

# GREATER KUALA LUMPUR

City of the Future & Beyond



## SPOTLIGHT GREATER KL E-BOOK

Discover the uniqueness of Greater Kuala Lumpur  
in its vision to become the centre of High-Tech & Innovation Hub



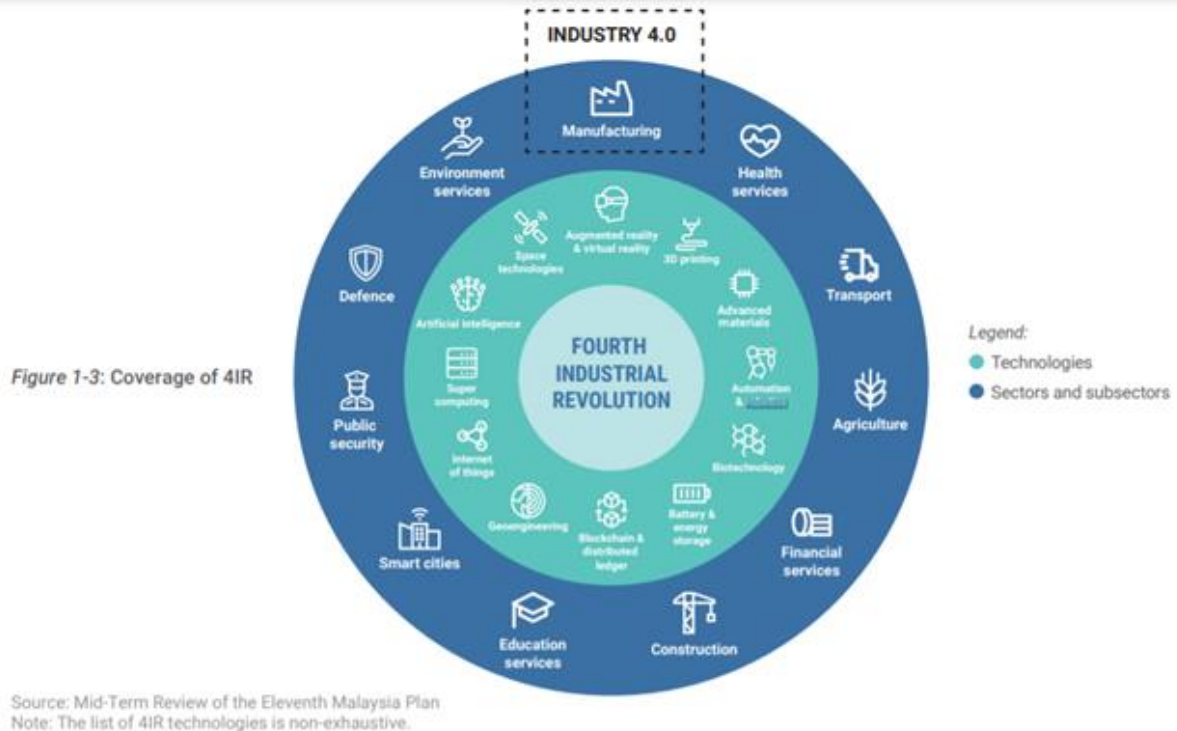
# **4IR: Future-proofing Malaysian industries for the digital age**

The Fourth Industrial Revolution (4IR) and the rapid advancement of disruptive technologies including artificial intelligence (AI), robotics, and blockchain, have shown the potential to significantly transform the economic landscape around the world.

Research has shown that AI technology can increase GDP by up to 26% in the next decade. Digitalisation will also help achieve sustainable growth in the long term, in line with the Shared Prosperity Vision 2030.

The National 4IR Policy outlined several targets for 2030:

- Malaysia to rank among the Top 20 in the Global Innovation Index,
- 30% productivity increase across all sectors, compared to 2020 levels,
- Transform 20% of semi- and low-skilled labour to highly skilled labour,
- 3.5% gross expenditure on R&D, including 4IR-related R&D,
- More home-grown 4IR technology providers, and
- 80% of e-government services are integrated and supported by 4IR technology.



In April 2021, the Cabinet announced that investment policy reforms will be rooted in the National Investment Aspirations (NIAs), namely:

- increase economic diversity and complexity through the development of sophisticated products and services, with high local R&D and innovation;
- create high skill jobs to provide better income for the rakyat;
- expand and integrate domestic linkages into regional and global supply chains, by improving their resiliency;
- develop new and existing clusters focusing on high productivity sectors, including local products and services; and
- improve inclusivity to contribute towards the socio-economic developmental agenda.

Subsequently, Bank Negara Malaysia established a RM1 billion High Tech Facility for SMEs in advanced manufacturing and services sectors aligned to the NIAs, as well as SME project participants in key Government programmes involved in R&D and innovation for critical technologies including 4IR technologies.

Thus far, three key technologies have come into focus: AI, robotics, and blockchain.

