



**NORTHERN CORRIDOR ECONOMIC REGION
STRATEGIC DEVELOPMENT PLAN
(2021-2025)**

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Logo Rationale

The Northern Corridor Economic Region (NCER) logotype is made up of four stars, a tapering line that is seemingly clasping the stars together and the typeface of the words 'NCER' and 'Malaysia'.

'NCER' is depicted in bold red font to represent the organisation's relentless undertaking to inculcate passion, professionalism and perseverance in the course of executing duties and responsibilities for the wellbeing of the *rakyat*.

The stars in the logotype previously represented the four states in the Malaysian northern region, encompassing Perlis, Kedah, Pulau Pinang and Perak. Now, the stars also represent each and every i-STAR, i.e. the staff of the organisation, who are recognised as the principal movers of the NCER mandate.

Notably, the stars infer to the symbol of quality. The tapering line clasping the stars refers to the regional approach in the development of NCER. This collective approach also indicates the seamless collaborations in executing initiatives and strategies to make NCER a premier investment region.

Cover Rationale

The establishment of the Northern Corridor Economic Region (NCER) is aimed at accelerating economic growth in the northern part of Malaysia, in line with the Government's aspiration to reduce the regional imbalances and provide equitably shared prosperity for all *rakyat*.

The cover design of the NCER Strategic Development Plan (2021-2025) highlights the backbone of the development in NCER, comprising the six main economic sectors in the region, as well as the key infrastructure, private investments and the *rakyat* themselves.

The images of the NCER locals signify their importance in the region's development, whereby all the strategic projects and programmes are meticulously planned and carried out to elevate their wellbeing and standard of living.

The flag colours of the four NCER states, namely, Perlis, Kedah, Pulau Pinang and Perak, were incorporated in the background to reflect the unique strengths of each state and their contribution towards economic growth in the region and the country.

The watercolour effect used in the cover represents the vibrant outlook for the region on the back of future plans and strategies outlined in this document, to ensure the continued progress and development of NCER in the coming years for the benefit of the *rakyat*.



(VOLUME 1)

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MESSAGE

by Prime Minister of Malaysia

The vision of shared prosperity among all Malaysians could only be realised through a balanced approach in implementing economic development across the nation. To ensure a more equitable distribution of wealth and greater inclusivity, the Northern Corridor Economic Region (NCER) has conceived a holistic development strategy encompassing economic empowerment of the *rakyat* and social re-engineering, while giving due emphasis on environmental sustainability.

The NCER Strategic Development Plan (2021-2025) will serve as the framework to guide the future development of the region with the aim of spurring economic growth to address inter and intra-regional imbalances. In this regard, it will also act as the basis for the implementation of projects and programmes in NCER under the 12th Malaysia Plan. In line with its theme of “Shared Prosperity Through Balanced Regional Development”, this strategic framework has been formulated to ensure equal and greater opportunities for the *rakyat* through sustainable economic activities to transform the socioeconomic landscape, not only in the region but also at national level. Most importantly, it is aimed at addressing the basic issues that are directly affecting the *rakyat*, such as the higher cost of living, unemployment, and quality of life, among others.

This strategic development plan has outlined four key outcomes, namely, to create new job opportunities, to develop more local entrepreneurs,

to achieve a high-income society, and to attract greater private sector investment. To achieve these goals, the Northern Corridor Implementation Authority (NCIA) will intensify its effort in attracting more private investments into NCER and implement high-impact strategic projects and human capital programmes that will enhance the well-being of the *rakyat* across all demographics via higher income and better standards of living. This runs parallel with NCER's vision to achieve Growth With Equity, where inclusiveness is the underlying basis of our initiatives towards achieving an equitable distribution of wealth in the region.

In the years ahead, sustainable development in NCER will be focusing on key priority and strategic sectors, such as manufacturing which consist of aerospace, electronics and electrical (E&E) and medical devices, among others; agribusiness; petrochemical; green economy; sustainable mining; and services which consist of tourism, logistics and connectivity, digital economy, and education.

I am pleased with the strategies and initiatives introduced by NCER as encapsulated in this strategic development plan, that will pave the way for a more promising future for the region. More importantly, it has also taken into account the impact of COVID-19 pandemic that has affected not only Malaysia, but also the rest of the world. This document has incorporated specific strategies and action plans that will help NCIA and all the stakeholders involved in addressing the aftermath of the pandemic, and guide the region to its path of growth and recovery. As NCER embraces the "new normal" as a result of the pandemic, focus will be given on digitalisation efforts to catalyse growth in key economic sectors. This will involve reskilling the local workforce and enhancing digital literacy among local entrepreneurs, as well introducing new processes, machineries and technologies in the industries.

The road ahead will indeed be a challenging one, but I am optimistic that through close collaboration between NCIA and the respective State Governments of NCER, the relevant agencies at both Federal and State Levels, investors and the community, we will be able to achieve the objectives and goals set for the region. The Federal Government is committed to ensuring the successful implementation of the projects and programmes in NCER as outlined in this strategic development plan for the benefit of the *rakyat*.

Hence, it is my sincere hope that NCIA will continue its commendable efforts in championing the needs of the people whilst prospering the country, in line with the Government's Shared Prosperity Vision 2030.



**YAB Tan Sri Dato' Hj. Muhyiddin
bin Hj. Mohd Yassin**

Prime Minister of Malaysia



FOREWORD

by YAB Menterī Besar of Kedah

Over the years, Kedah has been vigorous in its economic development by diversifying and modernising the State's economy. Traditionally known for its agriculture sector, it is now ready to embrace the next wave of industrialisation on the back of Kulim Hi-Tech Park's success, which has marked the dawn of industrial development in Kedah. While it proudly remains as Malaysia's "rice bowl", we are steadfast in our efforts to transform Kedah into an advanced and progressive state, with improved socioeconomic status and enhanced living standards for the people. This would include modernising the agriculture sector, which has long been an integral part of the State's identity.

In line with the State's vision for a thriving and liveable Kedah as encapsulated in the Kedah Strategic Development Plan 2035, the NCER Strategic Development Plan (2021-2025) will help in steering the focus on new economic activities that are based on knowledge and innovation, ranging from aerospace to medical devices, downstream petrochemical, and rubber products, among others. Under this strategic framework, it is envisaged that the GDP of Kedah will surge to RM62 billion. To achieve this target, efforts will be enhanced to industrialise the State by encouraging investment in high technology industries and strengthening the development agenda for economic growth in the identified key sectors.

We are also pleased with the prominence given on Green Economy, which will involve initiatives to conserve the rich biodiversity in the State. Such emphasis will simultaneously benefit Kedah's tourism sector, which is set to embrace various forms of tourism including ecotourism, geotourism, archaeotourism and heritage tourism to cater to the ever-changing demand from the tourists.

With the NCER Strategic Development Plan (2021-2025) closely aligned to Malaysia's Shared Prosperity Vision 2030, we envision Kedah to lead the region with value-added initiatives and programmes. The NCER projects

and programmes are tailored towards community empowerment through the creation of jobs and entrepreneurial opportunities, as well as inflow of private investment. To achieve this, various catalytic projects have been identified in the State comprising Kedah Aerotropolis, Kedah Rubber City, Integrated Community & Economic Centres in Yan, Baling and Sik, Northern Corridor Highway, Bukit Kayu Hitam Special Border Economic Zone, sustainable mining, the development of Kedah Eco Innovation Park, as well as agribusiness and tourism. To support all these developments, human capital programmes will also be implemented such as empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme and Dana Usahawan Bumiputera.

The introduction of new economic dimension to the State will also improve synergies between Kedah and its neighbouring states, resulting in a more balanced overall development and equitably shared prosperity for the *rakyat*. More importantly, the NCER Strategic Development Plan (2021-2025) was also prepared by taking into account the impact of COVID-19 pandemic on the region which has affected key sectors in Kedah such as aerospace and tourism. Hence, this document contains strategic action plans that will guide the State towards its path of socioeconomic recovery by emphasising on digitalisation and technology utilisation, with immediate priorities on safeguarding the income and livelihood of the *rakyat*, generating jobs and employment, encouraging entrepreneurship and spurring the local economy.

In this regard, I would like to extend my appreciation to the Federal Government for their support through the Northern Corridor Implementation Authority (NCIA) in accelerating the development of the State. We look forward to working in tandem with the national economic agenda and be aptly empowered with the pertinent resources, enablers and incentives to seamlessly mobilise this transformation, that will ultimately prosper the State, region and nation.

YAB Haji Muhammad Sanusi bin Md Nor, AMK
Menteri Besar of Kedah



FOREWORD

by YAB Menteri Besar of Perlis

Since the establishment of the Northern Corridor Economic Region (NCER), the region has thrived by leveraging on each state's strengths and advantages. Perlis in particular, has benefitted tremendously from the various programmes and initiatives implemented in the State that focus on modernising the agriculture sector, green technology initiatives and upskilling human resource programmes.

In line with its aspiration to become a harmonious city-state by 2030, Perlis seeks to achieve economic growth complemented with infrastructure development to leverage its strategic location in enhancing the region's cross-border movement. Towards this end, there has to be robust efforts to develop catalytic projects, equip the local talent pools and regenerate economic activities to propel the State's development in achieving greater heights and hence, improving the socioeconomic well-beings of the *rakyat*.

The NCER Strategic Development Plan (2021-2025) has outlined several strategies and action plans to spur balanced development across the region, including in Perlis, which is projected to contribute a colossal sum of RM7 billion to its economy. The strategic initiatives focusing on high-impact projects, renewable energy, green technology and the halal industry, together with ancillary initiatives for super fruits, cash crops and dairy farms; improved logistics infrastructures and ecosystem; and lastly on the tourism sector, are set to spearhead the economic growth of Perlis. The high-impact projects include the Chuping Valley Industrial Area, Perlis Inland Port, Chuping Agro Valley, Padang Besar Sentral, and tourism initiatives, which will be supported

by human capital programmes comprising empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme and Dana Usahawan Bumiputera.

Moving forward, we are very optimistic that the NCER Strategic Development Plan (2021-2025) will pave the way for more catalytic and other spin-off projects in Perlis, which in turn will generate new economic activities that will ultimately benefit the *rakyat* in the State and the region. I am also pleased that this document has incorporated strategies and action plans in addressing the impact of COVID-19 pandemic that has affected the business ecosystem in the State following border closures and restricted movement, as well as the main economic sectors such as logistics and connectivity and tourism. We are confident that Perlis will be able to weather these challenges by capitalising on the new opportunities brought by the pandemic, such as the rise of e-commerce, that will require approaches that are oriented towards digitalisation and the use of technology.

On that note, we would like to extend our deepest appreciation to the Federal Government for its support via the Northern Corridor Implementation Authority (NCIA) in accelerating the development of Perlis. Hence, we look forward to creating more synergies within NCER to achieve the Government's Shared Prosperity Vision 2030, which is a commitment to make Malaysia a nation that achieves sustainable growth along with fair and equitable distribution across income groups, ethnicities, regions and supply chains through well-balanced regional development initiatives, as guided by the NCER Frameworks.

YAB Dato' Seri Azlan bin Man
Menteri Besar of Perlis



FOREWORD

by YAB Menteri Besar of Perak

The NCER Strategic Development Plan (2021-2025) has set a bold target for the State of Perak to reach a GDP of RM103 billion. In order to achieve this, it is paramount to roll out initiatives to stimulate digital economy and knowledge-based industries in the State. At the same time, focus should also be given to accelerate the growth of automotive and tourism sectors.

While Perak has benefitted from the various initiatives and synergies between the four states in NCER, it is crucial to focus on the development and advancement of the State's key economic sectors in order to spur socioeconomic growth while bridging the rural-urban gap. Ultimately, we wish to align efforts to move the State's economy up in the value chain, which will lead to growth of income and balanced development throughout Perak.

To realise the vision of a high-income nation, we need to produce trained and highly-skilled human capital to handle advanced equipment and machinery, as well as the latest technologies to meet the demands of current and new industries. Thus, the human capital development programmes initiated in NCER are timely to enhance employability while ensuring adequate supply of skilled local workforce as required by the industries. These human capital programmes such as empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme and Dana Usahawan Bumiputera will complement the development of Silver Valley Technology Park (SVTP), Northern Corridor Highway, Tanjung Malim Automotive Hub, Pangkor Duty-Free Island, agribusiness, tourism, sustainable mining, Integrated Community & Economic Centre (I-CON), Special Development Zone in Pengkalan Hulu and the expansion of Sultan Azlan Shah Airport.

We are pleased that these strategic plans for the region are aligned to the State's vision as encapsulated in Perak 2040 Development Plan, as well as the development plans outlined by the Federal Government, that are focused on elevating the *rakyat's* well-being through balanced regional development, creation of job opportunities and income enhancement. In response to the COVID-19 pandemic that has affected the global economy, the NCER Strategic Development Plan (2021-2025) has also incorporated specific strategies and action plans to mitigate the impact of the outbreak towards the region, including in Perak. Hence, the document will serve as a guidance for the State to recover from the economic effects of the outbreak, especially on key sectors such as manufacturing, agribusiness and tourism. By focusing on digitalisation and the use of new technologies, we are optimistic that Perak will be able to rise above this challenge and ultimately achieve the set targets for the benefit of the *rakyat*.

In this regard, we would like to thank the Federal Government for its effort via the Northern Corridor Implementation Authority (NCIA) in ensuring that the country's prosperity is to be fairly shared by all Malaysians, including in Perak. We look forward to seeing dynamic socioeconomic growth in the region.

The State Government will render its full support and commitment to realise the development goals under the NCER Strategic Development Plan (2021-2025) to ensure shared prosperity for all.

YAB Dato' Seri Ahmad Faizal bin Dato' Azumu
Menteri Besar of Perak



FOREWORD

by YAB Chief Minister of Pulau Pinang



Pulau Pinang's economic growth and strategic directions are closely aligned with the nation's Shared Prosperity Vision 2030. Hence, we welcome the NCER Strategic Development Plan (2021-2025) which has been strategically designed to unleash the region's full potential and propel the nation's socioeconomic growth.

Pulau Pinang is globally recognised as one of the top ten dynamic industrial cluster locations in the world and it also serves as the manufacturing hub for the country's northern region. The state owes its vibrant electrical and electronics (E&E) ecosystem to the efficient supply chain, with world-class capabilities and efficient support offered to investors. We are eager to seize new opportunities arising from the global economic shift to position ourselves as the key investment destination in Malaysia.

NCER's holistic plans take into consideration the wide spectrum of needs of the various stakeholders, from the captains of the industry to the farmers, the millennial workforce and the micro-entrepreneurs. This undertaking is tangible proof that the concept of shared prosperity is the underlying thrust of the government's policies and programmes, consistent with the new economic direction outlined to ensure that the people reap the fruits of shared prosperity. Catalytic projects and programmes, such as the Penang Transport Master Plan (PTMP), the expansion of Penang Port and Penang International Airport, improvements in main roads and highways including the Northern Corridor Highway and Juru-Sungai Dua Elevated Highway, Seberang Perai Eco-Tech Park, human capital programmes and agribusiness, will accelerate the state's economic growth to the next level for the benefit of the *rakyat*.

In this regard, we are pleased that this document has also incorporated specific strategies and action plans to address the impact of COVID-19 pandemic that has affected the key sectors in Pulau Pinang such as manufacturing, tourism and logistics. Among others, focus will be given on new approaches that are based on digitalisation and technology to help bring the state's economy into the path of recovery, which would require the re-skilling of workers in the affected sectors.

Pulau Pinang will continue to leverage on its strengths to achieve a balanced development across the state and towards creating a family-focused green and smart state that inspires the nation, as envisaged in the Penang2030 vision. Regionally, we will continue to focus on attracting investments, creating job opportunities, encouraging entrepreneurship and increasing incomes. On that note, we would like to express our appreciation to the Federal Government for its support via the Northern Corridor Implementation Authority (NCIA) in driving the state development to the next level. We look forward to continue working synergistically within the framework of NCER to boost investment and move the economy up the value chain, not only in the state but also throughout the region.

YAB Tuan Chow Kon Yeow
Chief Minister of Pulau Pinang



FOREWORD

by Minister in the Prime Minister's Department (Economy)

The Northern Corridor Economic Region (NCER) has made great strides in accelerating its socioeconomic development since its establishment to-date, which is a clear reflection of the Government's commitment and effort in enhancing the well-being and livelihood of all *rakyat* across the nation. Hence, the launch of NCER Strategic Development Plan (2021-2025) is a timely move in ensuring the continued growth of the region as it moves forward into its next phase of development.

Serving as the main reference for a sustainable, holistic and inclusive development of NCER, this document will guide all the stakeholders involved in addressing the imbalances that still exist between regions in Malaysia, as well as those within NCER itself. Prepared around the theme of "Shared Prosperity Through Balanced Regional Development", the strategic plan will also help the NCER achieve its vision of Growth With Equity where not a single *rakyat* is left behind.

Under the NCER Strategic Development Plan (2021-2025), development in the region will be carried out to generate new job opportunities, nurture more local entrepreneurs, create a high-income society, and attract more private sector investment. Economic growth in NCER will be accelerated by high-impact projects such as the Chuping Valley Industrial Area, Kedah Rubber City, Sidam Logistics, Aerospace and Manufacturing Hub (SLAM), Collaborative Research In Engineering, Science & Technology (CREST), Northern Corridor Highway, Silver Valley Technology Park and Pangkor Duty Free Island. Human capital

development will also play a key role in preparing the region for the future in order to attract more high-value investors, develop skilled local workforce and create a vibrant entrepreneurship ecosystem. This effort will be spearheaded by initiatives such as empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme (NTEP) and Dana Usahawan Bumiputera.

I am pleased that this document has been prepared in line with the Government's Shared Prosperity Vision 2030, the 12th Malaysia Plan and the respective State Governments' development plans. This will ensure a more coordinated and impactful delivery in terms strategic planning and execution of projects on the ground. It has also incorporated specific action plans in addressing the devastating impact of COVID-19 pandemic which has not only been felt in the region and Malaysia, but also on a global scale. As the country bounces back from the aftermath of the outbreak, digitalisation and technology will play a main role in spurring NCER's economy back into recovery and subsequently, future growth.

In this regard, I would like to commend the Northern Corridor Implementation Authority (NCIA) for its meticulous and thoughtful approach in preparing this strategic development plan. While challenges abound, I am confident that NCER is able to realise its set goals and targets through close cooperation of all the stakeholders involved. The Federal Government is committed in ensuring that the development in NCER will be implemented as planned for the benefit of the *rakyat*, in line with our vision of Shared Prosperity for all.

Dato' Sri Mustapa bin Mohamed

Minister in the Prime Minister's Department (Economy)



FOREWORD

by Chief Executive,
Northern Corridor Implementation Authority (NCIA)



The NCER Strategic Development Plan (2021-2025) is aligned with the Government's Shared Prosperity Vision 2030 which envisages a more equitable distribution of wealth in Malaysia through a balanced regional development. It is also in tandem with the development plans and strategies of the respective NCER states, to ensure optimal synergies in the implementation of projects and programmes in the region.

Designed with the *rakyat* in mind, this development plan was conceived to streamline state and regional economic activities to unleash the region's full potential. Under the strategic framework, sustainable economic development in NCER will entail regional initiatives and collaboration to achieve the desired outcomes, namely, job creation, encouraging entrepreneurship, high income for the people and attracting private investment as the engine for growth.

Over the years, NCER has played an important part in the economic growth of the nation, as reflected in its strong contribution to Malaysia's Gross Domestic Product (GDP), especially in the areas of manufacturing and agriculture. Moving forward, NCER has set several key targets which include boosting the region's GDP to RM300 billion and increasing the mean household income and median B40 household income to RM10,508 and RM4,203 respectively. It also aims to attract a cumulative investment of RM146.5 billion that will create over 161,000 jobs for the *rakyat* and nurture more than 42,000 local entrepreneurs.

To ensure the successful implementation of the projects and programmes outlined in this strategic development plan, improvements will be undertaken in the existing logistics infrastructure, while the entire business ecosystem will be further enhanced. Strategic and catalytic projects will be carried out in key economic clusters such as manufacturing, agribusiness and services (tourism, logistics and connectivity, digital economy and education), in our effort to make the region more competitive. NCER will also be focusing on growing new sectors comprising petrochemical, green economy and sustainable mining to spur growth in the region. All these will be supported by our human capital development programmes such as empowerNCER, entrepreneurNCER and NCER Talent Enhancement Programme that will provide the industry with relevant, quality talent, as well as high-performing entrepreneurs.

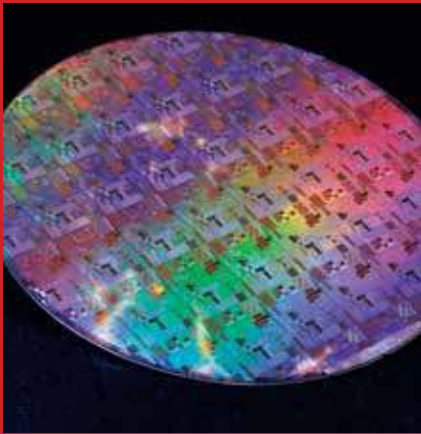
To promote an equitable distribution of wealth and rural-urban integration, 30 Key Development Zones have been identified in NCER to accelerate the region's development through the concentrated decentralisation strategy. This will enable the implementation of strategic and catalytic projects in an inclusive manner, which will help narrow the regional imbalances and promote a more balanced regional development.

The initiatives and programmes introduced by NCER are also designed to complement the direction and vision of each states, while serving to the needs of all relevant stakeholders. More importantly, this strategic development plan has also incorporated specific strategies and action plans to address the aftermath of COVID-19 pandemic on the region, as outlined in the accompanying document to this strategic plan. This is particularly crucial as the original growth targets set for NCER will now require an additional two years' time to be achieved as a result of the global pandemic. In this regard, NCIA will undertake a three-pronged approach to mitigate the socioeconomic impact of COVID-19, namely, accelerating the growth of private investment, prioritising strategic infrastructure projects, and expanding the human capital development programmes in NCER. Despite the delay in the timeline, the original framework, goals and targets prescribed in the NCER Strategic Development Plan (2021-2025) remain unchanged and will continue to be our main reference, especially in the Post-COVID-19 world.

I would like to express my sincere thanks to the NCIA Council members, the State Governments of Perlis, Kedah, Pulau Pinang and Perak, the Ministries, agencies and authorities at both the Federal and State levels, the investors, as well as the *rakyat* of NCER for their support and contribution towards our effort in elevating the development of the region. My utmost gratitude also goes to the management and employees of NCIA who have worked tirelessly and diligently in bringing growth and progress to NCER through the implementation of our projects and programmes.

We look forward to strengthening this synergistic collaboration with all the parties involved to further accelerate the region's development, to ensure that the Government's Shared Prosperity Vision would be realised for the benefit of the *rakyat*.

Datuk Seri Jebasingam Issace John
Chief Executive, NCIA



**SHARED PROSPERITY
THROUGH BALANCED
REGIONAL DEVELOPMENT**



PREFACE



Since its inception in 2007, the Northern Corridor Economic Region (NCER) has undergone a progressive and consistent evolution, driven by the Government's effort to promote inclusive and sustainable development in the region. Covering the states of Perlis, Kedah, Pulau Pinang and Perak, the region is now ready for its next phase of development, where bold measures are required to pave the way for innovative and impactful initiatives that will contribute to the optimal well-being and prosperity of the rakyat, in line with the Government's Shared Prosperity Vision 2030.

*The NCER Strategic Development Plan (2021-2025) aims to continue the region's upward trajectory by outlining the future direction and strategies to further advance economic growth and reduce regional imbalances. Anchored by the theme of **"Shared Prosperity Through Balanced Regional Development"**, this strategic framework aims to narrow the rural-urban development gap by driving sustainable economic growth and productivity in key priority sectors, through a holistic approach which encompasses the economic empowerment of the rakyat, the strengthening of infrastructure to support connectivity and growth, social re-engineering, and conservation and preservation of the region's biodiversity.*

The NCER Strategic Development Plan (2021-2025) was prepared through a collaborative and consultative process with over 300 key stakeholders from the Federal Government, the four NCER states, institutions of higher learning and the private sector. The framework was also presented to Jawatankuasa Pemandu Negeri (State Steering Committee) chaired by the respective Menteri Besar and Chief Minister of the NCER states, before it was approved by the Northern Corridor Implementation Authority (NCIA) Council chaired by YAB Prime Minister. Its development was guided by the relevant national and State policies and plans, to ensure that it is aligned to the proposed strategies, initiatives and targeted outcomes set by the Federal and State authorities.

*As a response to the COVID-19 pandemic that has caused a devastating impact on the global economy, including in Malaysia, NCIA has prepared an accompanying document to this strategic development plan entitled **"COVID-19 Impact And Mitigation Strategies, Projects & Programmes"**. It contains specific action plans that will be undertaken to address the impact and challenges brought by COVID-19 in order to bring NCER's economy back on track towards recovery and future growth.*

As the region moves forward into its next phase of evolution, the NCER Strategic Development Plan (2021-2025) will serve as the main reference for the implementation of high-impact projects and programmes to enhance the standard of living and income of the rakyat, in line with NCER's vision of achieving Growth With Equity.

Chapter

1

THE BEGINNING





NCER
MALAYSIA

THE HISTORY OF NCER



The Northern Corridor Economic Region (NCER) was established in 2007 as part of the Government's effort to reduce regional imbalances and promote equitable economic growth across the country through the creation of five economic regions during the period of the Ninth Malaysia Plan.



NCER was formed to leverage on the various economic and social advantages of selected areas in the four Northern States of Peninsular Malaysia, comprising **Perlis, Kedah, Pulau Pinang and Perak**.

In its initial stage, only the northern part of Perak covering the districts of Hulu Perak, Kerian, Kuala Kangsar and Larut Matang - Selama was included as part of NCER. In 2014, the district of Manjung was added into the region, followed by the rest of Perak in 2016. The Northern States that form NCER have consistently enjoyed economic prosperity and stability, and they remain as the country's **most ideal agricultural location** with consistent tropical weather and vast stretch of fertile land.

Strategically located bordering Thailand and facing the **Straits of Malacca**, the region also has the potential to become a world-class trade destination by leveraging on its close links to Sumatra, Indonesia and Thailand. The region's border towns, such as **Pengkalan Hulu-Betong** (Yala Province), **Padang Besar, Bukit Kayu Hitam-Sadao** and **Durian Burung-Ban Prakop** (Songkhla), are strategic entry points between Malaysia and Thailand that offer limitless potential for economic and social growth.

With its advantageous location, NCER also serves as an **important gateway** in Southeast Asia for businesses and commercial expansion of various industries. The **manufacturing sector** in NCER has experienced a steady growth since its inception, as reflected in the **investments by local and multinational companies** that have now exceeded **RM80 billion**. These companies have brought along patented, state-of-the-art manufacturing technologies and products, resulting in knowledge and technology transfer into NCER. The **Electrical and Electronics (E&E) sector** continues to be a key focus in the region and has spurred the growth of other industrial parks in NCER. This has, in turn, built a network of supporting industries with complementing manufacturing clusters, resulting in positive spillover effects into the region.

NCER's manufacturing industry is further boosted by its added advantage of being within the **Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT)**. Its **established logistics infrastructure** of road, rail, air and sea operations, together with efficient support services, play a major role in facilitating trade within and beyond the IMT-GT.

The region is also renowned for its diverse and historically rich **tourism attractions**, which include one of the UNESCO Historic Cities of the Straits of Malacca (**George Town**), a UNESCO Archaeological Heritage Site in **Lenggong Valley**, and a UNESCO

Global Geopark in **Langkawi**. As one of the earliest British settlements in Southeast Asia, George Town is a treasure trove of unique colonial buildings as well as *Peranakan* houses and heritage structures, while the archaeological site of Lenggong Valley in Perak houses Southeast Asia's oldest, most complete human skeleton, well-known as the "Perak Man".

Agriculture remains a key sector in NCER and is one of the top three contributors to the region's economy, with products such as **paddy, oil palm, rubber** and **fruits**, among others. Perak and Kedah are the highest Gross Domestic Product (GDP) contributors towards the nation's total agriculture GDP, whereby Kedah is the largest producer of paddy in NCER, followed by Perak.



In this regard, NCER prides itself for being the **"rice bowl" of the country**, where paddy production plays an important role in fulfilling the nation's **food security** agenda. Despite the manufacturing and services sectors being the key sectors in Pulau Pinang, the State has experienced a strong annual growth rate in the **aquaculture** industry, whereby it has now become the second largest aquaculture producer in Malaysia, after Sabah. Perak, on the other hand, is home to one of the largest poultry industries in the country.

NCER offers **a large and educated workforce**, a vast and **sophisticated logistics network** to support the key economic sectors, a **thriving business culture** and the presence of large multinational corporations with **global networks** and market reach,

all of which have helped move the region's economy to where it is today. It is also positioned as a viable investment destination to help maximise its economic potential and move towards higher value-added and knowledge-based economic activities, which will ultimately lead to higher per capita income for the *rakyat*.

To achieve these goals, six key economic clusters have been identified in the region, namely, **manufacturing, services, agribusiness, petrochemical, green economy** and **sustainable mining**.

Key Economic Clusters In NCER



The evolution of NCER towards becoming **a world-class economic region** is driven by the **Northern Corridor Implementation Authority (NCIA)**, which plays the role of the **regional development** authority by catalysing and implementing **high value-added development projects and programmes, developing human capital, and promoting private sector participation**. NCIA aims to transform NCER into a sustainable economic region, empowered by a population living a balanced lifestyle with a holistic approach to business ecosystem.

COMPETITIVE ADVANTAGES OF NCER



A Mature Ecosystem With Nearly 50 Years Of Evolution In High Technology

The business community in NCER has gone through an advanced stage of evolution, with nearly 50 years of experience in dealing with local and foreign organisations, both large and small. As a result, the region has developed **a highly efficient technical and business support ecosystem** which facilitates private sector participation in NCER. This highly evolved, business-friendly environment has also resulted in businesses adapting **world-class delivery standards** to cater for the needs of multinational corporations.

In the early years of industrialisation in NCER, investors in the region mainly consisted of foreign companies from developed countries. These international firms had invested in building their factories to benefit from the attractive incentives and low labour costs in the region. Back then, developed countries were experiencing tremendous growth, particularly in the technology and manufacturing sectors. As time progresses, the responsibilities for manufacturing automation and quality improvement were eventually transferred to the locals.

This has created an opportunity for some of the more enterprising employees to leave their multinational employers and venture into automation start-ups, with the purpose of serving the same industry that had nurtured and groomed them. Today, these start-ups have transformed into successful, giant companies that are spearheading the development of Malaysia's manufacturing technology.

The abovementioned evolution has also resulted in the creation of **a broad range of engineering-based baseline skills**, thus allowing the region to expand into new growth sectors such as **light emitting diodes (LEDs), automotive, aerospace, machinery and equipment, medical devices**, as well as **biotechnology-and-engineering-driven agriculture**.

Global Business Ecosystems

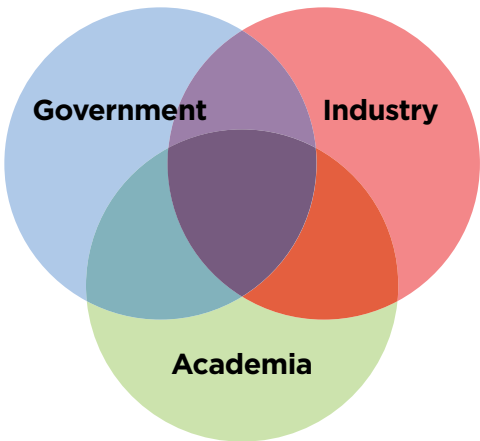
With its mature business ecosystem, various **multinational companies (MNCs)** have made the region as one of their **global hubs**. In this regard, NCIA is entrusted with the **facilitation of investors** and is tasked with hand-holding the latter throughout the pre-investment, investment and post-investment stages. Through its vast business networks, NCIA is also able to provide business matching arrangements between business-to-business, business-to-Government and business-to-institutions of higher learning, having successfully forged linkages with relevant agencies to provide seamless support and networking platform for businesses.

Industry-Academia Collaboration

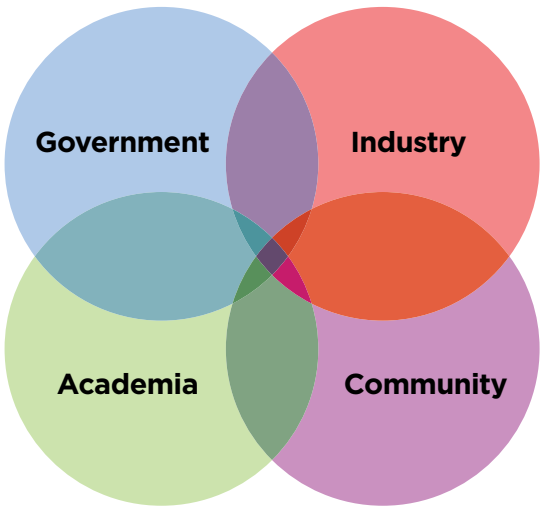
The **triple helix concept** of **University-Government-Industry** collaboration model was adopted to foster economic and social development in NCER. Under this approach, regular engagements are held between the industry and the academia, in addition to the setting up of **Centres of Excellence** to facilitate such collaborative efforts. These initiatives have helped improve the availability of skilled and industry-relevant workforce to meet the demands of the various sectors in NCER.

Moving forward, the **quad helix approach** involving collaboration between the **Government, research institutions, companies and citizens** shall be used to drive innovative and sustainable economic development. In this regard, the presence of a strong Government, academia and industries must mutually drive towards sustainable innovation for the benefit of the community.

Triple Helix Model



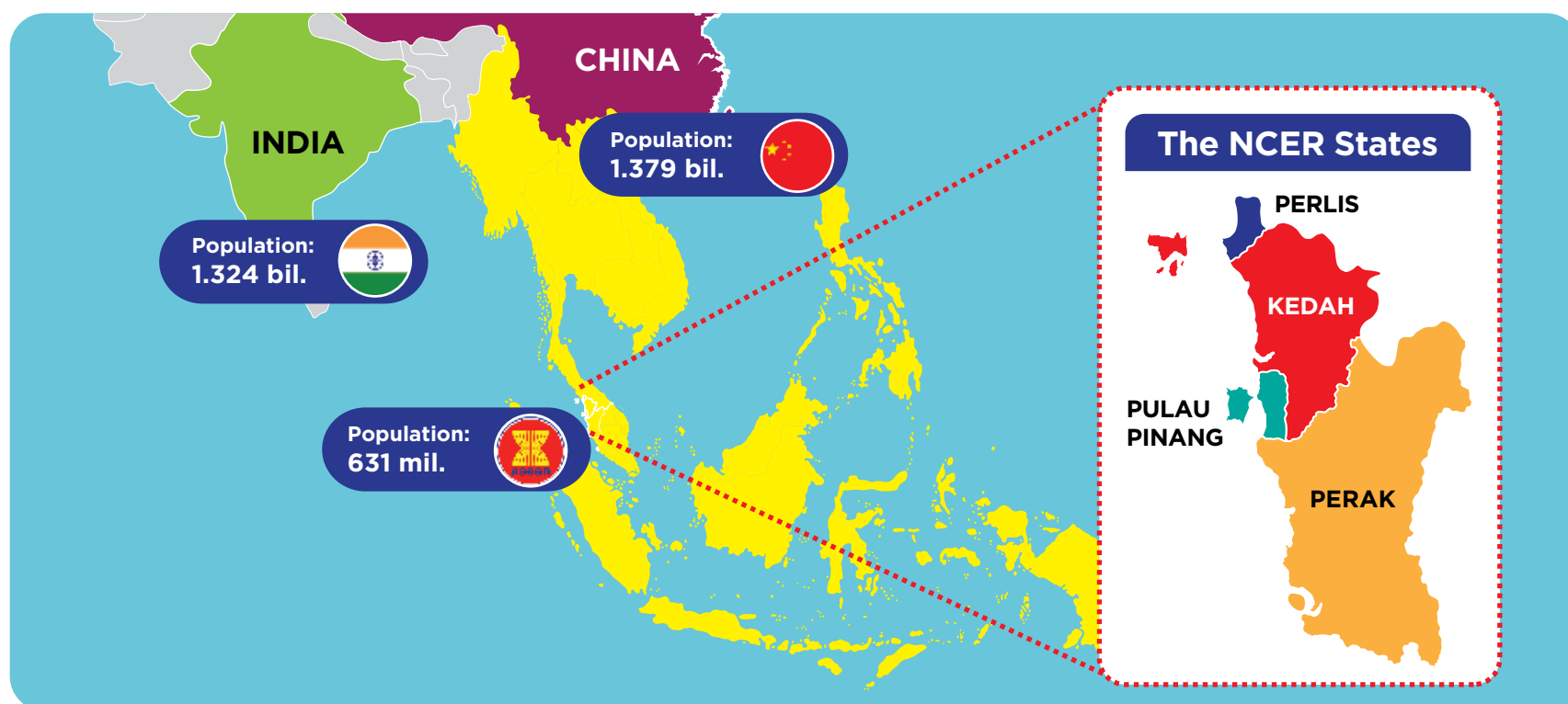
Quadruple Helix Model



The Quadruple Helix collaboration model involving the Government, research institutions, companies and citizens will help drive future economic development in NCER

Strategic Location

The region is **strategically located bordering Thailand** and **facing the Straits of Malacca**. It has the potential to develop strong international relations with Sumatra, Indonesia and Thailand given their many complementarities and geographical proximity, as well as close historical and cultural ties. This will help boost the region's economy and create a natural bloc for economic cooperation that would further enhance NCER's production, distribution and exports.



1



Strategically located at the **crossroads of Asia**, right in the heart of international trade route

2



Access to a total of **3.3 billion** population within ASEAN, India & China markets, reachable within 6 hours' flight radius from NCER

3



Access to one of the fastest emerging markets in the world

GDP Growth

7.1% > India
4.9% > Southeast Asia
6.7% > China

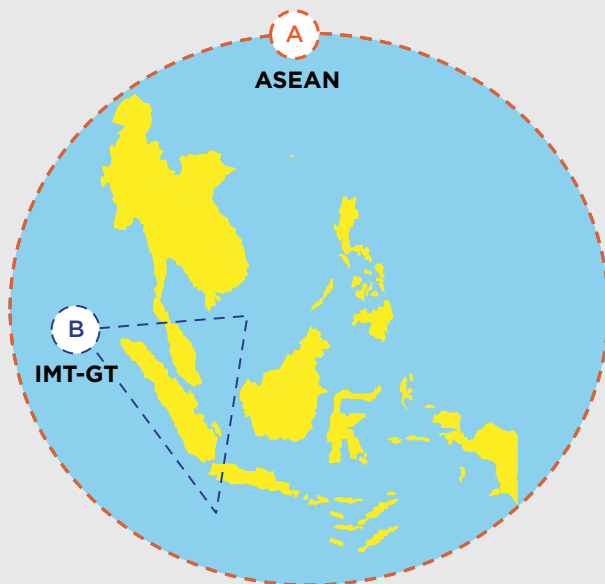
4



Extended NCER Hinterland Population

South Thailand > **9.3 mil.**
South Myanmar > **1.469 mil.**
IMT-GT-Sumatra > **50.3 mil.**

Strategically located within ASEAN and the IMT-GT region, NCER is able to leverage on available resources and trade opportunities



Source: IMT-GT website, ASEAN official website, press search & EY analysis

A Association of Southeast Asian Nations (ASEAN)

- Established in 1967; a coalition of 10 countries within Southeast Asia
- To facilitate integration and accelerate economic growth, social progress and cultural development
- 2 primary agreements reached:
 - ASEAN Free Trade Area (AFTA) - reduced barriers to trade; ease of imports and exports of products within the region
 - Mutual Recognition Agreements (MRAs) for several professions have increased talent movement within the region

The ASEAN region has the potential to be the primary export market due to proximity, established trade relationships

B Indonesia - Malaysia - Thailand Growth Triangle (IMT-GT)

- Established in 1993; coalition between 3 ASEAN countries to spur development within selected regions:
 - Southern part of Thailand, several states in Malaysia (including NCER region) and several areas in Sumatra, Indonesia
- To stimulate cross-border economic integration between regions, 6 priority areas have been identified:
 - Agriculture & fisheries; infrastructure development; trade; tourism; human resource development and professional services

IMT-GT acts as an immediate target market within ASEAN
NCER is being positioned to contribute to the coalition's ambitions

Established Logistics Network And Dynamic Infrastructure

In addition to its strategic location, NCER also has the edge of having an **established logistics network** and **vibrant transport infrastructure**. The region is home to the second busiest airport and one of the busiest seaports in Malaysia. Hence, the logistics sector plays an important role as a **key enabler of trade** for NCER, along with the entire established cluster of support services. The Malaysian Government is currently channelling investments for infrastructure into NCER **to improve international and regional connectivity**. Among the key investments were for the upgrading of rail capacity via the Ipoh-Padang Besar Double Tracking project, and the Second Penang Bridge which has enhanced the connectivity to the island's airport and seaport. The strategic high-impact projects refer to the inherent interdependence between the Government, the private sector and the community, and will continue to be the backbone of economic development throughout the region.



The Sultan Abdul Halim Muadzam Shah Bridge, also known as the Penang Second Bridge, has helped improve connectivity between Pulau Pinang and the mainland

Major Role In The Nation's Food Security

Agriculture has been identified as one of NCER three priority sectors that form the backbone of the region's success, alongside **services** and **manufacturing**. NCER currently provides for more than **one-third of the nation's paddy demand**. This is due to its best position to tap into this opportunity and become a modern and sustainable agriculture and food production zone in the country. It also supplies other agricultural products and output from its agro-based industries, cementing its role as a key player in Malaysia's food security agenda.

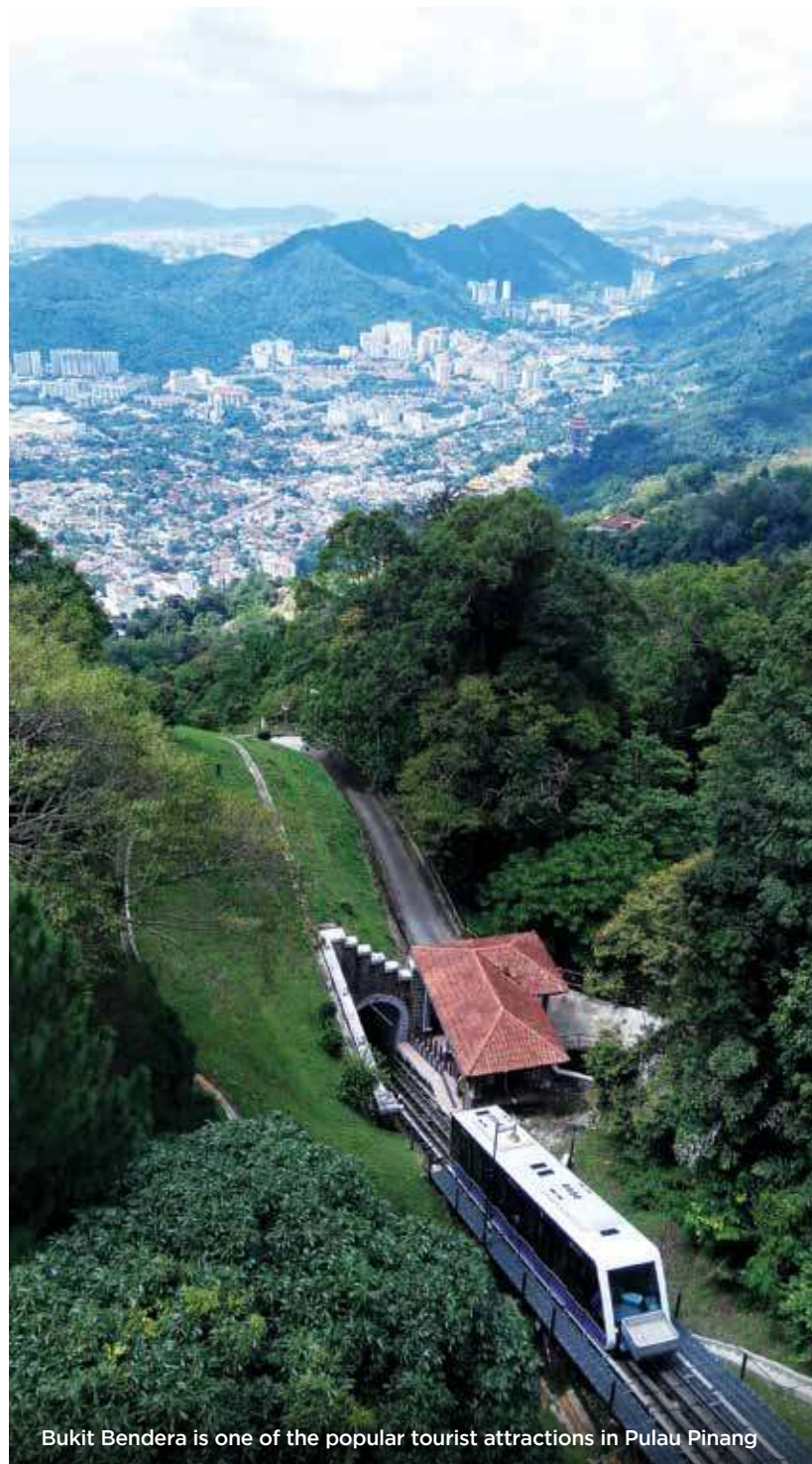
To realise this vision, continuous efforts were made to introduce innovative and proven technologies aimed at increasing the productivity level and volume of agricultural outputs by adopting the **Estate Management Model** for **paddy-planting**, setting up a **research and development (R&D) facility for seed** and **production of high-value superfruits**.

This is in line with the Government's call to modernise the nation's agricultural sector through automation, efficient use of land and cultivation of cash crops to provide better returns and increase farmers' income.

Internationally Recognised Tourism Destinations

In addition to its **rich culture and history**, NCER is endowed with **beautiful natural endowments**, **archaeological treasures** and **authentic cuisine**. With destinations that are recognised by **UNESCO**, such as one of the **UNESCO Historic Cities of the Straits of Malacca (George Town)**, **UNESCO Archaeological Heritage of the Lenggong Valley** and **UNESCO Global Geopark in Langkawi**, NCER is well positioned to attract tourists seeking a diverse tourism experience. Langkawi, known for its pristine beaches and luxurious resorts, and Pulau Pinang for its unique heritage and architecture, are popular tourist destinations with direct access from international destinations.

NCER is also home to many other unique tourist attractions such as **Sungai Batu, Lembah Bujang** which is home to the oldest known civilisation in Southeast Asia. The Belum-Temengor Tropical Rainforest (BTTR) in Perak dates back to over 130 million years, and is one of the world's oldest rainforests that holds many natural wonders. With all its diverse offerings, NCER is set to be a leading global tourist destination.



Bukit Bendera is one of the popular tourist attractions in Pulau Pinang

Steady Flow of Talent

The region's ecosystem is supported by a **steady supply of industry-relevant talent base**. Driven by its strategic high-impact projects as well as a strong track record, NCER will continue to prosper as a world-class economic region and a choice destination for investment, work and living, with skilled workforce that are developed through **upskilling programmes** and **on-the-job training** at various business establishments. This is in line with the agenda of collective impact by generating economic growth while creating positive spillover benefits for the *rakyat*.



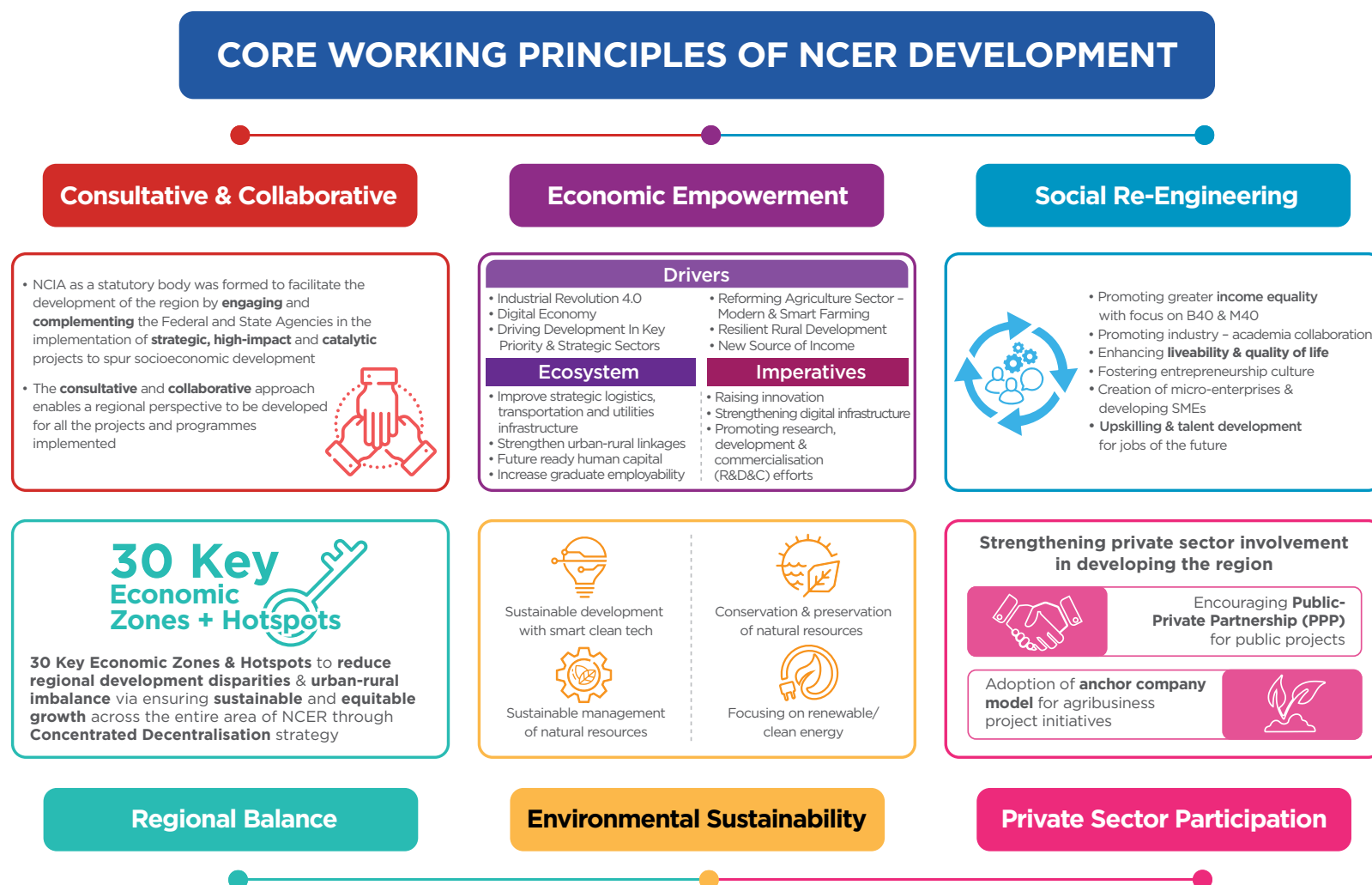
Future Ready

NCER is ready to embrace the future by being the game-changer through the use of the latest technology, in its effort to remain competitive and relevant for the current and future economic landscape.



CORE WORKING PRINCIPLES

The **development of NCER** relies on **six (6) working principles**:



Consultative & Collaborative Approach

To ensure that the perspectives of all stakeholders are addressed for the overall benefit of NCER, an approach that is based **on consultation and collaboration** is undertaken **between the Federal and State Agencies** as well as the **relevant stakeholders** and their representatives.

The concept of consultative and collaborative approach is enshrined in **Act 687**, where the governance and decision-making process is stipulated. Clear demarcation of roles and responsibilities of various committees was established to ensure transparency and good governance.

Act 687 provides the direction, policies and strategies in relation to the development within NCER, coordination between Government entities in the promotion of trade, investment, tourism and development activities within NCER, as well as other matters related to the region's development.

NORTHERN CORRIDOR IMPLEMENTATION AUTHORITY (NCIA)
GOVERNANCE STRUCTURE

Governance	Level	Chairperson	Key Responsibilities
Council	NCER	YAB Prime Minister (Act 687 – Section 9)	<ul style="list-style-type: none">Regulatory framework, vision and policiesApproval and resolution of strategic issues related to projects and programmes in NCER
Audit Committee	Board Committee	Member of Council	<ul style="list-style-type: none">Identification and assessment of risks and ensuring the proper implementation of appropriate systems to manage these risksReviewing the adequacy and integrity of established internal control systems and management information systemsEnsuring the existence of a satisfactory framework of reporting of internal controls and regulatory compliance
Steering Committee	State	YAB Menteri Besar & Chief Minister	<ul style="list-style-type: none">Review the planning and progress of NCER projects and programmesResolution of strategic issues related to NCER projects and programmes in respective states
Management Committee	NCIA	Chief Executive, NCIA	<ul style="list-style-type: none">Execute policies and strategies approved by the Council with the Prime Minister's Department and Economic Planning UnitDrive the planning and implementation of strategic projects, attract private investment into NCER and implement human capital development programmesFormulate new or improved policies and strategiesOperates with multidisciplinary team to support the organisation's vision and mission

Economic Empowerment

Economic growth in NCER is driven by key economic clusters comprising **agribusiness, manufacturing, services, sustainable mining, petrochemical and green economy**, together with the adoption of the **Fourth Industrial Revolution (IR 4.0), digital economy**, and reforms in the **agriculture sector** via modern and smart farming. **Resilient rural development** and the **creation of new income sources** also act as the **main drivers** for the region's economic empowerment.

At the same time, **economic enablers** such as **enhanced strategic logistics, transportation and utilities infrastructure** will also be rolled out, in an effort to strengthen the **rural-urban linkages**.

There is also the need to **groom the local talent pool** to be future ready and for them to be able to meet the demands and requirements from the industry.

The economic drivers and enablers in the region will be supported by the **imperatives**, which include **raising innovation, strengthening digital infrastructure** and **promoting research, development & commercialisation (R&D&C) efforts**.



Economic drivers, enablers and imperatives will empower the growth of the region

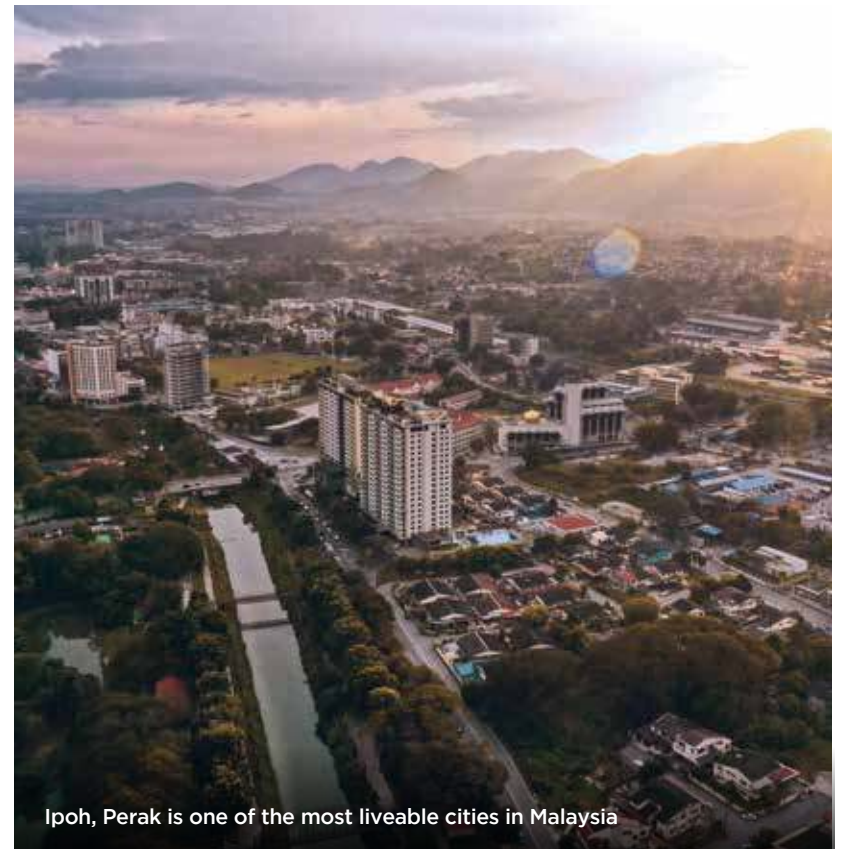
Social Re-Engineering

In developing the region, focus is given on **community empowerment** through **creation of jobs, upskilling** and **talent development for jobs of the future** and also continue to promote industry-academia collaboration.

The region will also continue providing entrepreneurial opportunities and applying an inclusive approach whilst addressing specific target group needs such as the B40 households, Orang Asli, youth, women and the Bumiputera community to enhance the liveability and quality of life for *rakyat*.



Inspiring young minds to explore new technologies, such as robotics



Ipoh, Perak is one of the most liveable cities in Malaysia

Regional Balance

To promote an equitable distribution of development and rural-urban integration, **30 Key Development Zones** have been identified based on the resources, population concentration and economic potential of each location. The zones were established to accelerate the development in NCER through the **concentrated decentralisation** strategy. This will enable the implementation of strategic and high-impact projects and programmes in an **inclusive** manner.

The strategy will also help in addressing one of the key challenges faced by the NCER, namely, the **attraction of private investment** that will enable the creation of new jobs and entrepreneurial opportunities, thus increasing the household income of the *rakyat*. The development of the zones has also enabled the optimisation of Government resources to reach the population and key economic activities.



Gunung Lang Recreational Park, Perak

Environmental Sustainability

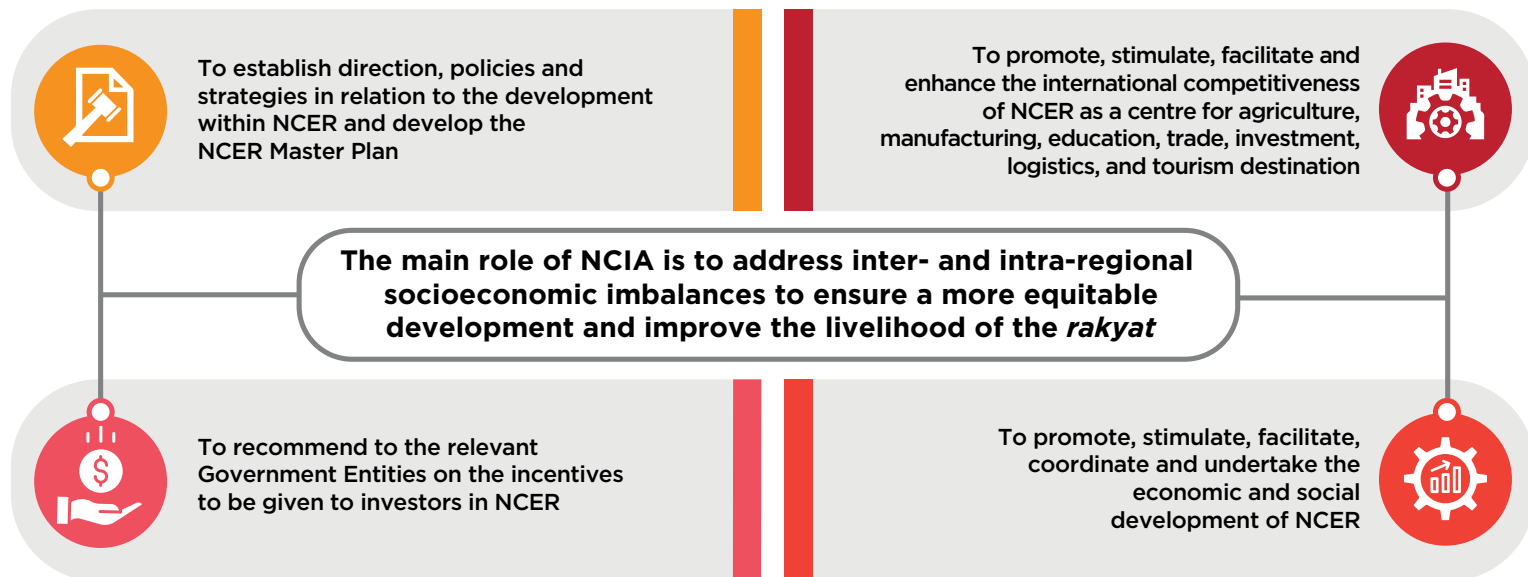
Blessed with rich natural assets, NCER is cognisant of the need to **conserve and preserve its natural endowments** in a sustainable manner. Hence, the development of NCER shall incorporate the use of **smart, clean technology**, together with the **sustainable management** of its **natural resources**.

Private Sector Participation

NCER's thriving **private sector** is the **key economic growth driver** in the region, especially in the **manufacturing, agriculture and services sectors**. In addition, the private sector in this region provides the main link between Malaysia and the world specifically for the **E&E industry**. The major factors encouraging private investment are **adequately skilled workers, good collaboration between Government, academia and industry in research and development (R&D) and competitive cost of doing business**. The private sector has also helped improve the quality of the workforce in the region by investing in skill development and training.

Another key feature in NCER's development is the **strong participation of the private sector in strategic and catalytic projects**, especially in **Public-Private Partnership (PPP) projects** and the adoption of the **anchor company model** for agribusiness initiatives. Under this model, private investors will first develop their own **nucleus farms of high-value agricultural and aquaculture products**, such as **superfruits and abalone**, before taking up active roles in developing satellite farms within the region and provide the new entrepreneurs with technical assistance and strategic input. Ultimately, the produce from these satellite farms will be sold back to the anchor company, which in turn, will market them to both local and foreign markets.

THE ROLE OF NCIA



The **Northern Corridor Implementation Authority (NCIA)** was established in 2008 under Act 687 as the entity mandated to drive the Government's regional strategies in the economic development agenda, particularly in NCER which covers the states of **Perlis, Kedah, Pulau Pinang and Perak**. Its conception was in line with the Government's vision to transform Malaysia into a high-income nation.

NCIA is the **statutory body** responsible for **providing direction and devising policies**, as well as **strategies** that promotes and accelerates **the development of NCER**. As the regional authority, NCIA focuses on the implementation of **strategic and high-impact**

development projects and programmes, undertakes **human capital programmes** to empower the *rakyat*, and **facilitates private sector participation** with an empowering and conducive ecosystem which involves cooperation and coordination with the relevant authorities at both Federal and State levels to promote foreign and domestic investments in NCER.

Through a collaborative engagement charter, the presence of an efficient delivery system has been set up to support companies establishing their operations and growth in NCER. This has led to strong relationships fostered between the private sector and various Government agencies over the years.



NCIA ORGANISATIONAL STRUCTURE

NCIA Council Members consist of the highest level of the Federal and State Administration, as well as senior representatives from the civil service and the private sector. The Council is chaired by the YAB Prime Minister of Malaysia.

The Council Members play an important role in setting the direction for NCER's development, whereby their insights and expertise have contributed towards the socioeconomic development of NCER. NCIA is also overseen by an Audit Committee to ensure that it adheres to the principles of good governance.

Each NCER state has its own State Steering Committee (SSC) which is chaired by the respective Menteri Besar and Chief Minister. The SSC is responsible for identifying and expediting the implementation of strategic development projects and investments in the respective states.

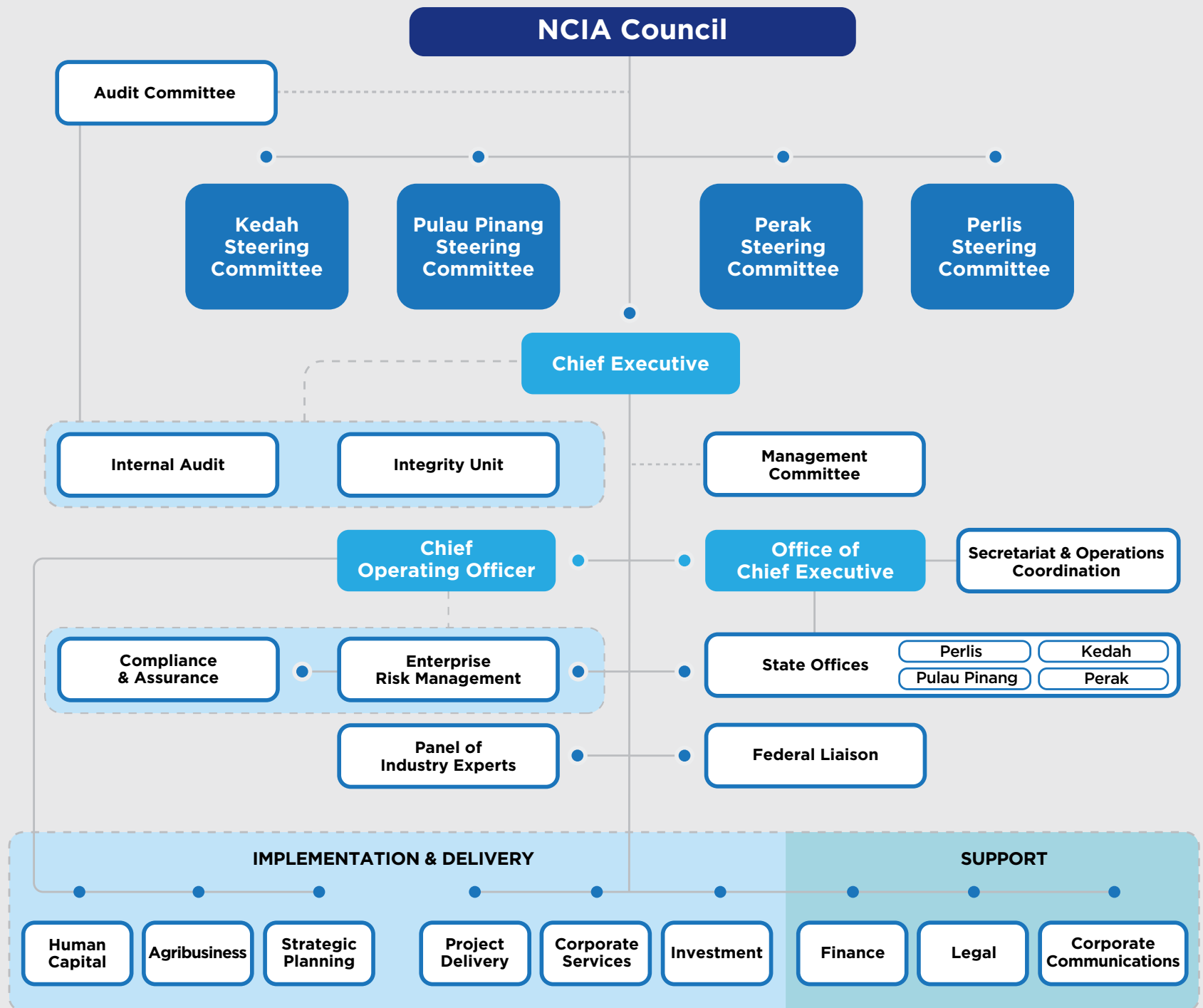
At NCIA level, the Management Committee holds the ultimate responsibility in directing the activity of the organisation, ensuring that it is well run and delivering the Key Result Indicators which have been set up by Council.

The successful and smooth implementation of NCER projects and programmes have been made possible by the dedication, support and commitment of all its stakeholders, particularly the Council Members, Federal and State Governments, the respective ministries and agencies, strategic partners, local and international investors, as well as the community.



NCIA Council Members play a major role in in setting the direction for NCER's socio-economic development through their guidance, insight and expertise

Organisational Structure of NCIA



LEGEND

----- Administrative Reporting

Chapter

2

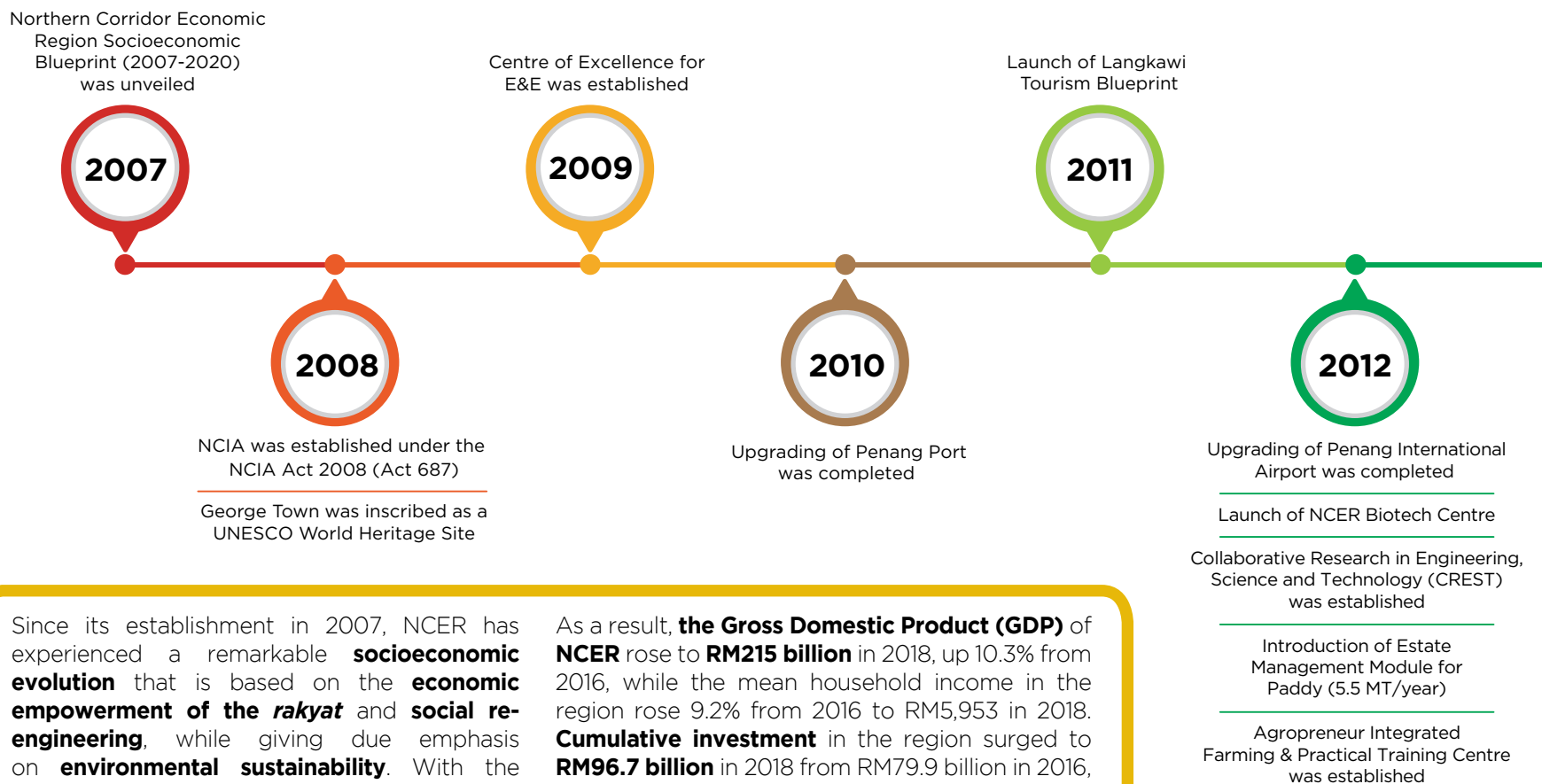
**THE
ACHIEVEMENTS**





NCER KEY MILESTONES

NCER Has Come A Long Way Since Its Establishment In 2007

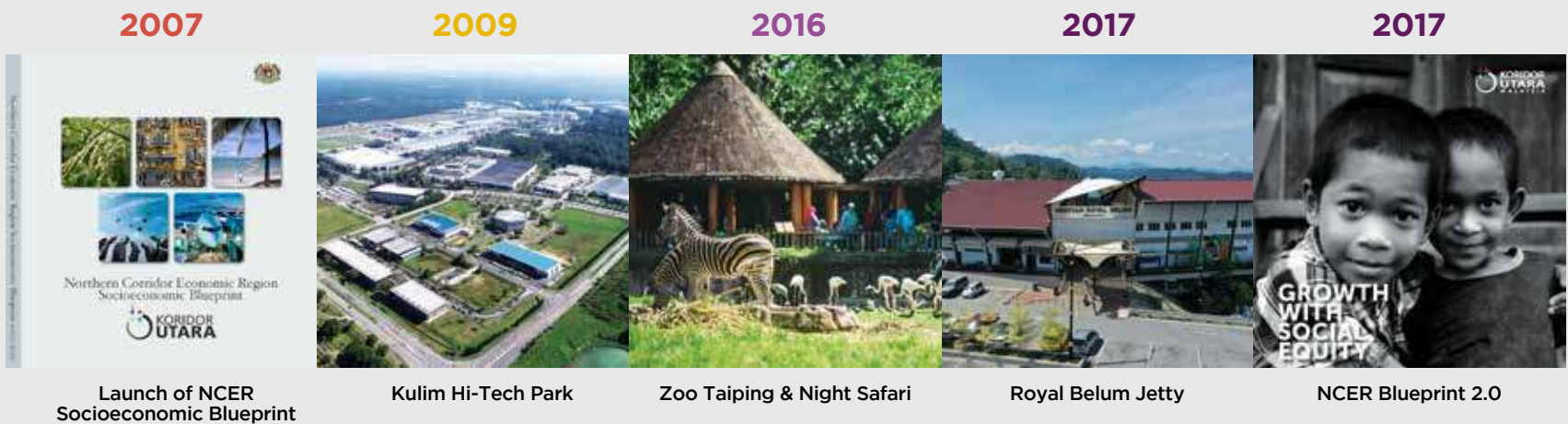
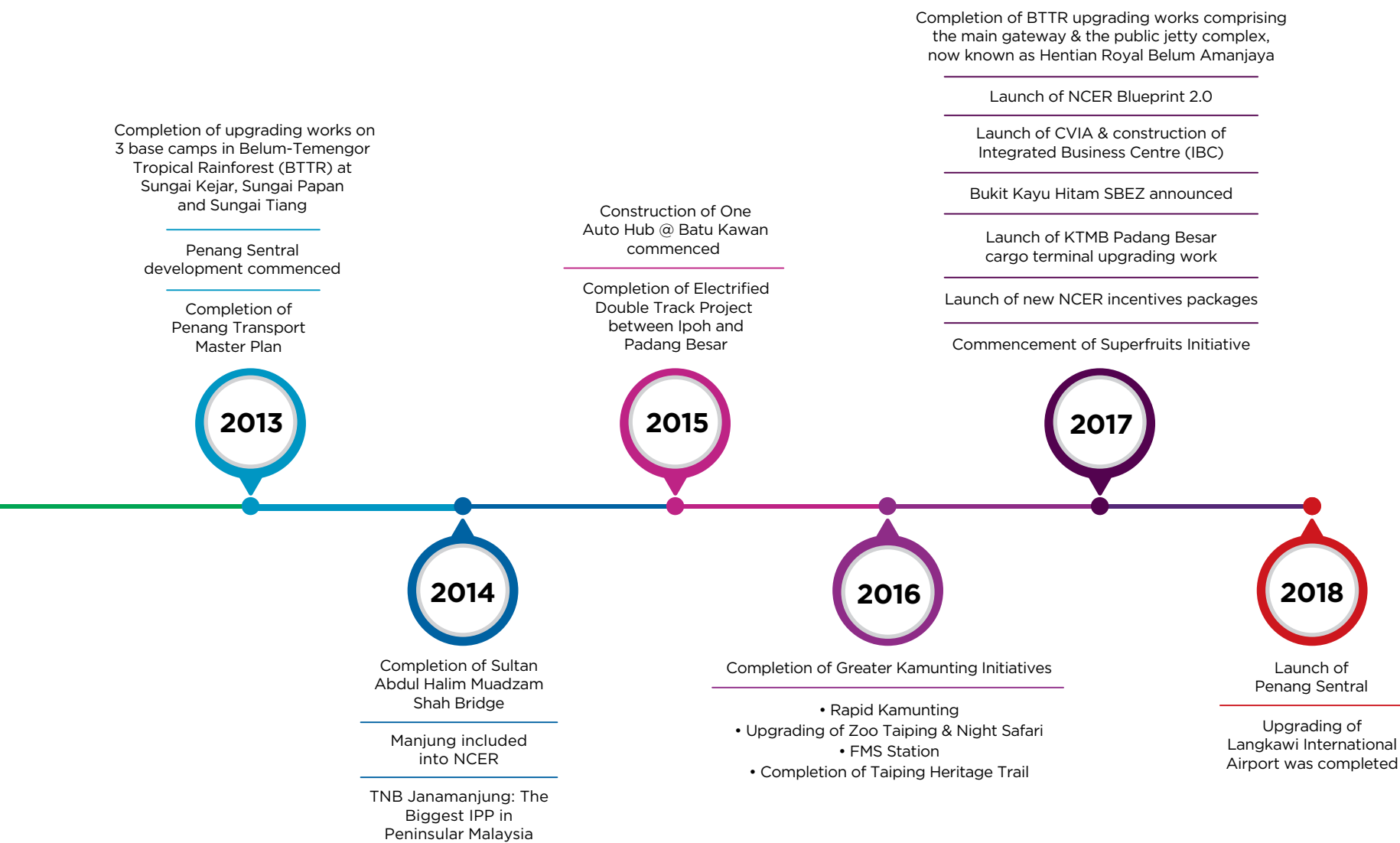


Since its establishment in 2007, NCER has experienced a remarkable **socioeconomic evolution** that is based on the **economic empowerment of the rakyat** and **social re-engineering**, while giving due emphasis on **environmental sustainability**. With the *rakyat's* well-being in mind, catalytic projects and programmes have been carried out in the region **to create new employment and entrepreneurship opportunities** to elevate their income and living standards. These are supported by **human capital programmes** to create a strong talent base that are able to meet the industries demand. At the same time, **infrastructure** within the region has also been enhanced to support connectivity and growth, while the **business ecosystem** is further nurtured and developed to address the needs of private investors.

