approved investment was an RM316.7 million expansion project by a wholly owned foreign company, Penfabric Sdn. Bhd. The project will expand four mills of a vertically integrated textile manufacturer involved in spinning, weaving, dyeing, printing, and finishing operations to produce yarn, grey fabric, and piece-dyed, printed, and yarn-dyed finished fabric.

Most of the fabric produced will be exported internationally to branded apparel manufacturers, for industrial workwear, uniforms, furnishing, suiting, shirts and sports/casual wear. The company received the 'Oko-Tex Standard 100' certification, awarded by the Institute of the International Association for Research and Testing in the field of Textile Ecology.

Another major project approved in 2017 worth RM36.5 million was by Sincerely Textile Sdn. Bhd., a new wholly Malaysian owned company. The export oriented project proposed the use of domestic yarn as the main raw material to produce knitted fabric, and its entire production is earmarked for export to Cambodia.

Efforts will be intensified to promote investment in targeted growth areas, which include industrial and home textiles, technical textiles, functional fabrics, high-end garments, ethnic fabrics, and key support facilities and services. Malaysian textile producers have been encouraged to invest in the latest technology e.g. automation to improve their efficiency and take full advantage of the ACA extension under Budget 2018.

Non-Metallic Mineral Products

The non-metallic mineral industry is a vital growth segment of the nation due to its multiple cross-industry linkages. Industry players supply raw and processed materials to domestic manufacturing industries, as well as export minerals and mineral-based value-added products, making the industry an essential component of local, regional, and global supply chains.

Non-metallic mineral products include high purity alumina (HPA), ceramics and clay-based products, cement and concrete products, glass products, IBS components, and other non-metallic mineral products such as quicklime, barite, marble and granite.

Industry players in the ceramics and clay-based products sub-sector produce both traditional and advanced ceramics. Traditional ceramics include (but are not limited to) wall, floor, and roofing tiles, bathroom fixtures, tableware, and bricks. Fine/advanced ceramics are relatively new to the country, with wide technologically advanced applications in electronics, aerospace, medicine, and other areas.

The types of cement produced by the cement and concrete products sub-sector in Malaysia include ordinary Portland cement, hydraulic cement, slag cement, fly ash cement, other blended cement and white cement.

The glass products sub-sector covers the production of float glass, safety glass, glassware, architectural glass, glass fibre, and high-technology precision glass products such as glass funnels and panels, hard disk glass substrates, and solar glass. Solar glass is a combination of solar and glass technologies, and is often used for the top surfaces of thermal collectors and photovoltaic modules.

The sub-sector is expected to expand to encompass functional materials, as well as low emission glass, high performance glass, and specially-coated glass, to meet the increasing demand from the construction and solar industries.

An exciting opportunity for local and foreign investors alike in the non-metallic products industry is Malaysia's drive to increase the use of IBS, aimed at reducing construction costs while increasing its quality. To support the uptake of IBS in Malaysia, MIDA provides both fiscal and non-fiscal incentives and facilitation. In particular, companies that manufacture IBS components are eligible to apply for PS or ITA from MIDA.

In 2017, investments totalling RM7.6 billion across 45 non-metallic mineral projects were approved. This represents over twice the total investments of RM3 billion in 2016. Of these, 25 were new projects worth RM2.1 billion, while the remaining 20 were expansion/diversification projects worth RM5.5 billion. Foreign investments formed slightly more than half of total investments at RM4.1 billion (53.2%), while domestic investments contributed RM3.5 billion (46.8%). DDI is more than triple 2016's figure of RM1.1 billion, with its share of total investments increasing by 10.9 percentage points, a noteworthy achievement.

In terms of project breakdown, 21 were for cement and concrete products, 12 projects were for IBS components, six were for other non-metallic products, four projects meant to produce glass products, and the other two were investments into manufacturing ceramic and clay-based products. The approved projects generated 4,836 employment opportunities, with 1,700 in the managerial, technical, and supervisory categories.

One of the major projects approved in 2017 was an expansion of a majority foreign owned project by CGPV Industrial Building System Sdn. Bhd., with investments of RM1.6 billion to produce IBS components. Adopting eco-friendly construction techniques using state-of-the-art automation technology from Europe, the project will be one of the largest prefabrication R&D centre in Malaysia, with a complete range of capabilities that integrate designing, manufacturing, and installation services. This project plans to utilise local raw materials, and provide linkages to local suppliers and contractors undertaking development and construction activities. In addition, the company had signed MoUs with Universiti Teknologi Malaysia (UTM), Kumpulan Pendidikan Yayasan Pelajaran Johor (KPYPJ), and Lafarge, to create job opportunities and collaborate in R&D programmes, student training, and expertise development.

Another notable investment was from Altech Chemicals Sdn. Bhd. a new wholly owned foreign project worth RM1.2 billion to manufacture HPA, which is essential in the production of synthetic sapphire, and for which there is no substitute. Synthetic sapphire wafer substrates are used in the manufacturing of LEDs, semiconductors, and other high-tech applications. Synthetic sapphire glass is used in the making of scratchproof lenses, smartphone components, and other applications requiring extreme strength, heat and scratch resistance, and electrical insulation. Powdered HPA is increasingly being used in the manufacture of lithium-ion batteries as a coating for the sheets separating the anodes and cathodes of the batteries. The company plans to export 85 per cent of its products to the North Asia region.

Medical Devices

According to a report by Visiongain, the medical devices market globally is growing at an estimated CAGR of 8 per cent between 2016 and 2021. This growth is a result of aging populations, rising healthcare costs, and technological progress.

The medical devices industry is expected to impact positively on the Malaysian economy, and has been designated as one of the '3+2' high-growth sub-sectors under the 11MP. It is also one of the growth areas under the Healthcare NKEA, and includes higher value-added and technologically advanced products, such as cardiac pacemakers, stents, orthopaedic implantable devices, electro-medical, therapeutic, and monitoring devices.

The Medical Device Authority (MDA), a regulatory body created under Ministry of Health (MOH), ensures that medical devices produced in Malaysia are of world-class quality and recognised for their adherence to international standards, as well as global regulatory compliance systems. Over 90 per cent of medical devices manufactured in Malaysia are exported.

The industry comprises over 200 manufacturers with implemented investments of RM14.2 billion, making Malaysia an up-and-coming global medical device manufacturing hub. More than 30 MNCs have made Malaysia their offshore manufacturing location, such as Abbott, Agilent, B. Braun, C.R. Bard, Symmetry Medical, Teleflex, Resmed, Ciba Vision, Ambu, Toshiba Medical Systems, and Haemonetics. These MNCs have contributed to the development of a comprehensive local supply chain, benefitting many domestic players. Furthermore, over 50 companies are categorised as Local Large Companies (LLCs), such as Vigilenz, Straits Orthopaedics, Ideal Healthcare, Top Glove, Hartalega and Kossan Latex Industries.

The Malaysian medical device industry shows great promise in creating high-income jobs, generating greater export value, and reinforcing the domestic supply chain ecosystem. Proof of its potential comes from Association of Malaysian Medical Industries (AMMI)'s Medical Device Industry Outlook Report 2017, launched in August 2017. The report highlighted a remarkable value-added ratio of 57 per cent in the manufacturing of medical devices in Malaysia.

In 2017, the industry recorded total approved investments of RM2.2 billion across six new projects worth RM69.4 million, and 19 expansion/diversification projects worth RM2.1 billion. Compared to 2016's figures of RM2.9 billion in investments across 41 approved projects, this is an indication that the medical devices industry is successfully attracting more strategic investments, with higher investments per project on average. Foreign investors demonstrated their confidence in the future of the industry by contributing RM1.6 billion (72.7%) worth of investments, while DDI brought in RM600 million (27.3%).

These 25 projects approved in 2017 generated employment opportunities for an estimated 2,931 people. Of these, 19 projects worth RM1.9 billion (88.7%) were mainly for the manufacture of high-end, high value-added medical devices.

One such project was an expansion by B. Braun Medical Industries Sdn Bhd, a foreign-owned company with investments of RM1.2 billion to manufacture medical devices, pharmaceutical sterile intravenous (IV) solutions, and surgical instruments and implants. These next generation products will be manufactured using automated and state-of-the-art processes. Approximately 809 additional jobs will be created, of which 164 are salaried positions of RM10,000 per month and above.

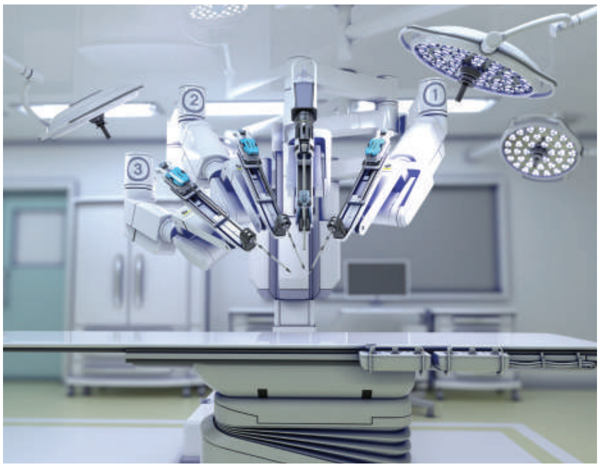
> "The medical devices industry is expected to impact positively on the Malaysian economy, and has been designated as one of the '3+2' high-growth sub-sectors under the 11MP."

Another project is an expansion by Visco Technology Sdn Bhd, a foreign-owned company to manufacture medical lenses. The project, with investments of RM222 million, will create an additional 257 employment opportunities. From the total, there will be 38 positions in the science and technical (S&T) fields, undertaking advanced R&D activities into new material development, lens production technology, and biological safety.

The medical lenses, the first of its kind to be manufactured in Malaysia, will be used to correct farsightedness and astigmatism, and also as an alternative to laser surgery.

As the nation moves towards Industry 4.0, the accelerating pace of innovation in the medical devices industry is evidenced by local companies beginning to undertake R&D on incorporating robotics, automation, integrated processes, and IoT into their manufacturing processes. Industry players will continue innovating and revolutionising their product development, manufacturing processes, and business models.

With Malaysia's strong ecosystems in the semi-conductor, M&E, E&E, metal stamping, and plastics industries, it is an ideal investment location for the procurement of parts and components when it comes to the manufacturing of medical devices.



An area that investors can look into is the production of components and parts related to medical imaging devices, including X-ray machines, computed tomography (CT) scanners, ultrasound and nuclear imaging systems and magnetic resonance imaging (MRI) systems. According to MarketsAndMarkets (a research consulting firm based in the USA), the global diagnostic imaging market was valued at approximately US$23.5 billion in 2015, and is expected to grow to a size of around US$33.5 billion by 2021. Revenue-wise, Asia Pacific is a leading regional market, and will likely witness significant growth in the near future.

There are several exciting developments taking place as a result of advancements in ICT and other medical fields, including the use of big data, wider adoption of cloud-based applications, and medical technology advancements, such as digital tomosynthesis for cancer detection, real-time imaging and image fusion, as well as greater patient engagement via online medical portals.

Pharmaceutical

The Malaysian pharmaceutical industry has been steadily growing over the last decade. Malaysian manufacturers have demonstrated their capabilities and capacities to produce pharmaceutical products in almost all dosage forms, including sterile preparations, injectables, and time-release medications, as well as developed and launched off-patent generic drugs and herbal products under their own brands. Malaysia is a member of the Pharmaceutical Inspection Convention and Pharmaceutical Inspection Cooperation/Scheme (PIC/S), enabling locally-manufactured pharmaceutical products to be accepted globally, particularly in other PIC/S member countries.

Major local companies in the industry include Pharmaniaga, CCM Pharmaceuticals, Kotra Pharma, Hovid and Xepa-Soul Pattinson; some notable foreign-owned manufacturers, such as Oncogen Pharma, Y.S.P. Industries, GlaxoSmithKline (GSK), Ranbaxy, and Biocon, also have a presence in the country. Responding to the growing demand for such products in the SEA region, leading Malaysian pharmaceutical companies are moving into the production of biologics, oncology drugs, and high value-added generic compounds.

As at 2017, a total of 251 facilities were licensed by the Drug Control Authority (DCA), Ministry of Health Malaysia. They are categorised into 158 (63%) facilities that produce traditional medicine, 83 (33%) facilities that produce pharmaceuticals and 10 (4%) facilities that produce veterinary products. A total of 23,650 pharmaceutical products are DCA-registered, including traditional products (51.6%), prescription medication (27.7%), non-prescription/over-the-counter medication (13%), health supplements (4.7%), and veterinary medicine (3%).

Investors seeking a niche in the pharmaceutical industry with significant growth potential should consider the halal sector. The halal pharmaceutical industry globally is a multi-billion dollar industry with expenditures of US$75 billion in 2017, growing to an estimated US$132 billion by 2021. Malaysia is fast becoming recognised as the leading global halal hub, as well as the global reference and trade centre for the mainstream halal industry. It had also established the world's first halal pharmaceutical standard, MS2424:2012 Halal Pharmaceutical – General Guidelines, with JAKIM's Halal Hub Division being the first accreditation body in the world to certify halal pharmaceutical products.

Malaysia's strength lies in its well-developed infrastructure, paired with the presence of a credible certification authority, Islamic financial institutions and products, and parks, logistics, and testing labs specifically catering to the halal trade and industry. This is complemented by Government support in laying the foundation for halal industry development in Malaysia. Government agencies, such as MIDA, Halal Industry Development Corporation, Malaysian Technology Development Corporation, and SME Corporation Malaysia, offer various facilities and initiatives, including tax incentives, assistance with funding, training and consultancy services, and skills upgrading programmes. For instance, tax incentives for halal industry players operating in halal parks have been extended to include manufacturers of nutraceutical and probiotic products.

The nine pharmaceutical projects approved in 2017, comprising investments of RM517.9 million, indicated major breakthroughs in the ecosystem, as they enabled more sophisticated, higher value-added, and frontier pharmaceutical products to be manufactured here. Of these, three were new projects involving investments of RM304.9 million (58.9%), and six were expansion/diversification projects with investments worth RM213.0 million (41.1%). FDI accounted for RM210.4 million (40.6%) of total investments, while the majority of investments (59.4%) came from DDI which amounted to RM307.4 million. The projects approved generated 230 job opportunities.

One major project was from AJ Biologics Sdn. Bhd., a new operation by a foreign-owned company with investments of RM139 million to produce human vaccines. The project created 105 job opportunities, with 57 per cent of them in science and technical fields. Once implemented, the project will contribute significantly to the development of the pharmaceutical ecosystem in Malaysia, leveraging the company's expertise in the development, formulation, and manufacturing of biologic products, and enabling technology transfer, as well as enhancing the upskilling of Malaysian talents.

Another project is an expansion by Upha Pharmaceutical Manufacturing (M) Sdn. Bhd., a Malaysian-owned company, a fully owned member of the CCM Duopharma Biotech Berhad Group of Companies, with an investment of RM5 million to manufacture effervescent products and the technology is the first to be introduced in Malaysia. The manufacturing facility for these new products will be retrofitted into its current facility. The project will not only reduce dependency on imported effervescent products, but also promote Malaysian-made products globally. Currently, all effervescent products available in the country are produced and marketed by foreign companies. Cutting-edge projects, such as biopharmaceuticals and biologics, will accelerate R&D and technological advances, leading to the development of pharmaceutical product clusters that will encourage the eventual commercialisation of niche pharmaceutical products.

Biotechnology

Biotechnology, which refers to technology based on harnessing various biological processes to develop technologies and products, has applications in numerous fields. The biotechnology industry is generally classified into the biomedical, bioindustrial, and bioagricultural areas.

Recognising the importance of biotechnology in promoting sustainable development, the Government launched the National Biotechnology Policy (NBP) in

2005. This policy outlines several key concepts and measures for developing the bio-based industry. Notably, Malaysia is the first SEA nation to launch a bioeconomy initiative, underscoring the country's commitment to provide an effective conducive platform to investors.

> "Being one of the world's 17 megadiverse countries, as identified by The World Conservation Monitoring Centre, Malaysia's rich biodiversity is a solid foundation for the development of a successful biotechnology industry."

Being one of the world's 17 megadiverse countries, as identified by The World Conservation Monitoring Centre, Malaysia's rich biodiversity is a solid foundation for the development of a successful biotechnology industry. This gives the country a competitive advantage in developing technologies that make it commercially feasible to convert these biomaterials into higher value-added products. The biotechnology industry is expected to make a contribution of five per cent to the national GDP by 2020, with investments of about RM8 billion and employment of 280,000. In light of this, more investments are encouraged, particularly into R&D activities for breakthroughs in agricultural productivity, new discoveries in healthcare, and the adoption of sustainable industrial processes.

New investments by foreign and local investors in this field continue to demonstrate the growth of the global biotechnology industry. Other than generating significant economic impact, they are also expected to provide new job opportunities for the local workforce, as well as developing Malaysia's green economy.

A total of six new projects with investments of RM814 million were approved in 2017. Foreign investors contributed more than 90 per cent of overall approved investments (RM780.3 million), while domestic investments totalled RM33.7 million.

These projects generated employment opportunities for 176 people. With a CIPE of approximately RM4.6 million, the biotechnology industry is one of the most capital-intensive industries in Malaysia.

Of the five projects approved, the largest investment by far was a new project by a foreign-owned company, Verdezyne Sdn. Bhd., for the manufacturing of dodecanedioic acid (DDDA) using yeast fermentation technology. DDDA is used in the production of high performance nylon moulding resins, as well as adhesives and powder coatings. This will result in the creation of 75 jobs, with six salaried positions of RM10,000 per month or higher.

Agriculture and Food Processing

The agriculture sector is expected to grow by 3.5 per cent per annum, contributing 8.2 per cent to total GDP under the 11MP, with the agro-food sub-sector growing an expected 5.4 per cent per annum. The sub-sector will be transformed i nto a high-income and sustainable industry through innovative R&D and modernisation initiatives. Malaysia has gradually developed and improved its agriculture and food processing industry to become a net exporter of processed food.

A total of 12 projects worth RM44.9 million were approved in 2017. These approved projects, nine new and three expansion/diversification, were all from domestic sources, and led to the creation of 305 jobs. They were in the cultivation of herbs, fruits, and vegetables, aquaculture, and floriculture sub-sectors.

One of the projects approved was a new investment by a wholly Malaysian owned company valued at RM15.1 million to cultivate herbs and vegetables in Melaka. Another notable project was also by a wholly Malaysian owned company with an investment of RM12.9 million, to cultivate vegetables in Kelantan.

Food Processing

Malaysia's food processing sub-sector includes all companies involved in value-added activities utilising agricultural or horticultural products, such as the manufacturing of cocoa & chocolate products, fishery products, cereals & cereal products, and processed fruits & vegetables. This sub-sector is transitioning from the use of conventional processes to the use of emerging technologies, assisted by the introduction and subsequent extension of the ACA incentive.

There are more than 8,000 establishments in this sub-sector, mainly dominated by Malaysian SMEs.

Well-known MNCs and LLCs, both domestic and foreign, are active in the industry. Among notable companies in the industry are Yeo Hiap Seng (Malaysia) Berhad, Nestle (Malaysia) Berhad, FFM Berhad, Malayan Flour Mills Berhad, Kawan Food Berhad, QL Resources Berhad, Charoen Pokphand Holdings (Malaysia) Sdn. Bhd., Ayamas Food Corporation Sdn. Bhd., Dewina Food Industries Sdn. Bhd., Ramly Food Processing Sdn. Bhd., Super Food Specialists (M) Sdn. Bhd., Golden Fresh Sdn. Bhd., Purecircle Sdn. Bhd., Kellogg Asia Products Sdn. Bhd. and Hershey Malaysia Sdn. Bhd.

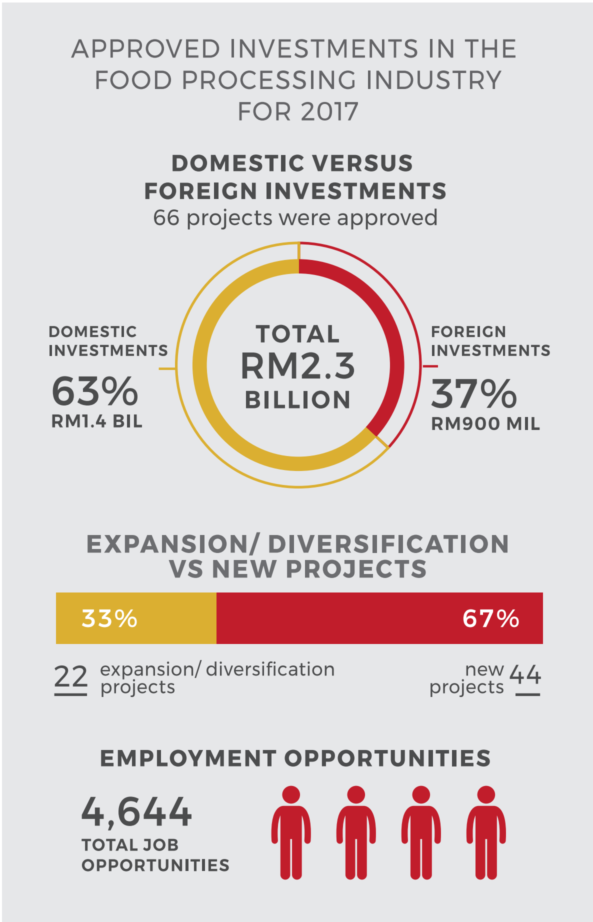
Throughout 2017, MIDA had organised various awareness and outreach programmes, assisting industry players to overcome challenges in meeting increasing global demands and rapid changes of technology. These initiatives were conducted nationwide to update and familiarise industry players on the policies, incentives, assistance, and facilitations available to boost their competitiveness.

Malaysia's Halal industry provides immense opportunities for food processing industry players, due to its strong value propositions. The country's Halal certification is well-accepted internationally, boosting Muslim consumer confidence, and indicating that certified products have passed safety, quality, and legal requirements based on Good Manufacturing Practice (GMP) and Hazard Analysis and Critical Control Points (HACCP). Potential investors are encouraged to leverage on this comprehensive halal ecosystem, particularly in the food industry.

Increasing consumer awareness about health and nutrition values has created strong demand for functional food/ingredients and natural food flavours from plants and seafood. Investors looking into the food processing sub-sector should take note of the significant potential for further growth in food ingredients such as customised formulations required by food manufacturers, functional ingredients, and natural food additives and flavours.

In 2017, there were 66 food processing projects worth investments of RM2.3 billion approved. Domestic investments of RM1.4 billion (63%) led the way, while foreign investments formed more than a third of the total at RM900 million (37%). The 44 new and 22 expansion/diversification projects had resulted in employment opportunities for 4,644 people.

Of the total investments into the approved projects, production of animal feed (22%) attracted the most investments, followed by food ingredients (16%), processed meat products (14%), cereals and flour-based products (14%), dairy products (11%), beverages (9%), seafood products (4%), chocolate and sugar confectioneries (3%), processing of fruits and vegetables (2%), and other food products.



Notably, there were two new projects by Dindings Poultry Development Centre Sdn. Bhd., a majority Malaysian-owned company, with investments of RM385.9 million to manufacture animal feed products in Perak and Johor. These projects aim to reduce the importation of animal feed into the country.

Another significant project approved was a new operation by a wholly foreign-owned company, with investments of RM263.8 million, to undertake R&D and manufacturing of soft gel flavour capsules in Selangor. This project is expected to create 121 job opportunities, and is the first of its kind in Malaysia with state-of-the-art machinery using seamless encapsulation technology.

Palm Biomass

The Government's adoption of green technology and other environmental sustainability initiatives has contributed to more local companies becoming increasingly aware of the concept of 'converting waste into wealth'. The launching of the National Biomass Strategy 2020, and initiatives undertaken by the Government in promoting investment in this area, has made the palm biomass industry more dynamic. Every year, Malaysia produces approximately 168 million tonnes of biomass. Overall, the biomass industry can be divided into four categories based on its sources.

Malaysia could potentially benefit from an additional RM30 billion contribution to GNI, and 66,000 more job opportunities, solely by utilising biomass from the oil palm industry for higher value-added downstream activities. There is an abundant supply of palm biomass, especially in the East Malaysia region (comprising Sabah and Sarawak), as it accounts for about 55 per cent of the total acreage of oil palm plantations nationwide.

Palm biomass production in the country mainly concentrates on the manufacturing of fibre, briquettes, and pellets; the production technology is mature and proven, infrastructure development costs are relatively low, and the projects pay investors back in a short period of time. The demand for pellets is driven by the renewable energy mandates in North Asian markets.

Several foreign companies have shown some level of interest in getting involved in the production of palm pellets for energy generation purposes.

More promotional and facilitation efforts are being undertaken to accelerate the progress in this area, as well as to address the high collection, handling, and transport costs due to biomass being scattered across large regions.

MIDA, together with the Sarawak State Government, and Agensi Inovasi Malaysia (AIM), organised the International Biomass Conference Malaysia (IBCM) 2017 in Kuching, Sarawak, in October 2017 to further promote the utilisation of palm biomass into high value-added products. This event benefitted 1,226 participants, comprising key local and foreign industry players within the biomass ecosystem, including feedstock & logistic providers, researchers, plantation owners, and manufacturers.

Significant opportunities exist in downstream activities that enable the generation of higher value-added products. The ongoing interest in using palm biomass to manufacture pellets, fibre, and briquettes has positively shaped the paradigm on the benefits of biofuel usage, and has inspired the pursuit of R&D into producing second-generation biofuels.

Malaysia is fast becoming an exciting destination for biomass-based investments in the region, with numerous technical and strategic level visits by reputable international investors and technology partners to explore the possibility of investing into the production of industrial sugars, biopolymers, and biochemical products.

FOUR SOURCES OF BIOMASS IN MALAYSIA

OIL PALM	WOOD	MUNICIPAL SOLID WASTE	AGRICULTURAL WASTE
empty fruit bunches, trunks, fronds and shells	wood chips, off-cuts, sawdust, and bark	shredded paper, cardboard drink containers, product packaging, and food scraps	rice husks, coconut trunks / shells / fibres, and waste from poultry houses

Eight projects with investments totalling RM78.4 million were approved in 2017, creating 210 job opportunities. Domestic investments formed the lion's share, amounting to RM63.3 million (80.7%), with foreign investments adding up to RM15.1 million. About 80 per cent of the projects approved were Malaysian-owned.

Chemicals and Chemical Products

The chemicals and chemical products industry is one of the key industries in Malaysia, which was ranked as the third largest contributor of manufactured goods to Malaysia's total exports in 2017. Chemicals and chemical products have mostly been exported to Asian countries, including the PRC, Indonesia, Thailand, and Singapore.