# ARTIFICIAL INTELLIGENCE (AI)

## CENTRE OF AI FOR FUTURE INDUSTRY (CAIFI)

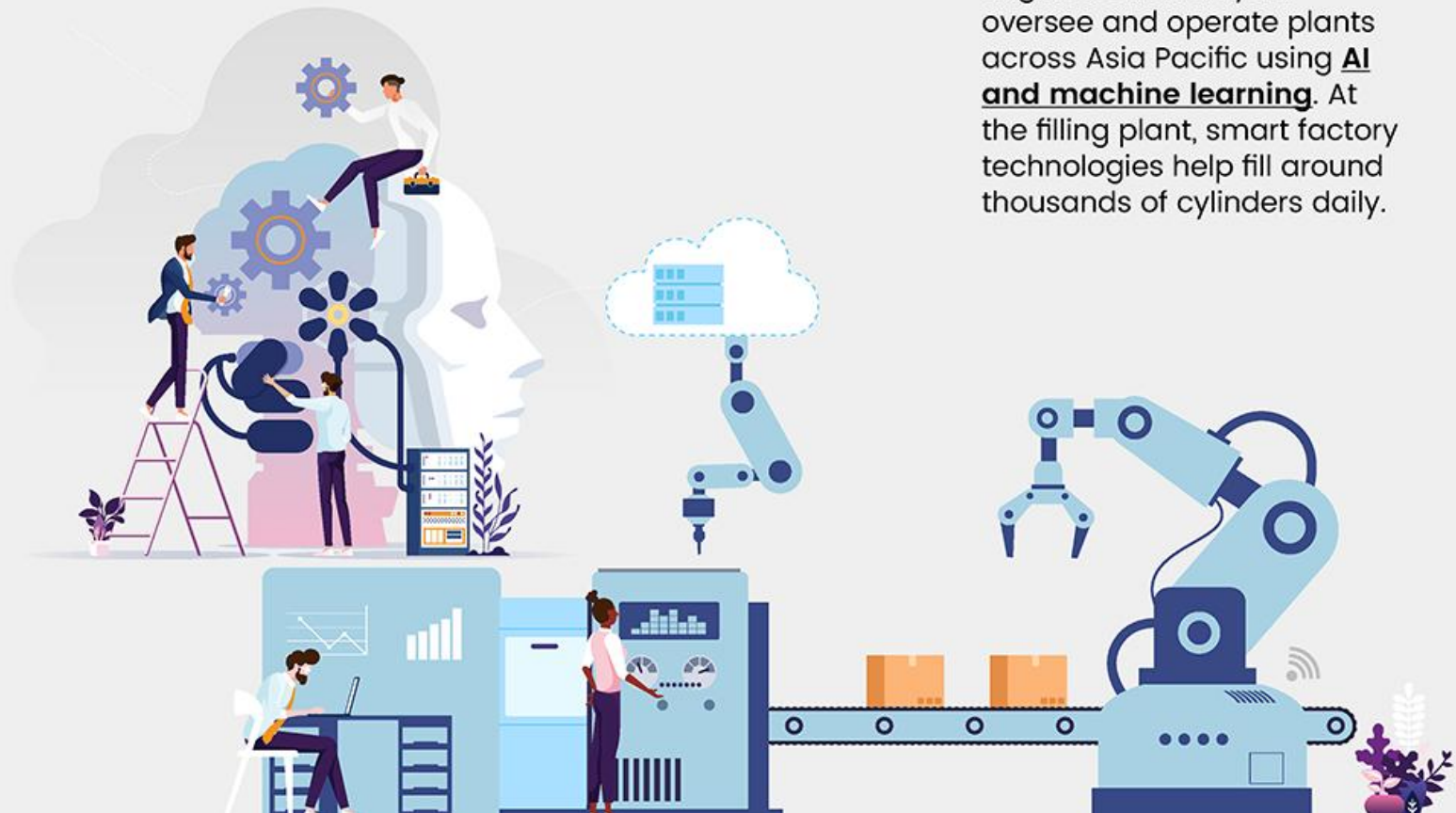
In April 2019, MIMOS and Microsoft jointly established **CAIFI**, equipped with Microsoft's Internet of Things and AI programme to train entrepreneurs including SMEs and finance and manufacturing graduates.

## AI PARK

In 2019, G3 Global partnered with China Harbour Engineering Company Ltd and SenseTime, the world's largest AI unicorn, to set up Malaysia's **first AI park**, with total investments of more than US\$1 billion planned over the following five years.

## REMOTE OPERATING CENTRE

German gas MNC **Linde** opened two 4IR-driven projects in Klang Valley: its regional remote operating centre (ROC) in Shah Alam and a semi-automated cylinder filling plant in Banting. At the ROC, engineers in Malaysia oversee and operate plants across Asia Pacific using **AI and machine learning**. At the filling plant, smart factory technologies help fill around thousands of cylinders daily.