As a result, **the Gross Domestic Product (GDP) of NCER rose to RM215 billion** in 2018, up 10.3% from 2016, while the mean household income in the region rose 9.2% from 2016 to RM5,953 in 2018. **Cumulative investment** in the region surged to **RM96.7 billion** in 2018 from RM79.9 billion in 2016, which in turn, have created **nearly 120,000 new jobs and almost 30,000 entrepreneurs**.

The remarkable economic growth in the region was driven by key strategic sectors, namely, **manufacturing, agriculture and bio-industries**, and **services** comprising **tourism, Global Business Services (GBS)**, and **logistics and connectivity**, that have propelled NCER's positioning as a competitive region and investment destination.

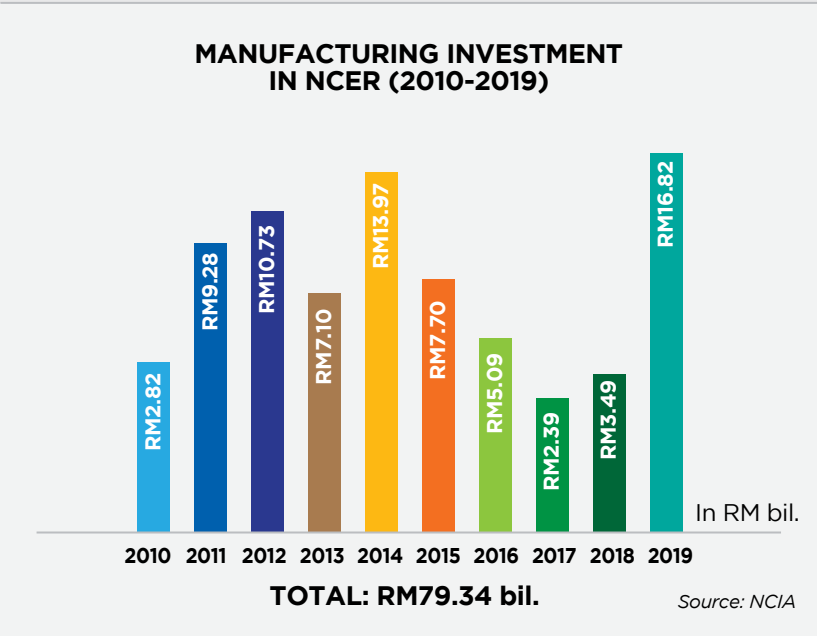
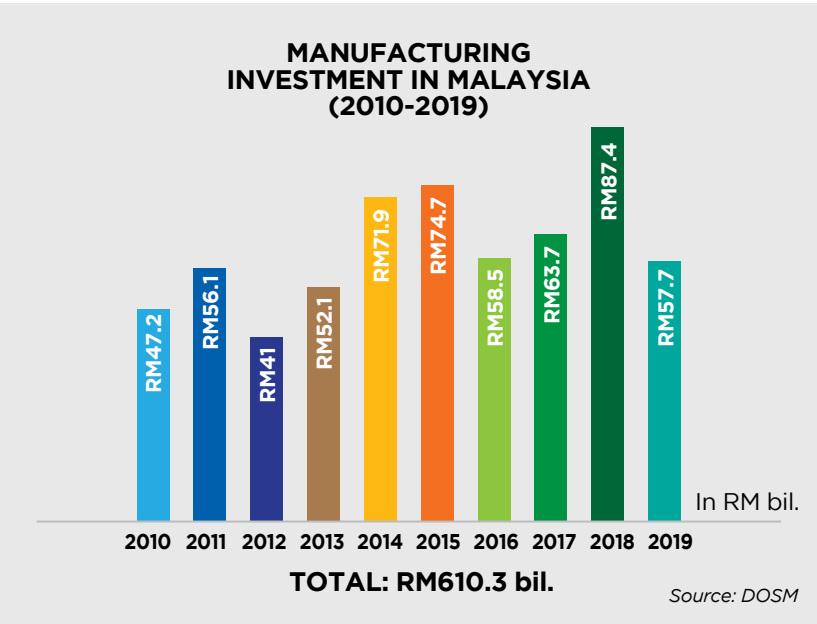
Source: Analysis by PwC



MANUFACTURING

Overview

The manufacturing sector in Malaysia has attracted a total investment of RM610.3 billion from Foreign Direct Investment (FDI) and Domestic Direct Investment (DDI) over the last 10 years. The manufacturing sector in NCER is a strong GDP contributor to the nation’s manufacturing GDP, contributing a total of **RM80.2 billion** of investment in the past decade.



The region’s significant manufacturing GDP growth is largely driven by the deeply rooted presence of **Electrical and Electronics (E&E)** ecosystem in Pulau Pinang, with the establishment of the industry since the 1970’s. Since then, Pulau Pinang’s Free Industrial Zones (FIZs) have hosted numerous multinational companies (MNCs) and attracted other manufacturing industries such as **aerospace, medical devices, automotive, and Machinery and Equipment (M&E)** in setting up their base in NCER over the past ten years.

The rapid industrialisation in Pulau Pinang since the 1970s has resulted in the **economic spillover** to the **mainland of Pulau Pinang** and the **Southern part of Kedah**, especially in Sungai Petani, Jitra and Gurun. Realising the need to establish a dedicated high technology park in Malaysia to further drive high-value activities in the country, the Government has developed the **Kulim Hi-Tech Park (KHTP)** in the state of Kedah in 1996. KHTP bears the significance as **the first high technology park in Malaysia** and it strives to provide world-class infrastructure for high technology R&D and manufacturing activities, while serving as a strategic gateway to Southeast Asia for businesses and commercial expansion for various industries. **KHTP** has since attracted more than **RM48 billion worth of investments** with over **28,000 jobs** created.

In **Perak**, investments in manufacturing were concentrated in **Kamunting**, particularly in the **rubber and medical devices sectors**, while in **Perlis**, efforts were in place to transform it into an industrialised state with the development of **Chuping Valley Industrial Area (CVIA)**.



In driving the growth of the manufacturing industry over the past ten years, NCIA has adopted the following approach:

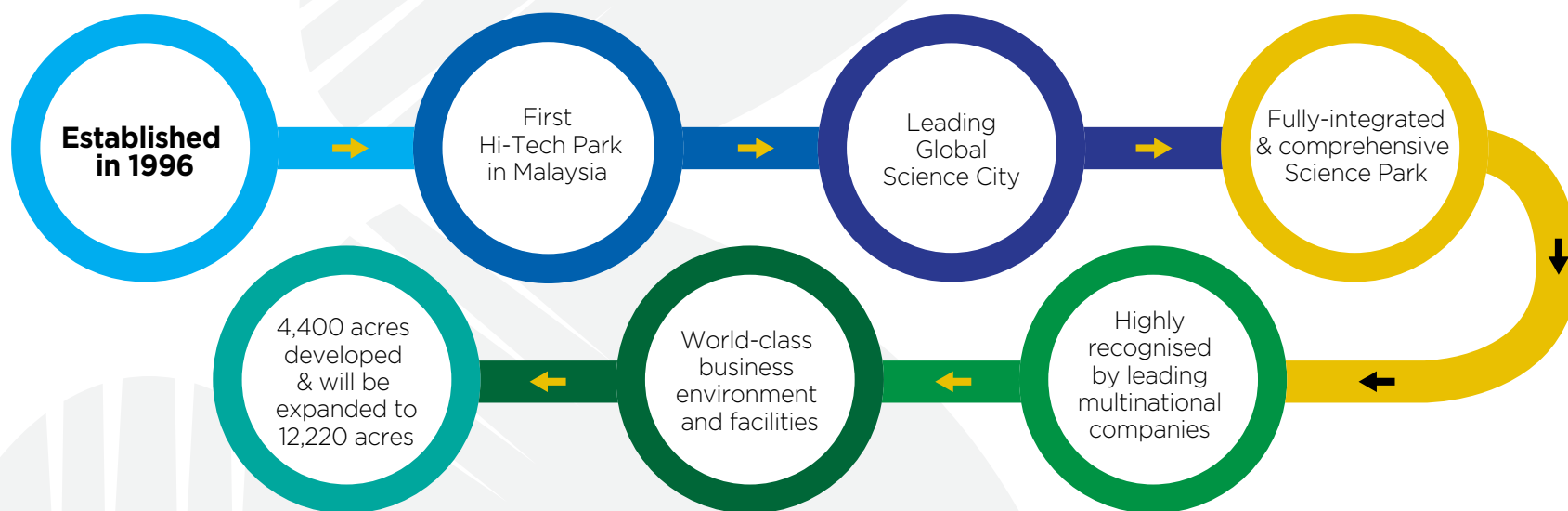


Over the past decade, NCIA has driven synergistic initiatives in NCER such as the **Kulim Hi-Tech Park (KHTP)**, **Collaborative Research in Engineering, Science & Technology (CREST)**, and **growing the local manufacturing ecosystem**.

The complex block contains three horizontal panels, each with an icon, a title, and descriptive text.

- Kulim Hi-Tech Park (KHTP)** (Icon: Trophy with dollar sign)
 - Efforts to increase the liveability and competitiveness of the park
 - RM29.71 billion private investment (2018); 26,862 jobs; RM3,450 average monthly wage
- Collaborative Research In Engineering, Science & Technology (CREST)** (Icon: Lightbulb with plug)
 - Developed new nanotechnology-based wafer for LED & SSL industries
 - GaN-on-GaN initiative catalysed the RM1.5 billion investment by OSRAM in 2016
- Growing Local Manufacturing Ecosystem and Supporting Enablers** (Icon: Globe with leaves)
 - Establishment of a test and measurement hub by Keysight Technologies with two local design partners
 - TF-AMD's collaboration with 12 local automation companies in developing automation solutions in assembly and test manufacturing
 - 1st Light Emitting Diode (LED) / Solid State Lighting (SSL) testing and certification centre in Malaysia

Kulim Hi-Tech Park (KHTP)



COMMUNICATION & UTILITIES

- Syarikat Air Darul Aman (SADA)
 - NUR Power (Independent Power Utility)
 - Telekom Malaysia (TM)
- SWCorp/Department of Environment

PARK OPERATOR & MANAGER



KTPC
KULIM TECHNOLOGY PARK CORPORATION

EDUCATION & TRAINING

- UniKL
- UniMAP
- Polytechnic
- KISMEC
- Primary Schools
- Secondary Schools

HEALTHCARE, SAFETY & SECURITY

- Fire & Rescue Department (HAZMAT-ready)
 - Kulim Hospital (equipped with MDERS)
 - Police Station

COMMERCIAL AND RECREATIONAL

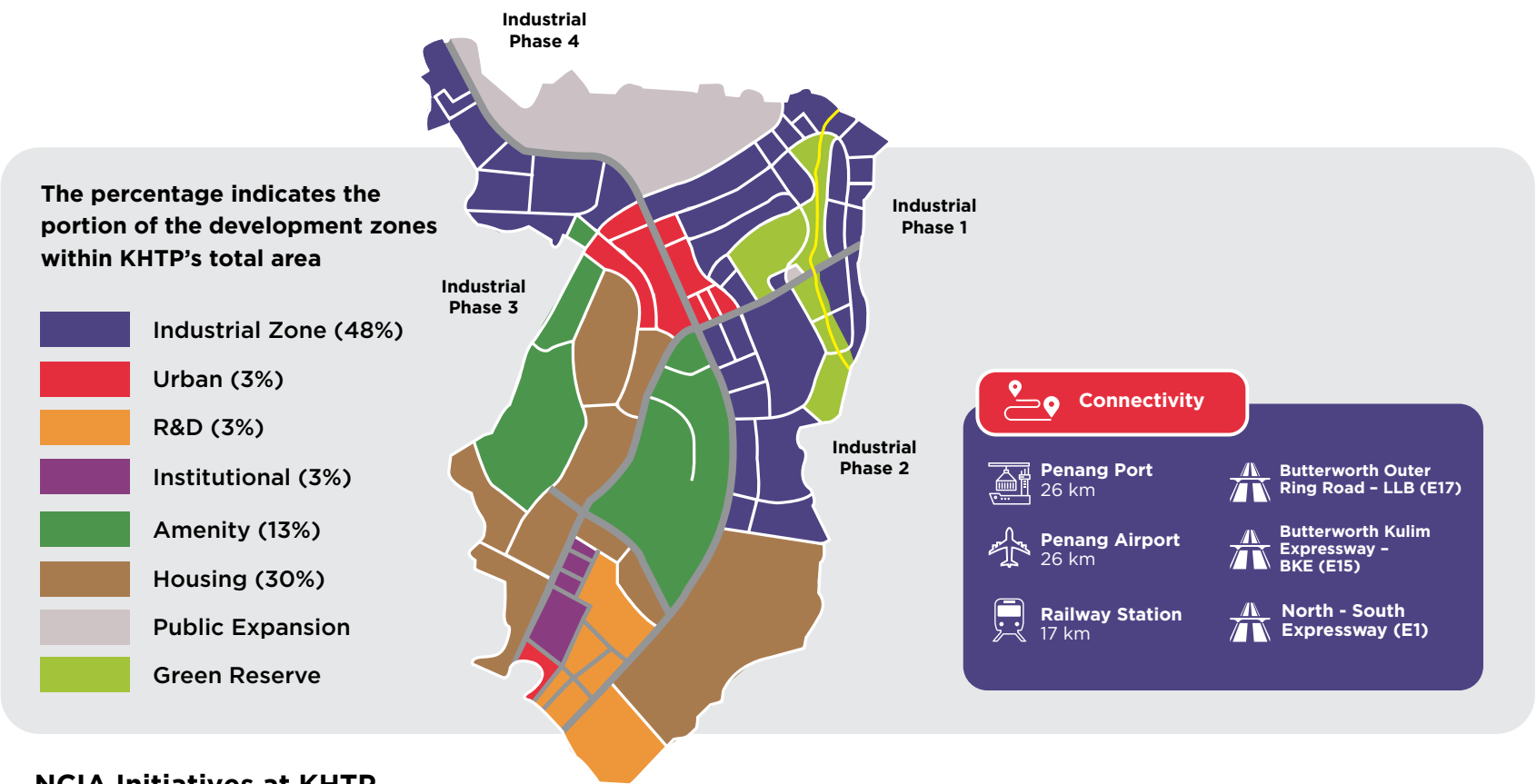
- KHTP Sports Complex
- Kulim Golf and Country Resort
 - Banks
 - Shops & Cafés

INDUSTRIAL & SUPPORTING TENANTS

32 Industrial Supporting Tenants

Focus Industries

- Wafer Fabrication and Semiconductor
 - Solar and Renewable Energy
 - Medical and Scientific Devices
 - Advanced Electronics Industries
 - Aerospace and Related Activities



NCIA Initiatives at KHTP

2009

- Enhancement in Health & Safety aspects through the provision of HAZMAT Vehicle for KHTP's Fire & Rescue Department
- Mass Decontamination & Emergency Response System (MDERS) for Kulim Hospital

2010

- Front-End Technology Water Fabrication Training (NUFET) with Kulim Industrial Tenants Association (KITA) and Penang Skills Development Centre (PSDC)
- NCER Operators Upskilling Programme (NCOUP)
- NCER Industrial Technical Enhancement Scheme (NCITES)

2011

- Special Study to Enhance the Competitiveness of Kulim Hi-Tech Park (KHTP Study)
- Silterra-NCIA-UniMAP Centre of Excellence (SNUCoE)

2013

- Upgrading of traffic lights at Simpang KHTP 1 & installation of traffic light sensors at KHTP1 and KHTP4 junctions

2014

- Road resurfacing works at Jalan Hi-Tech 1 & 4, Industrial Zone Phase 1

2015

- Construction of KHTP Sports Complex

2016

- Impact Assessment on Kulim Hi-Tech Park

2017

- TVET at KHTP (Pilot Project), to ensure adequate and well-trained skilled workforce to meet the needs of industries











“KHTP has played a major role in contributing towards the economy of Kedah and Malaysia as it has now become a fully-integrated and comprehensive science park.”

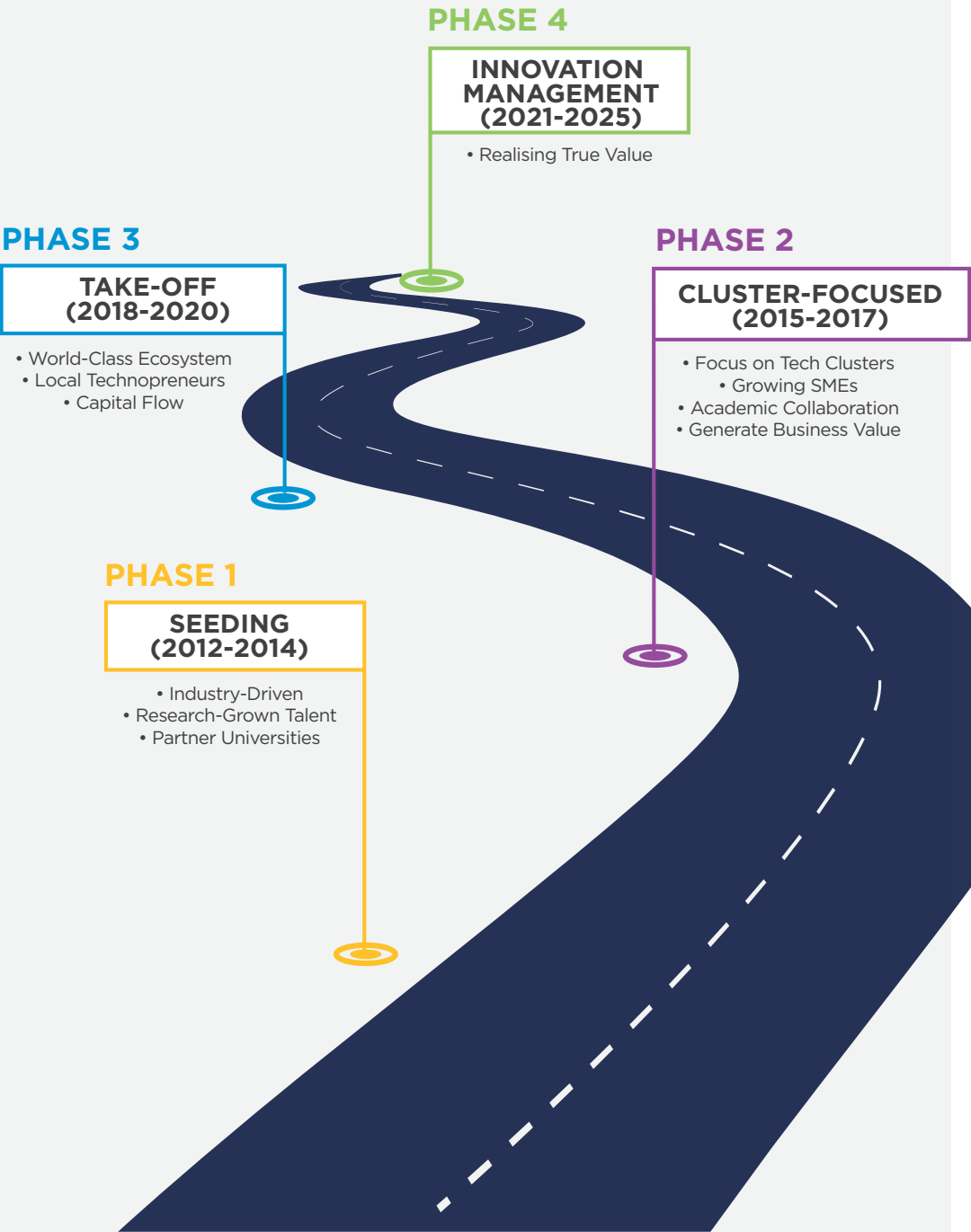
Collaborative Research In Engineering, Science & Technology (CREST)

CREST:
Promoting Industry - Academia -
Government Collaboration to Spur
R&D and Economic Growth

Launched in 2012, the **Collaborative Research in Engineering, Science and Technology's (CREST)** is an **industry-led collaborative platform for market-driven R&D** to enable Malaysia to become a high-income nation. CREST involves close collaboration between the **industry, academia and Government** and serves as a catalyst that contributes to the country's economic growth, especially in the **electrical and electronics (E&E)** industry. CREST has undertaken a total of **138 R&D projects** in collaboration with the industry and academia since 2012.

Founding Members

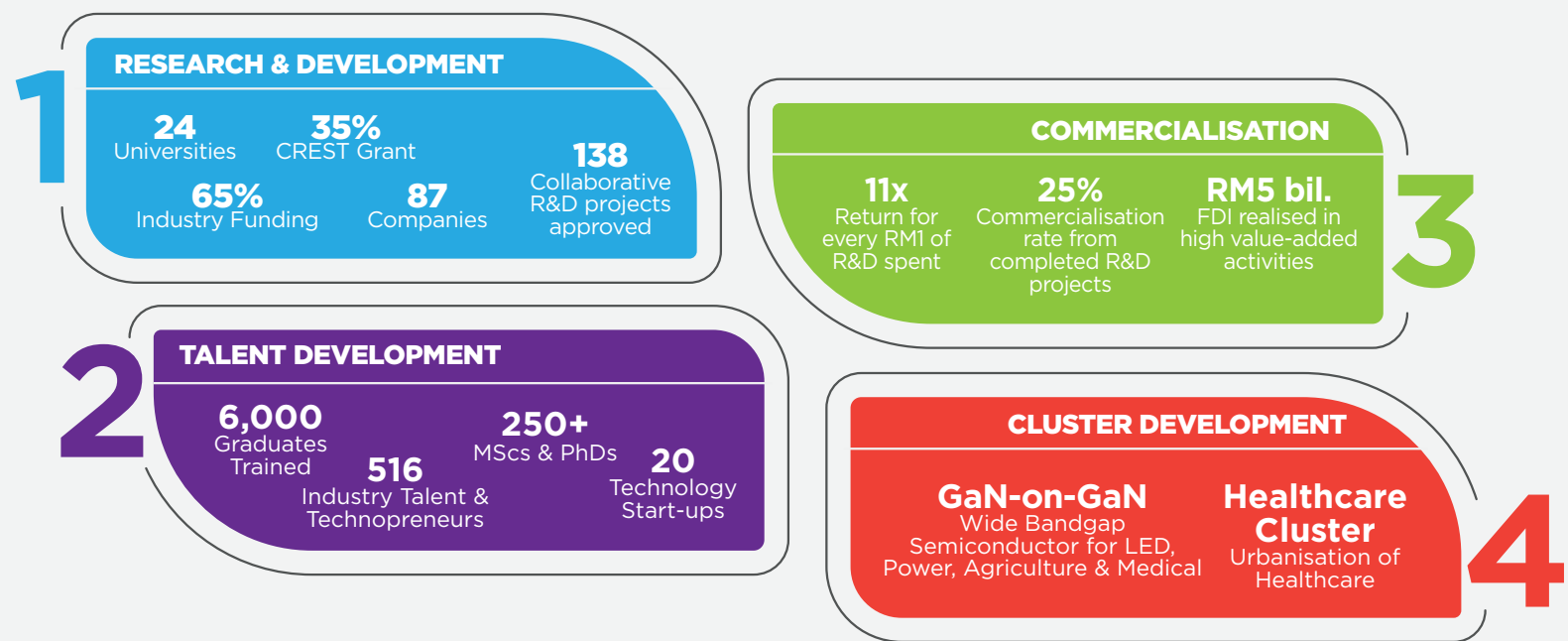
			
			
			
			
			



In 2016, CREST embarked on a journey with a group of industry players and academia from Universiti Malaya (UM), Universiti Sains Malaysia (USM), Universiti Malaysia Perlis (UniMAP), Monash University and University of California, Santa Barbara (UCSB) **to develop the first blue light-emitting diode (LED) in Malaysia.** The **gallium nitride on gallium nitride (GaN-on-GaN)** programme has resulted in

creating Malaysia's own capability to grow gallium nitride (GaN) on a base layer of GaN, which leads to more efficient LEDs on a commercial basis.

The programme team also successfully established the first end-to-end supply chain for LEDs, covering front-end epitaxy process to fabrication, packaging and system appreciation in the country.



EFFECTIVELY CREATING IMPACT
Building trust & integrity as a model neutral entity

Growing the Local Manufacturing Ecosystem

The past decade has seen the manufacturing sector as the prime mover of the economy in NCER, providing a critical component of GDP, attracting foreign investment and creating employment. As a result, NCIA has taken vital steps to move the industry, particularly the local SMEs, up the value chain to enhance their competitiveness in the global market. This has resulted in **three critical programmes** being undertaken to build local champions in the E&E and M&E industries. The programmes include partnering with **Keysight Technologies** in establishing a **Test & Measurement Hub** and facilitating **TF-AMD's** endeavour in **partnering with local automation players** to move them up the value chain.

In 2011, **Keysight Technologies** (previously known as Agilent Technologies) began spearheading the development of an **ecosystem of local design partners** to boost Malaysia's design services and **develop Original Design Manufacturers (ODM) and solution partners** of global standards.

As part of this effort, Keysight Technologies, in collaboration with NCIA, launched the **Test and Measurement Hub** programme with **two local design partners, namely**



Test and Measurement Hub at Keysight Technologies

To strengthen the local capability in testing and certification, a local company, **QAV Technologies**, has established the **LED/SSL Testing and Certification Centre** in Pulau Pinang and subsequently expanded to Selangor. QAV is the only TUV NORD-certified failure analysis, reliability testing and electromagnetic compatibility testing centre in Malaysia. It is also the first American National Standards Institute (ANSI)-certified lab outside of the United States.

CEEDTec Sdn Bhd and **Myreka Technologies Sdn Bhd**. The programme was designed to grow their R&D and ODM capability to be able to design and build their own products and compete worldwide, and to create more high-value jobs for Malaysians. From being mere service providers, **both CEEDTec and Myreka now have full scale design-to-manufacturing capabilities** and **secured access to global market**.



In 2013, NCIA in collaboration with **TF-AMD Microelectronics Sdn Bhd** (formerly Advanced Micro Devices Export Sdn Bhd) created the **opportunity for local automation partners to participate, design and deploy automation solutions for TF-AMD's assembly and test manufacturing processes.**

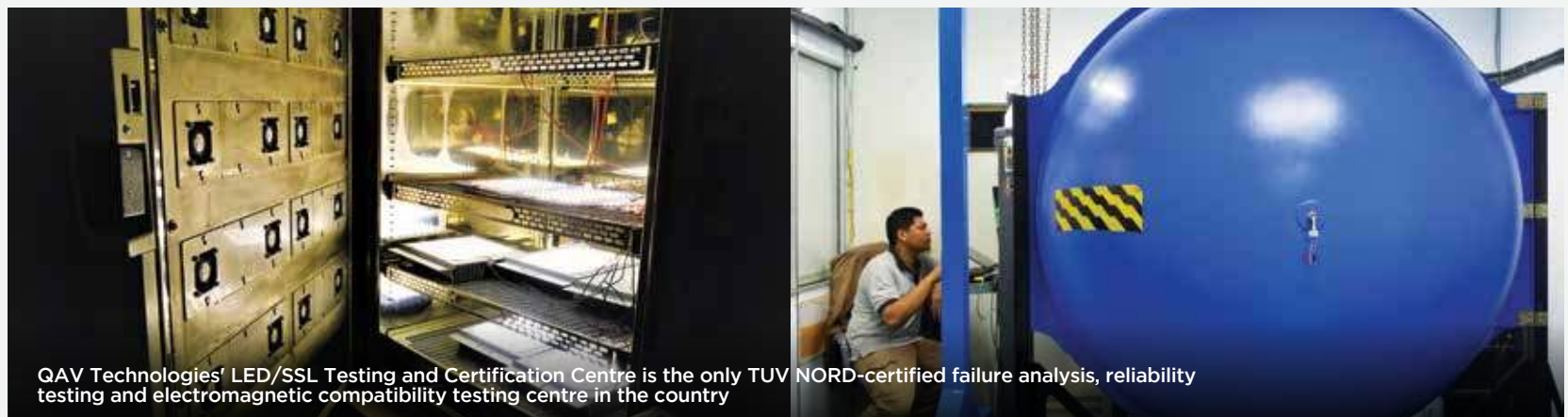
The initiative successfully saw the participation of **12 local automation players** who participated in co-designing and creating **automation solutions** for TF-AMD. The automation project has not only reduced TF-AMD's dependency on foreign labour by 24.8%, but it has also increased the capability of local automation players in moving up the value chain and gaining access to compete in global market.

In 2019, the project has been selected as one of the successful projects to be showcased during Konvensyen Pemantauan Penilaian 2020 and Majlis Anugerah Ikon Pembangunan Negara.



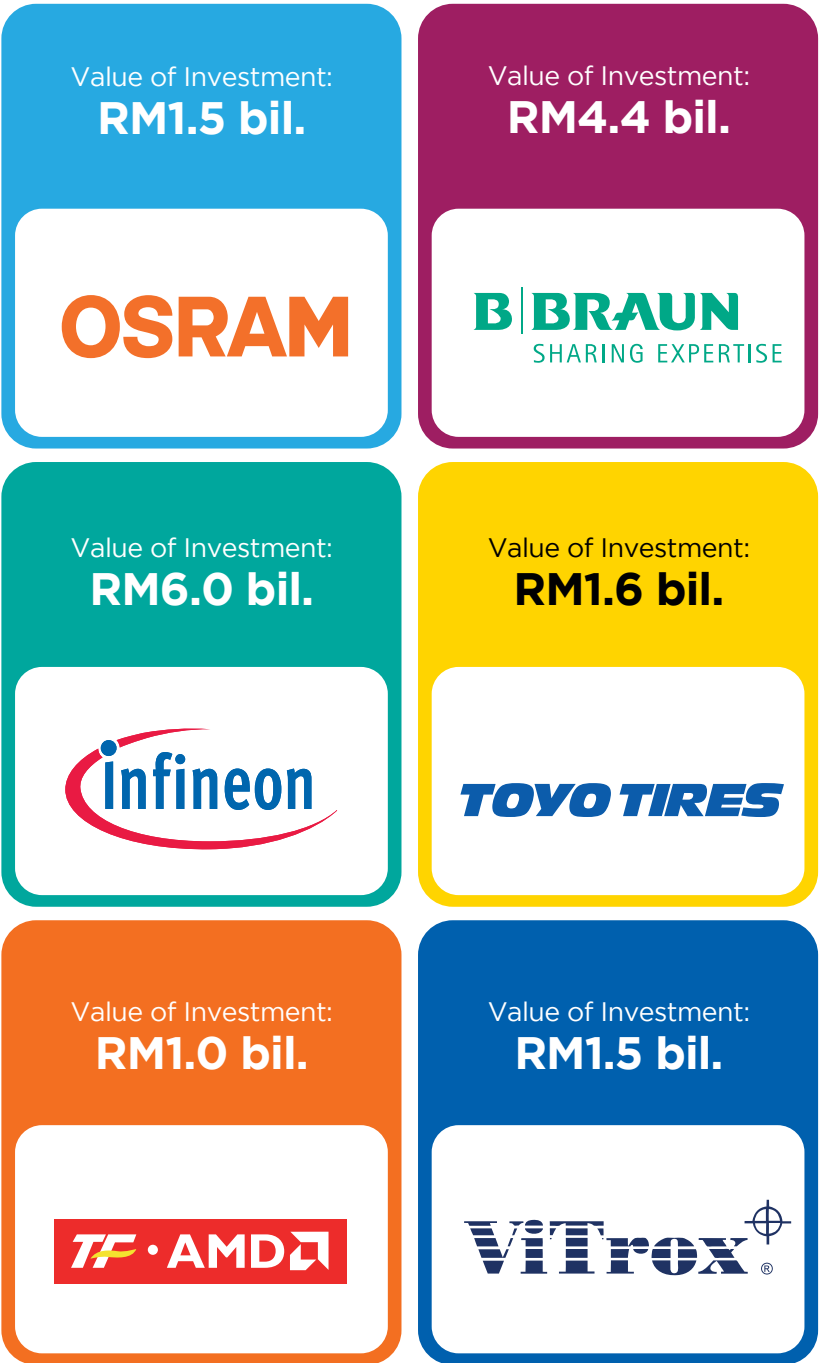
A total of 12 local automation players have participated in co-designing and creating automation solution for TF-AMD Microelectronics

In 2010, **QAV Technologies** established the **first Light Emitting Diode (LED)/Solid State Lighting (SSL) Testing and Certification Centre** in Pulau Pinang via facilitation from NCIA and subsequently expanded its footprint to Selangor in 2012. The facility provides American National Standards Institute (ANSI) and TUV NORD certification which was previously only undertaken by the US. This, in turn, reduces testing costs and enhances the ability of local companies to adhere to global standards, thus increasing their global competitiveness.



QAV Technologies' LED/SSL Testing and Certification Centre is the only TUV NORD-certified failure analysis, reliability testing and electromagnetic compatibility testing centre in the country

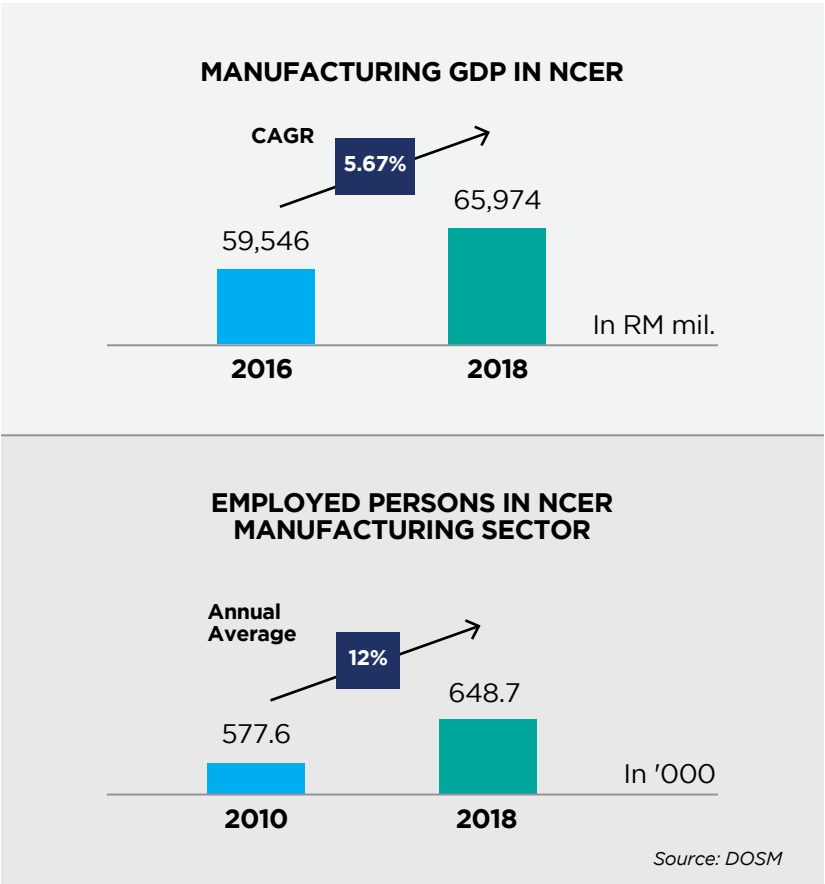
Key Investments in Manufacturing Sector



Source: NCIA Records & Respective Companies

Overall Impact of Manufacturing Sector

The achievements of the manufacturing sector in NCER over the past ten years have not only resulted in **positive growth in GDP**, but have also **created high-value jobs** for the *rakyat* and spurred the **establishment of local supply chains** to support the strong growth of the sector. The sector has also transformed to embrace global mega trends, including **the adoption of Industry 4.0**, and will continue to witness the emergence of disruptive technologies in the region.



TOURISM



The region is renowned for its rich natural and historical attractions, claiming UNESCO-status sites in three different states, including the **Lenggong Valley** in Perak which houses Southeast Asia's oldest, most complete human skeleton, the Perak Man. Perak is also home to the **Belum-Temengor Tropical Rainforest** which has been in existence for over 130 million years, with an ecosystem older than the ones in the Amazon and Congo.

Popular for its heritage attractions, **George Town** is famed for its building structures which reflect its rich history and importance as a trading centre. It is especially renowned as a food paradise, offering a vast array of local delicacies that are influenced by the myriad of cultures that have set their roots in the island. NCIA has identified **medical tourism** in the city as one of the areas to be promoted to encourage economic growth.



Well-known for its emerald sea and beautiful beaches, **Langkawi** has been awarded the **UNESCO Global Geopark** status, and has consistently appeared in the lists of top islands to visit globally by prominent travel brands such as CNN, National Geographic and Trip Advisor.

For **Taiping**, NCIA has implemented a comprehensive marketing and promotional activities for the **Greater Kamunting Conurbation** (GKC), which include "Travelogue Programme" and familiarisation trips for international media and travel agents, to promote Taiping as a preferred ecotourism destination. NCIA has identified **heritage tourism** as one of the region's potential growth catalysts, and with Taiping being rich with accolades for having 33 "Firsts" in Malaysia, it has the potential to be promoted as a Heritage Town. As such, NCIA has initiated the **Taiping Street Art project** and completed the **Taiping Heritage Trail** to promote the town as a heritage attraction.

To increase night-time activities with the aim of encouraging day trip tourists, especially those from Ipoh and Pulau Pinang, to extend their stay in Taiping overnight, NCIA has collaborated with Majlis Perbandaran Taiping (MPT) to upgrade the animal exhibits at **Zoo Taiping and Night Safari**, as well as its other attraction and facilities. The initiative has solidified Zoo Taiping's position as one of the northern region's most attractive nature and wildlife attractions. Taiping was listed in the **Top 100 of The Best Ecotourism Destinations by Green Destination ITB Award 2018** and it also won the Best CD Promotion during the 8th Tourism Promotion Organisation Award held in Ho Chi Minh City, Vietnam in June 2018.



Belum-Temengor Tropical Rainforest (BTTR), a state park gazetted in 2007, is one of the oldest tropical rainforests in the world located in NCER. Dating back to 130 million years, the BTTR reserve offers a vast selection of nature and adventure packages including wildlife and bird-watching, jungle trekking, as well as flora and fauna trails.

NCIA has been involved in the development of BTTR since the year 2010 through the **BTTR Integrated Master Plan (BTTR-IMP)**. In 2013, NCIA completed the upgrading works of three base camps in BTTR that are located at Sungai Kejar, Sungai Papan and Sungai Tiang respectively. The upgrading was meant to provide an opportunity for tourists and visitors to experience ecotourism stay in the state park. Subsequently in 2017, NCIA completed the upgrading works for Pangkalan Aman Public Jetty in Pulau Banding, Gerik. The Jetty Complex and main gateway to BTTR is now known as the Hentian **Royal Belum Amanjaya**. In November the same year, an interpretative centre was inaugurated at the complex, complete with information

panels and fun map of Royal Belum, a mural doodle with hornbill motif and a memorial wall.

Malaysia is recognised as a **top medical tourism destination** by International Medical Travel Journal and NCER has earmarked Pulau Pinang as the leading medical hub of Malaysia. To promote medical tourism in NCER, NCIA has helped increase the arrival of foreign patients through the Flight Incentive Programme to enhance connectivity and capacity building, besides providing training for medical personnel.

Other initiatives and programmes that have been implemented by NCIA for the tourism sector in NCER include:

Shared Value Concept (SVC) at BTTR

The project aims to equip the **indigenous communities** around **the Royal Belum State Park** with the necessary skills to produce and market local handicrafts, as well as to encourage the growth of **local entrepreneurs** and small businesses. As a result, an **Asliworks** kiosk has been set-up at Hentian Royal Belum Amanjaya to showcase and promote the handicrafts made by the Orang Asli natives to tour operators and tourists visiting Royal Belum.



Strategic Partnership between NCIA and Tuniu

Tuniu is one of the **leading online travel sites in China** and is listed on NASDAQ, USA. This partnership aims to bring awareness and stimulate interest among Chinese tourists on NCER through various tour packages offered.



Community-Based Tourism (CBT)

CBT aims to **foster entrepreneurship in local communities** and encourage them to seek and develop **careers in tourism**. The programme educates and empowers rural communities in managing tourism resources, thus creating opportunities for better income and improved living standards. Under this initiative, NCIA has implemented **Lenggong CBT, Destination Management Development Programme (DM)**, as well as **Professional Taxi Driver Programme** in Merbok (Kedah) and **Pangkor Cultural Mapping in Pulau Pangkor** (Perak).

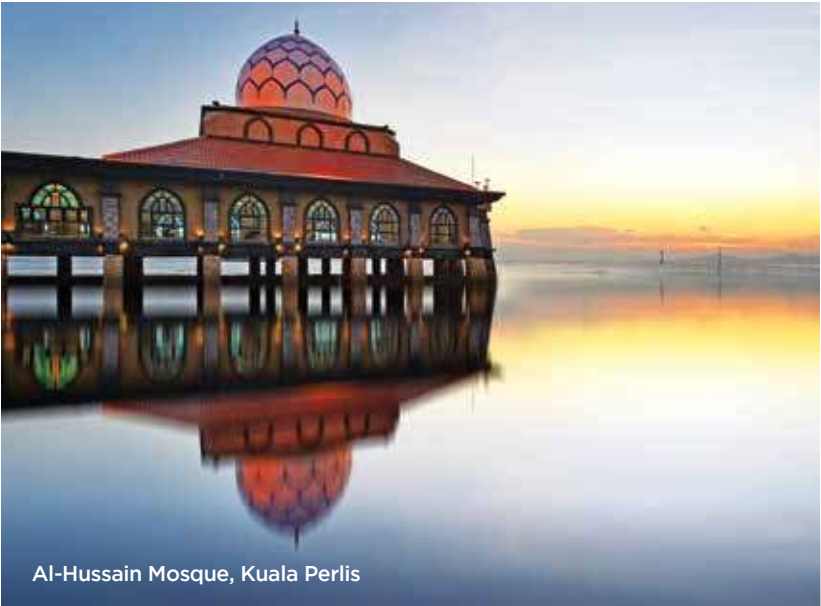


Indonesia - Malaysia - Thailand Growth Triangle (IMT-GT) Ecotourism & Homestay Programme

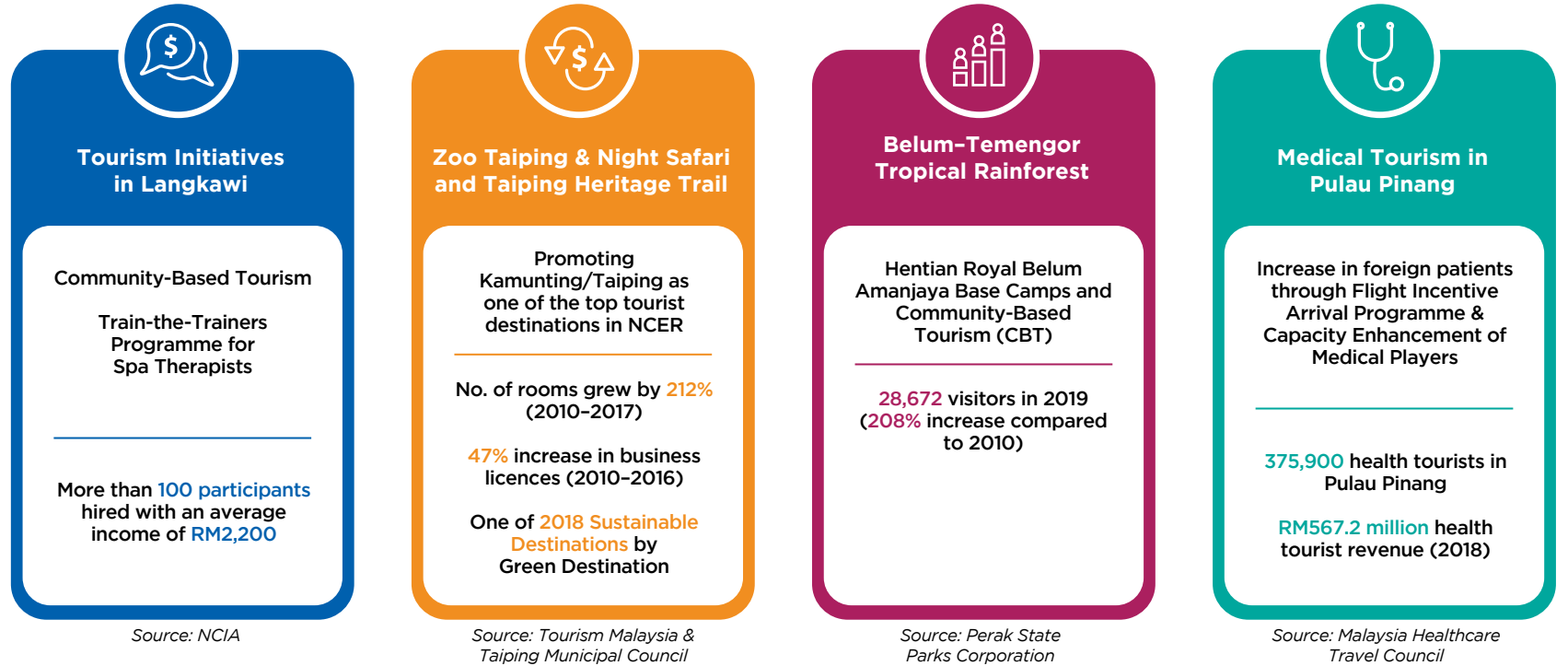
This programme entails a collaboration among the Ministry of Tourism, Arts and Culture Malaysia (MOTAC), UPEN Perlis and **homestay operators in Perlis**, particularly those located between Perlis and Satun, Thailand.



To develop the tourism sector in NCER, NCIA has adopted the following approach:



Impact of NCER Key Initiatives for Tourism



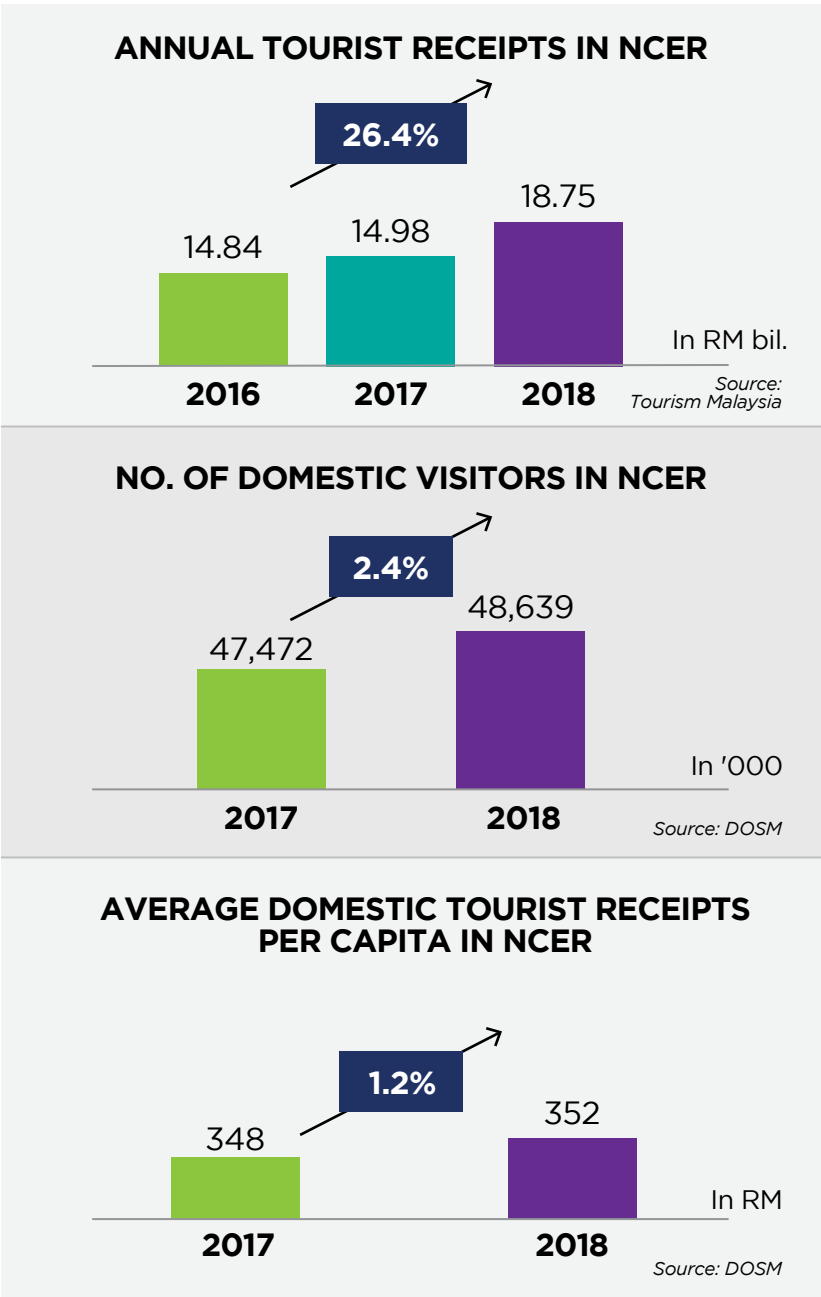
Key Investments in
Tourism Sector



Source: NCIA Records & Respective Companies

Overall Impact on Tourism Sector

Throughout the period, the region has seen an increase in the number of domestic visitors, hotel rooms and local tourist receipts.



LOGISTICS AND CONNECTIVITY

NCER is located along the **major maritime trade route** and one of Malaysia's **main international gateways for export and imports**. As at 2018, NCER already handled **more than 45% of Malaysia's manufacturing export**, and Penang International Airport reportedly managed almost double the value of goods handled via KLIA.

In addition, the reliance of Southern Thailand cargo to the points of export and import in NCER has catapulted **Bukit Kayu Hitam** and **Padang Besar** to become the major gateways for more than **67% of Southern Thailand exports**, or approximately **250,000 twenty-foot equivalent unit (TEUs)**.

To develop the logistics & connectivity sector in the region, NCIA has adopted the following approach:



To further strengthen the logistics and connectivity in the region, key initiatives such as the **upgrading of KTMB Padang Besar Cargo Terminal**, the development of **Penang Transport Master Plan (PTMP)** and **Penang Sentral Development Project** have also been carried out.



Key Logistics and Connectivity Projects in NCER



Penang Sentral Development Project

The flagship **Penang Sentral** development project is being modelled by Malaysian Resources Corporation Berhad (MRCB) around the success of **Kuala Lumpur Sentral**. Opened for operations on 22 November 2018, Penang Sentral is an **integrated transportation hub in Butterworth**, connecting buses, taxis, ferries and trains in a transit building equipped with shopping malls, hotels, offices and service apartments. With an estimated **Gross Development Value (GDV) of RM2.6 billion**, it is expected to gradually grow into a central business district, positively contributing to the improvement of socioeconomic infrastructure and modern continuity-based transport system.

Upgrading of the KTMB Padang Besar Cargo Terminal Project

The project objective is to improve the turnaround time and cost by **reducing the bottleneck and congestion during trade clearance**. The upgrading of Padang Besar Railway Terminal will see an increase of cargo handling volume to **150,000 TEUs** from 110,000 TEUs previously. This project involves the construction of an office building and upgrading works for container yard, as well as railway tracks to facilitate cargo movement and serve as a gateway for containers.

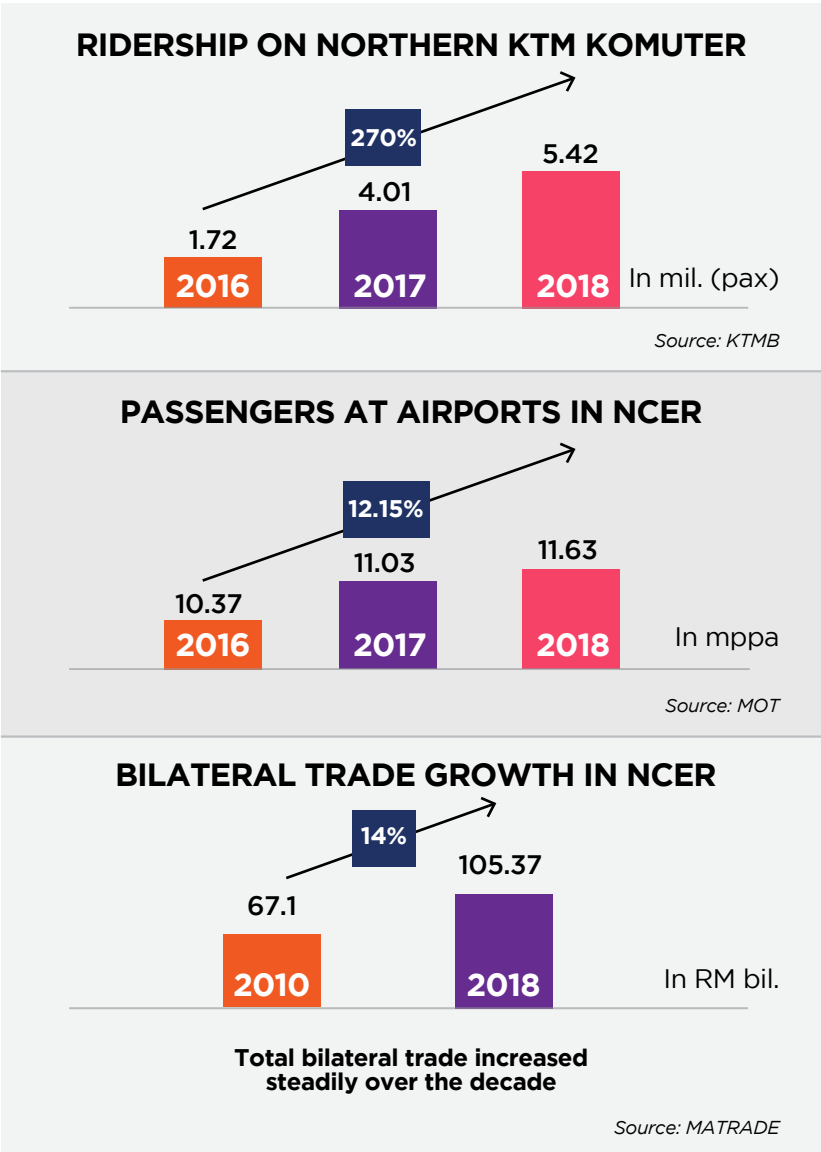
This project will have several major impacts to the region: Firstly, it will improve the state infrastructure and trade facilitation, while charting new growth areas for logistics. Padang Besar will also emerge as the **gateway for Thailand and Indochina to Malaysia** with port-rail connections. Padang Besar will also be transformed into the **Regional Rail Freight Consolidation Centre**, as well as the **logistics centre for agriculture and manufacturing sectors**.

Penang Transport Master Plan (PTMP)

NCIA has collaborated with the Pulau Pinang State Government to develop the Master Plan with the aim to **strengthen the current public transport network**, making it more efficient and more accessible for existing and potential new users. The plan includes the provision of new highways, the improvement of existing highways, the strengthening of existing regulatory enforcement and development of control-related policies.

Overall Impact in Logistics & Connectivity Sector

The region has seen positive growth in trade and logistics activities through various infrastructure investments, as reflected in the figures below:



AGRICULTURE AND BIO-INDUSTRIES

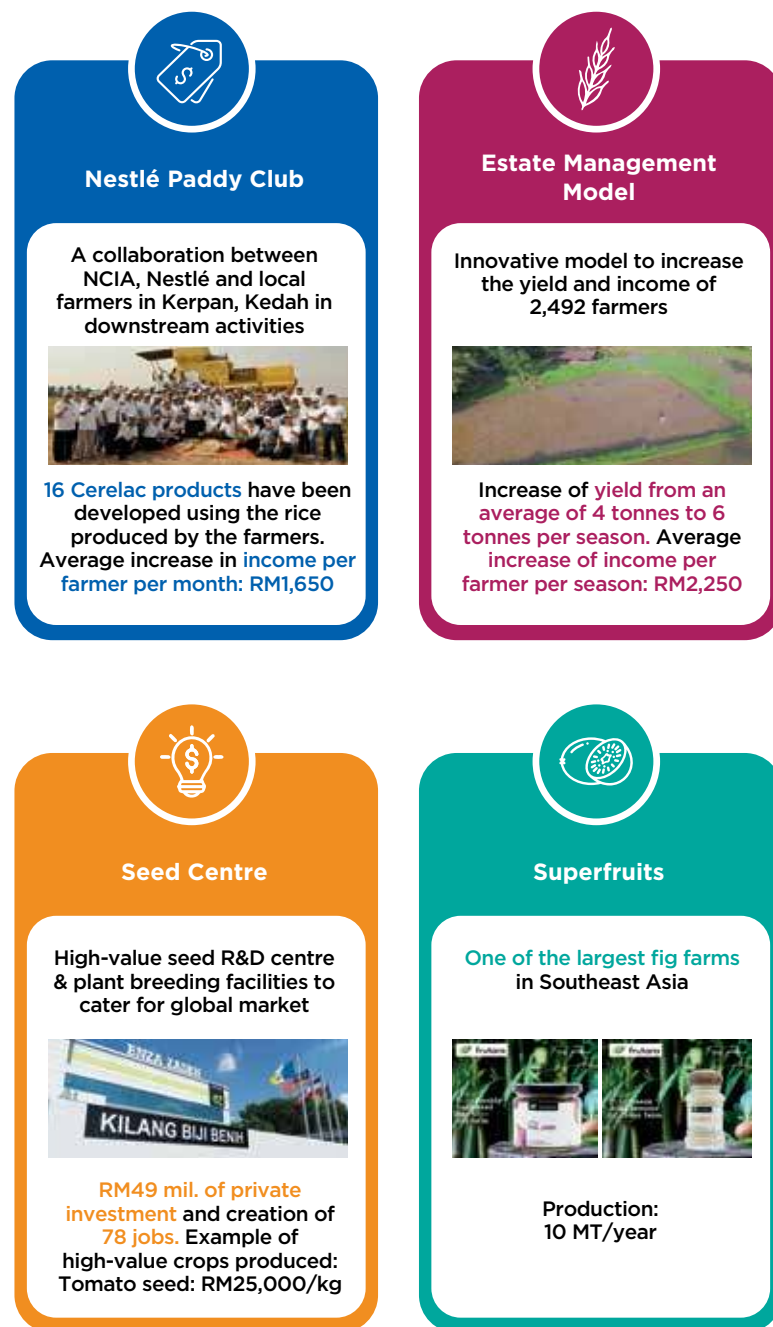
The agriculture and bio-industry sectors are of major social and economic importance to NCER due to their current and potential future contributions in building a sustainable and inclusive economic growth. The region's agriculture sector is also **a key contributor to the national food and nutritional security agenda**. NCER is in the best position to tap into this opportunity and become a modern and sustainable agriculture and food production zone in the country. This will help **improve the income of the farmers and workers** along the industry chain, and subsequently uplift their living standards.

To realise this vision, continuous efforts were made to introduce **innovative and proven technologies** aimed at increasing the productivity level and volume of agricultural outputs. In this regard, emphasis is always given on the **rice cultivation sector** due to its importance in the country's strategic food security planning.

To develop the Agriculture and Bio-Industries, NCIA has adopted the following approach:



The initiatives implemented by NCIA include **Nestlé Paddy Club**, **Seed Centre**, **Estate Management Model** and the cultivation of high-value **superfruits**.



Estate Management Model

The implementation of **paddy-planting** and **modernisation initiatives** through the **Estate Management Model (EMM)** was introduced in 2011. The first model entailed 2,000 hectares of land, with the participation of approximately 1,000 farmers in Seberang Perai Utara, Pulau Pinang.

The successful initial run paved the way for the programme to be extended into more paddy areas so that thousands of farmers may reap its benefits. This programme has since been successfully implemented in several field locations as well as Pertubuhan Peladang Kawasan (PPK) areas, in addition to the paddy growing sites in Kedah and Pulau Pinang.



Farmers involved:
2,492 farmers



35% increase in paddy yield within NCER



Income:
RM2,250 /farmer/season



Yield: Average of
6 MT/ha versus 4 MT/ha previously



1.65 mil. tonnes to
2.22 mil. tonnes of paddy production between 2013 & 2017

Nestlé Paddy Club (NPC)

NPC was established in 2012 to undertake agricultural initiatives for the global food giant, Nestlé. The objectives of NPC are to **improve the productivity of the paddy farmers** under the NPC **contract farming initiative** and to provide them with **access to sustainable agriculture technology**, while creating environmental benefits. The rice produced from this programme is then used in the **manufacturing of Nestlé infant cereals**.

This programme was conceived following growing concern on infants’ exposure to arsenic, which increases with the consumption of rice and rice products. This is because rice has higher levels of inorganic arsenic, which occurs naturally in soil and water, as the plant tends to absorb more arsenic from the environment compared with other crops. Numerous studies in the past have shown that arsenic exposure can impact the immune system and neuro-development of babies. Arising from these developments, the US Food and Drug Administration (FDA) has already called for a proposed limit on inorganic arsenic in infant rice cereals.

After a series of soil investigation tests, **Kerpan in Kedah** was chosen for the NPC programme based on the **low level of arsenic content in the soil** vis-à-vis other sites in the State.

The participating farmers have benefitted greatly as members of NPC through **higher yields generated**. The growing number of its members also demonstrates that the farmers are appreciative of the programme benefits. Following the encouraging response, NPC has since been extended to farmers in **Sanglang**.

On the other hand, Nestlé has also gained from this initiative by securing a continuous supply of rice that is traceable, controllable, reliable and sustainable to produce infant cereals. This arrangement also helps Nestlé to reduce its operational costs as it is more cost-effective to source raw materials locally.



Seed Hub at NCER

A Netherland-based seed and plant breeding company, **Enza Zaden Asia Sdn Bhd**, has invested a total of **RM49 million** in the region, specifically to set up its research and development (R&D) facility in Sauk, Perak and its regional headquarters and logistics hub at the Penang Science Park.



Enza Zaden's Seed Centre at Penang Science Park

The presence of Enza Zaden's new R&D centre has created a stronger footprint in Malaysia's agriculture industry. The company's expertise **in over 30 vegetable species** and **more than 1,000 crop varieties** has enabled the transfer of knowledge to local farmers and entrepreneurs and allowed them to obtain first-hand experience in identifying the local traits that are sought after in the crops.

Modern agricultural techniques developed by Enza Zaden's R&D and innovation will help increase agricultural productivity through **improved seed quality and better quality yields**. This will help Malaysian farmers and entrepreneurs increase their vegetable production and eventually bring their living standards to greater heights.

Promoting Shared Value Concept in Collaboration with Enza Zaden

Since the year 2012, NCIA has been progressively promoting the transformation of modern agriculture through the **Shared Value Concept (SVC)**. The synergy between Enza Zaden of Netherlands is an excellent example of SVC, as it offers great potential in **nurturing local "agripreneurs"** and **promoting low-land vegetable farming** in Malaysia.

The company's presence in NCER will further broaden the spectrum of the seed industry in Malaysia and ASEAN region as a whole. Enza Zaden's state-of-the-art R&D centre in Pulau Pinang will comprise a pathology research lab with diagnostics applications, designed with sustainability features in relation to its plant breeding business operations.



Tomatoes grown by Enza Zaden at its R&D facility in Sauk, Perak

Superfruits Initiative

Superfruits production in Malaysia is a **niche industry** as the country relies heavily on the import of these fruits. NCER is proud to be the leader of this industry by collaborating with a strategic anchor company and research institutes in developing a 25-hectare superfruits farm, which is one of the largest in Southeast Asia.

Located in the heart of picturesque **Chuping Valley** in Perlis, this initiative focuses mainly on **fig**, **lemon** and **gac**. The farm has produced more than 30 metric tonnes of fresh produce since its inception, as well as created job and internship opportunities for surrounding residents and agriculture-related students from local and international higher institutes. In addition, more than 15 downstream products have been developed and marketed through dealers and online platforms.



Products made from superfruits



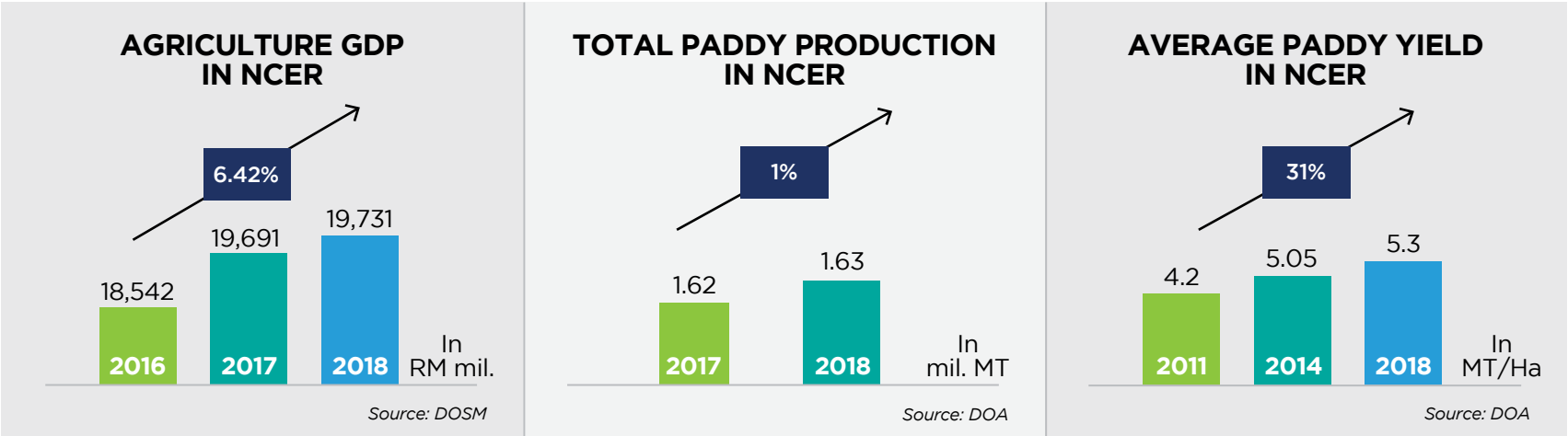
High-value superfruits produced at Superfruits Valley in Perlis



The Superfruits Valley has created new job and internship opportunities for local residents and students of higher learning institutions

Overall Impact Of Agriculture & Bio-Industries Sector

Through various enhancements and synergies in the sector, positive results were achieved in terms of GDP growth and yields.



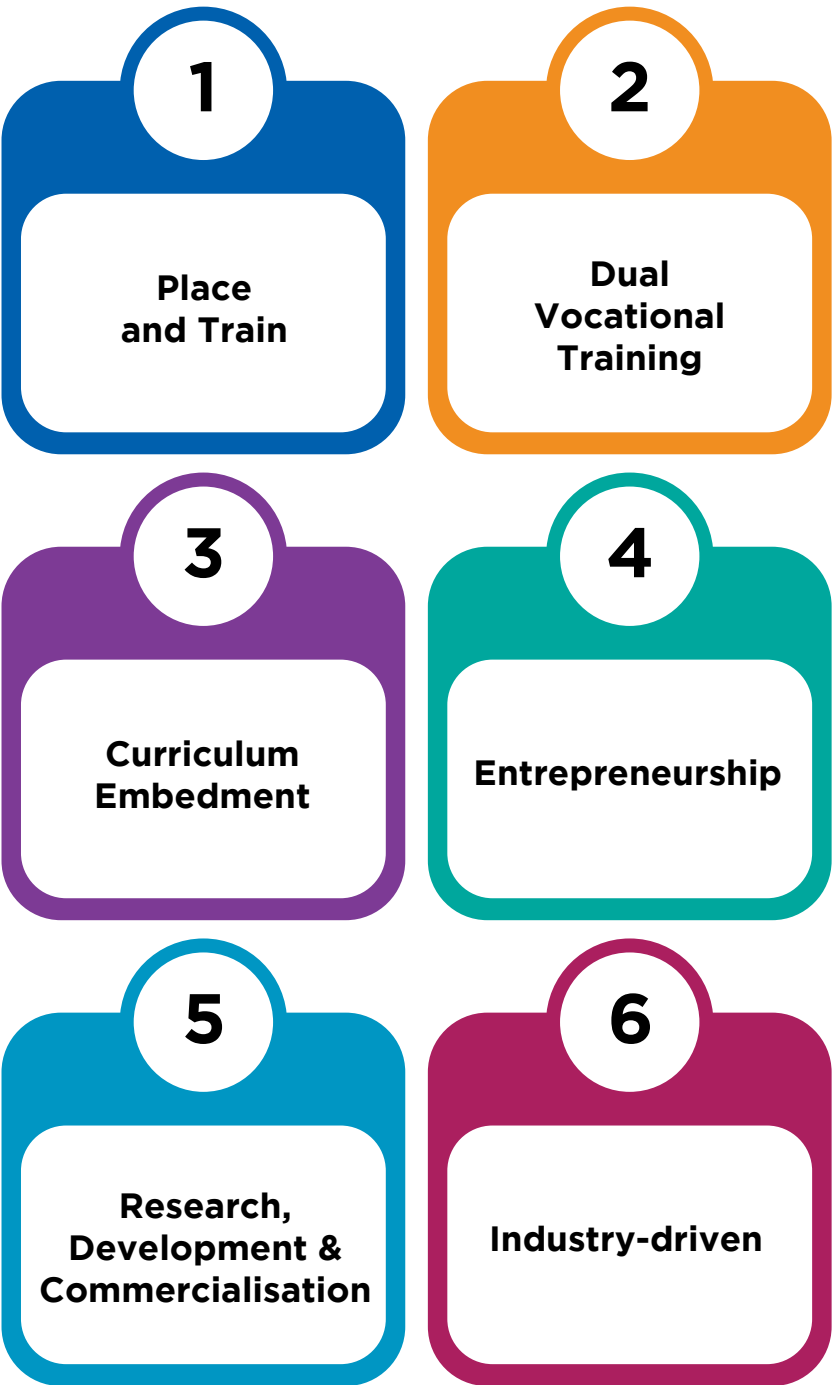
HUMAN CAPITAL DEVELOPMENT

NCER's human capital development programmes were designed to **address the challenges** faced by the region, which include **low household income, low-skilled talents, less-than-optimal labour force participation** and **high rate of graduate unemployment**. To mitigate these challenges and develop local talents of the region in an inclusive and holistic manner, various human capital initiatives have been introduced by NCIA such as the **Community Innovation Centre (CIC)**, **NCIA-ABM Masuk Kampung** and **BeliaKU Mahir**, that have benefitted more than 10,000 locals over the years.

For NCER to become a high-income region, human capital development must continue to be a key priority. Thus, NCIA will continue to **bridge existing skills gaps in the labour market** through various interventions and initiatives, which include reforming the labour market and prioritising skilled job creation, improving labour efficiency and productivity, enhancing access to quality education, and training and fostering stronger industry-academia links. NCIA will also continue to **encourage entrepreneurship** as a growth engine in **rural areas**, in order to provide additional income for the *rakyat* in NCER.



The following approach has been adopted by NCIA to continue developing the local talent base in NCER:



HUMAN CAPITAL AND SOCIAL DEVELOPMENT PROGRAMMES

Community Innovation Centre (CIC)



RM12,000
per cycle

Average revenue from sales of kelulut honey bee ("madu kelulut")
(1 Cycle: Avg. 1.5 Months)

Conceptualised based on social innovation by the community with the involvement of academia and NCIA

SuriaKU



RM6,000

Additional income per year for 21 years
Beneficiaries: B40 group

Recognised and announced for nationwide roll-out as MySuria programme

NCIA - ABM Masuk Kampung



5,990
Beneficiaries

from B40 group & 360 Trainees trained

Repair of dilapidated homes of the underprivileged and public amenities

BeliaKU Mahir



Modern Agriculture Fertigation Method

Pre-skill training in collaboration with Yayasan Pembangunan Sosial Malaysia (YKSM)



RM2,200 average income per month for B40 Rakyat



Graduate Employability Programmes

A training programme designed to suit the industry needs



- Benefited 1,684 fresh graduates
- 100% placement of graduates



Human Capital Development in Langkawi

Initiatives related to the tourism industry



- 17 trainees completed their training, with an average income of RM2,200 per month
- 109 jobs created for single mothers



AMBIENCE

Advanced Multidisciplinary MEMS-Based Integrated Electronics NCER Centre of Excellence



420 highly qualified graduates were produced and 70% were absorbed into the industry nationwide



Community-Based Tourism

Initiative to empower the local community in every aspect of tourism management



Trained 130 Orang Asli, who generated an average additional income of RM400/month

Community Innovation Centre (CIC)

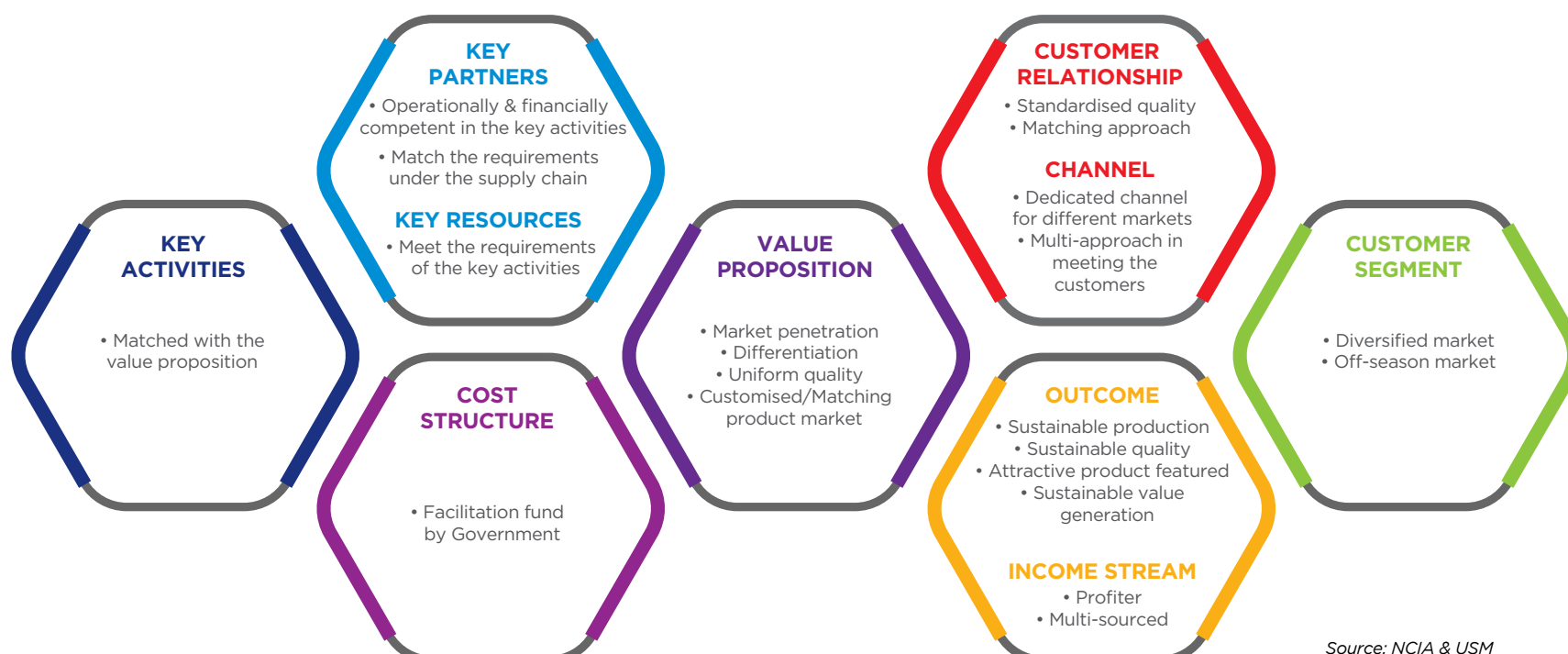
Community Innovation Centre (CIC) was established in partnership with Universiti Sains Malaysia (USM) in 2016. CIC was the result of NCIA's collaboration with USM to provide a **catalytic platform** for various activities that support the mutually beneficial **partnership** between the **Government, academia, industry, and local communities**. The programme was also meant to facilitate the **exchange of intellectual property, expertise, learning and skills** to boost the advancement of human capital and intellectual development in NCER. To date, **eight CICs** have been established in Perlis, Perak, Kedah and Pulau Pinang.