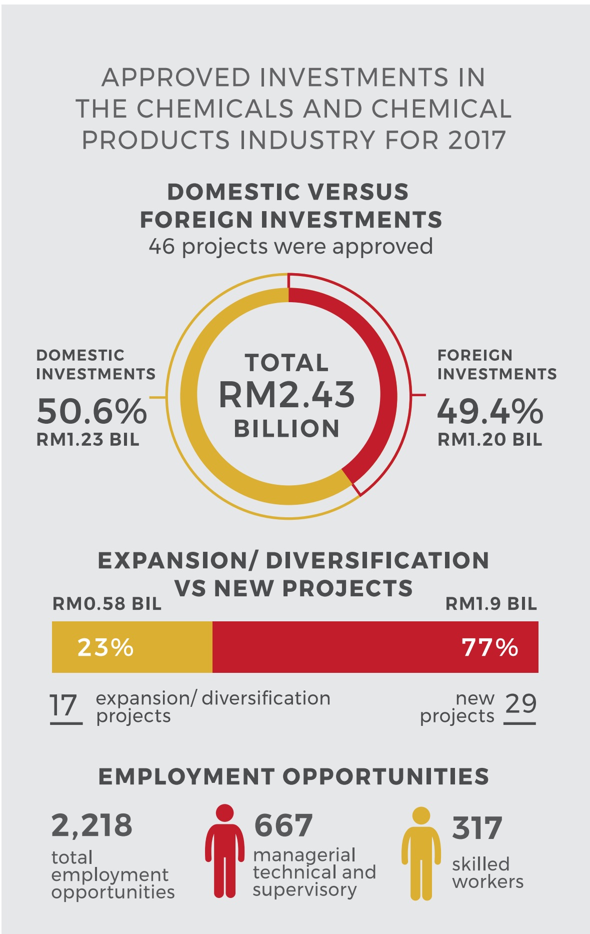
This industry encompasses the production of agricultural chemicals, fertilisers, industrial gases, inorganic chemicals, paint, printing ink, cosmetics and toiletries, soaps and detergents, as well as other chemical products. The ability to produce high quality specialty chemicals and chemical products in the most efficient operational environment possible is key towards enabling the industry to achieve higher profitability. As materials currently produced in Malaysia are still generic commodity products, such as chlorine, the focus now is on promoting more specialty products, including advanced materials such as nanoparticles and green chemicals.

One specialty chemical with great growth opportunities is synthetic zeolite. There are approximately 150 types of synthetic zeolites designed for specific purposes. According to the Zeolites Market-Global Forecast (2016-2022), Malaysia is among the Asia Pacific countries that have the fastest growth projections in the zeolite market, given its growing infrastructure investment.

> "The chemicals and chemical products industry is one of the key industries in Malaysia, which was ranked as the third largest contributor of manufactured goods to Malaysia's total exports in 2017."

The past several decades have seen the chemical and chemical products industry prove its importance to the nation. Given its status as a maturing industry, the readiness of manufacturers to embrace Industry 4.0 as the new way of doing business is a critical factor to ensure that the industry continues to maintain its presence in the fast moving world of global manufacturing, as well as play a larger role in local and regional supply chains. The use of smart manufacturing in Industry 4.0 will change how manufacturing intelligence development and application is applied to every aspect of business.

In 2017, a total of 46 projects with investments of RM2.43 billion were approved, a 71.4 per cent increase over 2016's performance of RM1.4 billion across 38 projects. Of these, 29 were new projects (RM1.9 billion), while the rest were expansion/diversification projects (RM580 million). DDI amounted to RM1.23 billion (50.6%), while FDI was worth RM1.20 billion (49.4%), or approximately RM1 billion more than 2016, which saw foreign investments of RM219.9 million. The approved projects in 2017 for this industry created 2,218 new job opportunities, of which 667 (30.1%) were in managerial, supervisory or technical roles, and 317 (14.3%) were for skilled workers.



One notable investment approved in 2017 is a project by domestically-owned Sokachem Sdn. Bhd. worth RM105 million, which will be undertaken in two phases. The company, a leading supplier of specialty chemicals to the latex-dipped, adhesives, rubber and personal care industries, will produce chemical dispersions in Klang, Selangor, and also chemical emulsions in the future. These chemicals, when added into latex compounds and water-based polymers, can enhance the final products' physical and chemical properties.

Oleochemicals

Oleochemical products are generally derived directly from naturally-occurring fats and oils from organic (i.e. animal and vegetable) sources. In Malaysia, oleochemicals are mainly extracted from oils produced by the oil palm plant. Industry players primarily are in the business of producing basic oleochemicals (fatty acid, fatty alcohol, methyl esters, and glycerine), oleochemical derivatives (fatty esters, fatty amines, soap noodles and metallic soaps), and palm-based constituents such as tocotrienols and carotene.

Currently, there are 20 oleochemical plants operating in Malaysia. Some of these companies are vertically integrated i.e. active in both upstream and downstream activities, from oil palm plantation management to the actual manufacturing of oleochemicals. Among them are IOI, KLK, Sime Darby and FGV.

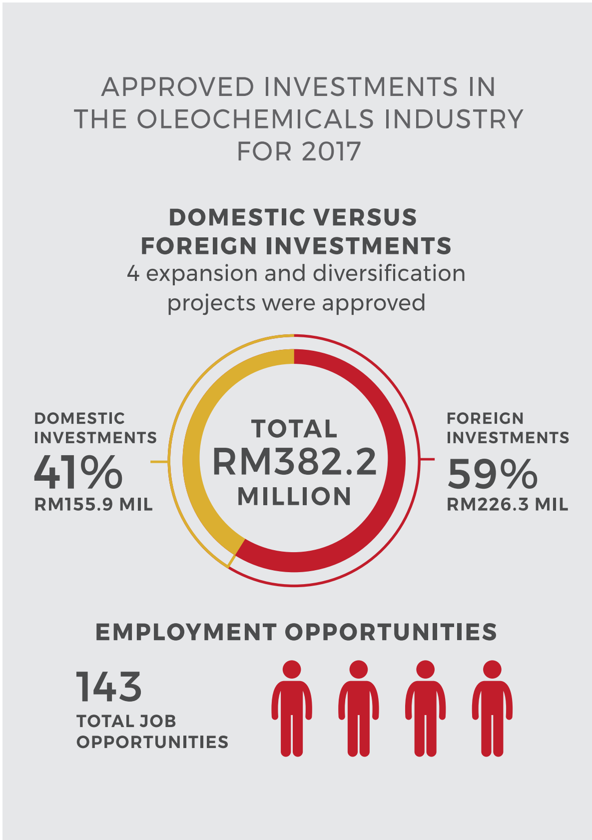
The demand for oleochemicals is expected to increase in response to the consumer market growth for products such as cosmetics, insect repellents, dietary supplements, speciality soaps, and biodegradable plastics. There is a need to step up industry R&D efforts to find and commercialise new oleochemical applications downstream.

Malaysia is gradually shifting into production of higher value-added oleochemical derivatives and bio-based chemicals. Mature industry players are encouraged to take advantage of the oversupply of basic oleochemicals, and explore technological innovation, for this transition.

Innovation and R&D efforts are areas in which industry players can invest in order to meet the evolving needs of the consumers and increase their competitiveness, especially with the Malaysian Palm Oil Board spearheading R&D activities. MIDA promotes more collaborative efforts between industry players and research institutes to commercialise R&D findings.

Business opportunities are readily available in new and emerging areas including green chemical products. Investors with strategic projects that involve heavy capital investments, have high levels of technology and generate extensive linkages are eligible for various incentives.

In 2017, the industry attracted total investments of RM382.2 million across four expansion/diversification projects, which generated 143 job opportunities. Over 59 per cent of these investments were from FDI sources (RM226.3 million) with the remainder coming from DDI (RM155.9 million).



A notable diversification project by Fatty Chemical (Malaysia) Sdn. Bhd. was approved, with additional investments of RM165.4 million to produce oleochemical derivatives; namely, hexadecenes and octadecenes at its existing location in Prai, Pulau Pinang. Fatty Chemical is a joint venture between IOI Oleochemical, a local champion in oleochemicals, and Kao Corporation from Japan. The finished products will improve surfactant performance in personal care products including hair products, skin cosmetics and shower bath agents.

Petroleum Products Including Petrochemicals

The petroleum products including petrochemicals industry is one of the leading industries in Malaysia, covering natural gas, petroleum products, and petrochemical products. The O&G sector in general contributed 14.5 per cent to the country's GDP and an estimated 14.7 per cent to the Government's revenues in 2016. Petroliam Nasional Berhad (PETRONAS), the national O&G company, has been recognised as a Fortune Global 500 company for the past 21 years.

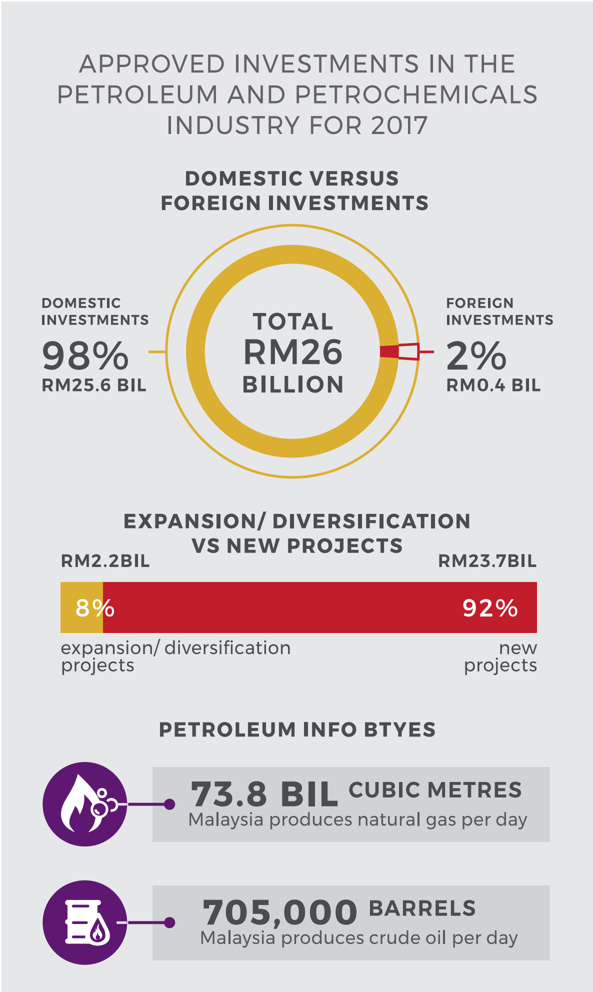
It is also the industry that has attracted the greatest level of DDI in 2017, amounting to RM25.6 billion out of RM26 billion in approved investments across 10 projects that created 1,949 job opportunities. Half of the projects approved were new projects amounting to RM23.7 billion, while expansion/diversification projects totalled RM2.2 billion.

Currently, Malaysia produces approximately 73.8 billion cubic metres of natural gas per day and 705 thousand barrels of crude oil per day. Malaysia also has the world's largest production facility of LNG at a single location, with an annual production capacity of up to 29.3 million metric tonnes.

The increasing number of plants (and hence production capacity) in Malaysia has transformed the country from being a net importer of major petrochemical products to being a net exporter. Since 1980, Malaysia has approved approximately 400 projects related to the petroleum products including petrochemical industry, with a total investment of around RM207.6 billion.

Major petrochemical companies in Malaysia include PETRONAS Chemicals Group Berhad, Lotte Chemical Titan (M) Sdn. Bhd., BASF PETRONAS Chemical Sdn. Bhd., Toray Group, Kaneka Group, and Idemitsu, among others.

The petroleum products including petrochemicals industry has benefitted from the overall drop of oil prices over the past few years. The industry is expected to grow moderately in 2018, as companies respond to stabilising oil prices and continuing access to low cost of feedstock.



Source: BP Statistical Review of World Energy, June 2017

Long term availability and reliability of feedstock at competitive prices has made Malaysia a viable petrochemical hub in the region. Additionally, long term and sustainable demand is supported by beneficial demographics in the various new and emerging markets. The Pengerang Integrated Petrochemical Complex (PIPC) is set to highlight Malaysia's status as a global leader in the petrochemical products industry. The petrochemical projects under PIPC will enable companies to better assess and exploit their opportunities in manufacturing downstream-intermediate and speciality chemicals, which provide greater returns and higher value exports.

In order to stay competitive and relevant, extensive R&D in various fields such as specialty and green petrochemical products, alternative petrochemical feedstock, innovation on nano-scale petrochemical products and derivatives need to be prioritised.

The flagship for this industry was a new approved project by PETRONAS to produce LNG on a floating facility in Sarawak in the East Malaysia region. The PETRONAS Floating LNG Satu (PFLNG Satu) showcases Malaysian capabilities in creating a floating LNG facility, the first of its kind anywhere.

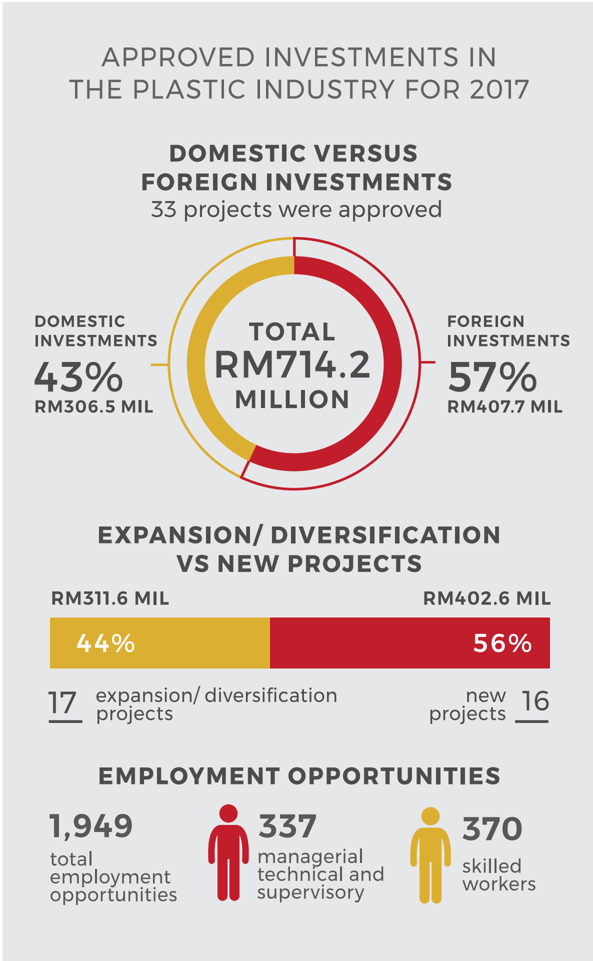
PFLNG Satu is an integrated LNG floating production, storage, and offloading unit, designed to extract natural gas, process it into LNG on board, store the LNG in its containment system, and offload directly into LNG carriers offshore. PFLNG Satu is expected to boost Malaysia's total LNG production capacity to 32 million tonnes per annum.

Plastic Products

With approximately 1,300 companies operating, the plastic products industry is one of the most vibrant industries in Malaysia's manufacturing sector. These companies manufacture a wide variety of products, from common household items and packaging materials, to parts and components for the electrical and electronic products, automotive, office automation, ICT, construction, and agricultural sectors.

The plastics' many useful and varied physical and chemical properties make them strong, lightweight and mouldable. This versatility makes plastics suitable for almost any application. In particular, the automotive, aerospace and medical sectors see the use of high performance plastics in several advanced technologies.

With the petrochemical industry providing a steady supply of raw material to the plastic industry, Malaysia's world-class resin production facilities can produce a variety of downstream plastics, including polyethylene (PE), polypropylene (PP), polyvinylchloride (PVC), polystyrene (PS), acrylonitrile butadiene styrene (ABS), polyacetal (PA), polyester copolymers, styrene acrylonitrile (SAN) and polybutylene terephthalate (PBT).



Additionally, with Government Green Procurement (GGP) and MyHIJAU Mark recognitions, manufacturers have been incentivised to produce certified high-quality and environmentally friendly plastic packaging products and household wares at competitive prices.

With new and emerging markets such as the PRC, the demand for regional suppliers of plastic products is expected to grow. Malaysia has been a net exporter of plastic products for the past seven years. In 2017, Malaysia exported RM13.3 billion worth of plastic products.

The plastic products industry is a labour-intensive industry that can benefit from the extension of the ACA. In efforts to reduce dependency on unskilled workers, local plastic product manufacturers have increasingly considered incorporating Industry 4.0 elements to improve the efficiency of their manufacturing processes, especially as they prepare to seize growing opportunities in new markets.

The overall reduction in oil prices over the past few years has resulted in the cost of manufacturing plastic products to drop significantly, and hence increasing demand in plastics production. This instability of the crude oil prices provides opportunities for plastic product manufacturers to produce higher value-added products with better profit margins.

Other areas with high investment potential include the production of high-tech advanced materials, such as biopolymers, high-strength composites, and nano-particles, as well as manufacturing related services, such as the recycling of locally generated toxic waste.

The plastic products industry saw 33 projects approved in 2017 with investments of RM714.2 million. FDI contributed RM407.7 million, making up more than half of total investments, while the remaining RM306.5 million came from DDI. These projects created 1,949 job opportunities, 337 (17.3%) of which are in the managerial, technical or supervisory categories, and 370 (19%) were skilled positions. There were 16 new projects worth RM402.6 million, while the other 17 were expansion/diversification projects with investments of RM311.6 million.

> "Malaysia has been a net exporter of plastic products for the past seven years. In 2017, Malaysia exported RM13.3 billion worth of plastic products."

A notable project approved in 2017 was Saiyakaya (M) Sdn. Bhd., a Malaysian-owned company that will be investing RM19.7 million into the production of PE protection film. The project will be operating in Rawang, Selangor, and will create 53 job opportunities. The company provides tailor-made protection film to meet their customers' specification. Their products will be marketed for both domestic and international manufacturers.

Rubber Products

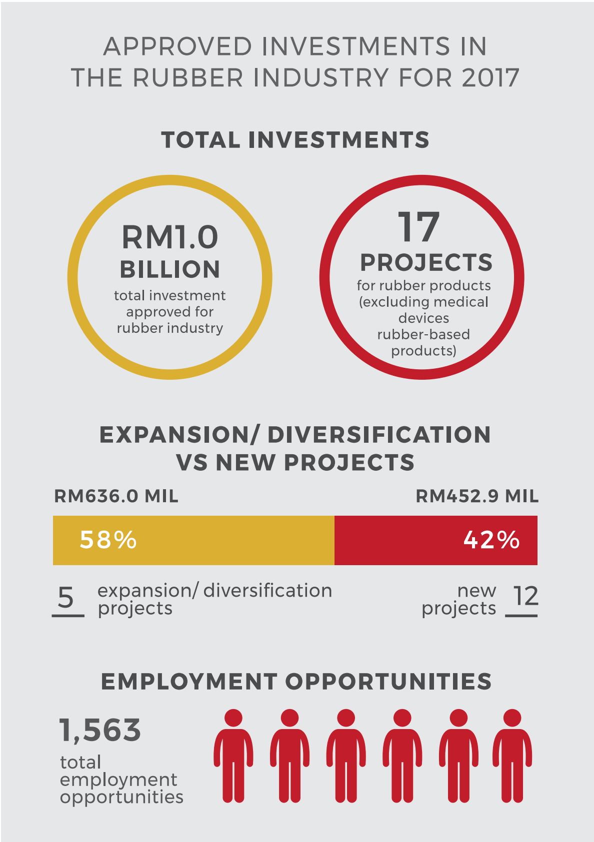
The rubber products industry comprises three sub-sectors; namely, latex products, tyres and tyre-related products, as well as industrial and general rubber products. It has been identified as one of the biggest potential contributors to GNI, especially since its downstream applications have a large cross-industry effect. Given the aggressive regional competition, Malaysia's competitive advantages ensure that it remains a global player, supplying the world market with a wide range of prime rubber products.

Potential investors can tap into the industry's well-established ecosystem dominated by SMEs. They could also leverage the abundant supply of quality raw materials, infrastructure, and R&D support; availability of incentives; and lower operational costs.

Advances in technology and growing awareness of sustainability have given a new boost to the industry. With the rise of Industry 4.0, the rubber products industry has the opportunity to transform itself from simply being a traditional commodity supplier to becoming a high-tech industry.

Industry 4.0 enables industry players across the ecosystem to harness the potential of the latest technologies, such as additive manufacturing (3D printing) and IoT. As the industry is a labour-intensive one, it can benefit from the tax incentives for Industry 4.0 upgrades, as well as the extension of the ACA.

While Malaysia is already known as the world's top glove producer, the Government continues to encourage the shift towards high value-added and high-technology rubber products.



This includes rubber products with engineering, construction, and marine applications, such as seismic bearings and rubber composites. Other targeted areas are rubber-based nano-materials/ advanced materials and high value-added rubber products such as magnetorheological fluid (MRF) in automotive rubber devices, high performance glow in the dark thermoplastic vulcanizate (TPV) blends, and rubberised bitumen.

The 1,538-acre Rubber City, located in Kedah, represents the next phase of development in the rubber industry. Supported and facilitated by both the Federal Government and the Kedah State Government, Rubber City will comprise industrial and commercial zones, as well as an R&D hub.

Projects located in Rubber City that produce specialised latex and rubber products, precision-engineered rubber products, and green rubber products, as well as catalytic anchor tenants, are eligible for various incentives.

In 2017, a total of RM1.0 billion was approved across 17 projects for the rubber products industry (excluding medical devices rubber-based products). The approvals included 12 new projects with investments of RM452.9 million, while the five expansion/diversification projects were valued at RM636.0 million. Eight of the total approved projects were wholly Malaysian owned, eight were wholly foreign-owned, and one was a joint-venture project worth RM5.1 million. Overall, projects in this industry will create additional 1,563 employment opportunities.

One notable project approved in 2017 was from Shibata Asia Sdn. Bhd. to produce marine fenders and rubber master batch. Located in Klang, Selangor, the RM25 million project manufactures marine fenders using technology from its Japanese parent company, Shibata Industrial Co. Ltd. The company will provide 40 job opportunities, out of which 80 per cent are high-income jobs for Malaysians.

Wood & Wood Products and Furniture & Fixtures

This industry continues to be a significant contributor to the Malaysian economy. Malaysia was ranked as the eighth largest exporter of furniture in the world, 80 per cent of which is wood-based. Its main overseas markets are the USA, EU, Japan, and Australia. The industry comprises over 3,500 mostly locally-owned companies that are concentrated in Johor, Selangor, and Pulau Pinang.

The Government has set an annual growth target of 6.4 per cent for timber exports, which are estimated to be worth RM53 billion by 2020. In 2017, Malaysia exported RM23.2 billion worth of wood and wood products, primarily consisting of furniture and panel products, such as medium-density fibreboard (MDF) and plywood. Although automation and Industry 4.0 in this sector has been slow to take off, Malaysian manufacturers have started to raise capital expenditures for technological investments.

The wood & wood products and furniture & fixtures industry is transitioning up the value chain, from mostly concentrating on primary processing activities and the production of generic products. Local companies are now differentiating themselves, by becoming Original Design Manufacturers (ODMs) and Original Brand Manufacturers (OBMs), producing high value-added furniture with creative and unique design aesthetics. This enables Malaysian companies to keep rising to the challenge of stiff global competition.

The Malaysian furniture industry has come a long way from its humble beginnings more than fifty years ago. Traditionally a cottage industry, it is now a multibillion-ringgit industry driven by technology, innovation, and modernity. Malaysian furniture is increasingly gaining access to new markets in South America, the Middle East, Africa, and countries in the Commonwealth of Independent States. Malaysia is a major supplier of office furniture to the Middle East, and has also been increasingly recognised for its hospital and laboratory furniture.

As the world demand for sustainable and eco-friendly products increases, the industry will be focussed on investments in R&D, and the innovation of new products, catering to this fast-growing consumer market in green and environmentally friendly products, especially in European and other First World nations.

The Malaysian furniture industry has considerable advantages when it comes to product creativity and design. From regular furniture to designer items, the variety that Malaysian furniture designers come up with appeals to even the most adept and experienced of collectors and theme decorators.

A potential area of innovation would be the establishment of a centralised furniture hub, where all industry-related activities, including designing and training, are housed at one location for the benefit of all industry players. Incentive could also be granted to companies adopting new technology such as automation and modernisation, in preparation for Industry 4.0. These efforts aim to accelerate the achievement of the National Timber Industry Policy (NATIP) by 2020.

The industry is currently facing a shortage of both skilled and unskilled workers, as well as raw materials in the form of rubberwood. To ensure sustainability of raw material supply to the local furniture industry, the Government had imposed a ban on rubberwood exports in the second half of 2017.

APPROVED INVESTMENTS IN THE WOOD & WOOD PRODUCTS AND FURNITURE & FIXTURES INDUSTRY FOR 2017

CIPE RATIO

HIGHER THAN THE CIPE IN 2016

↑16% RM305,200

DOMESTIC VERSUS FOREIGN INVESTMENTS

Total investments RM648.2 million

Domestic Investments	Foreign Investment
RM503.7 MIL	RM144.5 MIL
78%	22%

Potential investors into this industry may take advantage of the Automation Capital Allowance (ACA) incentive. MIDA had carried out several awareness programmes on the ACA incentive in Batu Pahat and Muar in 2017, both of which had accounted for the production of more than 70 per cent of Malaysia's furniture exports.

The establishment of the 987-acre Muar Furniture Park, and the setting up of another furniture park in Lanchang, Pahang, should see further development of Malaysia's furniture sub-sector, and boost furniture exports towards achieving the National Timber Industry Policy (NATIP) by 2020.

Despite there being fewer projects approved for the wood & wood products and furniture & fixtures industry in 2017 as compared to 2016 (39 versus 57), the total investments of RM648.2 million represented a modest 4 per cent decrease from 2016. This implied higher capital investments per project, further evidenced by a CIPE increase of 16 per cent to RM305,200 from 2016. Domestic investments were RM503.7 million, while foreign investments totalled RM144.5 million. These projects will create employment opportunities for 2,124 people. The furniture sub-sector attracted investments of RM171 million across 13 projects. Domestic investments accounted for RM90.2 million of total investments, while foreign investments of RM80.8 million made up the rest.

There were eight new projects with investments of RM53 million, while the remainder were expansion/diversification projects worth RM118 million. All the new projects approved were for Malaysian-owned companies, while 70 per cent of the approved expansion/diversification projects were contributed by foreign sources.

Two projects worth RM23.6 million were approved in the panel products sub-sector, and three projects worth RM23.9 million were approved in the mouldings and builders' carpentry and joinery sub-sector. Elsewhere, 12 projects with investments of RM112.3 million were approved. This covers manufacturing materials such as wood pellets, activated carbon, briquettes, and engineered wood products.