# ROBOTICS

## ROBOTIC AND COGNITIVE CENTRE

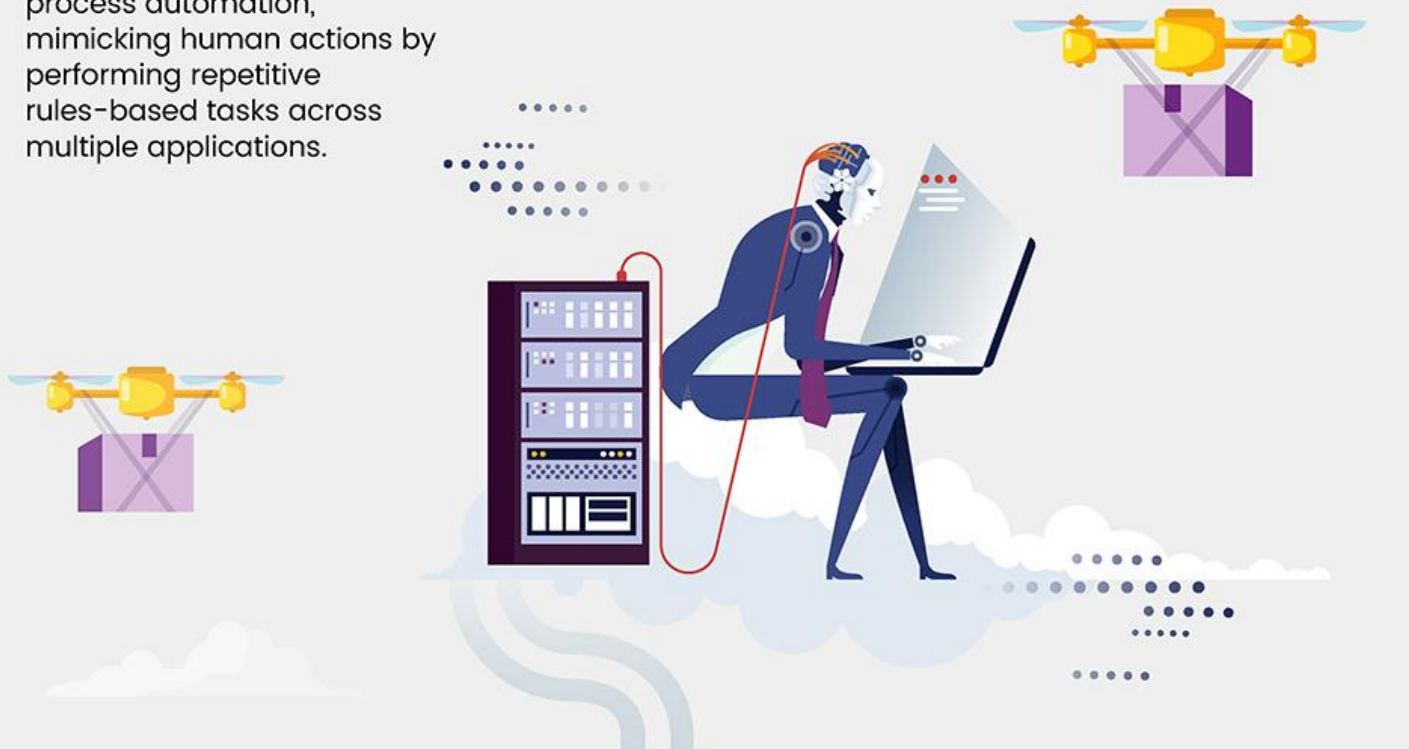
In March 2019, **AstraZeneca** launched its Asia Pacific hub in Kuala Lumpur, part of the pharma giant's plan to invest more than RM500 million in Malaysia over the next five years. The hub will house the Robotic and Cognitive Centre, which will deliver 'digital disruption' in day-to-day operations, increase efficiency and improve productivity that will be scaled across global operations using robotic process automation, mimicking human actions by performing repetitive rules-based tasks across multiple applications.

## ROBOTICS DIGITAL OPERATIONS CENTRE

In July 2019, Swiss tech giant ABB opened its **robotics digital operations centre** in Subang Jaya, to harness cloud computing, big data analytics and end-to-end connectivity to provide real-time monitoring and technical support for ABB robots across ASEAN countries as well as Taiwan and India.

## DRONE SANDBOX

Via the **National Technology and Innovation Sandbox**, the Malaysian Global Innovation & Creativity Center and Federal Land Development Authority (FELDA) selected five high-tech companies to stress-test various drone and robotic solutions to improve harvesting, maintenance and fertilisation of palm oil plantations at FELDA sites.



# BLOCKCHAIN

## REGIONAL BLOCKCHAIN HUB

In May 2021, Japanese blockchain developer **Chaintope** made Malaysia its ASEAN hub, supporting projects including digitalisation of administrative documents in Fukuoka, and traceability in the Japan fishing industry.

## INSTANT REMITTANCE

In November 2018, CIMB and Ripple collaborated to deploy Ripple's blockchain-based solution to enhance CIMB's remittance network and enable remittances via corridors such as Australia, USA, UK and Hong Kong.

## TRADE FINANCE

In October 2019, **HSBC** pioneered Malaysia's first blockchain transaction with the execution of a letter-of-credit deal involving the import of resin from Singapore. This followed 2018 news that nine Malaysian banks have teamed up to develop **blockchain applications for trade finance**.

## HEALTH DATA WAREHOUSE

The Malaysian Health Data Warehouse is a one-stop centre for health-related data gathered from public and private hospitals. There are plans to use blockchain to accelerate the usage of this warehouse while maintaining patient confidentiality.



# **Green Economy: Spurring green investments in Greater KL**

In the Shared Prosperity Vision 2030 (SPV) policy document, Green Economy is a key economic growth area that emphasises low-carbon activities as well as effective and inclusive sources.

The green economy encompasses activities such as green buildings, sustainable transportation and mobility, food sovereignty and security, energy and maritime, plastic substitute products, smart and sustainable cities, sustainable coastal development, environmental preservation and rehabilitation, climate-adapted technology and organic farming.

Green economy also refers to the creation of a circular economy that is capable of operating without emitting waste.




The SPV 2030 complements existing policies such as the Green Technology Master Plan 2017–2030, Malaysia’s Roadmap towards Zero Disposable Plastics 2018–2030, National Renewable Energy Policy, and the National Low Carbon Cities Framework 2017.

Together, these policies set Malaysia’s green economy trajectory as part of the country’s goal of achieving sustainability by 2030. Sustainable Malaysia’s green growth goals include:



- the green economy contributing RM100 billion to Gross Domestic Product (GDP);
- creating 222,000 green jobs;
- registering 50,000 green products and services; and
- government green procurement at 100% of GDP.