The participants of CIC also have the opportunity to leverage on other human capital development programmes introduced by NCER, such as **empowerNCER** and **entrepreneurNCER**, to enhance their skills and competitiveness, reflecting the seamless integration among the human capital initiatives in the region.

The main objectives of CIC are:

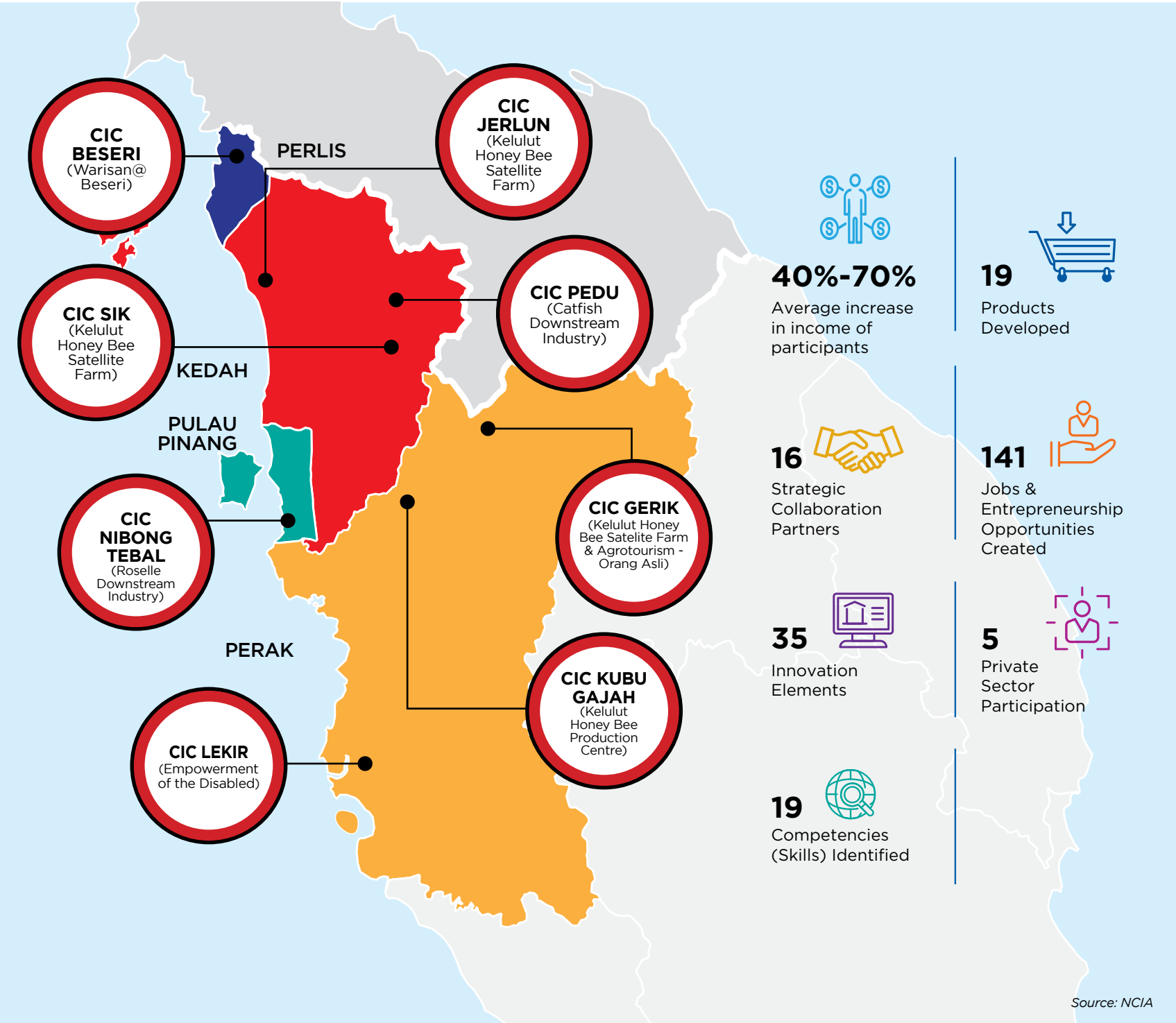
- To **increase the income of rural communities** through the collaboration platform created.
- To enable **stakeholders** (Government, academia, industry and local communities) to work as a **Collective Impact** through the **quadruple helix** approach.
- To **boost the activities of rural economy** through initiatives that can improve the income and quality of life of the target groups, which include **capacity enhancement** programmes through **skills training**.
- To **establish the continuity of Government policies** that emphasise on the inclusiveness and sustainability towards becoming a developed nation.
- To utilise the **Shared Value Concept (SVC)** which is being implemented in NCER as a means of strategic development to achieve NCER's vision of "Growth With Equity".

CIC BUSINESS CANVAS



Source: NCIA & USM

Impact of CIC Programme



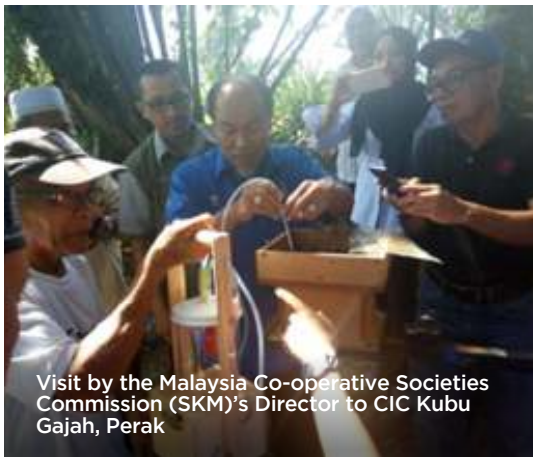
Products of CIC



Empowering the disabled through capacity development at CIC Lekir, Perak



Kelulut honey bee farming & agrotourism at CIC Gerik, Perak



Visit by the Malaysia Co-operative Societies Commission (SKM)'s Director to CIC Kubu Gajah, Perak



Coconut jelly production at CIC Lekir



Kelulut honey bee farming at CIC Sik, Kedah



Dried catfish production at CIC Pedu, Kedah



Production of crispy catfish at CIC Pedu, Kedah



Roselle product manufactured by CIC Nibong Tebal, Pulau Pinang



Virgin coconut oil produced by CIC Lekir, Perak

SuriaKU

The **“Sunlight at Koridor Utara”** or **SuriaKU** programme is aimed at **improving the socioeconomic status of the B40 group** to the middle-class income bracket (M40) **by generating income from solar energy sources**. This in line with the Government’s Shared Prosperity Vision 2030, as well as Government’s **Renewable Energy (RE) initiative**.

This programme is implemented in Pauh, Perlis, which was chosen due to the naturally high sun radiance in the State. Under SuriaKU pilot programme, 4kW solar photovoltaic (PV) panels were installed on the rooftops of B40 houses to generate electricity. The house owners will then sell the electricity directly to Tenaga Nasional Berhad under the RE Power Purchase Agreement for 21 years, using the Feed-in Tariff (FiT) mechanism.

SuriaKU was also selected as a shared value storyteller finalist at the 2018 Shared Value Leadership Summit, New York from over 200 proposals received worldwide.

Through SuriaKU programme, the participants can earn up to RM3,000 per year up to the seventh year, and this figure will increase to up to RM7,000 per year from the seventh to 21st year. Under the programme, the Government through NCIA bears 50% of the cost, while the balance is borne by the private sector.

This programme was introduced by NCIA in cooperation with the Ministry of Energy, Green Technology and Water (KeTTHA), Sustainable Energy Development Authority (SEDA), the Perlis State Government and the private sector.

The success of SuriaKU programme has been recognised by various agencies, where it has been announced as **the winner of National Energy Awards 2018 by the Ministry of Energy, Science, Technology, Environment and Climate Change (MESTECC)** and **ASEAN Energy Award 2018** by the **ASEAN Centre for Energy (ACE)** in October 2018.

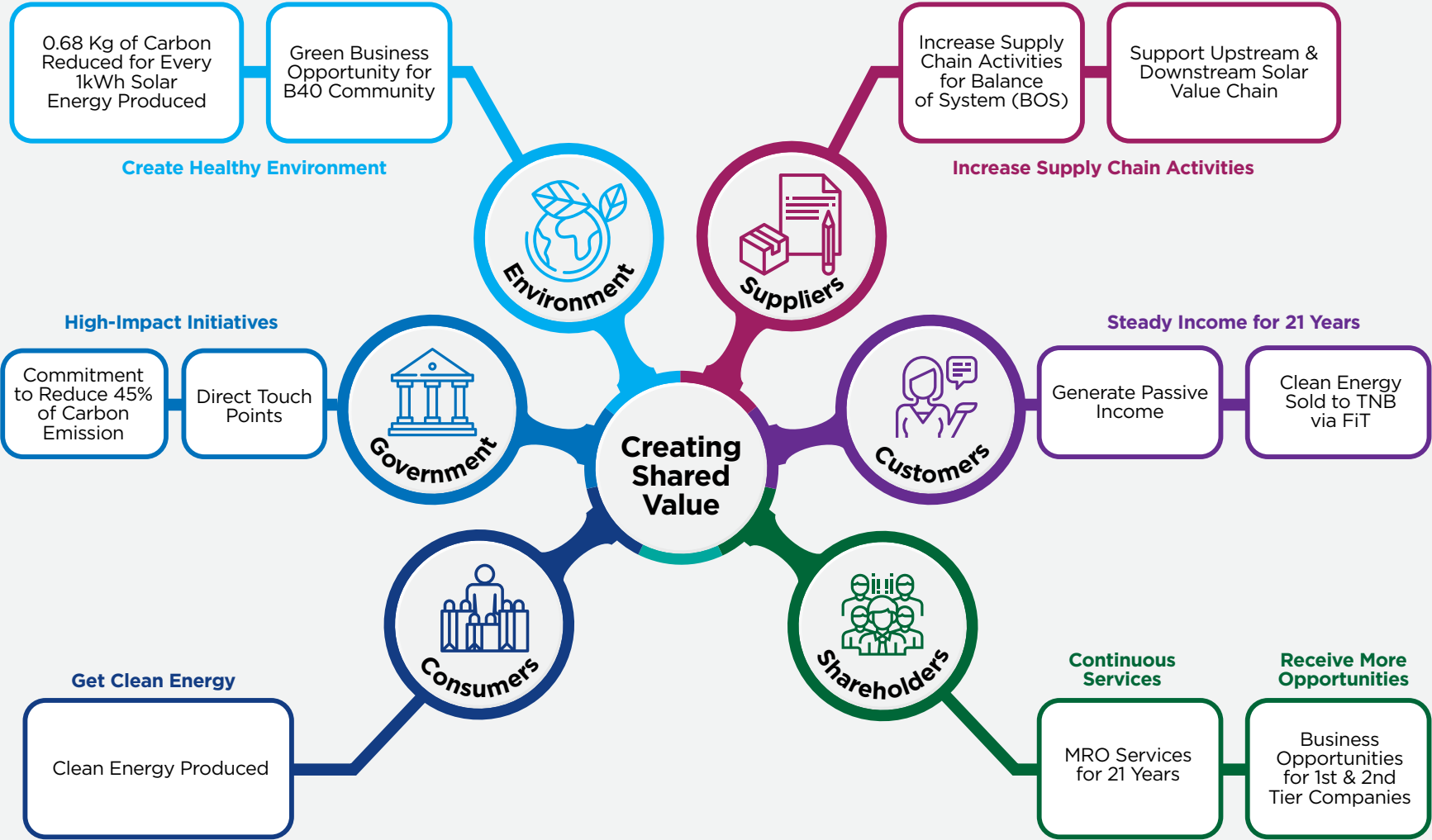


A participant of SuriaKU programme with his family in Pauh, Perlis



Solar panels were installed on the rooftops of SuriaKU participants' home to generate additional income

SuriaKU
Creating Shared Value



Source: NCIA

NCIA-ABM Masuk Kampung

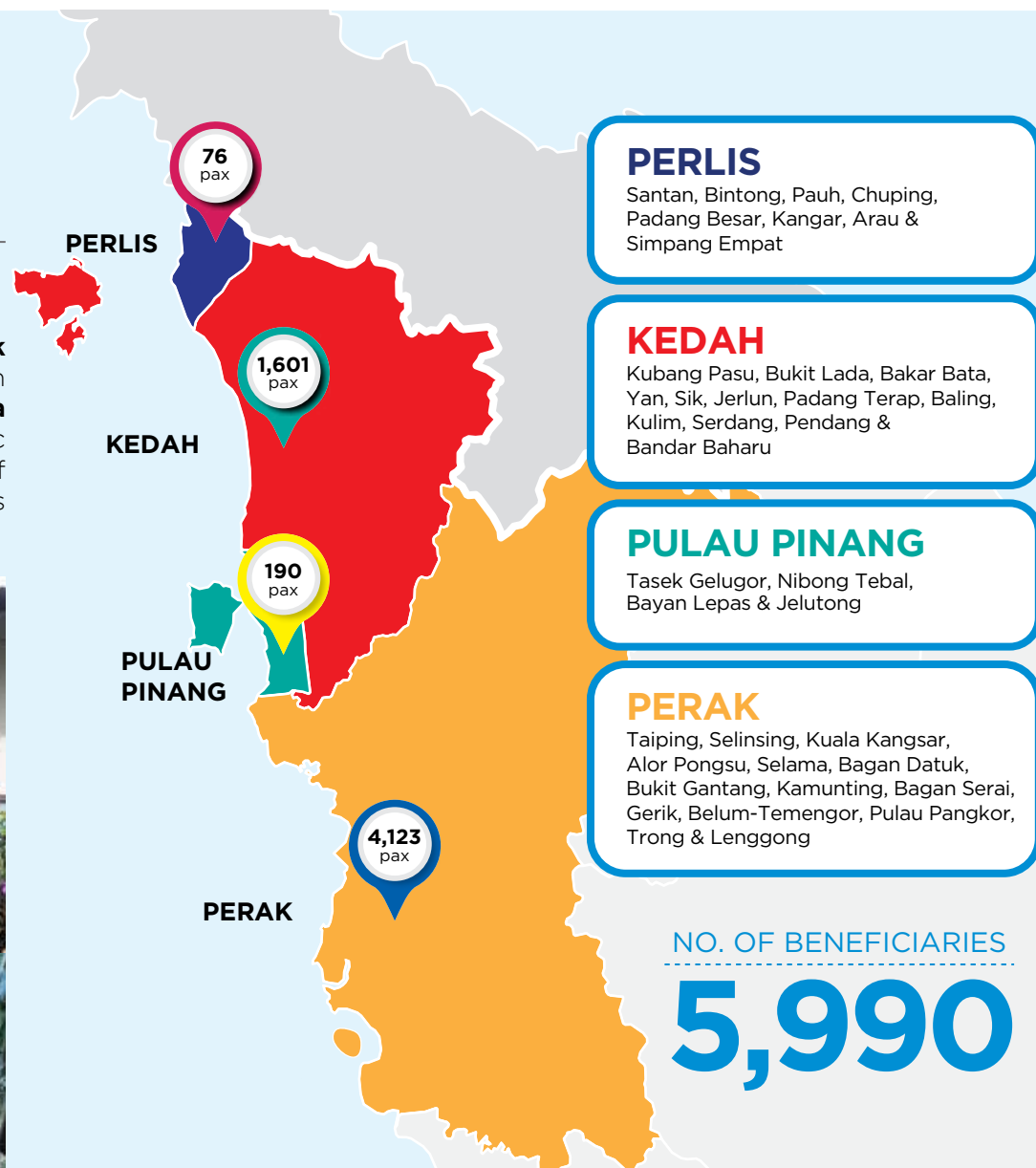
Target Group **B40**

Objective

Program Latihan NCIA-ABM Masuk Kampung is a collaboration between NCIA and **Akademi Binaan Malaysia (ABM)** under NCIA's people-centric initiatives to repair dilapidated homes of the underprivileged and public amenities in NCER.



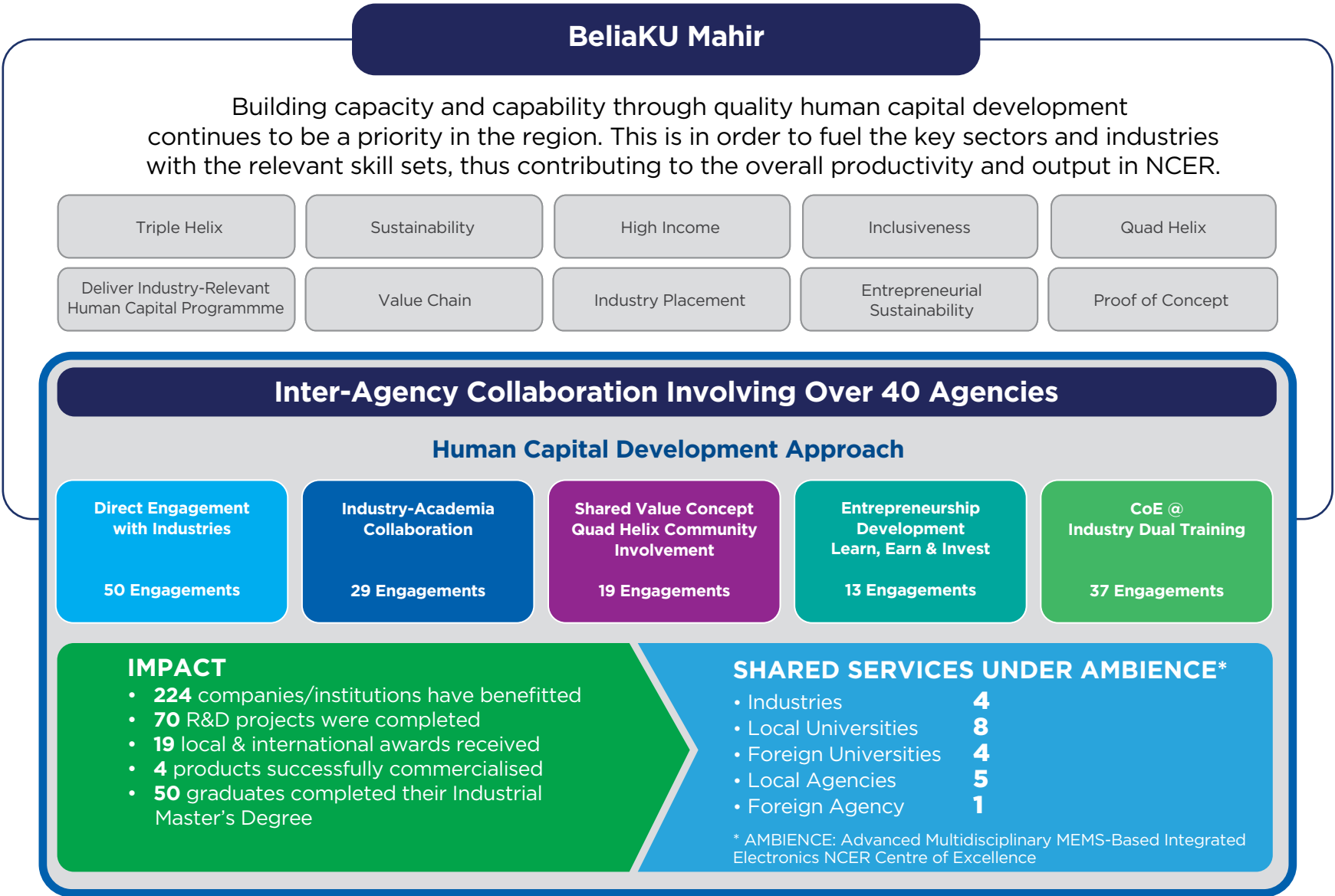
Participants of NCIA-ABM Masuk Kampung programme in Sik, Kedah



The programme also provided **ABM Students** with actual **on-the-job training** experience and allowed local contractors and carpenters to attend the **Construction Personnel Course** ("Kursus Personel Binaan"). Local contractors also gained from the **Continuous Contractor Development (CCD) Programme** and local carpenters were awarded with **Skills Competency Certificate** by CIDB.

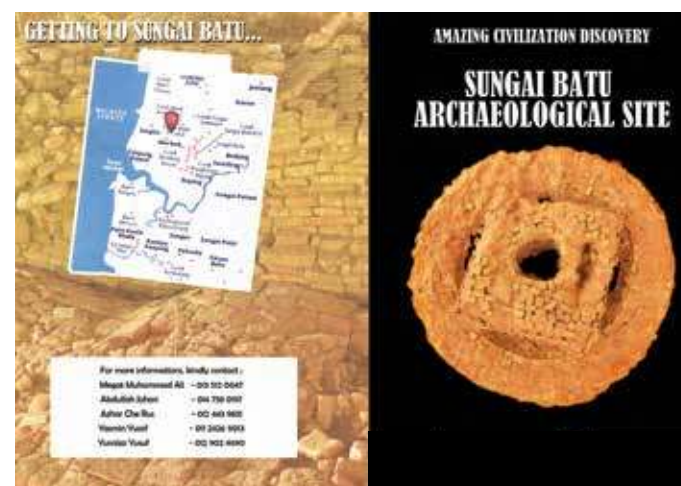
BeliaKU Mahir

BeliaKU Mahir is a programme introduced **to enhance the skills and marketability of the NCER’s human capital** to meet the needs of the industry, especially in the region. This programme is aimed at **youths, graduates and women** from all levels of society including the **B40, the disabled** and **Orang Asli**. It has brought together the academia, industry players and other Government agencies through the triple helix model, in a concerted effort to nurture, train, guide and motivate NCER’s rich pool of human resources.



Destination Management to Support Community-Based Tourism

This initiative was carried out for Lembah Bujang in Kedah and Pangkor in Perak and involved thematic trails such as **archaeology**, **gastronomy**, and **ecotourism** to promote the destinations while creating social economic impact at the same time. The cultural mapping for both destinations under this project has already been completed.



Community-Based Tourism (CBT) for Orang Asli

To reach out to the local Orang Asli who are interested to participate in tourism activities, NCIA has introduced a mobile training centre using a houseboat to provide in-situ training for them. This programme is carried out via collaboration with the local boat operator and community colleges. Customised modules were developed to train the Orang Asli, including the proper way to meet and greet tourists, basic tour guiding and housekeeping.



Programmes for Orang Asli at Tasik Banding, Perak to provide them with tourism-related skills under the CBT initiative

Agricultural Vocational School Enterprise for Students with Learning Disability

The **Agricultural Entrepreneurship Programme for the Disabled (Special Needs Students)** or "Program Keusahawanan Pertanian untuk OKU (Murid Berkeperluan Khas)" was introduced at selected **special education schools in Pulau Pinang and Kedah**. It aims to provide the participants with living skills and entrepreneurial programme related to agriculture. NCIA collaborated with the Ministry of Education and the Ministry of Human Resource's Department of Skills Development (MoHR-DSD) to implement this initiative. Students who have successfully completed the programme were awarded with certificates, namely, Malaysian Skills Certificate Level 1 ("Sijil Kemahiran Malaysia Tahap 1").



A participant of the Agricultural Entrepreneurship Programme for Special Needs Students

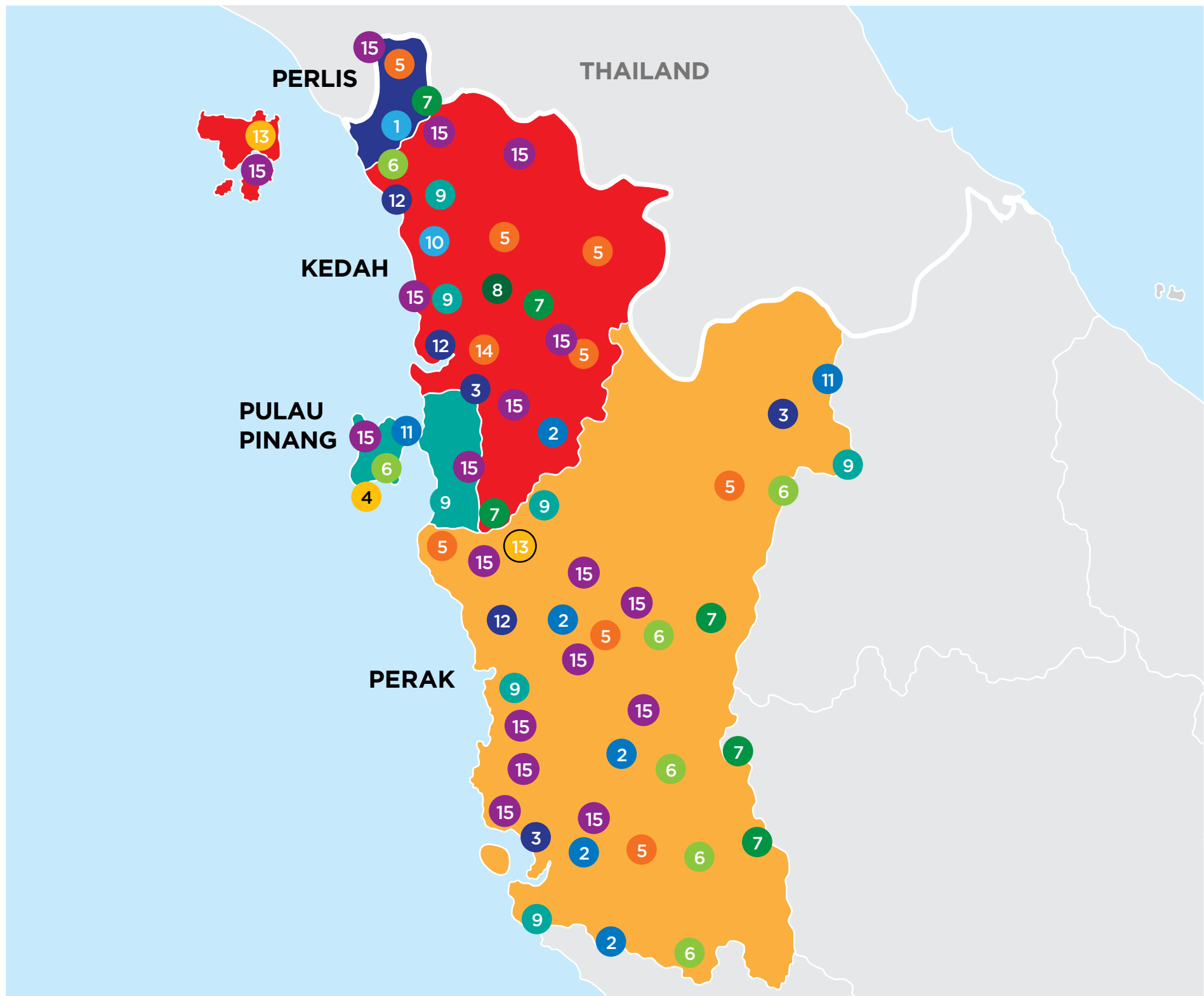


Mushroom cultivation by a special needs student



Visit by officials from the Ministry of Education and Welfare Department

Distribution of Human Capital Programmes In NCER



Social & Entrepreneurship Programmes



Skills & Professional Development Programmes



List of Programmes

- Tourism Career School Programme (TCSP)
- Graduate Employability
- SVC GIATMARA
- Skills Development Centre
- Master Training for UNESCO Site Guides
- Blue Badge City Guide
- Training for Basic Practical Welding Course & Specialist Technician
- NCIA Competency Enhancement Programme (NCEP)
- Professional Taxi Drivers
- Healthcare Training - Pantai Hospital
- Triple Helix Concept involving NCIA and ADTEC Taiping
- Establishment of CoE in Spa & Wellness and Train the Trainers - Langkawi Tourism Academy (LTA)
- Tour Guide Training Programme (PPK Merbok)
- Training in Automotive Assembling - Inokom
- N-Silicon/Water Fabrication Training
- Train the Trainer - Mazda
- Destination Management Upskilling & Taxi Drivers
- Training in Construction Industry - ABM (Utara)

Chapter

3

THE PRESENT





Pulau Pangkor, Perak



Tasik Melati Recreational Park, Kangar, Perlis



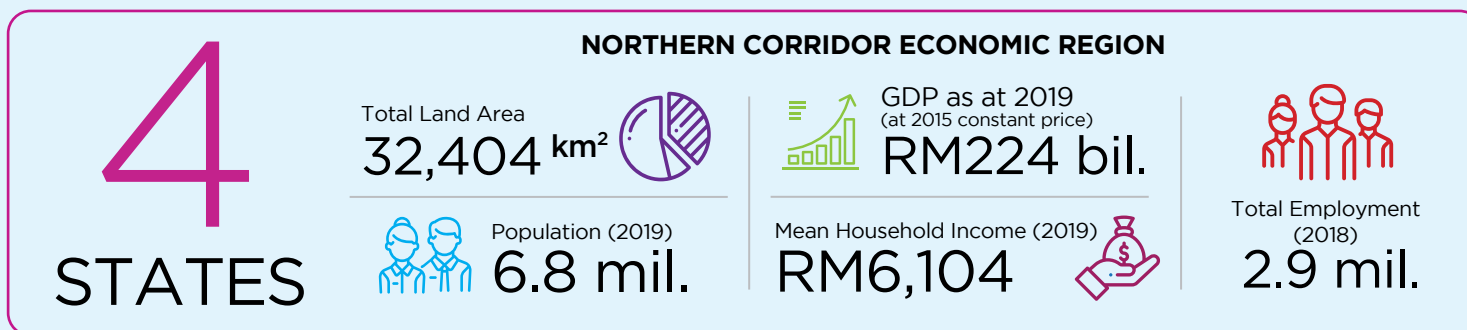
Langkawi Geopark, Kedah



Batu Ferringhi, Pulau Pinang

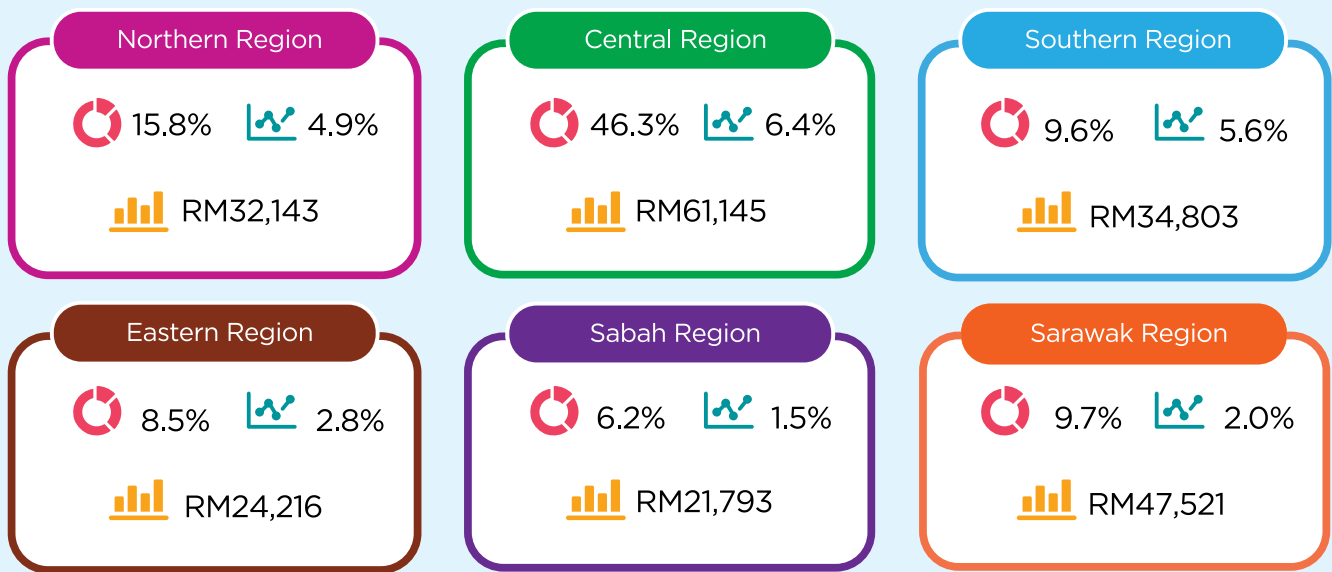
CURRENT ASSESSMENT OF NCER

Overview

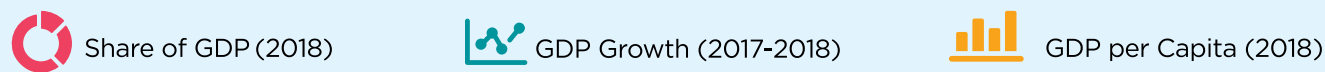


Source: DOSM, Analysis by PwC

NCER WITHIN THE NATIONAL LANDSCAPE



LEGEND



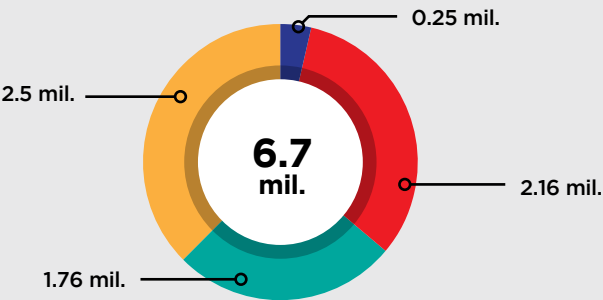
NCER has recorded a **steady annual Gross Domestic Product (GDP) growth of about 5% from 2015 to 2019**, which is consistent with the national average. As of 2018, NCER contributed a significant **16% share to the national GDP in 2018**, representing the second largest share among the regions after the Central Region with 46%. However, **nearly half** of this percentage came from **Pulau Pinang** alone, which contributed 6.7% to the overall national GDP, while Kedah, Perlis and Perak contributed a combined 9.1%. Similarly, while NCER has an overall GDP per capita of RM32,143, the figure for Pulau Pinang stood at RM51,721, compared with RM25,128 for the rest of NCER.

In addition, although there has been positive growth, NCER's share of national GDP has been decreasing from 21% in 1995 to 16% in 2018. This is largely due to the significant growth of the Central Region. The Central Region's share of GDP increased by 9% between 1995 and 2018, thus contributing to nearly half of the nation's GDP on the back of high investment and development volume in the region. This **widening gap** is further driven by **outmigration of talent** and **skilled workers** from NCER. As such, the region needs to grow at a faster rate than Malaysia's average growth in order to catch up with the development of the Central Region.

Source: DOSM, Analysis by PwC

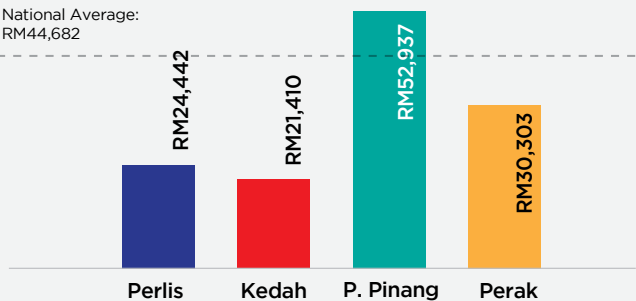
REGIONAL ASSESSMENT

TOTAL POPULATION (2018)



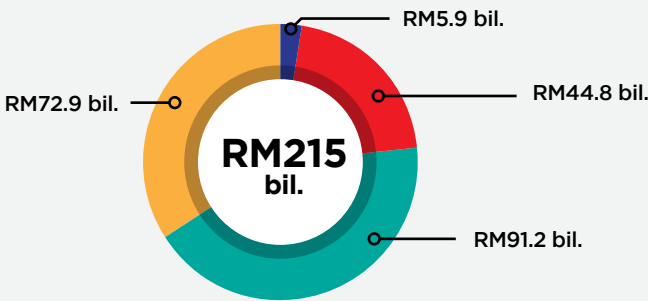
The total population NCER in 2018 is **6.7 million**, with Perak being the most populated state in the region with 2.5 million people. Perlis has the lowest number of population among the four states with 0.25 million people.

GDP PER CAPITA (2018):
RM32,273



As the most economically advanced state in the region, **Pulau Pinang also has the highest GDP** per capita in NCER at RM52,937 in 2018. Perak, which has the second highest GDP per capita in NCER, trails behind at RM30,303 followed by Perlis and Kedah. This further reiterates the **economic imbalance within NCER that needs to be addressed**.

GDP (2018)

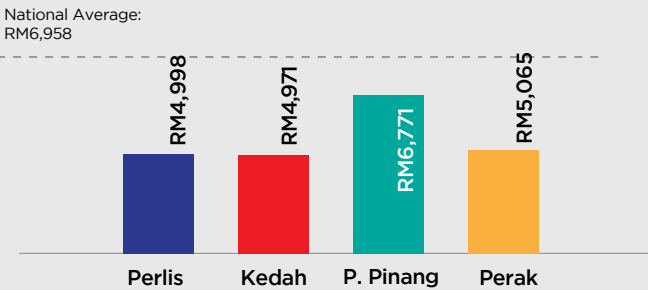


Pulau Pinang’s GDP surpassed that of other NCER states at RM91.2 billion, followed by Perak at RM72.9 billion. This indicates **an imbalance in the regional economic development** within NCER, as **most of the development are mainly concentrated in Pulau Pinang**. MEA has identified Perlis and Kedah as the states to be focused on under 12MP.

LEGEND

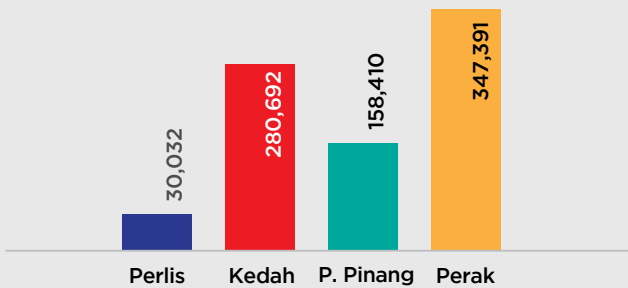
- Perlis
- Kedah
- P. Pinang
- Perak

AVERAGE HOUSEHOLD INCOME (2016):
RM5,478



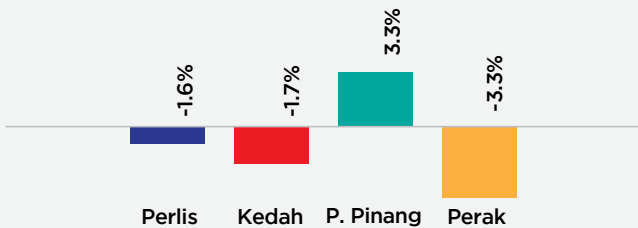
In general, **all states in NCER** still recorded a **mean household income that was below the national average** of RM6,958. However, the figure for Pulau Pinang greatly exceeded that of the other three states in NCER. Kedah registered the lowest mean household income in the region despite being bigger in size than Perlis. **High income disparities within the region** is due to the **strong manufacturing and services industries in Pulau Pinang** compared with the other states.

B40 HOUSEHOLDS (2016)



Both **Kedah** and **Perak** have a **high percentage of low-income earners (B40)** at 59% and 56% respectively. In total, there were 816,525 B40 households in NCER.

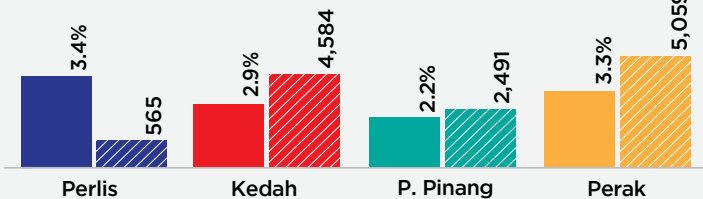
NET MIGRATION (2018)



Perlis, Perak and **Kedah** also reported **high outmigration** in 2018, with **Perak** recording the highest rate of outmigration. This indicates a **lack of job opportunities** being created in the three states, due to the **limited availability of economic activities**.

Hence, **more effort is required to attract high-value investment** and **encourage the participation of the private sector** in economic activities in these states to stimulate economic growth, which will create more job opportunities for the locals in potential industries.

UNEMPLOYMENT (2018)



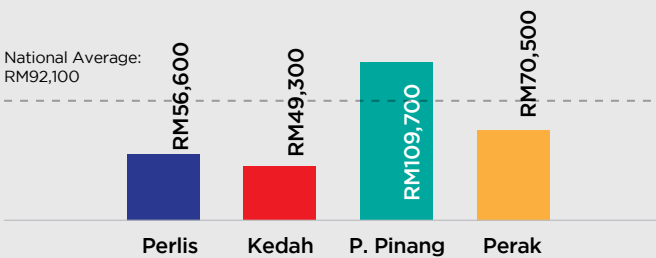
The **unemployment rates** in **Perlis, Perak** and **Kedah** were **all above the national average** of 2.7%, with only **Pulau Pinang** recording an unemployment rate that was below the national average.

NCER also has a **high percentage of unemployed graduates** with a total of 12,699 first degree holders and above remaining unemployed after one year of graduating, according to findings from the Ministry of Education Malaysia's Graduate Tracer Study (SKPG) for 2018. Meanwhile, the number of graduates who have not been employed after one year of graduation for the first degree holders and above is 30,765 out of the 51,365 graduates nationally, or 61% out of the total unemployed graduates nationwide.

LEGEND Unemployment Rate Graduate Unemployment No.

Source: Ministry of Education Malaysia's Graduate Tracer Study (SKPG) 2018

LABOUR PRODUCTIVITY



Labour productivity in all NCER states except for **Pulau Pinang** is still below national average. This disparity in labour productivity is largely **due to the difference in proportion of economic sectors in the states**: **Kedah** and **Perlis** have a **higher proportion of agriculture**; thus, **overall labour productivity** is relatively **lower**. On the other hand, **Pulau Pinang** has a **strong manufacturing sector**, which resulted in **higher overall labour productivity**. Other factors contributing to lower labour productivity include **inefficient use of labour** and a **skills mismatch** in terms of skill level and relevance to industry.

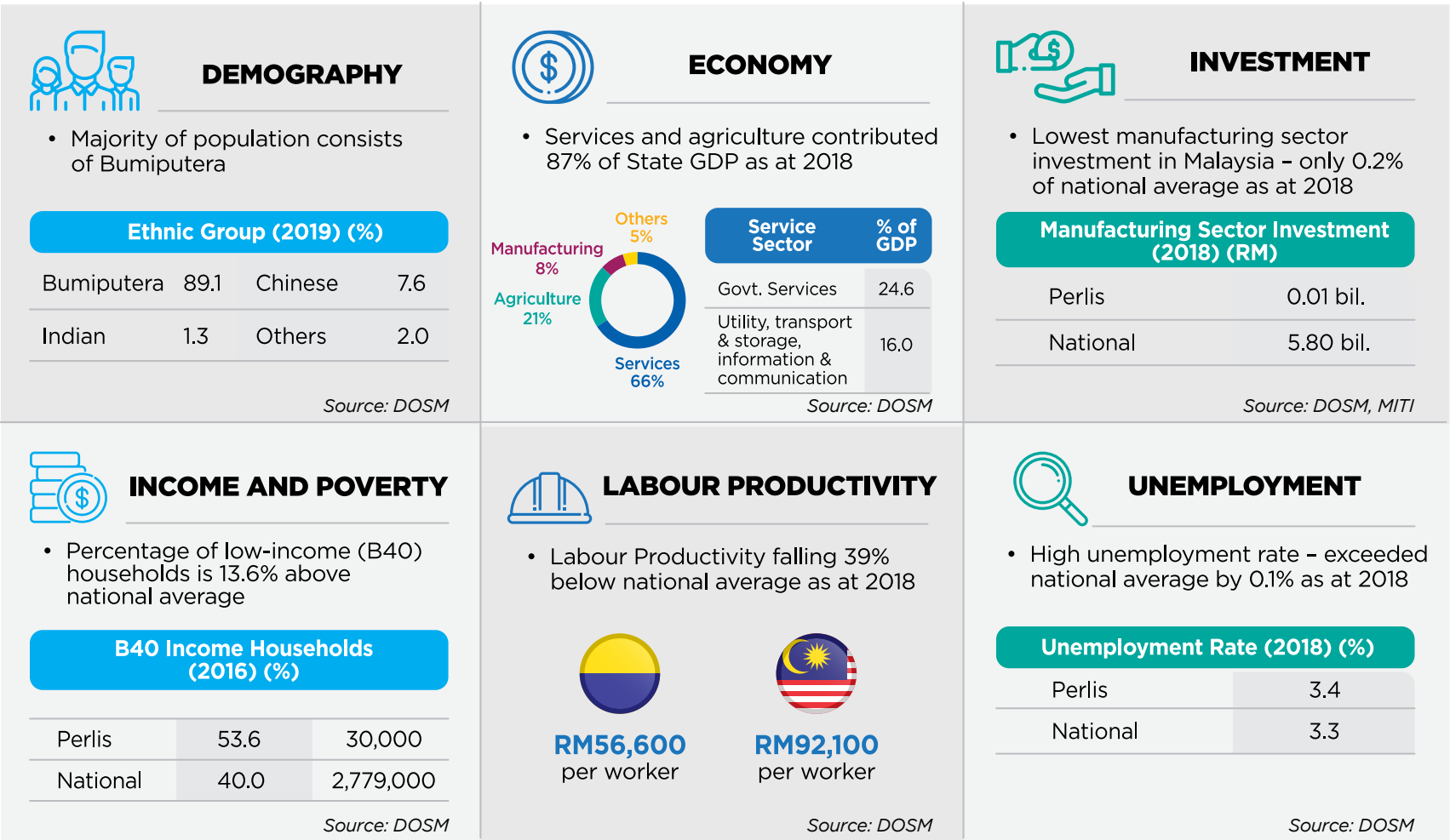
Source: DOSM, Analysis by PwC

CURRENT ASSESSMENT BY STATE

PERLIS

Among the states in NCER, Perlis has one of the highest percentage of low-income (B40) households at 53.6% in 2016, which is 13.6% above national average. Mean household income in Perlis is among the lowest in the region at RM4,998 in 2016, which is only slightly higher than Kedah. Relative poverty is high, indicating an apparent lack of jobs with high income. In terms of demography, nearly 90% of the population in Perlis consist of the Bumiputera. Due to those reasons, **more resources should be focused on the Bumiputera and human capital development programmes in Perlis.**

In terms of economic performance, Perlis has one of the lowest GDP per capita in NCER, being second only to Kedah. This is largely due to low labour productivity which is 39% below the national average. Another possible factor is the high proportion of Government services in the services sector, which is 24.6% of all economic sectors.





Connecting Malaysia and Thailand, the Padang Besar Station is a popular gateway for cargo and passenger movement

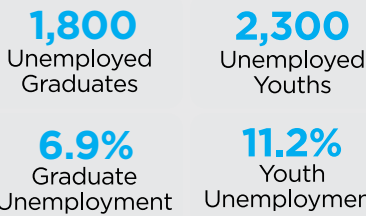
Perlis has the lowest manufacturing sector investment among all states in Malaysia with only 0.2% of national average investment in 2018, reflecting a lack of opportunities and business interests in the State. This is possibly due to low local market demand and lack of good connectivity to make up for the further distance between Perlis and key local and foreign markets.

Another contributing factor is the high unemployment rate of 3.4% in Perlis, which exceeds the national average of 3.3%. Labour force participation of women in Perlis is 8.1% below national average, highlighting a critical need for human capital development programmes targeted at women. Youth unemployment and graduate unemployment are also high at 11.2% and 7.3% respectively, indicating a mismatch in skills or a gap in skill level as required by industry, as well as an overall lack of job opportunities.



YOUTH AND GRADUATE UNEMPLOYMENT

- High youth and graduate unemployment as at 2018



Source: DOSM



WOMEN PARTICIPATION IN LABOUR FORCE

- Labour force participation rate of women fell 8.1% below national average


	Participation Rate (2018) (%)	No. of Females Employed (2018)
Perlis	47.1	38,700
National	55.2	5,734,200

Source: DOSM

KEDAH

Kedah has the highest percentage of low-income (B40) households among the states in NCER at 59.1% (2016), which is 19.1% above national average. Mean household income in Kedah is the lowest in the region, at RM5,928 in 2016. Relative poverty is high, indicating an apparent lack of jobs with high income for the majority of the State’s population, similar to Perlis. In terms of demography, nearly 80% of the population in Kedah consist of the Bumiputera. Due to this demographic and income distribution, a **higher proportion of resources for the Bumiputera community and human capital empowerment programmes should be allocated** for Kedah.

In terms of economic performance, Kedah has the lowest GDP per capita among the states in NCER at RM21,410. This is largely due to low overall labour productivity, which is 46% below national average, despite the relatively strong manufacturing sector contribution to GDP at 29%. This indicates that the majority of employment is in low-income jobs, particularly in the agriculture and services sectors, which is subsequently linked to the lower number of jobs required for manufacturing sector.




DEMOGRAPHY

- Majority of population consists of Bumiputera

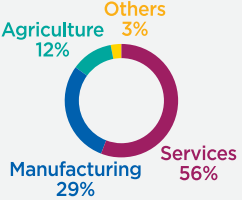
Ethnic Group (2019) (%)		
Bumiputera	79.7	Chinese 12.4
Indian	6.8	Others 1.1

Source: DOSM




ECONOMY

- Services sector contributed 56% of State GDP as at 2018
- Contribution from services sector were mainly from wholesale & retail trade, F&B, and Government services



Services Sector	% of GDP
Wholesale & Retail, F&B	18%
Govt. Services	14%
Other Services	24%

Source: DOSM




INVESTMENT

- Investments in manufacturing sector decreased by 32% from 2017-2018

2016	RM2.0 bil.
2017	RM2.2 bil.
2018	RM1.5 bil.

Source: DOSM, MITI




INCOME AND POVERTY

- Percentage of low-income (B40) households is 19.1% above national average


B40 Households (2016) (%)		
Kedah	59.1	280,700
National	40.0	2,779,000

Source: DOSM




LABOUR PRODUCTIVITY

- Labour Productivity fell 46% below national average as at 2018




RM49,300 per worker



RM92,100 per worker

Source: DOSM



UNEMPLOYMENT

- High unemployment rate - lower than national average by 0.4% as at 2018

Unemployment Rate (2018) (%)	
Kedah	2.9
National	3.3

Source: DOSM



YOUTH AND GRADUATE UNEMPLOYMENT

- High youth and graduate unemployment as at 2018

7,300
Unemployed
Graduates

3.4%
Graduate
Unemployment

20,100
Unemployed
Youths

11.2%
Youth
Unemployment

Source: DOSM



MALAY RESERVE LAND

- Vast tracts of land are classified as Malay Reserve Land
- Difficulty in attracting private sector investments due to limited land lease period

76% of Kedah land are classified as “Malay Reserve Land”

Source: PTG



WOMEN PARTICIPATION IN LABOUR FORCE

- Labour force participation rate of women was 5.1% below national average

Unemployment Rate (2018)

Kedah	50.1%	351,800
National	55.2%	5,734,200

Source: DOSM



The majestic Alor Setar Tower is a popular landmark of modern Kedah

Overall, the labour force in Kedah is better employed compared with those in Perlis and Perak, but still falls below the figure recorded by Pulau Pinang. **Unemployment rate in Kedah is 2.9%, slightly lower than the national average of 3.3%**, while graduate unemployment is 3.3%, close to the 2.6% recorded in Pulau Pinang. **Labour force participation of women in Kedah is 5.1% below national average**, highlighting a need for human capital development programmes targeted at this demographic group. Youth unemployment stands at 11.2%, indicating a mismatch in skills or a gap in skill level as required the industry, as well as an overall lack of job opportunities.


Kedah’s manufacturing sector attracted **RM1.5-RM2.2 billion worth of investments per year** over the period 2016-2018. While this investment figure is higher than that of Perak and Perlis, Kedah has the potential to attract even more investment, and capture the spillover from Pulau Pinang which is facing challenges in terms of land availability.

Another pertinent issue in Kedah is that a significant portion of land (76%) is classified as **Malay Reserve Land**, which makes it difficult to attract investors due to its restrictions and bankability. Therefore, **initiatives will be planned to address this issue** and provide an avenue for investors to develop the land in Kedah.

PULAU PINANG

Pulau Pinang is the only state in NCER with a **GDP per capita exceeding the national average**. Pulau Pinang also has **highest mean household income in the region** at RM6,771, which is slightly lower than the national average of RM6,958. One of the contributing factors to the high GDP per capita and household income is the **high proportion of manufacturing and services** in Pulau Pinang’s economic sectors at 43% and 51% respectively. This has led to the **high labour productivity** of RM109,700 per worker, which is 19% above the national average. Unsurprisingly, manufacturing sector investment in Pulau Pinang is on par with the national average.

Economic development in NCER is mainly concentrated in Pulau Pinang due to a lack of developed clusters and the connecting supply chain ecosystem in other states. Although Pulau Pinang is doing relatively well compared with the other three states in NCER, it still needs to **sustain its growth momentum** in order to be the catalyst to spearhead the development and growth of the region.




DEMOGRAPHY

- Majority of population consists of Bumiputera and Chinese

Ethnic Group (2019) (%)			
Bumiputera	46.7	Chinese	42.7
Indian	10.3	Others	0.3

Source: DOSM



ECONOMY

- Manufacturing, services and agriculture contributed 94% of State GDP

Others 4%


Agriculture 2%

Manufacturing 43%

Services 51%

Services Sector	% of GDP
Govt. Services	24.6
Utility, transport & storage, information & communication	16.0

Source: DOSM




INVESTMENT

- Manufacturing sector investment on par with national average as at 2018

Manufacturing Sector Investment (2018) (RM)	
Pulau Pinang	5.80 bil.
National	5.80 bil.

Source: DOSM, MITI




POPULATION

- Annual population growth slowing down – from 2.1% (2001) to 0.7% (2019)
- Average growth lagging 0.2% behind national average


Average Annual Population Growth (2001-2019) (%)	
Pulau Pinang	1.5
National	1.7

Source: DOSM




LABOUR PRODUCTIVITY

- High Labour Productivity – 19% above national average as at 2018




RM109,700
per worker



RM92,100
per worker

Source: DOSM



UNEMPLOYMENT

- Low unemployment rate – 1.1% lower than national average as at 2018

Unemployment Rate (2018) (%)	
Pulau Pinang	2.2
National	3.3

Source: DOSM



Pulau Pinang is a vibrant manufacturing hub and popular tourist destination with excellent logistics network

In terms of demography, the majority of population in Pulau Pinang consists of the Bumiputera (46.7%) and Chinese (42.7%). The State is experiencing a slowing annual population growth, which had decreased to 0.7% in 2019 from 2.1% in 2001. However, Pulau Pinang is the only state in NCER with a **positive net migration**, indicating more job opportunities with high income for the *rakyat*. As a result, Pulau Pinang has a **low unemployment rate of 2.2%**, which is 1.1% lower than the national average. Women participation in labour force is also the best in the region, where it stands at 0.7% above the national average.

While graduate unemployment is low at 2.6%, youth unemployment is higher at 7.4%. Nevertheless, the youth unemployment rate in Pulau Pinang is still lower compared with the figures in other NCER states, which range from 11.0% to 11.2%.



YOUTH AND GRADUATE UNEMPLOYMENT

- High youth and graduate unemployment as at 2018

7,000
Unemployed
Graduates

9,900
Unemployed
Youths

2.6%
Graduate
Unemployment

7.4%
Youth
Unemployment

Source: DOSM



WOMEN PARTICIPATION IN LABOUR FORCE

- Labour force participation rate of women was 0.7% above national average

	Participation rate, 2018 (%)	No. of females employed, 2018
Pulau Pinang	55.9	342,200
National	55.2	5,734,200

Source: DOSM

PERAK

Among the states in NCER, Perak's overall socioeconomic performance is slightly better than that of Perlis and Kedah, but still falls short of Pulau Pinang's. Perak's GDP per capita stood at RM30,303 as at 2018, well below the national average of RM44,682, which was possibly due to lower value-added economic sectors relative to Pulau Pinang and the Central Region. The **main economic sectors** of Perak are **services**, which contributed 63% of the State's GDP, followed by **manufacturing** (18%). Investment in the manufacturing sector ranged **from RM1.9-RM3.9 billion** in the past three years, which was lower than the average national figure of RM5.8 billion.

Perak's labour productivity stood at RM70,500 per worker, which was 23% below the national average, while women participation in labour force was 5.2% below national average. Overall unemployment in Perak was 3.3%, equivalent to the national average rate. Graduate and youth unemployment rates were relatively high in Perak at 6.2% and 11.0% respectively. Perak has the worst negative net migration rate, largely due to its location between the Central Region and Pulau Pinang which offer more attractive job opportunities.

Relative poverty in Perak is high, with 16% of its population were in the low-income (B40) group in 2016, or 16.1% above the national average. The mean household income in the State was RM5,065, which was below the national average of RM6,958. The majority of the state population consists of the Bumiputera at 59.5%, followed by the Chinese (28.7%). Perak has an Orang Asli population of 61,224 in 2019, representing the largest population of the indigenous community in Malaysia. As such, **more resources for welfare and human capital empowerment programmes should be allocated for the Orang Asli and Bumiputera community in Perak.**



Known as the "The Land of Grace", Perak is rich with cultural history and natural beauty which offers great potential in the tourism sector



DEMOGRAPHY

- Majority of population consists of Bumiputera

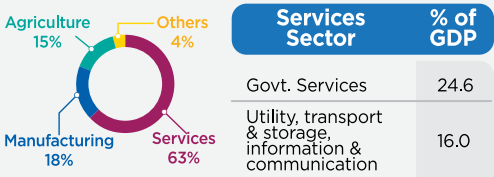
Ethnic Group (2019) (%)			
Bumiputera	59.5	Chinese	28.7
Indian	11.4	Others	0.4

Source: DOSM, Analysis by PwC



ECONOMY

- Services sector contributed 63% of the State GDP in 2018
- Services sector mainly consists of utility, transport & storage, information, wholesale and retail trade, and F&B

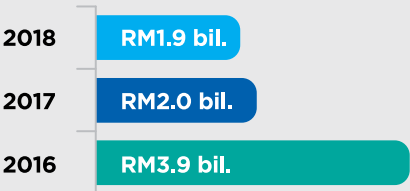


Source: DOSM, Analysis by PwC



INVESTMENT

- Investments in manufacturing sector decreased by 52% from 2017-2018



Source: MITI



INCOME AND POVERTY

- Percentage of low-income (B40) households was 16.1% above national average as at 2016

B40 Income Households (2016) (%)		
Perak	56.1	347,400
National	40.0	2,779,000

Source: DOSM, Analysis by PwC



LABOUR PRODUCTIVITY

- Low labour productivity - 23% below national average as at 2018



Source: DOSM, Analysis by PwC



UNEMPLOYMENT

- Unemployment rate - equivalent to national average as at 2018

Unemployment Rate (2018) (%)	
Perak	3.3
National	3.3

Source: DOSM, Analysis by PwC



YOUTH AND GRADUATE UNEMPLOYMENT

- High youth and graduate unemployment as at 2018



Source: DOSM, Analysis by PwC



WOMEN PARTICIPATION IN LABOUR FORCE

- Labour force participation rate of women was 8.1% below national average

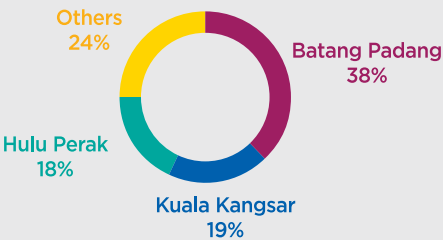
	Participation Rate (2018) (%)	No. of Females Employed (2018)
Perak	50.0	396,200
National	55.2	5,734,200

Source: DOSM, Analysis by PwC



ORANG ASLI

- Largest Orang Asli population in the nation - 61,224 as at 2019



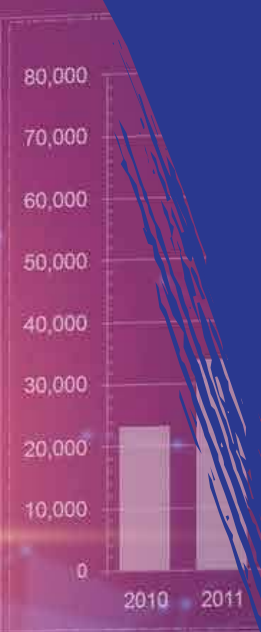
Source: JAKOA

Chapter

4

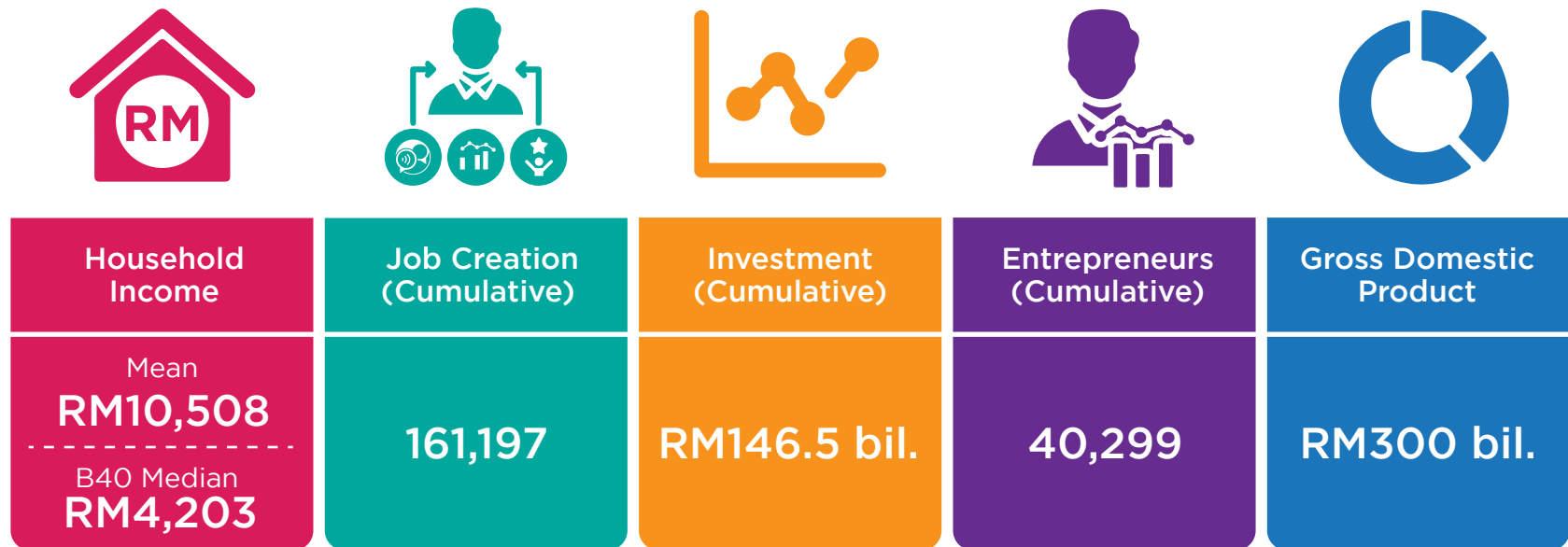
**THE WAY
FORWARD**





NCER STRATEGIC DEVELOPMENT PLAN (2021-2025): ENSURING SHARED PROSPERITY THROUGH BALANCED REGIONAL GROWTH

NCER Targets by 2025



The Malaysian Government has consistently embraced the concept that emphasises on economic development to deliver sustained growth with social inclusion, in line with its Shared Prosperity Vision 2030. While various achievements have been recorded in NCER over the years, it is imperative for the region to forge ahead with greater resolve in delivering equitable growth as a central goal of its development.

In this regard, the NCER Strategic Development Plan (2021-2025) will serve as the framework to guide the future development of the region, with the aim of spurring economic growth **to address inter and intra-regional imbalances** for the benefit of the *rakyat*.

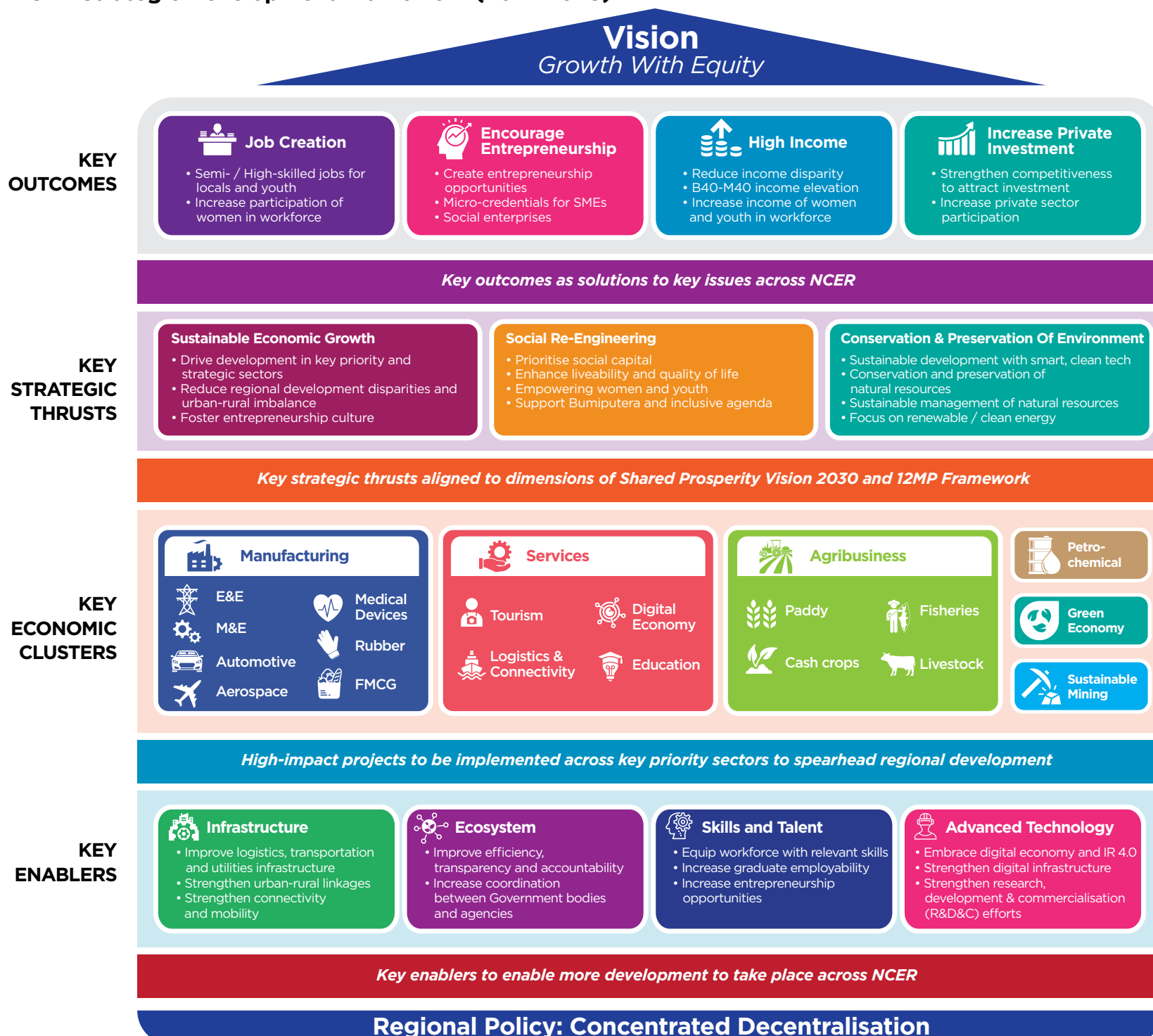
The strategic framework is anchored on NCER's vision of Growth with Equity and its goal of becoming a world-class economic region by 2025. It outlines the strategies, insights and projections that would bring about positive spillover effects for the society. The plan will also act as the basis for the implementation of projects and programmes in NCER under the 12th Malaysia Plan (12MP).

Under this strategic framework, NCER has set the target of becoming a **RM300 billion economy by 2025**, with a **mean household income of RM10,508** and a **B40 median income of RM4,203**. The Region is also expected to attract **RM146.5 billion worth of investments**, which will create 161,197 jobs for the *rakyat* and more than **40,000 local entrepreneurs**.

To achieve the aforementioned key outcomes, the NCER Strategic Development Plan (2021-2025) has identified **six key priority sectors** that will drive the region's economic growth within the next five years, consisting of **services, manufacturing and agribusiness**, as well as three new sectors namely, **petrochemical, green economy and sustainable mining**.

Development in the region will be based on **three key strategic thrusts**, namely, **sustainable economic growth, social re-engineering and conservation and preservation of environment**. This will be supported by **key enablers comprising strategic infrastructure, a business-friendly ecosystem, skilled workers and talent**, as well as **advanced technology**.

NCER Strategic Development Framework (2021-2025)

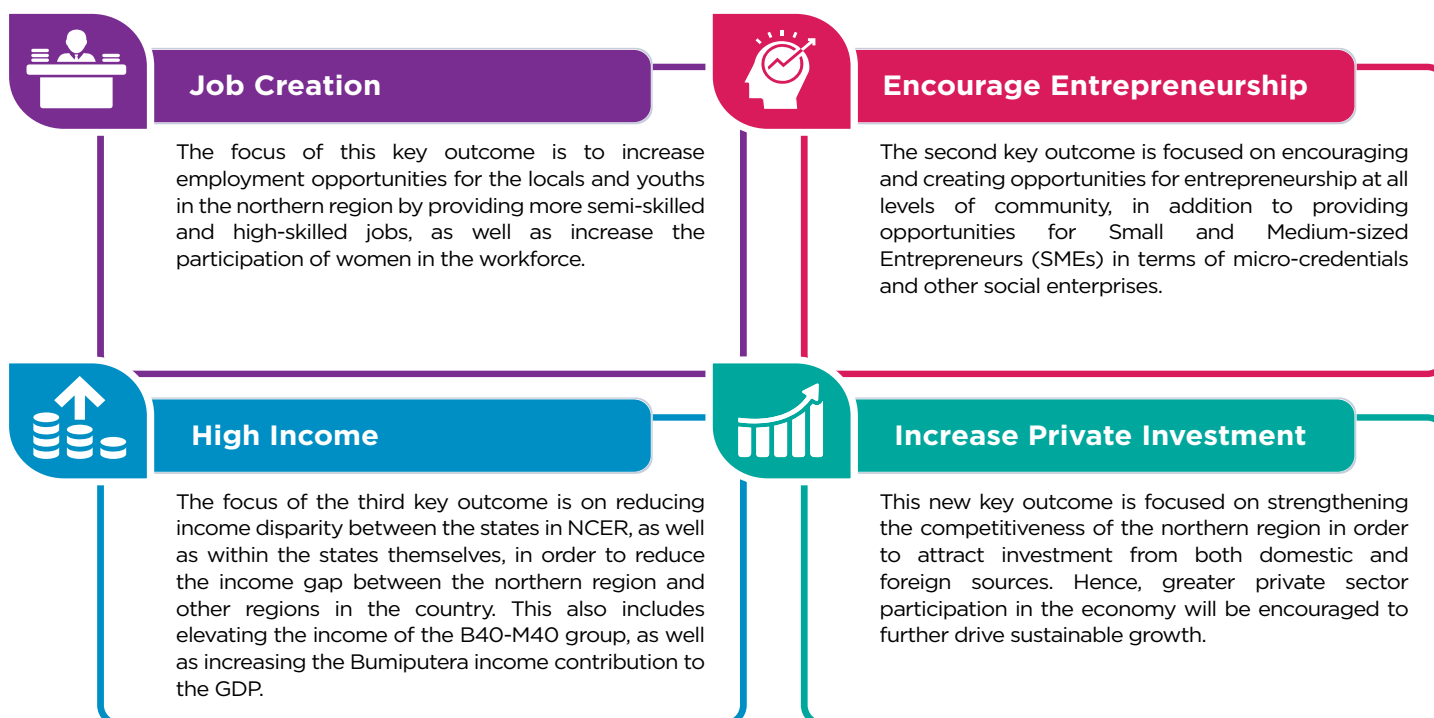


Key Outcomes



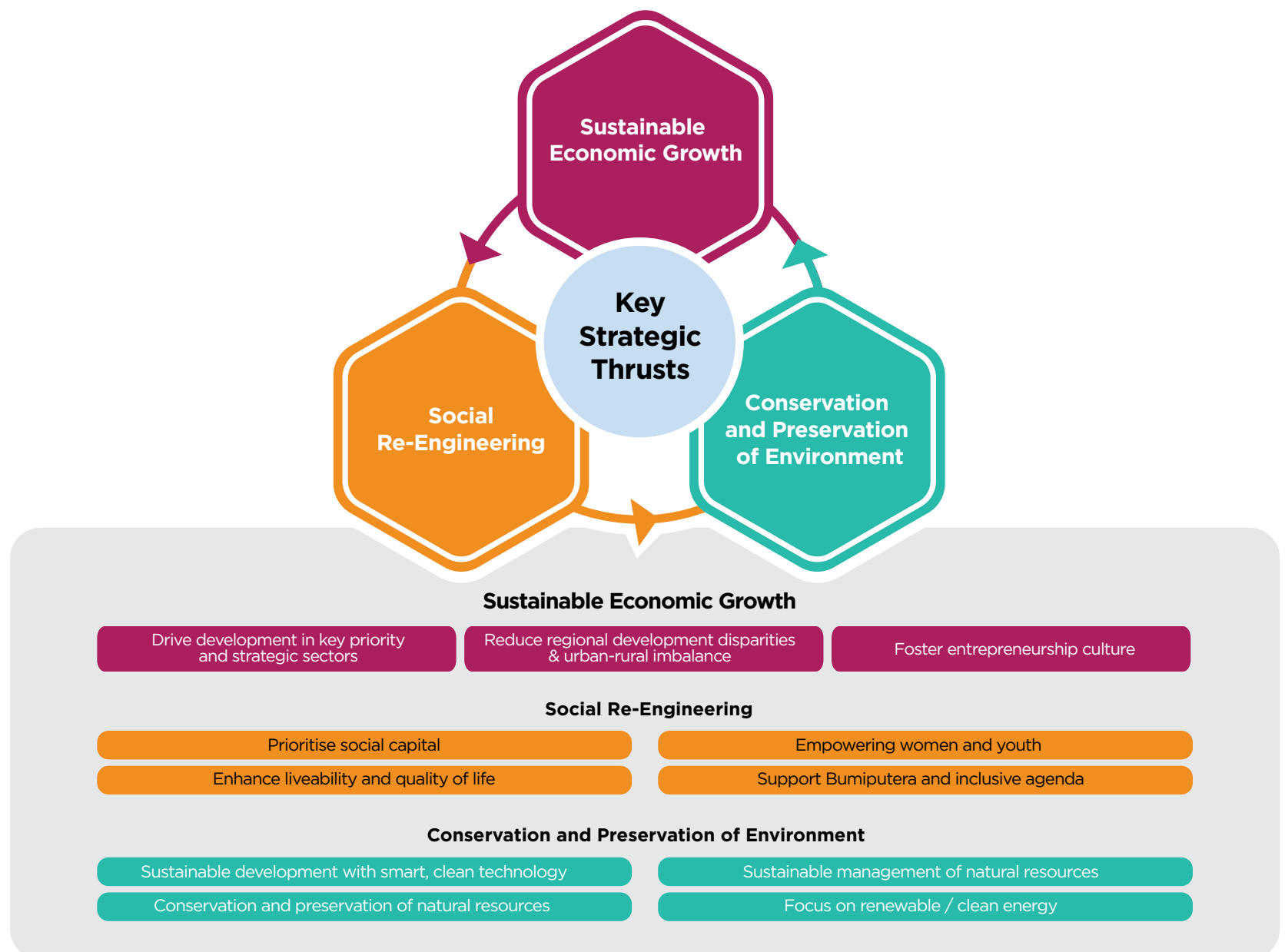
Continuous engagement with the relevant stakeholders will continue to be undertaken to move the industries up the value chain

The NCER regional strategic framework targets **four key outcomes** comprising **job creation**, **entrepreneurship**, **high income** and **increase in private investment**, which will ultimately benefit the *rakyat* and enhance their socioeconomic well-being.



Key Strategic Thrusts

In driving the region to its next phase of transformation, NCIA has identified three strategic thrusts under the NCER Strategic Development Plan (2021-2025) comprising **sustainable economic growth**, **social re-engineering**, and **conservation and preservation of environment**. These strategic thrusts place equal emphasis on socioeconomic development and the *rakyat* and are aligned with the three key dimensions of the Shared Prosperity model.