Among the significant projects approved was a diversification project worth RM59 million by a wholly foreign-owned company to manufacture composite wood products, made from wood waste and bonded together with a resin, as alternative raw materials for the production of wooden furniture. This project is expected to use 900,000 tonnes of wood waste per year, with its entire production meant for export.

Paper, Printing, and Publishing

Malaysia's paper, printing, and publishing industry encompasses pulp manufacturing; paper and paper product manufacturing; and printing and publishing.

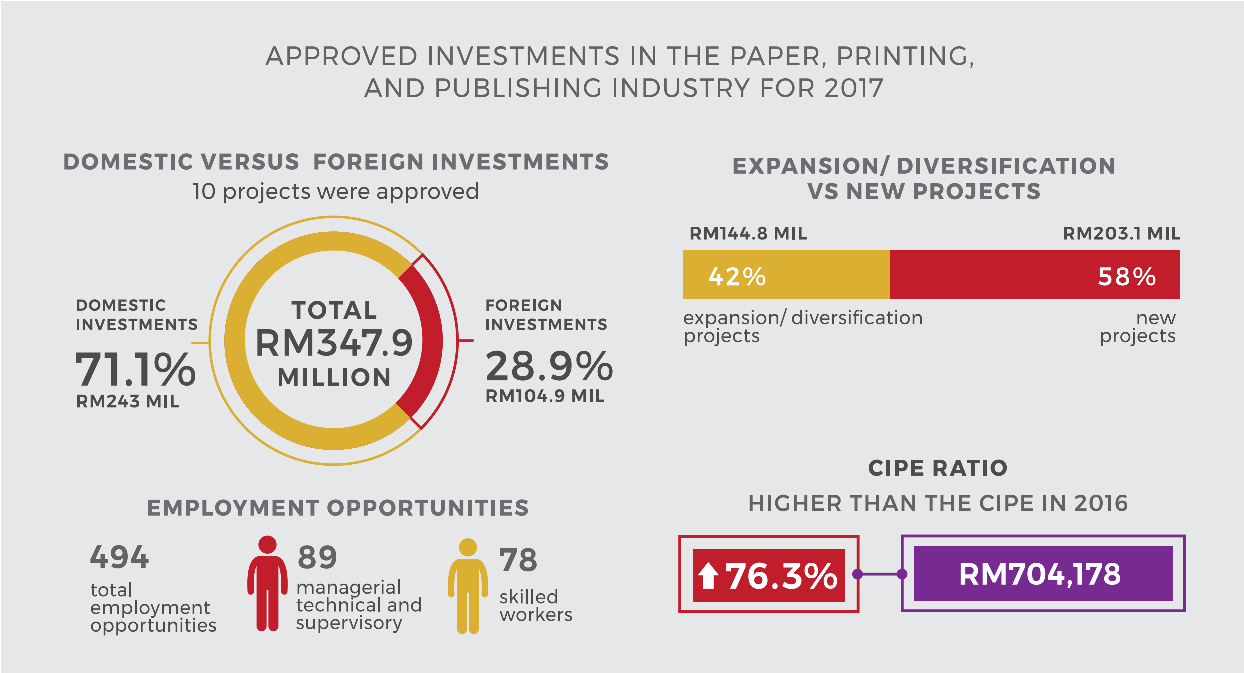
The industry's performance remains steady, with over 20 paper mills in the country capable of producing a total of approximately 1.9 million metric tonnes per annum. Some major companies in the industry include Muda Papermills Sdn Bhd., Nibong Tebal Personal Care Sdn. Bnd., GS Paper & Packaging Sdn.Bhd., and Pascorp Paper Industries Berhad.

MALAYSIA'S PAPER, PRINTING, AND PUBLISHING INDUSTRY

Separate cellulose fibres from wood using both mechanical and chemical processes

Produce various grades and types of paper (including paper made from biomass) and packaging products such as corrugated cardboard, labels, stickers, disposable diapers

Produce books, magazines, greeting cards, calendars, and other such materials, as well as carry out other miscellaneous printing activities



Local companies in this industry face challenges on multiple fronts. For example, the reduction of hard-copy publications due to changing consumer lifestyles has led to a decline in the supply of waste papers mainly used as raw materials by most of Malaysia's paper producers. Domestic mills import approximately 10 per cent of their waste paper requirement, as Malaysia allows such importation. To maintain their competitiveness, local SMEs are encouraged to leverage current trends, such as online shopping, that have created new business opportunities, including producing small packaging products with creative designs at low volumes and high mixes.

A total of 10 projects were approved in the paper, printing, and publishing industry in 2017, with investments amounting to RM347.9 million. These projects provided employment opportunities for 494 people, of which 89 (18%) are managerial, technical, or supervisory roles, and another 78 (15.8%) were skilled positions. Of these 10 projects, half were expansion/ diversification projects with investments of RM144.8 million (42%), and the other half were new projects with investments of RM203.1 million (58%).

Companies in this normally capital-intensive industry have been increasing the level of technology employed, as evidenced by a CIPE of RM704,178, a dramatic increase of 76.3 per cent from a CIPE of RM399,338 the year before. Domestic players dominated the industry, making up RM243 million (71.1%) of the total approved investments.

The paper and paper products sub-sector charted the majority of investments, for a total of RM336.2 million across eight projects. The largest single investment in this sub-sector was by a newly approved majority Malaysian-owned joint venture project to produce moulded paper products. This project accounted for a total of RM133.6 million, or 38.4 per cent, of investments approved.

Performance of
the Service Sector

2.3

Staying Resilient

An evolving services sector continues to draw investors with new opportunities. Positive growth spread all around the healthcare, transport, hotel & tourism and distributive trade sub-sectors

Like bees to honey

Two thirds of global FDI stock is concentrated in the services sector, based on the World Investment Report 2017 where global FDI in 2016 reached US$1.7 trillion. Manufacturing and the primary sector accounted for 26.0 per cent and 6.0 per cent, respectively. Investments in the services sector in Malaysia is aligned with these global trends.

As Malaysia moves headlong towards its goal of being a developed nation by the year 2020, the services sector continues to play a prominent role in its growth. Investors remained drawn to this sector, making it a resilient sector for the Malaysian economy. The Government's ongoing support in nurturing this dominant sector has seen inclusive and sustainable growth results that will propel the nation into the next level of development.

In 2017, the sector attracted investments in 4,731 approved projects amounting to RM121.0 billion. Of this amount, domestic investors supplied the lion's share of RM92.2 billion, with foreign investors contributing RM28.8 billion. The real estate sub-sector continued to lead services with the largest investments totalling RM45.7 billion, followed by global establishments at RM14.0 billion, financial services at RM11.8 billion, distributive trade at RM9.4 billion, and hotel & tourism at RM9.3 billion.

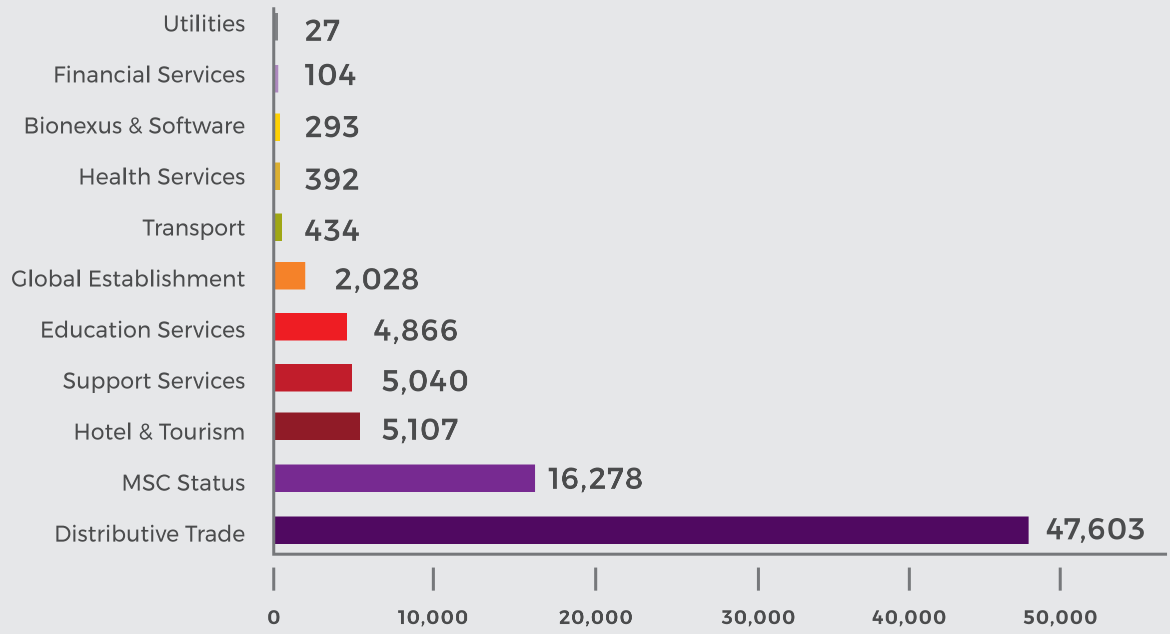
The contribution of the services sector drives GDP growth in developed economies, and Malaysia is experiencing a similar trend; the nation is well on its way to meet the targeted 56.5 per cent by 2020, as the figure stood at 54.6 per cent by the end of the fourth quarter of 2017. The main growth contributors were the wholesale and retail trade, and information and communications sub-sectors.

Unlocking potential

The development of the services sector is guided by the Services Sector Blueprint, launched in 2015. The Blueprint aims to unlock the potential of the sector and transform it into one that is knowledge-intensive and focused on innovation.

Specific sectoral strategies will reveal greater growth potential in the sector. Transformation of the services sector is ongoing with an emphasis on shifting towards high-value strategic investments, as laid out by the Eleventh Malaysia Plan (11MP). This includes enhancing the standards of service of our local suppliers, to bring them on par with the best in the world. The internationalisation of services will be the catalyst in developing this sector as it increases competitiveness, secures new markets, and enhances investment opportunities. The anticipated outcome is to attract

POTENTIAL JOBS CREATED BY APPROVED SERVICES PROJECTS IN 2017



higher private investment, boost services exports and create more high-income jobs in line with the national aspiration to become an advanced and inclusive nation. The 11MP targets upwards of a 40 per cent increase in export revenue of services from the RM135 billion posted in 2015 to RM195 billion in 2020.

The services sector is the largest employer in the economy, having created 82,172 job opportunities in 2017; of this, almost 84.0 per cent work in distributive trade, MSC status companies, and hotel and tourism.

All eyes on the digital economy

E-commerce is the fastest growing sector of the global trade landscape and has become an integral component of the world's largest economies. There is still much room for growth in Malaysia's e-commerce sector, as it contributed only 6.1 per cent to the nation's GDP in 2016 when compared to countries with much higher GDP contribution such as the US (35%), PRC (21%), and Taiwan (14%).

Here on our shores, investors are becoming aware of the vast potential of e-commerce as Malaysia has all the right ingredients for it to take off, offering high internet penetration from the heart of ASEAN, and linking businesses to over 620 million consumers in the region. Furthermore, the Government has implemented various initiatives to develop the country's financial and logistics infrastructure, which forms the backbone of the e-commerce ecosystem.

> "E-commerce is the fastest growing sector of the global trade landscape and has become an integral component of the world's largest economies."

In efforts to lift the barriers to e-commerce, the Government launched the first Digital Free Trade Zone (DFTZ) on 22 March 2017, providing physical and virtual zones to facilitate Small Medium Enterprises (SMEs) to capitalise on the explosive growth of the internet economy and cross-border e-commerce.

MIDA takes the helm in developing the nation's e-Fulfilment hub, under the Malaysian National E-Commerce Strategic Roadmap (NESR) launched in 2016, to attract domestic and foreign investments in this area to achieve the target of doubling the e-commerce growth rate in Malaysia. E-commerce's contribution to GDP is expected to grow to 6.4 per cent in 2020. With the introduction of Digital Free Trade Zone (DFTZ) and Go e-Commerce initiatives, the contribution of e-commerce to GDP is expected to be higher than the targeted rate.

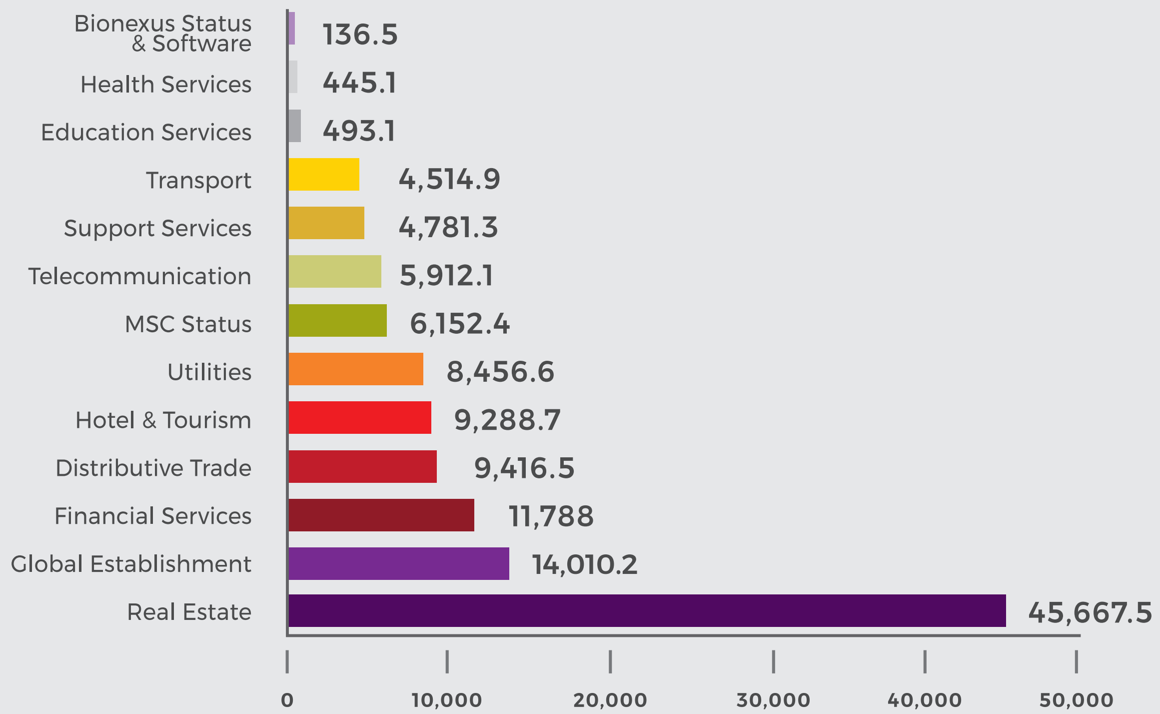
According to management consulting firm A.T. Kearney, Malaysia's online retail market is expected to grow by 23 per cent per year through to 2021, driven by electronics and media. In the firm's 2017 Global Retail Development Index released in June 2017, Malaysia ranked third among the top 30 developing countries for retail investment worldwide, with India topping the list, followed by the PRC.

On par with peers: Malaysia's Participation as Base Erosion and Profit Shifting (BEPS) Associate under the Organization for Economic Cooperation and Development (OECD)

With its aim to become a developed nation, Malaysia is focusing its efforts on attracting investors undertaking actual activities rather than those seeking only to

capitalise on tax benefits. To that end, Malaysia has applied and has been accepted as a BEPS associate under the OECD. As a member of BEPS, the Government will undertake several measures to reduce tax leakages and avoid profit shifting among countries. Although the initiative will pose a challenge to MIDA and other Investment Promotion Agencies (IPAs) when promoting investments, Malaysia's participation as a BEPS Associate is a tactical move to bring the nation on par with other developed countries in terms of attracting genuine investors.

TOTAL INVESTMENTS IN THE SERVICES SECTOR IN 2017 (RM MILLION)



Note: Telecommunication (January-September 2017)

2.4

A Bird's Eye View

An overview of the investments in the services sector, which was mainly coloured by the digital race that continues to raise the bar for innovation, research and development in these rapidly evolving times

Regional Establishments

Principal hubs: A thriving hive of activity

Malaysia holds many attractions for MNCs looking for a strategic location to headquarter their global operations. As company hierarchies and decision-making processes shift towards a decentralised model, MNCs are dividing their traditional corporate centres to offshore locations.

Besides its prime geographical location in the centre of ASEAN, Malaysia has a whole host of other advantages. Competitive costs of operations as well as proximity to customers and supply chains in the regional market underscores the importance of Malaysia as a regional hub location.

Top class infrastructure and telecommunications, advanced financial markets, pro-business legislations and a multicultural and multilingual professional workforce are additional attractions. Despite the competition from its regional neighbours, Malaysia has ranked 3rd as a global offshoring destination, after the PRC and India in AT Kearney's Global Services Location Index 2017; a position that the nation has held since 2004.

The concept of Principal Hubs (PH) which was mooted by the Malaysian Government in 2015, is defined as a locally incorporated company that uses Malaysia as a base to manage, control and support its key functions.

Since its introduction, the PH incentive has been successfully attracting many MNCs to make Malaysia their regional operations hub.

To encourage the development of PHs, this incentive has been extended until the year 2020 under the recent Budget 2018. On top of this, to boost Malaysia's attractiveness, a policy review of the PH scheme was announced on 7 July 2017. With this revision, the '30:70 sales threshold' imposed previously as a condition under this package has been removed, making the package more appealing to local conglomerates which derive a significant portion of their income in Malaysia.

The Principal Hub initiative is a driver for innovation as it encourages the transfer of high-value technology to the country, including R&D activities. It also creates job opportunities for Malaysians in a knowledge rich environment. In 2017, MIDA has supported the drive to promote Malaysia as a PH destination with outreach programmes including Specific Programme Missions to Singapore, Paris and Madrid.

The outlook for this sector is bright with support from the Government through its pro-business policies which accommodates the rising trend of MNCs offshoring trading and services activities to complement the evolving global business models of today.

Principal Hub projects approved

Under the PH scheme, Malaysia has seen a steady increase in companies setting up their regional headquarters in the country with a total of 28 PH projects approved. Not only do they bring in business commitments for the long term, which stands at RM28.57 billion– but also spill-over effects of spending on ancillary services amounting to RM2.35 billion and the creation of 2,020 high-value jobs for Malaysians over the next 10 years.

The year 2017 saw nine Principal Hubs projects approved – a mixture of both large and small MNCs – with committed business spending of RM13.64 billion, utilising ancillary services worth RM1.21 billion and creating 577 new high-value employment opportunities with a wide scope for knowledge transfer for Malaysians. Among them are foreign companies from the Netherlands, United Arab Emirates, Germany, Japan and the US operating in key economic sectors such as E&E, commodities and food & beverages.

In alignment with Malaysia's focus on developing Industry 4.0, several companies in the E&E sector have leveraged on the Principal Hub incentive to undertake R&D activities and develop various software solutions and control systems for smart applications. Many Principal Hub companies have also adopted real-time interconnected technologies to manage their regional and global supply chains. As an example, many Principal Hub companies which undertake procurement and distribution activities utilise automated warehouses and real-time tracking systems to manage their inventory more efficiently. It is envisioned that more companies will adopt IoT technologies to keep up with the ever-changing global business landscape.

Two notable PH projects that were approved in 2017 are Roland, a leading Japanese based electronic musical instrument manufacturer and IKEA, the Dutch-headquartered retail furniture giant. Through its Principal Hub, Roland aims to rationalise Roland Group's global supply chain by centralising planning, procurement, logistics, sales and marketing and R&D to achieve synergy and to optimise and improve the Group's profitability. IKEA's Regional Distribution and Supply Chain Centre in Pulau Indah, Selangor will serve 12 retail stores in ASEAN, which will increase to 20 stores by 2026.

PH companies have shown strong commitment in developing local talents to support their global supply chain activities. Several companies have implemented internship programmes to develop the skills of university graduates before hiring them to be part of their operations.

As part of the PH initiative, approved companies may apply to MIDA for the transfer of key expatriate personnel from their overseas operations to Malaysia. They will play an integral role in training the local employees in critical areas such as R&D, strategic procurement & development and strategic business planning, as these positions are expected to be eventually taken over by Malaysians, creating higher value jobs.

Representative Offices (RE) and Regional Offices (RO)

The Representative Office (RE) is an office of a foreign company set up to explore investment opportunities in the country especially in the manufacturing and services sectors, to enhance bilateral trade relations, promote the export of Malaysian goods and services and carry

TABLE OF GLOBAL ESTABLISHMENTS APPROVED IN 2017

YEAR	2017		
STATUS	NO	INVESTMENT (RM)	TOTAL EMPLOYMENT
PH	9	13,636,189,222	1,321
RE	121	153,809,883	346
RO	95	220,180,656	361
GRAND TOTAL	**225**	**14,010,179,761**	**2,028**

out R&D activities. Meanwhile, a Regional Office (RO) is base of a foreign company that coordinates and supports their parent company's operations in the Asia Pacific region. These other forms of Regional Establishments in Malaysia also saw positive developments in 2017. A total of 216 RE/RO projects were approved with investments of RM374 million. This was 33.6 per cent higher than the performance in 2016 which registered approved investments of RM280 million.

These approved projects are expected to create 707 new jobs for the country. Of these, 41 per cent of the investments are from REs and 59 per cent from ROs. MIDA continues to encourage these companies to take their strategic partnership with Malaysia to the next level by setting up companies to grow their business in the region.

Logistics in the digital economy

Digital race

Disruptions affecting the logistics industry is on the riseas the retail industry and supply chains are being revolutionised by digital technology. For instance, the rise of e-commerce has led to new digital entrants in the last-mile delivery market. An increasing number of logistics companies in Malaysia are harnessing new technologies and adopting innovative distribution methods and specialised warehousing facilities to improve operations efficiency, providing faster delivery and a better customer experience. The Economic Planning Unit (EPU) has formulated the Logistics and Trade Facilitation Masterplan (2015-2020) which provides the strategic framework and roadmap to elevate Malaysia to be the "Preferred Logistics Gateway to Asia" by 2020 and beyond. The Government remains committed to support the evolution of logistics companies in the new digital era with the provision of top quality infrastructure such as the Digital Free Trade Zone, KLIA Aeropolis, new sea ports and rail connectivity. With these endeavours, the Government hopes to thrust Malaysia as the leading regional logistics hub.

Recognising that the logistics industry is heavily dependent on a talented workforce, MIDA is stepping up efforts to develop the human capital requirement for this industry. Among initiatives undertaken in 2017 is the brainstorming session in collaboration with the Malaysian Digital Economy to enhance talent development in the e-commerce and e-fulfilment industry. MIDA is on the Technical Steering Committee of the study on workforce demand and supply in the logistics sub-sector, that is carried out by the Institute of Labour Market Information & Analysis and KPMG Management & Risk Consulting Sdn. Bhd.

Integrated Logistics Services (ILS) projects approved

The logistics industry plays an integral role in enabling the nation's supply chain and has seen robust growth, which is set to continue in tandem with the rest of the economy. The main activities performed under the ILS business category is freight forwarding, warehousing, transportation and other value-added services such as distribution, procurement and supply chain management.

As at 2017, a total of 84 ILS projects have been granted incentives with investments valued at RM4.9 billion. A total of 10 ILSs were approved in 2017 and further

INVESTMENTS APPROVED FOR INTEGRATED LOGISTICS SERVICES (ILS) IN 2017

84 ILS PROJECTS GRANTED INCENTIVES

RM4.9 BILLION WORTH OF INVESTMENTS

growth is expected in this sub-sector. The ILS projects approved are from Malaysian companies with investments totalling RM802.8 million and will be creating jobs for 468 Malaysians. From the latest approvals of ILS projects, it can be seen that most of the ILS companies in Malaysia are migrating towards integrated operations, and implementing ICT driven innovations like e-commerce as well as specialised logistics services to support various industrial sectors such as the oil and gas and petrochemicals.

A brief description of two significant ILS projects in the area of logistics in the digital economy are:-

Pos Malaysia

Pos Malaysia Berhad is a postal services company with a widespread network of over 1,000 touch points countrywide that include Pos Malaysia Outlets, Pos Minis, Pos24 (self-service terminals), Post-On-Wheels (mobile outlets), postal agents and stamp agents, making it one of the most extensive retail network in Malaysia. The company is a major player in the e-Fulfilment business, leveraging its strength as Malaysia's leading courier company.

The local postal giant has strategically positioned itself to provide end-to-end logistics solutions. Pos Malaysia is playing a major role in developing the physical zone of the newly launched DFTZ, which consists of three major components that combine physical and virtual zones. The physical zone comprises the e-Fulfilment Hub and Satellite Services Hub, while the virtual zone consists of the eServices Platform.

The first phase of the e-fulfilment hub sees Pos Malaysia investing US$14 million (RM60 million) to upgrade and renovate the massive KLIA Air Cargo Terminal 1 (KACT1) e-Fulfilment Hub, which is the former LCCT terminal. The ex-passenger terminal will be converted into to a high tech cargo terminal to serve e-tailers the likes of Lazada and Zalora.

Xin Hwa Trading and Transport

Xin Hwa Trading and Transport Sdn Bhd, primarily involved in the provision of land transport, warehousing and distribution operations as well as freight forwarding, custom brokerage, manufacturing and fabrication of trailers, is expanding its existing warehouse space as it is close to full utilisation. The company plans to transform its warehouse and distribution division at Pasir Gudang into an integrated logistics hub. Xin Hwa's recent foray into e-commerce is via the acquisition of a 50 per cent stake in China-based Yiwugou Ecommerce Sdn Bhd for RM500,000. The company plans to capture the business-to-business market, as the Yiwu Commodity Market is the world's largest small commodity wholesale market with 1.8 million products by 75,000 wholesalers and retail shops. This unique platform allows direct access to Zhejiang's five districts and ships 570,000 containers to over 200 countries.

International Integrated Logistics Services (IILS)

IILS Status companies provide integrated and seamless logistics services (door-to-door) along the logistics value chain as a single entity. A Customs Agent License will be issued to qualified IILS Companies.

As at 31 December 2017, a total of 23 companies were approved IILS status compared to 21 in 2016. Of these companies approved, 20 are wholly Malaysian owned. The Lazada Group was one of the significant IILS projects approved.

Lazada Group

Lazada Group is the pioneer and largest e-marketplace provider, with the biggest customer base in Southeast Asia, providing online shoppers access to many retailers with a convenient internet-based shopping experience.