There are a wide variety of tax incentives across various green activities, including Renewable Energy (RE), Electric Vehicles, Waste Management, and Energy Efficiency projects:

INCENTIVES/ DESCRIPTION	GREEN INVESTMENT TAX ALLOWANCE	GREEN INCOME TAX EXEMPTION							
		Green Technology Services	Solar Leasing Activities						
 <b>Qualifying activities</b>	Renewable Energy Energy Efficiency Green Building Green Data Centre Integrated Waste Management	Renewable Energy Energy Efficiency Electric Vehicle (EV) Green Building Green Data Centre Green Certification and Verification Green Township	Solar leasing activities 						
 <b>Quantum/ Period</b>	<b>100%</b> of qualifying capital expenditure for <b>three (3) years</b> from the date of the first qualifying capital expenditure (CAPEX) incurred; offset against <b>70% of statutory income</b> in the year of assessment	<b>70%</b> on statutory income for qualifying green services where the period of incentive is for <b>three (3) years</b> starting from assessment year of the first invoice related to green technology services issued	<b>70%</b> on statutory income for solar leasing activity for a period of up to <b>ten (10) years</b> of assessment based on the <b>capacity</b> : <table><tr><th>Capacity</th><th>Incentive Period</th></tr><tr><td>&gt;3MW- ≤10MW</td><td>5 years</td></tr><tr><td>&gt;10MW- ≤30MW</td><td>10 years</td></tr></table>	Capacity	Incentive Period	>3MW- ≤10MW	5 years	>10MW- ≤30MW	10 years
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# GREEN TECHNOLOGY

## SUSTAINABLE HOUSING

France's leading construction company **VINCI** Construction collaborated with Universiti Malaya (UM) to build a low-cost home using green technology which uses waste from the oil palm and steel industries. The project turned into reality the findings from UM's Centre for Innovative Construction Technology at UM regarding partial and full cement replacements using materials like palm oil fuel ash, palm oil clinker ash, rice husk ash, and coal bottom ash.

## INDUSTRIALISED BUILDING SYSTEMS (IBS)

**CRH**, the second largest building materials company globally, set up its regional hub in Greater KL to focus on IBS. Its local arm specialises in efficiency-increasing construction accessories for building-site structures and IBS that help improve the local build environment.

## EV BATTERY PRODUCTION

Malaysia's nascent electronic vehicle (EV) industry received a boost with auto parts supplier **Go Charge Go Asia**'s decision to set up its first EV battery plant in the country in June 2021. The plant will provide automakers and assemblers in Southeast Asia with a sustainable local supply, and is in line with global auto brands' movement towards EVs.





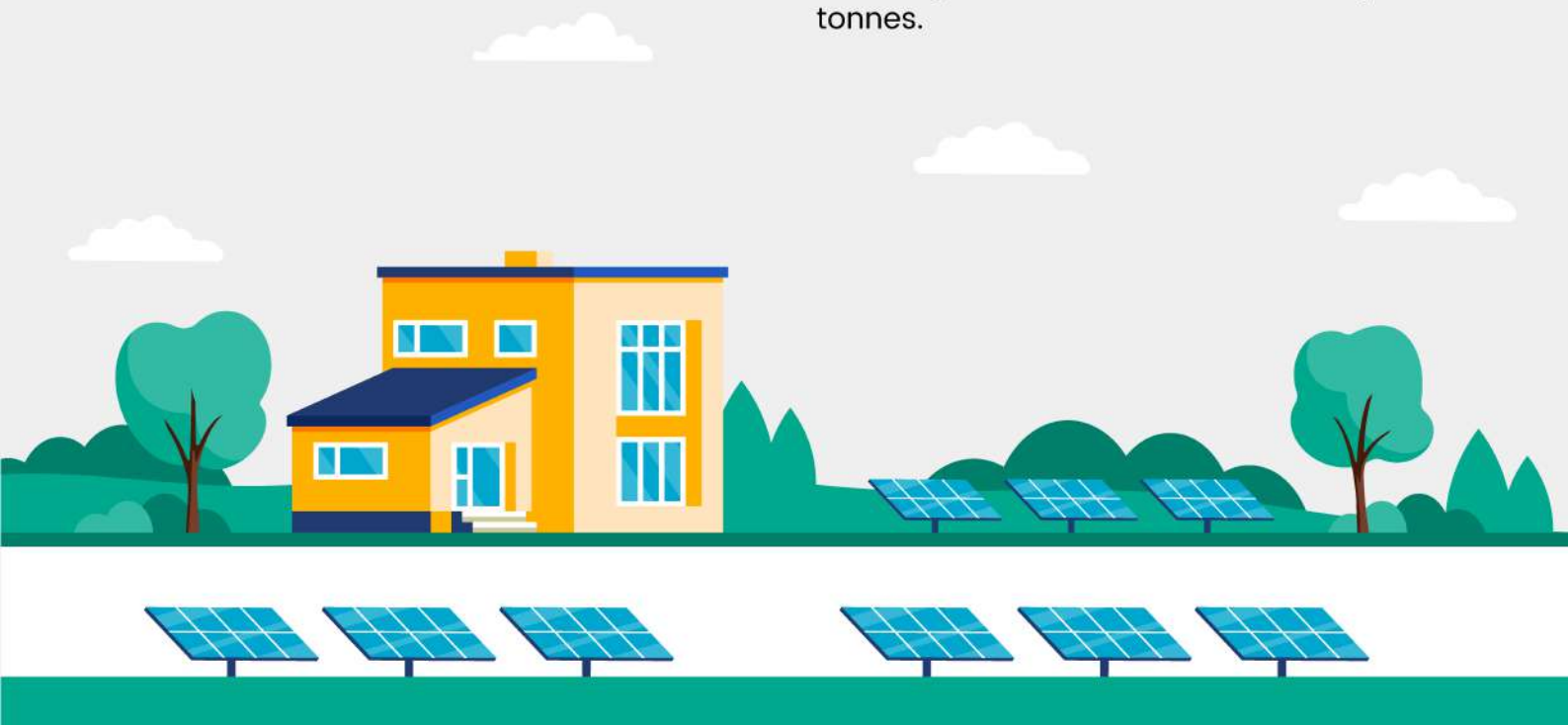
# RENEWABLE ENERGY

## SOLAR POWER GIANT

China's **Risen Energy**, the fifth largest solar cell manufacturer in the world, announced plans to expand to Malaysia in June 2021. Risen Energy will invest RM42.2 billion from 2021 to 2035 while creating 3,000 green jobs.