Key Economic Clusters

Under the new framework, the sectors of **manufacturing**, **agribusiness** and **services** covering **tourism** and **logistics and connectivity**, together with **human capital development** will remain as the **key economic drivers** in NCER, while several new key drivers have also been identified comprising **green economy**, **petrochemical** and **sustainable mining**, in addition to new sub-sectors under **services**, namely, **education** and **digital economy**.



Manufacturing

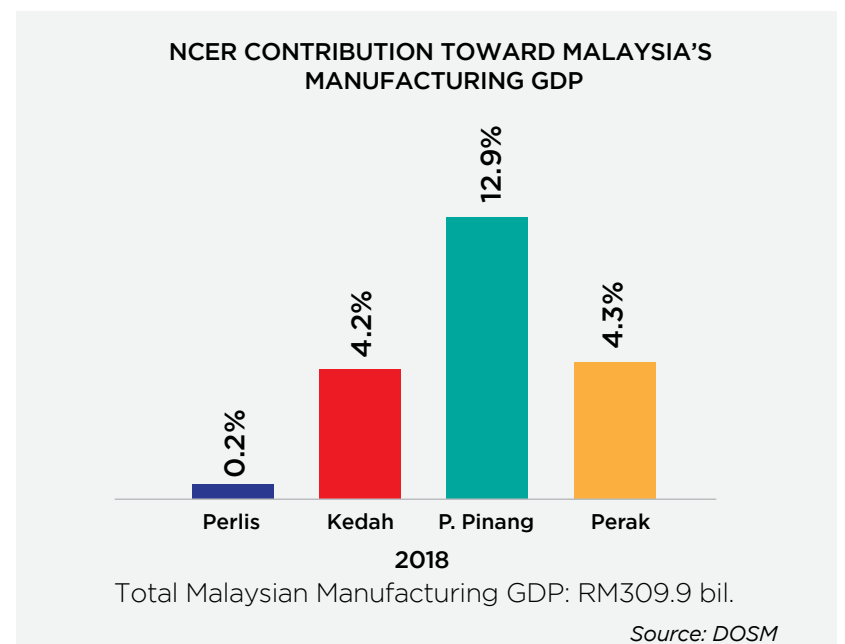
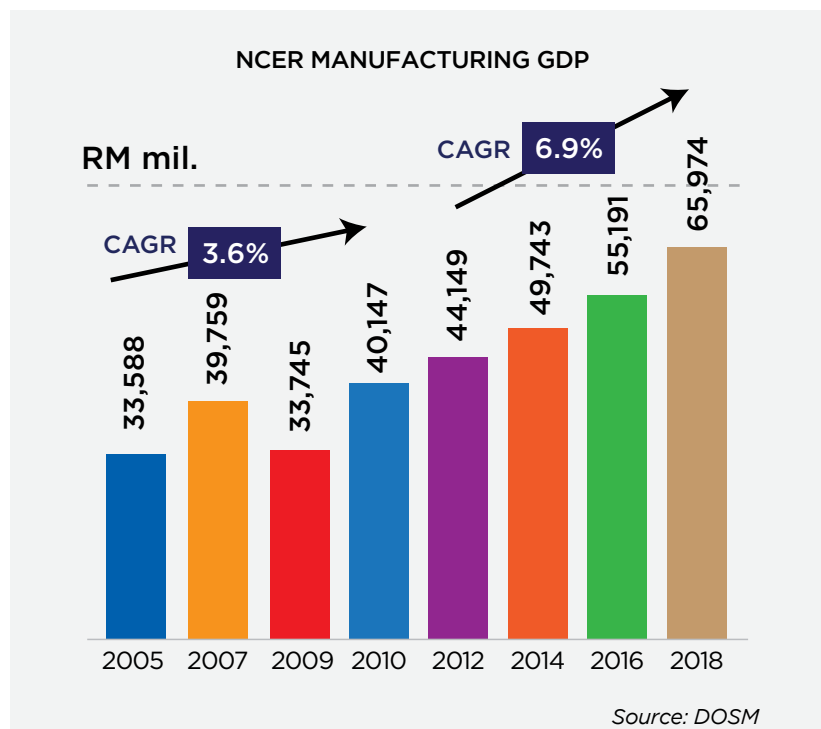


Focus on high-value manufacturing



The manufacturing sector in NCER has experienced steady growth since its inception, contributing significantly by up to 22% of Malaysia's manufacturing GDP. In the period of 2012-2018, NCER's manufacturing growth gained momentum at a rate of 6.9% annually.

Pulau Pinang is the highest contributor to NCER's manufacturing GDP, contributing 60% of the region's total GDP for manufacturing in 2018, while Kedah and Perak contributed 19% and 20% respectively.

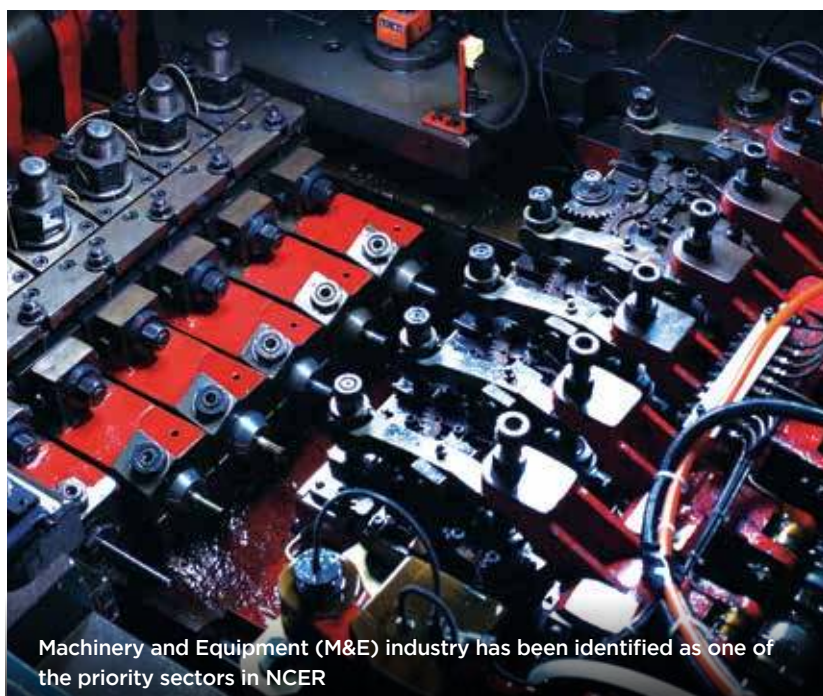


Moving forward, the NCER manufacturing sector aims to attract **RM99.5 billion** worth of cumulative investment by **2025**, that will create 83,739 jobs and 22,005 entrepreneurs.

TARGETS FOR MANUFACTURING



Under the manufacturing sector, **seven key subsectors** have been identified as **key priority sectors** for NCER, namely, **Electrical and Electronics (E&E)**, **Machinery and Equipment (M&E)**, automotive, aerospace, medical devices, rubber products and **Fast-Moving Consumer Goods (FMCG)**.



E&E and M&E

To further strengthen the E&E and M&E industries in NCER, initiatives such as the **Single Campus concept** will be introduced to focus on the synergies between the NCER states to create a more conducive ecosystem for the subsectors.



Aerospace

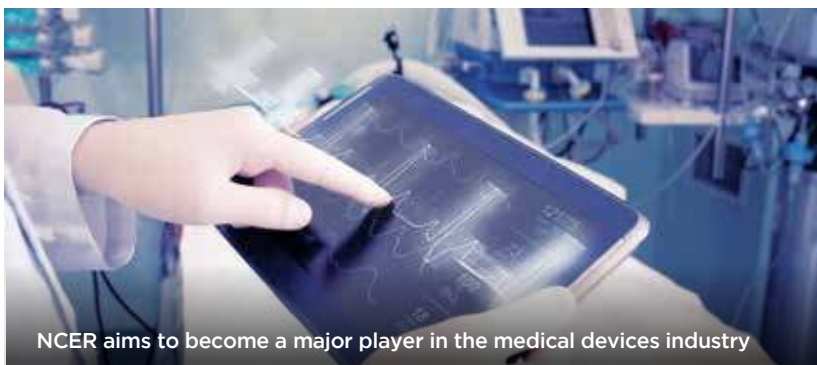
The aerospace industry is recognised as a national strategic industry and it is projected to grow significantly on the back of continued orders for aircraft components. Within NCER, this industry has been developed in **Batu Kawan** and **Bukit Kayu Hitam** and will be further strengthened through projects such as the **Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)** in Kedah.



Automotive assembly in Tanjung Malim

Automotive

NCER is a key region for the automotive industry with existing operations in **Tanjung Malim** in Perak, as well as **Gurun** and **Kulim** in Kedah. Moving forward, infrastructure in existing automotive hubs such as **PROTON City** will be further enhanced. In addition, **SME industrial parks** will be developed to support existing manufacturing operations



NCER aims to become a major player in the medical devices industry

Medical Devices

Under the 11th Malaysia Plan (11MP), medical devices industry was projected to be among the nation's top industries, with Pulau Pinang identified as a major medical devices cluster. To further position the region as a prominent player in this subsector, NCIA will encourage cooperation between Pulau Pinang and Kedah to establish a conducive ecosystem for medical devices manufacturing.



Rubber Products

Rubber products is a significant manufacturing subsector within NCER. Under 11MP, **Kedah Eco Innovation Park (KEIP)** has been identified as a growth node to re-engineer growth and productivity in the manufacturing sector. Moving forward, this subsector will be further developed in KRC with key initiatives to improve infrastructure, such as the **upgrading of broadband and road connectivity**. There will also be a continuation of the **Rubber City Smallholders Programme** to upskill the smallholders of rubber plantations.

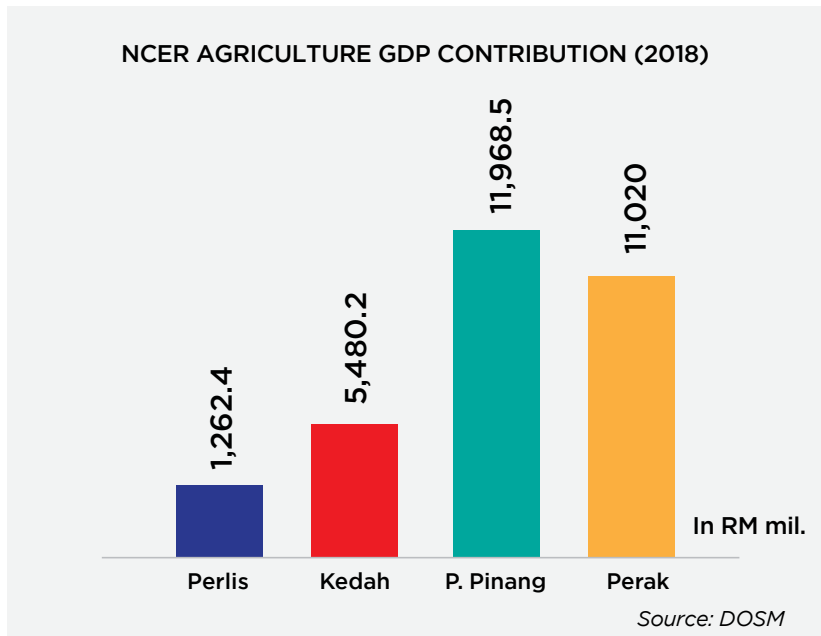


The FMCG subsector in NCER will be further developed

Fast Moving Consumer Goods (FMCG)

FMCG are products that are quickly sold in the market and include items such as packaged food, beverages, toiletries and other consumables. This is a new subsector that will be developed in NCER under the 12th Malaysia Plan (12MP) to cater to the region's growing population demand. According to MIDA, approximately 67% of potentially **halal products** are categorised as FMCG, and these include **processed food and beverages, bakery products, cosmetics and personal care products, confectionery, and nutraceuticals**.

Agribusiness



Agriculture remains a key sector in NCER and is the third largest contributor to NCER's economy, making up 9.2% of the region's GDP and contributing RM19.7 billion to Malaysia's GDP in 2018. The next phase for NCER's agribusiness sector development is to **modernise** and **enhance** this traditional sector through the use of **smart farming** and **cultivation of high-value produce**, such as **cash crops, superfruits, hemp** and **organic paddy**. NCER also aims to become **the seed hub for ASEAN** that will leverage on the existing Enza Zaden's R&D facility in the region to produce **high-quality seeds** that can be marketed at a premium price.



Smart farming, also known as the Third Green Revolution, refers to a concept of **farming management** using **the latest, cutting-edge technologies** that makes farming more controlled and accurate with automated decision-making to provide optimal growing conditions. These new technologies include **artificial intelligence, automation, Big Data analytics, drones** and **robotics** which will help farmers increase their profit and reduce risks. This would require the development of **high-skilled human capital**, such as **professionally-certified farm managers** to maximise production and efficiency.

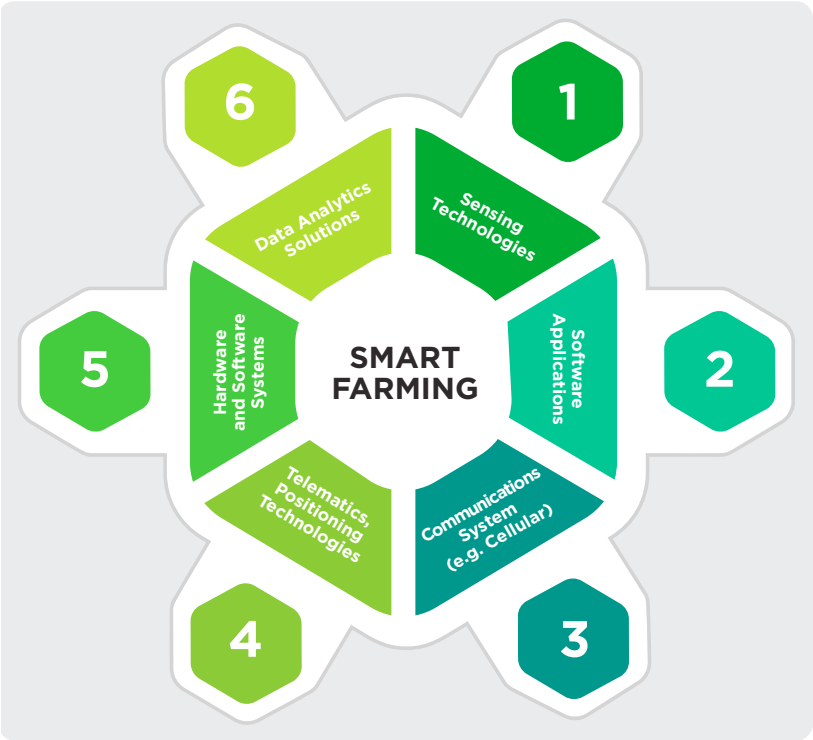


Vertical farming is an example of an innovation in smart farming as it lowers the water requirement by up to 70%, saves considerable space and soil, and enables production of high-quality vegetables in a predictable and reliable manner that is unaffected by plant diseases and independent of seasonal influences.

In NCER agribusiness projects, NCIA will play the **enabler** role to promote, create awareness and bring together the stakeholders comprising technology service providers, software companies, academia, research institutes and the farming community in ensuring the successful implementation of smart farming.

Moving forward, the agribusiness sector in the region is targeted to attract a cumulative investment of **RM4.3 billion** by **2025**, which will create **13,849 jobs** and **3,639 entrepreneurs**. By then, the region is expected to achieve an average paddy yield of **8 MT/ha** and a monthly farmers' income of **RM6,000**.

To achieve these targets, several key subsectors have been identified, namely, **paddy**, **cash crops**, **superfruits**, **hemp**, **aquaculture** and **livestock**.



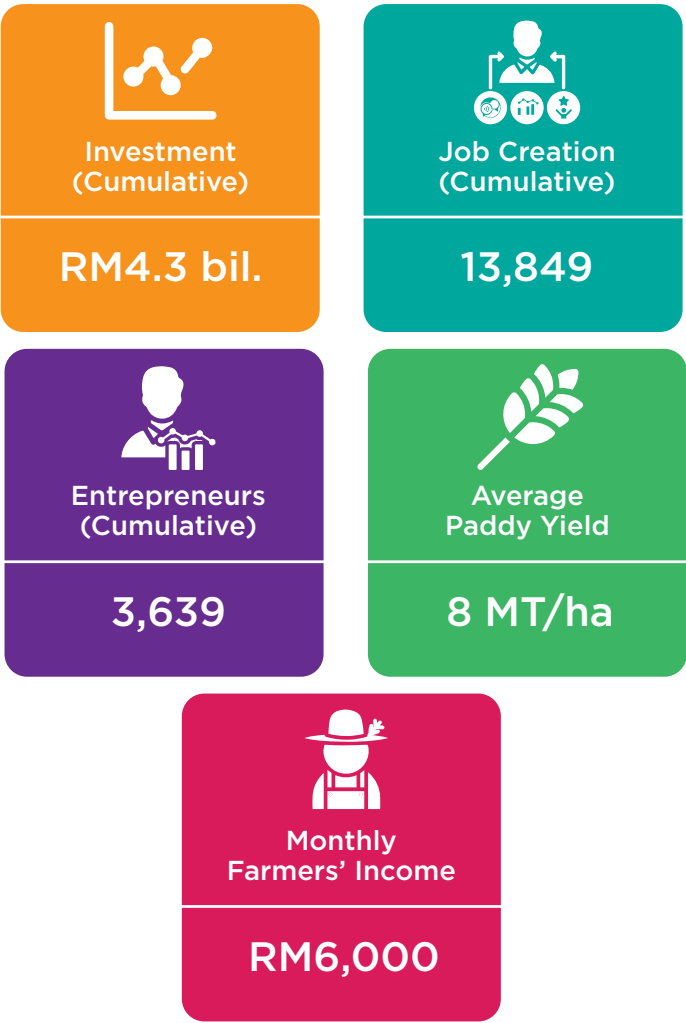
Source: Beecham Research

Paddy

The region is the biggest producer of rice in Malaysia, especially in Kedah which is well-known as “The Rice Bowl” of the country. Moving forward, the focus will be on the cultivation of **organic paddy** through **satellite farming** and **contract farming**. The commercialisation of organic paddy in NCER will serve as an alternative for farmers to gain higher income.

Following the success of the **Estate Management Model (EMM)** which has successfully increased the local farmers' income, this programme will be expanded to other areas throughout the region, especially in formerly non-productive areas, to boost productivity and increase farmers' yield.

TARGETS FOR AGRIBUSINESS





The use of drones to fertilise paddy is an example of smart farming in NCER's agriculture sector

Cash Crops

The cultivation of cash crops in NCER will be focusing on high-value crops, such as **legumes**, **sweet corn** and **ginger torch**, that will help farmers, including paddy growers, to increase their income. Cash crops initiatives the region will also promote the use of **new agriculture technologies**, such as **greenhouses**, that will allow the farming of highland vegetables in the lowland areas.

Superfruits

Superfruits are fruits that contain high level of nutrients and anti-oxidants, and generally command premium prices in the market. The commercial cultivation of superfruits will be expanded across NCER following the success of the **Superfruits Valley** in Chuping, Perlis and will be focusing on **fig**, **lemon** and **gac**.

Hemp

The introduction of commercial hemp cultivation is also expected to contribute towards the growth of agribusiness in the region. It is envisaged that NCER will become **the pioneer in commercial cannabis production for industrial use** in ASEAN, acting as a hub for tropical hemp seed selection and production as well as R&D.

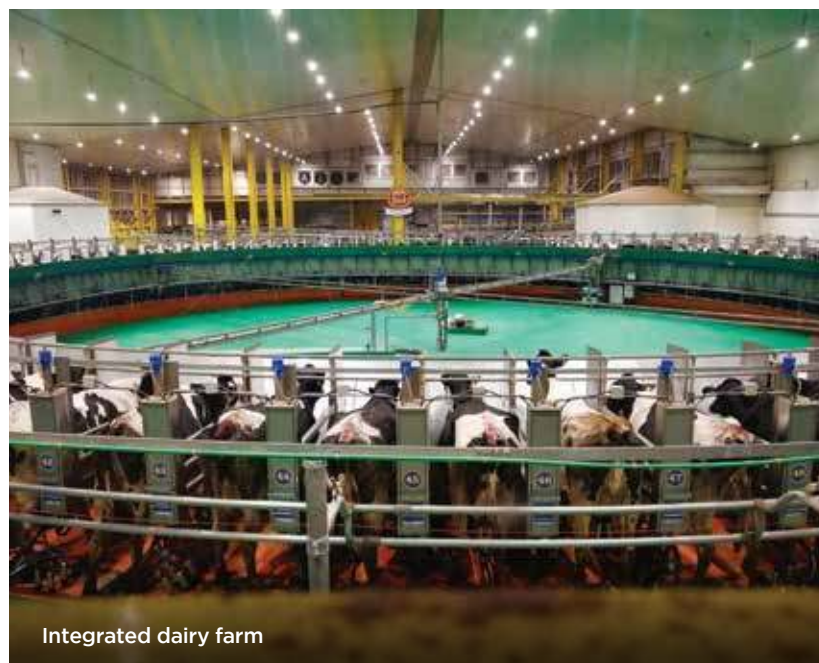
Aquaculture

Under this sub-sector, the focus will be on the farming of **oyster**, **abalone** and **shrimp**, as well as **fish cage farming**. These will be undertaken via **contract farming** and **satellite farming** programmes to ensure sustainable aquaculture production and higher coastal productivity.

The development of NCER's aquaculture will help increase **sustainable food production** and productivity, which in turn, will reduce Malaysia's heavy reliance on imports. This also includes moving the **halal food** industry up the agriculture value chain.

Livestock

To increase the country's food production, the livestock subsector in NCER will be developed through **satellite farming** and **contract farming** initiatives in areas such as **Trolak** in Perak. It also covers the **dairy industry**, which is aimed at reducing Malaysia's dependency on imports, as well as **the halal food industry** in the livestock industry and production of meat, covering the entire value chain from the upstream to downstream.



Integrated dairy farm



Smart Farming and Positioning Agriculture have been applied throughout NCER since 2016

Anchor Company Business Model

While agriculture has traditionally been a focus area in the northern region, there remain significant issues and challenges that prevent the sector from achieving higher value-added contribution to the economy. Among these **challenges** are **low productivity, aging farmers, high cost of production, outdated technology, limited financial resources** and **unskilled workers**. Hence, there is a pressing need to increase the income of farmers in order to sustain interest in the industry and attract sufficient workers. This issue is exacerbated by the **out-migration of talent** from Perlis, Kedah and Perak in recent years.

To address these issues, NCIA has introduced the **Anchor Company business model** in NCER agribusiness projects, where it acts as the **nucleus farm** that provides **technical training to satellite farms, improves the processes** and uses strategic inputs to **move farming activities up the value chain**. The adoption of Anchor Company business model aims to address

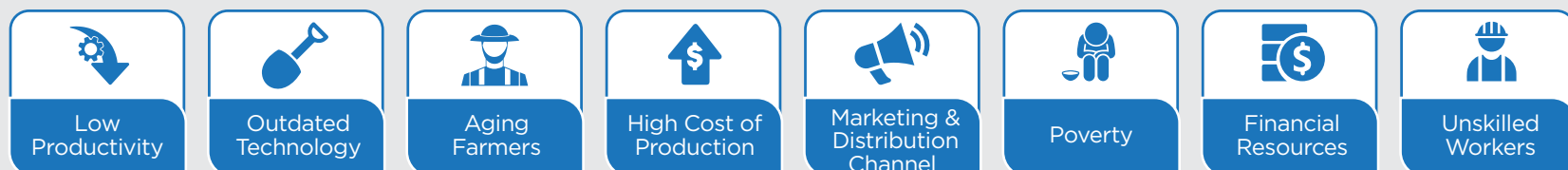
the aforementioned challenges by **promoting a competitive and sustainable industry, bridging the gap in the value chain** and **creating high-income farmers**.

Driven by the private sector, the Anchor Company model is aligned to **Dasar Agromakanan Negara-Halatuju 2019-2020**. The anchor companies are selected as the mentor based on their existing track record, readiness, and approval from Jawatankuasa Pemandu Negeri (JPN).

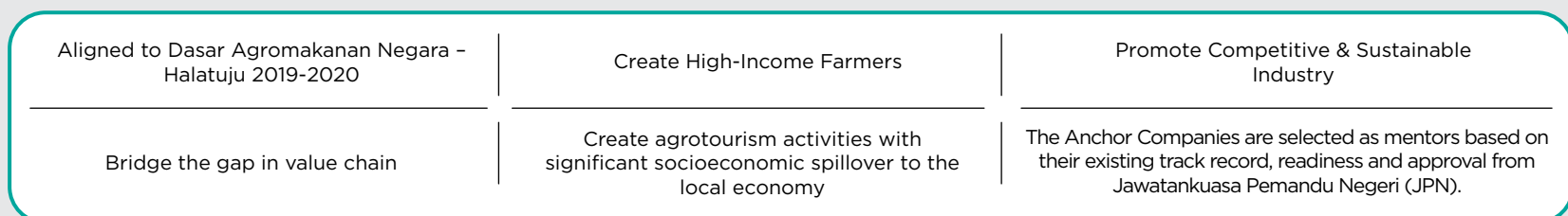
This model focuses on **high-value products** such as **superfruits, oyster, organic rice, cash crops** and **aquaculture**. Another opportunity arising from agribusiness is **agrotourism**, which can potentially create **spillover benefits to the local economy** as it would generate a need for more services such as accommodation, food and beverage, and transportation, among others.

Anchor Company Business Model to Transform the Agriculture Sector in NCER

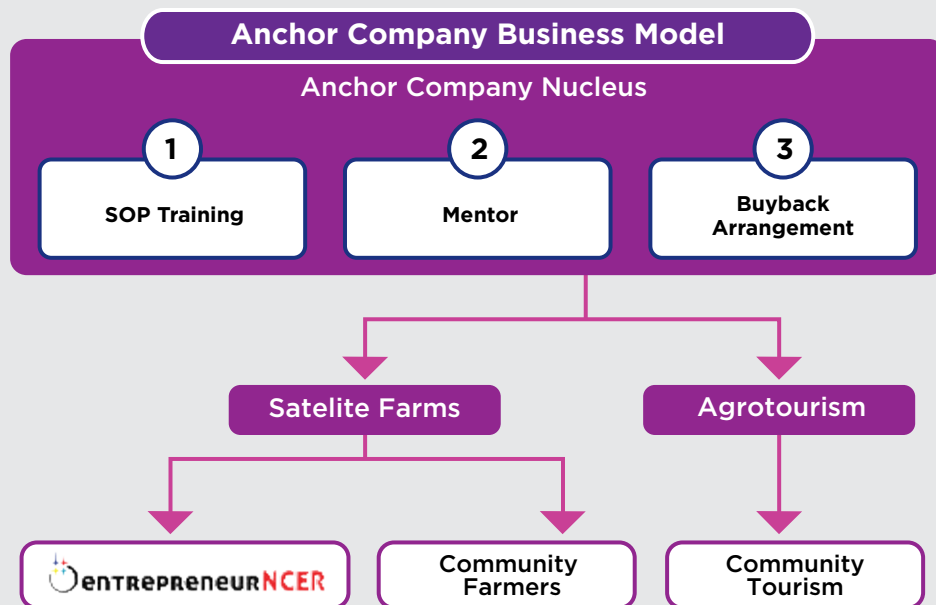
Issues & Challenges in Industry



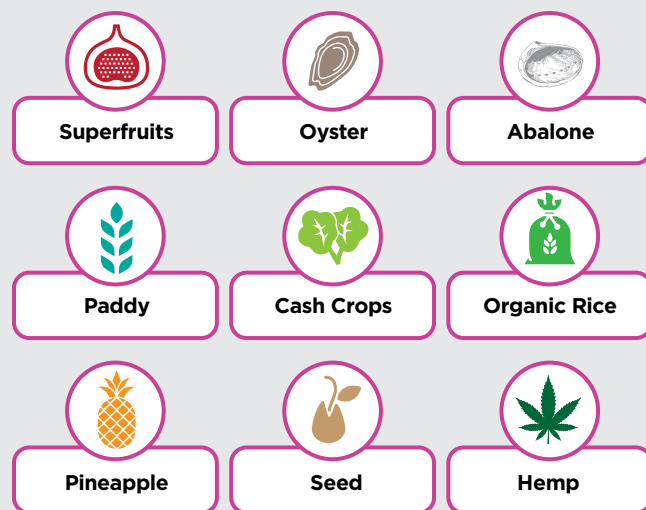
Proposed Adoption of Anchor Company Business Model



The Transformation: Anchor Company Business Model Driven by Private Sector



Focus on High-Value Products



Services

The services sector plays a major role in the growth and development of NCER economy. Its rising importance is in line with the transformation that has taken place in many developed economies. Subsectors identified under services are **tourism, logistics and connectivity, digital economy and education**, which are expected to boost their contribution to NCER's gross domestic product (GDP), as the region moves towards achieving a world-class economic region status.

Tourism

The tourism subsector in NCER will continue to be developed through initiatives such as the upgrading of tourism attractions and supporting facilities. Ecotourism will be a key focus due to the region's wealth of natural attractions such as **Pulau Langkawi, Balik Pulau and Belum Rainforest**. Other types of tourism that will be of particular focus include **heritage tourism, archaeotourism and niche tourism**, which covers **medical tourism, business tourism, agrotourism and halal tourism**.



Pulau Langkawi is one of the key tourism gateways in NCER

Ecotourism

The region is home to beautiful islands and lakes, as well as one of the oldest rainforests in the world that is rich with exotic flora and fauna. **The richness of these natural endowments offers vast potential for ecotourism** that will benefit the *rakyat* through the creation of **new job and business opportunities**. Hence, ecotourism will be sustainably developed in identified areas such as **Belum-Temengor Forest Reserve** and **Kuala Gula Ecotourism in Perak, Pedu-Ulu Muda Forest Reserve (Kedah)** and **Nibong Tebal Mangrove Forest (Pulau Pinang)**, among others.

Heritage Tourism

This subsector will leverage on the cultural and historical heritage of the tourism locations, where visitors can experience a glimpse of past and present stories of the places and the people. Heritage tourism in NCER is focused around the **UNESCO World Heritage Site of George Town** in Pulau Pinang, as well as the former colonial city of **Ipoh (Perak)** and the **royal towns** of **Kuala Kangsar (Perak)**, **Alor Setar (Kedah)** and **Arau (Perlis)**.

Archaeotourism

Archaeotourism in the region is aimed at **promoting archaeological sites** such as the **UNESCO World Heritage Site of Lenggong Valley (Perak)**, **Lembah Bujang (Kedah)** and **Guar Kepah (Pulau Pinang)** as tourism attractions, while ensuring their conservation and preservation for the benefit of the next generations.



Lembah Bujang archaeological site in Kedah

Geotourism

NCER's rich natural endowments also include **spectacular geoparks** such as the **Langkawi UNESCO Global Geopark**, **Jerai National Geopark**, **Kinta Valley National Geopark** and **Perlis Geopark**. Geotourism initiatives in the region aim to **link up the world-class geoparks and geosite products** within the **four states of NCER**. This strategy will capitalise on Pulau Pinang and Langkawi as the main tourist gateways in the region to attract visitors to other tourism destinations within NCER.



Kilim Geoforest Park, Langkawi

Niche Tourism

NCER is also focusing on niche tourism fields such as **medical tourism**, **MICE**, **agrotourism** and **halal tourism** to cater to the specific needs and demands of visitors.

Moving forward, the targets for NCER tourism sector include achieving a cumulative total of **46,540 jobs** and **12,230 entrepreneurs** created **by 2025**, on the back of cumulative investment of **RM33.2 billion**. The region also aims to achieve **annual tourist receipts of RM121 billion**, **annual tourist arrivals of 18.5 million** and **over 161,000 hotel rooms by 2025**.

Public-Private Partnership Model for Tourism







Tourism projects in NCER are carried out via **Public-Private Partnership (PPP)** model to improve tourism products in the northern region, with the objective of **increasing the number of tourists** and **tourist spending**. Despite the existence of many tourism spots which offer a diverse range of tourism experience (ecotourism, archaeotourism, geotourism and heritage tourism), most of these locations are relatively unknown, especially to foreign tourists.

Moving forward, tourism projects in **NCER aim to attract and entice tourists to visit the less well-known destinations**, thus effectively dispersing tourists from the more popular current hotspots and the key entry points for foreign visitors. This will require the creation of a sufficient ecosystem for tourists, from seamless transportation options to more varieties in tourism products, as well as availability of information.



Fort Cornwallis, one of the main tourist attractions in Pulau Pinang

TARGETS FOR TOURISM

 Investment (Cumulative)	 Job Creation (Cumulative)	 Entrepreneurs (Cumulative)	 Annual Tourist Receipts	 Annual Tourist Arrivals	 No. of Hotel Rooms
RM33.2 bil.	46,540	12,230	RM121 bil.	18.5 mil.	161,072

Logistics and Connectivity

The **logistics and connectivity subsector** is another **key priority area** under the services sector. This subsector will focus on **resolving rail bottlenecks**, alongside **improving inter- and intra-region connectivity** to ensure that NCER will become a more efficient regional player. **Key projects** under this subsector include the **Kedah Aerotropolis**, **expansion of Penang International Airport** and **Penang Port**, **Kota Perdana Special Border Economic Zone** and **Perlis Inland Port**.



Penang International Airport has been upgraded to handle more passengers and cargo



Aerial view of Padang Besar Cargo Terminal



Penang Port is a key transport hub in NCER which offers sea, air and land connectivity



The West Coast Expressway will link Banting in Selangor to Changkat Jering in Perak

Land Connectivity

Strategic projects will be undertaken to **enhance land connectivity** across the region, covering **roads and highways, railway and logistics hubs**. Examples of such projects are the **Northern Corridor Highway, Kota Perdana Special Border Economic Zone, Perlis Inland Port** and **Padang Besar Sentral** development, among others.



Air Connectivity

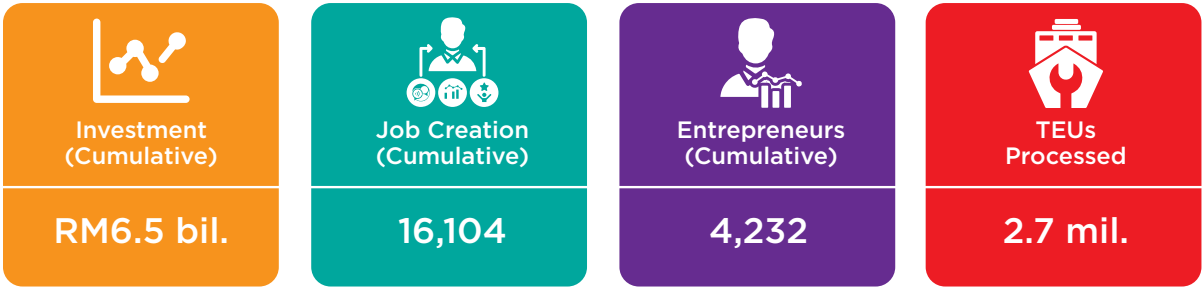
NCER is easily accessible by air from various parts of the world with the presence of **two international airports**, comprising **Langkawi International Airport** and **Penang International Airport**, as well as **two domestic airports**, namely, **Sultan Azlan Shah Airport** and **Sultan Abdul Halim Airport**. Under the new strategic development plan, Penang International Airport and Sultan Azlan Shah Airport will be expanded, while a new project known as **Kedah Aerotropolis** will be developed, encompassing the **development of Kulim International**

Airport (KXP) and **Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)** that will be supported by the construction of external infrastructure.

Sea Connectivity

With its strategic location facing the Straits of Malacca, NCER also offers **excellent sea connectivity** via **Penang Port** and **Lumut Maritime Terminal**. **Penang Port will be expanded** to increase its capacity, while a **new passenger terminal** will be developed in Kuala Perlis to improve passenger movement to Pulau Langkawi.

TARGETS FOR LOGISITICS AND CONNECTIVITY



NCER's logistics and connectivity subsector is targeted to attract a cumulative investment of **RM6.5 billion by 2025**, that will generate **16,104 jobs** for the *rakyat* and **4,232 entrepreneurs**. The region also aims to achieve **shorter clearance time of within one day with physical inspection**, and **less than a day** for **clearance without physical inspection**.

Education

The **majority of the workforce** in NCER are currently involved in **medium to low-skilled jobs**. Despite the region's efforts to introduce high value-added, complex and diverse subsectors in the job market, **the proportion of employed persons in NCER in high-skilled occupations still remains relatively low**. This has resulted in **a mismatch** between the **supply of talent** and **existing industries' demand**, particularly in terms of **qualification and skills**. Thus, the region needs to develop the required talent to support economic growth. This talent gap will be addressed via concerted efforts from both the public and private sectors.

NCER aims to attract **private higher learning institutions, international and vocational schools** to the region to ensure sufficient talent supply to meet the industry needs. To increase its appeal as an education hub, **a conducive ecosystem** to enhance the region's liveability will be created through the development of retail, lifestyle, residential and integrated transport facilities. NCIA will also collaborate with **universities, training institutions and companies** to implement talent development programmes in collaboration with existing skills training institution, such as **Kedah Industrial Skill and Management Development Centre (KISMEC)** and **Penang Skills Development Centre (PSDC)**.



The presence of international schools in NCER and the availability of skilled local talent will help attract more investors into the region

Digital Economy

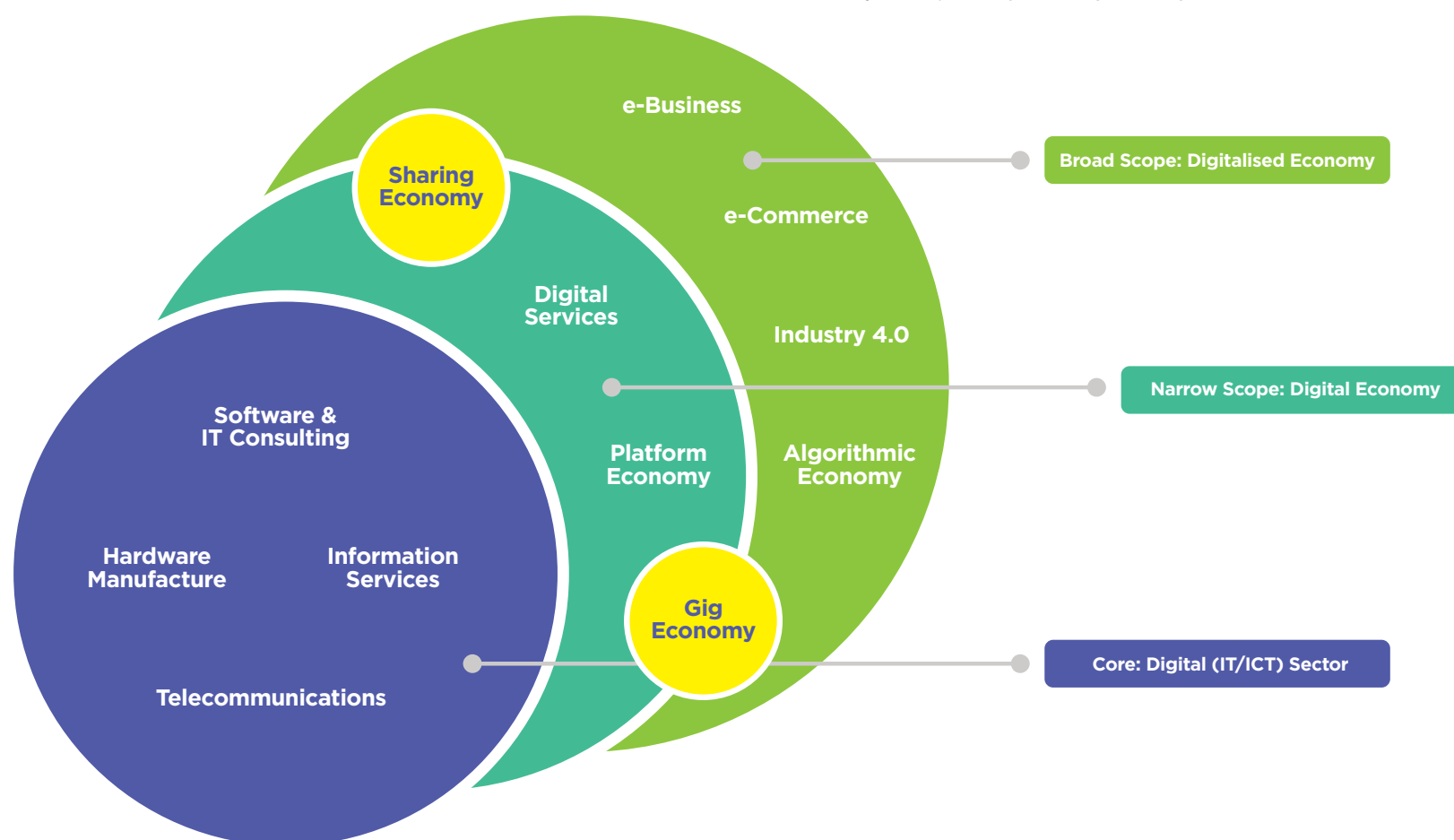
Digital economy has been identified as one of the priority sectors in the region due to its ability to create **high-value, high-income jobs**, which is in line with NCER's strategic development framework under the 12MP. This will in turn, **help address the issue of high graduate unemployment** in NCER.

The promoted subsectors of Digital Economy in NCER are **Global Business Services (GBS)**, **IR 4.0**, **e-commerce** and **creative multimedia**.

NCIA will intensify its effort to secure investments from **digital economy investors** into the region, as well as advocate the **use of digital technologies in other promoted sectors** to drive their movement up the value chain. This will enable other industry players, especially the **SMEs**, to adopt and leverage on digital economy to market their products and services.

The focus on digital economy will also create a robust entrepreneurship ecosystem in NCER, while creating new jobs for the *rakyat* and elevating their household income. In this regard, there is great potential in the area of **gig economy**, which refers to on-demand, peer, or platform economy, where companies engage independent contractors or project-based workers instead of employing them on a permanent basis. Gig workers range from e-hailing drivers to food delivery riders, to freelance project managers and software developers.

Based on the Employee Provident Fund (EPF) figures, gig economy is on a sharp rise in Malaysia and has grown by 31% in 2017. The World Bank has also indicated that about 26% of the Malaysian workforce are freelancers and the number is growing. The presence of gig workers will help **lower the cost** of doing business for companies and at the same time, increase the income of the *rakyat*, especially among fresh graduates.



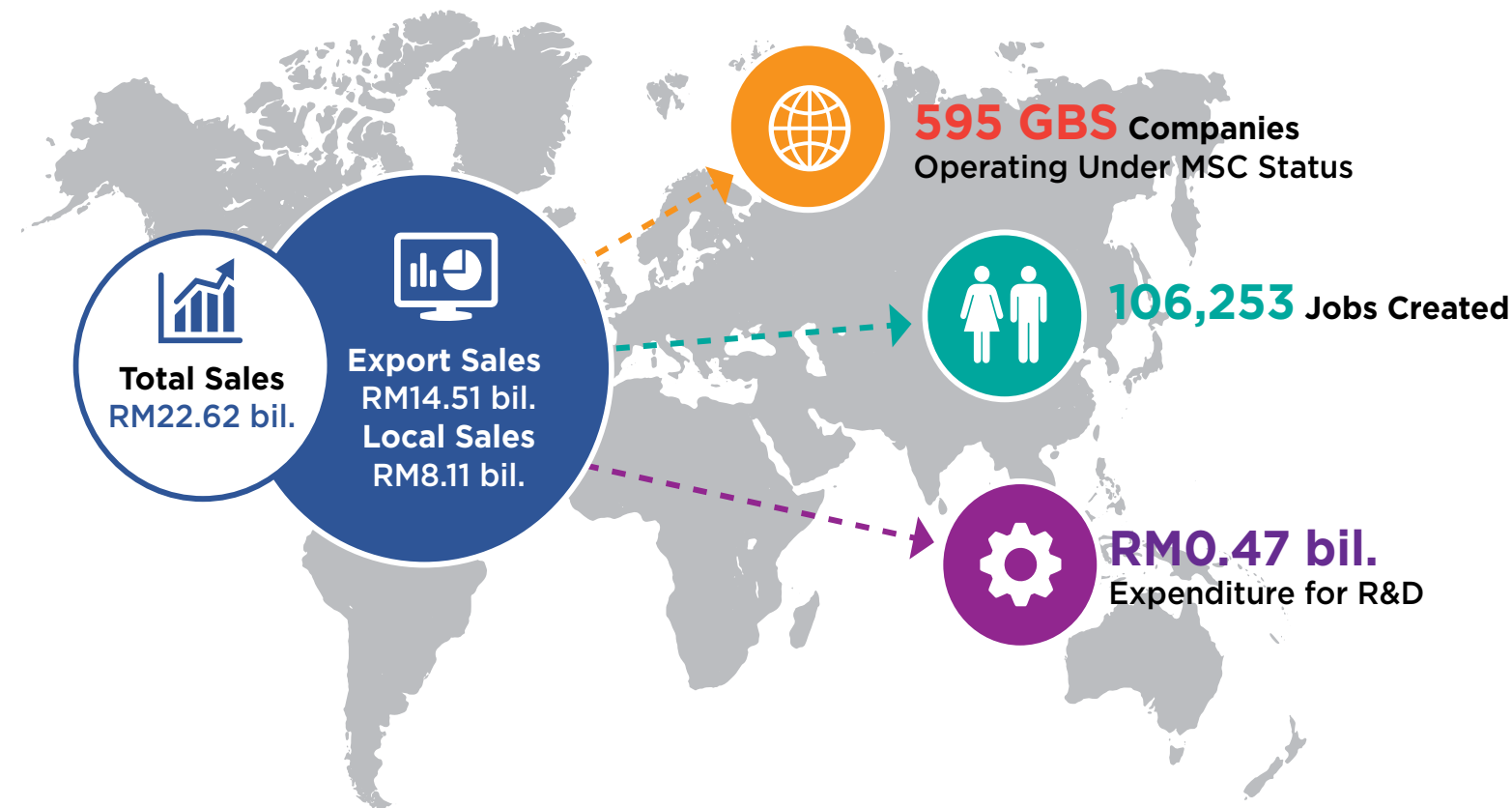
Global Business Services (GBS)

Global Business Services (GBS) is a **more integrated and mature evolution** of the **shared services model**. GBS provides services beyond transactional functions and has a wider remit and expertise to deliver higher value tasks, such as **consulting** and **business analytics**.

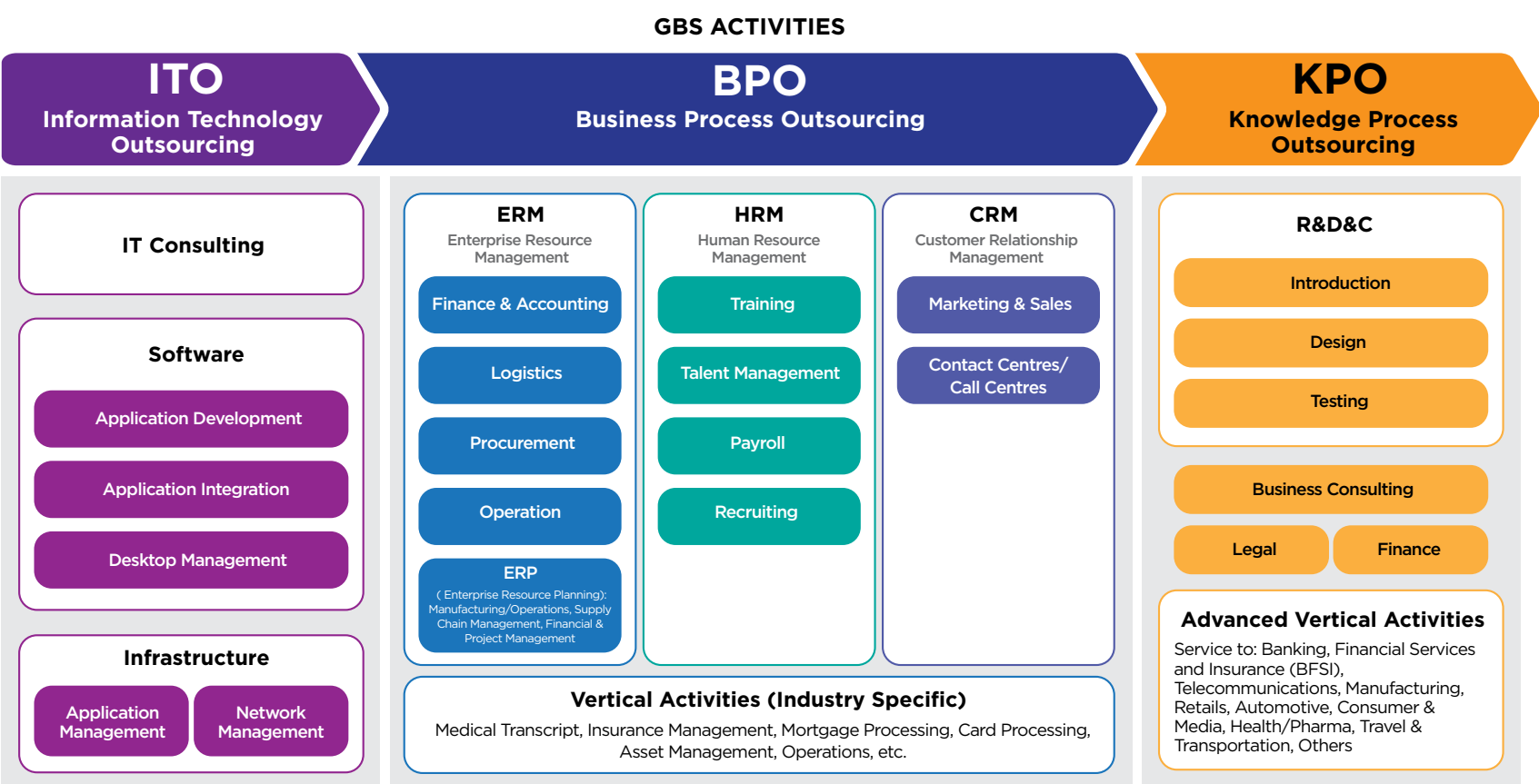
GBS deploys **advanced tools and technology** to deliver **scalability** to the business. It incorporates multiple functions and leverages business service delivery across all international operations, thinking and acting globally. Through GBS, activities are being run as a business that is fully in control of the process, budget and reporting lines. This emerging trend will fundamentally change the way business organisations operate, which in turn means changing the nature of jobs and creating new jobs that require different skill sets.

In NCER, GBS companies have traditionally been leveraging on the existence of large multinational manufacturing companies. This will be further enhanced by **GBS@IPOH** by embracing the latest technologies such as **Robotic Process Automation (RPA)** and **Artificial Intelligence**.

GBS LANDSCAPE IN MALAYSIA



Source: MDEC (March 2019)



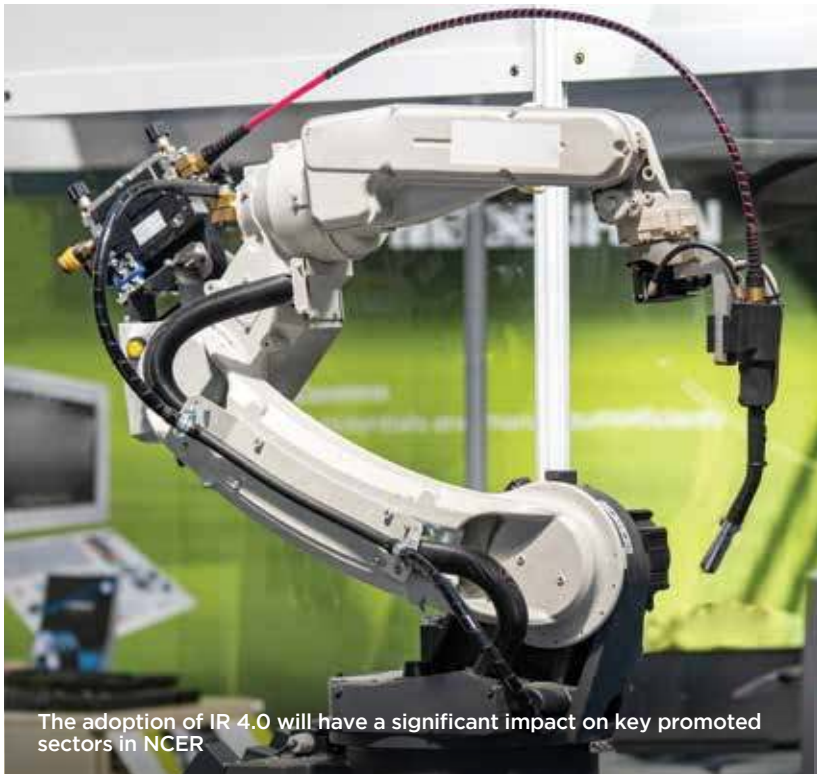
Source: CGGC: Centre of Globalisation, Governance & Competitiveness, Duke University



The Fourth Industrial Revolution (IR 4.0)

The **Nine Pillars of Industry 4.0** consist of **Big Data**, **Augmented Reality**, **Simulation**, **Internet of Things (IoT)**, **Cloud Computing**, **Cyber Security**, **Systems Integration**, **Additive Manufacturing** and **Autonomous Systems** to help transform the operational potential of manufacturing industries. In Malaysia's case, the country looks forward to capitalising on Industry 4.0 to boost productivity, with initial priority given to the manufacturing sector, prior to its adoption in other economic sectors.

While the manufacturing sector contributes 32% to Malaysia's economy, contribution from information and communications technology currently stood at 8.3%. However, the potential impact of digital technology on other economic sectors is indeed very significant. The need to move up the value chain has resulted in higher automation and a more autonomous production line in manufacturing.



The adoption of IR 4.0 will have a significant impact on key promoted sectors in NCER



In this regard, IR 4.0 will enable products to be **mass-customised** and **reach the market faster**, and **allow the decentralisation of factories**. In addition, the system can collect data from intelligent production machines to be analysed, while communications can be made directly for dynamic decisions. IR 4.0 will also help **reduce production cost**, **shorten product development lifecycles**, **enable better product monitoring** and **production schedule planning**, as well as help businesses increase their profit margins.

In this regard, the application of IR 4.0 in NCER will be further promoted across all the promoted sectors. For instance, the adoption of **augmented reality (AR)** and **virtual reality (VR)** in **tourism** will help **enhance tourist experience**. **IoT** can also be utilised in **logistics** to support the **tracking of goods** in **Special Border Economic Zones** for enhanced efficiency, as well as in **agriculture**, where it will enable a better and more cost-effective **precision farming**.

E-Commerce

Online shopping in Malaysia is the next talked about buzz in the industry today, with the country's **e-commerce economy** forecast to expand **by 20.8%** in 2020 and projected to rake in US\$3.91 billion alone in the year same year. This is on the back of a US\$1.07 trillion online revenue expected for Southeast Asia in 2020 (*Source: Statista).

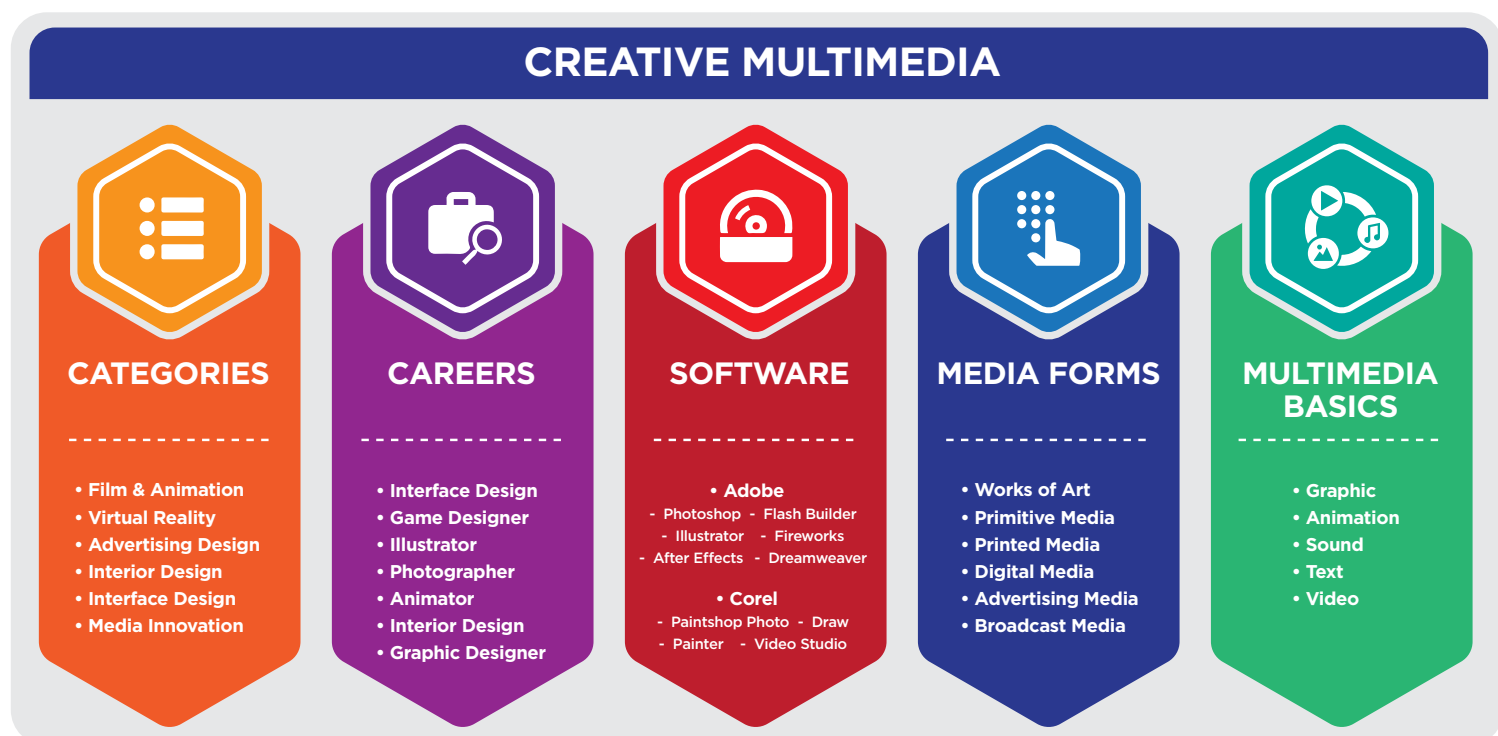
Having the **most extensive internet penetration in Southeast Asia** at a rate of 85.7% and a **mobile penetration rate of about 140%**,

Malaysia holds the crown as the fastest emerging e-commerce market across the Southeast Asia region.

With its 32.25 million digital population, the country attracts a wide variety of e-commerce companies from both local and international. Hence, this would provide vast opportunities to be tapped by the SMEs and e-commerce firms in NCER in particular, and Malaysia in general.

Creative Multimedia

Malaysia has aggressively embarked on the promotion of creative multimedia since the late 1990's. This has resulted in various local companies becoming household names in digital multimedia content and some have even exported their content to the Asia Pacific region and worldwide. A number of Malaysian companies have also collaborated with foreign production houses to support the latter's production. Thus, the region will continue to promote this subsector in its next phase of development.



Petrochemical

Petrochemical has been identified as **one of the new key priority sectors** under the NCER's Strategic Development Framework (2021-2025), which will capitalise on the **abundant feedstock supply of natural gas** in the region. It is a significant industry in creating downstream products to be supplied to other industries such as manufacturing, ranging from automotive to electronics, and textiles to pharmaceuticals. At present, this industry is located in **Gurun (Kedah)** and **Prai (Pulau Pinang)**.

One of the key initiatives to drive this sector is the development of **Kedah Eco Innovation Park in Gurun**, which focuses on **downstream and specialty chemicals**, such as **bio-based petrochemicals**, by leveraging on the raw material from the existing industries' ecosystem within the Gurun area. With its close proximity to the region's robust infrastructure comprising the North South Expressway, natural gas pipeline, railway connectivity, and seaport, this project is foreseen to be a prospective venture for potential investors to expand their presence in the region and transform the economic landscape of Kedah.



PETRONAS is one of the main players in NCER's petrochemical cluster via its subsidiary, PETRONAS Chemicals Fertiliser Kedah Sdn Bhd

Green Economy

Green economy is another newly identified priority subsector in NCER. The focus for this subsector will be on **sustainable management of natural capital** where investments are made in the saving of resources.

The NCER's Strategic Development Plan (2021-2025) aims to create a **green economic zone** within the region by leveraging on the region's natural resources. One of the core elements in this economic cluster is the **renewable energy sector**. Among the NCER states, renewable energy has the potential to be developed **in Perlis** as the State is naturally endowed with renewable energy sources such as **solar, wind, biomass** and **bioenergy**.

Other states in NCER also have embarked on this new emerging subsector. **Kedah** has launched its Green Energy and Renewable Energy Master Plan in July 2019. Renewable energy also has the potential to be developed in **Perak** due to **low energy costs** in the State and **ample land** availability for green-based economy establishment. In the case of **Pulau Pinang**, the State Government has planned to venture heavily into **solar farming**, in a push to harness renewable energy in the State.

Another element in the green economy is **biodiversity**, designed to drive rural development and prosperity through the sustainable use of genetic resources such as eco-based tourism in the region. As NCER is blessed with rich biodiversity, there is a huge potential for the region to tap on these resources.



Source: PwC: Roadmap to a Green Economy in the Heart of Borneo: A Scoping Study

Sustainable Mining

The history of mining in the region can be traced back to more than 100 years ago. The mining industry, particularly for **tin**, was the main economic driver for several parts of the region, notably in the states of Perak and Kedah, and contributed to the development of areas such as **Ipoh, Taiping, Pengkalan Hulu** and **Baling**. Throughout the years however, the industry has been eclipsed by other sectors such as manufacturing and services.

Under the NCER Strategic Development Plan (2021-2025), efforts will be channelled to ensure that **mining activities** are carried out in **a sustainable manner** throughout the region. To achieve this, one of the steps to be undertaken is to identify **new potential mining areas** with **greater accuracy** for better development planning. For this purpose, NCER is embarking on a **geophysical airborne survey** for the region, to be led by the Minerals and Geoscience Department of Malaysia and supported by NCIA.

In addition, mining activities in NCER will not only be focusing on sustainability, but also on the **value-adding aspect** of the industry which goes beyond extracting the raw minerals. In this regard, value-added activities, which will involve the integration of the entire **upstream, midstream** and **downstream** activities, will be carried out within NCER itself, thus benefitting the local economy and the *rakyat* in the region.

NCER will work closely with various stakeholders in the region to develop sustainable mining practices that will cover resource efficiency, community development, economics as well as strong environmental and safety regulations.



These sustainable mining practices will be based on industry's best practices, including those from leading mining nations. They will be implemented throughout the life cycle of mining activities in NCER



Key Enablers

The NCER strategic development framework has identified **four key enablers** to support the **key strategic thrusts** in achieving the vision and targeted outcomes of the region. These key enablers consist of **Infrastructure**, **Ecosystem**, **Skills and Talent**, and **Advanced Technology**.



Infrastructure

The upgrading and improvement of logistics and transportation infrastructure will help strengthen urban-rural linkages and strengthen overall connectivity and mobility in the region.



Skills and Talent

Talent is a key enabler, particularly for NCER which is facing the issues of out-migration. Equipping the workforce with relevant skill sets that are tailored to key industries and enhancing graduate employability will help support increased economic activities and attract investment.



Ecosystem

There is a need for continuous improvement in efficiency, transparency and accountability of governance. In addition, coordination between Government bodies and agencies also need to be increased to improve effectiveness.



Advanced Technology

The fourth enabler is advanced technology, and embracing digital economy and the Fourth Industrial Revolution (IR 4.0). This includes strengthening the digital infrastructure, such as broadband connectivity, as well as driving efforts in research, development and commercialisation (R&D&C).

Infrastructure

The **existing robust logistics and transportation infrastructure** in NCER is one of the key enablers in **strengthening the urban-rural linkages**, and **enhancing connectivity** and **mobility in the region**. The region also possesses well-planned and well-built infrastructure network, such as a **seamless public transportation system** and **expansive internet connectivity**, thus providing a **supportive ecosystem** that is essential towards expanding the economy, promoting inclusivity and raising living standards.

Under the NCER Strategic Development Framework (2021-2025), **infrastructure in NCER will be strengthened** via **three key strategies** as listed below:

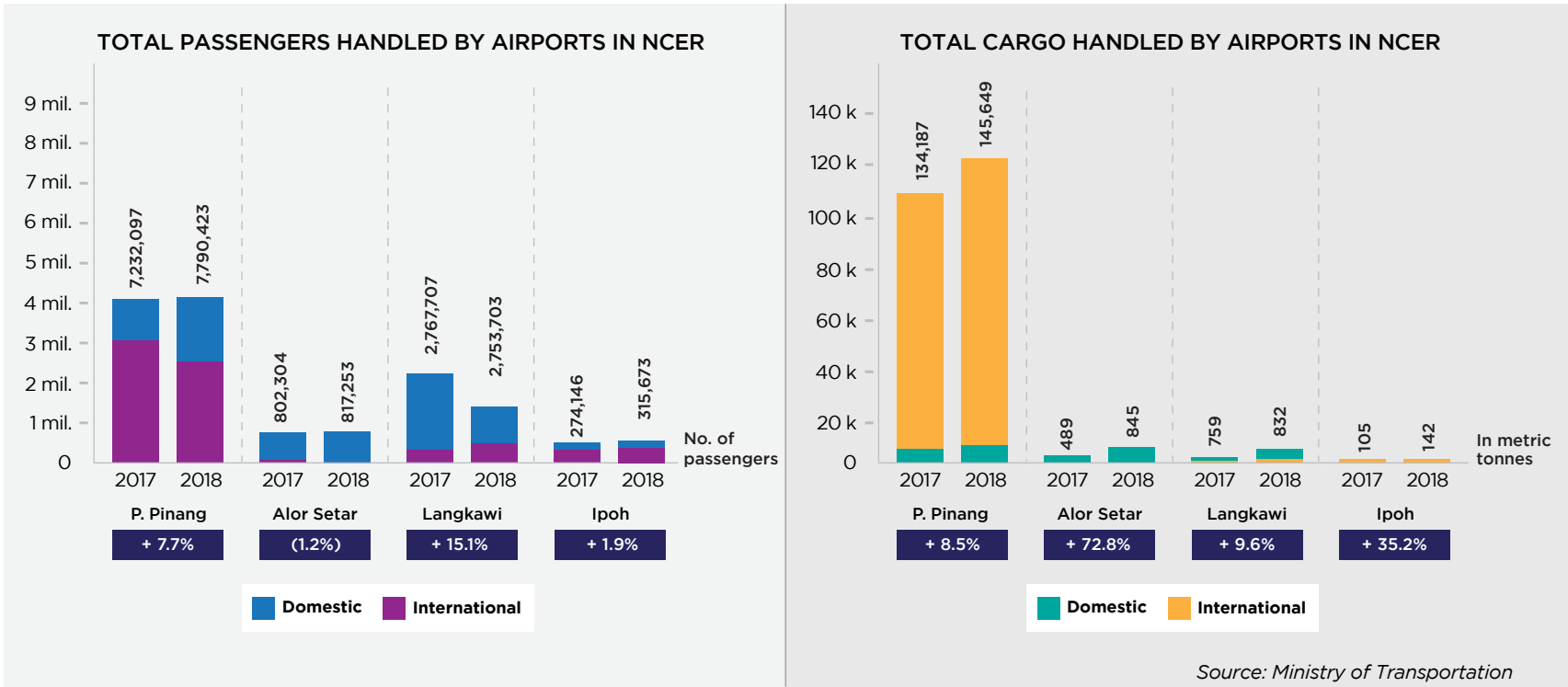
- Improving logistics, transportation and utilities infrastructure
- Strengthening urban-rural linkages
- Strengthening connectivity and mobility



Penang Bridge is a crucial transport infrastructure linking the island and the mainland

Air Transportation

With the presence of two international airports, namely, **Langkawi International Airport** and **Penang International Airport**, as well as two domestic airports comprising **Sultan Azlan Shah Airport** in Ipoh and **Sultan Abdul Halim Airport** in Alor Setar, NCER offers well-established air connectivity within the region. From 2017 to 2018, both air passengers and cargo traffic in NCER have increased by a cumulative growth rate of 5.46% and 9.27% respectively, as illustrated in the figures below:



Penang International Airport (PIA) continues to be the main international gateway to NCER

Sea Transportation

Currently, there are two major seaports serving the northern region, namely **Penang Port** and **Lumut Maritime Terminal**, that are well recognised as **important contributors to trade facilitation**. As the oldest and longest established port in Malaysia, **Penang Port** is the third largest seaport in Malaysia, with **1.5 million TEUs** of cargo handled in 2018, and it is **well-connected to over 200 ports worldwide**. Penang Port serves as the main gateway to NCER

and Southern Thailand, and it also serves the IMT-GT which has a thriving manufacturing-based hinterland.

The **Lumut Maritime Terminal** is a major bulk cargo port in Perak which **handles bulk materials for resource-based industries** in the mineral-rich state, as well as for the **heavy industries in Lumut** area such as oil and gas fabrication, shipbuilding and biodiesel plants. The port handled nearly **4.2 million MT of bulk cargo** in 2018.



Lumut Maritime Terminal caters to the resource-based and heavy industries located nearby



Penang Port is the oldest and third largest seaport in Malaysia

Rail Capabilities

NCER has a significant proportion of the **Electrified Double Track (EDT) rail**, with the Tanjong Malim to Padang Besar route making up 460 km of the 777 km EDT line. The region has two dry ports, namely **Ipoh Cargo Terminal** in Perak and **Padang Besar Cargo Terminal** in Perlis, with the former being the first dry port established in the country. The Padang Besar Cargo Terminal is the one and only rail cargo terminal in Malaysia that is connected to Thailand via rail, and handles export cargo volume from Southern Thailand to Penang Port.

Overall, **80% of the Keretapi Tanah Melayu Berhad (KTMB) freight in Peninsular Malaysia** is from the **northern region**, indicating the importance of rail transport for NCER.

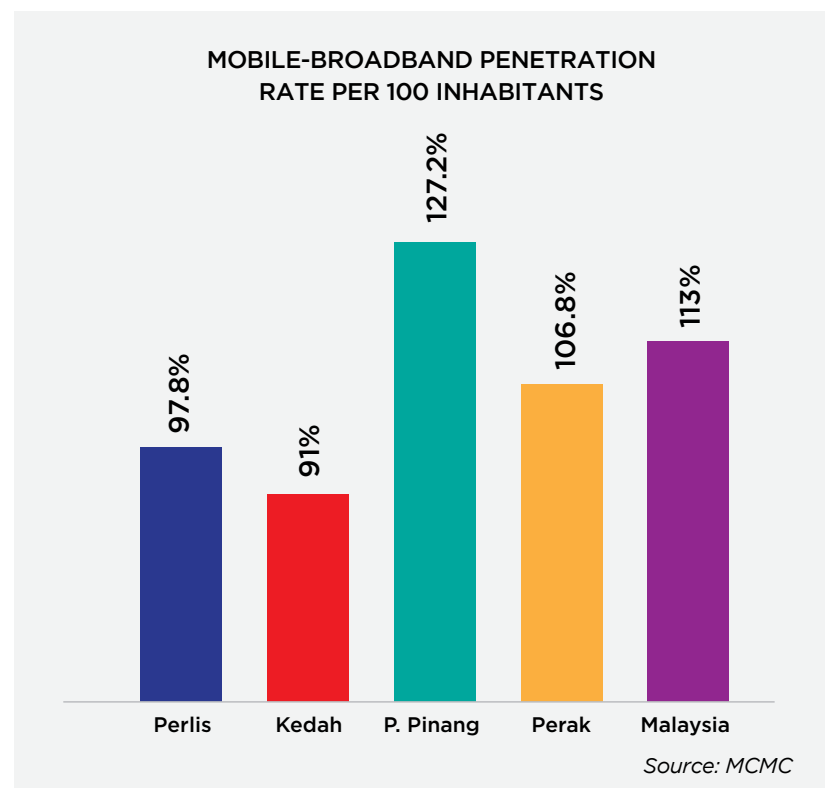


Rail connection remains as an important mode of transport in NCER, especially for cargo freight

Mobile and Broadband Connectivity

At national level, mobile cellular subscriptions are on an upward trend due to technological advancement and the increase in income. Based on the average fixed broadband speed measurement obtained from the Malaysian Communications and Multimedia Commission (MCMC) Industry Performance 2018 report, the country has recorded a commendable improvement by moving up to 32nd place in the world from 56th in 2017.

In the case of NCER, only **Pulau Pinang surpassed the average Malaysia's mobile penetration rate per 100 inhabitants** compared with other NCER's states in the fourth quarter of 2018.



Business Ecosystem

To set up their business and operations in NCER, potential investors need to liaise with various national and State level entities and authorities; hence, investors who are not familiar with the procedures may be faced with lengthy processing time which will delay the commencement of their businesses. As such, NCIA as the regional development authority is tasked to maintain a sound business ecosystem in the region by providing **handholding** and **facilitation assistance** to investors.

This commitment can be seen in NCIA's constant efforts to assist potential investors by providing them with the support in dealing with the local authorities, exploring local supply chain and raw material supplies, and providing access to skilled workforce and even business to business (B2B) matching to spur their business growth in the region.

To strengthen the business ecosystem in NCER, NCIA shall adopt the following strategies.

- Improving efficiency, transparency and accountability

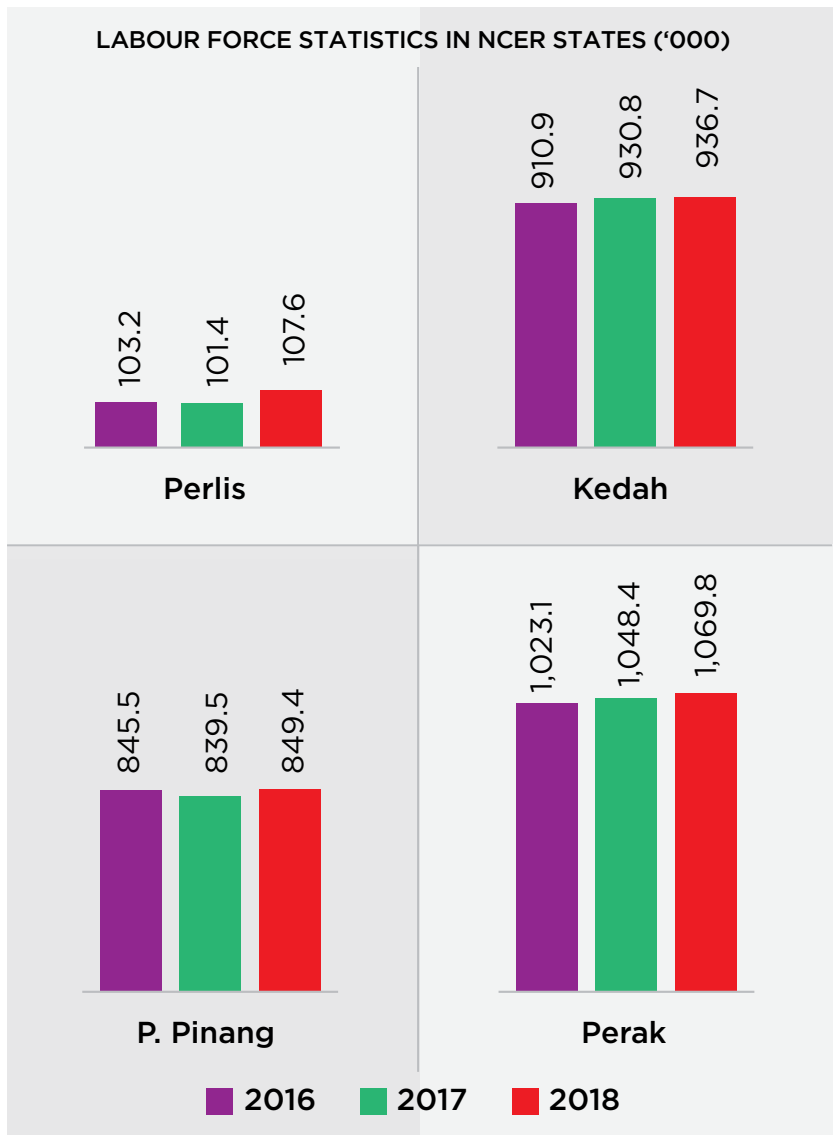
- Increasing coordination between Government bodies and agencies



Continuous engagement with the relevant stakeholders will continue to be undertaken to move the industries up the value chain

Skills and Talent Development

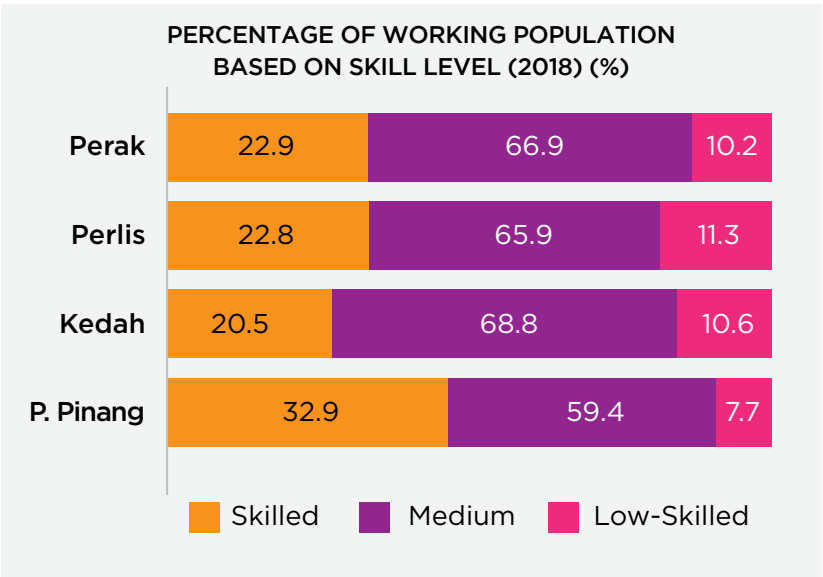
In order to move up the value chain and be a world-class economic region, NCIA is poised to nurture the human capital and talent workforce in NCER to adapt with the needs of the economy. All NCER states have recorded increasing labour force participants from 2016 to 2018, with **Perak** possessing **the highest number of labour force participants**, followed by Kedah and Pulau Pinang. **Perlis**, however, recorded a **huge gap** in terms of **labour force participants** compared with other NCER states.