Lazada Express (Malaysia Sdn. Bhd.), an offshoot the Lazada Group provides logistics services such as freight forwarding, transportation and warehousing as well as value-added services, offering a range of delivery options for the goods purchased online, such as same day delivery, next day express delivery and cross border solutions. This business has created jobs for 200 Malaysians and enhances the output of the main Lazada Group.

Business Services

Forward frontier

The business services sub-sector comprises three main areas, namely professional services, premium shopping outlets and ICT services, which are the new digital generation services with huge growth potential.

Professional Services

Business and Professional services have been recognised as one of the value-added sectors when the Malaysian Government introduced the twelve National Key Economic Areas (NKEAs) in 2010. In 2012, the Government further liberalised the services sector to allow up to 100 per cent foreign equity participation in phases. These high-value services, creating top wage jobs will propel Malaysia towards becoming a high-income nation. Among the services liberalised under this sub-sector include accounting and taxation, engineering, legal, architectural and telecommunication services.

Premium Outlet

Shoppers' paradise

Luxury shopping is a top draw for foreign tourists to Malaysia, and in recognising this, many incentives and strategies have been devised to boost this avenue for economic growth.

The establishment of premium outlets which offer discounted luxury items is one of the nation's ETP's Entry Point Project 3 (EPP3). Planned in 2015, the targeted contribution of premium outlets to the GNI is RM875.2 million by the year 2020; and also to provide 1,500 job opportunities for Malaysians.

To date, MIDA has approved five premium outlets in different parts of the country as per the table below. The newest, Horizon Village Outlet will open its doors by mid-2018 in Serenia City, Selangor (which is located 10 kilometres away from the Mitsui Outlet Park).

In 2017, a total of four first tenants of premium outlets were approved for tax incentives by MIDA. Three of the approvals were for the Malaysian brand CR Boutique which carries Carlo Rino products, as the first tenant at Design Village Penang, Mitsui Outlet Park and Freeport A'Famosa Outlet. The other company, CB Franchising that carries the Bonia brand has been approved incentives as the first tenant at A'Famosa Outlet.

TABLE OF APPROVED PREMIUM OUTLETS

PREMIUM OUTLET	OPENING	LOCATION	INVESTMENT (RM)	BRANDS OUTLETS
Johor Premium Outlet (JPO)	December 2011	Kulaijaya, Johor	150 million	130
Mitsui Outlet Park (MOP)	July 2015 (Expansion to be completed by 2021)	Sepang, Selangor (6km from KLIA)	335 million	128 (after expansion 250)
Penang Design Village	November 2016	Batu Kawan (close to Penang Second Bridge on the mainland)	200-300 million	150
Freeport A'Famosa	January 2016	Alor Gajah, Melaka	190 million	70
Genting Premium Outlet (Approved directly by Ministry of Finance (MOF)	June 2016	Genting Highlands	200 million	150
Horizon Village Outlets (HVO)	Targeted to open by mid 2018	Serenia City, Selangor (10km north of KLIA)	400 million	150 (will include local crafts, like batik and pewter)

ICT Services

As part of the ecosystem of the internet economy, services in the ICT industry covers many creative and cutting-edge technologies, such as gaming and animation studios, digital content, data centres and cloud services, Big Data Analytics, cyber security and, services supporting the IoT. Financial services in the digital age, termed Financial Technology (Fintech) is another component of ICT service with high growth potential.

Key segments of Fintech industry include business process outsourcing, financial media and data solutions, payment platforms as well as e-commerce. Malaysian consumers are embracing Fintech with transaction values (projecting annual growth rate, CAGR 2016-2020 of 23.3%) which will result in a total amount of US$14.4 billion in 2020. As of 2017, there are 70 Malaysian companies in the Fintech space, with four of them listed on the top 15 Asian Fintech start-ups. These companies are developing financial solutions to enhance efficiency in the market by using latest technology on data analytics, biometric authentication and near field communications.

MDEC has outlined key strategies to position Malaysia as the preferred regional hub for games development and delivery. These key strategies will build upon Malaysia's existing digital content sector, which includes attracting anchor companies, increasing local games capacity and capability and raising global market access resulting in the creation of many high-value jobs in the IT field.

MIDA works closely with MDEC in several of their initiatives in providing inputs and insights of the overall ecosystem of the industry. This includes the Digital Transformation Acceleration Program (DTAP) and being part of various committees such as MSC Malaysia Customized Incentives Committee, Grant Disbursement Committee and Technology Approval Committee.

Research and Development (R&D)

Innovation imperative

R&D is a cornerstone for development; featuring new ideas that are translated into commercial profits and new sustainable solutions for old conundrums thereby, increasing efficiencies and profits. As a measure of a nation's development, R&D spending is evaluated against a nation's GDP. It can also be benchmarked against the most advanced countries and those in the same developmental band as Malaysia. There is an upward trend of spending for R&D globally and Malaysia is moving in the same direction. The Global Innovation Index 2017 has ranked Malaysia 3rd among the upper middle-income nations, behind China and Bulgaria.

By strengthening the innovation ecosystem, the country is developing a conducive environment to foster trust among all stakeholders. This in turn will contribute to higher value R&D activities and increase R&D spending. It will ultimately cement Malaysia's position as a high technology hub for R&D, design and development (D&D) testing and technical support centre and Centre of Excellence (COE).

TYPE OF R&D APPROVALS (1995 - DECEMBER 2017)

TYPE OF R&D APPROVALS	NUMBER	EMPLOYMENT	DOMESTIC INVESTMENT (RM) MILLION	FOREIGN INVESTMENT (RM) MILLION	TOTAL CAPITAL INVESTMENT (RM) MILLION
R & D CONTRACT	76	1,482	382.6	207.3	590.0
R & D COMPANY	30	631	87.6	110.0	197.6
R & D IN-HOUSE	58	3,378	709.0	1,202.0	1,911
R & D STATUS	18	945	140.7	35.0	175.6
TOTAL	**182**	**6,436**	**1,319.9**	**1,554.3**	**2,874.2**

To complement these efforts, MIDA offers tax incentives for R&D that can be enjoyed by manufacturers with in-house R&D facilities or research service providers. These are some of the resources the Government has provided to encourage innovation, in addition to assistance given to industries in the promoted areas.

The table in pg74 lists the MIDA approved R&D projects to date. The research projects carried out are mainly in pharmaceutical, chemical, healthcare, machinery, E&E, automotive, energy, medical devices, palm-oil and, food production industries. These projects have created about 6,436 quality job opportunities, which are mostly in the science and technical fields.

Investments in this sub-sector has increased by 25 per cent, from RM266 million in 2016 to RM332.4 million in nine approved projects in 2017, creating 408 high value jobs. The ratio of foreign to domestic investment contribution is nearly 50-50.

Malaysia has a strong manufacturing base which is compelled to move up the value-chain in order to remain competitive. Collaborations with R&D institutions are crucial to propel the nation forwards towards its goals. The major players in the local R&D sphere are undertaking research projects such as semiconductors and faster fibre optics (E&E sector), edible oils, biodiesel engines and smart cars (automotive) and oleo chemical processing to name a few.

University – Industry Collaboration

The challenges in the Malaysian R&D sphere is that relatively few Malaysian companies carry out their own R&D which is relevant to investment, production or technology. Most patents are produced in universities, where funding is limited and not quite tailored to industrial needs.

Academia and industry have many synergies to leverage, and their collaboration will culminate in a higher research value, translating to commercialisation and hence economic growth. MIDA sees this potential and is actively engaging and creating linkages between industry and universities. In benchmarking against the world's most innovative nations, tertiary education centres have direct R&D links with industrial partners.

There is still much to do and investment opportunities to be had in this highest of knowledge fields, as Malaysia works to achieve its target of two per cent Gross R&D Expenditure (GERD) by the year 2020.

Based on the World Bank's World Development Indicator in August 2016, the total estimated spending of R&D worldwide is US$2,066.3 billion in 2017 and Malaysia's GERD is 1.1 per cent of the GDP compared to the top R&D nations, Republic of Korea's (ROK) at 4.2 per cent and Japan 3.8 per cent of GDP respectively.

In order to achieve innovation-led growth, several dynamic Government policies are in place, with an evolving portfolio of funding and support schemes covering different stages of the innovation process. The National Science and Technology and Innovation Policy (NSTIP), 2013-2020 provides guidelines and governance, while the Science to Action Programme monitors projects and policies towards sustainable growth beyond 2020. Since industry develops in tandem with the knowledge partners, the SME Masterplan (2012-2020) was launched to foster industry-academia relations whose internship programmes produce an industry-ready workforce.

Knowledge Partners

MIDA and the University of Nottingham Malaysia Campus (UNMC)

In building bridges between industry and academia, MIDA and UNMC collaborated in organising the Research Funding and Powering the Innovation Engine Conference on 23 and 24 August 2017.

The two-day conference focussed on three key areas, namely R&D, innovation and commercialisation, which were prompted by the 11th Malaysian Education Blueprint. It was a platform for sharing of knowledge on the topics of funding opportunities, sowing the seeds of collaboration and to focus academia on industry relevant concerns, with respect to Industry 4.0.

Monash Malaysia R&D Sdn. Bhd.

Monash University Malaysia launched its subsidiary Monash Malaysia R&D Sdn. Bhd (MMR&D) on 12 December 2017, entitled "University-Industry Collaboration: A Catalyst in Powering an Innovation Economy". MMR&D is a MIDA approved R&D status company which intends to work with industry players such as SMEs, MNCs and GLCs. The opportunities lie in the broad manufacturing base in Malaysia which is under pressure to move up the value chain to remain competitive. MIDA pledged to continue to facilitate and support companies and academia in their R&D ventures with the goal of enhancing the Malaysian industrial ecosystem.

MIMOS Semiconductor Sdn. Bhd.

This is the success story of a wholly Malaysian owned, approved R&D services company in the E&E sector specialising in semiconductor and nano fabrication, advanced analytical, nanoeletronic and nanophotonics, appearance modelling and prototyping, wireless intelligent communications and, integrated circuit design. MIMOS Semiconductor has been approved under the MIDA Pioneer Status incentive with an investment of more than RM118 million and created 205 high skilled jobs. The company's core business is providing full product development services to domestic and multinational companies such as Infineon, Reneon Technologies, Uzma Berhad, Eclimo Sdn. Bhd. and OSA Technology Sdn Bhd.

Advanced Seating Solutions Sdn. Bhd.

Advanced Seating Solutions Sdn. Bhd. was incorporated in 2016 to undertake the R&D activities of its parent company AirGo Design Pte. Ltd. Singapore. The R&D activities of this company focuses primarily on the design and engineering development of economy class aircraft passenger seats for narrow-bodied aircrafts such as A320 and B737.

In addition to that, it also carries out design activities of upholstery for the automotive industry. The company's niche expertise is in using composite material to produce light-weight economy class seats and thereby reducing aircraft payload and affording airlines reduced jet fuel consumption and ultimately cost savings.

In the initial stage, the company foresees an investment of RM4 million with the creation of 15 new jobs. Having a design house with extensive experience and network in such a safety stringent industry will complete the local aerospace industry ecosystem as well as catalyse high quality R&D collaborations between the industry, academia and Government to further propel Malaysia to become an innovation-driven economy.

THE FORECAST IMPACT OF THE GTMP VS BUSINESS AS USUAL

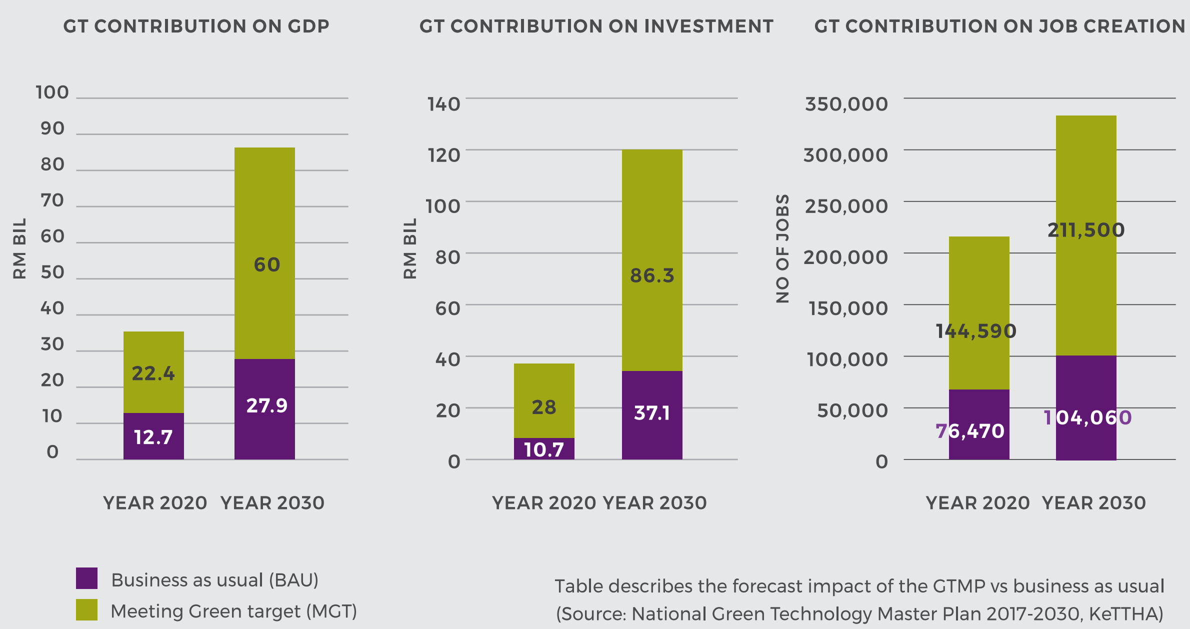


Table describes the forecast impact of the GTMP vs business as usual
(Source: National Green Technology Master Plan 2017-2030, KeTTHA)

Green Technology

Heal the world

Globally, concern for the environment is rising causing Green Technology (GT) to be commonly considered by the industries. GT investment refers to sustainable and environmentally friendly practices and products/services. Malaysia is determined to reduce carbon emissions by 45 per cent by 2030, and be fully carbon neutral by 2050. With the introduction of GT incentives in Budget 2014 and increased awareness of industries on the importance of climate change, more companies are now investing and adopting green initiatives for sustainable consumption and production.

The Incredible Hulk

Sustainable development is the key for successful long term economic growth and GT has been identified as a driver of the country's agenda to manage environmental pressure that accompanies economic growth. GT, under the National Green Technology Policy (NGTP), cuts across sectors which focuses on energy, building, waste management and transportation.

In line with the NGTP, the Green Technology Master Plan was launched in October 2017. It outlines Malaysia's strategic plans for green technology development until the year 2030. About RM1 billion in funds needs to be sourced over five years to create a low carbon and resource efficient economy.

The focus of this Master Plan is on ensuring sustainable energy consumption, environmental and climate protection while increasing innovation and productivity of current manufacturing process and services to drive Malaysia's aspirations for sustainable growth.

In this context, Budget 2014 allocated tax incentives for GT in the form of Green Investment Tax Allowance (GITA) for the purchase of green technology assets. Green Income Tax Exemption (GITE) on the use of green technology services and system was also introduced to further strengthen the development of green technology. Hence, MIDA has been targeting investment promotion efforts in the areas of Renewable Energy (RE), Energy Efficiency/Energy Conservation and Green Services. In 2017, MIDA has carried out 53 programmes and activities to engage with the private sector and relevant stakeholders, including Domestic Specific Promotion Missions, meetings, briefings and seminars.

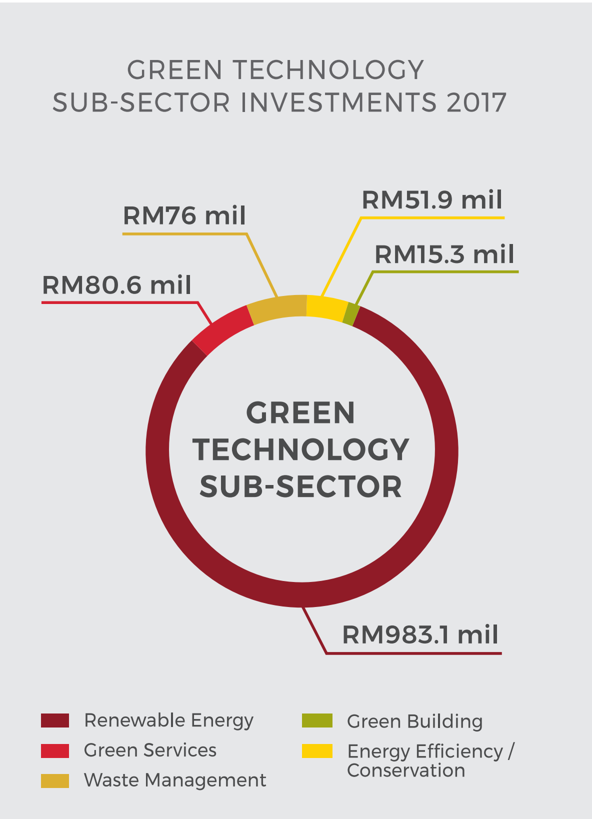
Renewable Energy

In its efforts to encourage greener and more sustainable industrial activities, the Government has identified in the 11MP that renewable energy (RE) resources will play a leading role in the country's alternative energy supply mix. Current installed RE mix capacity as at 2016 was 18.4 per cent, and it is targeted that RE will make up 20 per cent of the electricity generated by 2020.

Malaysia is ready to harness its abundant and varied renewable energy resources, namely solar, biomass, biogas, hydropower, and geothermal and has successfully promoted the growth of investments in solar photovoltaic cells (PV). To date, there are about 80 PV service providers, mainly locally owned, that have registered with the Sustainable Energy Development Authority (SEDA). With the Government's efforts, there has been promising growth of investments in the PV sector and this has energised the entire value chain of the industry, from the manufacturing of RE equipment right up to the installation of RE equipment to generate electricity.

Besides encouraging the private sector with the net energy metering (NEM) scheme to achieve the targeted 2080MW in RE generation by 2020, the Government (through the Energy Commission of Malaysia) has successfully completed the tender bidding exercise for the development of a large-scale solar (LSS) PV plant in Peninsular Malaysia and Sabah for Commercial Operation in 2017-2018. This plant will be connected to the distribution grid and will sell its energy to TNB or SESB under the Solar Power Purchase Agreement. Currently the EC is conducting the second phase bidding for LSS plant in Peninsular and Sabah/Labuan for 2019-2020.

In 2017 a total of 37 renewable energy projects were approved with total investments of RM983.1 million, of which 95 per cent comprised domestic investments, and five per cent foreign investments. Solar energy projects dominated, with 31 projects amounting to RM589.6 million, while the remaining were made up by three projects in biogas (RM25.2 million), two projects in mini-hydro (RM268.3 million), and one project in biomass (RM100 million). Of the 31 solar projects, four of them are large-scale solar photovoltaic plants. In total it is estimated that 183 new employment opportunities will be created. Kualiti Alam is a notable waste-to-energy project approved in 2017 for biomass/ scheduled waste-to-energy (WTE) in Port Dickson, Negeri Sembilan with a project cost of RM100 million. This plant, the first of its kind in the country, will produce electricity with capacity of up to 3.4MW. It also does double duty by disposing scheduled waste.



Energy Efficiency / Energy Conservation

The outlook for investments in energy efficiency (EE) and energy conservation (EC) projects is very encouraging for the years ahead, as it is driven by the fact that the demand for and consumption of energy is growing across all sectors, especially the manufacturing sector.

Historically, Malaysia's growth rate of demand for energy is higher than that of the GDP, and this is indicative of the energy-intensive activities driving the nation's growth and thus the need to promote efficient use of energy. Under the National Energy Efficiency Action Plan (NEEAP) introduced in January 2016, the focus is to address issues pertaining to energy supply by managing demand efficiently. Some of the measures taken to increase energy efficiency include the rating and labelling of appliances, energy audits in buildings, support programmes, and energy-efficient building designs.

In 2017, a total of 11 EE/EC projects with a total investment of RM51.9 million were approved and undertaken by the manufacturing and commercial sectors. Domestic investors provided the bulk of the investments of 99 per cent. These projects are expected to create 17 new jobs for Malaysia.

Green Services

Environmental champions

Green service providers are in a relatively new and niche service sub-sector which complements the overarching goals of moving the nation forward with "greener growth". The Malaysian Government has laid out various Green Investment Tax Incentives (GITA) for green projects and assets purchased to enable environmentally friendly practices as well as Green Income Tax Exemptions (GITE) since 2014. Qualifying green technology services activities are in RE, EE, electric vehicle (EV) services, green buildings/green data centres, green certification and verification, and green townships.

Green services companies play a significant and strategic role to boost the adoption of green practices. It is mainly local players that came forward in 2017 to invest in a total of 19 approved green services projects with investments of RM80.6 million. Most of the business scope of green services undertaken are solar photovoltaic system integrators, with nine related to green building services.

Waste Management

In 2017, there was one waste management project approved namely Shan Poornam Green Tech Sdn Bhd, which will be undertaking integrated household e-waste with a total investment of RM76 million, creating the potential for 239 new jobs. This waste management plant is located in Pulau Pinang, where they coordinate the collection, sorting and recycling of scheduled waste.

Oil and Gas

Burning brighter

The world's demand for oil, driven by Asia and its emerging markets makes Malaysia a strategic location for the oil and gas services industry. This is bolstered by renewed optimism in the oil market for the first time in three years, whereby the first few weeks of 2018 saw the oil price hit more than US$65 per barrel.

The oil, gas and energy (OGE) industry currently contributes about 20 per cent to Malaysia's GDP. This industry is targeted to raise total GNI contribution to RM131.4 billion by 2020. The OGE industry encompasses everything from upstream exploration, development, and production of oil and gas (including the decommissioning of rigs), to midstream activities such as logistics and storage. The main industry players in this sector are PETRONAS, SHELL, Repsol, HESS, BP and ExxonMobil.

The challenges facing the oil and gas industry are still prevailing, with lower oil prices remaining the standard, though figures have improved since 2016. Future investment potential lies in deep water, enhanced oil recovery (EOR) and marginal fields, all of which are technically challenging and require higher capital expenditure. The Government, together with PETRONAS, plans to establish Malaysia as the regional deep water oilfield services hub, targeting an annual growth of five per cent until 2020. This goal is based on the existence of up to seven billion barrels of untapped oil equivalent resources lying in deep water reserves in Malaysia.

MIDA continues to collaborate with all its stakeholders to ensure Malaysia's investment climate remains attractive for new players as well as for expansion and diversification of existing operations. These efforts have paid off as the performance of this sub-sector in 2017 improved compared to last year. As of December 2017, seven projects were approved; six of these are diversification projects, a reflection of investor confidence in the long-term growth of the Malaysian oil and gas industry. These projects amounted to a total investment of RM461.1 million, of which 98.5 per cent were domestic investments and 1.5 per cent were from foreign sources, compared to RM240.3 million in 2016. These investments are projected to create 558 additional high-skilled employment opportunities for the country. The notable projects include drilling, coiled tubing services, and deep-sea inspection, repair & maintenance.

" The Government, together with PETRONAS, plans to establish Malaysia as the regional deep water oilfield services hub, targeting an annual growth of five per cent until 2020. "

A notable investment project in 2017 is by DNeX Oilfield Services (DOS), a local oil and gas industry player that has been granted assistance through MIDA's Domestic Investment Strategic Fund (DISF). The company is 100 per cent locally funded, and has scaled up its business to operate as a multinational company in the global market with an investment of RM116.7 million. DOS has acquired equipment from Baker Hughes, making it the only Malaysian company among the few worldwide that has access to high-tier technology of Directional Drilling/ Measurement While Drilling/Logging While Drilling (DD/ MWD/LWD). To date, DOS has employed 51 highly skilled employees across various disciplines. It is estimated that the company will spend RM13.5 million per annum on services from local vendors.

Another significant project was the establishment of supply base for the oil & gas industry by TB Supply Base Sdn. Bhd. This is a new project with total investments of RM198 million. Tok Bali is strategically located to serve the Malaysia-Thailand Joint Development Area (TMJDA), the Commercial Arrangement Area (CAA) between Malaysia and Vietnam and the northern

Malay Basin oil and gas offshore fields. Tok Bali Supply Base aims to provide integrated logistic services to Production Sharing Contracts (PSCs) and oil & gas services companies in the area. It offers 24 hours operations, material handling equipment, transport vehicles, warehouse space, open yard, office space, infrastructure facilities and storage facilities in a customs bonded area. It will complement the Kemaman supply base and offer cost advantage for exploration activities in the East Coast offshore.

Machinery and equipment (M&E) for oil and gas

Manufacturers are now focusing on providing services to the assets which are approaching their end of design life. Of the 12 projects approved in 2017 (total investment of RM731.7 million), six were expansion/diversification projects, with some focusing on refurbishment and upgrading activities. Domestic investments contributed RM593 million (81%), while foreign investments totalled RM138.5 million (19%). These projects are expected to generate a total of 2,527 employment opportunities.

Omni Oil Technologies (M) Sdn. Bhd is one of the new projects approved which produces underground equipment and tools for drilling and completion of oil and gas wells. The investment involved was RM20.5 million and the project is forecasted to create 85 job opportunities.

Hospitality – Tourism and hotels

Tourist magnet

Malaysia's tourism sector has been identified as one of the major contributors to the nation's economic success, as the country's popularity among foreign tourists has increased tremendously over the past few years. In 2016, the sector ranked the second highest contributor of foreign exchange revenues, amounting to RM82.1 billion, and the third largest contributor to the nation's GNI, amounting to RM73.3 billion.

In light of this, the Government has acknowledged tourism as one of the twelve (12) National Key Economic Areas (NKEAs) to propel Malaysia into high-income nation status by 2020. The Malaysian Tourism Transformation Plan drawn up in 2011 targeted to attract 36 million international tourist arrivals spending RM168 billion by the year 2020.

Malaysia has received many accolades in the tourism sector. In addition to being ranked among the top 10 tourist destinations in the world, Malaysia has also been recognised as the World's 5th Best Shopping Destination by Expedia UK 2016, 10th Most Visited City in the World by Euromonitor International Report 2017 and 'Medical Travel Destination of the Year' for the third consecutive year at the International Medical Travel Journal's Medical Travel Awards 2017. These achievements underscore the attractiveness and capabilities of the country's tourism sector.

A potential niche market to be tapped in Malaysia is Halal tourism, where Malaysia ranked number one in the MasterCard-Crescent Global Muslim Travel Index 2017.

Targeted foreign tourist arrivals for 2017 are 31.8 million, generating tourist receipts of RM118 billion. This is an increase of 19 per cent over the previous year's tourist arrivals of 26.8 million spending RM82.1 billion. Domestic tourism is also a significant contributor to the growth of the industry, which is why many recent promotional efforts by the Tourism Ministry have been geared towards fellow Malaysians. This sector is expected to increase to 5.2 per cent by the year 2027.