## IN-HOUSE REDUCTIONS

**Intel Corp** announced in April 2021 that its Malaysia operations house the MNC's largest solar farm outside the U.S. The installation is achieving 4.1 megawatts (MW) in total installed capacity, and contributes 15% of Intel's global on-site solar capacity while reducing carbon dioxide emissions by 3,800 tonnes.



# WASTE AND WATER

## WASTE-TO-ENERGY

**WTE Jeram Worldwide** is a RM1 billion waste-to-energy plant jointly owned by Malaysian environmental services company Worldwide Holdings and Chinese company Western Power Clean Energy. The plant will be developed in two phases in a 15-acre piece of land in Jeram Sanitary Landfill, and once fully completed, process 1,200 tonnes of waste per day. The first phase is slated for completion in 2022, and will produce 20-24 MW of green energy, delivering energy to 25,000 households.

## WASTEWATER TREATMENT

In June 2019, French water and wastewater treatment solutions provider **Veolia Water Technologies** relocated its regional headquarters to Greater KL. The move makes Greater KL Veolia's hub for its Asia Pacific business, which accounts for 15% of the company's global revenue. Veolia has a 20-year agreement to provide a wastewater treatment and reclamation plant for the **Tun Razak Exchange (TRX)**. TRX is the first fully integrated commercial reclaim water project in Southeast Asia with 50% less potable water demand compared to a typical development, LEED Gold certification and GBI platinum certification.





# **A Leading Advanced and Modern Services Hub, Supported by Incredible Talents**

In the Shared Prosperity Vision 2030 (SPV) policy document, Advanced and Modern Services is highlighted as a key economic growth area due to the outsize impact that the services sector has on Malaysia's economy. Despite a pandemic-affected year, the services sector still accounted for the bulk of Malaysia's Gross Domestic Product (GDP), at 57.7%.

Therefore, modernisation and diversification of the sector must be in line with technological advancement and current market demand. Emphasis on sub-sectors such as environmental services, professional services and technology services will catalyse an increase in inclusive sources.

The SPV 2030 complements existing policies related to the Green Economy (particularly for environmental services sub-sector), Global Business Services (for professional services), as well as the Fourth Industrial Revolution (4IR) and Digital Economy (for technology services).

As more sectors adopt 4IR technologies and join the global Digital Economy, the need to make business processes more sustainable in the long-term will grow in tandem with customer and client demands. As a result, environmental services such as lifecycle review of assets and resources, energy efficiency and

conservation, waste disposal and recycling, as well as resource allocation will become more vital.

The increase in technical knowledge and digital know-how will also follow the rise in 4IR adoption. On par with that, businesses will also require more advanced professional services to support their growth ambitions, especially in finance, accounting, legal, architecture, and engineering.

Technology services that support digital adoption across multifunctional organisations include cybersecurity professionals, cloud computing providers, data centres, software developers and even fintech consultancies. In August 2021, Kuala Lumpur was ranked among the top 10 Asia Pacific cities seen by KPMG as leading technology innovation hubs, further burnishing the city's reputation in this area.



# ENVIRONMENTAL SERVICES

## ARCADIS – THE OCEAN CLEANUP PARTNERSHIP

Arcadis, a global consultancy with a Greater KL hub, partnered with The Ocean Cleanup to provide project management, stakeholder management services and an environmental impact assessment as part of their global Interceptor project to reduce plastic waste in 1,000 rivers globally and halt 80% of plastic from entering the oceans in five years' time. The Interceptor, which is 100% solar-powered, extracts plastic autonomously, and is capable of operating in the majority of the world's most polluting rivers. Arcadis was involved in the assembly, installation and commissioning of the Interceptor for use in Klang river, the biggest contributing river to plastic emission in the ocean in Malaysia.

## MALAYSIA AIRPORTS – AVIATION MRO FACILITY

In May 2021, Malaysia Airports teamed up with Dviation, a Swiss and Greater KL-based aviation solutions provider, to set up a maintenance, repair and overhaul (MRO) facility that offers end-to-end aftermarket services including aircraft teardown, aircraft material recycling and parts trading. When an aircraft is retired, 85%–95% of its weight can be recycled to ensure proper disposal. With 12,000 aircraft retiring in the next two decades, the dedicated teardown facility helps the aviation community reduce its environmental footprint.



# PROFESSIONAL SERVICES

## EUROP ASSISTANCE HUB

Italy's Europ Assistance opened its **Greater KL hub** in May 2021, towards expanding its offerings in Southeast Asia in line with services in other geographies including travel and medical assistance, automotive and roadside assistance, personal assistance which includes medical assistance, home maintenance services, cyber protection, and concierge services. The Malaysia office will be staffed by a multilingual team that will be able to provide service to customers in English, Bahasa Malaysian, Vietnamese, Tagalog, and Bahasa Indonesian – among others.