Source: DOSM

Based on the findings from the Ministry of Education’s Graduate Tracer Study (SKPG) for 2018, NCER also has a **high percentage of unemployed graduates** with a total of 18,900 first degree holders and above remaining unemployed after one year of graduating.

Several roundtable discussions have been held between the industries and academia to identify the root cause of the problem. It was found that one of the key contributing factors was the **mismatch of the graduates’ existing skill set against industry’s needs**, especially in technical areas. Another main reason was the **dwindling enrolment in technical fields** in local universities. In this regard, actionable programmes have been identified **to address these gaps** in the industry, including human capital initiatives such as the NCER Talent Enhancement Programme (NTEP).



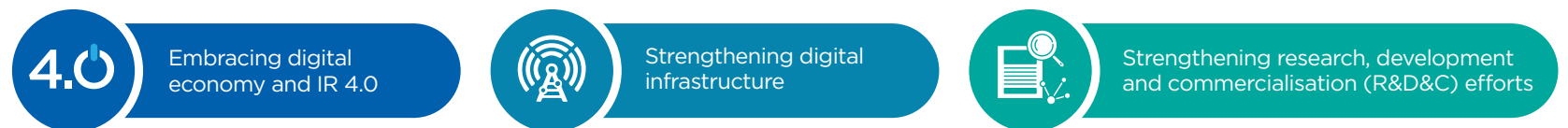
Source: DOSM

Advanced Technology

The fourth enabler is **advanced technology**, embracing **digital economy** and the **Fourth Industrial Revolution (IR 4.0)**. This includes **strengthening digital infrastructure** in NCER such as **broadband connectivity**, as well as driving efforts in **research, development and commercialisation (R&D&C)**, among others.

As the digital economy grows, NCIA is prepared to embrace the shift into the digital era. As such, it has formed **collaborations** with numerous prominent stakeholders in NCER that comprises **Government authorities, industry players** and **higher learning institutions**. These active engagements are aimed at ensuring that the key stakeholders are able to adapt to the ever-changing business environment in the digital age.

The key focus areas in this scope are as follows:



Advanced technology will serve as the fourth enabler to spur NCER's economic growth

NCER STRATEGIC PROJECTS AND PROGRAMMES

High-impact projects and programmes in NCER are defined as **initiatives that contribute directly and significantly** towards achieving the targeted key outcomes for the region, which consist of **job creation, encouraging entrepreneurship, high income for the rakyat and increase in investment**. In line with this definition, high-impact projects and programmes are expected to **contribute to the national GDP and create positive spillover impact to the local economy**.

These projects and programmes must also meet the criteria of **requiring strategic planning at the regional level**, and **could not be carried out by State Agencies alone**, for instance, projects that require **significant investment** or **regional coordination** across multiple states. In addition, the high-impact initiatives must be aligned with the national **Shared Prosperity Vision**, as well as the respective **State's vision** in terms of **key focus area or industry**.

Besides projects in **key priority** sectors, high-impact projects include **strategic projects** which **are required to support future regional or national strategic direction**, or **projects that are part of regional or national interest**. **Human capital development and social empowerment programmes** are also defined as high-impact programmes, as these programmes aim to **upskill workers, as well as improve employability, liveability and quality of life**.

The high-impact projects and programmes, that are carried out at **both regional and state levels**, were identified through a rigorous assessment process, based on the input received from the states and focus group discussions held with key stakeholders. These projects have been chosen **based on the individual states' existing strengths and potential opportunities, regional synergies, current socioeconomic situation, focus areas and priority sectors**, as well as the respective **state's strategic framework**. Hence, the implementation of these projects will address the development issues and key challenges faced by each state, while benefitting all *rakyat* as aspired by the Government.

Implementation Model

In driving a balanced regional growth for NCER, the projects implemented are classified under **three categories**, namely **Public Projects, Private Projects** and **Public-Private Partnership (PPP) Projects**. They are categorised based on the roles and responsibilities of the parties involved, as well as the source of financing.

Public Projects

Public projects are projects **driven and financed by the public sector**, and are typically owned by **the Government**. Upon the completion of their development phase which involves construction works, the private sector may support the project operations when they are at the operational phase.

Public projects are defined as **strategic, high-impact projects** with **wide-reaching benefits to society and the economy**. Because of this definition, public projects typically involve high capital expenditure costs, special strategic purpose, or human capital development and welfare programmes. In most cases, public projects **help address a critical need for development** that is usually a gap in the current framework, or may drive development by catalysing growth in a particular region or industry.

Examples of public projects with a heavy focus on strategic infrastructure include the **Broadband Penetration Enhancement Plan of Kedah and Perlis, Sidam Logistics, Aerospace and Manufacturing Hub (SLAM), Silver Valley Technology Park**, as well as **transport-related projects** such as **Kangar Sentral, road upgrading works for Kedah Rubber City and Changkat Byram connectivity**.

Public projects with a special strategic purpose include **Special Development Zone** projects at various rural locations in NCER such as Permatang Pauh, Baling, Sik, Pengkalan Hulu and Yan, and **agribusiness initiatives** such as Estate Management Model 2.0. These projects aim to uplift local communities by increasing productivity, providing more opportunities and increasing overall income through community-based industries as well as cottage and resource based-industries, alongside traditional sectors such as agriculture. This category also includes projects such as Kedah Malay Reserve Land Trust Fund, which targets specific issues in the State that are hindering investment and development, as well as the Kedah Biodiversity Trust Fund, which aims to unlock the potential value of biodiversity in Kedah's vast forest reserves.

Public projects also include **human capital development, upskilling-related projects** and **welfare programmes** such as empowerNCER, entrepreneurNCER, Centre of Excellence TVET @ NCER, Kasih Ibu Darul Aman (KIDA) and Dana Usahawan Bumiputera.



Public-Private Partnership (PPP) Projects

Public-Private Partnership (PPP) projects are **collaborative projects** driven by **both the public and private sectors**. PPP projects are generally defined as long-term contracts between the Government and a private party to provide a public asset or services (*Source: PPP Knowledge Lab, World Bank*). In most cases in NCER, the role and financing percentage between the public and private sector normally ranges from about 30:70 to a more even 50:50 ratio.

PPP are common in **infrastructure and industrial park projects**, which typically require significant capital expenditure investment.

PPP projects in the **tourism industry** can be applied to a wide range of tourism products including **iconic cultural landmarks, natural heritage sites** and **national parks**. Under the PPP model, the public sector creates financial solutions and incentives as well as provides basic infrastructure for the project.

The use of **Anchor Company Model** is an example of PPP projects in NCER's **agribusiness** sector, where the use of supporting contracts such as **contract farming agreements** is also common.

Private Projects

Private projects are **driven and wholly financed by the private sector**, which typically owns the projects. Private projects are primarily **profit-driven** and **address specific business needs** in the economy. Certain private projects may be **infrastructure intensive**, such as projects in the logistics and transportation sector, as well as the energy sector, for example, the development of **Sanglang Maritime Integrated Corridor, Independent Power Producer (IPP) plants**, and **the expansion of Penang Port and Lumut Port**.

Otherwise, the basic and supporting infrastructure required for private projects are usually already in place in most cases. Private projects cover a wide range of industries, from energy to manufacturing, and tourism to agrofisery. Examples of private projects include the development of **Langkawi Low Carbon Island, Kedah Energy Park** and **Centre of Excellence, Penang cruise homeport, proposed medical wellness centre in Balik Pulau, development of New Kamunting Industrial Park, Kossan Glove City** and **Kedah Integrated Agrofisery Terminal**.



Key Strategic Projects and Programmes

There are **seven focus areas** for the catalytic projects and programmes in NCER, consisting of **New/Thematic Industrial Parks, Infrastructure, Agribusiness, Tourism (Public-Private Partnership Model), Human Capital Development, Investment/Incentive Programmes and Natural Resources.**



Strategic Infrastructure Projects

Infrastructure projects are significant strategic investments that act as key enablers for the region by **increasing connectivity** and **facilitating cross-border movement** of goods and people that will further boost trade, business and investment.

Strategic infrastructure projects in NCER include **key transportation and logistics nodes** covering **seaports, airports, roads and rail**, as well as **special development zone projects** to catalyse growth in targeted rural areas. Key infrastructure projects in NCER include the **Kedah Aerotropolis**, which **comprises Kulim International Airport (KXP) and Sidam Logistics, Aerospace and Manufacturing Hub (SLAM), Padang Besar Border Gateway and the Northern Corridor Highway.**

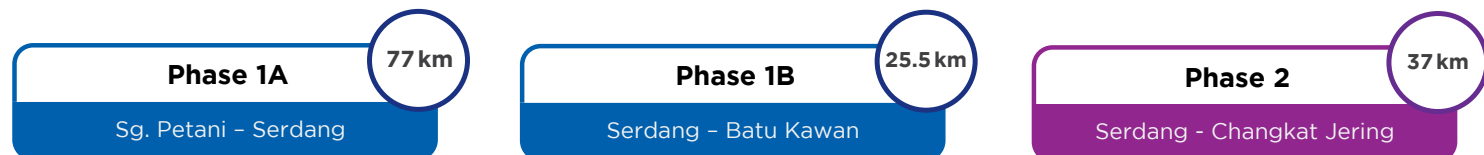
Infrastructure projects also include the **strengthening and widening of broadband network coverage**, such as the Broadband Penetration Enhancement Plan in Perlis and Kedah. Broadband infrastructure is increasingly necessary to support efficient communication in both business and social environments, in order to embrace knowledge-based digital economy.



Enhancements in key transportation networks is crucial to further promote economic growth in the region

Northern Corridor Highway

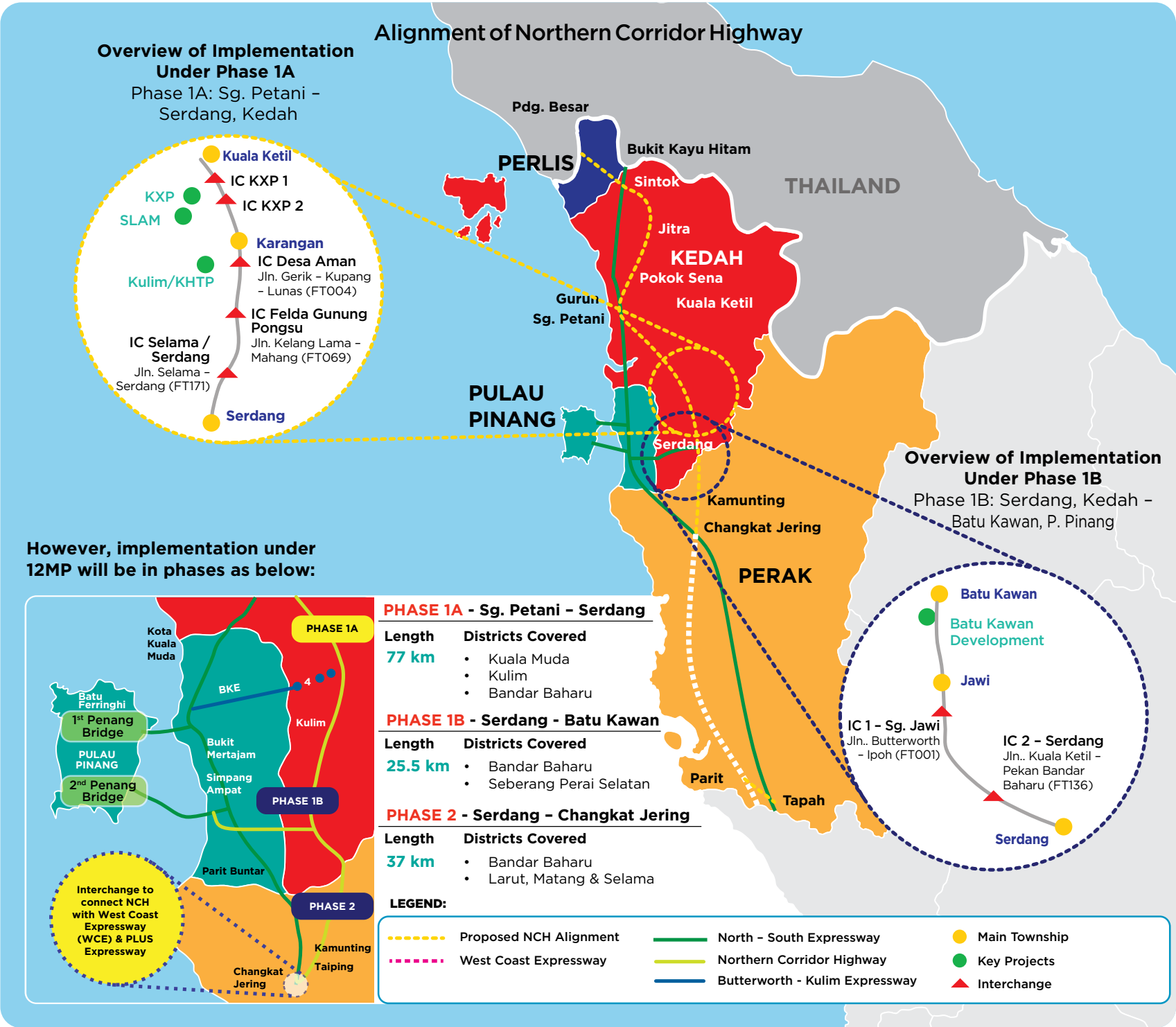
The Northern Corridor Highway is one of the seven mega projects announced by the Minister of Economic Affairs during his visit to Kedah on 19 March 2019.



Phase 1 of the development will cater for major development areas such as **Sungai Petani**, **Kulim International Airport (KXP)**, **Desa Aman**, **Kulim Hi-Tech Park (KHTP)** and **Batu Kawan**.

Meanwhile, **Phase 2** of NCH will connect **Serdang in Kedah** to **Changkat Jering in Perak**. Once completed, it will create continuous connectivity with the West Coast Expressway (WCE) and PLUS Expressway. This project will not only improve inter-city connectivity and reduce the congestion on PLUS Expressway, but will also catalyse the development in less developed areas, especially in hinterland Kedah and Perak. The project planning is expected to commence in 2020.





Pulau Bunting Development

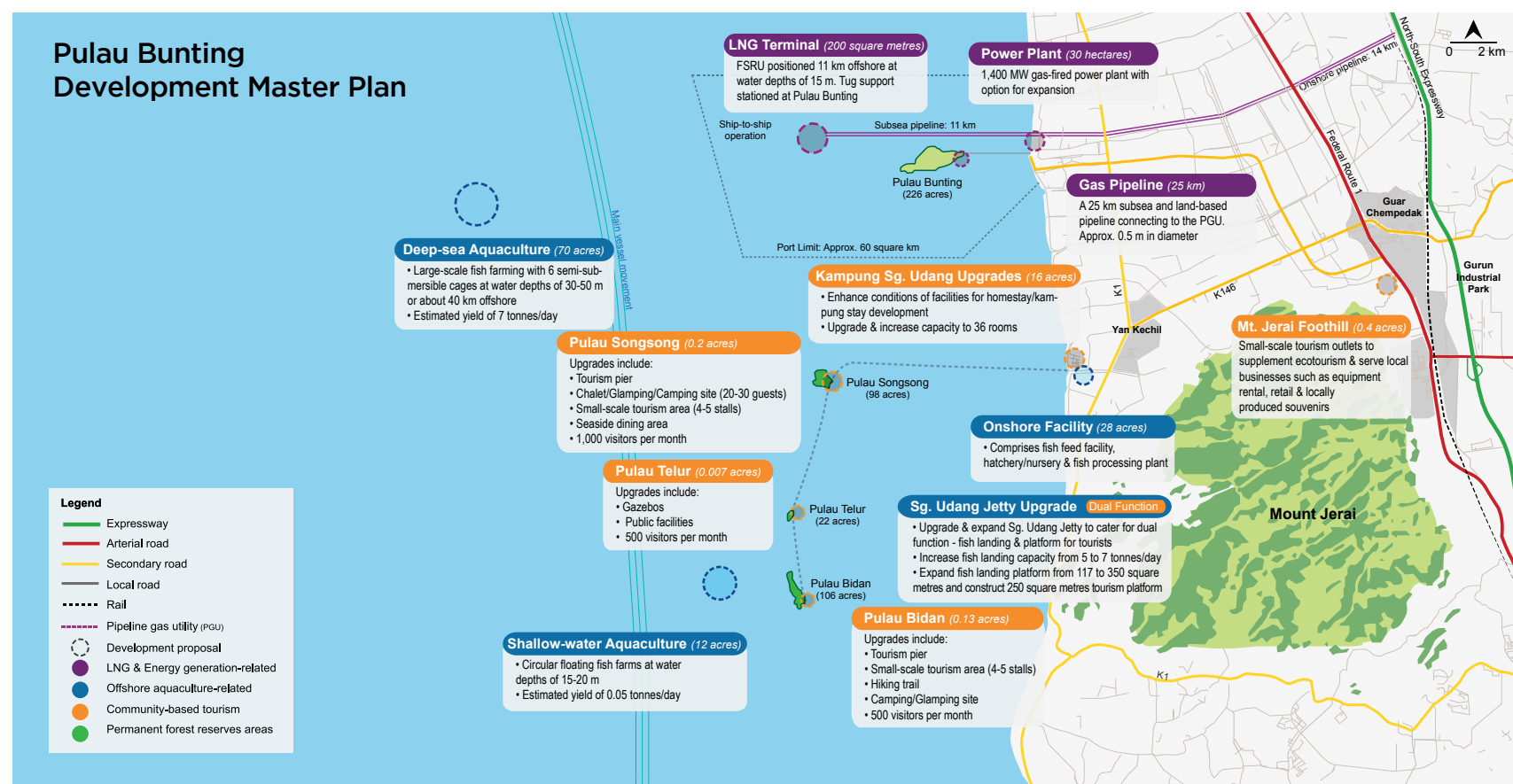
Economic disparity remains evident in Kedah, particularly in the **district of Yan** where the main economic activities consist of **paddy farming** and **fishing**. Land in the area is predominantly used for a **single purpose**, such as agriculture, and there is a **lack of integration in terms of economic activities**.

Nevertheless, Yan and the surrounding areas are already attracting tourists from the local community. Hence, NCIA has outlined a strategic plan to develop the district in a feasible, impactful and sustainable manner through the integrated development of **Pulau Bunting**, an island located in the district.

The 226-acre Pulau Bunting is part of a cluster of four islands off the coast of Yan, alongside Pulau Song-Song, Pulau Telur and Pulau Bidan. The development plan for the island was formulated

to **optimise the potential of Pulau Bunting** and to **encourage private-driven projects in Yan** which will bring a new economic dimension into the region.

Under this development, Pulau Bunting will be transformed into a **hub for tourism, industrialised offshore aquaculture** and **Liquefied Natural Gas (LNG)**. The development of Pulau Bunting aims to encourage the participation of local communities in economic activities, hence promoting inclusive growth. Its development will promote synergistic relationship via **industry diversity**, with private investments acting as the preferred engine for economic growth and development. It is envisaged that the **integrated, private-led development** will help transform Yan from a solely agricultural district into a **diversified, major township**.



Source: The Development of Pulau Bunting by KPMG

**Pulau Pangkor Duty-Free Island
Infrastructure Enhancement**

Pulau Pangkor has been gazetted as a **duty-free island** commencing 1 January 2020. The objective is to spur Pangkor’s economic growth and enhance its attractiveness as a tourism destination.

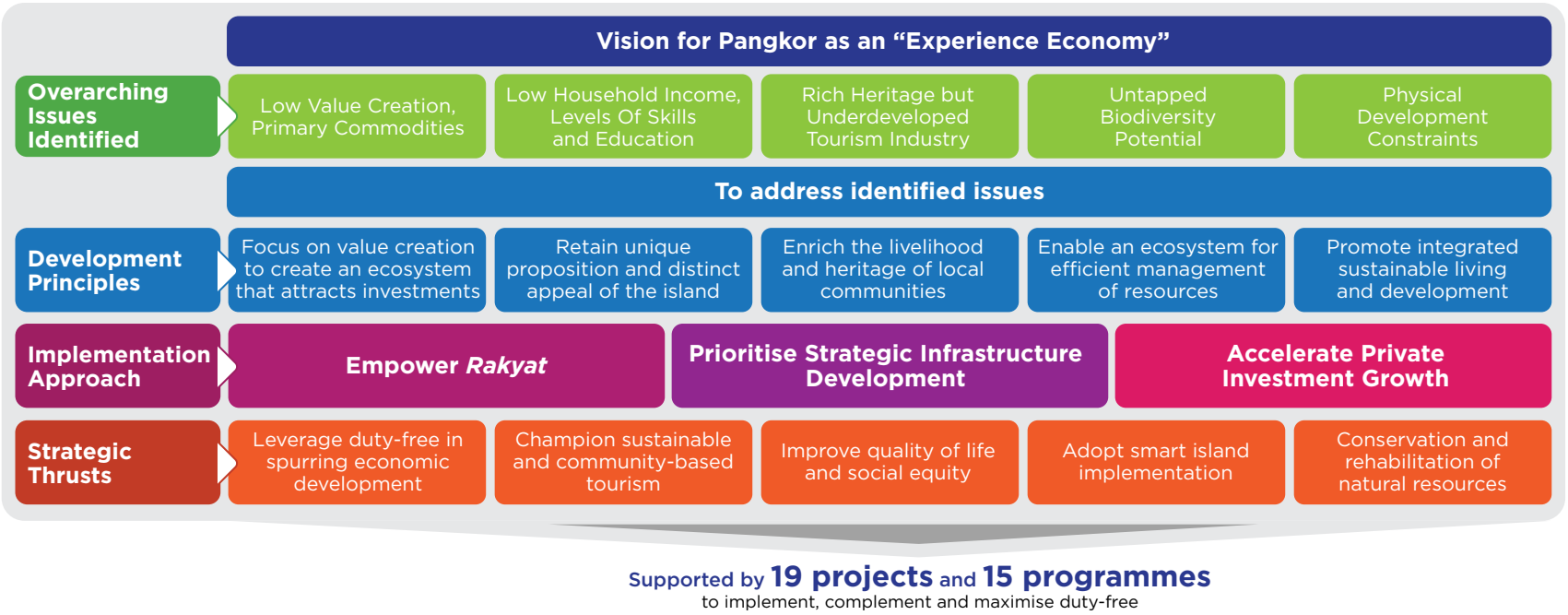
The duty-free initiative is expected to catalyse economic activity on the island, that will contribute to the **growth in tourist arrivals** to the island. In line with this, the future development of Pangkor will leverage its unique strengths, namely:

- Proximity to Kuala Lumpur and its location within the Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT)
- Richness in biodiversity and abundance of natural terrestrial and marine resources
- Unique cultural heritage which includes fishing villages, fisheries and colonial British and Dutch history.

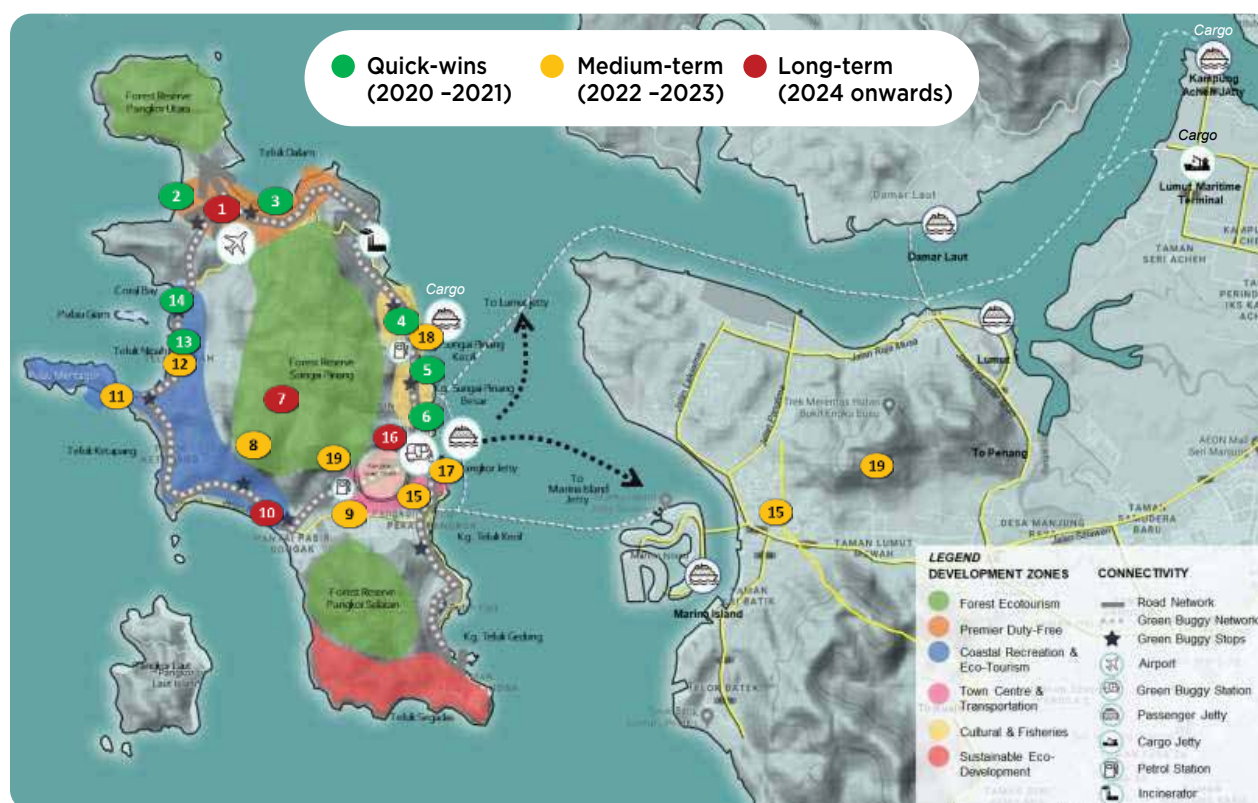
Moving forward, Pangkor is envisioned to become a **niche duty-free island** and **sustainable tourism destination**. Leveraging Pangkor’s existing economic activity, priority sectors will include **ecotourism, fisheries and aquaculture, and seafood processing**. New economic sectors linked to the island’s duty-free status and aspiration to become a smart island have also been identified, comprising **specialised repair services, green economy** and **digital economy**.

The key to attracting private sector investment into Pangkor would be enhanced public infrastructure and connectivity, particularly the completion of the **West-Coast Expressway (Teluk Intan-Lumut)** and **upgrading of the Pangkor passenger and cargo jetty** to facilitate higher volume of tourist and cargo arrivals as a result of its duty-free island status.

Hence, key infrastructure on the island will be further improved, which will involve the upgrading of Pangkor Island Passenger Jetty at Pangkor Town and Pangkor Cargo Jetty at Sungai Pinang Besar.



Pangkor Conceptual Development Framework



PROJECTS

Manufacturing

- 1 Teluk Dalam Premium Duty-Free Complex
- 2 Pangkor Island Beach Resort (Redevelopment)
- 3 Teluk Dalam Resort (Redevelopment)

Cultural & Fisheries Hub

- 4 Sungai Pinang Cultural Hub and Fishing Village
- 5 Fisheries Heritage Centre
- 6 Centralised Seafood Processing Centre

Forest Ecotourism Zone

- 7 Tortoise Hill Nature Adventure Park
- 8 Pangkor Challenge Arena

Cultural & Fisheries Hub

- 9 Pasir Bogak Duty-Free Retail Eco-Park
- 10 Pangkor TVET Training Centre
- 11 Pangkor Zipline Flyer
- 12 Pangkor Nature Discovery Centre
- 13 Teluk Nipah Sunset Beachfront
- 14 Pangkor Seafood Beach @ Coral Bay

ENABLERS

Connectivity, Accessibility & Transportation

- 15 Pangkor Cycle Initiative
- 16 Green Mobility Public Transport
- 17 Pangkor Town Passenger Jetty
- 18 Sungai Pinang Besar Cargo Jetty
- 19 Hello Pangkor - Digital Tourism & Self-drive Holiday Route

PROGRAMMES

Duty-Free

- Duty-free readiness for local entrepreneurs
- Youth tobacco and alcohol awareness

Tourism

- Capacity building for domestic MICE
- Pangkor Tourism Marketing & Branding

Environment & Sustainability

- Coral rehabilitation
- Green turtle conservation
- Capacity building towards becoming a sustainable tourism observatory
- Waste segregation & community recycling

Human Capital Development

empowerNCER

- Training and certification of nature and localised guides
- Local handicraft and waste-to-wear for local women and youth
- Cycle repair and assembly skills for youth
- Digital literacy for youth

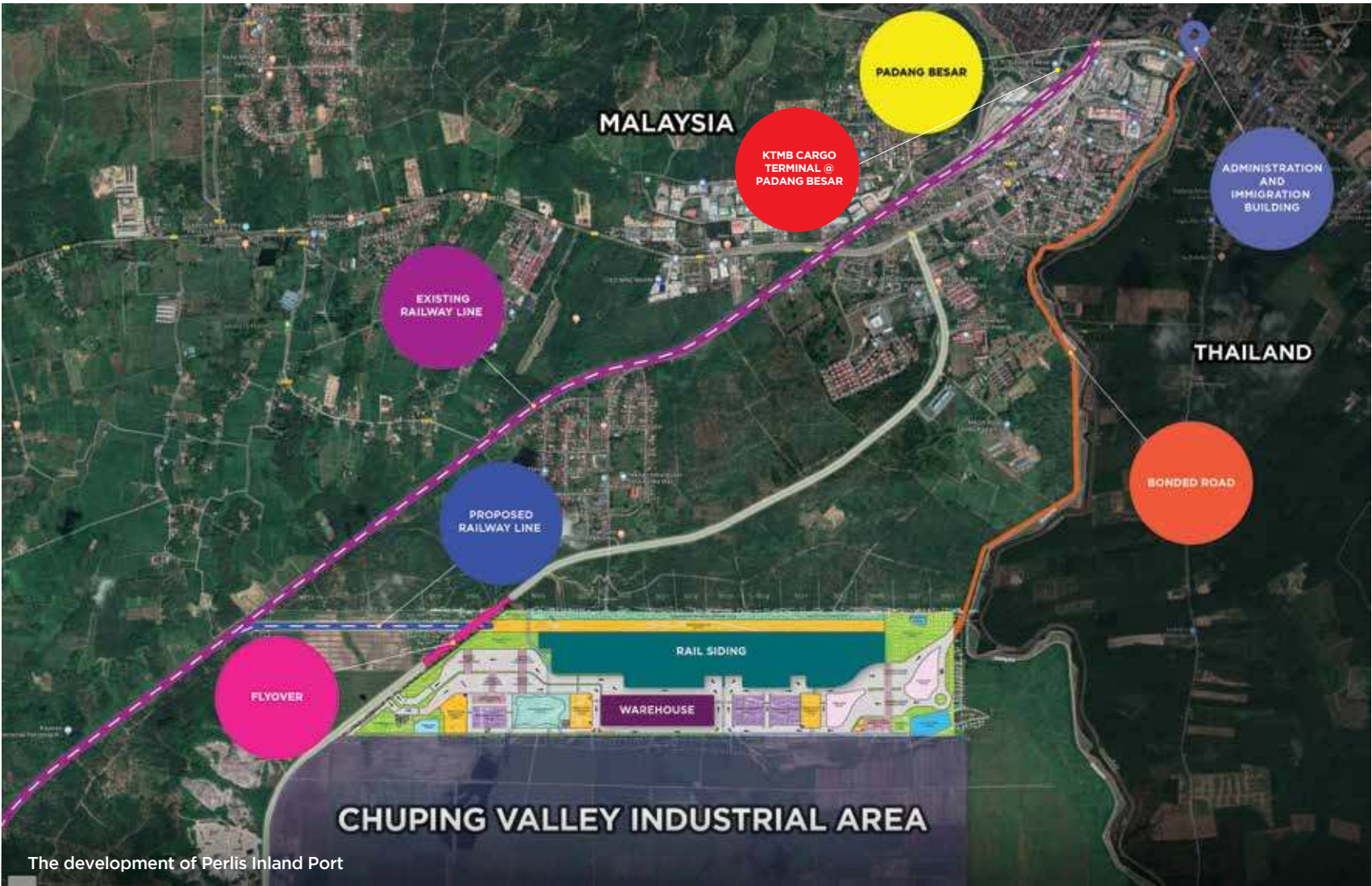
entrepreneurNCER

- Certification and product upscaling for seafood operators
- Fishermen development through pesca-tourism
- Skill enhancement for local operators

Perlis Inland Port

The Perlis Inland Port (PIP) entails the development of inland port facilities with a capacity of 2 million TEUs annually and the development of commercial facilities and logistics over an area of 375 acres to cater to the export markets. PIP will serve as the new gateway for trade, specifically for container routes passing through Padang Besar in Perlis. This project will be carried out via a public-private partnership, where the Federal Government through NCIA will develop the external infrastructure while the private sector will develop the inland port, together with other components.

Perlis Inland Port was established as a catalyst for logistics development in Perlis and to facilitate cross-border trade between Malaysia and Thailand, that will transform Perlis into an international border town and logistics hub, thus, creating socioeconomic growth and spillover benefits to the State. It is expected to create about 4,000 jobs and generate a Gross National Income of RM1 billion.



The development of Perlis Inland Port

Kedah Aerotropolis

Under this project, Kedah Aerotropolis is envisioned as an **airport city** that will serve as an **aerotropolis economic region**, driven by **intermodal connectivity** focusing on **cargo, logistics** and **industrial development**. The proposed site for Kedah Aerotropolis is at **Mukim Sidam Kiri** of Kuala Muda District, Kedah.

- Kedah Aerotropolis will **boost Kedah's GDP** by an **additional 3%** annually
- **Kulim International Airport (KXP)**, together with **Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)**, will be the **game changer** for NCER, whereby it will help **narrow the economic disparity gap** within the NCER states

Source: AB Consulting Research & Analysis

The development of both **KXP** and **SLAM** is expected to be the impetus of the establishment of KXP Aerotropolis, a metropolitan subregion with over 9,800 acres in footprint where the infrastructure, facilities and economy are centred around the airport which serves as a multimodal "airport city" commercial core.

PRIVATE FUNDING

Kulim International Airport (KXP)

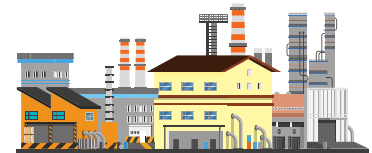


Other Developments (e.g. Commercial Areas, Mixed Residential)



GOVERNMENT-LED

Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)



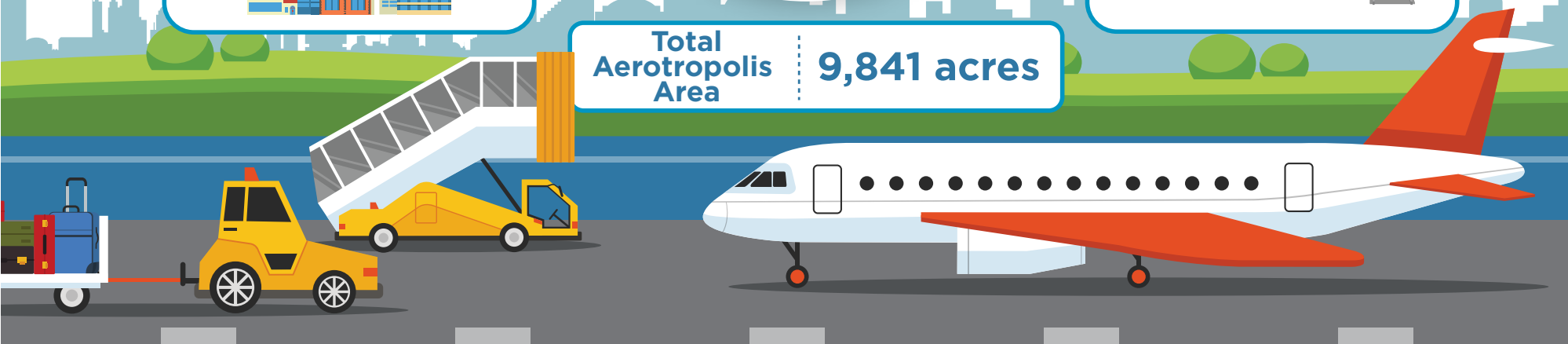
External Infrastructure; Direct Road and Rail Connection to the Airport



KEDAH AEROTROPOLIS



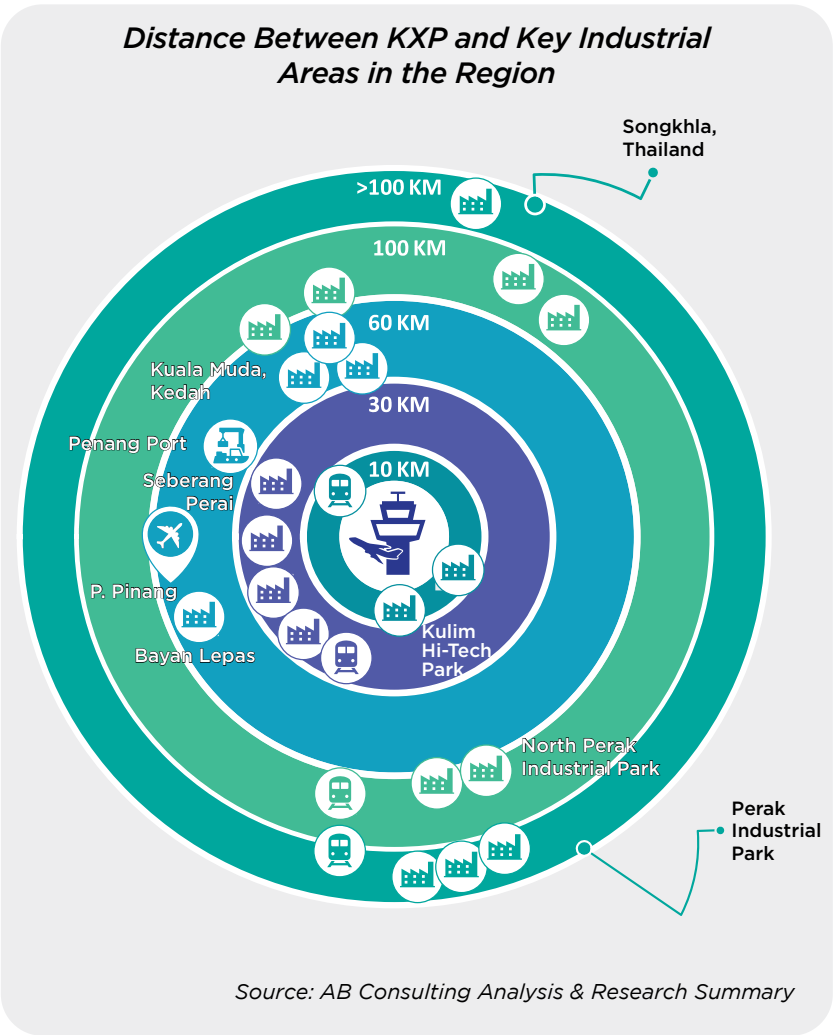
Total Aerotropolis Area | **9,841 acres**



A Game Changer in NCER Economic Development

The development of KXP and SLAM will support the growth of **e-commerce industry**, not only in NCER, but also in Southern Thailand. It will also help accelerate the advancement of **high-tech industries**, such as the **Maintenance, Repair and Operating Supplies (MRO) subsector**.

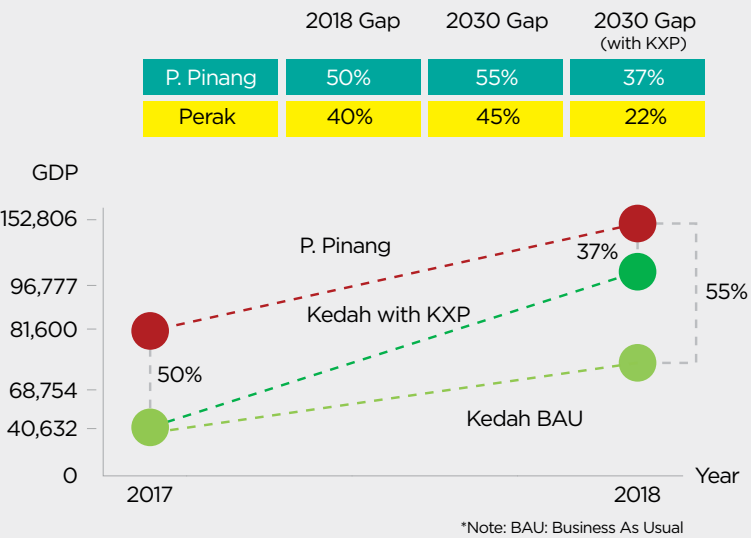
One of KXP’s key advantages over many other airports is its ability to integrate **sea-air-surface transport modes**, hence providing a good intermodal transportation system. With its **close location to the Penang port**, the airport is in a position to facilitate sea-to-air transportation at **half the cost and time**. In addition, KXP has readily available land that can cater for its expansion for the next 20-50 years.



KXP will also complement **Penang International Airport (PIA)** which is expected to reach its maximum annual capacity by 2025, thus ensuring that **the needs of logistics network and services in NCER** would be met accordingly in line with the region’s future development. It will also benefit the region and investors by providing an alternative international gateway into NCER.

In this regard, KXP is expected to create **spill-over effects** in other NCER states comprising Pulau Pinang, especially in the northern and central parts of Seberang Perai, as well as in Southern Kedah and Northern Perak. This will further spur the development of the existing **manufacturing cluster** and **logistics hub** in NCER, while ensuring a more balanced development in the region.

Without KXP, the disparity gap within the four states in NCER will widen, hence levelling up is key.



KXP & SLAM: Levelling Up the Economic Growth in NCER

With **KXP**, Kedah’s annual **GDP growth rate** is projected to be at **7.5%** instead of the current 4.5% per annum. The project is also expected to **reduce the GDP gap** between Pulau Pinang and Kedah to **37% by 2030** from 50% presently. Together with **SLAM**, KXP will be **the game changer** in reducing the economic disparity within NCER, benefitting not only the state of Kedah, but **all states in the region**.

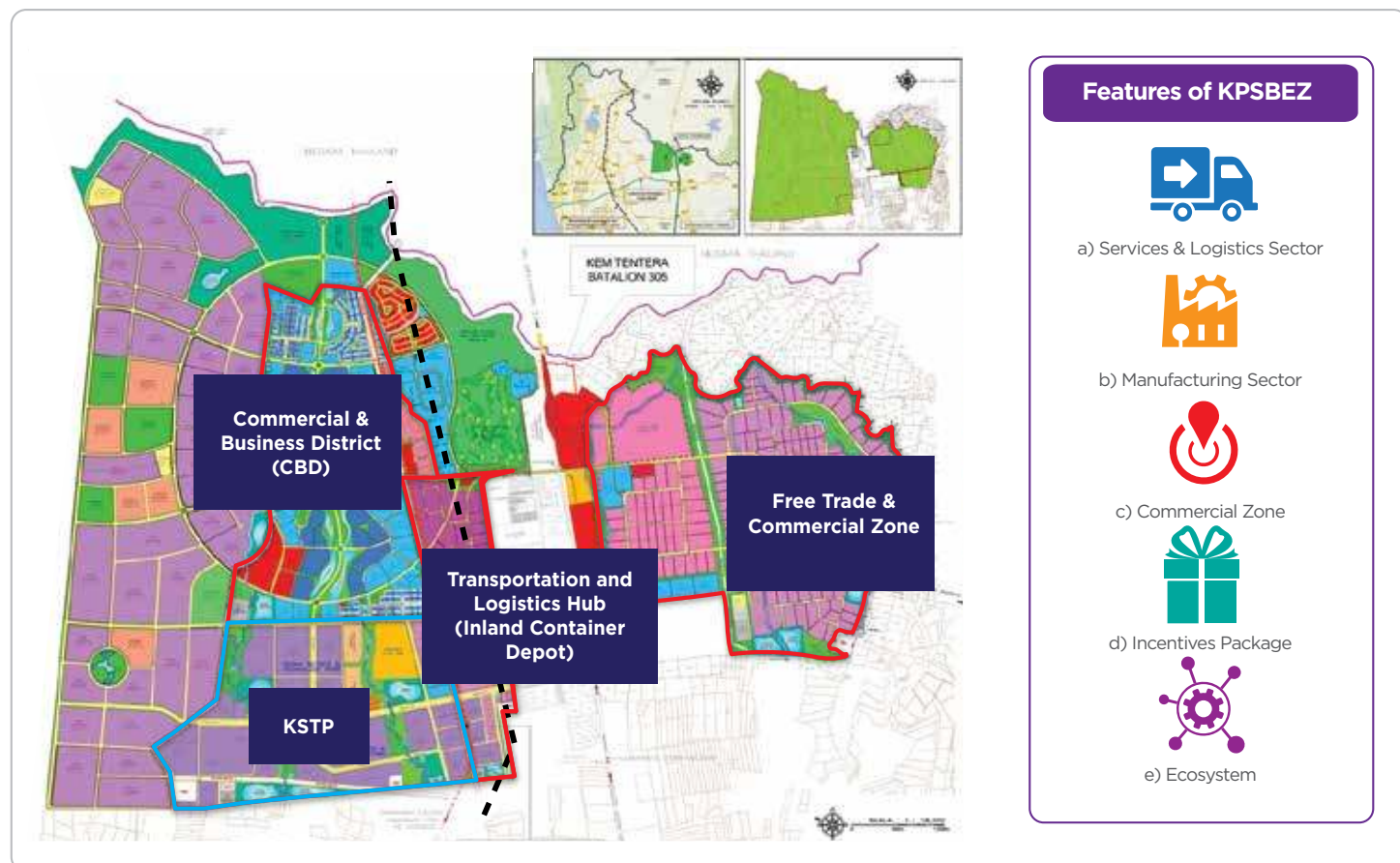
Source: AB Consulting Analysis & Research Summary

Bukit Kayu Hitam Special Border Economic Zone (SBEZ)

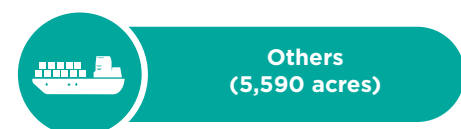
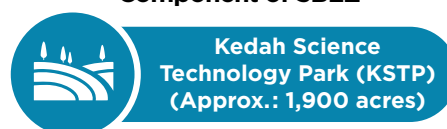
Bukit Kayu Hitam Special Border Economic Zone (SBEZ) is a new development covering approximately **11,000 acres** of land **located near the border area of Kedah and Sadao, Thailand** and is **the only border town in Malaysia** that is located on the **Asian Highway Network** linking Singapore and Thailand via Asian Highway 2 (AH2). Bukit Kayu Hitam SBEZ consists of two main developments, namely, the **Kedah Science & Technology Park (KSTP)** and **Kota Perdana SBEZ (KPSBEZ)**. This development would be a catalyst to stimulate the economic growth in the northern region.

KPSBEZ is envisioned to be the safest, most efficient and sustainable integrated logistics services hub in the region, offering excellent business environment, and focusing on the development of sustainable and efficient logistics chains, clusters and modes of transport.

KSTP focuses on two components, namely the **Global Research Centre (GRC)** and **Modern Industrial Park** as economic drivers for Kedah through applied research and development. The development is expected to create **23,242 new jobs** for the locals and contribute approximately **RM72.7 billion** to Malaysia's GDP.



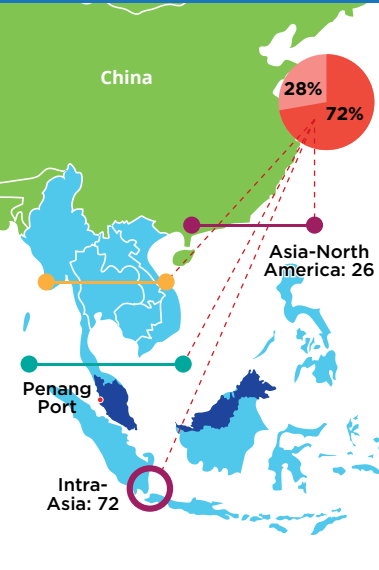
Component of SBEZ



Source: Plan Malaysia Kedah

Penang Port Expansion

- Most of the world's containerised cargo is connected via Asia
- The Asia-Europe, Asia-North America, Asia-Middle East, and Intra-Asia trades alone capture 72% of the world's containerised trade activity



Penang Port is well-positioned to capture more cargoes in the future.

Penang Port Plays a Strategic Role as the Maritime Gateway for Trade and Tourism in NCER



Trade getaway for all states in NCER & Southern Thailand



Cruise tourism



Business attractiveness

Strategies To Enhance Penang Port

Attract Potential Investors to Penang Port



- To attract foreign major investors in shipping and logistics companies to expand their business in Pulau Pinang
- A few major players have expressed interest to invest in Penang Port

1

Positioning Penang Port As A Smart Modern Port & Heart Of Economic Activities



- NCIA to work with Penang Port Commission on the development plan for Penang Port
- Bring port and harbour-related investments to Pulau Pinang and the hinterland

2

Penang Port Expansion Plan & Infrastructure Development



- Expansion of Penang Port infrastructure
- 2019** : 2.32 mil. TEUs
2021 : 2.73 mil. TEUs
2022 : 5.03 mil. TEUs
2030 : 7.5 mil. TEUs

3

The **expansion of Penang Port** will further enhance its importance as the **maritime gateway for trade and tourism in NCER**, as well as **Southern Thailand**. As of 2019, the port is capable of handling 2.3 million TEUs of cargo annually and it is well positioned to capture more cargo in the future. With the port expansion and infrastructure development, Penang Port will be positioned as a **smart, modern port** that is capable of handling **7.5 million TEUs of cargo per year by 2030** onwards.

Integrated Economic and Community Centre (I-CON@NCER)

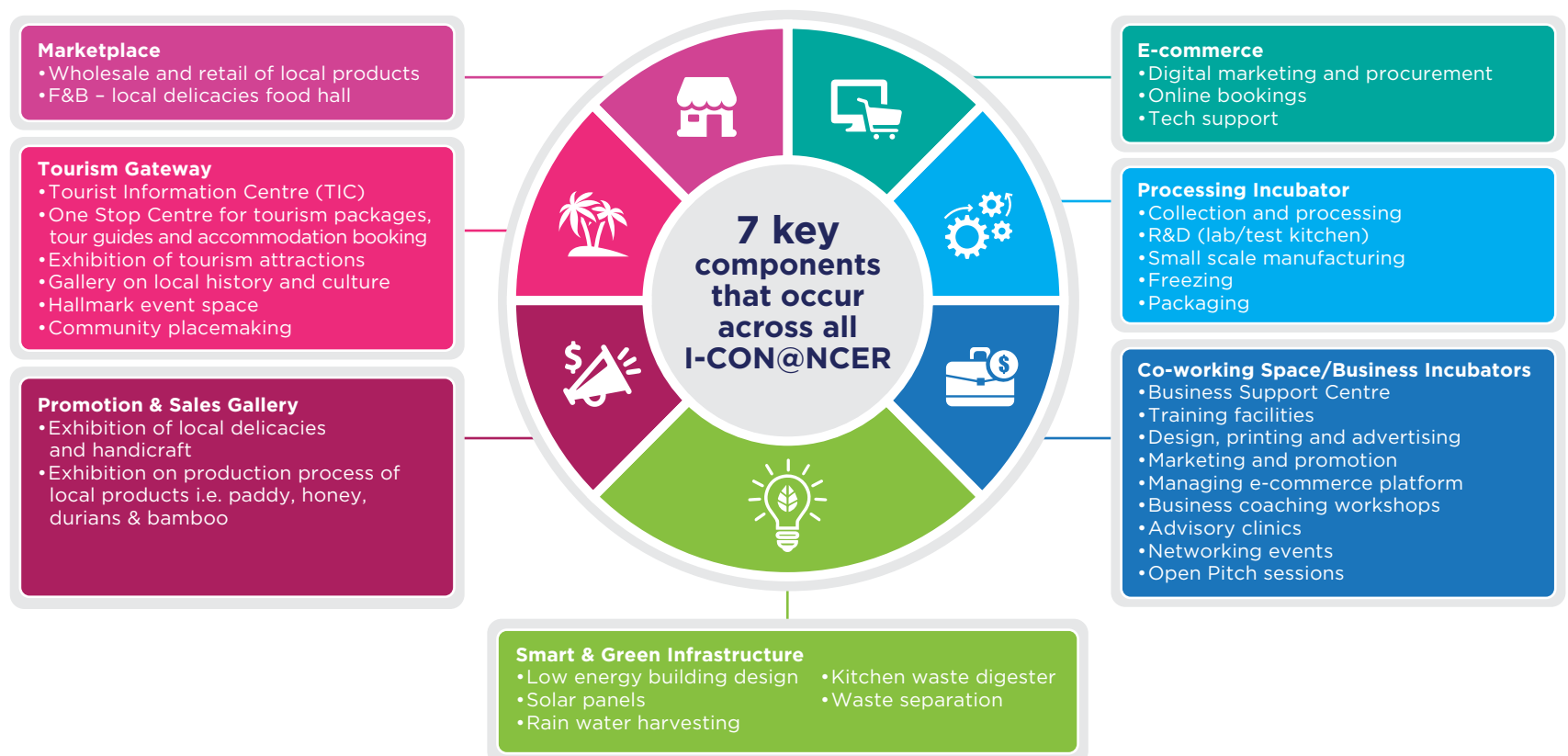
Integrated Economic and Community Centre (I-CON@NCER) is the new approach to reduce the disparity gap between the *rakyat* living in urban and rural areas by unlocking the potential of Malay Reserve Land (MRL) and less developed areas (LDAs). This approach is in line with the Government's Shared Prosperity Vision 2030 which emphasises on sustainable development and equitable distribution of wealth for all Malaysians.

Four districts have been identified as **pilot projects** for I-CON@NCER, comprising **Pengkalan Hulu in Perak**, as well as **Baling, Sik and Yan** in Kedah. The I-CON@NCER will drive rural economy that

is capable of **generating sustainable income for the locals**, as well as **creating new job** and **entrepreneurship opportunities** while reducing out-migration.

The proposed main component for I-CON@NCER is to provide infrastructure and facilities in the selected locations. Under the NCER Strategic Development Plan (2021-2025), economic activities in the I-CON@NCER and its surrounding area will be based on the local potential of each respective location and will be carried out through the establishments of the following components:

There are seven (7) key components that occur across all I-CON@NCER. There will also be additional components tailored to each SDZ according to their economic drivers.



Kedah Digital Library (KDL)

Realising the importance of ICT in education, especially in **making knowledge and information more accessible to students and teachers**, NCIA has been tasked to replicate the Penang Digital Library in other NCER states during the 20th NCIA Council Meeting in March 2019. The project will kick off in the State of Kedah, with the establishment of Kedah Digital Library (KDL) on the existing Memorial Tunku Abdul Rahman Building in Alor Setar.

KDL will be developed in an area spanning 2.13 acres that is nestled in the green lung area of the city. The **Memorial Tunku Abdul Rahman Building** itself is rich with heritage value and charm, and is expected to become an iconic landmark once transformed into a digital library.

The digital library will **cater to the lack of digital library facilities in Alor Setar** and shall **serve the local communities, schools and agencies**. Its development will consist of several components, including a Mansion Library, reading spaces, and a gallery hall to commemorate notable Kedah leaders. These will be complemented with commercial facilities such as a cafeteria and restaurant, as well as a community hall that will serve as a multi-event space.

The development of KDL will be undertaken in two phases, comprising Phase 1 which will involve the renovation of the existing building as a Library Mansion, and Phase 2 which entails the development of a new annex building.



Artist's impression of the brand new Kedah Digital Library (KDL) in Alor Setar



Artist's impression of KDL

Thematic Industrial Parks

New/Thematic Industrial Parks refer to **industrial park projects** with targeted focus industries, such as **Chuping Valley Industrial Area (CVIA)**, **Kedah Eco Innovation Park (KEIP)** and **Silver Valley Technology Park**. Each of these industrial parks has a **specific focus area** with their own targeted industries, where they are aimed at **leveraging the existing strengths of the state or region**. For example, **KRC is envisioned** to be the driving force in **linking the region's major rubber producers in Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT) together**, capitalising on its strategic position within the "Rubber Belt" of the Malaysia-Thailand border.

Certain industrial parks have the added advantage in terms of strategic geographical location or well-connected logistics infrastructure of land, rail, air and seaport links, which help facilitate efficient movement of manufacturing input and goods produced.

While spurring growth in high-value manufacturing of key products, thematic industrial parks also play an important role in terms of **catalysing growth down the value chain of the industry, creating a network of supporting industries and suppliers** in the region, leading to a more complete business ecosystem. Overall, this will help create more opportunities for employment in the region, as well as contribute to reducing reliance on imports.



Kulim Hi-Tech Park, the first high technology park in Malaysia



Integrated Business Centre (IBC) at Chuping Valley Industrial Park

Chuping Valley Industrial Area (CVIA)

The development of CVIA at Lembah Chuping in Perlis with a total area of **2,482 acres** is centred around **green industries**, such as **green manufacturing** and **renewable energy generation**. Consistent with the State's vision, CVIA also focuses on **halal industries** to transform Perlis into a high-income and industrialised state by 2030.

Situated **near the border town of Padang Besar**, which plays an important role in attracting shoppers from both Thailand and Malaysia, CVIA is surrounded by areas that host **a diverse variety of commercial activities**. The surrounding establishments in Kedah and Pulau Pinang also help in providing value chain support for CVIA.

CVIA is expected to contribute **RM2.58 billion** towards the country's **Gross National Income (GNI)**, as well as attract a total of **RM4.5 billion in private investment** and create **12,674 jobs** by 2030.

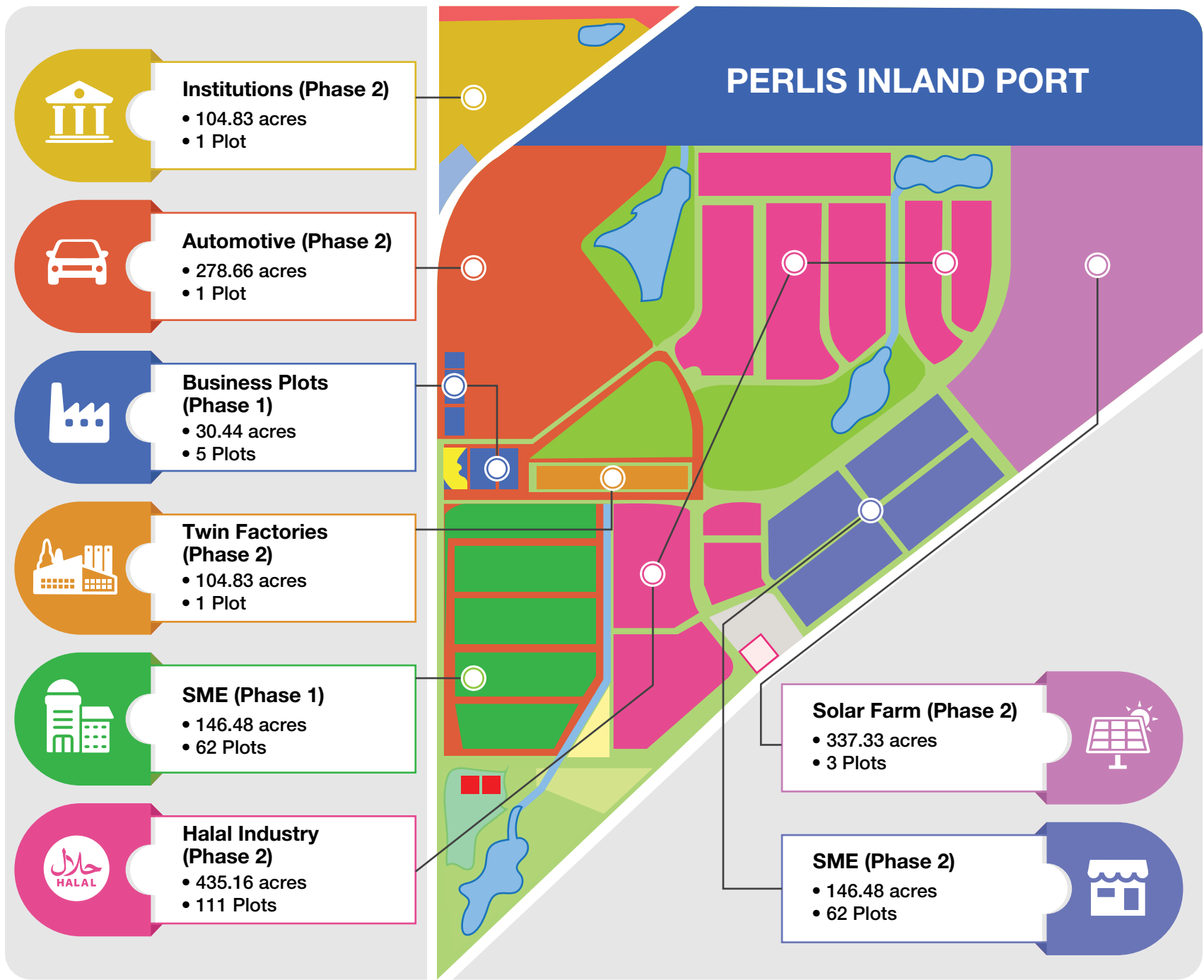
Objectives of CVIA

To develop CVIA to become an economic catalyst, nurturing high-technology industries that employ skilled and semi-skilled workers, encouraging competitiveness and creating social inclusiveness

To complement and maximise the potentials and opportunities of CVIA arising from the surrounding developments

To develop a sustainable model with industries, relevant supporting functions and Institutions of Higher Learning (IHLs) coexisting as part of a mutually beneficial network

Overall Masterplan of CVIA



Kedah Rubber City (KRC)

KRC is one of Malaysia's **national projects** to elevate the global competitiveness of the **Malaysian rubber industry** and provide economic benefit to the surrounding areas. The project is a synergistic effort supported by both **Malaysia and Thailand** to stimulate socioeconomic development in the border region. It will be developed into a **"Rubber Corridor"** that would link together the region's major rubber producers in Indonesia-Malaysia-Thailand Growth Triangle (IMT-GT).

KRC is located at Ladang Bukit Ketapang, about 10 km from Kuala Nerang, the capital of Padang Terap district, and 45 km from Alor Setar, the capital of Kedah State, which is within the **"Rubber Belt"** of the Malaysia-Thai border. Spanning across an

area of nearly 1,250 acres, **seven** key clusters have been identified for KRC, which are **Advanced Latex Products, Tyre and Tyre-Related Products, Automotive Rubber Products, Engineering Rubber Products, Advanced Rubber Materials, Biotechnology,** and **Services & Support**. KRC will also strengthen the **rubber value chain** across the **upstream, midstream** and **downstream** segments in the IMT-GT sub-region, that will enable local small and medium-sized enterprises (SMEs) to be more competitive.

The project is expected to contribute **RM14.7 billion** to the country's Gross Domestic Product (GDP) and create 14,500 jobs once it is completed by 2030.



Smallholders Programme For
Kedah Rubber City (KRC)

KRC development is expected to be completed and operational by **2025**. According to the KRC Development Study conducted by the Malaysian Rubber Board, KRC is expected to require up to **400,000 tonnes** of **latex-based natural rubber supply** per year. Therefore, **sufficient supply of latex is critical** to ensure the **sustainability of rubber industry activities in KRC**.

However, the **current lack of latex production** in Malaysia for industrial use has caused the supply of latex to be imported

from abroad, especially from neighbouring Thailand, which has led to higher costs for the rubber industry in Malaysia. The **local smallholders** in general, have been focusing on the production of **cup lump rubber**, which has **less value than latex**.

Hence, this programme is expected to **enhance the production of latex** in the country in order **to meet the demand of KRC**, thus **reducing the dependency** on latex from abroad while **increasing the income** of **rubber tappers** and **smallholders**.

LATEX COLLECTION CENTRE (LCC)

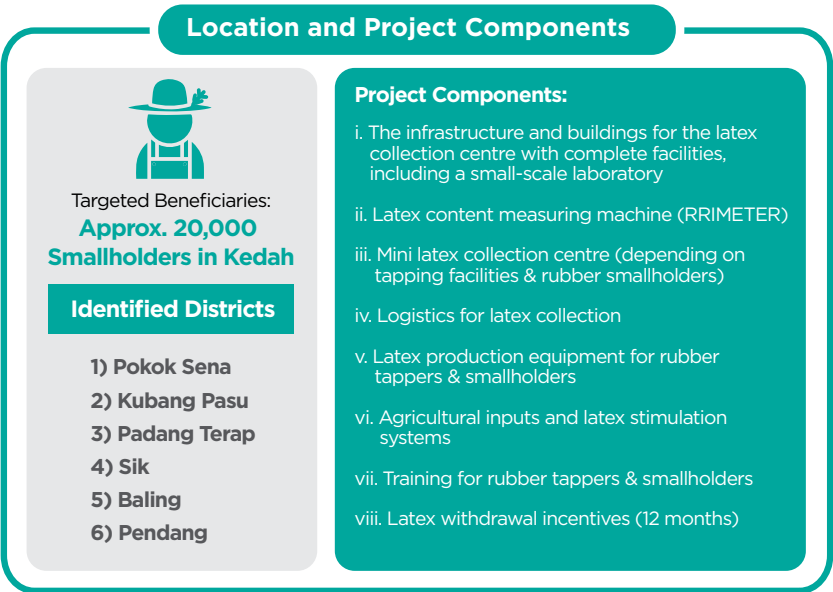
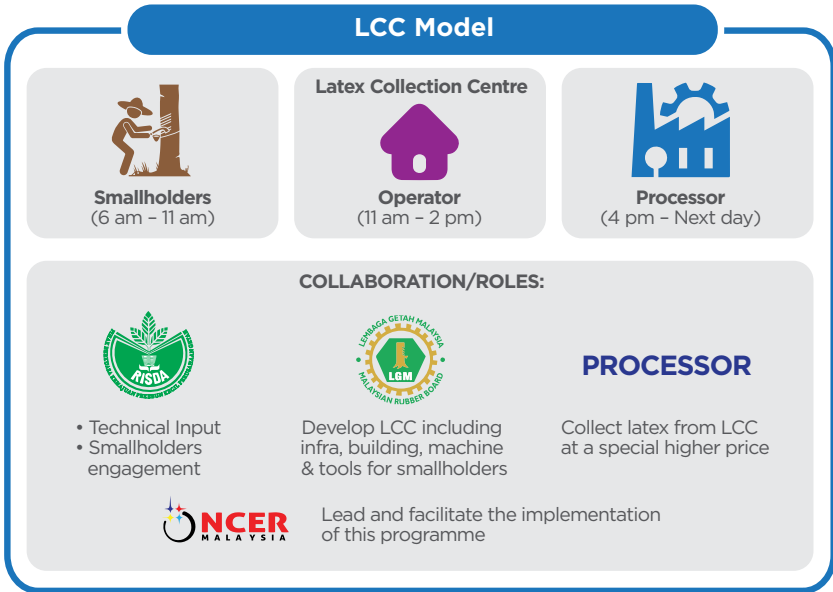
To transform smallholders from producing cup lumps to higher value latex

1

To increase smallholders' income by approximately 30% through harvesting of latex

2

To increase the local production of latex to meet the demand from KRC



Kedah Eco Innovation Park (KEIP)

The increasing number of petrochemical plants and 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 those in the petrochemical industry, with a total investment of around RM207.6 billion.

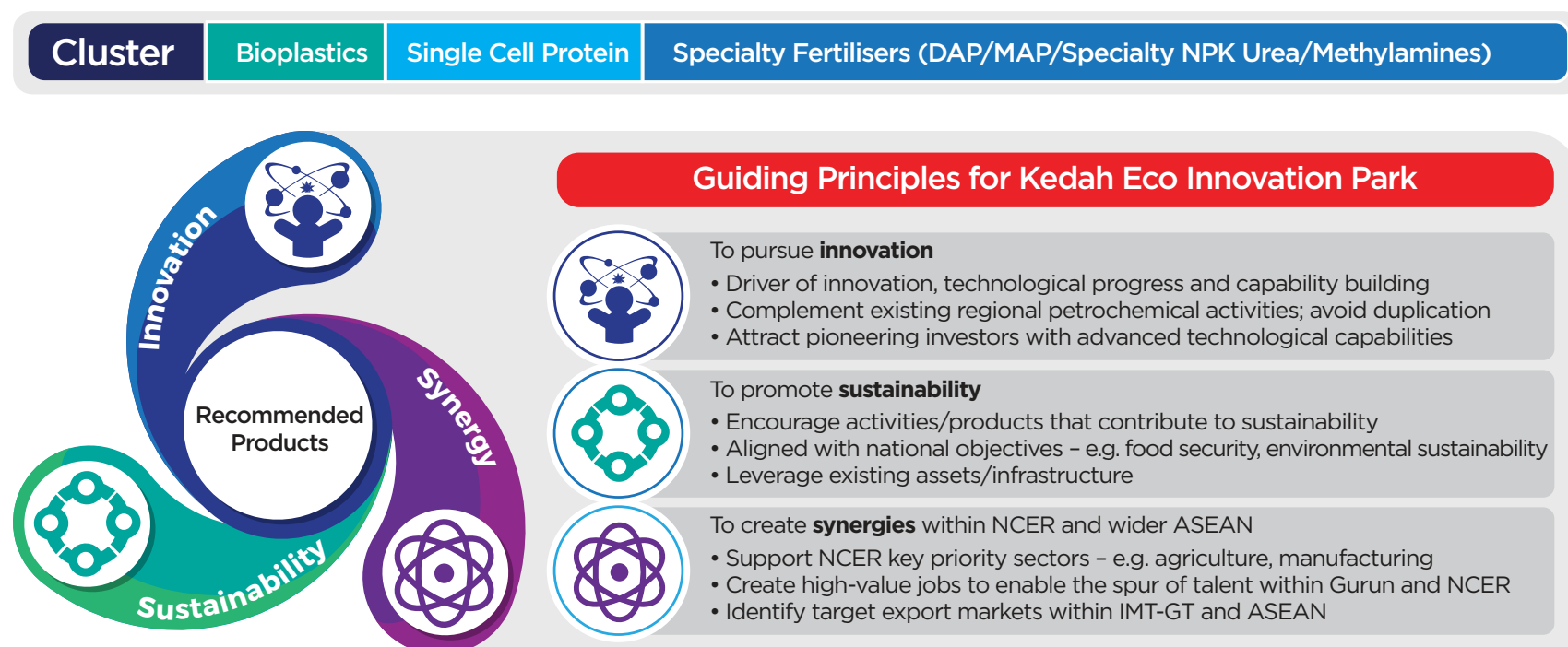
NCER is already **home to existing petrochemical and chemical industry players**, such as **Petronas Chemicals Fertiliser Sdn Bhd** and **Malaysian NPK Fertilizer in Gurun, Kedah**, as well as **Toray** and **IOI Oleo Prai in Pulau Pinang**. This sector is supported by **efficient enablers** and **ecosystem** that include **readily accessible feedstock**, **close proximity to ports**, as well as the availability of **centralised utility facility** and **logistics hub**.

In March 2019, the NCIA Council has given its approval for the Kedah Eco Innovation Park project to be established in Gurun, Kedah. The development of the Kedah Eco Innovation Park will be guided by the principles of innovation, sustainability and synergies,

whereby it will contribute to NCER's key priority sectors by **creating economic value** and **leveraging on existing feedstock sources** and **infrastructure** while creating high-value jobs within NCER. Its development will also take into account related aspects such as the environmental, social and economic impact.

The feasibility study for this project has made recommendations for viable products for the park, comprising **petrochemical and bio-based products**. Products for the proposed park will be determined by several factors, such as **regional competition**, **industry focus**, **Government objectives** and **NCER's focus sectors**. Given the strong regional competition, the proposed park will be focusing on producing differentiated products that will serve the targeted markets, for instance, PETRONAS, which is focusing on specialty chemicals.

The Kedah Eco Innovation Park will play a role in supporting the country's objectives, such as the **national food security** agenda and the promotion of **environmental sustainability**. It will also support the economic objectives of the Kedah State and NCER, while serving the IMT-GT and ASEAN region.



Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)

SLAM is a high-impact project in Mukim Sidam Kiri, Kedah that will complement the development of Kulim International Airport (KXP). The park focuses on **high-value activities in manufacturing, logistics and aerospace**. These activities range from **aerospace** and **manufacturing of avionics and aircraft interiors**, and **maintenance, repair and overhaul (MRO) activities**, and **high-value manufacturing** such as **pharmaceuticals** and **E&E**.