There were a total of 70 hotel and tourism projects that were approved in 2017 with total investments of RM9.29 billion, mostly from domestic investors. This is almost double the figure recorded for 2016 (RM4.68 billion).

Due to the robust growth of the industry, 18 out of the 70 hotel projects were existing players undergoing expansion and upgrading of their facilities; in its entirety, these projects will create 5,107 new employment opportunities.

As Malaysia becomes increasingly popular with the luxury tourist market, 20 of the slated projects were for four- and five-star rated hotels, also in line with the Government's focus on targeting high-yield tourists. Tax incentives for these high-end hotels and tour operating companies have been extended until 31 December 2020, which will support the Ministry of Tourism and Culture's (MOTAC) target of building capacity of 37,000 rooms for four- and five-star hotels by the year 2020. Currently, there are 269 luxury hotels from the top global hotel chains, namely Marriot, Sheraton, Hilton, Westin, Shangri-La, and Hyatt.

The Government lends strong support in developing the tourism industry via its custodian, MOTAC. Other Government agencies such as Tourism Malaysia and Malaysia Tourism Centres, actively promote Malaysia and its varied attractions to the world. Shopping in Malaysia is a top tourist draw, and several shopping carnivals are organised throughout the year. Premium outlet malls are also prioritised developments to attract tourists, and to date there are five luxury brands outlet malls throughout Malaysia.

Education

Knowledge hub

The education services sector in Malaysia serves to provide education to its population from preschool to professional skills training. In recent years, the move to set up more private-funded foreign and local higher learning institutions in the country has become a priority to boost the growth of the economy.

Besides providing opportunities for quality further education, it offers savings on foreign exchange and promotes Malaysia as a regional hub for education. Malaysia is targeting more than 200,000 foreign students in private and public universities by 2020.

To attract private investment, the Government started liberalising the sector in 2012, resulting in the establishment of many new Private Higher Education Institutes (PHEIs), including the University of Reading and Xiamen University. There is great potential for education business investors as further liberalisation has allowed foreign companies to own equities of up to 100 per cent in international schools, technical and vocational schools, and private universities.

APPROVED PRIVATE INVESTMENTS IN EDUCATION SECTOR FOR 2017

EDUCATION SERVICES	NO OF PROJECTS	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)
PRIVATE COLLEGES / UNIVERSITIES	20	307.6	22.9	330.5
PRIVATE EDUCATION INSTITUTIONS (INTERNATIONAL AND PRIVATE SCHOOL)	631	60.3	27.9	88.2
SKILL CENTRES	60	74.4	0.0	74.4
TOTAL	**711**	**442.3**	**50.8**	**493.1**

One of MIDA's efforts in promoting investments in Malaysia's education sector, has resulted in the United Kingdom Trade and Investment body (UKTI) earmarking Malaysia's market potential in several sub-sectors, namely schools (K-12), technical and vocational education and training (TVET), English language training, higher education (HE), and professional training for the financial sector. There are currently more than 20 British international schools in Malaysia and five Malaysian branches of reputable UK universities, the highest number per country of ownership in the country.

Education plays an important role in the development of the country, as it prepares the skilled human resources needed to meet the needs of the burgeoning industries particularly the manufacturing sector, which is projected to require 3.3 million highly skilled workers by 2020; of these, 1.3 million are expected to be Technical and Vocational Education Training (TVET) graduates.

This aptly skilled workforce will be trained to be equipped for Industry 4.0, smart manufacturing, as well as the digital economy. The TVET transformation programme was launched in September 2017 with an allocation of RM50 million for strategic TVET programmes and RM75 million for the support of Industry 4.0 through collaboration between industry and educational institutions. The target is to increase skilled workers from 28 to 45 per cent by 2020.

In 2017 there were two fully local-funded TVET projects approved by MIDA with total investments of RM5.6 million, and one Malaysian majority owned private education with investments worth RM57 million. In total it will create 192 job opportunities in the high-value knowledge industry.

Healthcare Services

Vim and Vigour

There is a healthy mix of Government and private healthcare facilities in Malaysia as the sector has undergone huge transformations in past years. Among the anchor private healthcare players in Malaysia are KPJ Healthcare Berhad, IHH Healthcare Berhad (Pantai and Gleneagles Hospitals), Ramsay Sime Darby Healthcare and Columbia Asia Malaysia.

According to the Malaysian Healthcare Travel Council (MHTC), Malaysia is fast becoming a famous medical tourism destination as a result of maintaining high-quality medical services. The most popular procedures that people come to have done in Malaysia are dental, cosmetic surgery, and orthopaedic treatments.

Medical tourism has been given a tax incentive boost by the Government in recognition of its remarkable growth opportunities. The Investment Tax Allowance (ITA) which applies to the establishment of new private hospitals and ambulatory care centres, as well as incentives for existing centres to undertake expansion, modernisation and refurbishment, has now been extended to 31 December 2020 (as announced in Budget 2018).

In addition to that, the Government will allocate RM30 million for MHTC to support the target of Malaysia as the Asian Hub for Fertility Treatment and Cardiology by 2020. The MHTC will undertake programmes such as the eVisa facility, the creation of high-value healthcare packages and a new Flagship Medical Tourism Hospital. As a result of the efforts put in by all stakeholders, Malaysia has received many accolades worldwide for its medical tourism. The country was recognised as having the "Best Healthcare in the World", ahead of Costa Rica and Colombia in 2017 by the International Living

Magazine. The International Medical Travel Journal (IMTJ) awarded Malaysia the “Medical Travel Destination of the Year” for three consecutive years at the IMTJ Travel Awards 2017, while Sunway Medical Centre was recognised as the “International Hospital of the Year” and TMC Fertility Centre was capped “International Fertility Clinic of the Year” by the same organisation. The weakening of the Malaysian Ringgit against the U.S. Dollar is a challenge as well as a boon to the Malaysian healthcare industry. The downside is the increased cost of operations in purchasing imported consumables, pharmaceutical products, medical devices and equipment; there is, however, the upside of increased affordability, which makes Malaysia incredibly attractive as a medical tourism destination.

MSC Status Companies

MSC status companies are part of the innovative ecosystem of IT and IT-enabled industries that operate in the sphere of creative content technologies, global business services, Institutes of Higher Learning (IHLs) and incubators. They facilitate the development of the national digital transformation.

In 2017, a total of 315 companies were awarded MSC status with approved investments of RM6.1 billion, (compared to RM6.4 billion in 2016) where RM2.7 billion (44.3%) were contributed by domestic investors and RM3.4 billion (55.7%) by foreign investments. The creation of 16,278 high-value jobs is to be expected by these companies.

Real Estate

The real estate sub-sector covers the housing industry (excluding commercial buildings) in Malaysia and has always been the largest contributor to the services sector. In 2017, it lived up to its mark despite taking hard hits in the softening of the property market whereby a total of 973 projects were approved, with investments amounting to RM45.7 billion; of this, the lion’s share (94.5%) came from domestic investors. In comparison with figures from the same period last year (RM64.1 billion from 680 approved projects), 2017 has taken a hit.

Transport

The transport sub-sector covers maritime transport, aviation, and highway construction and maintenance. In 2017, a total of 16 projects were approved with investments of RM4.5 billion, where RM4.3 billion was contributed by domestic investors, and RM237.6 million from foreign investors.

In comparison, investments approved in the transport sub-sector in 2016 amounted to RM2.1 billion. It is expected that 434 new job opportunities will be created by these projects. The aviation sector saw 13 new projects with total investments amounting to RM596.7 million, one project in the highway construction and maintenance segment amounting to RM3.7 billion and two projects in maritime amounting to RM180.2 million

Utilities

The utilities sub-sector includes energy and water utilities services. Under energy services is power generation, transmission, and distribution of electricity by Tenaga Nasional Berhad (TNB), Syarikat SESCO Bhd. (SESCO) and Sabah Electricity Sdn. Bhd. (SESB). Water utilities services are provided by Suruhanjaya Perkhidmatan Air Negara (SPAN) and Pengurusan Aset Air Berhad (PAAB). In 2017, a total of RM8.5 billion investments were approved compared with RM10.6 billion registered in 2016. The investments in 2017 were driven by domestic sources.

Telecommunications

Malaysian networks keep up with global technology trends with; 4G networks are close to matching the global average of 13.5 Mbps. Malaysia also has a high mobile penetration rate with 132 mobile phones for every 100 people, and the number of households with broadband internet and pay-TV amount to more than 80 per cent. The telecommunication sub-sector covers network facilities, network services, application services (including content application services), postal and broadcasting. To create and maintain these world-class communication services for Malaysians, a total of RM5.9 billion were approved in 2017, all of which came from domestic sources. In comparison, investments approved in the telecommunications sub-sector in 2016 totalled RM10.6 billion.

Financial Services

The financial services sub-sector covers banking, insurance and capital markets (fund management, investment advisory, financial planning, venture capital and brokerage). Investments in 2017 amounted to RM11.8 billion. In comparison, investments approved in 2016 were registered at RM13.7 billion. Domestic sources contributed RM10.4 billion (88.1%) while foreign investments totalled RM1.4 billion (11.9%). The banking segment continued to be the largest contributor to the sub-sector with investments amounting to RM11.6 billion, which was mainly attributed to conventional banking activities which brought in RM10.4 billion worth of investments. Investments in insurance and capital markets totalled RM178.3 million and RM5.7 million respectively.

Distributive Trade

Distributive trade encompasses wholesale and retail trade; hypermarkets and supermarkets, department stores and direct selling, franchising, and projects approved under the Petroleum Development Act 1974. In 2017, a total of 1,750 projects were approved with investments totalling RM9.4 billion.

In comparison, investments approved in distributive trade sub-sector in 2016 totalled RM9.3 billion. A total of 47,603 employment opportunities will be created by this sub-sector, which makes it the largest employer in the services sector. The majority of investments in this period were contributed by foreign sources amounting to RM6.0 billion (63.8%), whereas domestic investments totalled RM3.4 billion (36.2%).

2.5 Performance of the Primary Sector

Overview

The three major sub-sectors that make up the primary sector are grouped into agriculture, mining and plantation and commodities. In 2017, 48 projects were approved in 2017 with investments of RM12.4 billion, an increment of 49.4 per cent from RM8.3 billion approved in 2016. Of these, RM8.0 billion (64.5%) were derived from domestic investments, while foreign investments contributed RM4.4 billion (35.5%). These investments are expected to provide 930 new job opportunities.

Agriculture

In 2017, a total of 12 projects were approved with total investments of RM44.9 million, all of which are domestic investments. These projects are expected to create 305 employment opportunities.

Mining

Investments in the mining sub-sector, comprising oil and gas exploration and quarrying other minerals, spearheaded the primary sector. Fuelled by natural gas extraction activities, this sub-sector contributed 94.3 per cent of total investments of the primary sector in 2017 with a total of 32 projects approved, with investments of RM11.7 billion. Domestic investments amounted to RM7.3 billion (62.4%) while foreign investments totalled RM4.4 billion (37.6%), while a total of 243 potential jobs are expected to be created.

Plantation and Commodities

In 2017, investments valued at RM672 were approved all of which were domestic investments, which contributed to 382 employment opportunities.

3

Collaboration

Towards Attracting Quality Investments

“MIDA works hand in hand with regional corridors and industrial development agencies to spearhead the country’s national investment agenda. These entities complement MIDA’s on-going efforts to develop the various regions of the country and nurture the development of talent & specific industries such as biotechnology, E&E, halal and ICT.”

3.1 Regional Corridors

East Coast Economic Region (ECER)

The past decade has seen the ECER, which covers the states of Kelantan, Terengganu, Pahang, and the district of Mersing in Johor, undergo a remarkable socio-economic transformation, becoming a distinctive, dynamic, and competitive investment destination. Its solid investment growth has been spurred on by the Government's implementation of high-impact infrastructure projects, as well as concerted efforts to attract both foreign and domestic investments.

By end-2017, ECER had surpassed its 2020 cumulative investment target of RM110 billion, recording RM111.6 billion in committed private investments. Coupled with ECER's human capital development programme, this had created more than 150,000 jobs and 30,000 entrepreneurial opportunities.

The manufacturing cluster had been one of the main catalysts of growth, attracting RM54 billion in cumulative private investments, and providing employment opportunities for 56,000 people. This was largely attributed to the Federal Government's successful development of ECER's 12 industrial parks. Equipped with basic infrastructure facilities such as roads, electricity, water supply, and telecommunications, these parks helped attract investors who are able to enjoy greater efficiency and a lower cost of doing business in ECER, as well as seamless connectivity to major export hubs in the Asia Pacific region.

The tourism cluster was another key contributor, given ECER's natural treasures and rich heritage. By end-2017, it had brought in RM20.9 billion in cumulative private investments and created 20,546 job opportunities. In tandem with strategic infrastructure and investment projects to boost ECER's tourism potential, the East Coast Economic Region Development Council (ECERDC) had also undertaken rigorous measures to preserve the region's environmental and cultural assets as sustainable ecotourism destinations.

Domestic investment has emerged as a key enabler of ECER's socio-economic transformation, contributing 46 per cent of the region's total private investments. The role of bumiputera investors has also become more apparent over the years, contributing 14 per cent of the total investments in ECER. To facilitate higher bumiputera participation, ECERDC has been collaborating with Unit Peneraju Agenda Bumiputera (TERAJU) via the TERAJU@ECER programme since 2012. The programme provides Facilitation Funds to eligible bumiputera projects as well as financial and non-financial support to High-Performing Bumiputera Companies (TeraS).

A total of 127 bumiputera projects with investments worth RM2.2 billion have been granted financial assistance amounting to RM282.1 million under the TERAJU@ECER Facilitation Fund. In addition, 94 high-performing bumiputera firms have been identified as TeraS companies based on their merit, benefitting from various support programmes such as funding, talent development, participation in business opportunities, and assistance for listing on stock exchanges. A total of RM120 million in financing has also been approved for the TeraS companies under ECERDC's purview, with a combined investment value of RM617.8 million.

ECER's achievements are largely attributable to the high-impact projects and programmes under the 9th, 10th and 11th Malaysia Plans, attractive packages of both fiscal and non-fiscal incentives, and business-friendly investment policies by the Federal Government in partnership with the respective State Governments. Continual efforts in promoting investments into ECER through collaborations with federal Government bodies, such as MIDA, MITI, Malaysian Bioeconomy Corporation, and MDEC, have also contributed to the RM12.5 billion worth of investments attracted in 2017.

The implementation of infrastructure projects to enhance connectivity with the Asia Pacific region also helped make ECER more attractive to investors. Capitalising on its strategic location facing the South China Sea, ECER's global positioning as the gateway to the Asia Pacific region is set to be further reinforced. One of the game-changers is the expansion of Kuantan Port into a deep-water port to cater for bigger, more modern vessels, and higher cargo traffic.

Further, ECER's future investment growth will be spearheaded by the East Coast Rail Line (ECRL), which is expected to boost the GDP of ECER by up to 1.5 per cent. Meanwhile, the Lebuhraya Pantai Timur 3 (LPT3) and the Central Spine Road will result in a new wave of investment growth.

Moving forward, ECER's development model will be transitioning from an input-based economy to one that is knowledge-intensive and productivity-driven, with emphasis on efficient logistics, high-value-added activities, and industry-oriented human capital. One of the key strategies will be the adoption of IR4.0 elements to boost economic growth and productivity, particularly in ECER's manufacturing cluster. The arrival of new technologies brought forward by IR4.0 will also benefit ECER via the creation of high-value jobs for the rakyat.

To accelerate this, ECERDC signed two MoUs; one with Technische Universität München (TUM) to establish an ASEAN Competency Centre, steering efforts towards Industry 4.0 in ECER, and another with the Free State of Bavaria in Germany to attract advanced manufacturing companies to set up new operations here, making ECER their production and service hubs for the SEA markets.

Northern Corridor Economic Region (NCER)

The Northern Corridor Implementation Authority (NCIA), a federal statutory body under the NCIA Act 2008 (Act 687), was tasked with the transformation of the four states of Perlis, Perak, Kedah, and Pulau Pinang into a world-class economic region.

The Northern Corridor Economic Region (NCER) has a large and educated workforce, a vast logistics network to support key economic sectors, a thriving business culture, and the presence of large MNCs that bring with them global networks and markets. NCER's ability to diversify its economy has helped to ensure the region's resilience and its long-term economic growth.

NCER attracted accumulative private investments of RM89 billion from 2009-2017 (61 per cent of the 2025 target of RM146.5 billion), and created 115,421 job opportunities from 2010-2017 (72 per cent of the 2025 target of 161,197 jobs). NCER continued to attract commendable investments in 2017 despite global uncertainties and less-than-favourable market conditions throughout the year, bringing in RM9.1 billion in private investments and creating 11,824 job opportunities. This has exceeded its 2017 targets for both.

On 17 August 2017, YAB Prime Minister launched the NCER Development Blueprint 2016-2025 (Blueprint 2.0). NCIA will continue its efforts by outlining its future direction and strategies to expand growth and reduce regional imbalance. This is in line with the goal to make NCER one of the best investment destinations in the ASEAN region, particularly Malaysia. Spin-off investments are expected to be generated from new growth nodes identified in Blueprint 2.0, such as the Perlis Inland Port, Kedah Rubber City, Kedah Science and Technology Park (KSTP), Chuping Valley, Greater Kamunting, Manjung-Aman Jaya Maritime City, and the Batu Kawan Development. These high-impact projects under the 11MP serve as development catalysts for NCER, and will continue to be the backbone of economic development throughout the region for the next 15 years, assisting the country in its agenda to become a RM2 trillion economy by 2023.

Kedah Science and Technology Park (KSTP)

KSTP is strategically located at the Malaysia-Thailand border in Bukit Kayu Hitam, and is the only border town in Malaysia linking Singapore and Thailand. It has the added advantage of attracting movement of goods, labour, and tourists. Its development focuses on two components – the Global Research Centre and the Modern Industrial Park – which provide complementary services and solutions to each other.

KSTP's primary objective is to be an economic driver through applied scientific R&D, thus creating more high-value jobs for locals, and upskilling the local talent pool by attracting top foreign researchers to facilitate knowledge transfer. KSTP is also meant to enhance the national innovation system, by facilitating research and commercialisation of innovation. It is expected to contribute RM72.7 billion in GDP and 23,244 high-value jobs in 2025.

Chuping Valley Industrial Area (CVIA)

In order to transform Perlis into a high-income and industrialised state by 2030, CVIA aims to become an economic catalyst, by nurturing high-technology industries that employ skilled and semi-skilled workers, as well as encouraging competitiveness and creating social inclusiveness. It also aims to complement and maximise potential, to capitalise on opportunities arising from the surrounding developments in Kedah and Pulau Pinang, and to develop a sustainable model with industries, relevant supporting functions, and Institutions of Higher Learning (IHLs) to co-exist as part of a mutually-beneficial network.

The development of CVIA is centred on "green" industries, such as green manufacturing and renewable energy generation, and on the halal sector. CVIA is expected to contribute RM2.6 billion to GNI and create 12,674 jobs in 2025.

Manjung-Aman Jaya Maritime City

In recent years, Manjung, a well-known tourist destination featuring Pulau Pangkor, has undergone rapid development, with increasing economic activities in tourism, manufacturing, business, agriculture, and aquaculture. These high-impact sectors are set to promote the growth of downstream industries, increase economic opportunities for local entrepreneurs, businesses and residents, and further diversify economic activities within the district.

In addition, the West-Coast Expressway from Banting to Taiping is also expected to spur growth in this district. Efforts are underway to identify the support facilities, infrastructure, transport systems, human capital, governance structure, and private-sector engagement models needed to realise the vision of Manjung-Aman Jaya Maritime City. The Maritime City is expected to contribute RM22.5 billion to GDP with 35,310 jobs created by 2030.

Greater Kamunting Conurbation (GKC)

GKC's strategic location allows integration with the other nodes in Pulau Pinang, Kedah, and Perak through a complex network of physical infrastructure, economic activities, and institutional & social systems. This allows access to a common industrial ecosystem and greenspace, without the disadvantages of urban sprawl.

GKC aims to accelerate GDP growth so that Perak achieves its 2030 target of becoming a high-income state. To enhance inclusiveness, development is designed for equitable distribution of income and wealth within the GKC community, through an emphasis on "shared value". Shared value conceptualises companies recognising their responsibilities and bringing benefits to themselves and the society, by contributing solutions to solve problems, and increasing sustainability through socioeconomic and physical components. GKC is expected to contribute RM12 billion to GDP by 2030, and create 90,263 job opportunities.

Batu Kawan Development

The former fishing village of Batu Kawan has experienced significant development in recent years, blossoming into an emerging township with various investments and development projects. The Sultan Abdul Halim Mu'adzam Shah Bridge connects Batu Kawan on mainland Pulau Pinang to Batu Maung, near the Penang International Airport. The completion of the bridge in 2014 was a crucial point for Batu Kawan's development and an important catalyst for its socioeconomic growth.

As the next satellite township in Pulau Pinang, Batu Kawan aims to reduce regional imbalances and offer high-value job opportunities to locals through new investments, increasing the quality of life and reducing the gap between urban and rural areas.

2017 Highlights in NCER

The upgrading of the Padang Besar KTMB Terminal was one of the key projects identified in the Logistics and Facilitation Master Plan to de-bottleneck the existing congestion issues at the Malaysia-Thailand border areas. This upgrade will support and improve current transportation and logistics system connectivity.

The MIMOS-NCIA Advanced Competency Development Centre was launched to facilitate the building of a world-standard, highly skilled workforce and to accelerate the nation's embrace of IR4.0. This collaboration is an example of Government agencies working off the National Blue Ocean Strategy, complementing each other and utilising resources optimally.

NCIA's engagement with OSRAM Opto Semiconductors (Malaysia) Sdn. Bhd. resulted in opening of the company's new semiconductor plant at Kulim Hi-Tech Park. The event was officiated by YB Dato' Seri Mustapa Mohamed, Minister of MITI. This project will create 969 job opportunities for local talents.

The collaboration between NCIA and the Perlis State Government, Ministry of Tourism and Culture Perlis, and Tourism Malaysia Perlis, led to the creation and launching of ecotourism packages to be offered to tourists. As part of the marketing and promotion of Perlis Homestay, the product launching of the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) Ecotourism and Homestay Packages between Perlis and Satun was held on 17 January 2017.

Iskandar Malaysia

Total cumulative committed investments in Iskandar Malaysia continued its upward trend in 2017 through the continual and collaborative investment promotion efforts by the Iskandar Regional Development Authority (IRDA), MIDA, and related agencies to promote Iskandar Malaysia as a preferred investment destination in Malaysia. From January to November 2017, Iskandar Malaysia secured total committed investments of RM29.7 billion, bringing the total cumulative committed investments at the end of 2017 to RM252.1 billion, of which RM138.1 billion (55%) had been realised.

Some of the key projects completed and opened during the year were IKEA Tebrau, the largest IKEA store in Malaysia and Southeast Asia; Paradigm Mall Johor Bahru; Impiana Hotel Senai; and the IBS project by Country Garden Pacificview Sdn. Bhd.

Mixed developments totalling RM72.8 billion (29%) were the largest contributors to total cumulative investments, followed by investments in the manufacturing sector of RM59.6 billion (24%). Residential and industrial properties accounted for RM50.8 billion and RM20.9 billion respectively. Investments in promoted sectors, which consist of manufacturing and services, contributed RM80.9 billion (32%). DDI accounted about RM156.3 billion (62%), with the remaining RM95.8 billion (38%) coming from FDI.

Invest Iskandar Malaysia 2017 Symposium

Organised by IRDA, the Invest Iskandar Malaysia 2017 Symposium was the biggest and most comprehensive investment-related event in the southern economic region and was a signature event held in conjunction with Iskandar Malaysia's year-long 10th anniversary celebration. Themed 'Shaping the Future Economy of Iskandar Malaysia', the event was officiated by Johor's Chief Minister YAB Dato' Mohamed Khaled Nordin, and also graced by YB Dato' Sri Mustapa Mohamed, Minister of MITI.

Social Development

The Iskandar Malaysia Eco-Life Challenge (IMELC)

IMELC aims to raise awareness on energy efficiency among students, promote sensitivity towards energy usage and conservation, and inculcate energy-saving behaviour from young. The IMELC School Project is a primary-school-level team competition to help create awareness and promote low-carbon lifestyles. It focuses on household energy accounting, where schoolchildren are taught to track energy consumption, waste generation and management, transportation choices, and utilising renewable energy resources. From just 23 primary schools when it first started in 2013, IMELC has since expanded to cover 346 primary schools in Iskandar Malaysia.

Kawan Iskandar Malaysia

A total of five new Kawan Iskandar Malaysia (KIM) projects were launched by the end of 2017, making a total of eight KIM projects in Iskandar Malaysia. KIM supports vulnerable groups and communities whose ways of life have been affected by the development taking place in Iskandar Malaysia. KIM operates projects that can help these groups generate income through social enterprises and cooperatives. The KIM projects focus more on eco-tourism as a way to generate greater income for these communities.

The symposium, which was attended by about 700 guests, featured a line-up of speakers who were movers and shakers of the investment community. In the panel discussions, leaders from major companies in Iskandar Malaysia shared their insights and visions on future trends to define a more sustainable Iskandar Malaysia.

Human Capital Development

IRDA successfully created 732,325 jobs from 2007 until mid-2017, following the investment momentum into Iskandar Malaysia. In terms of talent development initiatives, IRDA successfully conducted several TVET employment fairs, which have attracted the participation of more than 120 companies and showcased more than 10,000 job vacancies.

IRDA also organised two specific programmes; namely, the Iskandar Malaysia Professional Fund (IMProF), and the Iskandar Malaysia Employment Grant (IMEG), which helps address the mismatch of graduates' qualifications to industries' needs, as well as to increase talent upskilling opportunities to different segments of the community.

The IMProF has benefitted 75 people to date (providing up to RM24,000 per person) with an allocation of RM1.8 million, while IMEG has benefitted 607 people involving 126 companies. Another initiative is the Creative Industry Talent Development Program, which has seen 938 candidates graduate from the program, of which almost 70 per cent have been successfully employed.

SME Development

As of July 2017, RM5.5 million worth of funds have been disbursed to support SMEs in Iskandar Malaysia through the Teraju @ Iskandar Malaysia Facilitation Fund.

As a result, the 7.9 per cent growth in SME income in Iskandar Malaysia is higher than the national average of 6.5 per cent. Furthermore, the SMEs' profitability level in Iskandar Malaysia of 5.8 per cent is higher than the national average of five per cent.