## PICKLES AUCTIONS' REGIONAL COE

In 2019, **Pickles Auctions** made Greater KL its regional Centre of Excellence and a launchpad for its Southeast Asian ambitions. Australia's largest privately owned auction company has invested AUD3 million in its Greater KL hub, with an additional AUD3 million planned up to 2024. Technologists and an auction facility manager were brought in to further transfer knowledge to Malaysian talents.

## HUNTSMAN APAC GBS HUB

**Huntsman**, a global differentiated and specialty chemicals company plans to grow its global and regional Asia Pacific (APAC) global business services (GBS) hub in Greater KL, by hiring 100 highly-skilled employees by end-2024. Its GBS operations started with internal audits in 2007, accounting in 2010 and then IT in 2014. Today, the Greater KL hub provides strategic and transactional IT, accounting, finance and internal audit services to Huntsman businesses across the globe.





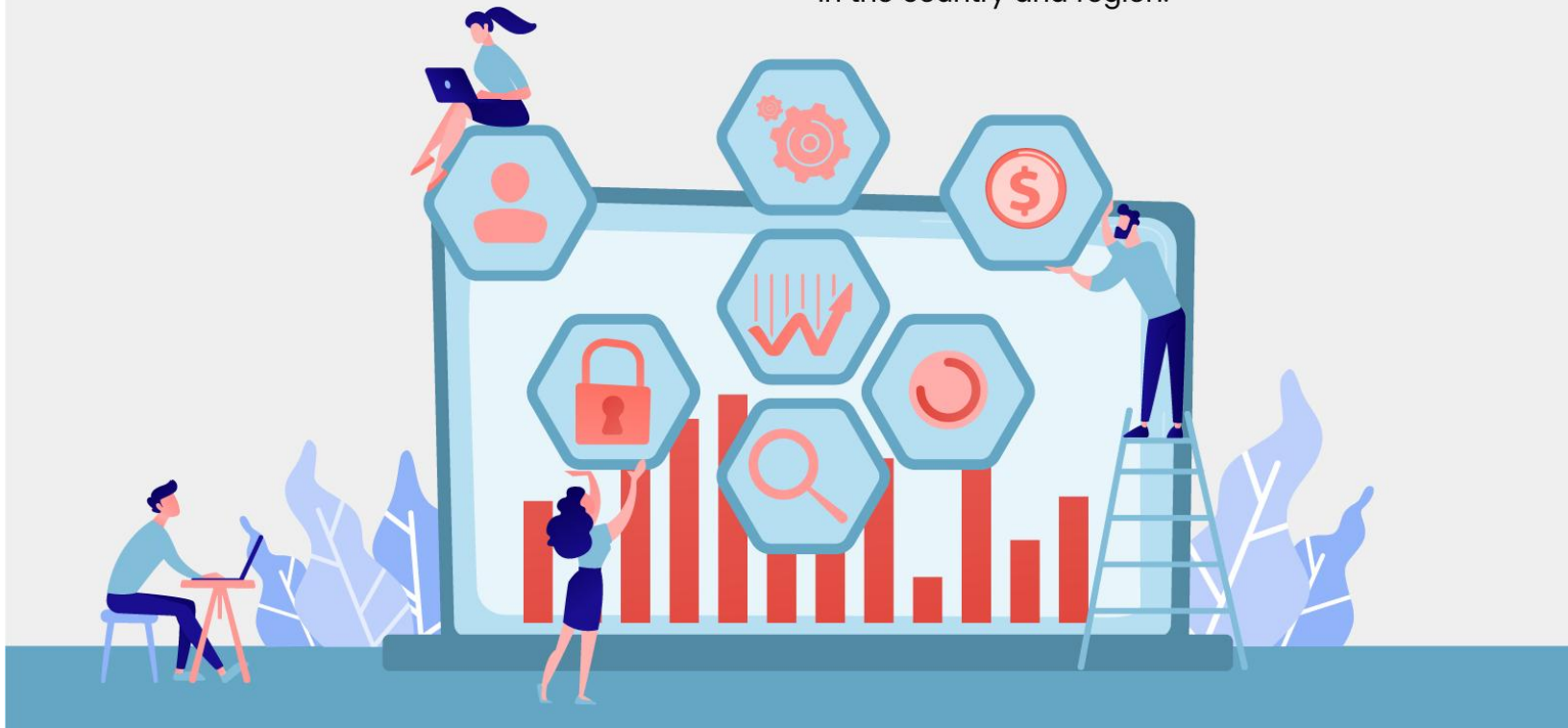
# TECHNOLOGY SERVICES

## INDRA'S ASIA PACIFIC TECHNOLOGY HUB

After multiple successful projects in Malaysia, Spanish technology consultancy Indra set up its **Asia Pacific Transport Business Unit** in Greater KL. Since then, Indra has executed projects in Malaysia in the areas of transport, air traffic management, defence and digital transformation in several industries, such as airlines and oil and gas. Its Greater KL office boasts 50 highly-qualified professionals, of which 70% are Malaysians.

## WASTEWATER TREATMENT

In January 2021, **TÜV Austria**, an international testing, inspection and certification (TIC) company collaborated with Malaysian cybersecurity firm LGMS to launch the TÜV Austria Cybersecurity Lab in Greater KL. Under the partnership, the joint venture will house a global Cybersecurity Testing and Certification Center of Excellence to serve both domestic and international markets, creating 100 highly-skilled jobs. The lab will help companies identify and solve weaknesses in their IT infrastructure and contribute towards improving the level of security in the country and region.