AEROSPACE ACTIVITIES



Avionics, Aircraft Interiors and MRO

- Avionics – Starting from a strong E&E base in NCER
- Aircraft interiors and component MRO supports the achievement of economic complexity objective
- MRO activities, including component MRO

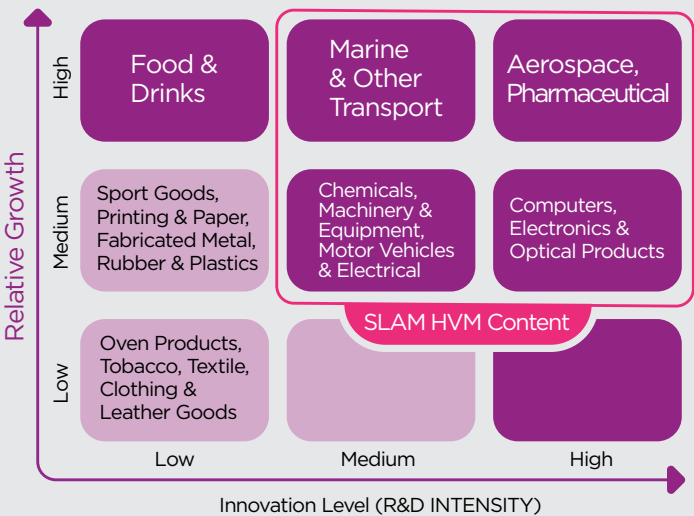
LOGISTICS ACTIVITIES



Intermodal Logistics District and 4th Party Logistics (4PL)

- Intermodal rail-road hinterland terminal
- 4PL logistics services to optimise logistics cost for industrial park tenants

MANUFACTURING ACTIVITIES



Other manufacturing content for SLAM focusing on HVM

Provision of base catchment for logistics activities

Alignment with Industry4WRD focus sectors and NCER Strategic Framework

TARGET AUDIENCE

Catalyst for Kedah’s Economic Growth through Aerospace and HVM Industry in Enabling Malaysia’s Aspiration as the Aerospace Hub for ASEAN Region



Aircraft Manufacturing & Components



Avionics



High Volume Manufacturing



Engineering & Research Centres

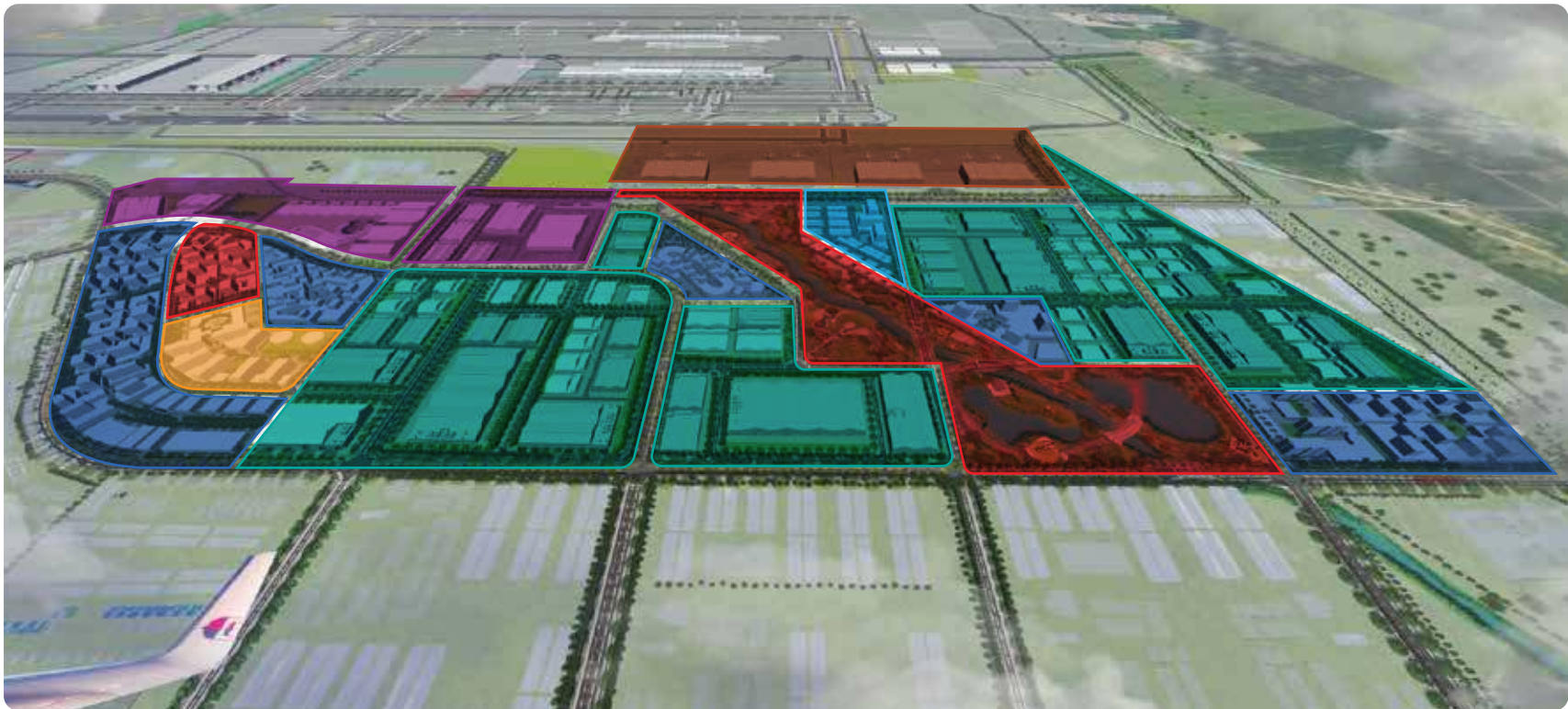


Aviation Logistics & Air Express



International Distribution Centre

SLAM Master Layout Plan and Activities



<div>SUPPORT SERVICES</div> <div>143.23 acres</div>	<div>KNOWLEDGE HUB</div> <div>14.54 acres</div>	<div>ADVANCED MANUFACTURING CENTRE</div> <div>399.73 acres</div>	<div>KNOWLEDGE WORKER COMMUNITY</div> <div>59.78 acres</div>	<div>CENTRAL PARK & POND</div>	<div>MULTI-MODAL LOGISTICS WAREHOUSING</div>	<div>MRO</div> <div>201.64 acres</div>
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Silver Valley Technology Park (SVTP)

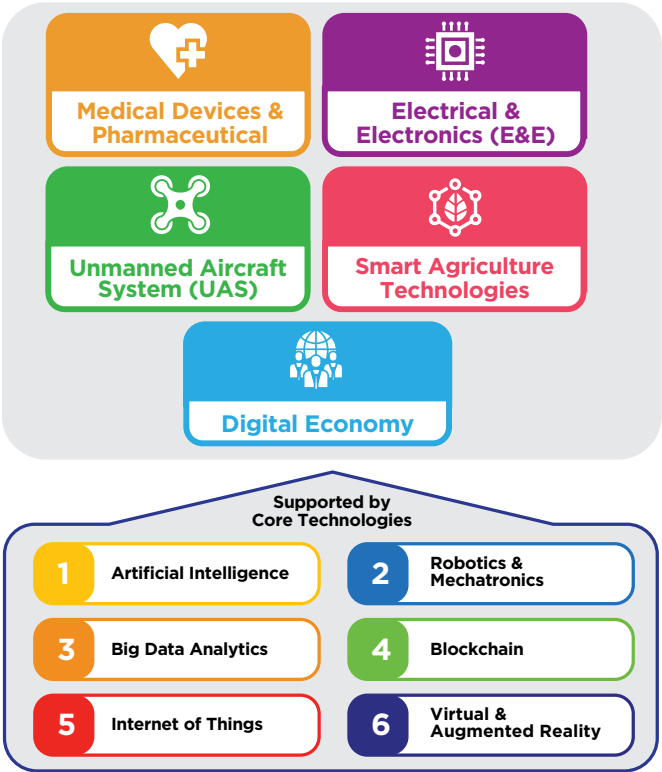
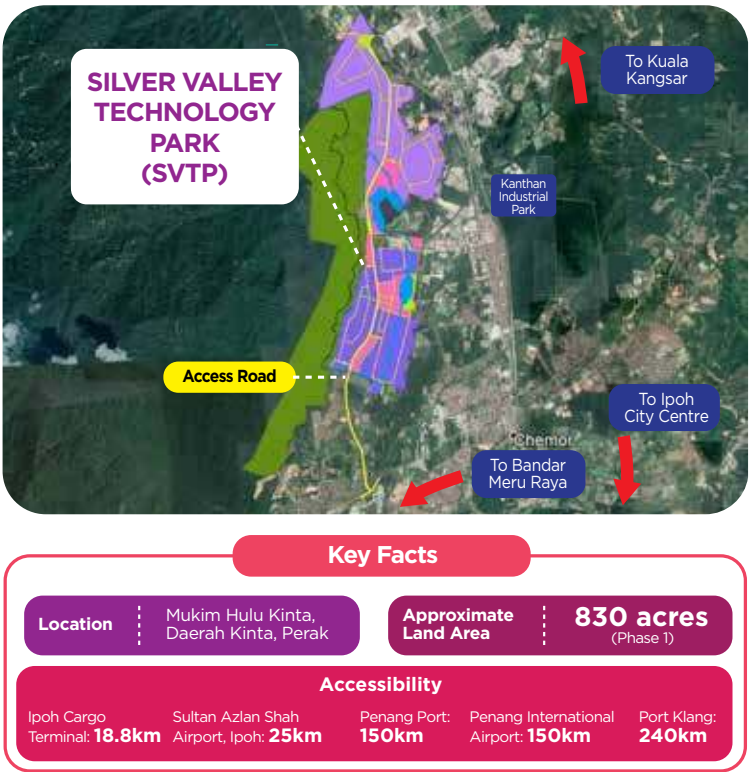
Located in Mukim Hulu Kinta, the Silver Valley Technology Park (SVTP) is **Southeast Asia’s first Digital Disruptive Technology Park** that will serve as a platform to facilitate the development of emerging applied technologies from concept to production, particularly in **priority sectors** such as **Medical Devices, Electrical and Electronics (E&E), Unmanned Aircraft System (UAS), Smart Agriculture Technologies** and **Digital Economy**.

The objectives of SVTP’s establishment are to **create high-skilled and high-income jobs for the rakyat, encourage entrepreneurship** and **increase investment** in the State. It is designed to be a human-centric and environmentally sustainable project, that will enhance

the liveability of Ipoh City to attract the skilled talents of the future today.

Strategically located with easy access to Ipoh Cargo Terminal, Sultan Azlan Shah Airport, Penang Port and Port Klang, the park will also attract core technology clusters that are driving disruptive changes to markets worldwide. These would include **Artificial Intelligence, Advanced Robotics, Augmented and Virtual Reality, Nanotechnology** and **Advanced Digital Analytics**, among others, to support the development of commercially-driven innovation.


SVTP Will Spur the Development and Adoption of Cutting-Edge Applied Technologies in Perak through the Formation of Core Technology Clusters



Target	Cumulative GDP contribution: RM41 bil.	Private Investments: RM14 bil.	New Job Creation: 13,000 jobs
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Masterplan of SVTP

SVTP




3,000
acres


Phase 1



Gross Area
830 acres



Industrial
513
acres



Support
Services
112
acres

Phase 3


(Potential)




Gross Area
340 acres

Potential Area
for Inland Port


Phase 2



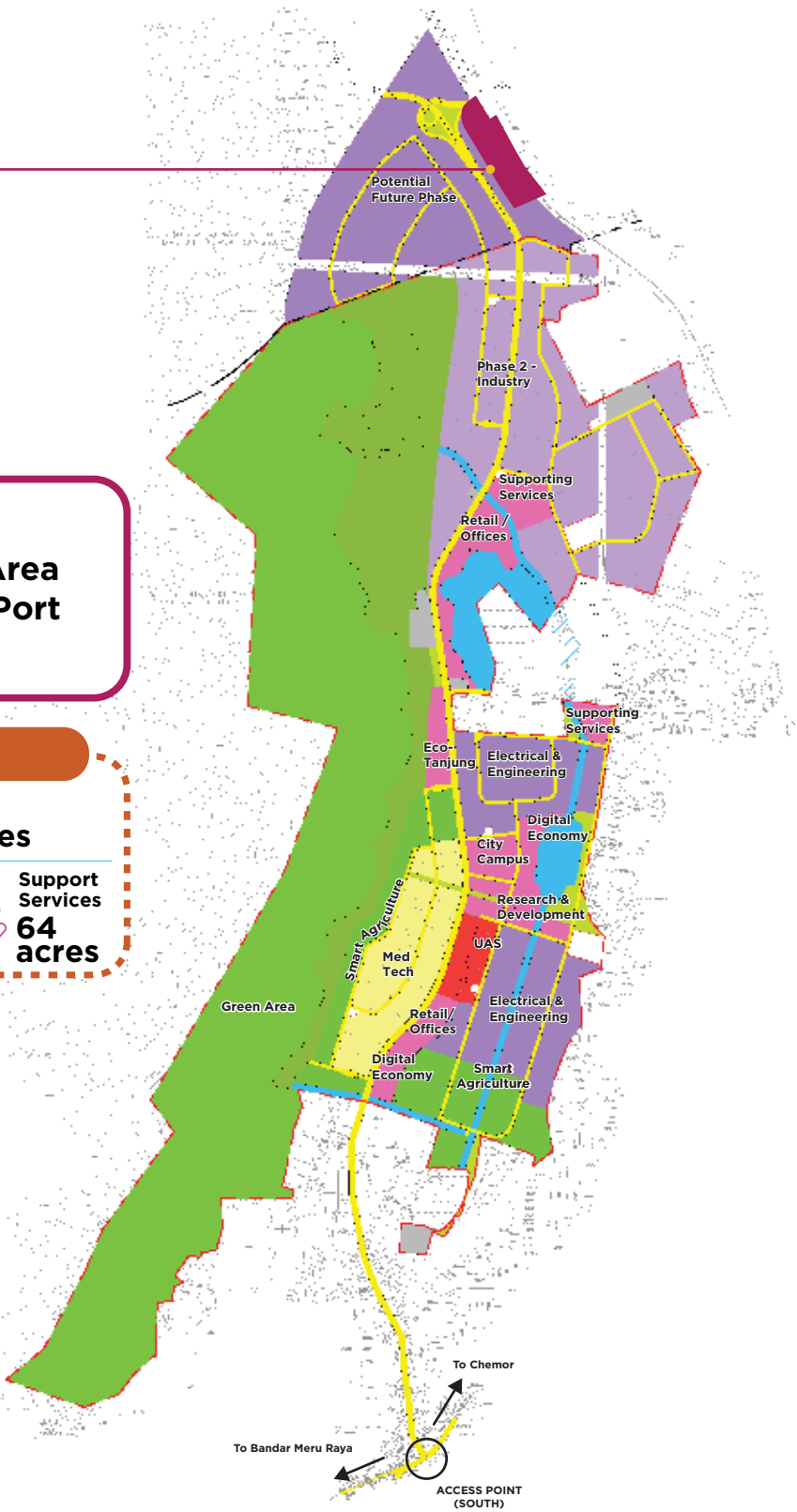
Gross Area
670 acres



Industrial
452
acres



Support
Services
64
acres



NCER Agri Economic Zone (NAEZ)

Population growth, rising income levels and urbanisation are driving up food demand worldwide. The Organisation for Economic Cooperation and Development (OECD) has projected the world population growth to reach **9.7 billion** and global urbanisation to increase to 68% by **2050**. This has put in motion a structural transformation of the global agrofood system, which is further fuelled by technological progress and facilitated by economic policies that are biased towards free trade and export-led development model.

The Malaysian Government has established a series of **National Agricultural Policies** since 1984, which have enabled the country’s agriculture sector to achieve a consistent growth rate of between 3% and 5% per annum. In 2011, Malaysia has introduced the National Agrofood Policy (NAP) which aims to improve the efficiency of its agrofood industry, particularly in terms of driving productivity and

competitiveness across the industry value chain. It is anticipated that the NAP will increase the revenue of farmers as well as entrepreneurs and allow the agrofood sector to develop into a steady, resilient, competitive and sustainable industry.

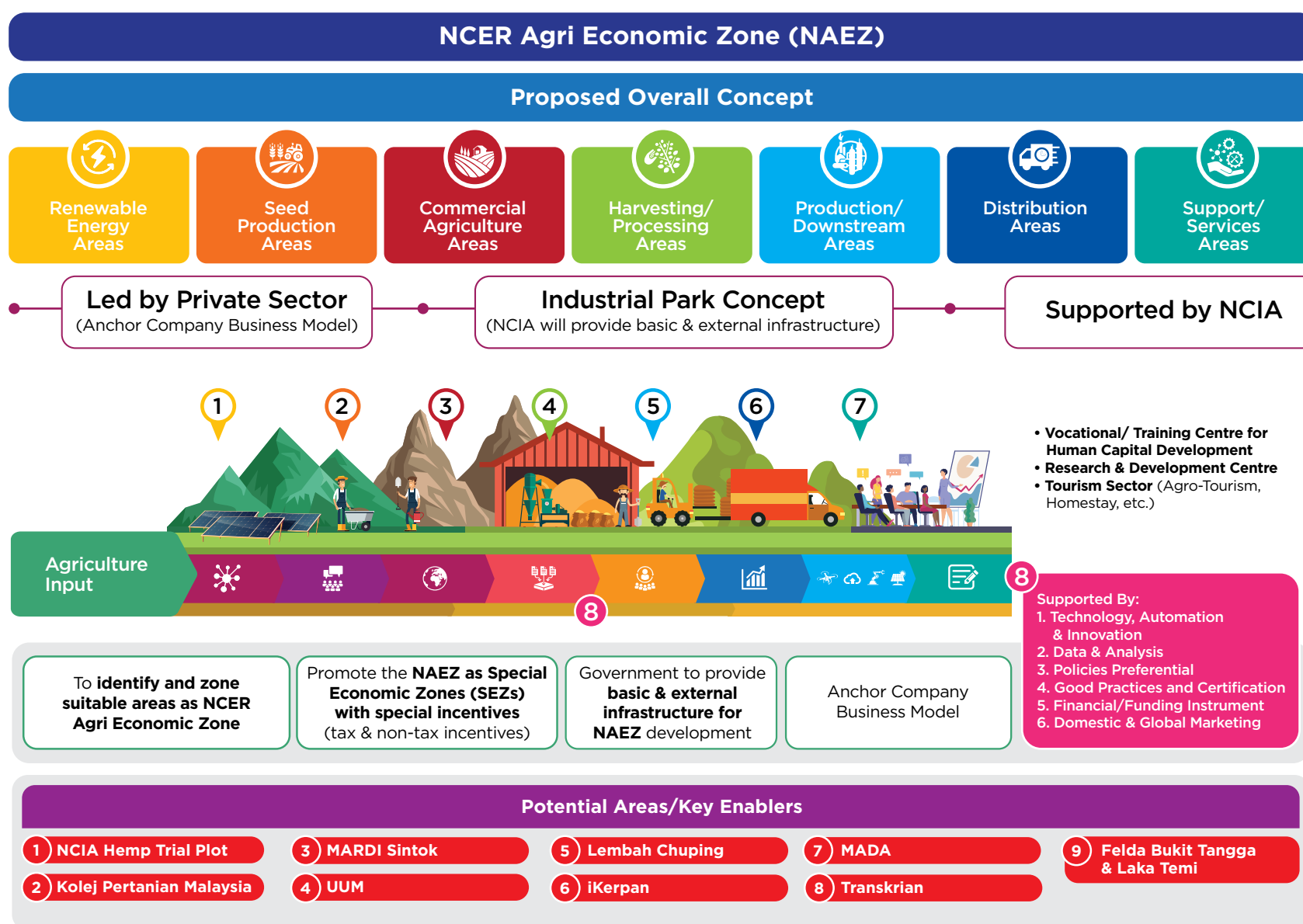
The structural changes in the economy have also brought along new issues and challenges in the Malaysia’s agricultural sector, such the **decreasing farmland for food production** against the **increasing population** and **aging smallholder farmers**. In Malaysia, the **Total Factor Productivity Growth in Agriculture**, which is the ratio of total agricultural output to total production input, is rather **stagnant** at around 105 compared with other countries such as Thailand, Vietnam and Indonesia that have surpassed the 120-level from 2008 until 2016.

Key Challenges of Malaysia’s Agrofood Industry



Therefore, NCIA is adopting a new development approach known as **the NCER Agri Economic Zone (NAEZ)** that will act as a catalyst for the **national food security** and enable Malaysia's advancement in the **agrofood** arena.

This game changer initiative is crafted with a macro holistic approach which incorporates **end-to-end value chain** embedded within the park, that is supported by various facilitation and key enablers such **technology, R&D&C, human capital** and **financing**.



Agribusiness

To transform and modernise the agriculture sector in NCER, NCIA is introducing the **Anchor Company business model to encourage the participation of the private sector** in agriculture projects, while **grooming the local farmers** at the same time. Under this Anchor Company business model, companies with excellent track record will be appointed to spearhead strategic agriculture projects in NCER via their respective nucleus farms. The anchor companies are also tasked to provide **mentorship to contract farmers** and **purchase high-quality output** from satellite farms through **buyback arrangements**.


Within the next five years, the Anchor Company concept will be applied in strategic agriculture projects such as **Superfruits @ NCER Phase 2, oyster and abalone farming, Integrated Organic Paddy Farming** and **cultivation of cash crops**.

NCIA is also enhancing its signature **Estate Management Model (EMM) 2.0** for paddy cultivation, which entails land consolidation, introduction of smart farming and cash crop integration.


Superfruits

Nucleus Farm: Superfruits Valley @ Chuping

25 ha (62.5 acres)




Sensors for monitoring




ACHIEVEMENTS

Current Production



23,115 kg

Graduates Trained




11 graduates


Number of Products

20 products

Collaboration




SEED PRODUCTION




SMART FARMING


Promoted Crops



Fig



Lemon



Gac

Following the success of the Superfruits Valley in Chuping, Perlis, NCIA is expanding the programme to transcend the State border with the production of high-value fresh fig produce and downstream products. To be implemented via the Anchor Company business model, this initiative will help create more satellite farmers across the region, who will also benefit from the consolidated volume purchase arrangement by the Anchor Company.

Future Expansion: Satellite Farms


ANCHOR COMPANY: NUCLEUS

SOP & Training

Mentor

Buyback Arrangement

SATELLITE FARMS




Community Farmers

AGROTOURISM


Community Tourism

Under the joint volume concept, contract farmers will benefit from income from fresh produce (**upstream**) & value-added products (**downstream**)

1 Entrepreneur@NCER




2,400
fig trees/
6 bays
of greenhouse/
entrepreneur




RM72,000
potential income/
month

2 Community Farmers




800
fig trees/2 bays
of greenhouse/
farmer




RM24,000
potential income/
month


3 Agrotourism Impact




Homestay




Education & recreation centre




Job creation
entrepreneur@NCER
empower@NCER



Create local branding



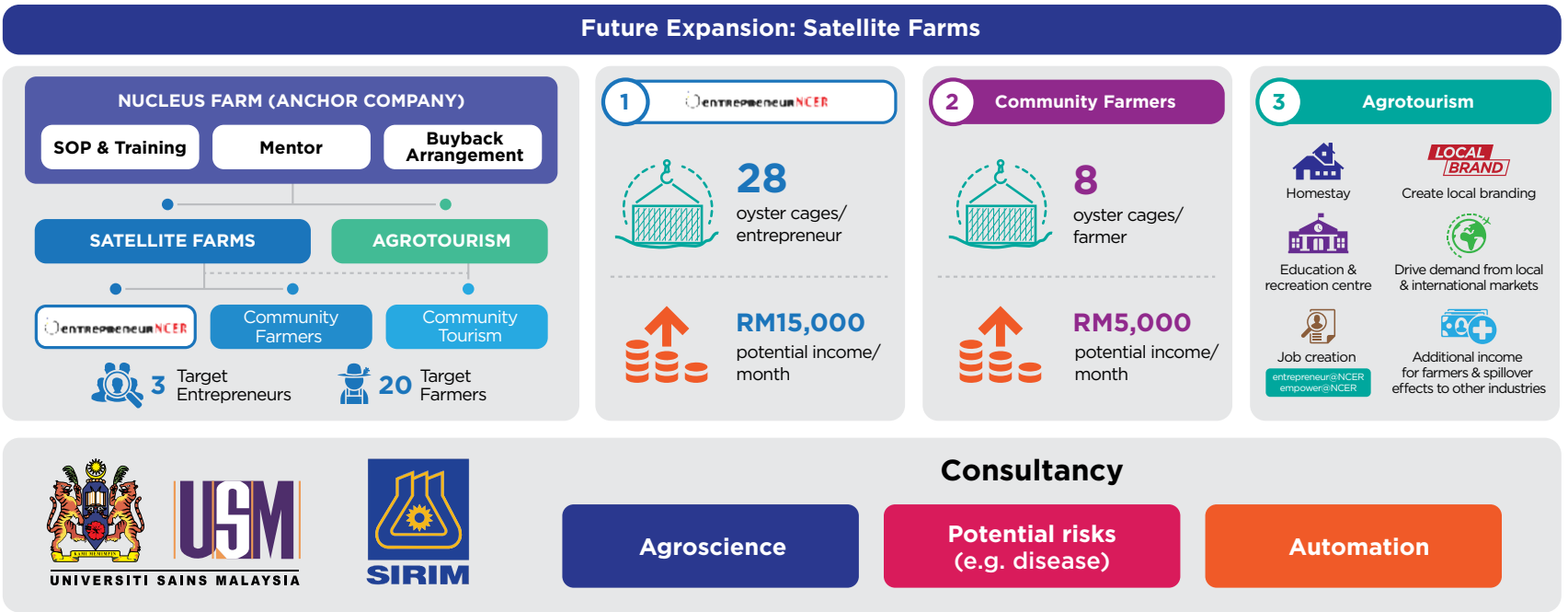
Drive demand from local & international markets



Additional income
for farmers & spillover
effects to other industries

Oyster Farming

To catalyse the growth of oyster industry in NCER, efforts will be undertaken to **strengthen the oyster seed production supply chain** and **improve the oyster breeds** and **farming techniques**. Strategic partnerships will also be promoted to create more players in the upstream segment of oyster industry. **Agrotourism** is also a key part of the project, representing a signature offering of NCER’s aquaculture sector and a new experience for tourists.



Organic Paddy

In line with the increasing global demand for organic produce which offers higher income margin to the **farmers**, **organic paddy farming** has been identified as a **new key economic activity** in NCER. Hence, an **Organic Centre of Excellence** known as **Institut Pengurusan Pertanian Organik Bersepadu Kedah Darul Aman (INSPEK)** will be established in collaboration with the **State Agency**, **academia** and **Anchor Company**, to act as the centre of reference for integrated organic farming. Upon graduation, INSPEK trainees will be well-equipped with the required skills to run their own satellite integrated mixed organic farms.



Organic paddy farm in Sik, Kedah

DRIVING FACTORS

Higher Price



RM15/kg
compared to white rice at **RM2.60/kg**
.....
Increase farmers' income

Competitive Advantage



An **innovative strategy** for the National Agricultural Agenda structure to sustain its competitive advantage

Market Demand



Malaysia imports **60%** of its organic produce


Sustainable Development Goal



Dasar Agromakanan Negara (DAN) 2.0 is moving towards **sustainable agriculture**

PHASE 1

Establishment of Organic Centre of Excellence in Sik, Kedah



Upgrading of the existing paddy farm to become the Organic Paddy Centre of Excellence and incorporation of empowerNCER

Adopt System of Rice Intensification (SRI) crop management, smart farming and organic seed production

Establish organic rice mill

A collaboration with Perbadanan Menteri Besar Kedah (MBI), Universiti Utara Malaysia & SRI Lovely (Anchor Company)

PHASE 2

Future Expansion: Satellite Farms

ANCHOR COMPANY: NUCLEUS


SOP & Training

Mentor

Buyback Arrangement


SATELLITE FARMS


AGROTOURISM

 **Community Farmers**

Community Tourism


Under the joint volume concept, contract farmers will benefit from income from fresh produce (**upstream**) & value-added products (**downstream**)


 **50**
Target organic farmers


 **8 MT**
Target yield/ha /season

RM5,000
Potential income /ha/month

Agrotourism Impact

 Homestay


 Education & recreation centre

 Job creation
entrepreneur@NCER
empower@NCER

LOCAL BRAND

Create local branding

Drive demand from local & international markets

 Additional income for farmers & spillover effects to other industries

1. The approach of EMM 1.0 (2014-2018)

Land Preparation



Best Farming Method

Transplanter



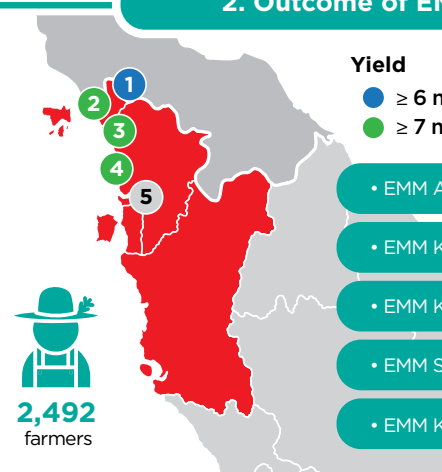
Modern Technology Application

Planted Area in Selinsing



Inclusive Approach

2. Outcome of EMM 1.0



Yield

• ≥ 6 metric tonnes (MT) per hectare

• ≥ 7 metric tonnes (MT) per hectare

• EMM Asun, Kedah

• EMM Kerpan, Kedah (Nestle Paddy Club)

• EMM Kuala Muda Selatan, Kedah

• EMM Seberang Perai Utara

• EMM Kerian, Perak (new)

3. EMM 2.0 - Driving Paddy Industry to the Next Level (2019-2025)

OBJECTIVE

- To increase the paddy yield and increase farmers' income
- In line with MOA and MTEN aspirations



8 MT
Target yield/
ha/season



RM3,000
Potential income/
ha/month

Land Consolidation

- Long-term lease (min. 2 ha of land to generate RM3,000 monthly income)
- Synchronise planting & harvesting
- Economies of scale

Anchor Company

- The entire production value chain is driven by Anchor Company

Precision Farming

- Quality seeds
- Adoption of precision farming & big data
- Improvement of mechanisation

Cash Crops

- Inter-crop/crop rotation or off-season crops include legume (e.g Bambara ground nut), sweet corn, ginger torch & fig
- Secondary income

Agrotourism



Homestay



Create local branding



Education & recreation centre



Drive demand from local & international markets



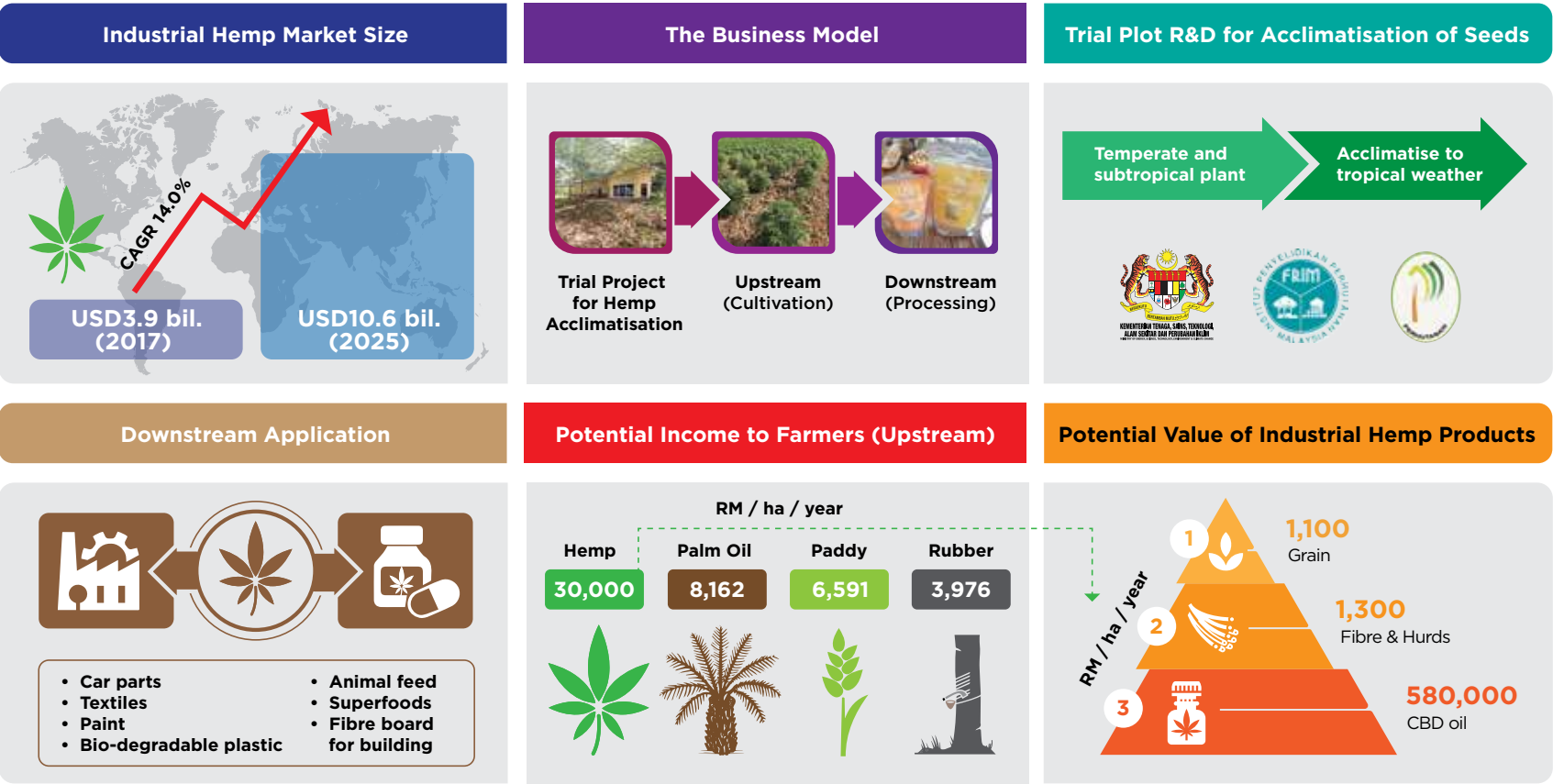
Job creation
entrepreneur@NCER
empower@NCER



Additional income for farmers & spillover effects to other industries

Hemp

NCER is making a bold move in **pioneering the introduction of hemp industry in Malaysia** for industrial use. In the next five years, the region will be the **hub of tropical hemp seed selection and production**, as well as **hemp commercial trials, research and product development** for industrial applications. This development will establish NCER’s positioning as one of the main industrial hemp players in Southeast Asia.



Tourism

NCER will leverage on its **world-class natural, cultural and historical attractions** to sustainably develop tourism products that will generate new economic activities for the *rakyat*.

Tourism products across NCER states will be **linked up** through a **border-transcending strategy** to offer a **richer, more comprehensive and integrated experience for visitors**. NCER will also optimise on the IMT-GT platform to promote its tourism destinations, as well as capitalise on the strength of **Pulau Pinang** and **Langkawi** to pull tourists to visit other attractive destinations within the region.



The captivating beauty of Royal Belum Rainforest is set to attract more visitors to the region

The underlying strategy is to develop each eco site in NCER to create individual brands with unique positioning



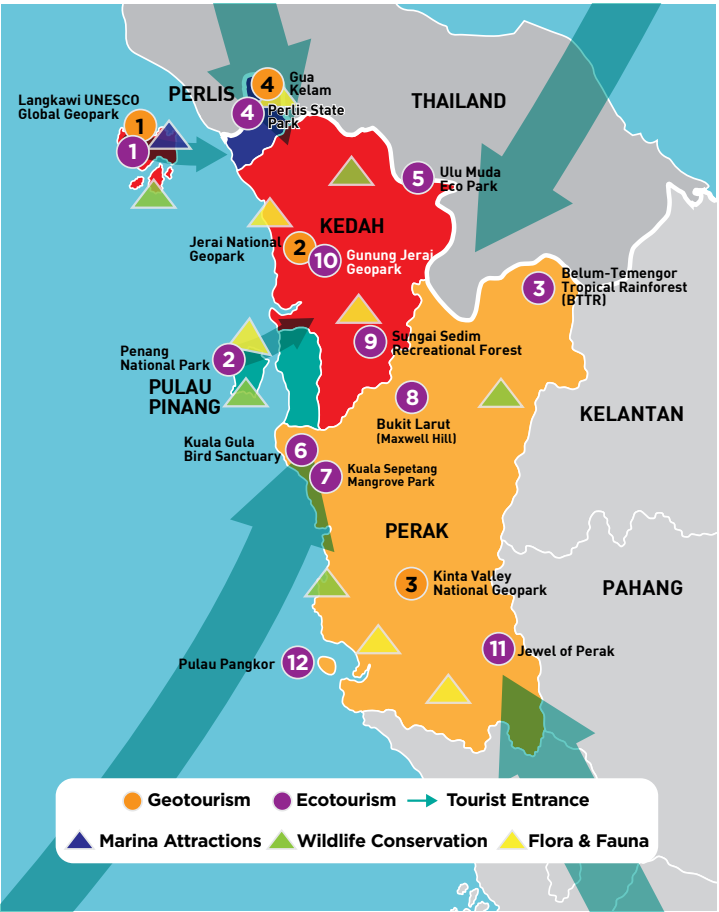
Ecotourism

- 1) **Langkawi Geopark/Pulau Payar**
 - Wildlife conservation / Flora & fauna / Marine attraction
- 2) **Penang National park**
 - Wildlife conservation / Flora & Fauna
- 3) **Belum-Temengor Rainforest**
 - Wildlife conservation
- 4) **Perlis State Park**
 - Flora & fauna
- 5) **Ulu Muda, Sik**
 - Wildlife conservation
- 6) **Kuala Gula Bird Sanctuary**
 - Wildlife conservation
- 7) **Kuala Sepetang Mangrove Park**
 - Flora & fauna
- 8) **Bukit Larut / Maxwell Hill**
 - Flora & fauna
- 9) **Sungai Sedim Recreational Forest**
 - Flora & fauna
- 10) **Gunung Jerai**
 - Wildlife conservation
- 11) **Jewel of Perak**
 - Wildlife conservation
- 12) **Pangkor Ecotourism**
 - Marine attraction / Flora & fauna



Geotourism

- 1) **Langkawi UNESCO Global Geopark**
 - Geological, biological and cultural heritage with an abundance of natural wonders, as well as flora and fauna
- 2) **Jerai National Geopark**
 - Geological, archaeological and conservation of natural heritage
- 3) **Kinta Valley National Geopark**
 - Geological, rugged terrains, limestone, stalactites, Neolithic wall paintings and conservation of natural heritage
- 4) **Gua Kelam**
 - Geological and conservation of natural heritage



Ecotourism

To spur the growth of **ecotourism** in NCER, ecotourism sites in the region will be promoted with their own **individual branding** and **unique positioning**. They will capitalise on the richness of natural assets available, such as **marine attractions**, **wildlife conservation**, as well as **flora and fauna**, to attract visitors from local and abroad.

At the same time, efforts will be undertaken to attract tourists to visit other nearby locations, thus encouraging more activities in this sector. In this regard, **the Ecotourism Link** in NCER will connect various **state parks**, **eco parks**, **recreational forests** and **geoparks** in the region.

One of the packaged ecotourism products is **the Jewel of Perak** in the Southern Perak Region (Wilayah Perak Selatan), which is a **flagship zone** that hosts various natural assets such as **waterfalls**, **recreational forests**, **hot springs**, **rivers** and **mountains**. It aims to boost Perak tourism industry and enhance the participation of the local community, including the **Orang Asli**, to benefit from the region's economic growth. Jewel of Perak will be co-managed by the Forestry Department and other stakeholders comprising NGOs, the private sector, social enterprises and local communities.

Geotourism

The **geoparks** in the four states of NCER, such as the **Langkawi UNESCO Global Geopark**, **Jerai National Geopark**, **Kinta Valley National Geopark** and **Gua Kelam** will be connected under the **Geo Tourism Link** to offer a holistic and unique experience to visitors.

The Langkawi archipelago in Kedah boasts the oldest and most complete Palaeozoic geological record in the region, dating back to 250 million-540 million years ago. In 2007, **Langkawi** was awarded the **UNESCO Global Geopark status**, making it the **first Global Geopark in Southeast Asia**, and one of only 147 UNESCO Global Geoparks worldwide to date. Langkawi UNESCO Global Geopark consists of the **Machinchang Cambrian Geoforest Park**, **Kilim Karst Geoforest Park**, **Dayang Bunting Marble Geoforest Park**, and **Kubang Badak BioGeo Trail**.

Gunung Jerai has long been an important landmark for seafarers plying the trade route since the golden age of the Old Kedah civilisation. Jerai National Geopark, which covers an area of 800 square kilometres, is located in the high rock geodiversity area of the Jerai Formation, Mahang Formation and Jerai Granite. Straddling

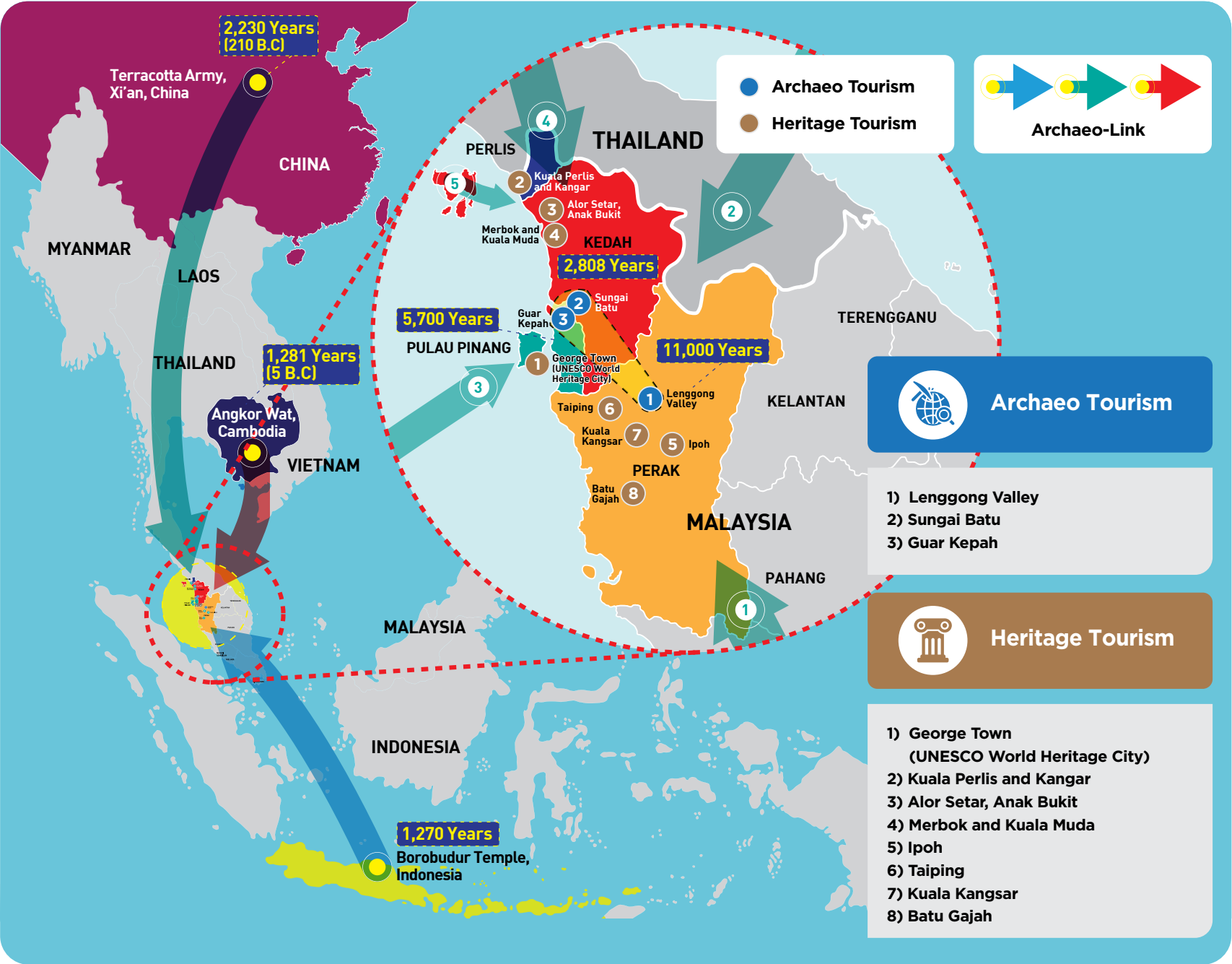
the districts of Yan and Kuala Muda, it was declared as a National Geopark in 2018. The Jerai Formation has a rock age of about 550 million years and at its highest level, stands at 1,217 meters from the sea level. Its uniqueness allows visitors to experience geological, archaeological and biological diversity at a single location.

The **Kinta Valley National Geopark in Perak** is the country's second national geopark after Langkawi, with a total of **18 geo sites** located in the area including **Gunung Lang**, **Gua Tambun**, **Gua Naga Mas**, **Gua Tempurung**, **Gunung Korbu**, **Jeram River**, **Hutan Lipur Ulu Kinta** and **Sungai Salu Waterfall**, among others. In total, it covers an area of 1,952 kilometres, which spans across the districts of Kinta and Kampar.

Gua Kelam in Perlis is one of the largest tin mining caves in the world, whose residual artifacts still exist until today. The 370-metre long limestone cave is one of the most distinctive caves in Malaysia and it is popular for its enchanting cave walk where visitors can enter from one end of the cave and exit at a different location.



Stalactites and stalagmites in Gua Tempurung, Perak



Source: UNESCO

Archaeo Tourism

With the presence of world-class archaeological sites, such as **Lenggong Valley**, **Lembah Bujang** and **Guar Kepah**, archaeo tourism products within the states in NCER will be connected via the trans-border **Archaeo Tourism Link** to provide holistic knowledge and experience to both local and international tourists. Moving forward, NCER plans to enhance the facilities at the archaeo tourism sites as part of its efforts to attract more tourists and provide more convenience to visitors, which in turn will generate more economic activities for the *rakyat* in the areas.

Lenggong Valley in Perak, which was accorded the status of **UNESCO World Heritage Site** since 2012, is home to a series of caves and open-air archaeological sites that could be traced back to the Palaeolithic Age, up to Neolithic and Bronze Ages. It is home to **Perak Man**, claimed to be Southeast Asia's oldest, most complete human skeleton. Lenggong Valley attracted some 30,000 domestic and international visitors in 2019, and it offers great potential for catalytic tourism products that will spur the

socioeconomic growth of the surrounding area and serve as main source of income for the State of Perak.

Sungai Batu in Lembah Bujang, Kedah is believed to be the site of the oldest and earliest **civilisation in Southeast Asia**, with iron smelting activities that could be traced back to the 8th Century BC. To-date, 54 sites out of the 97 sites at the Lembah Bujang archaeological complex have been explored.

Located next to Bujang Valley, near the border between Kedah and Pulau Pinang, is **Guar Kepah**, believed to be the **oldest archaeological site in Pulau Pinang**, and is the only site that has clear evidence of **shell midden** in Malaysia. Recognised as a heritage site by the State Government, Guar Kepah will be developed and protected as a **new archaeotourism location** based on its significant archaeological value. Famed for the "**Penang Woman**" skeleton found at the site, recent analysis has shown that the skeleton could be traced back to 5,710 years ago.





Lembah Bujang Archaeological Site, Kedah



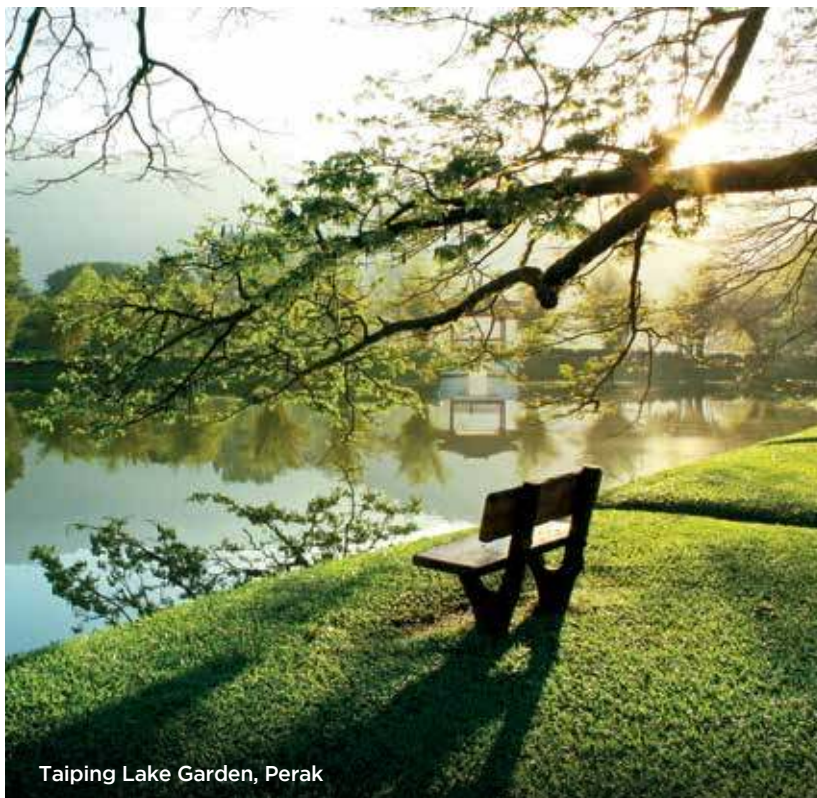
The skeleton of "Penang Woman" in Guar Kepah, Pulau Pinang

Heritage Tourism

NCER is experiencing a good pace of development in its tourism sector, including in heritage tourism which has long contributed to the region's appeal among tourists, especially those with major interest in heritage and arts.

Therefore, focus will be given on locations with **significant heritage and historical value** to bring in more tourists into the region. The **Heritage Tourism Link** which has been identified in NCER covers the locations as listed below:

- **Perlis:** Kuala Perlis and Kangar
- **Kedah:** Alor Setar and Kota Kuala Muda
- **Pulau Pinang:** George Town (UNESCO World Heritage City)
- **Perak:** Taiping, Ipoh, Kuala Kangsar and Batu Gajah



Taiping Lake Garden, Perak

Ipoh Heritage Tourism

Located in the middle between Kuala Lumpur and George Town, Ipoh has slowly gained recognition as an alluring tourist destination, with its **colonial centre, traditional shophouses, limestone cliffs** with extensive conservation networks surrounding the town and multiracial population.

For Ipoh Heritage Tourism, plans are underway to install sound and **lighting feature** at the **Ipoh Padang** for light projection shows that will highlight the history and culture of the city, its tourism destinations, as well as cartoons by the beloved cartoonist, Dato' Lat. NCIA also plans **to upgrade the Ipoh Town Hall** to become a **Performance Art Centre**, while the **Old Post Office** will be repaired and upgraded to become an **Art and Digital Centre**. The next package under Ipoh Heritage Tourism development will involve the **upgrading of Kinta Riverfront**, which includes upgrading works for existing kiosks, bridge and lighting, as well as the construction of a new promenade and entrance statement.

Components of Ipoh Heritage Tourism Initiatives

COMPONENT 1

Sound and lighting along 24 heritage buildings and at Ipoh Padang

COMPONENT 2

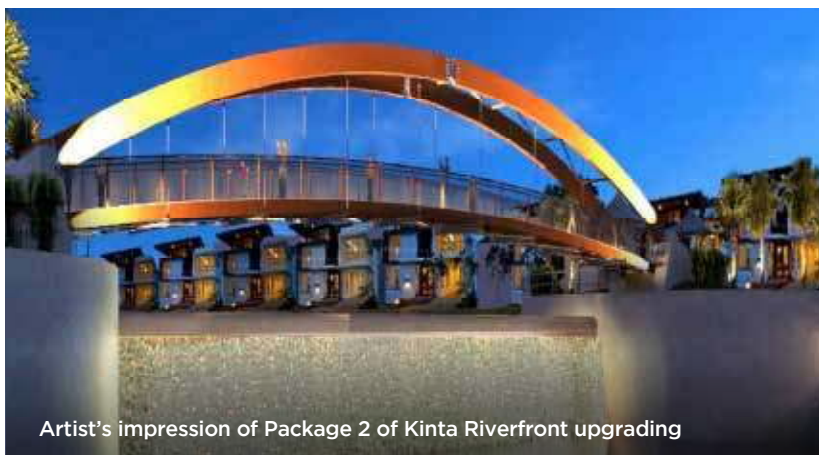
Upgrading of Ipoh Townhall and the Old Post office as a Performing Art Centre and Digital Art Gallery

COMPONENT 3

Upgrading of Kinta Riverfront and Ipoh-Fukuoka Japanese Garden at Taman Rekreasi D.R. Seenivasagam



The historic Ipoh City Hall Building



Artist's impression of Package 2 of Kinta Riverfront upgrading



The light projection shows at Ipoh Padang will highlight the history and culture of the city

Natural Resources

Projects under Natural Resources aim to capitalise on opportunities in the areas that are rich in biodiversity, as well as the need for environmental conservation and sustainability in mining. Increasing interest in the new green economy as well as global commitment towards the environment has created vast potential for revenue sources. However, while it is necessary to sustainably manage forest reserves and reduce the loss of biodiversity, further development has been hindered due to **limited land availability**. Kedah in particular, has 37.5% forest coverage out of its total land area in 2018, and a significant portion of the remaining land is reserved as granary area.

The **Pedu-Ulu Muda Biodiversity Study and Implementation Plan** aims to leverage on the potential resulting from this wealth of biodiversity, while conserving natural resources. Another key project is the **Kedah Biodiversity Trust Fund**, with the objective of harnessing the potential of biodiversity to increase the revenue contribution from green economy for Kedah. Part of this project involves developing a green growth generator and roadmap, with initiatives supported by the biodiversity fund.

Other projects under Natural Resources include **Sustainable Mining** in **Pengkalan Hulu, Baling, and Temengor**, which involves the extraction of natural resources while **minimising harm to the environment**.



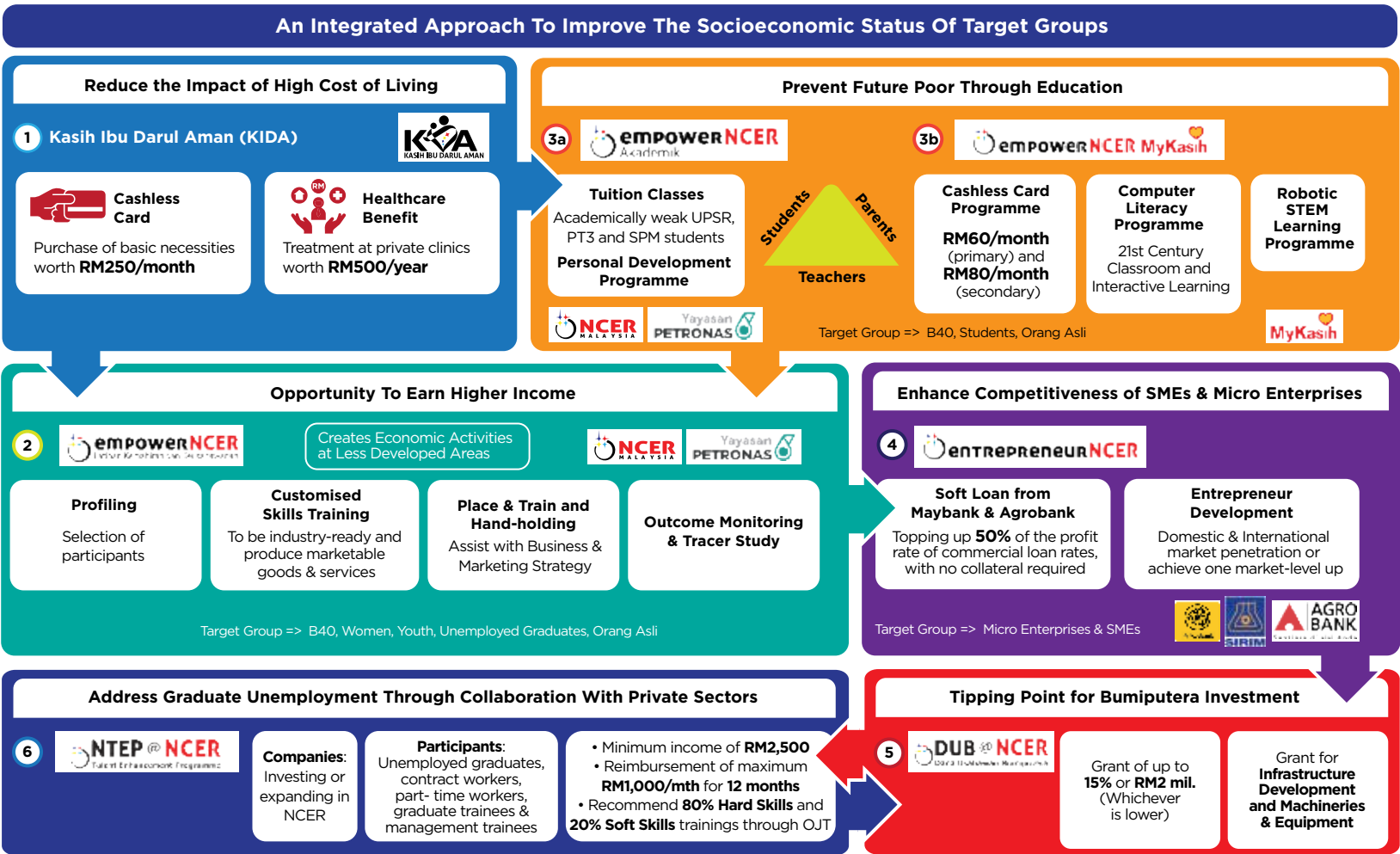
Efforts will be made to leverage on the potential of NCER's natural resources while ensuring minimal harm to the environment

Human Capital Programmes

NCER’s human capital programmes are focused on **improving the *rakyat*’s welfare** and **upskilling the local workforce**. They are instrumental in ensuring a sufficiently skilled workforce that is relevant to the needs of industry and businesses, and able to support the entrepreneurs and SMEs that are the backbone of the economy.

The human capital initiatives in NCER represent the Government’s holistic approach in improving the socioeconomic status of the target groups, who mostly consist of the **B40 households**. They are aimed at reducing the impact of high cost of living, providing the *rakyat* with the opportunity to earn higher income, prevent future poor through education, and enhance the competitiveness of local micro enterprises and SMEs.

Programmes focusing on upskilling and enhancing talent in the region include **empowerNCER**, **entrepreneurNCER** and **NCER Talent Enhancement Programme (NTEP)** as well as talent development through the **Single Campus Hub** initiative. On the other hand, programmes aimed at improving welfare of the community include **Kasih Ibu Darul Aman (KIDA)**.



Kasih Ibu Darul Aman (KIDA)

The Government recognises the role of mothers as the main pillar of the family and the community as a whole. Mothers play a pivotal role, not only in educating and raising children, but they also often hold the responsibility of managing family finances. Thus, the Government has introduced the **Kasih Ibu Darul Aman (KIDA)** programme to assist mothers from poor and hardcore poor groups in Kedah.

The primary objective of KIDA is to cover the **cost of living** through financial assistance for mothers with low-income **to purchase basic necessities and obtain healthcare benefits**. As at February 2020, 4,281 KIDA recipients in Kedah are receiving a monthly finance assistance of RM250 through cashless card to purchase basic essential items at **over 60 convenient stores** and **14 chain merchants**. They are also eligible to receive healthcare treatment and services valued at RM500 per year at over 120 clinics in Kedah.



Cashless card for KIDA participants



A participant purchasing basic necessities



Making healthcare more accessible for all

15 Essential Items (Approved by KPDNHEP)

- | | | | | |
|--|---|---|--|---|
| 
1
Rice | 
2
Noodles and Vermicelli | 
3
Bread | 
4
Biscuits | 
5
Eggs |
| 
6
Sugar and Salt | 
7
Spices, Sauces, Soy Sauce and Others | 
8
Flour | 
9
Cooking Oil | 
10
Meat and Fish |
| 
11
Vegetables and Fruits | 
12
Soap, Toiletries and Detergents | 
13
Disposable Diapers (Baby / Adult) | 
14
Dairy Products (Fresh Milk, Milk Powder, Evaporated Milk and Condensed Milk) | 
15
School Items (Shoes, Bags, Books, Stationery, Uniforms, etc.) |

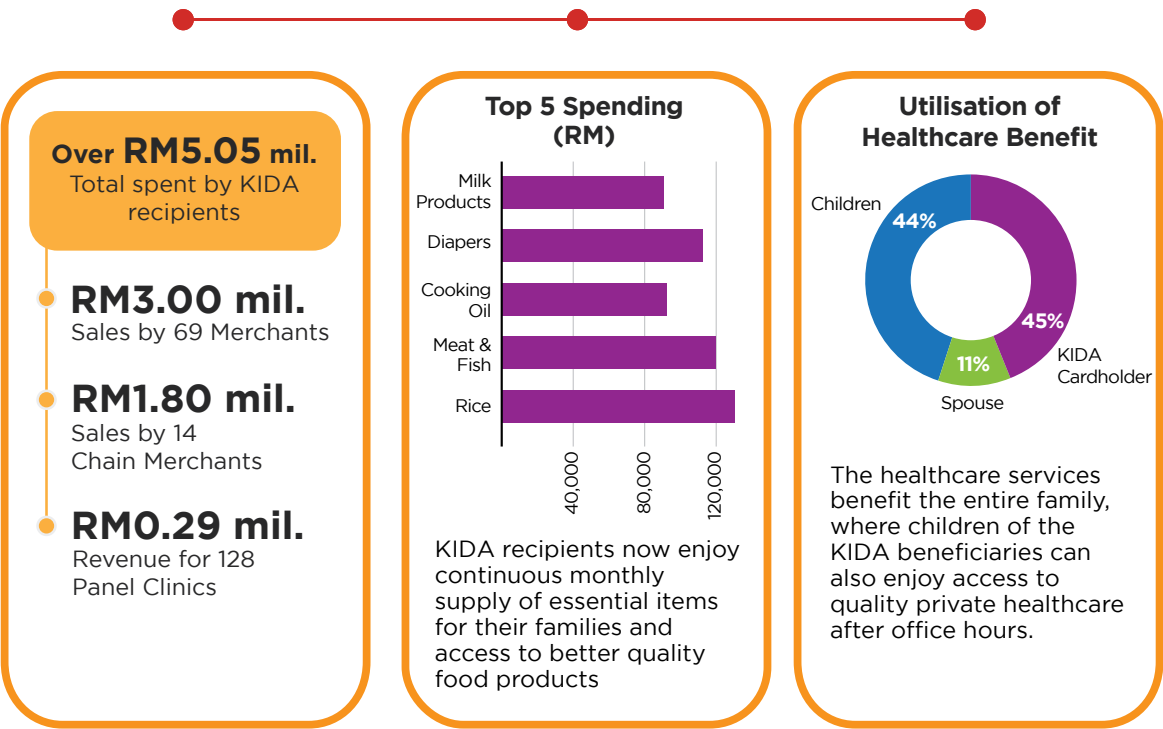
Kasih Ibu Darul Aman (KIDA)

KIDA has helped reduce the impact of rising living cost, increase purchasing power & improve quality of life

Current Beneficiaries



Increase Consumer Demand & Economic Multiplier at Local Level



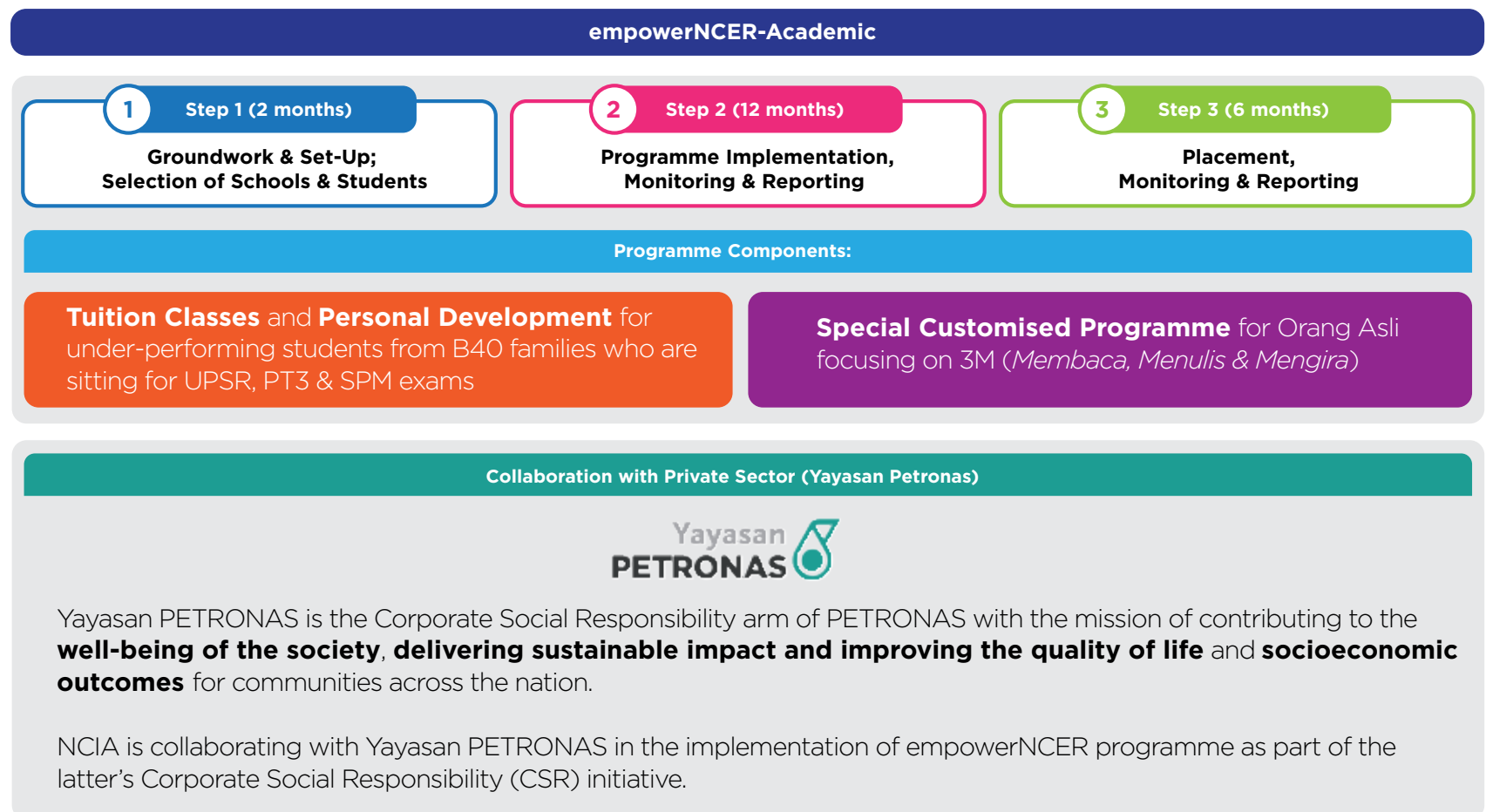
The KIDA programme is an endeavour to ensure that the country’s shared prosperity can be enjoyed by all. KIDA is also a solution to meet the short-term needs of its beneficiaries by helping ease their burden so that they are able to escape poverty, in line with the Government’s goal to improve the people’s purchasing power, well-being and quality of life. Notably, the value allocated to KIDA is the highest compared to other financial aid programmes.

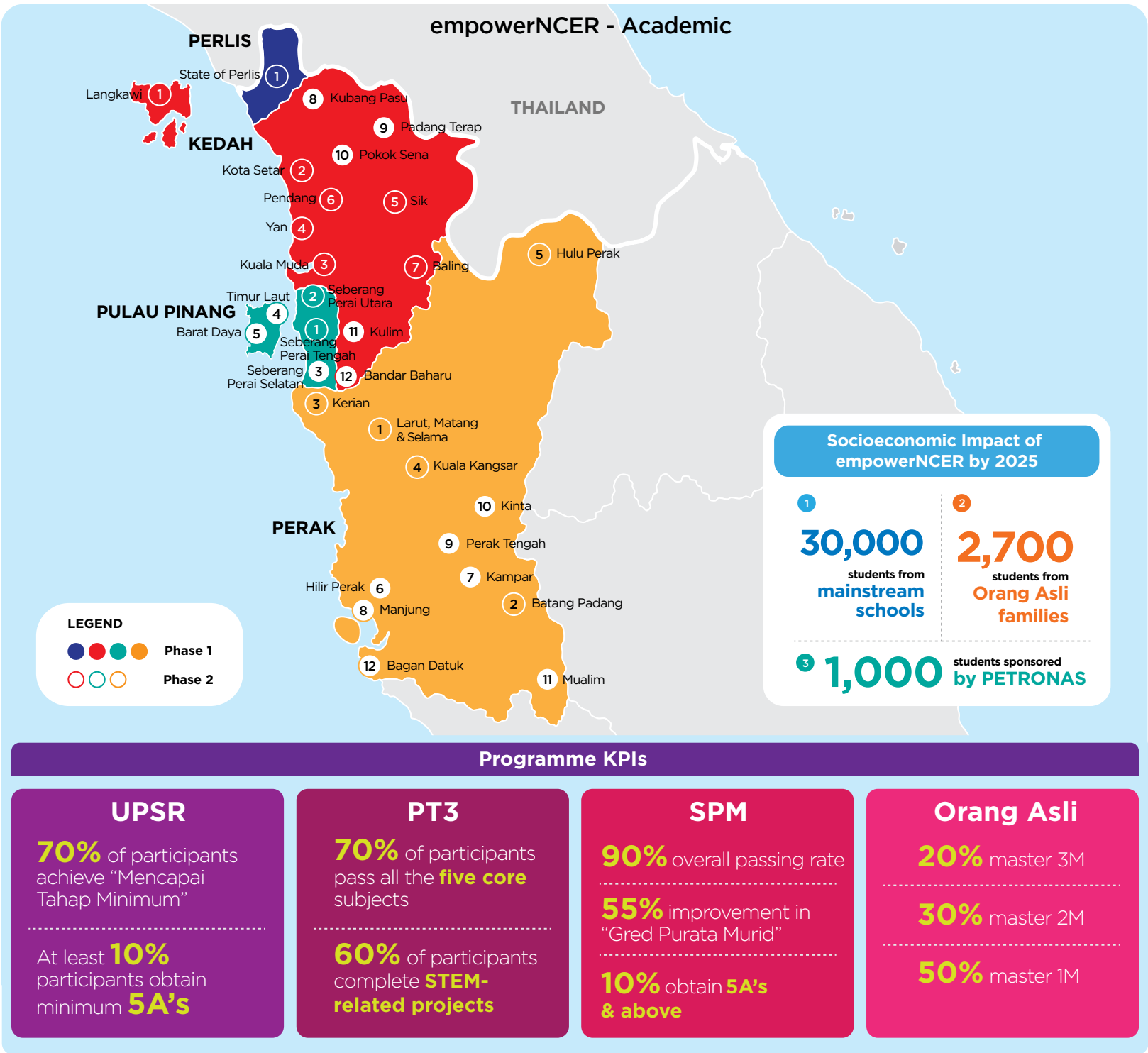
empowerNCER

The empowerNCER programme was designed to **enhance the skills of the locals** to enable them to compete and seize the economic opportunities created in NCER. The programme also **addresses the socioeconomic needs** of the region, based on **existing industry demand**. These objectives are realised by providing academic coaching as well as skills and entrepreneurship training for the target group, who mostly come from the B40 group in NCER as well as Orang Asli. The programme is divided into two components, namely, **Academic** and **Skills & Entrepreneurship development**.

empowerNCER - Academic

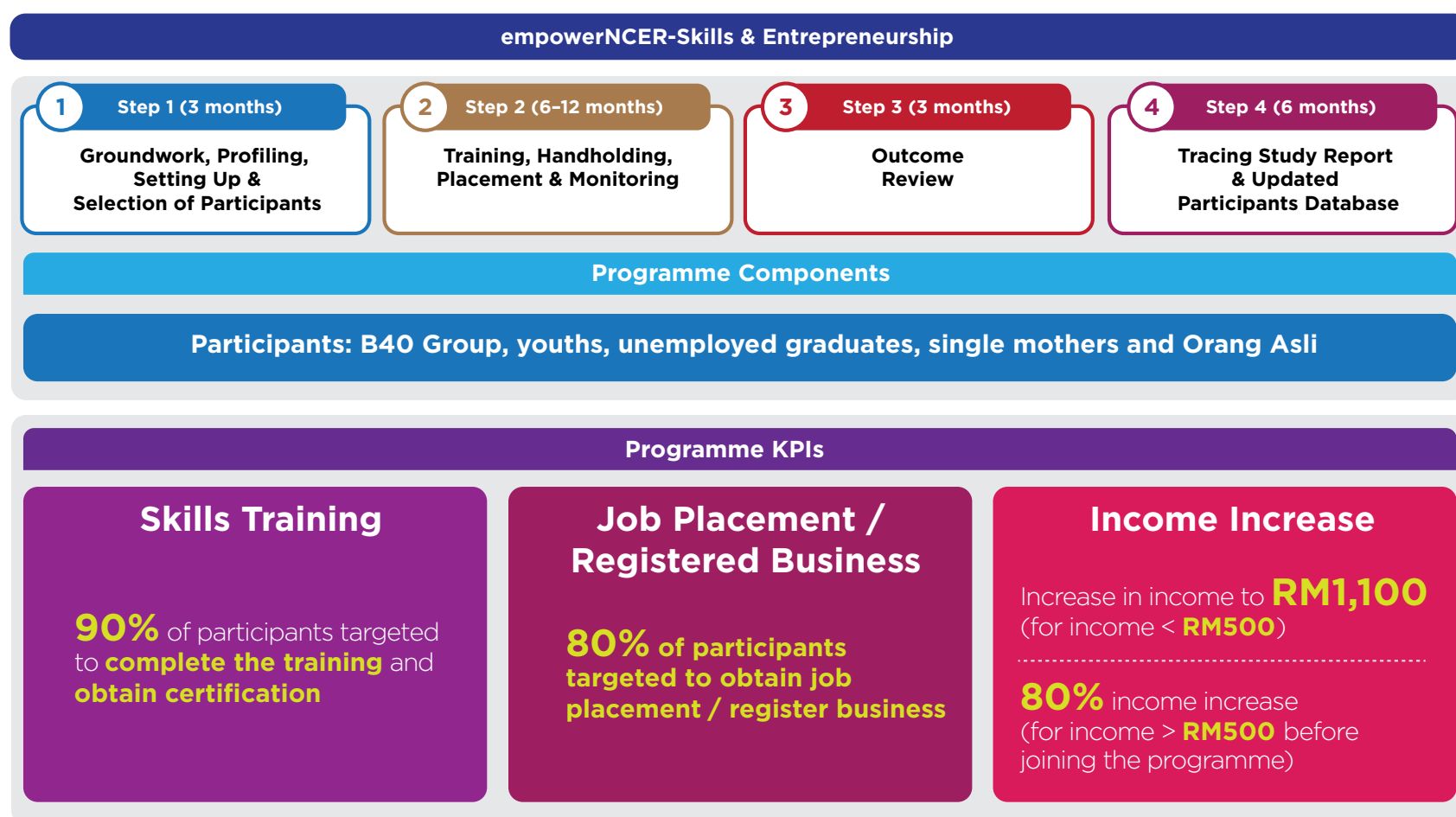
The Academic component will be rolled out in all the four states in NCER, starting with the developed areas. It is designed to enhance the achievement of students by **improving their academic and personal development skills**. The Academic component of empowerNCER provides a **holistic approach** to education with emphasis on academic excellence, skill competencies and personal development for students from **KIDA and B40 groups**, as well as the Orang Asli community.



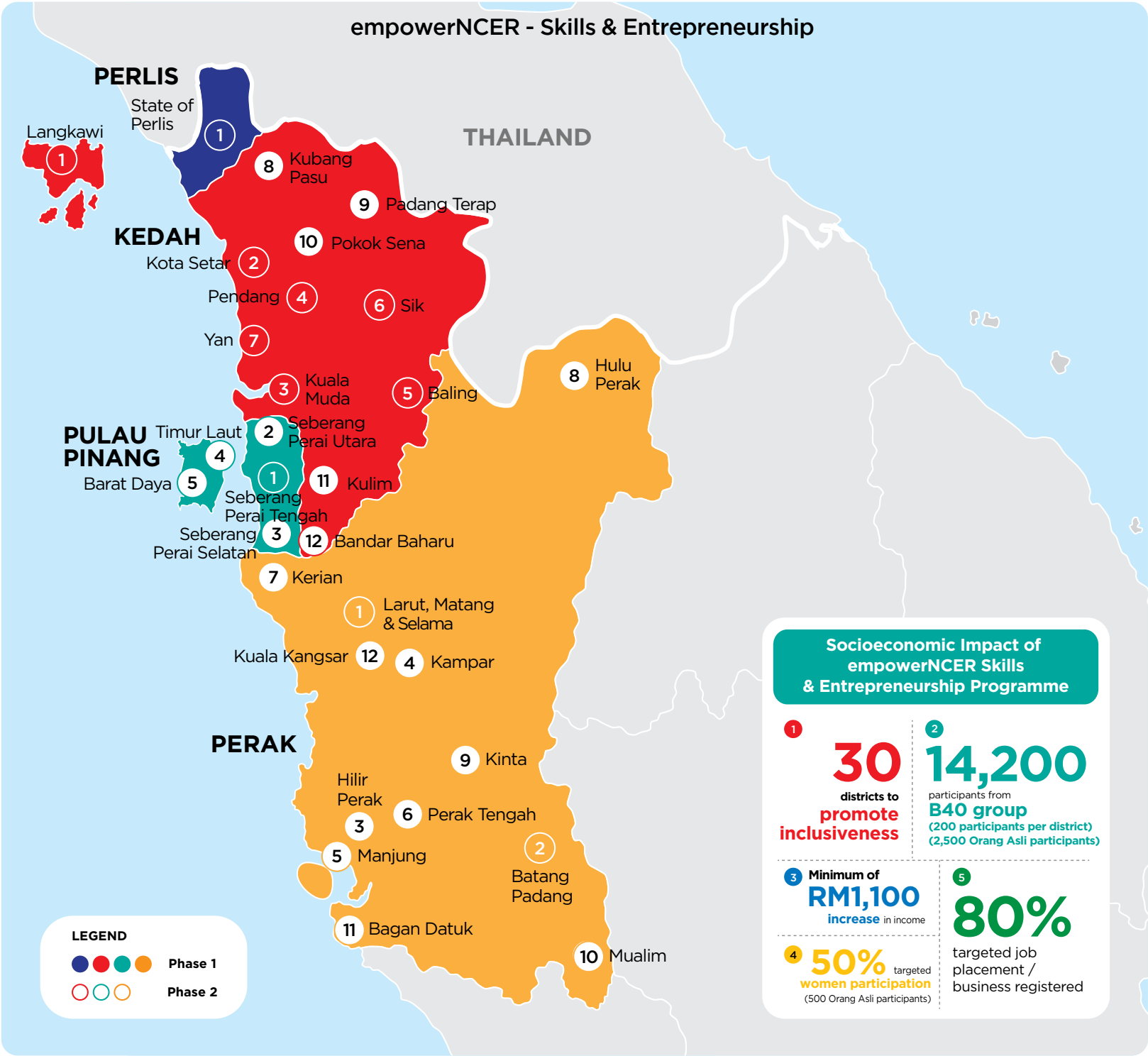


empowerNCER - Skills & Entrepreneurship

The **Skills and Entrepreneurship Training** component is designed to provide **basic skills and entrepreneurial training** for local participants to enable them to **increase their household income** while supporting the industries in the region. Through this programme, the participants will be trained and empowered to become entrepreneurs or gain employment in the local industries. The target group for this programme consists of **KIDA beneficiaries, youths, women, the B40 group and Orang Asli**.