SARAWAK SCORE
CORRIDOR OF RENEWABLE ENERGY

Sarawak Corridor of Renewable Energy (SCORE)

SCORE is one of the five economic development corridors initiated by the Federal Government to accelerate Sarawak's economic growth and development in specific areas with high economic potential, but are still lagging behind in terms of socio-economic progress. SCORE was launched in February 2008 to develop the central region of Sarawak, covering an area of 70,708 square kilometres. SCORE's major advantage is its abundant energy resources; specifically, the 20,000MW of hydropower potential, 1.46 billion tons of coal, and abundant natural gas (40.9 trillion square cubic feet). The core element of the SCORE plan is to accelerate the development of energy resources, allowing Sarawak to price its power competitively, and attract investments in energy-intensive industries, especially in the Samalaju Industrial Park, one of the growth nodes in SCORE.

SCORE Phase 1 (2008-2015), which revolved around laying the foundation stage, had been successfully implemented. In building critical mass and momentum to spur its development, the State Planning Unit (SPU) promoted ten priority industries under SCORE; namely, aluminium, glass, oil-based, steel, oil palm, fishing and aquaculture, livestock, timber-based, tourism, and marine engineering. Since its inception, SCORE had successfully attracted 22 investment projects worth RM33.64 billion, generating 17,093 employment opportunities. In tandem with SPU's target under Phase 1, most of these investments were high-priority trigger projects, such as aluminium, ferroalloy, and polycrystalline silicon production. The year 2017 marked the second year for SCORE Phase 2 (2016–2020). Under this development phase, SCORE focusses more on attracting downstream industries, by leveraging the products of the existing trigger industries in SCORE such as raw materials. Downstream manufacturing industries in the areas of building materials and components, heavy industries and metal, renewable energy products, transportation, and resource innovation, will be promoted and developed under SCORE Phase 2.

These downstream industries will be centralised at the Samalaju Industrial Park, which was developed as an 'industrial innovation township' to attract world-class industries, including future technology, agro-based, and life sciences industries. Extensive focus will also be given to promote and drive the development of downstream activities in O&G; to that end, SPU plans to establish a methanol and ammonia plant in Bintulu, and an integrated petrochemical plant in Samalaju Industrial Park. Success in attracting these downstream industries is important, as they are involved in higher value-added activities, and are able to generate high-paying jobs for Sarawakians. In this respect, the Government will continuoally put concerted effort into the development of infrastructure, power supply, and human capital, to ensure that SCORE will be able to maintain and sustain its competitiveness and attractiveness – especially in the region – to both domestic and international investors.

The Regional Corridor Development Authority (RECODA) is responsible for promoting, attracting and facilitating investments into the SCORE areas. RECODA is also tasked with coordinating and implementing the development of the key infrastructure projects required to realise the SCORE Development Plan. Three new agencies under RECODA were established; namely, the Highland Development Agency (HDA), the Upper Rajang Development Agency (URDA), and the Northern Region Development Agency (NRDA), to spearhead and expedite development in these Sarawakian sub-regions.

SCORE hinterland areas will be opened up for more development, as well as promoting investments into the areas surrounding hydroelectric project (HEP) dams to explore eco-tourism opportunities. The biomass industry will also be promoted to tap the potential of the vast forest areas and the development of oil palm plantations in the SCORE area. The Samalaju Industrial Park is located approximately 60 kilometres from Bintulu. With an area of more than 8,000 hectares, Samalaju Industrial Park is one of the biggest industrial parks in the country. Developed with the necessary industrial infrastructure to sustain its growth, including dedicated port facilities and a new township, its distance and location from existing towns and settlements enables its expansion in the future. Since the launching of the SCORE development plan in February 2008, the park has received overwhelming response from both domestic and international investors. To date, 16 companies with a total investment of RM27.7 billion were approved and issued manufacturing licences.

▶ *Sakura Ferroalloys Sdn. Bhd.*

Sakura Ferroalloys Sdn. Bhd., a joint venture between Assmang Limited, Sumitomo Corporation, and China Steel Corporation, has two modern energy-efficient "dual product" submerged electrical arc furnaces (SAFs) in Samalaju Industrial Park. The plant manufactures both high-carbon ferro-manganese (HCFeMn) and silicon manganese (SiMn), and has the flexibility to produce either material according to market conditions. These specialty materials are essential ingredients in the production of various types of carbon, alloy steel, and alloy iron. A significant quantity of ferroalloys is also consumed by foundries and electrode industries.

▶ *OM Materials (Sarawak) Sdn. Bhd.,*

OM Materials (Sarawak) Sdn. Bhd., owned by OM Holding Limited (OMH), commenced a manganese alloy smelting plant in Samalaju Industrial Park. This project brought in new technology in manganese alloy smelting, using submerged electric furnaces. The project benefitted the logistics handling business, with an annual output of one million metric tonnes. This investment created 2,684 job opportunities for Sarawakians.

▶ *OCIM Sdn. Bhd.*

OCIM Sdn. Bhd. (formerly known as Tokuyama Malaysia) of South Korea is the first foreign investor to invest in Samalaju Industrial Park. OCIM's facility is the first plant in Malaysia to produce polycrystalline silicone, the main component for solar cells and semiconductors, creating 1,050 job opportunities. Malaysians, especially young graduates, who work at the plant can benefit from the knowledge and technology transfer.

▶ *Pertama Ferroalloys Sdn. Bhd.*

Pertama Ferroalloys Sdn. Bhd. is the first large-scale manganese alloys and ferrosilicon plant in Malaysia. The ferrosilicon furnace had commenced full commercial operation by the second quarter of 2017. At its maximum capacity, the plant is able to generate an output of 240,000 metric tonnes per annum. The plant produced and supplied manganese alloy products for the steel industry worldwide, and will trigger the development of a steel-based industrial cluster in SCORE.

▶ *Press Metal (Bintulu) Sdn. Bhd.*

Press Metal (Bintulu) Sdn. Bhd. located in the Samalaju Industrial Park is the second aluminium smelting plant of Press Metal Berhad in SCORE. The plant, commissioned in December 2012, produces 320,000 metric tonnes per annum of aluminium billets and ingots using the world's latest 400kA smelting technology. Press Metal Berhad was the first local company to invest in SCORE.

SABAH DEVELOPMENT CORRIDOR

Sabah Economic Development & Investment Authority (SEDIA)

The first of its kind in Sabah, the Sipitang Oil and Gas Industrial Park (SOGIP) is envisioned to be the premier oil and gas industrial park of choice for petrochemical hubs in Asia Pacific, stimulating Sabah's oil and gas downstream industry, as well as related heavy industries adding to their value chains.

Located within SOGIP is the completed and fully-operational Sipitang Ammonia and Urea project (SAMUR). Initiated by PETRONAS Chemicals Group Bhd. (PCG), the project strengthens its position as a key regional fertiliser player, while supporting Malaysia's ETP that focuses on the agricultural sector as one of t he NKEAs. The project involves three key plants that produce ammonia, urea, and granulated urea in one complex, using technology from Denmark, Italy, Germany and Holland. It is capable of producing 1.2 million metric tonnes per annum (mtpa) of granulated urea and 740,000 mtpa of liquid ammonia.

SOGIP, which was approved in early 2011, attracted local and foreign oil and gas investors to scout possible investment opportunities on the site. Last year, three MOUs for feasibility studies (FS) were signed with China Consortium, Eurochem/Technimon Group, and China United Resources Development Group Co Ltd., respectively.

The China Consortium is made up of China National Complete Plant Import & Export Corporation Limited, Sichuan Chemical Industry Holding (Group), China Chengda Engineering Co., and Denrich Naluri Rezeki Sdn Bhd. The FS will look into the production of 800,000 metric tonnes of urea and 450,000 metric tonnes of ammonia annually.

The MOU FS with Eurochem is for the proposal of a second ammonia plant in SOGIP, producing 27,000 metric tons per day (mtpd) of ammonia. China United Resources Development Group is in the midst of studying the potential of setting up an ammonia plant in SOGIP, which will produce 450,000 tonnes of synthetic ammonia and 800,000 tonnes of urea annually.

3.2 Other investment agencies

Driving Transformation

Malaysia Digital Economy Corporation (MDEC)

Known as the "Year of the Internet Economy", 2017 saw many aspects of the digital economy experience all sorts of acceleration and improvements, further reinforcing the belief that digital innovations and next-gen technologies will fully empower the socio-economy of Malaysia.

This has emboldened MDEC to push forward with its efforts in driving the digital economy to even greater heights, reaching and even going beyond its 20 per cent GDP contribution target for 2020. This includes expanding the capabilities of current initiatives that are now in place, and introducing even more platforms that will transform Malaysia into a regional innovation powerhouse.

In pushing the digital economy agenda forward, and establishing Malaysia as the gateway to ASEAN for investments and high-growth start-ups, MDEC has introduced new platforms that build over existing offerings and attract even more strategic investments. These moves spurred critical industry developments, especially in new marketplaces that are now experiencing disruptions on multiple fronts.

MDEC continues to take the digital economy to new heights. Part of its push to improve the performance of businesses and widening their market reach include introducing new world-class initiatives and support services. Other steps forward for Malaysia's digital economy include grass-roots activation and enablement, empowering SMEs, boosting investment value, and even deploying new establishments that reinvigorate Malaysia's goal of being a regional internet economy hub.

Central to this are the multiple resource platforms that have appeared this year, all of which have raised the digital economy's GDP contribution from 17.8 per cent to 18.2 per cent in 2016. Similar growth has been seen in new investments, generated revenue, and export sales, due to the accelerated efforts of technology-related sectors.

MSC Malaysia saw 315 new companies being awarded MSC status in 2017, with RM6.2 billion worth of approved investments. Domestic investments accounted for 44 per cent of the total at RM2.7 billion, while foreign investments made up the remaining 56 per cent with RM3.5 billion. A total of 16,278 job opportunities were created by these investments.

> "MDEC's commitment and continued efforts have helped it contribute to the growth of Malaysia's digital economy's 18.2 per cent contribution to the country's GDP, making it the fastest growing sector of the economy."

MDEC's commitment and continued efforts have helped it contribute to the growth of Malaysia's digital economy's 18.2 per cent contribution to the country's GDP, making it the fastest growing sector of the economy.

MDEC has four specific focus pillars that it operates on; namely, driving investments, building local tech champions, catalysing the digital innovation ecosystems, and propagating digital inclusivity. Each is critical in empowering the digital economy and the socio-economy, and have spurred encouraging growth in many MDEC efforts.

The most significant move for 2017 was the launch and deployment of the Digital Free Trade Zone (DFTZ). Established to streamline and augment the constantly accelerating e-commerce space, this platform will help local and regional SMEs to expand their reach within local marketplaces and provide access to new regions. The primary goal is to boost cross-border trade, and attract more investments from global e-commerce and internet economy companies.

Since the DFTZ went live via its DFTZ Go-Live initiative on 3 November 2017, SMEs who are already on board have gained immediate access to the massive client base present on the Alibaba platform. This has paved the way for various businesses to export their goods and services to untapped consumer spaces.

Enablement also came in the form of platform building, when MDEC launched the Malaysia Digital Hubs initiative. Since its introduction, there have been five certified Digital Hubs – The CO., APW, Common Ground, WORQ, and Sunway iLabs – to date. All offer high-impact development support and deep ecosystem growth for start-ups, scale-ups, and entrepreneurs of various sizes.

These specially-certified co-working spaces have a long and comprehensive list of companies operating within. As an additional measure to attract world-class hot start-ups and ecosystem players, Malaysia also introduced a new visa called the Malaysia Tech Entrepreneur Programme.

One of the biggest movers for 2017 was the #YouCanDuit campaign. A year-long initiative, it championed the drive for digital inclusivity by expanding the capabilities of the eRezeki and eUsahawan platforms. Beyond supporting thousands from the B40 group around the country, the two platforms were widely promoted on mainstream media and via roadshow events, augmented with knowledge-enhancement sessions, and received upgrades that would further enable the B40 community – and M40 by extension – with even more digital opportunities.

More platforms have rolled out, increasing the count from five to 62, and have brought in the need for scaling processes.

Further supplementing the two programmes were the service concepts that the sharing economy has brought about. This included the Tour Buddy, Project BLEE, and eLadang pilot concepts. These three engaged the sharing economy model, enabling the B40, M40, and those that can be digitally empowered.

The first two focussed on improving the services sector, specifically for tourism and retail supply chains, and enabling them to become alternate revenue streams. eLadang introduced the power of digital innovation to the agriculture industry, and provides industry players with the means to scale up and exchange knowledge. The pilot is expected to take existing innovations and expand their scopes of deployment to other crop and agriculture developments.

INVEST KL
MALAYSIA

InvestKL Corporation (InvestKL)

A Government entity under the purview of MITI, InvestKL is tasked with encouraging large global MNCs to locate their regional hubs or headquarters in the Greater Kuala Lumpur region, and strategically grow their businesses in Asia Pacific. Since its inception in 2011, InvestKL has successfully brought in 73 large MNCs, and is on track to meet the targeted 100 MNCs by 2020. InvestKL's vision is to make Greater KL into one of the world's top investment destinations, with the ultimate goal of contributing RM40 billion in GNI and 200,000 jobs by 2020.

In 2017, InvestKL also set about differentiating Greater KL as a "City of Opportunity". Kuala Lumpur has the advantage of its geographical location in the heart of ASEAN, in addition to Malaysia's political stability, excellent infrastructure, abundant English-speaking talent, competitive costs, and a robust legal and financial framework. These dynamic factors allowed InvestKL to continue to attract high-value investments that will bring high-skilled jobs into Greater KL.

In 2017, InvestKL secured 12 MNCs, with FDI inflows coming to a total of RM2.2 billion in investments committed and approved. The MNCs committed to the creation of 1,689 high-skilled regional jobs, with 324 new regional jobs on their payrolls.

The year also saw a realised amount spent in Malaysia by all MNCs totalling RM994 million. In terms of regional breakdown, 49 per cent of the investments from these MNCs came from Europe, 29 per cent from the Americas, 19 per cent from Asia, and three per cent from Middle East and Africa.

Some sterling examples of the MNCs brought in last year include big brands and recognisable industry standout names such as Oracle (Regional Digital Hub), Honeywell (Regional Principal Hub), Givaudan (Business Solutions Hub), Air Liquide (Smart Innovative Operations Centre), Sports Direct (Regional HQ for ASEAN and Distribution Centre for APAC), and ALLIANZ (Regional Centre of Competence for the Asia Pacific Region), among others.

The setting up of regional hubs by MNCs has had a positive effect on the local ecosystem through the creation of jobs, capital investment, upgrading the skills of the local workforce, and increased economic activity.

By targeting investments in high-value sectors as aspired by the various NKEAs, InvestKL is playing its role in helping to create new skilled and high-salary jobs. As the MNCs interact with the local value chains, the knowledge transfer will help strengthen the competitiveness of business ecosystems, especially in various key areas, with a high impact on the nation's economy.

Local businesses – such as service providers, real estate agents, hotels, international schools, retail services, and other businesses – will see better trade volumes, which will in turn result in a higher standard of living for the local population. As a whole, these are multiplier effects that support Malaysia in its goal to become a high-income, developed nation by 2020.

> "InvestKL's vision is to make Greater KL into one of the world's top investment destinations, with the ultimate goal of contributing RM40 billion in GNI and 200,000 jobs by 2020."

InvestKL will continue to forge ahead with confidence in developing the right approaches and strategies for its continued success. With regional economic groupings like the ASEAN Economic Community and the Regional Comprehensive Economic Partnership, and the PRC's greater economic focus in ASEAN, driven by its Silk Road Economic Belt and the 21st-century Maritime Silk Road (the One Belt and One Road) initiative, InvestKL will continue to capitalise on this interest, by targeting more PRC MNCs, as well as those from the advanced economies of the USA and Europe.

To cap it all off, Malaysia's strong economic fundamentals and financial policies will enable InvestKL to continue to push and develop solid initiatives with alliances and partnerships to attract high-value MNCs to have their regional bases of operation in Greater KL.

Halal Industry Development Corporation (HDC)

Malaysia is endowed with a comprehensive halal ecosystem to support the growth of an integrated halal supply chain. Already in place are numerous halal parks throughout the country, providing a dedicated venue for halal manufacturing activities and related services.

The availability of these halal industrial parks augurs well for investors, as they serve as alternatives to existing industrial parks. These dedicated halal parks uphold halal integrity, where halal principles are strictly observed and adhered to by all parties. Investors seeking an ideal investment location for halal-related activities may avail themselves of choice sites within these halal parks.

There are currently 23 halal parks, of which 15 have been awarded HALMAS status. The HALMAS status is accorded to halal park operators which have complied with requirements under HDC's Designated Halal Park Development Guidelines. Only halal park operators, halal logistic operators, and industry players with operations located within HALMAS halal parks are eligible to apply for tax incentives specific to the halal industry.

By the end of June 2017, HALMAS Designated Halal Parks throughout the country attracted investments worth RM12.9 billion, and created a total of 10,074 job opportunities. These included investments in halal F&B, as well as non-food sectors, such as pharmaceuticals, cosmetic products and logistics services. Also included were companies with business expansion and relocation plans.

These numbers were comparable to those achieved by the end of 2016 (RM11.9 billion and 10,941 jobs, respectively). Halal parks have attracted both FDI and DDI; particularly from multinational corporations and large local corporations.

The companies with significant investments came from Japan, Taiwan, the USA, and the UK. The leading MNCs operating within these halal parks include Al-Jomaih Group, Cargill, Coca Cola, CPL Aromas, Kellogg, Kewpie, Oleon, Pure Circle, and PML Dairies. One of the projects approved in 2017 was CPL Aromas, a world-leading fragrance house supplying producers of fine fragrances, personal care, and household industrial products.

> "By the end of June 2017, HALMAS Designated Halal Parks throughout the country attracted investments worth RM12.9 billion, and created a total of 10,074 job opportunities."

It will establish its halal manufacturing operations in the Selangor Halal Hub at Pulau Indah, as part of its expansion plan to serve the global market and the Far East region. The proposed investments were valued at more than RM50 million. The establishment of its highly automated operations in Malaysia will benefit the company in terms of its market share in the halal sector, while the halal ingredients resulting from its manufacturing facilities there will benefit halal producers within the country and the surrounding region.

Various efforts and initiatives will be undertaken in 2018 to make Malaysia the preferred investment location for halal products and related services. Initiatives to attract FDI and DDI will include organising the World Halal Conference (WHC), a global halal intellectual discourse and thought leadership conference, as well as HALFEST, a mega expo platform to promote halal products and services; participation in investment and trade missions organised by MIDA and MATRADE; and partaking in halal-related exhibitions, such as MIHAS and other international exhibitions. The halal industry welcomes investments in projects utilising state-of-the-art machinery or technology, and the production of high-value-added halal products. These can effectively and profitably combine with the availability of halal-sourced raw materials and halal-dedicated infrastructure already existing in Malaysia to ensure that investors can gainfully prosper and secure footholds in the lucrative global halal market.

Malaysia Bioeconomy Development Corporation (Bioeconomy Corporation)

The Malaysian bio-based industry is in the third and final phase of the National Biotechnology Policy (NBP) – Going Global. Under the auspices of the Ministry of Science, Technology and Innovation (MOSTI), the Bioeconomy Corporation acts as the economic development agency for the bio-based domain, and oversees the industry and technologies for successful implementation of the bioeconomy agenda in Malaysia.

As at December 2017, Bioeconomy Corporation had successfully built a network of 283 BioNexus-status companies, accounting for over RM6.8 billion in total approved investments, and 10,665 jobs in the Healthcare, Agriculture Biotechnology (AgBiotech) and BioIndustrial sectors. From January to December 2017, 11 new companies were successfully awarded BioNexus Status. Total investments amounted to RM114 million, of which RM27 million had been contributed by the AgBiotech Sector, RM82 million by the Healthcare sector, and RM5 million by the BioIndustrial sector. The Bioeconomy Corporation also facilitates, monitors, and coordinates activities to drive the Bioeconomy Transformation Programme (BTP), a platform by the Government for the private sector to channel and maximise commercial opportunities in bio-based industries. As of December 2017, a total of 77 BTP Trigger Projects have been approved, comprising of 35 projects under BioIndustrial, 34 projects under AgBiotech, and eight projects under Healthcare. These projects were targeted to provide more than 26,700 job opportunities, and cumulative approved investments of over RM17 billion in 2020.

“As at December 2017, Bioeconomy Corporation had successfully built a network of 283 BioNexus-status companies, accounting for over RM6.8 billion in total approved investments, and 10,665 jobs in the Healthcare, Agriculture Biotechnology (AgBiotech) and BioIndustrial sectors.”

In terms of investments, a target to attract RM15 billion worth of investments has been set for Phase III of the NBP, as well as to realise approved investments accumulated in Phase I and Phase II. Several key projects under both BioNexus and BTP have so far contributed significantly to the investment numbers.

Under the AgBiotech sector, key investments approved under the Bioeconomy Transformation Programme that were undertaken by local companies included the establishment of an integrated fruit production facility worth RM67 million in Dengkil, Selangor; the development of integrated tilapia fish-farming facilities situated in Temoh, Perak with total investments of RM52 million; and the development of fully-integrated aquaculture facilities with an investment value of RM42 million in Teluk Panglima Garang, Selangor.

In the BioIndustrial sector, a major investment project in Pekan, Pahang, with investments valued at RM270 million, was registered as a BTP Trigger Project for the development, production, and commercialisation of corrugated medium paper using empty fruit bunches, with raw materials sourced from a network of nearby oil palm plantations.

Other notable BioIndustrial projects include the setting up of bio-based wastewater treatment facilities on 11 sites in the Klang Valley and its conurbation, with total projected investments of RM33 million, starting with the first site located in Cyberjaya. Another BTP project valued at RM24 million was also approved for the production and commercialisation of specialty food ingredients in an ultra-modern facility planned in Klang, Selangor.

In the Healthcare sector, a key investment worth RM71 million was approved under the BioNexus status for the commercialisation of peptide-based therapeutics and licensing activities. The BioNexus company also offered contract research services for drug development and discovery, especially those related to peptide-based therapeutics. Another project was awarded BTP status to realise the production and commercialisation of biocompatible orthopaedic medical devices, with the plant costing RM21 million to be located in Bukit Mertajam, Pulau Pinang.

In ensuring the continued success of Bioeconomy Malaysia, Bioeconomy Corporation seeks to work in tandem with related ministries, universities and research institutions, economic corridors and incubators, private corporations and GLCs, and financial and other funding institutions. In addition to its significant economic impacts, the Bioeconomy Malaysia initiative will also benefit society and the nation by improving the income and well-being of the populace, promoting a green economy, and contributing to long-term economic and environmental sustainability.

TalentCorp MALAYSIA

Talent Corporation Malaysia Berhad (TalentCorp)

TalentCorp is the national agency that drives Malaysia's talent strategy towards becoming a dynamic and market-driven talent hub. It partners with the public and private sectors to implement initiatives that attract, nurture, and retain the right expertise needed to meet the talent demands of today and into the future. Over the years, TalentCorp has engaged close to 7,000 companies, with over 5,500 taking up its initiatives and participating in its market-driven programmes focused on building Malaysia's talent pipeline, mobilising and connecting talent opportunities, and diversifying Malaysia's talent pool by influencing workplace policies.

The changing global socio-economy and the digital revolution means that more needs to be done to create a future-ready Malaysian workforce that is both locally relevant and globally competitive. The year 2017 highlighted how work, workplaces, and workforces are being disrupted as a result of technological breakthroughs. With that in mind, TalentCorp is driving the 'future of work' agenda, by collaborating with employers and empowering talent, taking the lead in conversations on strategies and projects that will future-proof Malaysia's talent pool.

Empowering Malaysian professionals

TalentCorp introduced KNOWMADS, a network of global Malaysians abroad, with the skills, expertise, experience, and passion to be part of the continuing development of Malaysia. Under KNOWMADS, Malaysians abroad can contribute through knowledge-sharing and technology transfer, network contacts, investment funding, advisory and consultancy activities, market access, and business linkages, as well as research think-tanks.

TalentCorp unveiled Talent Compact 4.0, an industry advisory panel to address the need for a talent strategy for the future of work in line with Industry 4.0. Chaired by Dato' Sri Idris Jala, CEO of PEMANDU Associates and a member of TalentCorp's Board of Trustees, it brings together 10 experts representing Malaysia's key and emerging industries, serving to assist in the development of the National Future of Work Action Plan. The National Leaders Circle initiative, spearheaded by TalentCorp, will develop future leaders and facilitate sharing of best practices and knowledge transfer within GLCs to solve national-level issues.

In support of the Government's efforts to increase the country's female labour force participation rate to 59 per cent by 2020, and to help facilitate the return of women back to the workforce, TalentCorp connects female talent to employers via the Career Comeback Programme. To date, the programme has helped more than 600 women find career opportunities in a range of sectors and with over 100 employers, including Maybank, UEM Group, PwC, and others.

TalentCorp continues to support employer efforts to encourage Malaysians abroad to bring their expertise home through the Returning Expert Programme. In 2017, more than 400 experienced Malaysian professionals who were working abroad in key sectors such as oil, gas and energy, financial services, electrical and electronics, as well as professional services, were approved under the programme.

Future-proofing Malaysia's workforce

TalentCorp organised the Future of Work, Workplace, Workforce Conference as part of a continual effort to enhance Malaysia's talent strategy, ensuring that the country's workforce is future-proof. The one-day conference featured two internationally-recognised figures in technology and education as keynote speakers: Co-Founder and Co-Director of MIT's Initiative on the Digital Economy, Dr Andrew McAfee, and education and creativity expert, Sir Ken Robinson. TalentCorp launched Nurturing Expert Talent (NEXT), a national talent analytics platform, to acquire and analyse data on the quality and ability of the Malaysian workforce to meet the demands of the evolving marketplace. NEXT forms vital links between education, employers, and employability, while also offering insights to help workers identify their strengths, passions, and the career choices most suited to their skill sets.

> "Over the years, TalentCorp has engaged close to 7,000 companies, with over 5,500 taking up its initiatives and participating in its market-driven programmes focused on building Malaysia's talent pipeline, mobilising and connecting talent opportunities, and diversifying Malaysia's talent pool by influencing workplace policies."

TalentCorp also launched the Visioning Malaysia's Future of Work: A Framework for Action report, which underlined five key recommendations to future-proof Malaysia's workforce. The report called for the engineering of a robust talent ecosystem, enhancing the skills and capacities of the workforce, reforming talent and human capital policies, employing data to better coordinate human capital policies, and developing a National Future of Work Action Plan.