# Malaysia make Great Strides as a Leading Digital Economy

Malaysia's digital economy amassed RM289 billion, accounting for 19.1% of GDP in 2019. This is driven by the rapid growth of e-commerce, with gross merchandise value (GMV) expected to grow to reach a total value of US\$11.4 billion in 2020. Malaysia also leads ASEAN in e-wallet usage at 40%.

Launched in February 2021, the MyDIGITAL Blueprints aims to transform Malaysia into a digitally-driven, high-income nation and a regional leader in the digital economy. MyDIGITAL outlines several targets for 2025:

- 100% of Malaysian households will have Internet access,
- the digital economy to account for 22.5% of GDP,
- RM70 billion in digital investment,
- RM3.6 billion revenue from the local data centre industry,
- 875,000 SMEs adopting e-commerce, and
- 500,000 jobs in the digital economy.

Building an inclusive digital economy requires both public and private actors to deliver investments and craft forward-thinking strategies in four key areas: digital policymaking, cloud and data centre investments, the e-commerce ecosystem and digital talent.



# DIGITAL POLICYMAKING

## CASHLESS GOVERNMENT

All government services will go **cashless** by 2022, in line with MyDIGITAL. As at end-2020, already 60% of the government's total collection was via e-payment.



## DIGITAL BANKING

Bank Negara Malaysia released its policy on Licensing Framework for Digital Banks on Dec 31, 2020, and will issue **five licenses** for digital banks by the first quarter of 2022.

# CLOUD AND DATA CENTRE INVESTMENTS

## IT AND BUSINESS PROCESS OUTSOURCING

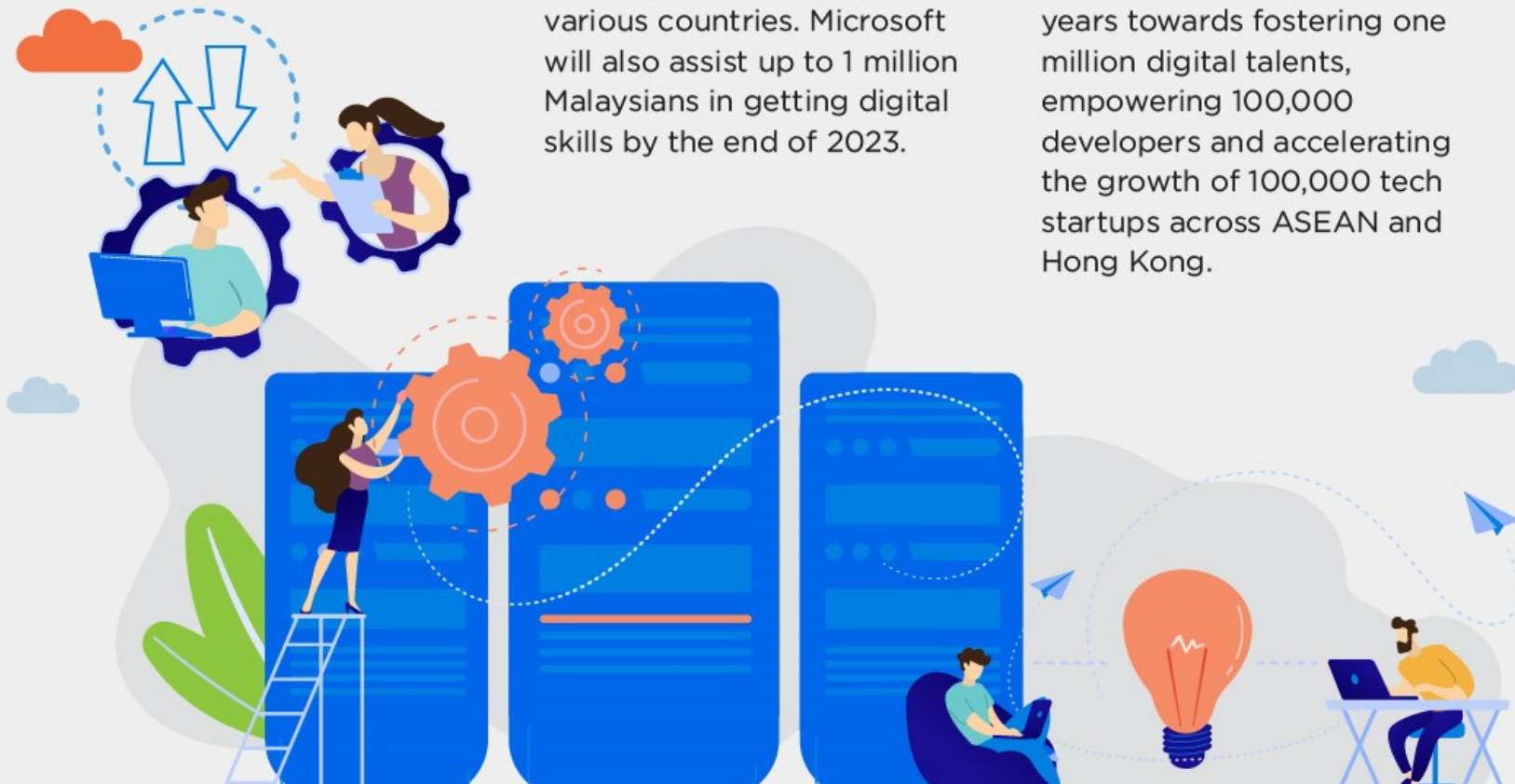
In September 2020, **PCCW Solutions** opened a new delivery centre and data centre in Greater KL to expand its IT outsourcing and managed services to clients across ASEAN.