This programme involves **collaboration with various agencies and organisations** to provide training and relevant certification to participants, while **engagement with industries** are also being undertaken to ensure **job placement opportunities** for participants as well as **buyback arrangements** of products and services produced by the participants.





About 6,000 participants of empowerNCER Skills and Entrepreneurship training programme have benefitted from this initiative

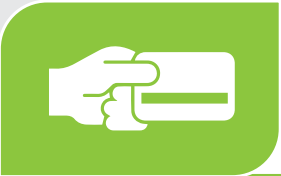
empowerNCER-MyKasih

The empowerNCER-MyKasih programme is a **private-public collaboration** between **NCIA** and **MyKasih Foundation** which provides **students in remote rural areas** access to the **latest learning aids and facilities**, as well as **food assistance**. Fully-funded by the private sector, **three components**, namely, **cashless food aid for students**, **21st Century Classroom** and **Robotic Science, Technology, Engineering and Mathematics (STEM) Learning** have successfully been implemented in **10 schools** in NCER in 2019 and will be replicated in other schools in the four NCER states.


The empowerNCER-MyKasih programme has shown **positive impact** in improving the school attendance of participating students and spurred their interest in STEM, and will be integrated with the **empowerNCER-Academic programme**.

The empowerNCER-MyKasih programme is a private-public collaboration between the MyKasih Foundation and NCIA

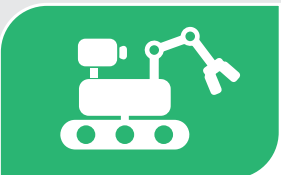
The Current 3 Components Will Be Replicated in Other Schools Selected Under the empowerNCER-Academic Programme



Cashless Card




21st Century Classroom




Robotic STEM Learning


6 New Programme Components Will be Piloted in Langkawi and Later Rolled Out in Other Schools in 2020




School Management System (SMS)
Single application for teachers, students & parents to monitor students' progress and other reports




Edible Garden Project (Aquaponics)
Revolutionise farming via non-toxic, environmentally friendly & pollution free, green farming




Recycle For Life (RFL)
Increase awareness on recycling with a smartcard that can be used to buy essential items from canteens and participating merchants



Sports Development (i.e. Football & Netball)
Develop grassroots players and break routine. Enhance EI & soft skills, integrity and harness future talent



Study Camps & Back to School
Study camps prior to major exams and provide back-to-school items




Health Screening
Free eye-screening and spectacles to selected B40 students


Impact of empowerNCER-MyKasih as of January 2020




6 schools in Langkawi involved in Pilot Programme since July 2019




120 students enjoying food aid and essentials via cashless card



6 21st Century Classrooms set up and robotics sets distributed for Applied STEM



Attendance rate has improved by up to **95%**



Teachers are more motivated to teach through applications on **17 learning devices** in the classroom

Successful Pilot Programme of empowerNCER-MyKasih (A Private Initiative)



Year 4 students of SK Selat Bagan Nyior, Pulau Dayang Bunting taking part in Robotic STEM Learning Programme



Year 2 students of SK Selat Bagan Nyior, Pulau Dayang Bunting using a tablet under the 21st Century Classroom initiative



empowerNCER-MyKasih participants being exposed to the use of laptops in their learning



Students from SJKC Chung Hwa, Langkawi participating in Robotic STEM Competition organised by empowerNCER-MyKasih

entrepreneurNCER

The entrepreneurNCER programme will be implemented throughout the region in a move to support the **industry supply chain** in NCER. The Entrepreneurship Development component of the programme is set to elevate and expand existing businesses of **micro enterprises and Small & Medium-sized Enterprises (SMEs)**. Designed as a holistic and comprehensive programme, entrepreneurNCER is a recognition of the vital role played by the micro enterprises and SMEs as the backbone of the local economy.

Strategic partnerships are being developed with selected banks to provide **soft loan assistance** through a **50% topping up method of bank interest rates**. In addition to providing soft loan assistance to

entrepreneurs who intend to grow their business, **entrepreneurship development programme** is also provided for **product development and packaging, promotion and maneuvering, and technology adoption**.

Meanwhile, the **SME Development IR 4.0 adoption** is aimed at encouraging the conversion of IR 4.0 among local SMEs via the provision of technology and incentives. With the advent of IR 4.0, NCER will also leverage on the momentum driven by the convergence of industries as a result of innovation and digitalisation, as greater use of technology will boost entrepreneur productivity and raise the nation's overall competitiveness.

entrepreneurNCER

entrepreneurNCER Aims to Reduce the Cost of Doing Business and Business Expansion for Micro Enterprises & SMEs


ENTREPRENEURNCER

Financial Assistance


NCIA Funding

Bank Lending

1 : 12




- Top-up of 50% on loan interest
- Financing up to RM500,000




- Top-up of 50% on loan interest
- Financing up to RM100,000


Enhance Business Growth and Competitiveness




Product Development & Packaging



Promotion & Marketing




Technology Adoption




Collaborate with other potential strategic partners to grow innovative business opportunities


In Line with the National Entrepreneurship Policy 2035




Inculcation of entrepreneurship at every level of society




Optimising the regulatory system & access to financing




Stimulating integrated & holistic entrepreneurship development



Spurring economic growth through innovation-based enterprises



Boosting capability & performance of micro, small & medium enterprises

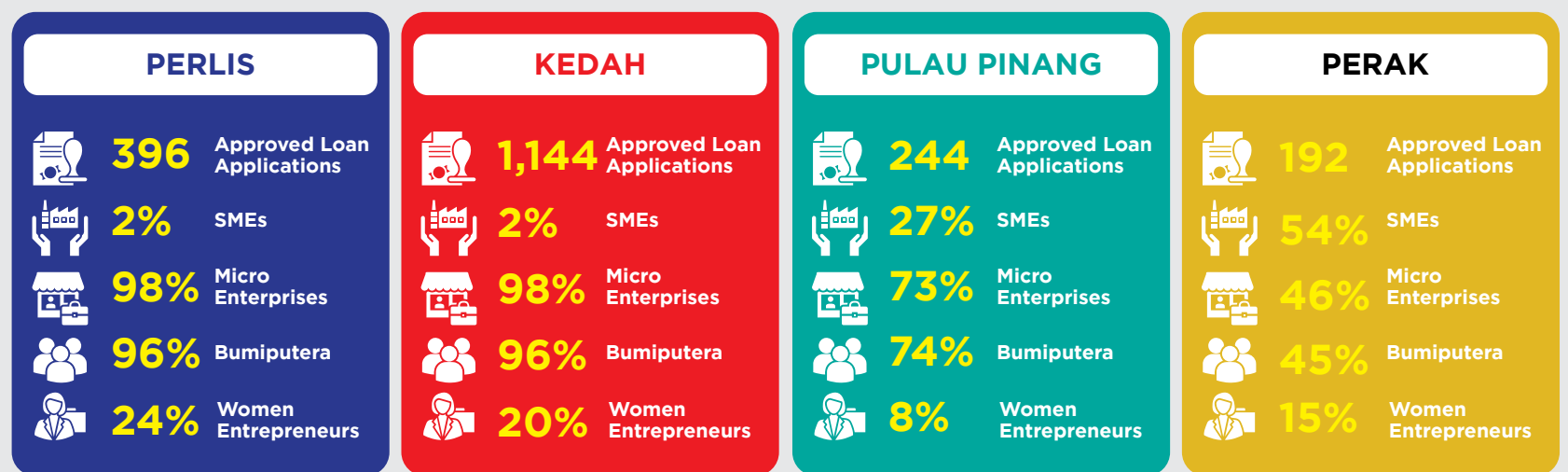


Internationalisation of high-growth enterprises

Achievements of entrepreneurNCER in 2019



Impact of entrepreneurNCER by state as at January 2020



**Targets by
2025**



8,160
entrepreneurs

250
Orang Asli
entrepreneurs



5,200
jobs created



Services - Restaurant



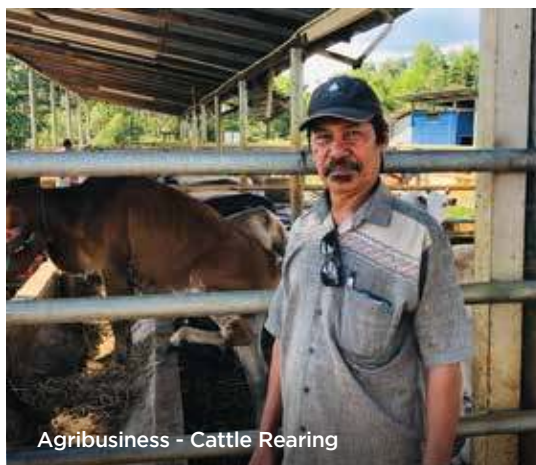
Services - Kindergarten



Services - Nursery



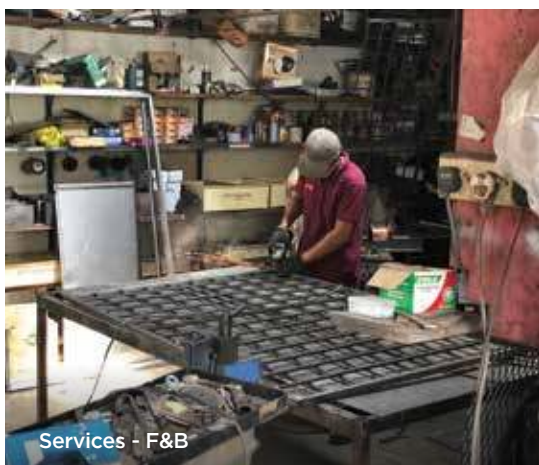
Services - Wholesale Business



Agribusiness - Cattle Rearing



Services - Restaurant



Services - F&B



Services - Retail



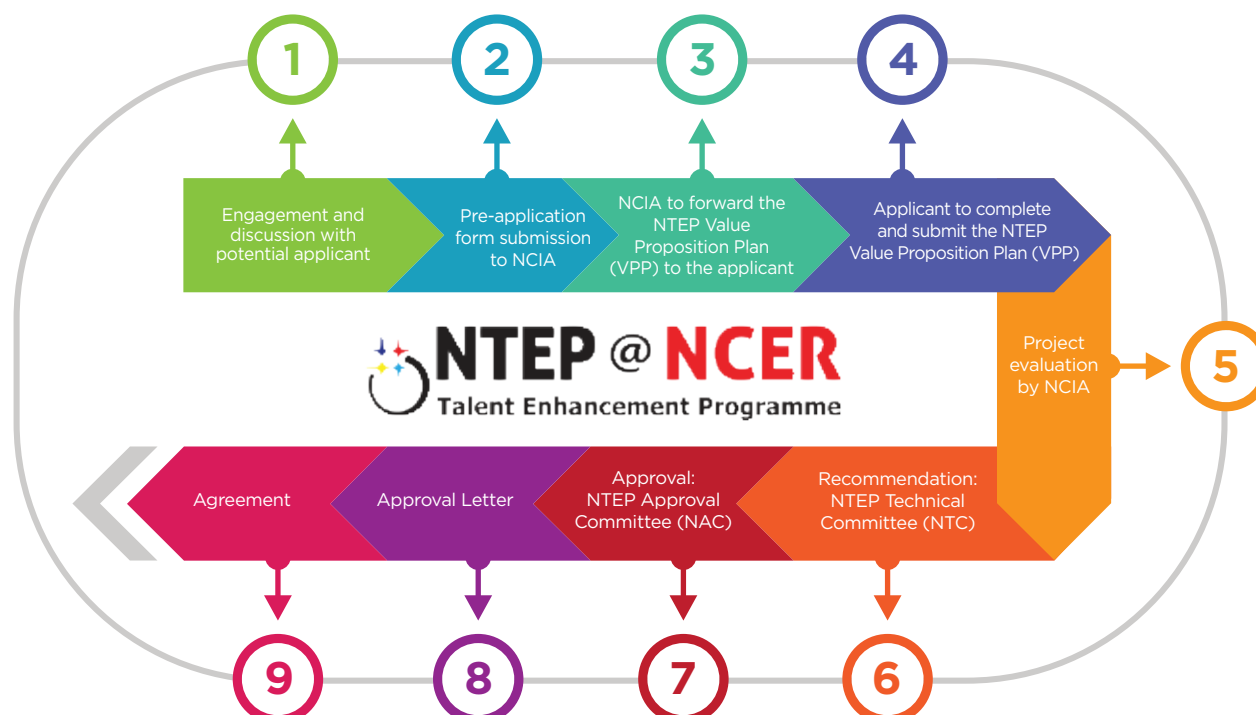
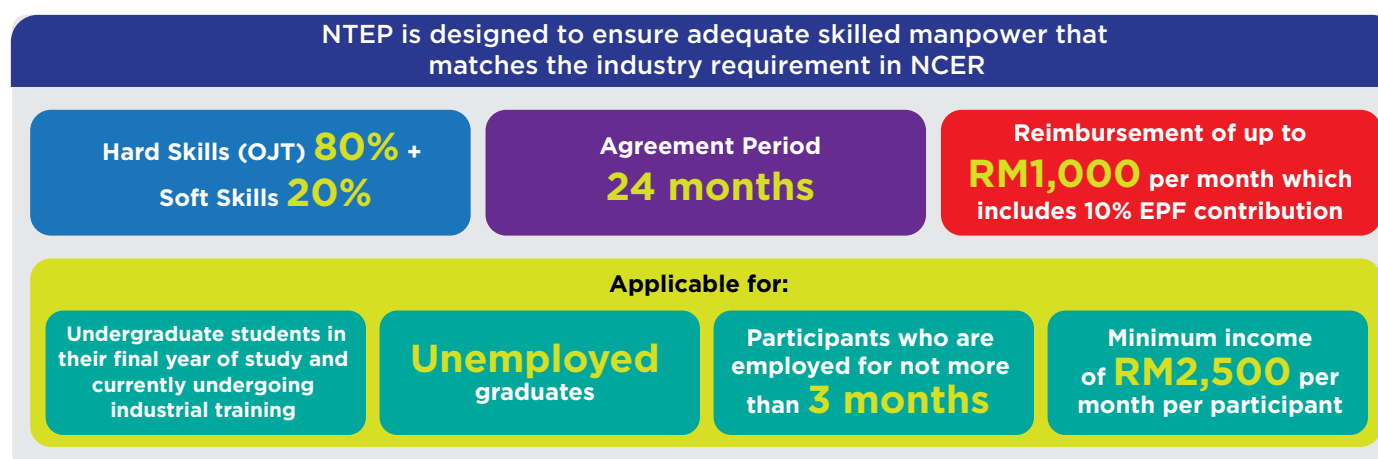
Services - F&B

entrepreneurNCER aims to reduce the cost of doing business and business expansion for micro enterprises and SMEs

NCER Talent Enhancement Programme (NTEP)

Malaysia's graduate unemployment rate in 2018 fell slightly to 3.9% from 4% in 2017, with a total of 162,000 unemployed graduates. NCER alone recorded 14,300 unemployed graduates, with Perak and Perlis recording the highest percentage rate.

NTEP is specially-tailored to **enhance the employability of local graduates** and provide them with job opportunities and better quality of life, as well as ensure a **sufficient skilled workforce** that matches the industry requirements within NCER. Through this programme, participants will receive high-quality work skills training, followed by soft skills training to enhance their competitiveness, thus providing direct employment opportunities to the local graduates.



NTEP Programme Beneficiaries

NTEP is open to **all local and foreign companies** that are **investing or expanding in NCER**. The companies will be given a subsidy of RM1,000 per graduate for a period of 12 months, or RM12,000 per graduate in total. The NTEP subsidy is meant to **encourage companies to employ fresh graduates** and **provide them with adequate training**, in lieu of hiring experienced personnel or foreign knowledge workers.

One of the conditions that have to be met by companies is that they must offer **a minimum monthly salary of RM2,500** to the graduates. The firms are encouraged to recruit graduates who have been unemployed within two years upon their graduation. They are also advised to recruit more STEM-related graduates and at least 30% female participants under NTEP. Among the participating companies for NTEP are Pulau Pinang-based **Micron Memory Malaysia Sdn Bhd**, **ViTrox Corporation Berhad** and **Oppstar Technology**.

Micron Memory Malaysia

Under NTEP, all training aspects are comprehensively considered in designing the training and development programme for the

participating graduates. In the case of Micron Memory Malaysia, new college graduates are required to undergo **on-the-job training** for six months, which cover **both technical skills** and **soft skills**. This “learning by action” via on-the-job approach is viewed as essential to expose and educate the trainees in an effective manner.

The trainees are also given work exposure at other Micron sites in the region, such as Xi'an in China and Singapore, to familiarise them with the company's systems, structure and technology, in addition to networking. The fresh graduates are also assigned with a “buddy” who acts as their mentor at the workplace.

ViTrox Corporation Berhad

ViTrox Corporation Berhad has introduced its own **in-house soft skills training programmes** for the graduates comprising the “Effective Series” (email writing skills and presentation skills), “Language Mastery Series” (communication skills), and “Lean Series” (problem-solving skills through Lean Tools and mindset cultivation), among others. This is based on the realisation that technical skills alone are not enough for the graduates, as soft skills are also viewed as equally important to deliver business excellence and drive competitive advantage.



NTEP participants from Micron Memory Malaysia Sdn Bhd, a global leader in the semiconductor industry



NTEP Participants from Vitrox Corporation Bhd, a local Automated Vision Inspection Solutions provider

Oppstar Technology

Oppstar Technology provides a series of **Integrated Circuit (IC) Design training** classes for NTEP participants for a duration of 4-6 months. The training, which covers both theoretical and practical aspects, is conducted by the company in partnership with the **Collaborative Microelectronic Design Excellence Centre (CEDEC), USM**. The IC Design classes include Introduction to IC Design, Digital Front End Design, Digital Back End Design, Analog Circuit Design, Custom Layout Design and Design for Test.

Under the NTEP programme, Oppstar Technology will monitor the trainees' learning progress and identify their strengths before assigning them to the appropriate IC Design job scope, where they will be led by the company's senior designers. Those who are ready will be immediately assigned to local and overseas projects under the guidance of the senior designers until they are able to work independently. Regular dialogue and shared learning sessions are also conducted to help expedite their IC Design learning.

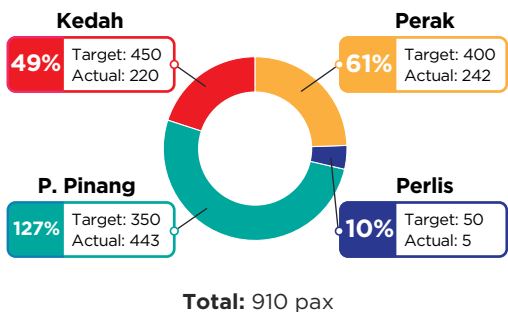


NTEP Participants from Oppstar Technology Sdn Bhd, a local IC Design firm

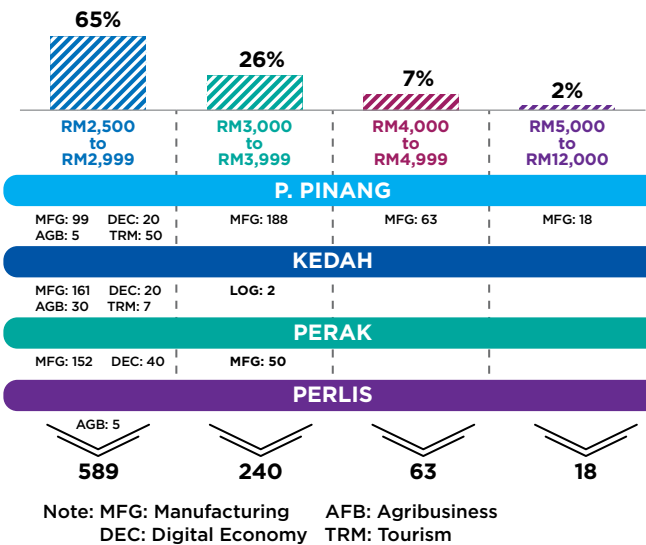


Impact of NTEP@NCER as of January 2020

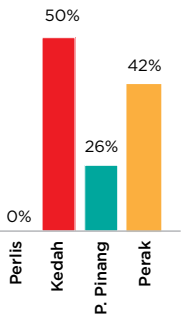
Participating Graduates by State



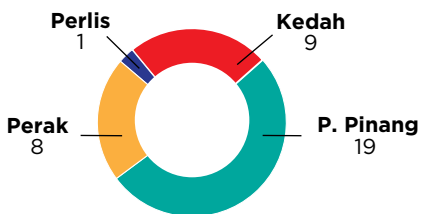
Number of Participants by Sector & State



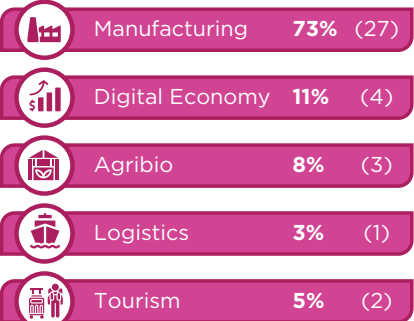
Female Participation



Companies by State

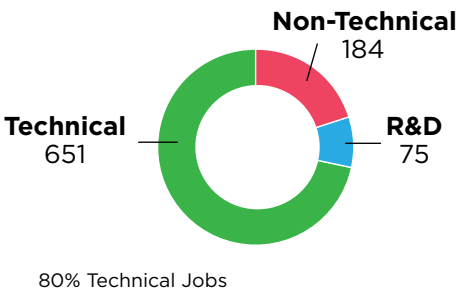


Total: 37 companies



Note: Participation of 3 Bumiputera companies (Pulau Pinang, Perak & Kedah)

Type of Jobs



Targets by 2025



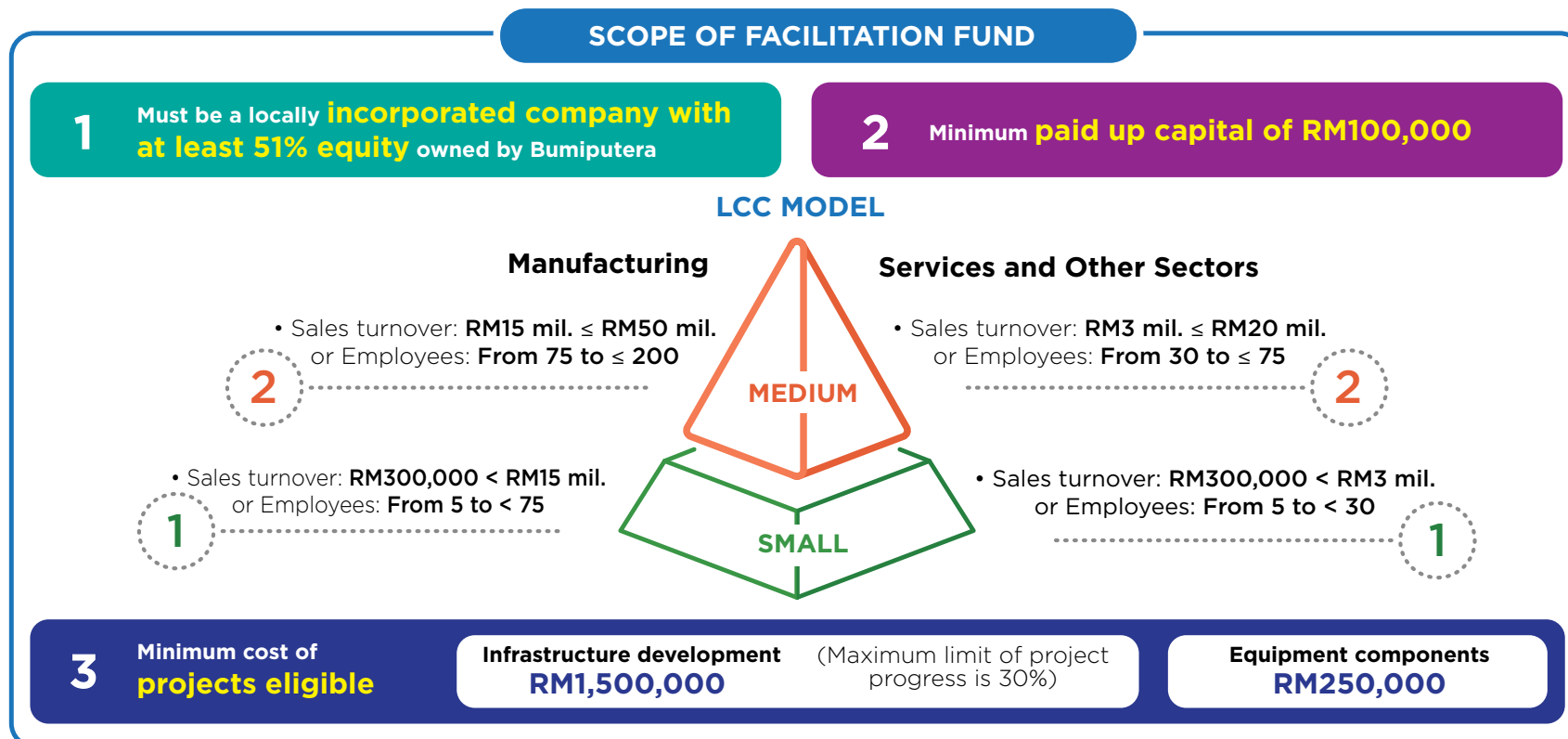
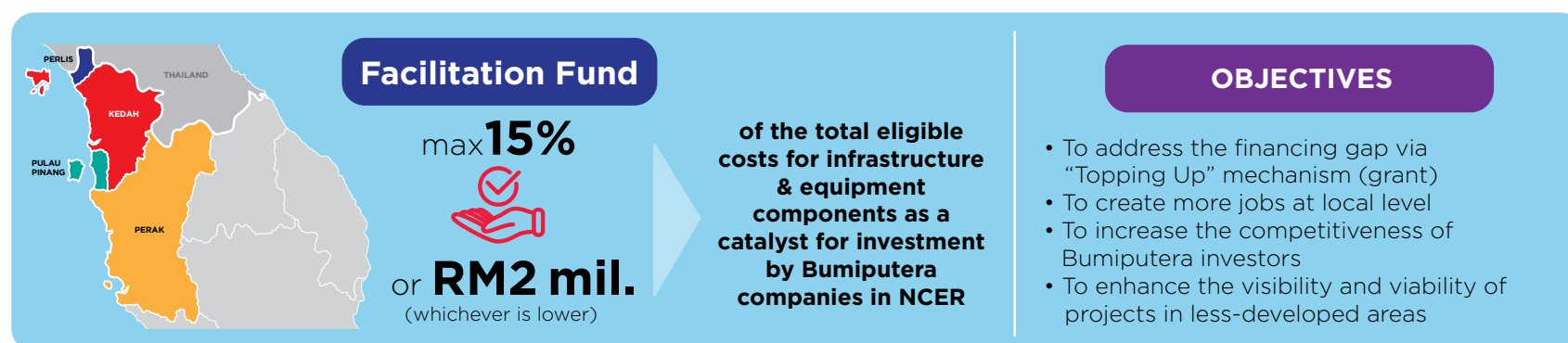
6,250 graduates employed with minimum income of **RM2,500 per month**



125 private companies involved in **NTEP**

Dana Usahawan Bumiputera (DUB)

The DUB Programme is a Facilitation Fund created as a **tipping point for Bumiputera private investment initiatives** in NCER. DUB supports Bumiputera companies in the form of financial assistance, to enable them to become more competitive and catalytic in the implementation of projects in the region. This initiative is also aimed at **enhancing the viability of private sector investment**, particularly in the implementation of Bumiputera projects, that will have a significant impact on the economic development and community in NCER.

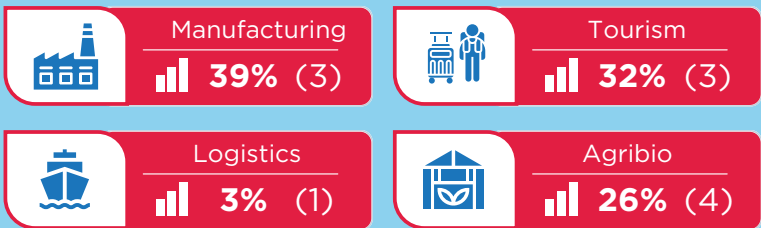


The Impact of DUB as at January 2020

1 Economic Impact



2 Investment by Sector



3 Type of Grant Approved

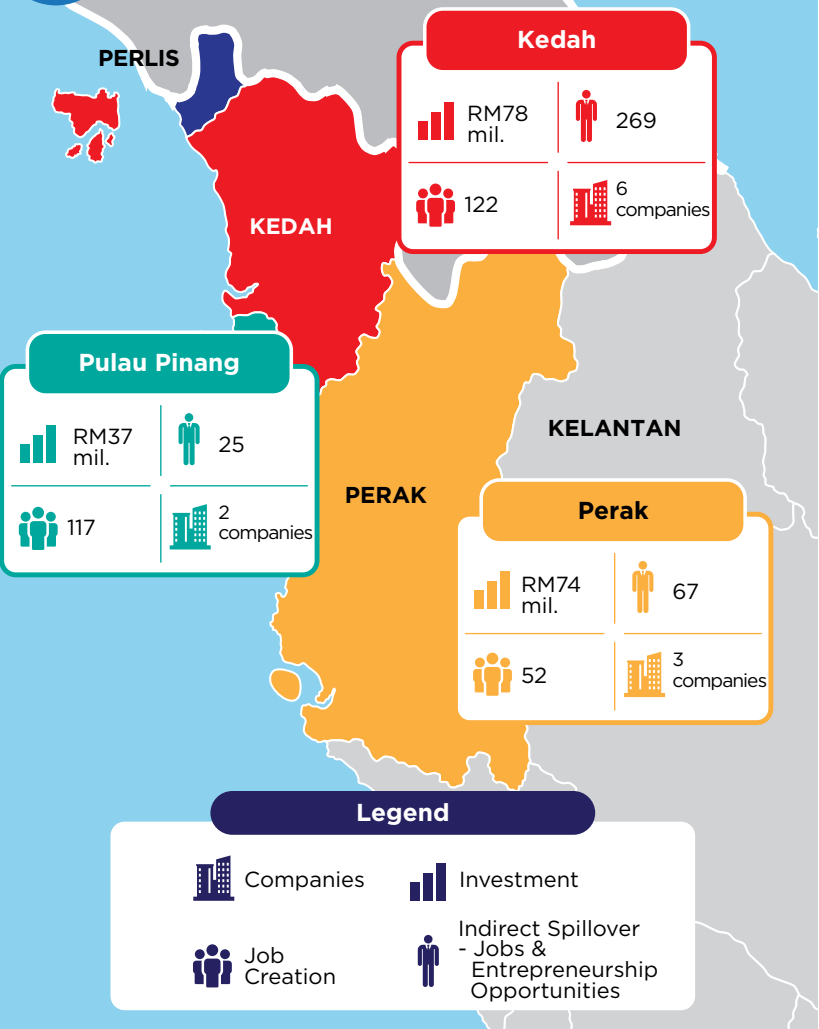


Targets by 2025

a Investment value of **RM1.5 billion** from approximately 20 to 30 Bumiputera companies

b Create **1,750** new job opportunities

4 Impact by State



Source: NCIA

Impact of Dana Usahawan Bumiputera (DUB)

Eagle Nest Skywalk, Langkawi

As of January 2020, DUB has benefitted **11 Bumiputera companies** in NCER, one of which is **MBIAB Ventures Sdn Bhd** (MBIAB Ventures), a strategic partnership between private company, **Art Best Sdn Bhd**, and Kedah State subsidiary, **Menteri Besar Kedah Incorporated (MBI Kedah)**.

Dana Usahawan Bumiputera was utilised by MBIAB Ventures for the development of **Eagle Nest Skywalk** at the **Langkawi Cable Car Station**, which will be the latest attraction at the must-see tourist spot.

While the Langkawi Cable Car has already established itself as an established and matured tourist attraction, capturing almost 40% of the annual tourist arrival to Langkawi, its tremendous potential has not yet been fully unleashed. Hence, this iconic project, which will be **the world's longest free-standing cantilever glass skywalk**, will help propel Langkawi's global image to greater heights.

Located at Gunung Mat Chinchang, which is part of **Langkawi UNESCO Global Geopark**, Eagle Nest Skywalk will be perched on a stunning site which offers a spectacular view and a thrilling experience for its visitors. The project will be developed by **experienced, award-winning professionals** in the industry who have been involved in the development of other similar attractions in Malaysia, such as the Langkawi SkyBridge, Langkawi SkyGlide, Penang Hill Funicular, revitalisation of KOMTAR Tower, and Rainbow Skywalk at KOMTAR, among others.

This project will involve a total investment of **RM30 million** and is expected to create **25 new jobs** for the local community once it is completed and opened for the public in **March 2021**.



Artist's impression of Eagle Nest Skywalk, Langkawi

Enhancement of Poultry Processing Plant in Alor Setar

Another DUB beneficiary is **Ayam Bismi Sdn Bhd** (Ayam Bismi), a leading Bumiputera company in the northern region which is involved in **poultry farming and processing**. Currently, Ayam Bismi is only able to process up to 15,000 birds per day. Hence, the company is utilising the funds from DUB to help **enhance its chicken processing capacity** through the construction of a new processing plant in Alor Setar, Kedah, as well as installation of machineries and procurement of commercial vehicles.

Through this project, Ayam Bismi will be able to double its processing capacity to **30,000 birds per day** to cater to the market demand, especially from Kedah and Perlis.

The project will involve a total investment value of **RM8.2 million** and is expected to create up to **60 new jobs** for the local communities once completed in 2020. The company will also help create **new entrepreneurship opportunities** to those who are interested to set up Ayam Bismi outlets through their Business Transformation Programme.



Organic chicken produced by Ayam Bismi has received positive response from consumers



Usaha Strategik's new plant for EMP biomass pellet production

New Factory for EFB Biomass Pellet Production in Behrang

Based in Behrang, Perak, **Usaha Strategik Sdn Bhd** (Usaha Strategik) is involved in the **trading and processing of empty fruit bunch (EFB) into biomass pellet**. In 2016, Usaha Strategik signed an MOU with two Japanese companies, namely, Nissin Shoji Co. Ltd and Japan Bioenergy Co. Ltd, to supply EFB biomass pellet to Japan.

To fulfil the demand from both companies, Usaha Strategik has taken a proactive step by planning to set up a **new factory to process EFB into biomass pellet**. Hence, the company will utilise the funds from DUB to install two complete pelleting systems for palm oil biomass.

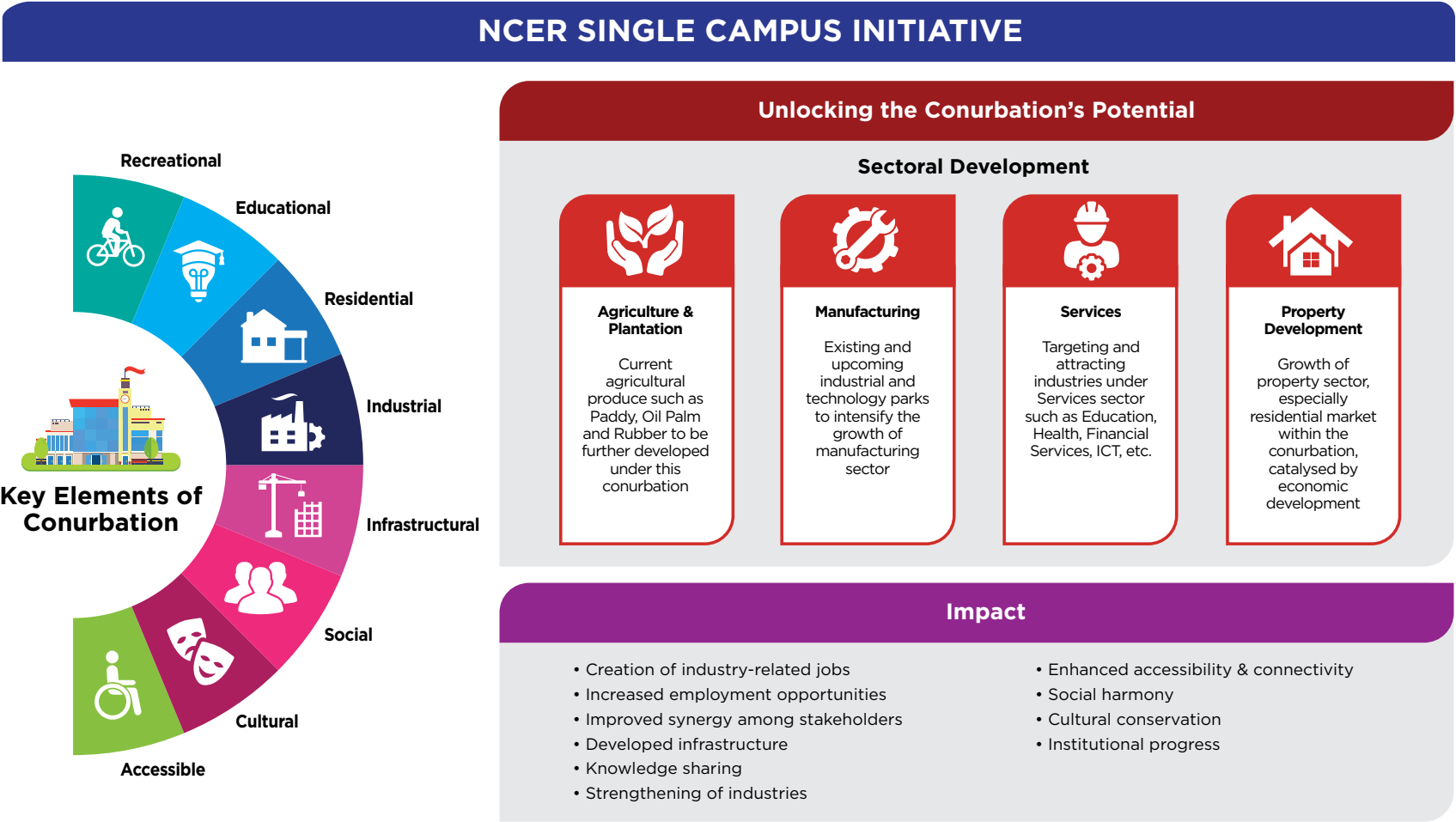
This project will have a total investment value of **RM7.5 million** and is expected to create up to **20 new jobs** for the local community.

Advanced Technology

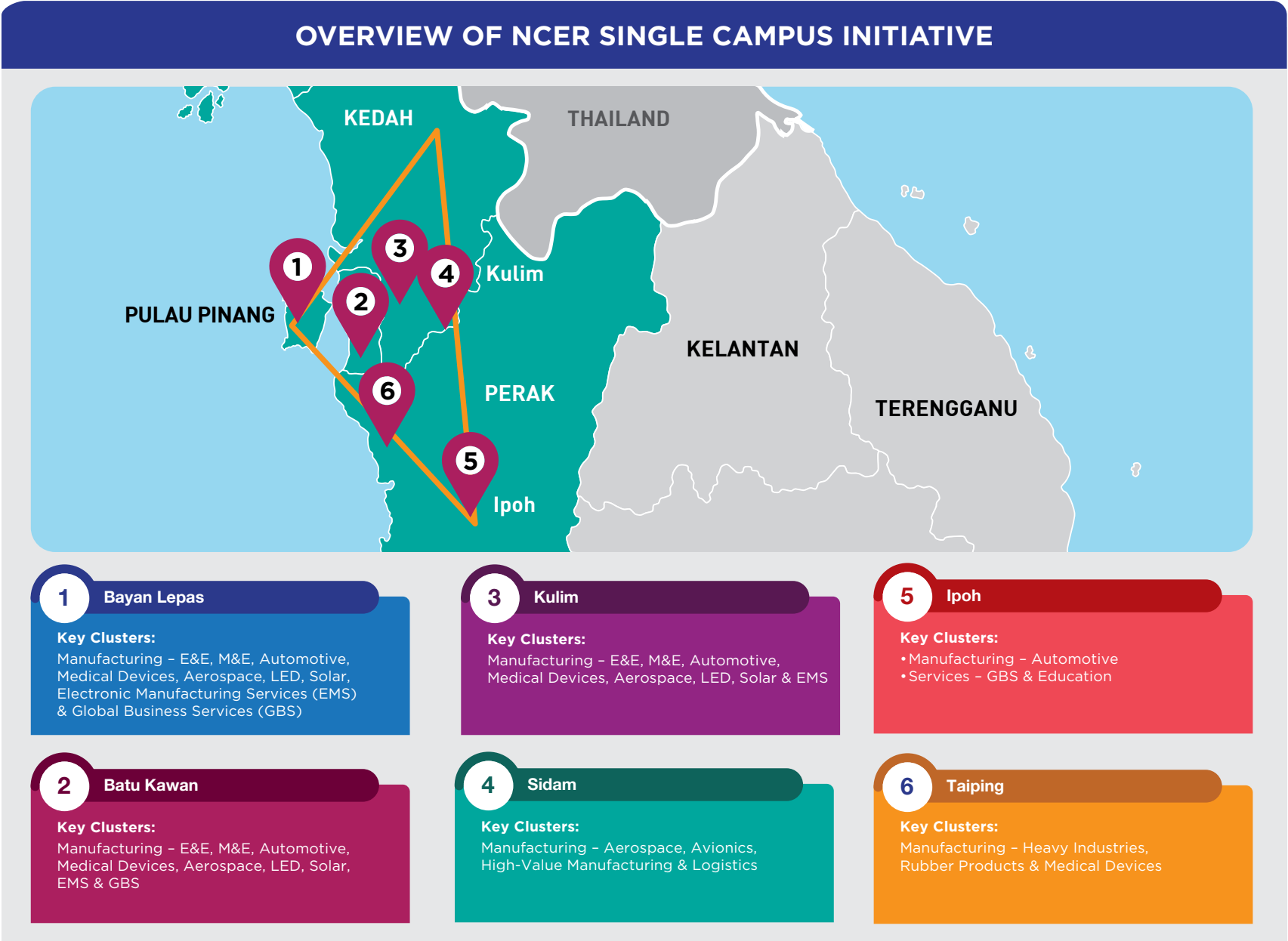
To enhance NCER’s competitiveness in the era of IR 4.0, the **Single Campus Hub** concept will be introduced to **streamline the value chains, value propositions, incentives, and cluster planning** in the region’s manufacturing sector. Covering the key manufacturing areas of **Pulau Pinang-Kulim-Ipoh**, the virtual **Single Campus Hub** will serve as a centre for **Research, Development & Commercialisation (R&D&C)** in NCER and promote the growth of homegrown advanced technologies and R&D assets. It will allow **cross-sharing of human capital and expertise**, as well as **R&D and technology** across the region, while strengthening cooperation and coordination between the **Government** agencies and **TVET higher learning institutes**.

NCER Single Campus (Bayan Lepas - Batu Kawan - Kulim - Sidam - Taiping - Ipoh)

An initiative to position Pulau Pinang, Kulim (Kedah) and Ipoh (Perak) as a single campus to encourage collaboration between the three states, in order to create a more conducive ecosystem for the holistic development of key sectors such as Manufacturing, Logistics, and Services.



As most manufacturing activities in NCER are currently concentrated in **Pulau Pinang**, it is envisaged that the existing key manufacturing zones will eventually become the **R&D&C Centre** of the region, with the **production activity** being carried out **in other parts of NCER**. This will help ensure a more balanced spread of economic activities and distribution of wealth, in line with the Government’s Shared Prosperity Vision. Initiatives under the Single Campus Hub include **NCER Technology Innovation Centre (NTIC)** and **Collaborative Research in Engineering, Science and Technology’s (CREST) 2.0**.



NCER Technology Innovation Centre (NTIC)

NTIC will be focusing on activities related to **research, product development** and **design customisation**, whereby it will serve as a platform for **SMEs, Large Local Companies (LLCs), MNCs, young technocrats** and **entrepreneurs**, as well as start-up companies to conduct their **higher value-added activities** in the region. Its development will be based on **NTIC Strategic and Enabling Pillars**, that will serve as a framework in moving up the value chain for industries in NCER in order to transform the region from a labour-intensive economy to the one that is based on higher value-added activities.

NTIC will enable these activities to be conducted in their various stages, starting from idea creation to design, development, prototype and validation, which will result in innovative outcomes and valuable assets in the form of **Intellectual Properties (IP)**.

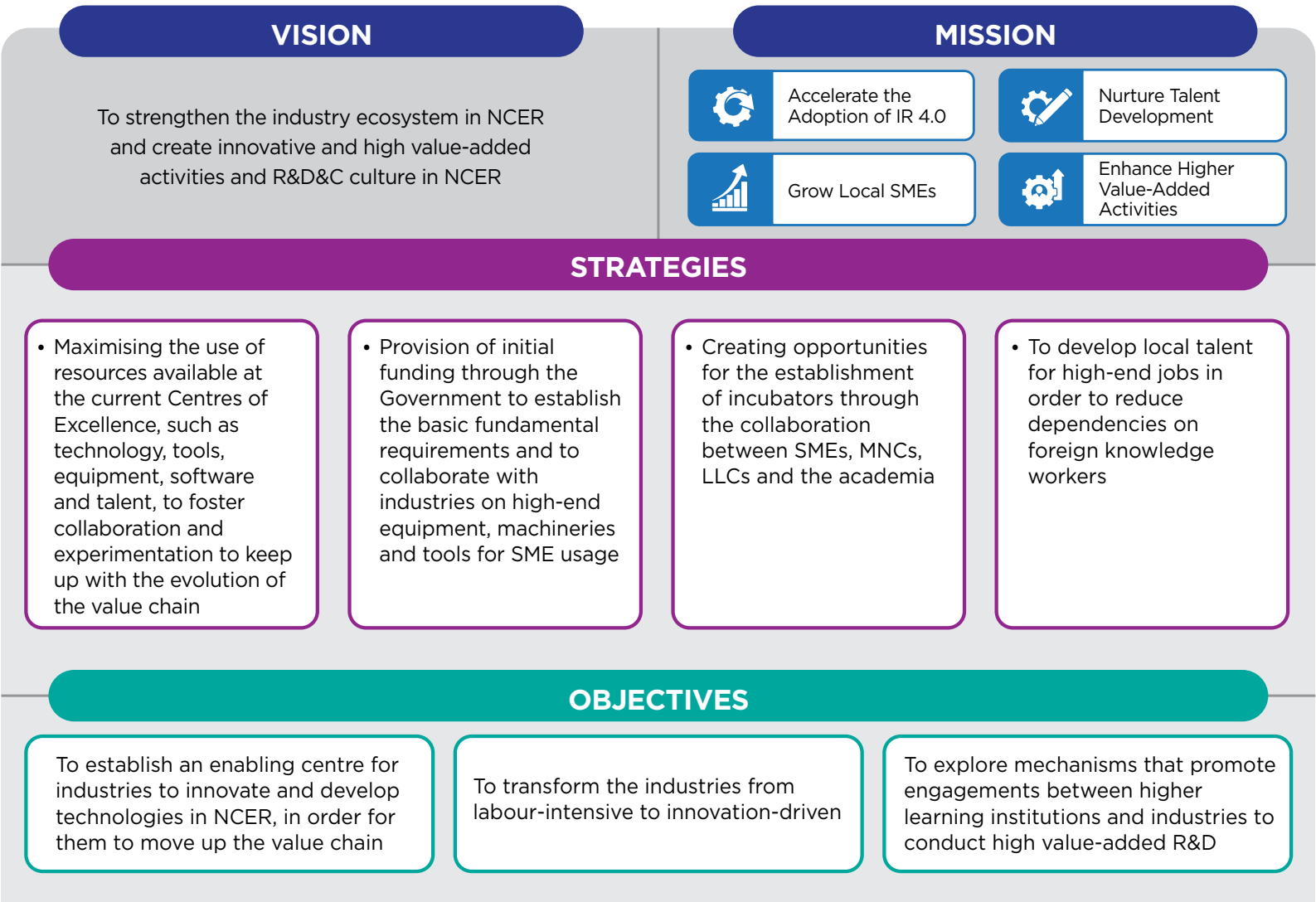
NTIC will use the **quad helix approach** to spur innovative and sustainable economic development in the region. The presence of a strong **industry, Government** and **academia** must mutually drive towards sustainable innovation for the benefit of the community. The centre will be focusing on four growing sectors as its enabling pillars namely, **Electrical and Electronics (E&E), Machineries and Equipment (M&E), medical devices** and **aerospace**.

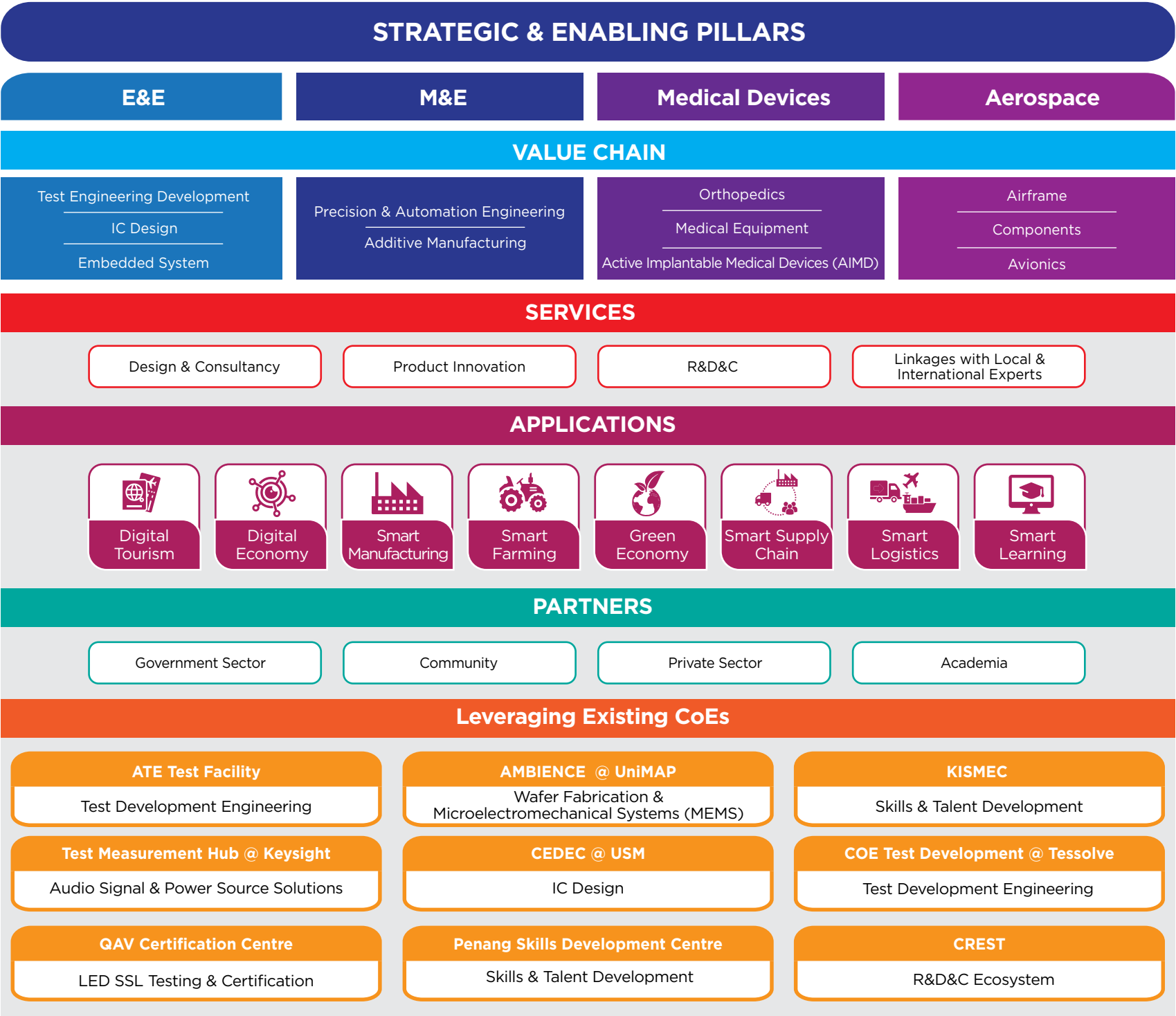


Artist's impression of NTIC

At the initial stage, NTIC will be focusing on activities that are currently in **high demand** by the SMEs, particularly those that will add value to the targeted subsectors, such as **Test Engineering Development** and **IC Design** under E&E. Once these sectors are well-established and matured, this approach will be replicated in other sectors and subsectors in the region. The focused strategies and initiatives aim to **enhance higher value-added activities, nurture the local talent pool, accelerate the adoption of IR 4.0** and **strengthen the SME development**.

NTIC will provide the services and facilities to serve and accommodate the targeted companies in the areas of **Design and Consultancy, Product Development, Research, Development and Commercialisation (R&D&C)** and provide linkages with local and international experts. To ensure that NTIC will be operating in a cost-effective and sustainable manner, it will leverage on the **eight applications** of **Smart, Digital and Green Economies** by fully leveraging and utilising all the existing **Centres of Excellence (COEs)** in collaboration with the industries in NCER.

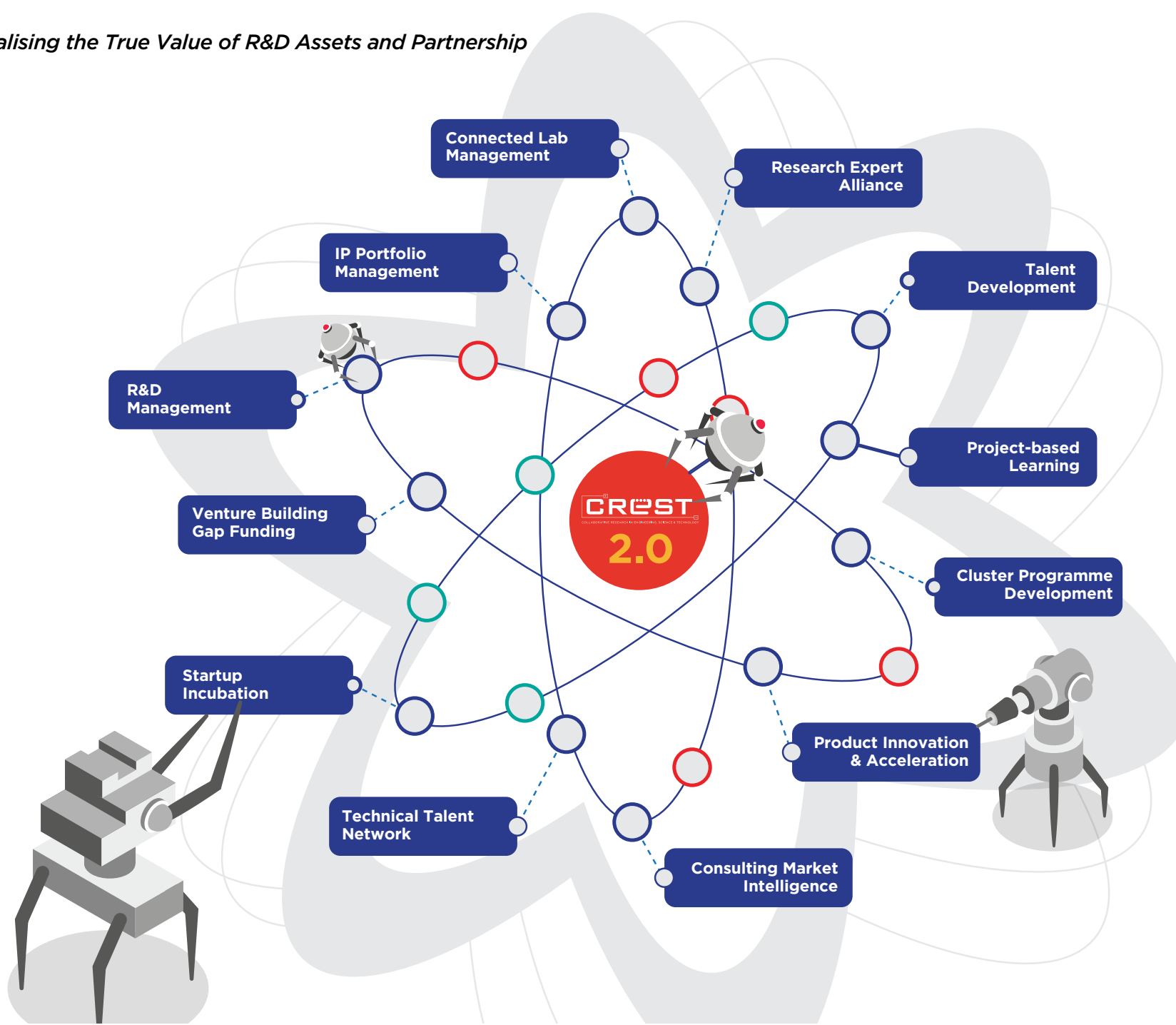




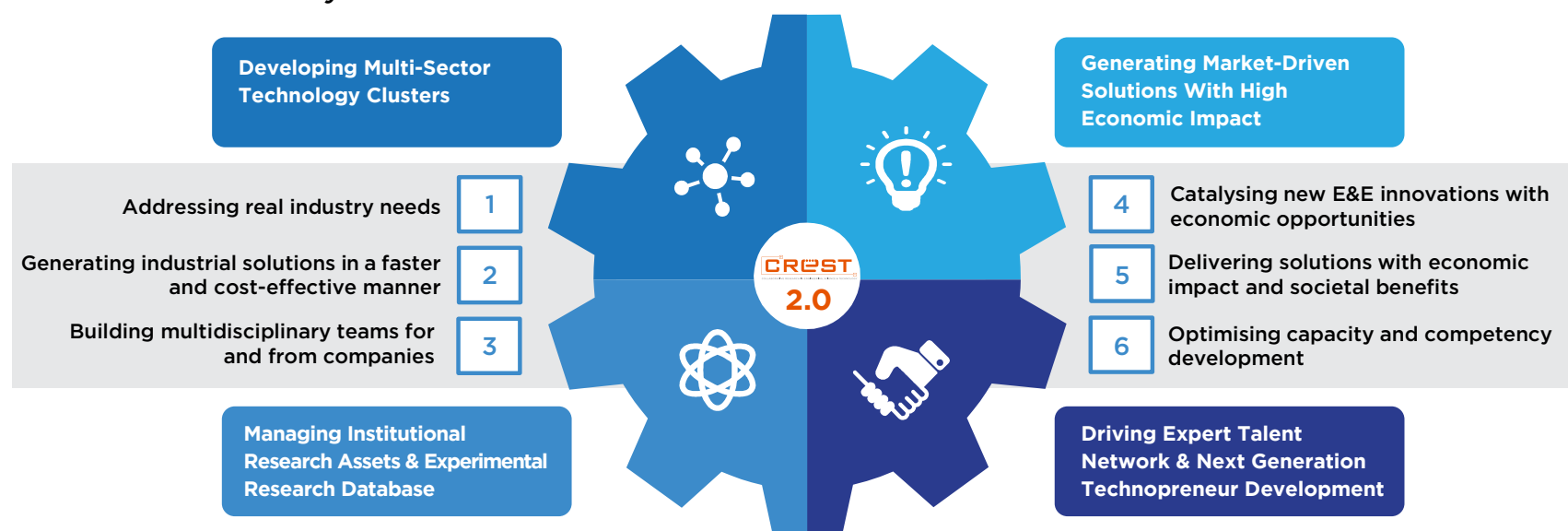
CREST 2.0

CREST 2.0 is a **continuation of the Collaborative Research in Engineering, Science and Technology's (CREST) initiative**, an industry-led collaborative platform between the **industry, academia and Government** which serves as a catalyst to the country's economic growth, especially in the **electrical and electronics (E&E) industry**.

Realising the True Value of R&D Assets and Partnership



CREST 2.0: National Collaborative R&D&C Platform to support Malaysia's E&E Ecosystem and Drive an Innovation-Led Economy



High-Level Programme Roadmap (2021-2025)

Focus on value extraction and building a sustainable ecosystem

IoT Cluster



GaN Power Devices

Diversifying GaN applications

- GaN for Power Devices & Telecommunications

Target Outcomes

- Commercialisation of 8" Gan on Silicon Wafer
- 30 GaN Power Device Researches
- Creation of 300 Technical Experts
- Spin-off at least 1 company on GaN product
- 5 IPs in the GaN power and GaN communication devices



R&D and Talent Enhancement

Labs and research network via TheGreatLab (TGL) Academy Collaborative Learning and building a sustainable talent pipeline

- Knowledge
- Capital Development
- High-Impact Ecosystem Solutions
- Accelerated SME Innovation
- More Investments in Applied Research
- Positioning Malaysia as the Preferred R&D hub

Target Outcomes

- 4,000 TGL industry-relevant talent trained
- 20 new founders and start-ups
- 8 International IPs to be created



Precision Agriculture

Scaling farming solutions for the community

Focus areas: Automation and modernisation of farming, R&D for yield improvement, etc.

NCER INCENTIVES PACKAGE FOR INVESTMENT

NCER is the ideal destination to establish and enhance high-value and impactful economic activities due to its strategic geographical location, as well as its well-connected logistics infrastructure. Given its unique value propositions, NCIA aims to continue attracting new investments into NCER and encourage existing investments to expand their operations in the region.

The Government recognises the unique and multi-faceted economic activities in NCER, and as such, focus is given on the **regional approach and perspective** to ensure that the region gains a **competitive edge over other investment destinations**. In this regard, the **NCER Incentives Package** has been approved on 13 August 2019 to encourage **high-value and substantive investments** to spearhead the regional development in NCER.

The NCER Incentives Package is a comprehensive package of fiscal incentives that is currently being offered to investments in **promoted activities** within the region, particularly in **manufacturing, agribusiness, petrochemical, green economy, and services** which consist of **tourism, logistics, education and digital economy**. In the future, the **sustainable mining industry** will also be a crucial and promoted sector for NCER.

The NCER Incentives Package features the **Pioneer Status** or **Income Tax Exemption** of up to 100% for a period up to 15 years, while the **Investment Tax Allowance** offers up to 100% allowance on qualifying capital expenditure for up to 10 years. The incentives package is also applicable for manufacturing and seed companies undertaking Research and Development (R&D) activities in the region. **Customised incentives** of either income tax exemption or investment tax allowance may also be offered to high-impact or strategic projects in the region.

In addition to the NCER Incentives Package, investors also have access to other Government incentives which can be facilitated by NCIA. These include **import duty exemption** on raw materials, components, machineries, equipment, spare parts and consumables that are not produced locally and used directly in the production activity.



Income Tax Exemption

Income tax exemption of up to **100%** for a period of up to **15 years**



Investment Tax Allowance

Up to **100%** allowance on qualifying capital expenditure for up to **10 years**



Import Duty Exemption

Raw materials, components, machinery, spare parts and equipment



Stamp Duty Reduction

50% reduction of stamp duty on instruments of transfer or lease of land (Kedah & Perlis)

CUSTOMISED INCENTIVES
(Section 127 (3A) of Income Tax Act 1967)



Special Incentives Package



Global Business Services (GBS)

BROAD-BASED INCENTIVES
(P.U. (A) 112/113 Income Tax Act 1967)



Manufacturing



Agriculture & Bio-Industries



Services (Tourism & Logistics)



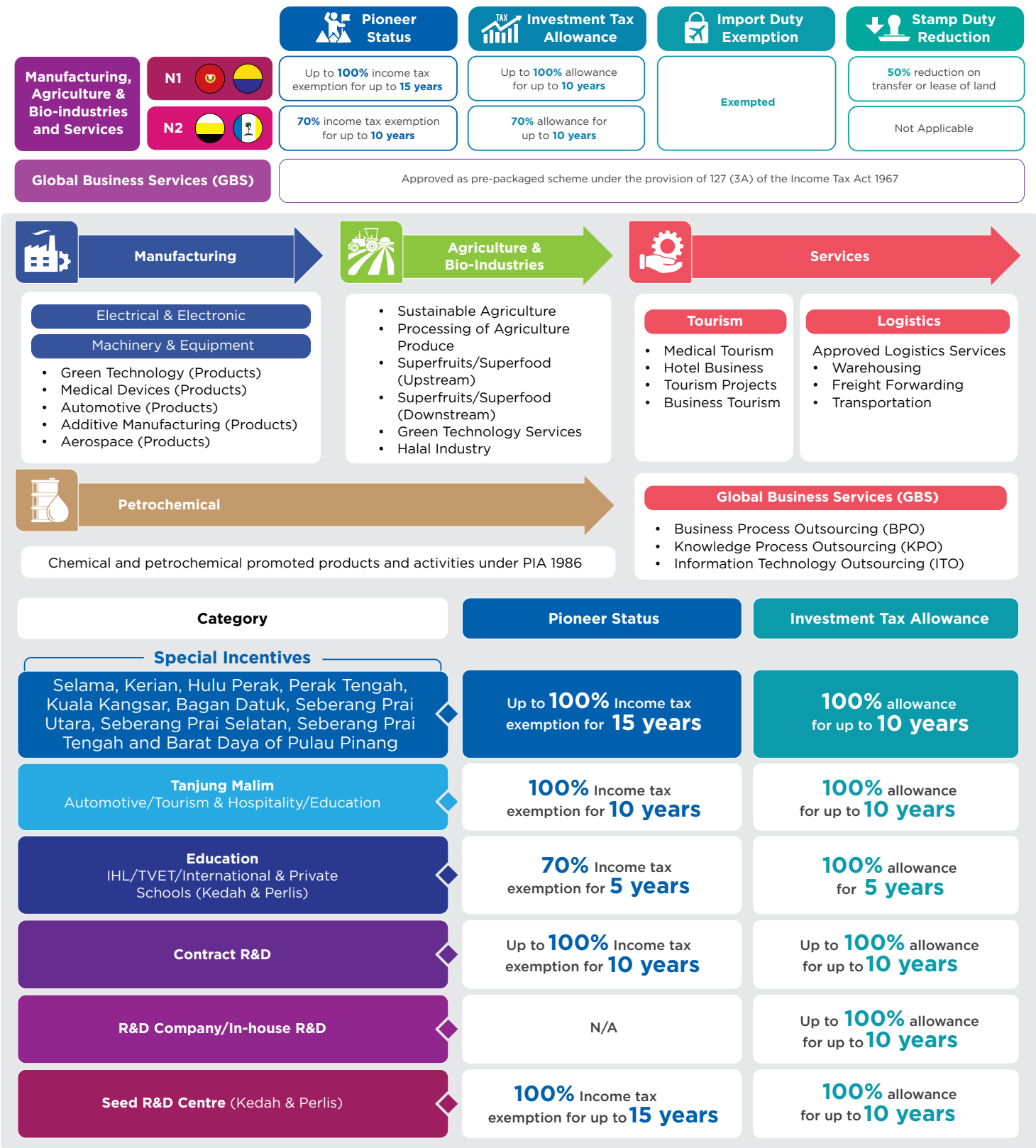
Medical Science R&D and S&T



Growth Nodes (KRC & CVIA)



Education



Manufacturing

Electrical & Electronic

Machinery & Equipment

- Green Technology (Products)
- Medical Devices (Products)
- Automotive (Products)
- Additive Manufacturing (Products)
- Aerospace (Products)

Agriculture & Bio-Industries

- Sustainable Agriculture
- Processing of Agriculture Produce
- Superfruits/Superfood (Upstream)
- Superfruits/Superfood (Downstream)
- Green Technology Services
- Halal Industry

Services

Tourism

- Medical Tourism
- Hotel Business
- Tourism Projects
- Business Tourism

Logistics

Approved Logistics Services

- Warehousing
- Freight Forwarding
- Transportation

Petrochemical

Chemical and petrochemical promoted products and activities under PIA 1986

Global Business Services (GBS)

- Business Process Outsourcing (BPO)
- Knowledge Process Outsourcing (KPO)
- Information Technology Outsourcing (ITO)

ALIGNMENT WITH 12TH MALAYSIA PLAN (12MP) AND OTHER PLANS BY THE STATES

To ensure that it is aligned with other strategic plans outlined by the relevant authorities, the NCER Strategic Development Plan (2021-2025) is prepared **in line with the Federal Government's Shared Prosperity Vision (2030), the 12th Malaysia Plan (12MP), State Structural Plans** or *Rancangan Struktur Negeri* (RSN) for all NCER states, as well as **Penang 2030 vision**.

Shared Prosperity Vision 2030

Shared Prosperity Vision 2030 (SPV 2030) was launched in 2019 as Malaysia's new development blueprint, spanning through the **12MP (2021-2025)** and **13th Malaysia Plan (2026-2030)**.

SPV 2030 reflects Malaysia's commitment as a nation to achieve **sustainable growth with fair and equitable wealth distribution** across all income groups, ethnicities, regions and supply chains. This commitment is aimed at strengthening political stability, enhancing the nation's prosperity and ensuring unity among the *rakyat*, whilst celebrating ethnic and cultural diversity as the foundation of the nation.



The Shared Prosperity Vision 2030 reflects the Government's commitment to achieve sustainable and inclusive growth for all *rakyat*

The primary aim of the **Shared Prosperity Vision** is to provide a decent standard of living for all Malaysians by 2030. To achieve this, a **three-pronged approach** has been introduced which entails **Restructuring the Economy**, **Addressing Inequalities** and **Nation Building**.

Restructuring the Economy refers to **holistic development for all** and for the nation to be more progressive, knowledge-based and high-valued, with full community participation at all levels.

Addressing Inequalities means **addressing economic disparities across all demographics** in order to protect and empower the *rakyat*, to ensure that no one is left behind.

Nation Building entails **building a country that is united, prosperous and dignified**, and subsequently becoming an economic powerhouse of Asia.

Analyse Key Strategic Thrusts and Identify Common Themes

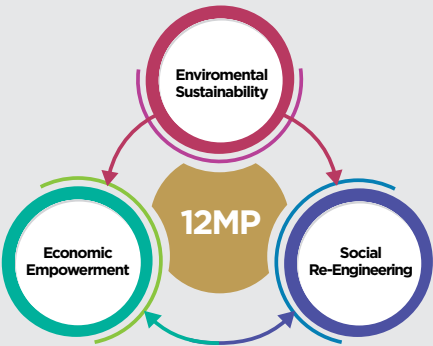
Align National, State and NCER Direction To Develop Regional Strategic Framework

National Direction

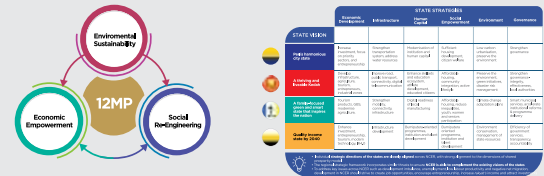
Identify strategic thrusts based on Shared Prosperity Vision 2030 (SPV2030) and 12MP

Three main development framework dimensions have been identified under 12MP

- Economic Smpowerment
- Environmental Sustainability
- Social Re-Engineering



Alignment with Existing Strategic Directions



State Direction

Identify the strategic thrusts of each state, based on information from focus group discussions (“FGD”) and State documents

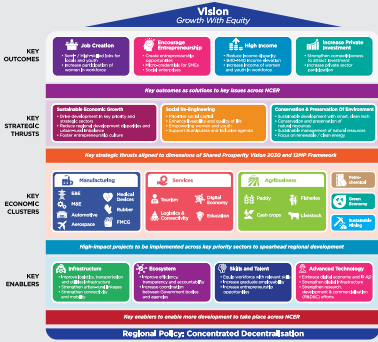
Common themes identified across the states are as follows:

- Economic development
- Infrastructure
- Human capital
- Social empowerment
- Environment
- Governance



National

State



12th Malaysia Plan (12MP)

In line with SPV 2030, the country’s development under the 12MP will be implemented based on **three main development dimensions**, which are **Economic Empowerment**, **Environmental Sustainability** and **Social Re-engineering**.

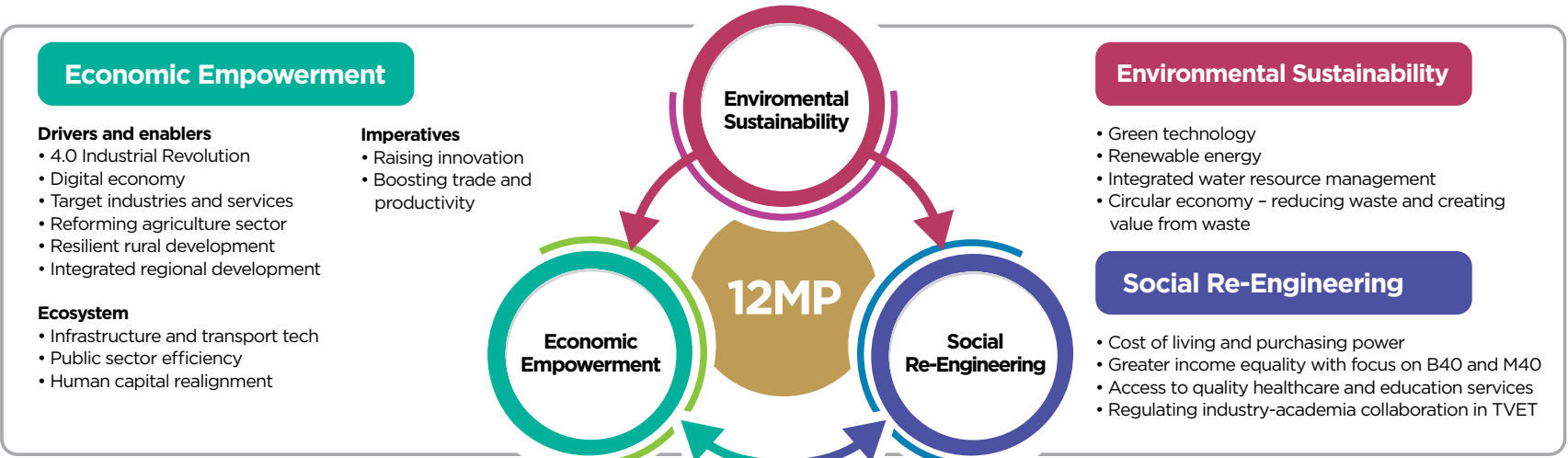
The three dimensions of the 12 MP are aligned with **United Nation’s 17 Sustainable Development Goals (SDGs)** which emphasise on a holistic approach to achieve sustainable development for all.

Under the first dimension of Economic Empowerment, several key drivers and enablers have been identified, which include **Industrial Revolution 4.0, digital economy, agricultural sector reform, resilient rural development** and **integrated regional development**. The ecosystem required to support Economic Empowerment entails improvements in infrastructure and transport technology, public

sector efficiency and human capital realignment, while imperatives include raising innovation and boosting trade and productivity.

For the second dimension of Social Re-engineering, the **priority areas** include **cost of living** and **purchasing power, greater income equality** with focus on the **B40** and **M40** households, access to **quality healthcare** and **education services**, as well as **regulating industry-academia collaboration** in **Technical and Vocational Education Training (TVET)**.

The third dimension of Environmental Sustainability places key focus on the areas of **green technology, renewable energy, integrated water resource management** and **circular economy**, which involves reducing waste and creating value from waste.








NCER Strategic Development Plan (2021-2025) is **closely aligned to SPV2030**, with all the three **dimensions of Shared Prosperity** reflected in the regional strategic framework

• **Economic Empowerment** • **Social Re-Engineering** • **Environmental Sustainability**

National Physical Plan and State Structure Plan

Under the NCER Strategic Development Plan (2021-2025), the strategic thrusts for each NCER states have been identified based on the information obtained from State documents, such as the **State strategic plans** and **structural plans**, as well as **syndication sessions** with **relevant stakeholders** and the **previous NCER Blueprints**.

Each of the State’s visions and strategies were examined **to identify common themes** and **key priority areas**. It was found that the states’ individual strategic directions are closely aligned across NCER, with strong alignment to the dimensions and state focus of the Shared Prosperity Model. **Six common themes** were identified across the states, namely **Economic Development, Social Empowerment, Infrastructure, Human Capital, Environment** and **Governance**.