A crucial instrument to help guide TalentCorp and various stakeholders on Malaysia's talent roadmap is the national Critical Occupations List, which presents the annual set of data for high-skill occupations within Malaysia's critical growth sectors. Developed together with the Institute of Labour Market Information and Analysis under the Ministry of Human Resources, in line with international best practices with guidance by the World Bank, the 2016/2017 List featured 48 critical jobs across 10 key industries.

Collaborative Research in Engineering, Science and Technology (CREST)

Research & Development

The CREST R&D Grant programme continued to support industry-academia research collaborations, with increased focus on key clusters and technology domain areas. In 2017, nine new projects were approved, bringing the total to 118 R&D projects enlisted under the CREST R&D grant portfolio. The portfolio was valued at RM125 million, with the industry continuing to contribute more than 60 per cent of total project costs. These R&D projects involved 60 companies and 20 universities working closely together. Such collaborations continued to spark new ideas, new innovations, and new products, while nurturing and growing the pool of sustainable industry-relevant talent and expertise in the E&E sector. A total of 57 postgraduates (MSc and PhD) have completed their research projects.

The year saw 11 projects completed, bringing the total completed to date to 41. Several of the recently-completed projects are also actively being commercialised; some via internal implementation, and others through sales of the new products developed. One highlight of 2017's research outcome was a Super Wi-Fi module using the TV white-space spectrum that enabled long-range wireless communication up to 50 kilometres and installed at various locations across the Universiti Malaysia Perlis campus, thus providing fast connectivity to the students.

The 'Reveal & Discover' session continues to encourage research knowledge via sharing of project outcomes between industry and academia, in the effort to promote further collaboration in similar areas and expand the benefit from the specific research to a larger group. CREST sponsored selected researchers to share and showcase their findings in international conferences such as the Malaysian Telemedicine Conference 2017, International Symposium Green and Sustainable Technology 2017, and Conference for Innovation in Biomedical Engineering and Life Sciences 2017.

Talent Development

For CREST's Talent Development department, 2017 was another fruitful year. The Great Lab (TGL) Carnival 2017 saw winners from the Grand Design Challenge Finale 2016 and 2017 (University category) going on to set up their own start-up companies. Banking on this success, CREST shall be going a step further by laying the foundation in nurturing future 'technopreneurs' via summer 'internpreneurship' programmes in 2018.

CREST also runs a series of industry bootcamps and workshops throughout the year. More than 600 students from both postgraduate and undergraduate levels took part in the Industry-Relevant Graduate programme. These boot-camps seeded innovative ideas that address industry challenges.

Over 100 students were involved in the Semiconductor and Optoelectronics lab visit and training with research university partners; namely, UM, USM, UniMAP, and Monash University Malaysia. CREST also continued on its fifth year of collaboration with UiTM Shah Alam to deliver a blended learning and industry lecture module for 80 final-year electrical engineering students.

> "The CREST R&D Grant programme continued to support industry-academia research collaborations, with increased focus on key clusters and technology domain areas."

Local universities such as UniMAP, UPM, UTM, IIUM, and UiTM Pulau Pinang have also collaborated with CREST throughout 2017 to host and co-organise Mini TGL Workshops, which involved almost 300 students presenting their design and final year project solutions to industry-specific challenges. In continuing its commitment to promote Science, Technology, Engineering and Mathematics (STEM) amongst the youth, CREST organised the 2017 Youth Industry Bootcamp that benefitted around 400 students from 40 secondary schools in Peninsular Malaysia.

Industry Development

Optoelectronics/Light Emitted Diode (LED)/Solid-State Lighting (SSL)/ Development Cluster

The Gallium Nitride on Gallium Nitride (GaN-on-GaN) programme funded by CREST intends to further accelerate the build-up of the Light Emitting Diode (LED) ecosystem in Malaysia. To date, this programme involves four academia and four industry members. The focus of the programme in 2017 was to establish front-end processes (i.e. epitaxy and fabrication capabilities) for academia.

There are currently 26 GaN experts (Malaysian) carrying out their research in UM, USM, Monash University Malaysia, and Universiti Malaysia Perlis under the GaN-on-GaN program. 3 PhD students from Malaysia were put under the program to pursue their studies in University of California, Santa Barbara (UCSB) under the supervision of principle investigators from UCSB. The program expects to produce at least 50 GaN experts in Malaysia by year 2020.

At present, the UM lab is fully equipped with the LED front-end processes, and is therefore ready to produce a fully made-in-Malaysia LED chip. The program has also funded a Metal-Organic Chemical Vapour Deposition (MOCVD) reactor used for epitaxial growth located in USM, which will be fully operational by February 2018.

As a whole, the programme has been on track of its five-year journey. This programme has set a platform for the next phase of research (e.g. gallium nitride power devices, Li-Fi communication and ultraviolet LEDs).

Embedded Systems Development/ IoT Development Cluster

CREST's IoT cluster continued to build momentum and spearhead telemedicine awareness through its third Telemedicine Conference which took place in August 2017. The conference's theme, 'Healthcare for Tomorrow: The Disruption Begins', attracted policy makers, medical practitioners, researchers and others relevant stakeholders to the industry to share best practices and health innovations.

The Telemedicine Innovation Challenge 2017 (TIC 2017) attracted more than 30 participating teams of medical doctors, researchers, industry, and university students. In 2017, there was an 80 per cent increase in participation from 2016. The winner last year was the team from Telkom University Indonesia.

Recognising Malaysia's need for a vibrant collaborative platform for public and private partnerships in the telemedicine ecosystem, the Telemedicine Development Group (TDG) officially held its first meeting on 19 June 2017. It was co-chaired by the Director General of Health Malaysia, Datuk Dr. Noor Hisham Abdullah, and Dato Sri Halim Shafie, Head of the Malaysian Communications and Multimedia Commission (MCMC).

TDG represented a very important platform for harnessing innovative and creative ideas to develop and upscale telemedicine solutions for the market. The meeting was attended by representatives of MOH, MCMC, CREST, Monash University, UMMC, Clinical Research Malaysia (CRM), and Clinical Research Center (CRC) to enhance and facilitate the development of digital health services in their respective areas.

Smart Manufacturing Development Cluster

CREST's journey into Industry 4.0 or Smart Manufacturing began with the inception of the R&D Grant scheme in 2012. CREST provides valuable E&E industry input to Malaysia's Industry 4.0 policy and strategic roadmap development under the purview of MITI and with the partnership of MIDA, as well other key stakeholders like MIMOS and SIRIM.

CREST's proof-of-concept project was initiated in late 2016 with the involvement of anchor manufacturing companies, which evaluated technology and integrated solutions from technology providers, academic researchers, and systems integrators. This has led to the adoption of several solutions in their factories. Most importantly, the anchor manufacturing companies will serve as showcase sites for further promotion of Industry 4.0 adoption to other companies, and the promotion of solutions from local SME companies as well.

“CREST provides valuable E&E industry input to Malaysia's Industry 4.0 policy and strategic roadmap development under the purview of MITI and with the partnership of MIDA, as well other key stakeholders like MIMOS and SIRIM.”

In promoting specific Industry 4.0 technologies adoption, CREST partnered with universities that had key core expertise like UTM, USM, and Universiti Malaysia Pahang (UMP), to develop a focussed Industry 4.0 Technology Workshop Series on simulation and modelling, collaborative robots and metaheuristics algorithms. These workshops were attended by industry practitioners and academic researchers who were considering the adoption of these technologies in their production lines, or learning these technologies for further R&D activities. These programmes were conducted in conjunction with Perbadanan Pembangunan Sumber Manusia Berhad (PMSB) under the Human Resource Development Fund. Additional special technology skills and knowledge programmes are continually being identified and developed.

CREST Place – entrepreneur development centre

The entrepreneurial development centre continues to host some of the most successful start-ups in Penang. The 10,000 square foot facility at sains@usm is now home to over 100 entrepreneurs, hosting some of the most successful IC design companies in Malaysia engaging in activities that range from training and outsourced designing to in-house product development.

It has had early start-up companies grow to sizeable entities in the areas of IoT, e-commerce, robotics, and consultancy in multiple countries abroad. CREST looks forward to introducing this model to other parts of Malaysia as well.

CREST experienced a fruitful 2017, in terms of nurturing the seeds and platforms for more opportunities, especially in terms of commercialising the effort and activities that have taken place in previous years. This success in 2017 has suitably prepared it for Phase 3 (coined as “Take Off”), which begins in 2018.

The focus in 2018 and the subsequent three years will be towards translating the outputs of research, industry development, and talent development, into commercial outcomes that benefit the CREST R&D ecosystem, primarily in the E&E sector. However, its efforts also extend to cover the healthcare sector and the larger manufacturing sectors as well.

4
Going Forward

"As companies take the lead, the Government stands ready to provide the necessary support, guidance and assistance."

- Dato' Azman Mahmud, CEO MIDA at the National Investment Seminar 2017

4.1 Rolling Ahead with the Times

Despite cautious economic forecasts, the Malaysian economy proved robust in 2017, charting steady growth. With a transformative course laid out for the nation, eyes turn to the future to assess what coming years are likely to bring

Despite the grey economic forecasts that were predicted by economists in 2016, the year 2017 was better than anticipated. The global economic growth rate is expected to turn out at a favourable 3.0 to 3.3 per cent, salvaged by the recovery of Europe and North America's economies and the sustained growth of emerging markets; PRC, in particular, experienced a sturdy economic growth of between 6.4 and 6.5 per cent – a result that provided a much-needed boost to the global economy.

In the face of this, Malaysia is proving incredibly resilient, with a projected GDP hovering at 5.2 per cent for 2018 and 2019. Unemployment in the nation rounded out at around 3.3 per cent. The nation's buoyancy was largely due to the support of robust private investment, emphasising capacity expansion in the manufacturing and services sectors. Exports surged by 19.4 per cent in 2017, growing at the highest rate in 13 years - underpinned by the growth in Electronics and Electrical (E&E) and also major commodities.

Year-on-year, exports in December grew to RM79.33 billion – a growth of 4.7 per cent. Adding to this was the gradual recovery of crude oil prices, which are expected to rise steadily through to 2019, and the increased sale of commodities besides liquefied natural gas, including timber and oil palm-based products. All these together boosted the GDP growth for the year and are expected to lead to new job opportunities, signalling a positive outlook for coming years.

The natural progression of a maturing economy is a transition from manufacturing-based to services-based. However, the advent of Industry 4.0 has resulted in a diversion to smart manufacturing for countries looking to capitalise on the creation and sale of sophisticated manufactured goods.

Industry 4.0 builds on the increasingly powerful technology available to manufacturers nowadays, including advanced robotics, large-scale factory digitisation, 3D printing, and energy innovations. Industry 4.0 is characterised by the move towards an interconnected world – one where machines interact with each other seamlessly and where big data and advanced analytics come together to offer greater insights and powerful real-time decision making. With most countries starting on relatively equal footing, Malaysia is well-situated to become a leader in the race towards Industry 4.0, a transformation outlined in the National Transformation 2050 (TN50).

The Government has identified Malaysian conglomerates and multinational corporations (MNCs) as drivers of Industry 4.0 and hopes that, through their wayfinding, they will lead other local players of different tiers to adopting Industry 4.0 best practices in their own businesses, thus leading to an Industry 4.0-optimised value chain. It is expected that the 'building blocks' of this envisaged Industry 4.0 ecosystem will begin with the Internet of Things (IoT), leading naturally into the Internet of Services, the Internet of Data, and the Internet of People.

While this transformation will galvanise and turbocharge many businesses, there are bound to be a few that will be unable to assimilate and adopt emerging technologies and the new business models that follow them. To reduce this occurrence, the Government is working hard to bring early awareness on the need to embrace new technology and to be pragmatic about riding the wave of this new industrial revolution. To this end, local businesses are being encouraged to intensify their R&D, innovation and digitisation efforts. With many local players finding themselves financially challenged from adopting Industry 4.0, the Government is offering various tax incentives and capital allowances to ease the way for companies.

The ongoing changes in technology and industrial structure have also resulted in widespread worker displacement. While jarring for workers, the retrenchments are unavoidable features of any transitioning economy as businesses reorganise and redistribute their human capital to best suit the new systems. Thus, Malaysia is not exempt from this phenomenon, as it undergoes a shift from labour-intensive to knowledge-driven. To address the changing skill requirements of the transforming industries, the Government has made great strides to ensure the local workforce is prepared to meet the changing nature of jobs. These include strategies to upskill and reskill the workforce, taking into account megatrends such as automation and Industry 4.0.

As the agency responsible for the nurturing of the country's economic terrain through investment, MIDA is fixing its eye on other development areas that would support automation and the future of manufacturing. One of the key reasons for the Government's push for automation is because automation would reduce the reliance on foreign labour. Achieving this, however, will require concerted efforts from all stakeholders.

A wider eye

The outlook for global economies seems relatively optimistic, despite a trend of slowing growth in developed economies. The US economy is projected to expand by 2.3 per cent in 2018; in Europe, the acceleration of exports has served to pad the slowing effect, however both Germany and France are expected to face moderate growth of 1.8 per cent in 2018; finally, in Asia, Japan – Malaysia's traditional trading partner – recorded an impressive (for the nation) growth of 1.6 per cent in 2017, propelled by a supportive fiscal stance and strengthening global demand, although this pace is expected to weaken and slow to 1.1 per cent in 2018.

This overarching slow growth, while expected for developed nations, has resulted in escalating inward-looking policies. This policy shift, wherein nations try to stimulate their own domestic economies, could stem trade with external parties, further reducing essential trade and hampering growth. One external factor that has put pressure on emerging markets, including Malaysia, are the US tax reforms which heavily favour domestic investments within the US. Even US companies that have placed their money overseas have been seeking ways to bring it back to the US as fast as possible in order to capitalise on the reforms.

A glimmer of hope appears, however, in the anticipated formation of the Trans-Pacific Partnership (TPP) – initially stalled by the unexpected withdrawal of the US, but since re-established with Canada at its helm and repackaged as the Comprehensive and Progressive Agreement for Trans-Pacific Partnership (CPTPP). The CPTPP is an expansive agreement that spans 11 countries with a combined GDP worth approximately US$11 trillion (13% of overall global GDP) and a 15 per cent share of global trade volume. The deal is planned to eliminate 98 per cent of tariffs and, through this agreement, it is hoped that Malaysian companies will be able to expand their presence in the overseas market.

One fairly recent development has been the diversification of investment from PRC into new sectors. PRC has recently been one of the largest sources of foreign investment into Malaysia's manufacturing sector, due largely to its Belt and Road

11TH MALAYSIA PLAN'S (2016-2020) MAJOR MACRO TARGETS

MAJOR MACRO TARGETS	TARGETS	ACHIEVEMENTS
GDP growth	5-6% p.a.	2017: 5.9% p.a.
GNI per capita	MYR54,100 by 2020 (2015: MYR36,093)	2016: MYR37,760 Q4 2017: MYR42,930
Average monthly household income	MYR10,540 by 2020 (2014: MYR6,141)	2016: MYR6,958
Median monthly salaries & wages	MYR2,500 by 2020 (2015: MYR1,600)	2016: MYR1,703
Salaries as a % of GDP	At least 40% by 2020 (2014: 34.9%)	2016: 35.3%
Malaysian Wellbeing Index (MWI)	+1.7% p.a. (10MP: +1.2% p.a.)	NA
Current account as a % of GNI	2.6% by 2020 (2015: 3.1%)	2016: 2.4% 2017: 3.1%
Ratio of Federal Government debt to GDP	<45% by 2020	End-2016: 52.7% End-June 2017: 50.9%
Government fiscal position	Near-balanced budget, by 2020 2.4% (2018-2020)	End-2016: -3.1% of GDP End-2017E: -3.0% of GDP

Source: 11 Malaysia Plan (11MP), Bank Negara Malaysia (BNM) and Department of Statistics Malaysia (DOSM)

initiative. According to The Economist Intelligence Unit, Malaysia has been ranked 4th in its China Going Global Investment Index 2017. As investment from PRC continues to ramp up, it is expected that other beneficiaries will be the tourism, food and beverages, hotel, recreation, education, and healthcare sectors.

Malaysia, through MIDA, remains committed to the agenda of the Sustainable Development Goals (SDGs), ensuring its investment policies serve to secure and support the SDGs. The SDG outlines 17 Development Goals, including a goal which emphasises the promotion of inclusive and sustainable industrialisation and economic growth. Investment policies are drafted and recalibrated to ensure productivity, technological upgrading and an innovation-driven economy, while improving the efficiency of resource consumption. Malaysia's investment policy stance cements its commitment towards the SDG agenda and is in tandem with the SDG goals and best practices.

Another key goal of the SDGs is poverty eradication, and it is one that the Government is addressing with aplomb. Taking on an approach that prioritises access to education and skill development, as well as employment and income-generating activities and entrepreneurial support, the national poverty rate has improved rapidly since the 90s. The Government has also undertaken the challenge to ramp up the median monthly income for the bottom 40 (B40) per cent households, from RM2,537 in 2014 to RM5,270 in 2020.

Moving forward, it is hoped that Malaysia's continuous growth, fed by both internal and external parties, will open gateways toward structural policy reforms which will enhance productivity and improve the quality of life for the rakyat as a whole. By addressing the constraints associated with a skills deficit and lack of competition in key markets, the Government and MIDA hope to set the nation on a path to unfettered economic and developmental success.

> "Malaysia, through MIDA, remains committed to the agenda of the Sustainable Development Goals (SDGs), ensuring its investment policies serve to secure and support the SDGs."

Fast forward Budget 2018

On 27 October 2017, YAB Prime Minister Datuk Seri Najib Tun Razak announced the Budget 2018, which set the tone for the country's sustainable economic growth in coming years.

Aptly coined "Prospering an Inclusive Nation towards the Aspiration of TN50", the budget promises positive prospects and is expected to boost investor confidence in the economic development of the nation, with a focus on promoting domestic investment and reaffirming Malaysia as a key destination for foreign investment.

In line with the nation's quest to pursue high-quality investment in manufacturing and services emphasising technology transfer and job opportunities for Malaysians, the Government has allocated RM200 million to the High Impact Strategic Fund under MIDA. This investment will be used to facilitate technology transfer in the nation, and to create high-skilled jobs that will change Malaysia's economic landscape, assisting in the endeavour to become a high-income nation by 2020. A further RM150 million was allocated to MATRADE, MIDA and SME Corp, to go towards essential activities such as export promotion and investment events such as the Market Development Grant.

The Budget 2018 highlights the need to focus on long term goals, such as the need to strengthen Malaysia as a global industry player in the wake of the Fourth Industrial Revolution. For that reason, the Government has committed to providing a conducive ecosystem for future-focussed manufacturing companies that are seeking to innovate and adopt elements of Industry 4.0 and the Internet of Things (IoT) in their business processes and products. By doing so, the Government hopes to boost Malaysia towards embracing a 'Smart Manufacturing' concept: driving the adoption of automation – particularly in labour-intensive industries such as rubber, plastic, wood and textile products – and active innovation, and reducing the reliance on unskilled workers.

To support the new Industry 4.0 revolution, two new initiatives were announced under Budget 2018:

- Matching grants under the Domestic Investment Strategic Fund (DISF) to upscale Smart Manufacturing facilities.

- Accelerated Capital Allowance (ACA) of 200 per cent on the first RM10 million of qualifying capital expenditure incurred in the year of assessments (YA) 2018 to 2020 for manufacturing and manufacturing-related services, fully claimable within two years.

Despite the Industry 4.0 buzz among manufacturing circles, local Malaysian players have yet to catch up and fully move up the global value chain. To make this shift, industry players must adopt automation, especially in industries with a heavy reliance on unskilled foreign workers.

Smart factories are able to raise the bar on productivity through efforts that cover automation processes involving robotics, optimised assets, production quality and a highly skilled workforce. Acknowledging the need for Malaysia to gear itself towards adapting the technology drivers of Industry 4.0, the Government has pledged to extend the Automation Capital Allowance (Automation CA) to 200 per cent for the first RM4 million of qualifying expenditure incurred from YA 2018 to 2020 for labour-intensive industries.

Through the establishment and adoption of Industry 4.0, it is hoped that multinational companies (MNCs) will be able to assist in leading the transition to Industry 4.0, pushing local production further up the supply chain and engaging in technology and knowledge transfer with local suppliers.

Recognising the importance of fortifying the country's footing in the services sector, especially where strategic services activities are concerned, the Principal Hub incentive scheme has also been extended from YA 2018 to 2020 in order to strengthen Malaysia as a strategic location for MNCs to establish regional hubs. The three-tiered tax incentive scheme will promote higher value-added services and create high-income jobs for Malaysians.

As the nation gears up for the upcoming Visit Malaysia Year 2020, and sets its eyes on increasing hotel rooms up to approximately 37,000 rooms by then, Budget 2018 has extended the existing investment incentives for four and five star hotels in Malaysia until the year 2020. By doing so, the Government hopes to capitalise on the nation's natural beauty and ongoing potential as a tourist destination.

Continuing the tourism trend, the Government has worked to spur the growth of medical tourism in the country in order to create a Medical Tourism Hub in Malaysia. Though the initial medical tourism incentive expired in 2017, the scheme has since been extended to 2020, and will enable companies carrying out either new or expansion activities of private healthcare services to enjoy an Investment Tax Allowance (ITA) of 100 per cent of qualifying capital expenditure. This will further stimulate the development and expand the capacity of the private healthcare industry in Malaysia. The hope is that, by doing so, Malaysia's healthcare sub-sector will become a healthcare hub for foreign patients.

The Budget also provides GST relief on the import of Oil & Gas equipment, including oil rigs and floating structures, for companies in certain areas from January 2018. For more information on Budget 2018, you can find it online at http://www.treasury.gov.my/index.php/en/budget/annual-budget.html.

Malaysia's Got to Have Talent

In the face of rising labour costs and its surmounting issues, developing and developed Asia must now deal with the emergence of automation and robotics; technological trends which are fast reshaping the investment dollar landscape. Industries everywhere are being disrupted; not just in Asia, but the world at large.

That leaves ASEAN, where 80 per cent of the world's consumer electronics is manufactured, with little choice but to invest in strengthening its human capital via education and skills training especially since the application of high technology demand high labour skills. Failure to upskill workers could result in unemployment, diminishing FDI inflows and decline in business; all unsustainable factors for long term economic growth.

On a positive note, the rise of these disruptive technology trends could compel a nation to up skill its workforce, bringing about the realisation of its growth potential. Elevated human capital provides an incubation for innovation resulting in a knowledge led economy that is the leading edge for every successful nation.

As far as investments go, a highly skilled workforce is a critical enabler for winning over investor confidence. Here in Malaysia, investors are no different. Recognising this and the technological trends that Malaysia must embrace, the Government, alongside MIDA and other relevant agencies continually work hand in hand towards future-proofing the local talent pool to prevent skills mismatch.

Under the 11MP, the country has set its sights on becoming a developed nation by 2020. It is expected that the economic sectors would create 1.5 million jobs by then and that 60 per cent of these employees are deemed to possess technical and vocational education and training (TVET)-related skills. Clearly, the future is very much dependent on the availability of skilled labour which is estimated to constitute 35 per cent of the workforce by then.

At the national level, as Malaysia gears up towards equipping our industries with a highly-skilled workforce, MIDA's participation in attaining this objective is evident via various targeted initiatives, such as the setting up of skills committees, technical working groups (TWG) and industrial cooperation working groups (ICWG), focussed industry human capital requirement and industry outlook studies, industry-academia collaboration and apprenticeship programmes.

"Elevated human capital provides an incubation for innovation resulting in a knowledge led economy that is the leading edge for every successful nation.
As far as investments go, a highly skilled workforce is a critical enabler for winning over investor confidence. Here in Malaysia, investors are no different."

The Industry Skill Committee (ISC), co-chaired by the Ministry of International Trade and Industry (MITI) and Malaysian Employers Federation (MEF), encourages industries to step up their productivity game with the utilisation of automation, reduced reliance on foreign labor and industry-led training. In turn, the Industry Working Group (IWG), co-chaired by MIDA and Department of Skills Development under the Ministry of Human Resources (MOHR), oversees the Sub-Industry Working Group (SIWG) to determine industries' expectations and human capital requirements.

For starters, the 10 priority industries that have been identified are as follows:-

- Electrical and Electronics
- Chemical and Petrochemical
- Machinery & Equipment/ Advanced Engineering
- Aerospace
- Medical Devices
- Pharmaceutical
- Automotive
- Oil & Gas
- Maritime
- Information, Content and Infrastructure

One of the deliverables of this committee is for MIDA to conduct a study on 'Environmental Scan for Human Capital Issues' to gain better insights into the current and future workforce within the E&E, Chemical and Petrochemical, Medical Devices and Pharmaceutical Manufacturing sectors. The study for the machinery & equipment industry was completed in February 2017. Meanwhile, studies for the other industries are due for completion in May 2018.

Additionally, the National Policy on Industry 4.0 outlines a strategic policy framework for the industry led by MITI, supported by the following five Technical Working Groups (TWG):-

- Infrastructure & Ecosystem
- Talent & Human Capital Development
- Technology & Standards
- Funding & incentives
- SME

Of the listed five TWGs, MIDA is actively engaged in Talent & Human Capital Development, Technology & Standards and Funding & Incentives.

The Industrial Cooperation Working Group (ICWG) is a collaborative effort between MIDA and the Economic Development Board (EDB) to intensify cooperation between Malaysia and Singapore for the promotion and facilitation of investments.

As part of this collaboration, MIDA, EDB Singapore, Temasek International Foundation and Institute of Technical Education Services (ITEES) are partnering on a Train-the-Trainer programme.

At the same time, the Industry-Academia Collaboration (IAC) initiative is a tripartite partnership between Talent Corporation Malaysia Berhad (TalentCorp), the Ministry of Higher Education (MOHE) and MIDA to address labour demands in seven key technology clusters as follows:-

- Solar
- IC Design
- Embedded System
- Wireless Communication (RF)
- Wafer Fabrication
- Opto/LED
- Advanced Manufacturing

This initiative takes place over nine public universities and 14 companies. Similarly, MIDA has also signed a Memorandum of Understanding (MoU) with SEGI University and Biocon Sdn. Bhd, as well as initiating a curriculum embedment workshop in the fields of engineering, material science, applied physics and applied sciences between MOHE and the Semiconductor Fabrication Association (SFAM).

On the other hand, the Apprenticeship Programme is a collaboration between MIDA, the Ministry of Education (MOE) and the Federation of Malaysian Manufacturers (FMM). Students enrol in a two-year programme at vocational colleges that offer academic and vocational courses with practical training in the manufacturing industry.

The Department of Public Services (JPA) and Japan International Cooperation Agency (JICA) and MIDA jointly organised a training programme at Tohoku University as part of the second wave of The Look East Policy. MIDA has also spearheaded several career fairs and open interviews.