## DATA CENTRE REGION

As part of its Bersama Malaysia initiative, in April 2021 Microsoft said it will invest **US\$1 billion in Malaysia** over the next five years. This includes the establishment of Microsoft's first 'data centre region', which consists of multiple data centres in Malaysia to manage data from various countries. Microsoft will also assist up to 1 million Malaysians in getting digital skills by the end of 2023.

## CLOUD INNOVATION CENTRE

In June 2021, **Alibaba Cloud** launched its first international innovation centre outside China, in Greater KL. It also plans to train 30,000 Malaysian professionals in the following year to strengthen local talent development. Alibaba Cloud will invest US\$1 billion within the next three years towards fostering one million digital talents, empowering 100,000 developers and accelerating the growth of 100,000 tech startups across ASEAN and Hong Kong.





# E-COMMERCE ECOSYSTEM

## REGIONAL E-FULFILLMENT HUB

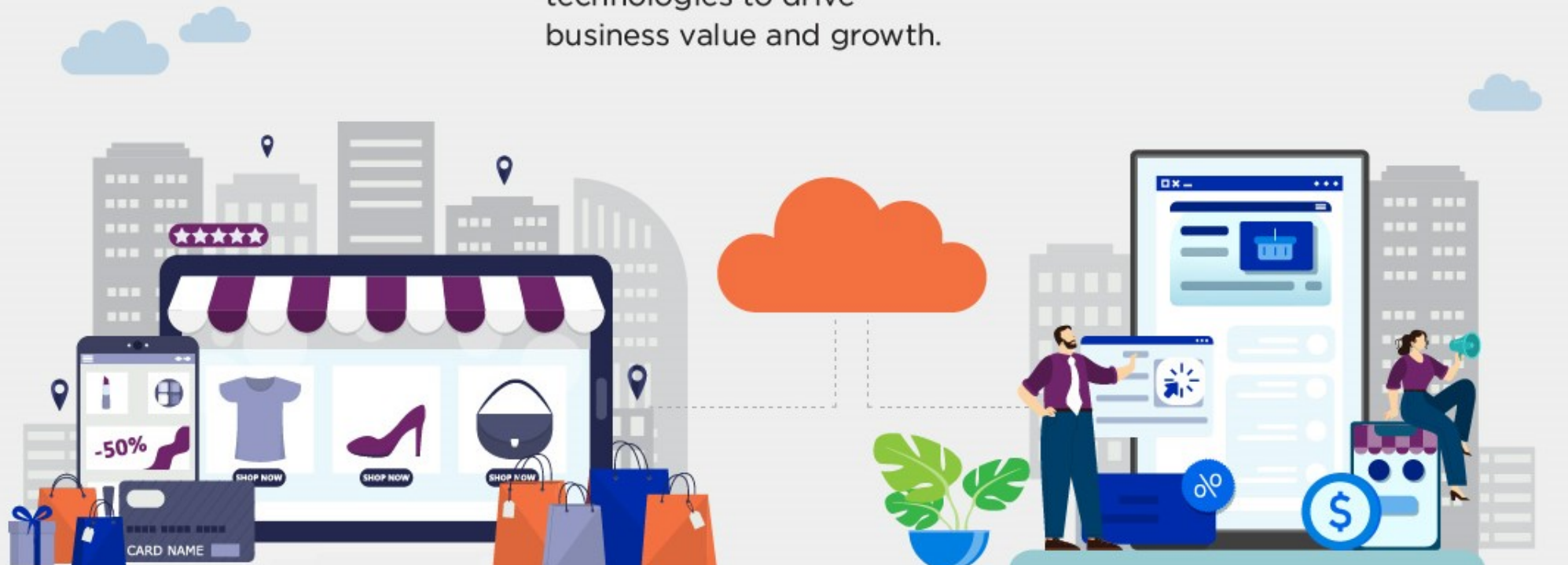
E-commerce champion **Zalora** set up its regional e-fulfilment hub-cum-headquarters in Greater KL in 2017. The city will be Zalora's launchpad towards capturing ASEAN's e-commerce boom.

## DIGITALISING SMES

In 2017, Oracle set up a **Digital Hub** in Greater KL to serve enterprises across 22 countries. In 2019, the MNC followed this up by launching its **Cloud Solution Hub** -- with 150 cloud consultants -- to help SMEs understand how they can harness emerging technologies to drive business value and growth.

## ASEAN OPERATIONS HUB

Baozun, one of the largest e-commerce platform players from China, established its ASEAN operations hub in Greater KL focusing on operations, digital marketing and business development work.



# DIGITAL TALENT

## CORPORATE-READY TALENT

InvestKL's **Fit4Work** programme is a 3-month finishing school where Malaysian graduates will learn management skills, knowledge skills, essential skills and IR4.0 business skills. 400 trainees will be selected from participating universities, and InvestKL partners and MNCs will provide potential recruitment for outstanding trainees upon completion of Fit4Work.

## QUALITY TECH WORKFORCE

MyDigitalWorkForce Work In Tech (**MYWiT**) will upskill and subsidise talents and businesses with RM100 million in training and salary incentives. More than 300 companies in digital business services sectors will participate, while around 6,000 job opportunities will be created towards producing at least 1,000 quality tech talents.

## BUSINESS-EDUCATION PARTNERSHIPS

Global lighting leader Signify and intellectual service robotics manufacturer CANBOT became the first two MNCs to participate in the **Greater KL Live Lab**. Over a 12-month period, they will collaborate with at least two local ecosystem players (SMEs, universities TVET providers), and create at least 10 jobs for local talent with a monthly basic salary of  $\geq$ RM5,000.







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