Changing Tides

The year 2017 proved to be a challenging year for numerous industries in Malaysia, led largely by the global economic slowdown that affected both advanced, emerging markets and low-income countries.

This saw the closure of several businesses owing to various reasons, including the transition to e-commerce and the inevitable redundancies that come in the wake of emerging technologies. Even companies that aren't joining the e-commerce bandwagon have found themselves making critical restructuring choices.

As Malaysia, in line with its vision to transform into a high-income nation by 2020, makes its transition away from low-cost, high-labour manufacturing towards high-tech, higher value-added outputs, many companies are now seeking to shift their labour-intensive factories elsewhere to capitalise on abundant cheap labour.

Other businesses reduced their staff numbers owing to the advent of new technologies that enabled them to automate tasks and increase efficiency. Based on information provided by the Department of Labour, a total of 35,097 workers (including foreign labour) were retrenched in the period of January – December 2017. Of this total, 32,055 Malaysians were in the manufacturing sector.

Nonetheless, it is worth noting that the manufacturing sector continues to show a high demand for employees. A large portion of the retrenched workers have been absorbed by other firms which are expanding operations, such as Keysight, Inari, HP, Osram, and Infineon.

A good example is Samsung Electronics Display Malaysic (SDMA), which conducted an Outplacement Programme for its retrenched employees after its business cessation.

The programme was participated by 20 companies, including Hanwha Q Cells, NXP Semiconductors, Careglove Global, Coca-Cola, Flextronics, and AUO SunPower.

Ushering in the new

In assessing the economy, one needs to take into account the new investments that are coming in, as well as the expansion by many established firms which have operations in Malaysia and the employment opportunities created by them.

The nation attracted new investments in 2017, many in the much desired high-skill, high value-added industries the Government has been targeting. These investments will provide more job opportunities for Malaysians.

A total of 139,523 job opportunities will be created from the 5,466 projects approved in the manufacturing, services and primary sectors in 2017. Of these, 56,421 job opportunities will be created for the manufacturing sector.

In addition, the year 2017 saw many companies undertaking opening ceremonies and ground-breaking announcements. Among them were Rohm Wako's new building, Nestle's Procurement Hub, Broadcom's Global Distribution Warehouse, Atlas Copco's first South East Asia Training Academy Centre, ABB's launching of its new Leangear Zs9, KLK Oleo's opening of a new R&D Centre and Ester plant, IKEA's new regional distribution and supply chain for ASEAN, Konica Minolta's ground-breaking ceremony of its Smart Industrial Centre, Infineon's new Block 8 (which is set to gear Malaysia's E&E industry towards Industry 4.0), Endress & Hauser's launch of its new customer service and training facility, Roland's opening of its Mi Services, and BMW's new regional parts distribution centre. These projects alone are expected to contribute additional job opportunities of more than 7,000 to the country, and the list is constantly expanding. Rohm Wako, with its expansion, now provides 1,899 jobs (99.7% of which are for the local Kelantanese) – a monumental increase of more than 160 per cent since its establishment in 1989.

> “The nation attracted new investments in 2017, many in the much desired high-skill, high value-added industries the Government has been targeting. These investments will provide more job opportunities for Malaysians. A total of 139,523 job opportunities will be created from the 5,466 projects approved in the manufacturing, services and primary sectors in 2017. Of these, 56,421 job opportunities will be created for the manufacturing sector.”

Another long term investor, Nestle, has grown and expanded, and now operates a total of seven production facilities and one National Distribution Centre. The company employs more than 5,500 employees, with a 100 per cent Malaysian workforce in their factories. With their expansion of establishing a Procurement Hub in the country, an estimated 130 Malaysians will stand to benefit in terms of employment opportunities, particularly in procurement planning, quality management, and contract development.

In short, the investment performance, particularly for the manufacturing sector, remains encouraging. What we need now is to encourage greater labour mobility from states where there is surplus of labour to areas where demand for labour is higher.

APPENDIX 1: APPROVED MANUFACTURING PROJECTS, 2017 AND 2016

	2017			2016		
	NEW	EXPANSION/ DIVERSIFICATION	TOTAL	NEW	EXPANSION/ DIVERSIFICATION	TOTAL
Number	327	360	687	340	393	733
Employment	29,775	26,646	56,421	34,066	30,054	64,120
Total Capital Investment (RM million)	39,493.5	24,191.3	63,684.8	27,740.5	30,752.2	58,492.7
- Domestic (RM million)	31,804.7	10,337.1	42,141.8	17,397.2	13,678.1	31,075.3
- Foreign (RM million)	7,688.8	13,854.2	21,543.0	10,343.3	17,074.1	27,417.4

APPENDIX 2: NEW MANUFACTURING PROJECTS APPROVED BY SIZE OF CAPITAL INVESTMENT, 2017 AND 2016

SIZE OF CAPITAL INVESTMENT	2017					2016				
	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MIL)	FOREIGN INVESTMENT (RM MIL)	TOTAL CAPITAL INVESTMENT (RM MIL)	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MIL)	FOREIGN INVESTMENT (RM MIL)	TOTAL CAPITAL INVESTMENT (RM MIL)
Less Than RM2.5 mil	12	235	17.2	-	17.2	26	566	43.3	-	43.3
RM2.5 mil - < RM5.0 mil	35	1,219	103.0	27.0	130.0	30	1,135	87.3	23.7	111.0
RM5.0 mil - < RM10.0 mil	84	3,523	543.7	64.0	607.7	71	3,295	392.1	131.6	523.7
RM10.0 mil - < RM50.0 mil	134	10,269	2,202.1	771.7	2,973.8	146	10,348	1,978.9	1,089.3	3,068.2
RM50.0 mil - < RM100.0 mil	30	3,982	1,347.6	527.9	1,875.5	30	3,745	1,355.2	649.1	2,004.3
RM100.0 mil - < RM500.0 mil	23	5,433	1,566.6	2,705.3	4,271.9	30	7,542	3,356.5	3,799.9	7,156.4
RM500.0 mil - < RM1.0 mil	5	3,051	1,213.4	2,140.6	3,354.0	3	2,890	-	1,906.0	1,906.0
RM1.0 mil and Above	4	2,063	24,811.1	1,452.3	26,263.4	4	4,545	10,183.9	2,743.7	12,927.6
Total	327	29,775	31,804.7	7,688.8	39,493.5	340	34,066	17,397.2	10,343.3	27,740.5

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

APPENDIX 3: APPROVED MANUFACTURING PROJECTS BY INDUSTRY, 2017 AND 2016

INDUSTRY	2017					2016				
	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)
Petroleum Products (Including Petrochemicals)	9	1,782	16,310.8	340.2	16,651.0	18	808	10,319.8	5,599.6	15,919.4
Electrical & Electronic Products	109	10,593	1,510.5	8,155.1	9,665.6	107	16,260	1,294.4	7,943.3	9,237.7
Natural Gas	1	167	9,305.3	0.0	9,305.3	1	67	3,657.2	0.0	3,657.2
Non-Metallic Mineral Products	45	4,836	3,526.2	4,123.9	7,650.1	34	3,004	1,062.9	1,898.0	2,960.9
Transport Equipment	79	9,112	3,346.2	1,502.3	4,848.5	68	7,239	3,064.1	1,691.0	4,755.1
Chemical & Chemical Products	65	2,767	1,728.1	2,420.4	4,148.5	69	2,773	1,661.4	1,390.1	3,051.5
Machinery & Equipment	77	6,078	1,431.3	755.0	2,186.3	88	2,866	999.6	536.5	1,536.1
Food Manufacturing	56	4,149	1,280.8	824.1	2,104.9	58	6,423	2,065.1	1,273.0	3,338.1
Scientific & Measuring Equipment	23	2,497	476.7	1,556.0	2,032.7	28	2,722	224.8	1,184.7	1,409.5
Rubber Products	19	1,997	850.2	380.8	1,231.0	24	6,916	1,277.9	1,015.7	2,293.6
Fabricated Metal Products	72	3,798	803.4	322.4	1,125.8	75	3,718	769.2	635.4	1,404.6
Plastic Products	33	1,949	306.5	407.7	714.2	48	3,038	433.1	1,372.7	1,805.8
Wood & Wood Products	26	1,335	413.5	63.7	477.2	32	1,507	388.5	128.9	517.4
Textiles & Textile Products	12	1,850	106.4	322.3	428.7	8	344	401.0	362.4	763.4
Paper,Printing & Publishing	10	494	243.0	104.9	347.9	15	906	310.6	51.2	361.8
Beverages & Tobacco	12	569	170.3	47.1	217.4	1	64	9.2	0.0	9.2
Basic Metal Products	15	1,362	171.4	11.8	183.2	19	3,345	2,732.5	2,249.5	4,982.0
Furniture & Fixtures	13	789	90.2	80.8	171.0	25	1,072	137.8	22.9	160.7
Leather & Leather Products	-	-	-	-	-	4	303	15.6	35.8	51.4
Miscellaneous	11	297	71.0	124.5	195.5	11	745	250.6	26.7	277.3
Total	687	56,421	42,141.8	21,543.0	63,684.8	733	64,120	31,075.3	27,417.4	58,492.7

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

APPENDIX 4: APPROVED MANUFACTURING PROJECTS WITH INVESTMENTS OF RM100 MILLION AND ABOVE, 2017

INDUSTRY	NEW					EXP./DIV.					TOTAL				
	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	EMPLOYMENT	DOMESTIC INVESTMENT (RM MILLION)	FOREIGN INVESTMENT (RM MILLION)	TOTAL CAPITAL INVESTMENT (RM MILLION)
Petroleum Products (Including Petrochemicals)	1	568	14,302.0	-	14,302.0	2	1,031	1,920.7	302.4	2,223.1	3	1,599	16,222.7	302.4	16,525.1
Natural Gas	1	167	9,305.3	-	9,305.3	-	-	-	-	-	1	167	9,305.3	-	9,305.3
Electrical & Electronic Products	4	1,204	-	1,071.9	1,071.9	17	4,530	1,093.6	6,052.0	7,145.6	21	5,734	1,093.6	7,123.9	8,217.5
Non-Metallic Mineral Products	3	457	201.0	1,429.2	1,630.2	14	2,683	2,778.3	2,604.8	5,383.1	17	3,140	2,979.3	4,034.0	7,013.3
Transport Equipment	7	3,276	1,784.3	1,186.6	2,970.9	2	221	345.9	-	345.9	9	3,497	2,130.2	1,186.6	3,316.8
Chemical & Chemical Products	7	627	921.3	1,427.5	2,348.8	3	170	41.1	509.0	550.1	10	797	962.4	1,936.5	2,898.9
Scientific & Measuring Equipment	-	-	-	-	-	3	1,128	100.0	1,422.0	1,522.0	3	1,128	100.0	1,422.0	1,522.0
Food Manufacturing	3	1,197	222.6	610.7	833.3	3	202	395.4	-	395.4	6	1,399	618.0	610.7	1,228.7
Machinery & Equipment	2	2,451	521.5	278.0	799.5	2	406	160.2	170.3	330.5	4	2,857	681.7	448.3	1,130.0
Rubber Products	1	260	-	162.3	162.3	2	484	604.0	-	604.0	3	744	604.0	162.3	766.3
Wood & Wood Products	1	220	231.5	-	231.5	-	-	-	-	-	1	220	231.5	-	231.5
Paper,Printing & Publishing	1	20	101.5	32.1	133.6	-	-	-	-	-	1	20	101.5	32.1	133.6
Plastic Products	1	100	-	100.0	00.0	-	-	-	-	-	1	100	-	100.0	100.0
Total	32	10,547	27,591.0	6,298.3	33,889.3	48	10,855	7,439.2	11,060.5	18,499.7	80	21,402	35,030.2	17,358.8	52,389.0

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

APPENDIX 5: APPROVED NEW AND EXPANSION/DIVERSIFICATION MANUFACTURING PROJECTS BY INDUSTRY, 2017 AND 2016

INDUSTRY	2017						2016					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)
Petroleum Products (Including Petrochemicals)	4	14,425.8	5	2,225.2	9	16,651.0	8	7,854.7	10	8,064.7	18	15,919.4
Electrical & Electronic Products	20	1,401.4	89	8,264.2	109	9,665.6	17	1,468.1	90	7,769.6	107	9,237.7
Natural Gas	1	9,305.3	-	-	1	9,305.3	1	3,657.2	-	-	1	3,657.2
Non-Metallic Mineral Products	25	2,154.0	20	5,496.1	45	7,650.1	16	2,244.3	18	716.6	34	2,960.9
Transport Equipment	33	3,750.9	46	1,097.6	79	4,848.5	24	1,651.1	44	3,104.0	68	4,755.1
Chemical & Chemical Products	37	2,959.7	28	1,188.8	65	4,148.5	36	1,558.5	33	1,493.0	69	3,051.5
Machinery & Equipment	39	1,346.3	38	840.0	77	2,186.3	42	819.4	46	716.7	88	1,536.1
Food Manufacturing	37	1,399.6	19	705.3	56	2,104.9	30	2,510.0	28	828.1	58	3,338.1
Scientific & Measuring Equipment	6	69.4	17	1,963.3	23	2,032.7	12	523.6	16	885.9	28	1,409.5
Rubber Products	12	452.9	7	778.1	19	1,231.0	11	1,393.3	13	900.3	24	2,293.6
Fabricated Metal Products	44	838.0	28	287.8	72	1,125.8	47	901.5	28	503.1	75	1,404.6
Plastic Products	16	402.6	17	311.6	33	714.2	24	1,250.3	24	555.5	48	1,805.8
Wood & Wood Products	15	367.5	11	109.7	26	477.2	26	473.6	6	43.8	32	517.4
Textiles & Textile Products	7	106.9	5	321.8	12	428.7	4	456.0	4	307.4	8	763.4
Paper,Printing & Publishing	5	203.2	5	144.7	10	347.9	7	152.3	8	209.5	15	361.8
Beverages & Tobacco	8	142.8	4	74.6	12	217.4	1	9.2	-	-	1	9.2
Basic Metal Products	5	49.7	10	133.5	15	183.2	8	467.2	11	4,514.8	19	4,982.0
Furniture & Fixtures	8	53.1	5	117.9	13	171.0	15	87.2	10	73.5	25	160.7
Leather & Leather Products	-	-	-	-	-	-	4	51.4	-	-	4	51.4
Miscellaneous	5	64.4	6	131.1	11	195.5	7	211.6	4	65.7	11	277.3
Total	327	39,493.5	360	24,191.3	687	63,684.8	340	27,740.5	393	30,752.2	733	58,492.7

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

APPENDIX 6: APPROVED MANUFACTURING PROJECTS WITH MALAYSIAN MAJORITY* OWNERSHIP BY INDUSTRY, 2017 AND 2016

INDUSTRY	2017						2016					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)
Petroleum Products (Including Petrochemicals)	4	14,425.8	1	1,920.7	5	16,346.5	4	7,198.8	2	5,708.1	6	12,906.9
Natural Gas	1	9,305.3	-	-	1	9,305.3	1	3,657.2	-	-	1	3,657.2
Transport Equipment	28	2,768.6	38	886.8	66	3,655.4	20	1,586.5	32	2,159.7	52	3,746.2
Non-Metallic Mineral Products	20	558.8	12	2,231.3	32	2,790.1	9	345.0	8	310.4	17	655.4
Chemical & Chemical Products	26	1,370.7	14	364.6	40	1,735.3	24	789.2	23	873.3	47	1,662.5
Machinery & Equipment	31	1,065.5	22	454.5	53	1,520.0	32	518.3	38	570.3	70	1,088.6
Food Manufacturing	27	749.1	14	644.0	41	1,393.1	21	1,832.8	11	133.3	32	1,966.1
Electrical & Electronic Products	9	160.4	29	1,210.1	38	1,370.5	10	221.9	19	1,115.0	29	1,336.9
Rubber Products	8	217.8	3	642.0	11	859.8	9	843.4	8	356.0	17	1,199.4
Fabricated Metal Products	35	569.0	16	218.9	51	787.9	35	511.8	19	266.1	54	777.9
Scientific & Measuring Equipment	6	69.4	8	445.9	14	515.3	6	75.4	6	158.6	12	234.0
Wood & Wood Products	12	326.0	10	103.2	22	429.2	20	370.3	5	25.4	25	395.7
Plastic Products	10	166.7	9	151.7	19	318.4	15	275.2	17	197.4	32	472.6
Paper,Printing & Publishing	5	203.1	2	71.1	7	274.2	6	142.3	5	203.4	11	345.7
Basic Metal Products	5	49.8	8	124.3	13	174.1	5	174.2	8	2,465.4	13	2,639.6
Beverages & Tobacco	8	142.8	-	-	8	142.8	1	9.2	-	-	1	9.2
Textiles & Textile Products	7	107.0	-	-	7	107.0	1	410.0	2	19.5	3	429.5
Furniture & Fixtures	8	53.0	3	37.2	11	90.2	14	75.5	10	73.5	24	149.0
Leather & Leather Products	-	-	-	-	-	-	2	26.0	-	-	2	26.0
Miscellaneous	4	60.4	3	16.5	7	76.9	6	203.8	4	65.7	10	269.5
Total	254	32,369.2	192	9,522.8	446	41,892.0	241	19,266.8	217	14,701.1	458	33,967.9

* Projects with Malaysian equity ownership of more than 50 percent.

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

APPENDIX 7: APPROVED PROJECTS IN THE ENGINEERING SUPPORTING INDUSTRY BY SUB-SECTOR, 2017

SUBSECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)
Machining	6	462	66.6	52.2	118.8	9	97	109.6	10.0	119.6	15	559	176.2	62.2	238.4
Moulds, Tools & Dies	5	256	46.1	18.5	64.6	6	127	3.3	12.8	16.1	11	383	49.4	31.3	80.7
Surface Engineering	3	151	60.8	3.3	64.1	2	57	-	8	8	5	208	60.8	11.3	72.1
Casting	1	166	63.7	-	63.7	-	-	-	-	-	1	166	63.7	-	63.7
Stamping	2	278	4.0	29.0	33.0	1	6	-	3.5	3.5	3	284	4.0	32.5	36.5
Jigs & Fixtures	1	30	3.9	9.2	13.1	-	-	-	-	-	1	30	3.9	9.2	13.1
Total	18	1,343	245.1	112.2	357.3	18	287	112.9	34.3	147.2	36	1,630	358.0	146.5	504.5

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

APPENDIX 8: APPROVED PROJECTS IN THE MACHINERY & ENGINEERING SUPPORTING INDUSTRY BY SUB-SECTOR, 2017

SUBSECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)
Machinery Specialised for Specific Industries	22	3,586	781.6	157.9	939.5	15	536	214.8	280.5	495.3	37	4,122	996.4	438.4	1,434.8
General Industrial Machinery, Equipment & Parts	11	740	162.8	31.0	193.8	8	697	206.0	31.7	237.7	19	1,437	368.8	62.7	431.5
Power Generating Machinery & Equipment	2	144	6.2	183.2	189.4	1	44	-	6.8	6.8	3	188	6.2	190.0	196.2
Machinery/Equipment Modules or Industrial Parts/Components	4	190	20.7	2.9	23.6	9	127	39.2	41.6	80.8	13	317	59.9	44.5	104.4
Maintenance, Upgrading or Reconditioning of M & E (Refurbishment)	-	-	-	-	-	5	14	-	19.4	19.4	5	14	-	19.4	19.4
Total	39	4,660	971.3	375.0	1,346.3	38	1,418	460.0	380.0	840.0	77	6,078	1,431.3	755.0	2,186.3

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 SUBSECTOR, 2017

SUBSECTOR	NEW					EXP/DIV					TOTAL				
	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)	NO.	EMPLOY-MENT	DOMESTIC INVEST-MENT (RM MILLION)	FOREIGN INVEST-MENT (RM MILLION)	TOTAL CAPITAL INVEST-MENT (RM MILLION)
Electronic Components	3	307	73.2	3.7	76.9	42	5,930	582.9	3,562.2	4,145.1	45	6,237	656.1	3,565.9	4,222.0
Industrial Electronics	9	725	48.5	760.7	809.2	24	939	557.7	2,851.6	3,409.3	33	1,664	606.2	3,612.3	4,218.5
Industrial Electrical	5	735	14.1	357.7	371.8	9	390	207.6	84.4	292.0	14	1,125	221.7	442.1	663.8
Electrical Components	2	99	19.1	13.4	32.5	7	751	2.3	408.5	410.8	9	850	21.4	421.9	443.3
Consumer Electronics	1	700	-	111.0	111.0	-	-	-	-	-	1	700	-	111.0	111.0
Electrical Appliances	-	-	-	-	-	7	17	5.1	1.9	7.0	7	17	5.1	1.9	7.0
Total	20	2,566	154.9	1,246.5	1,401.4	89	8,027	1,355.6	6,908.6	8,264.2	109	10,593	1,510.5	8,155.1	9,665.6

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

APPENDIX 10: MANUFACTURING PROJECTS APPROVED WITH FOREIGN PARTICIPATION BY SOURCE, 2017 AND 2016

COUNTRY	2017		2016	
	NO.	FOREIGN INVESTMENT (RM MILLION)	NO.	FOREIGN INVESTMENT (RM MILLION)
China	21	3,854.5	33	4,774.8
Switzerland	7	2,444.0	6	522.5
Singapore	100	2,307.0	96	2,113.8
Netherlands	13	2,033.9	18	3,216.4
Germany	18	1,516.9	21	2,645.3
Hong Kong	10	1,494.5	12	265.2
Japan	41	1,310.7	53	1,861.7
Australia	9	1,270.2	7	70.9
USA	18	1,107.2	18	1,412.8
Taiwan	20	755.4	18	548.6
Korea,Rep.	8	659.3	8	2,169.0
Ireland	2	572.0	-	-
United Kingdom	13	500.3	13	2,574.8
France	4	414.1	4	33.0
Saudi Arabia	1	139.0	1	5.8
Jordan	1	120.0	1	120.0
Thailand	4	62.3	4	169.9
Norway	1	55.1	1	65.9
Luxembourg	1	55.0	1	539.1
Others	68	871.6	103	4,307.9
Total	***	21,543.0	***	27,417.4

Note *** : Number is not totaled to avoid double counting

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

APPENDIX 11: APPROVED MANUFACTURING PROJECTS BY STATE, 2017 AND 2016

STATE	2017						2016					
	NEW		EXP./DIV.		TOTAL		NEW		EXP./DIV.		TOTAL	
	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)	NO.	TOTAL CAPITAL INVESTMENT (RM MILLION)
Johor D.T.	74	18,824.4	72	3,103.4	146	21,927.8	79	14,972.2	86	11,438.4	165	26,410.6
Pulau Pinang	46	1,654.2	74	9,157.7	120	10,811.9	43	1,649.9	63	2,644.0	106	4,293.9
Sarawak	7	9,430.3	13	1,104.1	20	10,534.4	9	1,343.4	4	3,291.9	13	4,635.3
Selangor D.E.	104	2,565.7	98	3,026.8	202	5,592.5	117	3,699.9	125	4,180.8	242	7,880.7
Melaka	10	294.0	27	4,360.7	37	4,654.7	6	233.4	17	1,121.3	23	1,354.7
Pahang D.M.	10	2,662.7	9	299.3	19	2,962.0	6	487.0	13	396.1	19	883.1
Kedah D.A.	16	1,718.4	25	816.5	41	2,534.9	15	489.3	20	1,694.0	35	2,183.3
Perak D.R.	29	1,137.5	16	869.6	45	2,007.1	23	1,714.7	32	2,231.5	55	3,946.2
Negeri Sembilan D.K.	13	840.7	15	265.8	28	1,106.5	13	621.6	20	1,295.9	33	1,917.5
Sabah	10	221.3	4	563.9	14	785.2	15	2,115.0	4	23.1	19	2,138.1
Perlis I.K.	1	25.0	2	500.0	3	525.0	-	-	-	-	-	-
W.P. Kuala Lumpur	4	48.3	3	117.2	7	165.5	7	174.8	5	14.1	12	188.9
Terengganu D.I.	3	71.0	1	2.1	4	73.1	3	85.1	2	2,027.2	5	2,112.3
Kelantan D.N.	.	-	1	4.2	1	4.2	3	120.4	2	393.9	5	514.3
W.P. Labuan	-	-	-	-	-	-	1	33.8	-	-	1	33.8
Total	327	39,493.5	360	24,191.3	687	63,684.8	340	27,740.5	393	30,752.2	733	58,492.7

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, 2017 AND 2016

SERVICES SECTOR	NUMBER		POTENTIAL EMPLOYMENT		TOTAL INVESTMENT (RM MILLION)	
	2017	2016 (R)	2017	2016 (R)	2017	2016 (R)
Real Estate	973	680	NA	NA	45,667.5	64,086.4
Global Establishments	225	211	2,028	2,611	14,010.2	14,098.3
Financial Services	44	43	104	74	11,788.0	13,687.8
Distributive Trade	1,750	1,449	47,603	52,052	9,416.5	9,262.2
Hotel &Tourism	70	97	5,107	6,217	9,288.7	4,680.4
Utilities	NA	NA	27	0	8,456.6	10,576.8
MSC Status	315	336	16,278	18,171	6,152.4	6,430.5
Telecommunications*	421	586	NA	NA	5,912.1	10,613.9
Support Services	194	284	5,040	4,547	4,781.3	9,555.4
Transport	16	15	434	280	4,514.9	2,061.5
Education Services	711	669	4,866	4,683	493.1	572.1
Health Services	3	4	392	266	445.1	188.5
Bionexus Status & Software	9	18	293	634	136.5	375.0
Total	4,731	4,392	82,172	89,535	121,062.9	146,188.8

Note: NA Data is not available
* Data for telecommunications is only up to September 2017
(R) Revised figures

APPENDIX 13: APPROVED INVESTMENTS IN THE PRIMARY SECTOR, 2017 AND 2016

PRIMARY SECTOR	NUMBER		POTENTIAL EMPLOYMENT		TOTAL INVESTMENT (RM MILLION)	
	2017	2016	2017	2016	2017	2016
Agriculture	12	16	305	529	44.9	69.4
Mining	32	19	243	68	11,700.9	7,593.3
Plantation & Commodities	4	6	382	239	672.0	566.1
Total	48	41	930	836	12,417.8	8,228.8

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

Malaysia : Your Profit Centre in Asia™

MIDA SENTRAL
No 5, Jalan Stesen Sentral 5, Kuala Lumpur Sentral, 50470 Kuala Lumpur, Malaysia
Tel: (603) 2267 3633 Fax: (603) 2274 7970 E-mail: investmalaysia@mida.gov.my
www.mida.gov.my