		STATE STRATEGIES					
		Economic Development	Infrastructure	Human Capital	Social Empowerment	Environment	Governance
STATE VISION							
	Perlis as a harmonious city-state	Increase investment, focus on priority sectors and entrepreneurship	Strengthen transportation system, address water resources	Modernisation of institution and human capital	Sufficient housing development, citizen welfare	Low carbon urbanisation, preserve the environment	Strengthen governance
	A thriving and liveable Kedah	Develop infrastructure, agriculture, tourism, entrepreneurs, industrial zones	Improve road, public transport, connectivity, digital telecommunications	Enhance skill sets and education ecosystem, athlete development, educated citizens	Affordable housing, community integration, active lifestyle	Preserve the environment, green initiatives, disaster risk management	Strengthen governance & integrity, effectiveness, local authorities
	A family-focused green and smart state that inspires the nation	Tourism products, GBS, modernise agriculture	Strengthen mobility, connectivity, infrastructure	Digital readiness of local manufacturing	Affordable housing, reduce inequalities, youth, women and senior participation	Climate change adaptation plans	Smart municipal services, accelerate institutional reforms & programme delivery
	Quality income state by 2040	Enhance investment, entrepreneurship, tourism, modern technology, IR 4.0	Infrastructure development	Bumiputera-oriented programmes, institution and talent development	Bumiputera-oriented programmes, institution and talent development	Environment conservation, management of state resources	Efficiency of Government services, transparency, accountability
		<ul style="list-style-type: none">Individual strategic directions of the states are closely aligned across NCER, with strong alignment to the dimensions of shared prosperity modelThe regional strategic framework incorporates similar thrusts to ensure NCER is able to complement the existing visions of the statesTo address key issues across NCER such as development imbalance, unemployment, low labour productivity and negative net migration, development in NCER should strive to create job opportunities, encourage entrepreneurship, increase <i>rakyat</i>’s income and attract investments					

Hence, the NCER Strategic Development Plan (2021-2025) incorporates similar thrusts to ensure that NCER is able to complement the existing visions of the Federal and State Governments, in line with its objective of achieving **Shared Prosperity Through Balanced Development** for the benefit of the *rakyat*.

Chapter

5

**DEVELOPMENT
STRATEGY:
NCER STATES**





George Town, Pulau Pinang



Kangar, Perlis



Alor Setar, Kedah



Ipoh, Perak

KEY STRENGTHS AND VALUE PROPOSITIONS OF EACH NCER STATE

Perlis

SPV

- Border & Logistics Economy
- Ecotourism
- High-Value Agriculture
- Renewable Energy

SDP

- Manufacturing
- Agribusiness
- Tourism (Geo & Eco)
- Logistics & Connectivity
- Education
- Infrastructure
- Business Ecosystem
- Skills & Talents
- Sustainable Mining

Pulau Pinang

SPV

- Logistics Hub
- High Technology Hub
- Heritage & Health Tourism
- Technology Centre of Excellence

SDP

- Manufacturing
- Agribusiness
- Tourism (Archaeo and Heritage)
- Logistics & Connectivity
- Education
- Digital Economy
- Infrastructure
- Business Ecosystem
- Skills & Talents
- Advanced Technology

Kedah

SPV

- Border & Logistics Economy
- Ecotourism & Heritage Tourism
- Modern Farming & Livestock
- Aerospace Industry

SDP

- Manufacturing
- Agribusiness
- Tourism (Archaeo, Eco and Heritage)
- Logistics & Connectivity
- Education
- Infrastructure
- Business Ecosystem
- Skills & Talents
- Sustainable Mining
- Green Economy - Renewable Energy & Biodiversity
- Petrochemical

Perak

SPV

- Ecotourism & Heritage Tourism
- High Technology Fisheries & Livestock
- Rural Industries
- Creative Industry Economic Hub

SDP

- Sustainable Mining
- Manufacturing
- Agribusiness
- Tourism (Geotourism & Archaeotourism)
- Logistics & Connectivity
- Education
- Digital Economy
- Infrastructure
- Business Ecosystem
- Skills & Talents
- Advanced Technology

* **SPV** : Shared Prosperity Vision

* **SDP** : Strategic Development Plan

Perlis

- Strategic geographical location next to neighbouring Thailand, with the border towns of Padang Besar and Wang Kelian (gateway to Wang Prachan)
- Highest sun irradiance, providing conducive environment for solar farms
- Hub for high-value agriculture

Kedah

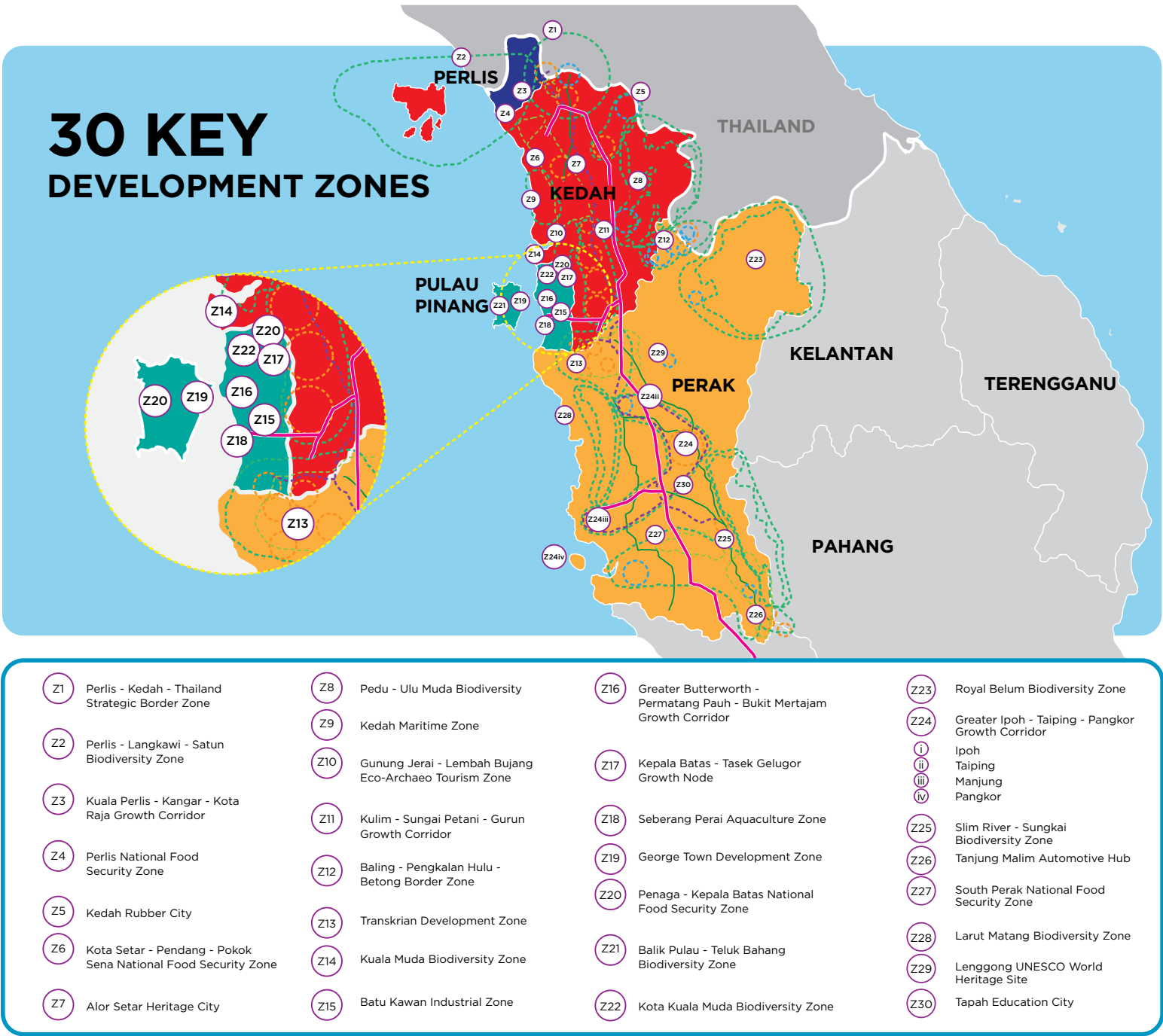
- Strategic geographical location next to neighbouring Thailand, with the border towns of Bukit Kayu Hitam (gateway to Sadao) and Durian Burung (gateway to Ban Prakob)
- Strong agriculture sector, especially for paddy and fruits
- Eco and heritage tourism sites, such as Lembah Bujang and Langkawi
- Kulim Hi-Tech Park (KHTP): The first and most successful high-tech park in Malaysia
- Great potential for aerospace and avionics industry

Pulau Pinang

- Strong and established manufacturing ecosystem (E&E, M&E and medical devices)
- Strong presence of medical tourism
- International tourist attractions and George Town as a UNESCO Heritage Site
- Heart of international trade gateway in NCER, with international airport and seaport

Perak

- Strategic geographical location next to neighbouring Thailand, with the border town of Pengkalan Hulu (gateway to Betong)
- Strong agriculture sector (fisheries, poultry and vegetables)
- Well-known tourist attractions, such as Ipoh, Belum, Lenggong, Taiping and Pangkor
- Abundance of natural resources, such as minerals
- Automotive Hub in Tanjung Malim, rubber-based industries in Kamunting and heavy industries in Manjung



The strategic development framework is designed to combine both spatial analysis with socioeconomic assessment in order to drive growth and development across the northern region of Malaysia. This will help **address socioeconomic disparities** within NCER, including issues such as **unemployment and migration, labour productivity** and **household income**, as well as between NCER and other regions in the country.

For this purpose, **30 development zones** have been identified by taking into consideration the **strengths and uniqueness** of each state, as well as to promote regional synergy, connectivity and mobility. The development zones were established to accelerate the Region's development through the **concentrated decentralisation strategy**, which has enabled the implementation of strategic and high-impact projects and programme in an inclusive manner.

PERLIS



Integrated Business Centre (IBC) at Chuping Valley Industrial Area (CVIA)

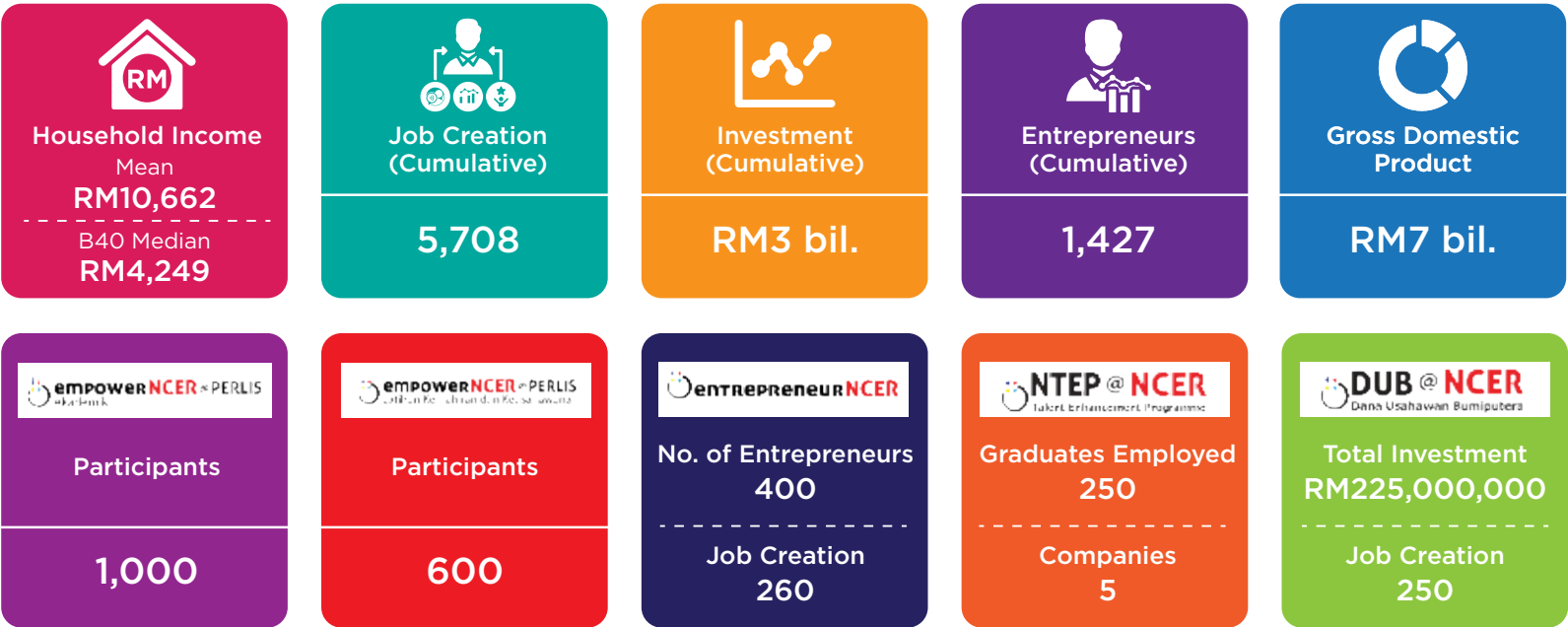
“**PERLIS WILL BE FOCUSING ON ENHANCING ITS LOGISTICS CAPACITIES AND INDUSTRIALISATION TO CREATE MORE JOB OPPORTUNITIES FOR THE LOCALS.**”

Aspirational Vision

Located at the northernmost part of Peninsular Malaysia, Perlis is well-known as the smallest state in the country. Despite its small size, Perlis plays a vital role in connecting the country with neighbouring Thailand through the Padang Besar Railway Terminal, the sole railway connectivity between the two countries. In 2018 alone, some **RM7.7 billion** worth of cumulative **import and export trade** was recorded crossing through this railway terminal. Hence, the **existing strong logistics infrastructure** in this state will be the impetus for other economic activities to be developed in the region, such as **manufacturing, agriculture, services** and **tourism**.

The NCER’s Strategic Development Plan (2021-2025) for Perlis will be focusing on **enhancing its logistics capacities and industrialisation** through key catalytic projects which aim to create more job opportunities for the locals. This is in line with Perlis’ aspiration to become a harmonious city-state by 2030, whose economic growth is complemented with infrastructure development to strengthen the State’s logistics capabilities. Under this strategic framework, future targets for Perlis by 2025 are as illustrated below:

TARGETS FOR PERLIS BY 2025

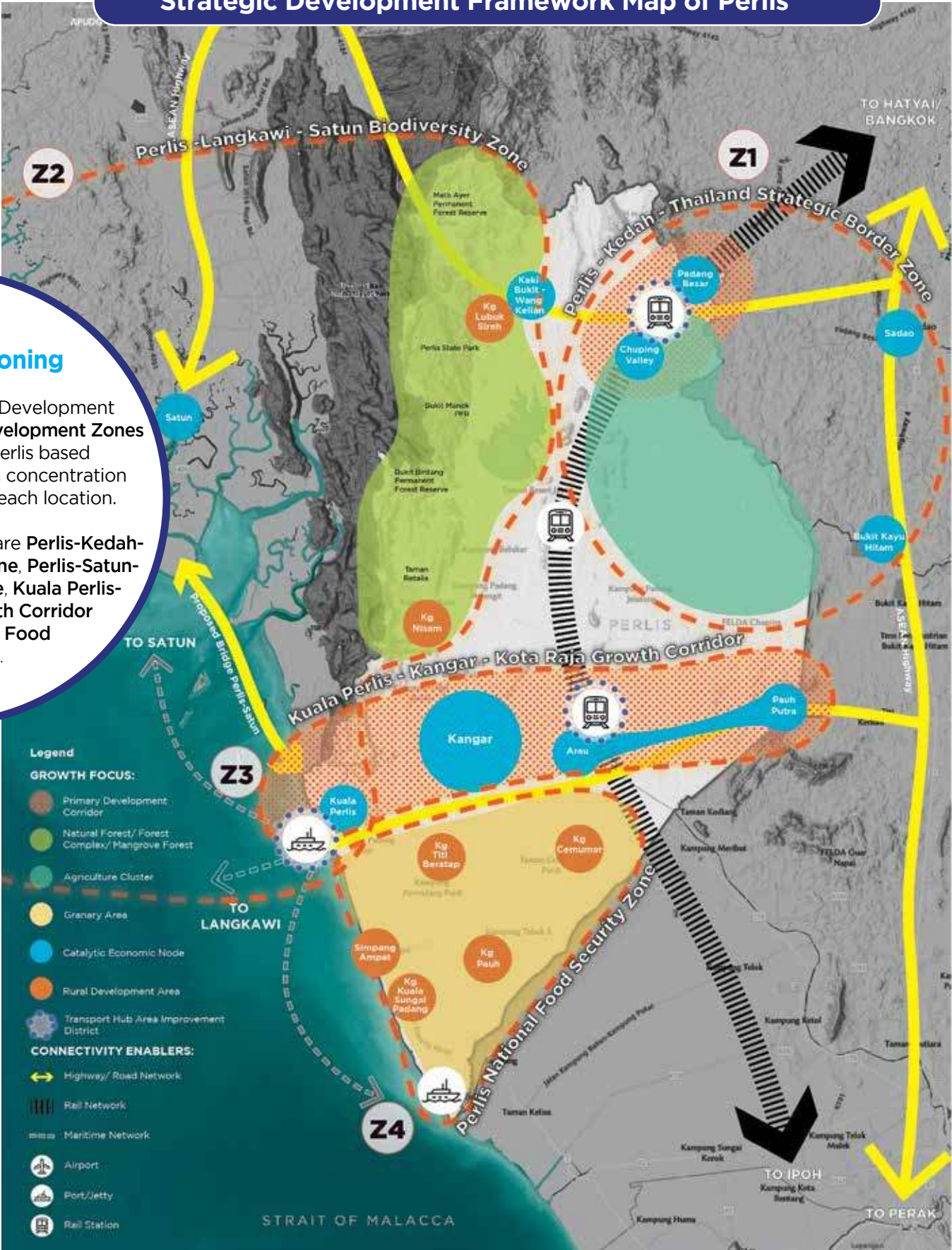


Strategic Development Framework Map of Perlis

Strategic Positioning

Under the NCER Strategic Development Plan (2021-2025), **four Key Development Zones** have been identified in Perlis based on the resources, population concentration and economic potential of each location.

The Key Development Zones are **Perlis-Kedah-Thailand Strategic Border Zone**, **Perlis-Satun-Langkawi Biodiversity Zone**, **Kuala Perlis-Kangar-Kota Raja Growth Corridor** and **Perlis National Food Security Zone**.



PERLIS STRATEGIC DEVELOPMENT FRAMEWORK

21 PERLIS - KEDAH - THAILAND STRATEGIC BORDER ZONE

Padang Besar Border Gateway

- Logistics
- Border Trade
- Border Tourism

Chuping Agro Valley

- Agriculture
 - Integrated Modern Farming
 - Superfruits initiatives
 - Dairy Industry initiatives

Chuping Integrated Area

- Perlis Inland Port
- Chuping Valley Industrial Area
- UniKL Asia Sustainable Transport Institute
- Renewable Energy Generation/ Independent Power Plant (IPP)

22 PERLIS - LANGKAWI - SATUN BIODIVERSITY ZONE



Perlis State Park

- Biodiversity Conservation
- Ecotourism
- Geopark

Kaki Bukit / Wang Kelian Ecotourism Gateway

- Community-based tourism
- Cottage industries

23 KUALA PERLIS - KANGAR - KOTA RAJA GROWTH CORRIDOR

Kuala Perlis Maritime Town

- Kuala Perlis Maritime Terminal Area
- Improvement District
- Tourism
- Logistics
- Aquaculture

Kangar City Centre

- Administrative township
- Finance centre
- Commercial & Retailer
- Heritage tourism

Kota Raja Development Corridor

- Arau
 - Heritage tourism - Education Hub
 - Royal town
 - Arau District Improvement Areas
- Pauh Putra
 - Education Hub
 - Bio-Industries

24 PERLIS NATIONAL FOOD SECURITY ZONE

Simpang Empat

- National Granary Area
- Estate Management Model 2.0
- Community-based tourism
- Cottage industries

Sanglang Integrated Maritime Development Zone

- Tourism
- Logistics
- Fisheries
- Aquaculture

**ZONE Z3:
Kuala Perlis-Kangar-Kota Raja Growth Corridor**



Strategic Development Map of Zone Z3

Zone Z3 consists of three nodes comprising **Kuala Perlis Maritime Town**, **Kangar City Centre** and **Kota Raja Development Corridor**. It will be a multipurpose zone aimed at increasing the overall economic activity in the State. This growth zone will be focusing on **commercial (retail)**, **tourism**, **logistics**, **industrial**, **education** and **fishery**.

Zone Z3 will have five catalytic projects, most of which will focus on **infrastructure improvement and development**. This includes the construction of an integrated public transport terminal at **Kangar Sentral** and brownfield development at Kuala Perlis terminal area. To spur **heritage tourism** activity in **Kangar** and **Kota Raja**, other catalytic projects that are centred around the upgrading of tourism attractions have also been planned for these areas.

**ZONE Z4:
Perlis National Food Security Zone**



Strategic Development Map of Zone Z4

Zone Z4 is located near the State border with Kedah and consists of two nodes, namely, **Simpang Empat** and **Sanglang Integrated Maritime Development Zone**.

This zone will focus on developing the State's capabilities to achieve self-sufficiency in food production. As such, various projects in the agriculture sector have been planned including one with catalytic potential. This catalytic project is the **Estate Management Model 2.0** to increase local farmers' income and productivity.

Sanglang is a key focus area for mixed and waterfront development, and will have one catalytic project which is the Sanglang Integrated Maritime Development. This project will be fully financed by the private sector and will consist of three key components comprising **Sanglang Marina**, **Sanglang Maritime Industrial Area** and **Sanglang Esplanade**.

Economic Drivers



Renewable energy sector offers great potential in Perlis' manufacturing sector

Manufacturing

The strategic development framework for the State's manufacturing sector will leverage on two of its key value propositions, namely, its **strategic location bordering with Thailand** and **ample land** for future growth in the manufacturing sector. **The Chuping Valley Industrial Area**, the first industrial park in the State, is envisaged to intensify its **halal industry** and **renewable energy sectors**, underpinned by the easy access to raw material resources from Thailand and high sun radiation level in the State.



Superfruits Valley in Chuping

Agribusiness

The agriculture industry has traditionally been one of the main economic activities in Perlis, and the key to further enhance this industry is by going beyond the conventional practice. For instance, the **Chuping Agro Valley project**, which is one of the primary agriculture projects to be implemented in the State, will adopt **new, modern agriculture practices** and shift towards higher value produce, such as **superfruits**.



Tasik Timah Tasoh, one of the tourism destinations in Perlis

Tourism

Perlis acts as the nexus between its two neighbours, namely, Kedah and Thailand. The railway terminal at Padang Besar has been upgraded over the years, an indication that it is fully utilised by local and foreign tourists crossing over the State. Hence, the strategic development framework for Perlis will be focusing on **the expansion of tourism activities** in the State, **covering ecotourism, geotourism, heritage tourism and agrotourism**. This strategy is foreseen to draw off more tourist receipts at the newly planned tourism attraction spots.



Padang Besar Cargo Terminal

Logistics

The logistics development framework for Perlis is crucial as it is the one of the main drivers of key economic activities in the State. Priority will be given on the border area, particularly in Padang Besar, through the **Padang Besar Border Development Project** and **maritime-related development** in the State. Through these projects, tourism industry will grow within the State and manufacturing sector will be spurred by seamless logistics infrastructure development.



The promotion of green economy will help preserve the state's biodiversity

Green Economy

Green economy is one of potential sectors to be explored in Perlis, due to the naturally high sun radiation level and ample brownfield areas to be developed in the State. This emerging sector will help **reduce carbon emissions and pollution, enhance energy and resource efficiency, and prevent the loss of biodiversity and ecosystem**. Development in this sector will be driven by public and private investments, which in turn, will spur growth in terms of employment opportunities and higher income for the *rakyat*.



Participants of empowerNCER programme

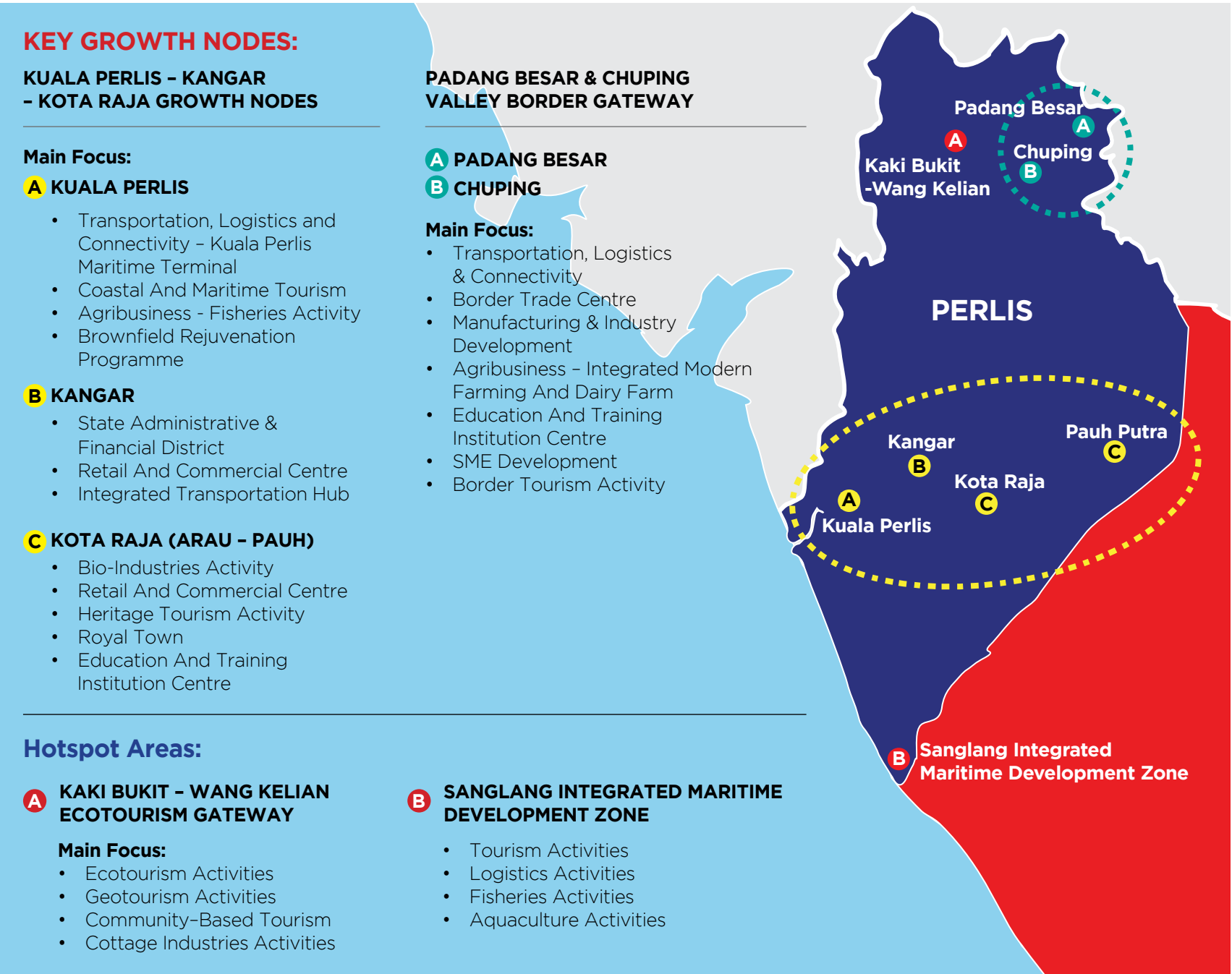
Human Capital

The development of human capital development in Perlis is crucial, in line with the numerous development plans that have already been outlined for the State. As such, high-impact projects that are already in the pipeline are aimed **at reducing the outflow of local talent** from the State itself, while **providing high-income jobs** to attract skilled workforce to contribute towards the State's productivity. In addition, Perlis already houses Universiti Malaysia Perlis (UniMAP), a public higher learning institution which offers a wide array of engineering courses from diploma to MSc. and PhD levels.

Perlis will also continue to benefit from NCER's human capital development programmes that are aimed at uplifting the socioeconomic well-being of the *rakyat*, such as **empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme (NTEP), and Dana Usahawan Bumiputera (DUB)**.

Mapping of Economic Clusters by Key Growth Nodes and Hotspot Areas

- Aligning Shared Prosperity Vision to NCER Strategic Development Plan for Perlis



Catalytic Projects and Programmes in Perlis

1

Chuping Valley Industrial Area (CVIA)

- Development of 1,215 ha to transform Perlis into a high-income industrial state
- Expected to generate 12,500 jobs with a GNI of RM2.58 bil.

4

Padang Besar Sentral

- Development of Padang Besar Sentral to promote Padang Besar as an integrated transit-oriented development to accommodate Padang Besar border tourism
- Phase 1 will focus on the preparation of feasibility study

7

Kota Raja Development

- Kota Raja Development Plan to study the economic potential of the Kangar-Arau-Pauh areas to spur Perlis' economic growth

2

Perlis Inland Port

- Development of 202 ha inland port to overcome rail bottlenecks and capture transshipment opportunities

5

Kuala Perlis Passenger Terminal

- Development of a new Kuala Perlis Passenger Terminal to resolve issues faced by the current terminal, such as dredging, etc.
- Phase 1 will focus on the preparation of feasibility study

8

Tourism (Heritage, Eco, Geo)

Various tourism initiatives under PPP model to promote Perlis, such as upgrading of infrastructure at the following locations:

- Perlis Geo Site (Gua Kelam)
- Ecotourism (Sg. Perlis & Kuala Perlis)
- Heritage Tourism (Kangar & Arau)
- Border Tourism (Padang Besar)

3

Chuping Agro Valley

- Implementation of Agribusiness initiatives such as superfruits, cash crops, integrated dairy farm and agrotourism via the Anchor Company model

6

Human Capital Programmes

- Continuation of empowerNCER, entrepreneurNCER, NCER Talent Enhancement Program (NTEP) & Dana Usahawan Bumiputera
- Implementation of new Human Capital programme such Centre of Excellence IR 4.0 (CoE IR 4.0)

KEDAH



The resplendent Masjid Zahir in Alor Setar is one of the most beautiful mosques in Malaysia

“FOR KEDAH, EFFORTS WILL BE CHANNELLED IN DEVELOPING ITS BORDER AND LOGISTICS ECONOMY, ECOTOURISM, GEOTOURISM AND HERITAGE TOURISM, MODERN AGRICULTURE AND AGRIBUSINESS, AS WELL AS THE NEW INDUSTRY OF AEROSPACE WHICH OFFERS GREAT POTENTIAL FOR DEVELOPMENT.”

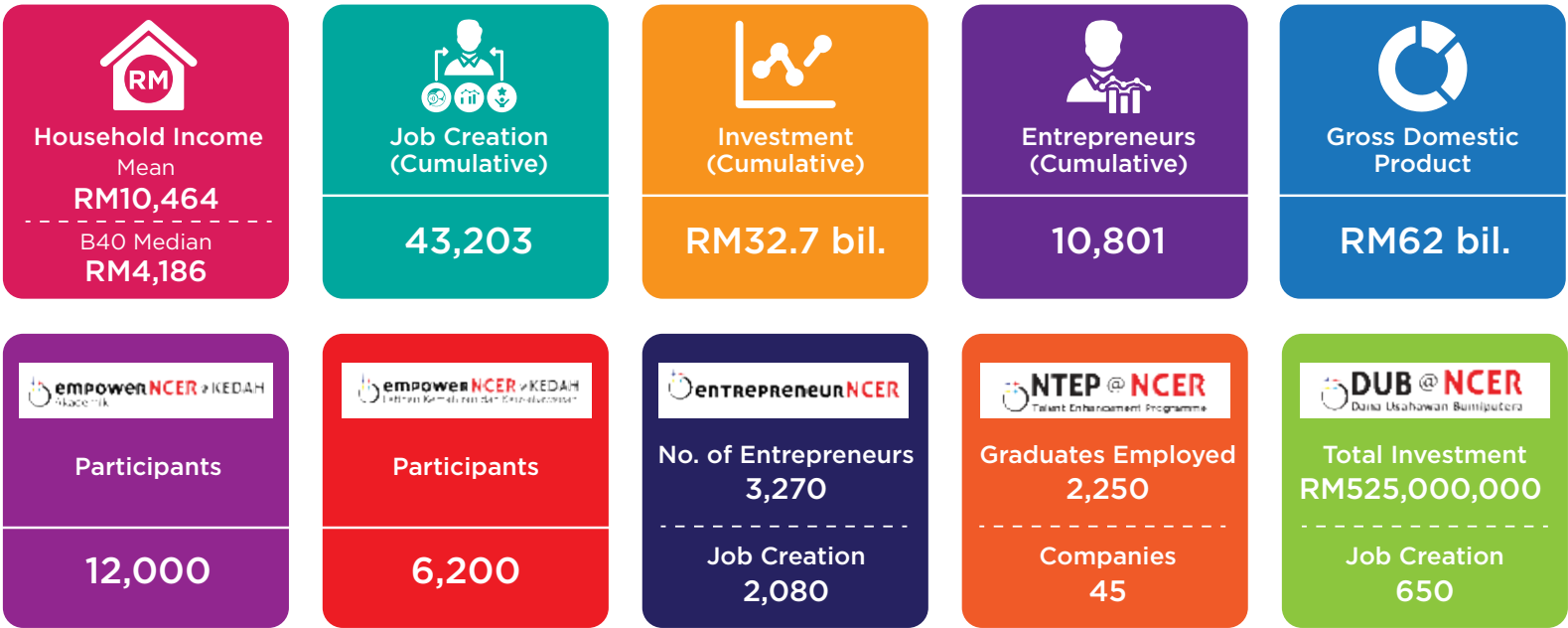
Aspirational Vision

A Northern Malaysia State fronting the ever-busy Straits of Malacca, Kedah is positioned to be the preferred business destination among investors and entrepreneurs. This State is also the main producer of rice and contributes up to one third of the rice production in the country, hence, its popular reference as the “Rice Bowl of Malaysia”.

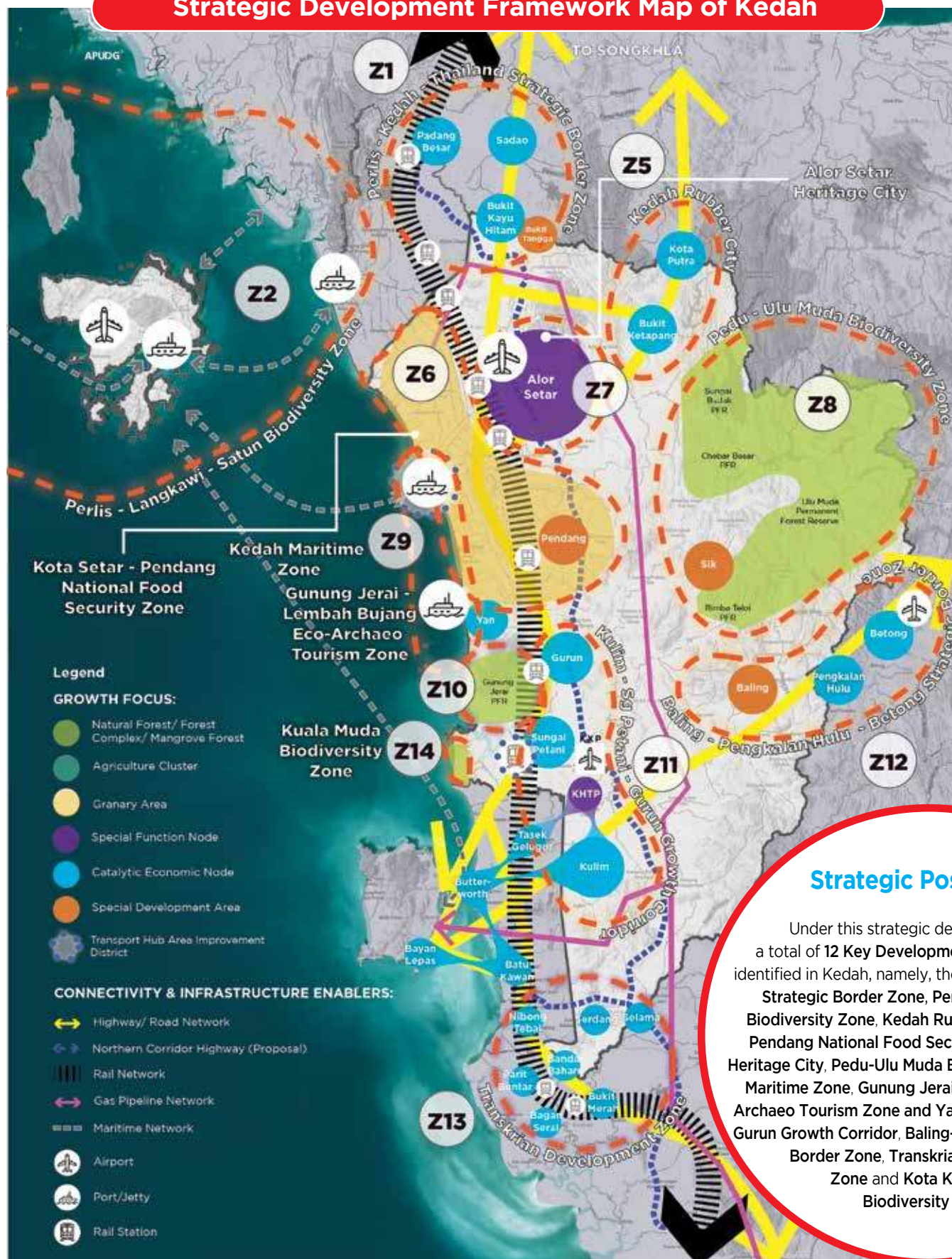
In the manufacturing sector, Kedah is well on track to become a **centre for high-value industries** in the region, particularly with the presence of Kulim Hi-Tech Park, Malaysia’s first ever high technology park. In addition, the State is strategically located bordering Thailand and has significantly contributed to the nation’s international trade via its border gateway town of Bukit Kayu Hitam.

Under the NCER Strategic Development Framework (2021-2025) for Kedah, efforts will be channelled **in developing its border and logistics economy, ecotourism and heritage tourism, geotourism, modern agriculture and livestock**, as well as the new industry of **aerospace** which offers great potential for development. This is in line with the State’s vision for a thriving and liveable Kedah as encapsulated in the Kedah Strategic Development Plan 2035.

TARGETS FOR KEDAH BY 2025



Strategic Development Framework Map of Kedah



KEDAH STRATEGIC DEVELOPMENT FRAMEWORK

Z1 BUKIT KAYU HITAM SPECIAL BORDER ECONOMIC ZONE

Bukit Kayu Hitam Special Border Economic Zone

- Bukit Tangga New Integrated Agriculture Centre
- Kedah Science and Technology Park
- Border Trade
- Education hub
- Bukit Kura New Agriculture Centre
- Logistics hub
- Energy generation – IPP

Z2 PERLIS – LANGKAWI – SATUN BIODIVERSITY ZONE

Langkawi Global Geopark

- Island tourism
- Heritage tourism
- Ecotourism
- Geotourism
- Low-carbon island
- International gateway (Langkawi International Airport/Ferry Terminal)
- Langkawi Cruise Home Port
- Agribusiness – Paddy Estate Management Model & Fisheries

Z5 KEDAH RUBBER CITY

- Rubber City** • Manufacturing • KRC Smallholders Programme
- Kota Putra Border City** • New border township

Z6 KOTA SETAR – PENDANG NATIONAL FOOD SECURITY ZONE

- National Granary Area** • Agrotourism • Agribusiness – Paddy EMM & cash crops
- Pokok Sena** • SME Development Programme

Z7 ALOR SETAR HERITAGE CITY

- Creative / Knowledge economy
- Heritage tourism
- Brownfield rejuvenation
- Royal town
- Education hub
- Kedah Trade Centre

Z8 PEDU – ULU MUDA BIODIVERSITY ZONE

- Pedu – Ulu Muda Biodiversity Zone** • Biodiversity conservation • Retirement resort • Ecotourism
- Renewable energy
- Sustainable Biodiversity Harnessing Programme
- Sik** • Agribusiness – Paddy EMM, organic paddy, organic hemp & cash crops
- Integrated Economic Centre (I-CON@NCER): - Community-based tourism - Cottage & resource-based industries

Z9 KEDAH MARITIME ZONE

- Kuala Kedah** • Kuala Kedah Maritime Terminal • Heritage tourism
- Pulau Bunting** • LNG • Aquaculture • Island tourism

Z10 GUNUNG JERAI – LEMBAH BUJANG ECO – ARCHAEO TOURISM ZONE

- Lembah Bujang/Sg. Batu Archaeology
- Jerai Geopark
- Kuala Muda Mangrove
- Tanjung Dawai – Pantai Merdeka Ecotourism
- Adventure sport tourism

Z11 KULIM – SUNGAI PETANI – GURUN GROWTH CORRIDOR

Kedah Aerotropolis

- Kulim International Airport (KXP)
- Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)

Kulim

- Kulim – Penang Single Campus
- Expansion Kulim Hi-Tech Park
- Medical/Wellness Industries

Sungai Petani

- Sg. Petani Station Area Improvement District
- Renewable Energy Generation

Gurun

- Petrochemical
- LNG
- Heavy Industrial Park

Z12 BALING – PENGKALAN HULU – BETONG BORDER ZONE

Baling

- Gunung Pulai Ecotourism
- Heritage tourism
- Sustainable mining
- Kensui Orang Asli Community & Heritage Programme
- Agribusiness – Cash Crop
- Special Development Zone (SDZ): - Community-based tourism - Cottage & resource-based industries

Z13 TRANSKRIAN DEVELOPMENT ZONE

Bandar Baharu – Serdang – Selama

- Agribusiness – Paddy EMM & cash crops
- Durian industry
- Ecotourism
- Education Hub
- Heritage tourism
- Kedah Medical
- Science City
- Special Development Zone (SDZ): - Community-based tourism - Cottage & resource-based industries

Z14 KUALA MUDA BIODIVERSITY ZONE

- Ecotourism
- Kota Kuala Muda Mangrove Conservation
- Heritage tourism
- Agribusiness – Fisheries

ZONE Z1:

Perlis-Kedah-Thailand Strategic Border Zone

Strategic Development Map of Zone Z1

Zone Z1 covers four catalytic economic nodes, namely **Padang Besar Border Gateway Node**, **Bukit Kayu Hitam Special Border Economic Zone**, **Chuping Agro Valley** and **Chuping Integrated Area**.

As an important **border gateway** for people and goods movement, several catalytic projects have been identified, whereby they are centred around Bukit Kayu Hitam as a Special Border Economic Zone and Kedah Science and Technology Park as part of the surrounding ecosystem.

Agriculture is also a focus in this zone, particularly around the Bukit Kura and Bukit Tangga areas, that will be focusing on **hemp**, **cash crops** and **superfruits**.

ZONE Z2:

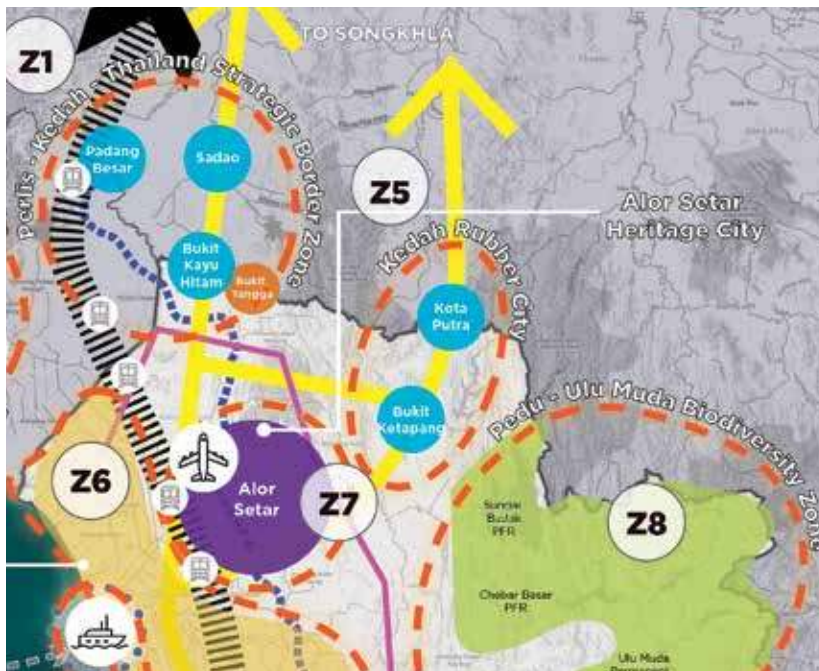
Perlis-Satun-Langkawi Biodiversity Zone

Strategic Development Map of Zone Z2

Zone Z2 covers an important environmental area encompassing the **Perlis State Park**, **Pulau Langkawi** and **Kaki Bukit-Wang Kelian Ecotourism Gateway**. With ecotourism being a key focus, Pulau Langkawi will be a designated geotourism zone, while Perlis State Park will be designated as an ecotourism and geotourism site, focusing on biodiversity conservation.

To ensure that this zone will fulfil its potential of being an ecotourism hotspot among travellers, one key catalytic project has been identified, namely, the **upgrading of tourism attractions and supporting facilities** at key locations in Pulau Langkawi, as well as **attracting investments in the tourism sector**. This project will be jointly financed by the public and private sectors.

ZONE Z5: Kedah Rubber City (KRC)



Strategic Development Map of Zone Z5

Zone Z5 includes **Kedah Rubber City**, **Bukit Tangga** and **Kota Putra Border Development Zone**. Development in this zone will be spearheaded by Kedah Rubber City and Kota Putra Border Development projects. Four catalytic projects focusing on **infrastructure and connectivity improvements** have been planned in the Kedah Rubber City node. These include dual carriageway road networks from KRC to key transport and logistics locations such as Kota Putra, Bukit Kayu Hitam and Pokok Sena.

There will also be a **smallholders programme** for Kedah Rubber City (KRC) with the aim of upskilling and training rubber smallholders to produce higher value latex, which in turn will increase smallholders' income.

To increase cross-border trade between Thailand and Malaysia, Kota Putra has been identified as the Kota Putra Border Development Zone. The development in this zone will include an **industrial border city** with **Free Industrial Zone (FIZ) status**, accompanied by development of residential and commercial areas across 2,448 acres of land.

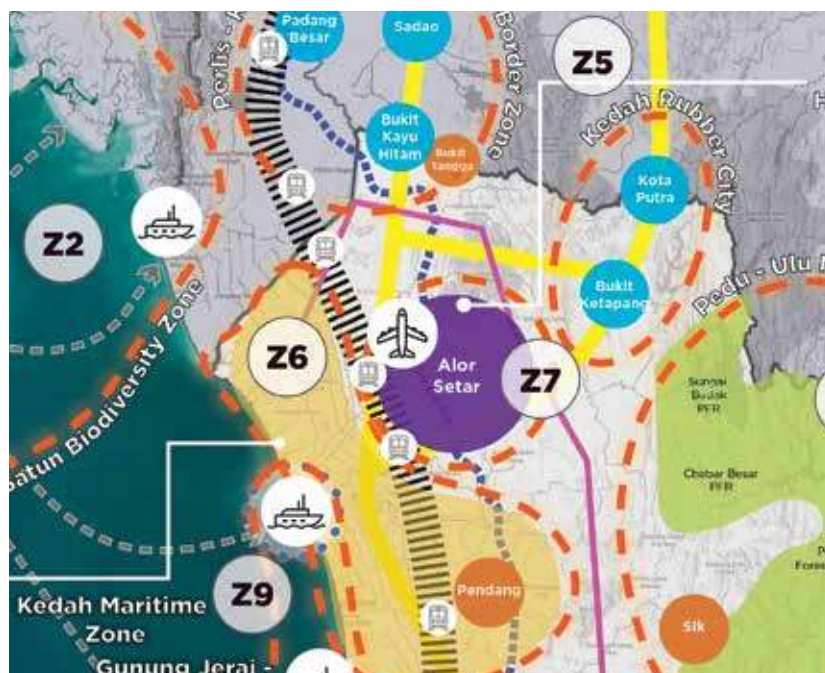
ZONE Z6: Kota Setar-Pendang National Food Security Zone



Strategic Development Map of Zone Z6

Zone Z6 is located in the national granary area of Kedah. It will continue to focus on **agriculture** as its main economic activity, with **paddy** being a key agricultural output. Under the **Estate Management Model 2.0**, modern agriculture methods will be applied across the zone to increase agriculture yields. Zone Z8 can leverage on its close proximity to Thailand and Langkawi Island by focusing on **agribusiness and agrotourism** as complementary industries to paddy-farming activities.

ZONE Z7:

Alor Setar Heritage City

Strategic Development Map of Zone Z7

Zone Z7 encompasses the wider area surrounding **Alor Setar city**, particularly the **Alor Setar Sultan Abdul Halim Airport** and **Alor Setar railway station**.

This growth zone mainly focuses on **heritage tourism** with catalytic projects planned across this theme. Under heritage tourism, key tourism locations such as **Muzium Padi** and **Sungai Kedah** will be upgraded and further developed, while **Kedah Digital Library** will be established to spur growth that is based on the education theme.

To encourage more traffic into the zone, the Alor Setar train station area will be improved through brownfield development, which includes **transit-oriented development**, **mixed development** and **smart infrastructure**. An economic positioning study will also be carried out to provide the guidelines to rejuvenate Alor Setar as a **creative economic hub**.

ZONE Z8:

Pedu-Ulu Muda Biodiversity Zone

Strategic Development Map of Zone Z8

Located near the border of Thailand, Zone Z8 is made up of the **Pedu-Ulu Muda Biodiversity Zone** and **Sik**, with key activities that include **agriculture**, **ecotourism** and **biodiversity zone**.

To support biodiversity conservation, a **biodiversity study** and implementation plan will be carried out for Pedu-Ulu Muda area. The financing of this catalytic programme will be a joint effort between the public and private sectors.

Within Sik, the **Sik Integrated Economic Centre** will be developed to support **community-based tourism activities** and **cottage-based industries**. Several high impact agribusiness projects will also take place in Sik such as **Estate Management Model 2.0**, **organic paddy** and **organic hemp**.

ZONE Z9: Kedah Maritime Zone



Strategic Development Map of Zone Z9

Zone Z9 is located on the **west-coast line of Kedah** and will focus on **logistics, fisheries, oil and gas, and tourism**. The two growth nodes in this zone include **Kuala Kedah** and **Pulau Bunting**.

In this zone, several catalytic projects that are centred around infrastructure improvement will be carried out. These include **Phase 2 of Pulau Bunting Development** and the **upgrading of Kuala Kedah jetty terminal**.

Additionally, there will be a tourism-focused catalytic project in Kuala Kedah, namely, the **Kuala Kedah Area Improvement District**, also known as **Kota Kuala Kedah Heritage**. This project will be jointly financed by the public and private sectors.

ZONE Z10: Gunung Jerai-Lembah Bujang Eco-Archaeo Tourism Zone



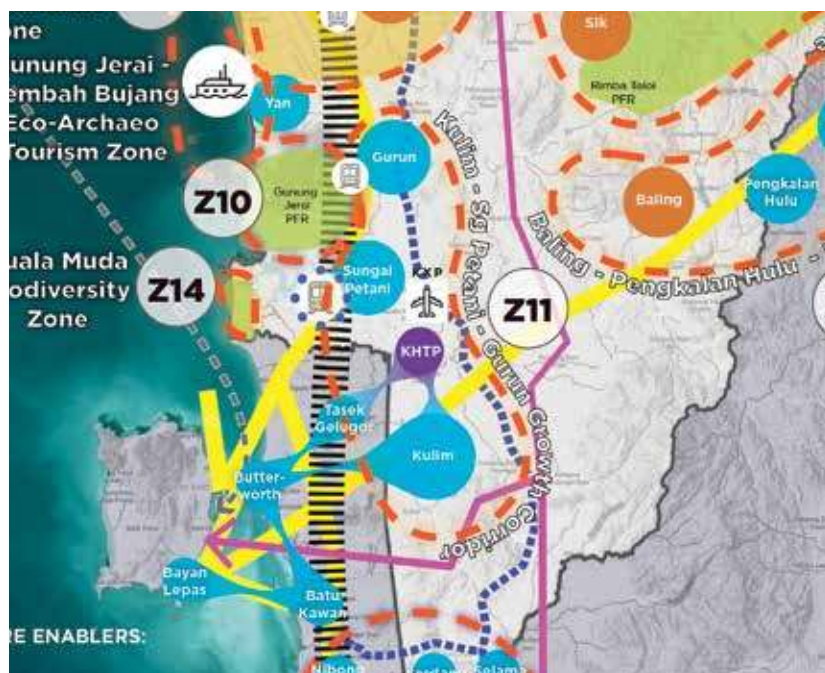
Strategic Development Map of Zone Z10

Zone Z10 is made up of **Gunung Jerai-Lembah Bujang Eco-Archaeo Tourism Zone** and **Yan**. The zone possesses a wealth of archaeological history, and as such, has been identified as having great tourism potential. To leverage on this potential in achieving growth in Kedah's tourism sector, key tourism locations such as **Sungai Batu** will be further developed to enhance its tourism appeal. This would include the **building of tourism facilities** such as an exhibition gallery, a viewing deck and an information centre.

Apart from tourism development, the **Yan Integrated Economic Centre** will be established to include **community and cottage-based industries**.

High-impact agribusiness projects such as **Estate Management Model 2.0** and **oyster satellite farming** in **Sungai Merbok** will also be carried out. These catalytic programmes in agriculture will be led by the public sector via the anchor company business model.

ZONE Z11:

Kulim-Sungai Petani-Gurun Growth Corridor

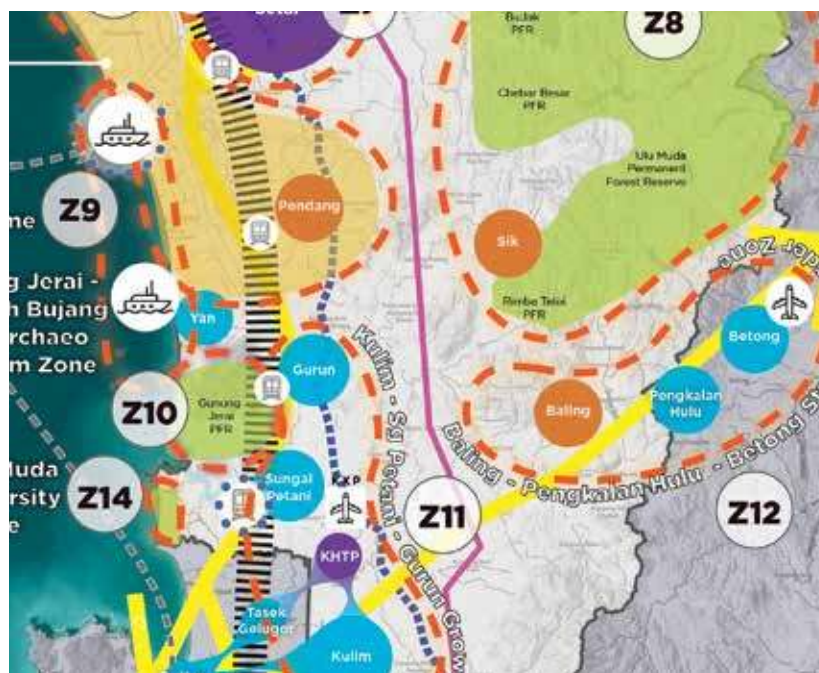
Strategic Development Map of Zone Z11

Zone Z11 will focus mainly on **manufacturing** and **logistics activities**. This zone has a total of six catalytic projects that are centred around **infrastructure development** and **connectivity enhancement** between key transport and logistics locations.

Manufacturing activities will be driven by industrial areas such as the expansion of **Kulim Hi-Tech Park Phase 5**, **Sidam Logistics, Aerospace and Manufacturing Hub (SLAM)** and **Kedah Eco Innovation Park (KEIP)**.

The construction of **Kulim International Airport (KXP)** is expected to have catalytic impact, whereby it will complement the industrial areas within the zone by increasing connectivity and providing cargo services. KXP will also bring in more international passengers and serve as a **major transport hub** serving the NCER states and southern provinces of Thailand. To support the development of KXP, the **road infrastructure** for the airport will also be enhanced to improve accessibility and connectivity.

ZONE Z12:

Baling-Pengkalan Hulu-Betong Strategic Border Zone

Strategic Development Map of Zone Z12

Zone Z12 comprises several initiatives that are aligned with the nation's objective of achieving shared prosperity by 2030. These key initiatives include the **Baling Integrated Economic Centre (I-CON@NCER)** and **Kensui Orang Asli community and heritage programme**.

Both projects will encourage **community-based** and **cottage-based industries** that will function as catalysts in the zone, particularly in providing employment and economic opportunities for the local population.

Modern agriculture projects such as **cash crops**, together with **sustainable mining** in Baling, will also be implemented by NCIA to support economic growth in this zone.

ZONE Z13:
Transkrian Development Zone



Strategic Development Map of Zone Z13

Zone Z13 covers the area where Kedah, Perak and Pulau Pinang intersect. Due to soil fertility and adequate rainfall, **agriculture** has been identified as a key enabler to spur growth within this zone.

To achieve this, several modern agriculture projects will be implemented, such as **superfruits**, **cash crops** and **Estate Management Model (EMM)**.

Apart from agriculture projects, another catalytic project in this zone is the **Kedah Medical Science City**, a mixed development centred around the medical science industry. This development will complement Kulim Hi-Tech Park in Zone Z11 and will focus on the **manufacturing of high-end medical devices**, **R&D** and provision of **specialised services**.

ZONE Z14:
Kuala Muda Biodiversity Zone



Strategic Development Map of Zone Z14

Zone Z14 possesses a wealth of biodiversity resources and has been earmarked as a **biodiversity zone**.

As the mangrove reserve features prominently in this zone, initiatives to develop more tourism activities, such as **mangrove ecotourism**, will be introduced. Promoting the zone as an ecotourism site will help contribute to the State's economy, without compromising the natural environment.

The zone will also be supported by an agriculture programme with catalytic potential, namely the **oyster satellite farming** at Kuala Muda. This programme will be a joint initiative between the public and private sector through the anchor company business model and will focus on the development of contract farmers.

Economic Drivers



High-value industries will drive economic growth in Kedah

Manufacturing

Despite the challenging global economic environment, Kedah has remained resilient by attracting **additional approved investments** worth **RM2.4 billion** in the **manufacturing** sector in **2018**.

Kedah is home to **10 industrial parks**, including the Kulim Hi-Tech Park (KHTP) which has a strong presence of multinationals from the electrical and electronics (E&E) industry. Total foreign direct investment in KHTP currently amounted to more than **RM45 billion**. Foreign investors in the industrial park include Intel, First Solar, Silterra, Infineon Technologies, Fuji Electrics and Osram. Osram had recently opened its new, state-of the-art semiconductor plant in KHTP, which happens to be the world's most advanced LED chip factory at the moment.

The State development strategy for Kedah in this strategic development plan will be expanded to include **higher value industries** such as **aerospace**, **petrochemical** and **high-value manufacturing**. These will be spearheaded by catalytic projects such as Sidam Logistics, Aerospace & Manufacturing Hub (SLAM), the Kedah Eco Innovation Park (KEIP) in Gurun, Kedah Rubber City in Padang Terap and the Special Border Economic Zone (SBEZ) in Bukit Kayu Hitam.



Langkawi cable car

Tourism

Kedah's growing tourism sector will continue to be developed with the focus on **ecotourism**, **geotourism**, **heritage tourism**, and **archaeological tourism** at **Lembah Bujang**. This project will benefit from the existing steady inflow of tourist to the main attraction spots in the State, such as Langkawi and Bukit Kayu Hitam. To further spur the tourism sector in Kedah, a new range of tourism activities will be introduced in several potential spots, including **mangrove ecotourism** and archaeological tourism at Sungai Batu.



Estate Management Model for paddy farming

Agribusiness

The agribusiness in Kedah are primarily focused on leveraging the abundant natural agriculture resources available in the State. These concerted efforts can be seen through the newly developed **Kedah Rubber City** industrial park, a national-level initiative to elevate the value chain of rubber industry in Malaysia. A holistic programme on paddy industry in Kedah have also been given priority through the creation of the **Estate Management Model** programme. Kedah is also planned to be the first State to embark on the commercial cultivation of **hemp**, deemed as a high-value crop globally, as a cash crop.



Transport connectivity will be further enhanced

Logistics & Connectivity

The state is strategically located with Thailand as its neighbour up north and Pulau Pinang on its south. As such, the strategic development framework will be focusing on a **two-pronged strategy**, namely, the **border development** and the new **Kedah Aerotropolis**. The border development will be tapping into the existing cross-border trade ecosystem at Bukit Kayu Hitam, Kedah, while the Aerotropolis is anticipated to be a game-changer for Kedah's economic landscape.



Green economy as a new source of income

Green Economy

In line with the global sustainable development goals, Kedah will embark on green economic-based activities where growth in employment and income are driven by public and private investments in economic activities that **emit lower carbon emissions and prevent the loss of biodiversity and natural ecosystem**.

As such, high-impact projects planned for Kedah will also factor in the green element, without compromising its natural environment. These initiatives will provide Kedah with new sources of income to compensate for the financial lost in its effort to preserve the State's biodiversity, including the main water catchment areas of NCER.

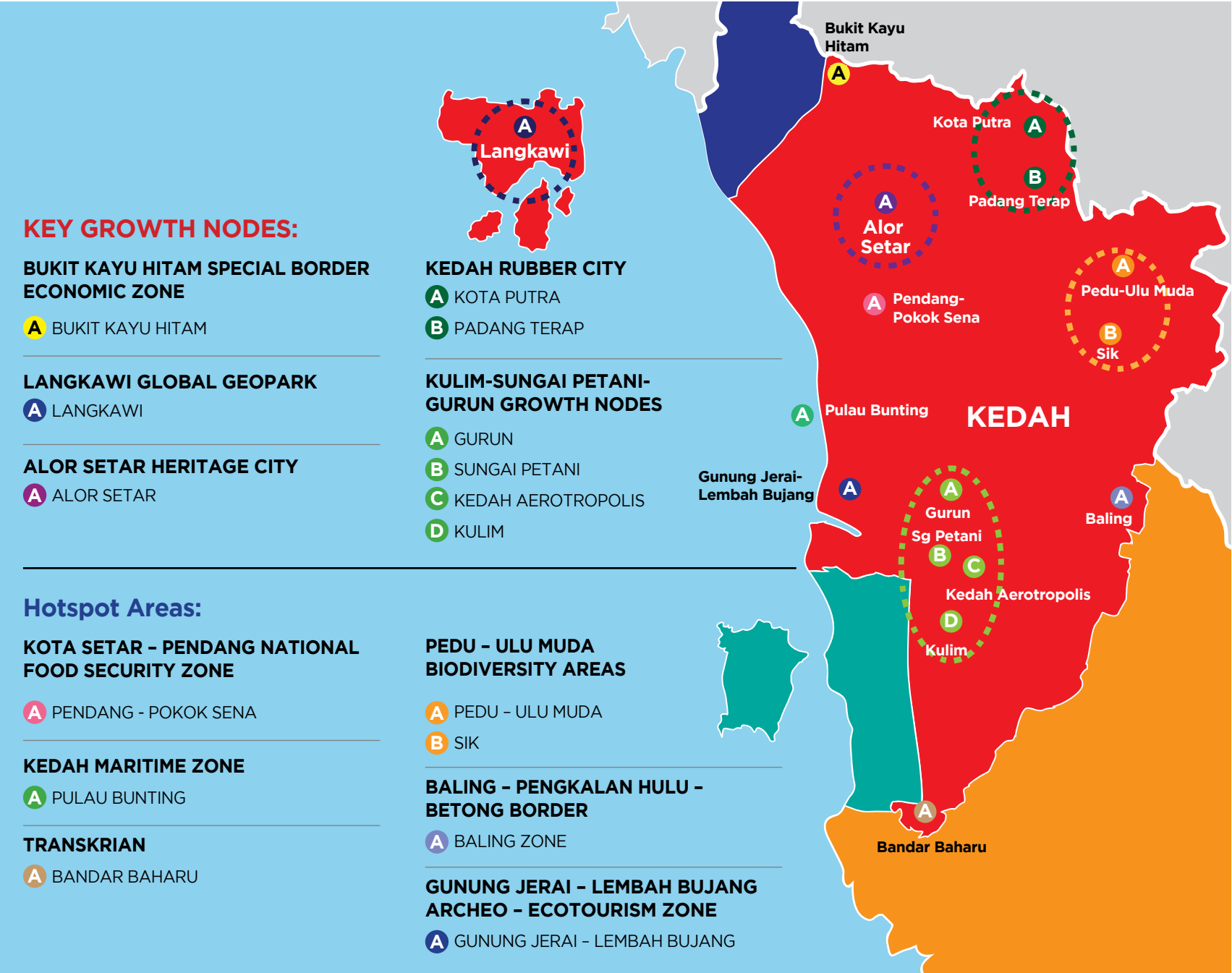


Local talent will be developed from an early stage

Human Capital

The NCER Strategic Development Plan (2021-2025) envisions human capital as a critical driver of growth and development to address the underlying challenges in the region. Kedah has the advantage of providing a constant supply of talent due to the availability of more than **38 higher learning institutions** in the State, including universities, colleges and training institutes. Notably, the **Kedah Industrial Skills & Management Development Centre** has been collaborating with companies operating in Kedah to provide an industry-ready workforce. NCIA as the regional enabler will continue to implement its human capital programme such as **empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme (NTEP)** and **Dana Usahawan Bumiputera (DUB)**.

Mapping of Economic Clusters by Key Growth Nodes and Hotspot Areas
- Aligning Shared Prosperity Vision to NCER Strategic Development Plan for Kedah



Catalytic Projects and Programmes in Kedah

1

Kedah Aerotropolis

- Development of Kulim International Airport (KXP) - New International Passenger and Cargo Airport
- Sidam Logistics, Aerospace and Manufacturing Hub (SLAM) - Development of external infrastructure to support both projects

2

Kedah Rubber City (KRC)

- Development of internal infrastructure for Kedah Rubber City (1,244 acres)
- Development of external infrastructure such as road upgrading works to support the development of KRC

3

ICON@NCER

- Integrated Economic Centre (I-CON@NCER) is a new development approach for rural areas, particularly the Malay Reserve Land and Less Developed Areas (LDAs)
- Potential location Yan, Baling, Sik

4

Northern Corridor Highway (Phase 1A)

- Development of a new highway in NCER from Serdang to Sungai Petani (70 km)

5

Bukit Kayu Hitam Special Border & Economic Zone

- Development of 11,000 acres of land which will involve the establishment of a manufacturing park with FIZ status, a logistics hub and mixed development (residential & commercial)

6

Sustainable Mining

- Airborne geophysical survey for mineral deposit exploration in NCER

7

Kedah Eco Innovation Park

- Development of a petrochemical industrial park
- Infrastructure development of Pulau Bunting

8

Human Capital Programmes

- Continuation of empowerNCER, entrepreneurNCER, NCER Talent Enhancement Programme (NTEP) and Dana Usahawan Bumiputera
- Implementation of new Human Capital programmes such as IR 4.0 Centre of Excellence

9

NCER Agri Economic Zone

- Kota Setar - Pendang - Pokok Sena National Food Security Zone (EMM 2.0, Pokok Sena SME Development Centre)
- CREST Precision Agriculture Programme
- Integrated New Agriculture (hemp, cash crops and superfruits)

10

Kedah Biodiversity Trust Fund

- The establishment of a Biodiversity Trust Fund to harness its potential as a new source of income for Kedah

11

Malay Reserve Land Trust Fund

- The establishment of a trust fund to unlock MRL's value and development potential while preserving its status

12

Tourism (Eco, Heritage, & Archaeo)

- Various tourism initiatives to promote Kedah at the following locations:
 - Lembah Bujang
 - Langkawi
 - Gunung Jerai
 - Enhancement of Sungai Kedah & Sungai Anak Bukit

PULAU PINANG

A wide-angle photograph of the Penang Second Bridge, a cable-stayed bridge with four tall, blue, A-frame pylons. The bridge deck is a multi-lane highway with a metal guardrail. The bridge spans a body of water, and a small boat is visible in the lower right corner. The sky is a clear, pale blue.

Penang Second Bridge

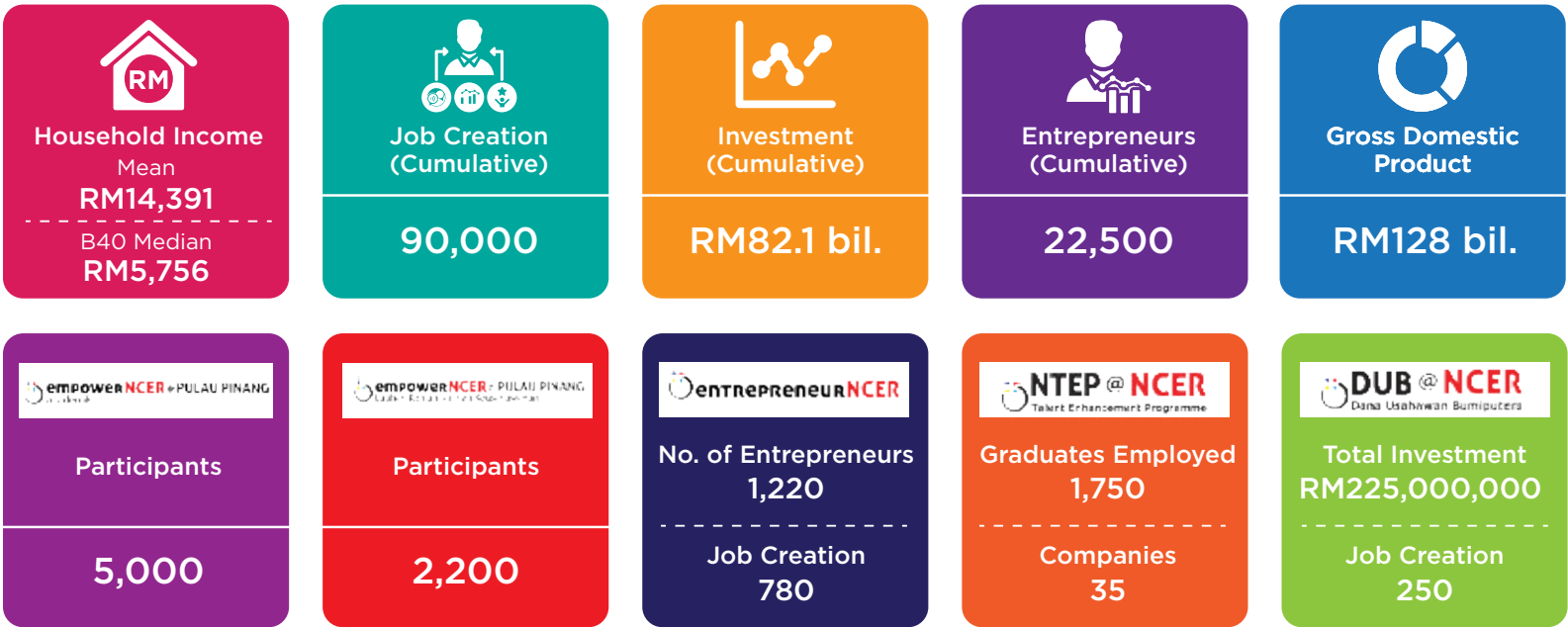
“THE STATE’S STRATEGIC POSITIONING UNDER THE NCER STRATEGIC DEVELOPMENT PLAN (2021-2025) IS AIMED AT INTENSIFYING THE R&D&C SECTOR IN PULAU PINANG, TOGETHER WITH OTHER SECTORS SUCH AS LOGISTICS, AS WELL AS HEALTH, HERITAGE, ARCHAEO AND ECOTOURISM.”

Aspirational Vision

Pulau Pinang’s competitive edge lies in its skilled workforce, robust supply chain, top-notch infrastructure and Government support, making it a preferred destination for companies to establish their presence in the state. The State also acts as the **main international trade hub in NCER** with the existence of Penang Port, the third largest cargo seaport in Malaysia. With excellent rail and road connection to Southern Thailand and the northern Malaysia states, the Penang seaport provides strong logistics support for the importation of raw material and exportation of finished products.

The State’s strategic positioning under the NCER Strategic Development Plan (2021-2025) is aimed at **intensifying the R&D&C sector** in Pulau Pinang, together with other sectors such as **logistics**, as well as **health, archaeo** and **heritage tourism**. As envisaged in Penang 2030 vision, Pulau Pinang will continue to leverage on its strengths to achieve a balanced development and create a family-focused, green and smart state that inspires the nation. Under this framework, the targets for Pulau Pinang by 2025 are as shown below:

TARGETS FOR PULAU PINANG BY 2025



Strategic Development Framework Map of Pulau Pinang



Strategic Positioning

A total of **9 Key Development Zones** have been identified in Pulau Pinang, namely, **Batu Kawan Industrial Zone**, **Greater Butterworth-Permatang Pauh-Bukit Mertajam Growth Corridor**, **Kepala Batas-Tasek Gelugor Growth Node**, **Seberang Perai Aquaculture Zone**, **George Town Development Zone**, **Transkrian Development Zone**, **Penaga-Kepala Batas Food Security Zone**, **Balik Pulau-Teluk Bahang Biodiversity Zone** and **Kuala Muda Biodiversity Zone**.

PULAU PINANG STRATEGIC DEVELOPMENT FRAMEWORK

Z15 BATU KAWAN INDUSTRIAL ZONE

Batu Kawan – Simpang Ampat

- Hi-Tech Park
- Manufacturing

- Science Park
- Halal Park
- Simpang Ampat Station

- Regional retail outlets
- Area Improvement District
- Sports tourism

Z16 GREATER BUTTERWORTH – PERMATANG PAUH – BUKIT MERTAJAM GROWTH CORRIDOR

Greater Butterworth

- Penang Sentral (Transit-Oriented Development)
- Manufacturing

- Penang Port
- Waterfront development
- Hi-Tech Park

- Logistics hub
- Tuna port
- Harbour-related manufacturing

Z17 KEPALA BATAS – TASIK GELUGOR GROWTH NODE

Kepala Batas

- Administrative
- Commercial
- Manufacturing

Bandar Bertam

- Education Hub
- Kubang Menerong New Rail Station

Tasek Gelugor

- Station Area Improvement
- Agriculture
- Business Services
- SME Industrial Park

Z18 SEBERANG PERAI AQUACULTURE ZONE

- Pulau Jerejak – Pulau Aman – Pulau Gedung
- Aquaculture (shrimp, oyster & abalone)
- Ecotourism
- Pulau Jerejak Biodiversity Zone

Z19 GEORGE TOWN DEVELOPMENT ZONE

- George Town
- Heritage tourism
- Waterfront business hub
- Logistics
- Transport hub
- Cruise tourism
- Penang Transport Master Plan

George Town – Batu Ferringhi – Teluk Bahang Ecotourism

- Ecotourism

George Town – Ayer Itam – Balik Pulau Ecotourism

- Durian Industry
- Superfruits
- Education Hub
- Relau Agrotourism Centre
- Aquaculture
- Ecotourism
- Medical and wellness

George Town – Bayan Baru – Bayan Lepas Zone

- Penang International Airport
- Global Business Services
- Penang South Waterfront
- Logistics
- Manufacturing

Z13 TRANSKRAN DEVELOPMENT ZONE

Nibong Tebal

- Durian Industry
- Superfruits
- Ecotourism

Z21 BALIK PULAU – TELUK BAHANG BIODIVERSITY ZONE

- Ecotourism
- Organic paddy & cash crops
- Durian Industry
- Oyster farming
- Agrotourism

Z20 PENANG KEPALA BATAS NATIONAL FOOD SECURITY ZONE

- Penaga – Kepala Batas Granary Area
- Agrotourism
- Paddy EMM & cash crops

Z22 KOTA KUALA MUDA BIODIVERSITY ZONE

- Ecotourism
- Aquaculture

ZONE Z15:
Batu Kawan Industrial Zone



Strategic Development Map of Zone Z15

Zone Z15 currently focuses on **high value-added manufacturing**, particularly **electrical and electronics (E&E)**. A key catalytic project is the **Byram SME Hi-Tech Park**, an ongoing initiative between the private and public sectors to undertake the development of SMEs and heavy industries, as well as mixed development.

Moving forward, this zone will be further developed to complement the industrial activities in Bayan Lepas. To increase its investment appeal, the **transportation infrastructure** connecting to the park, such as the Batu Kawan-Changkat Byram Connectivity Link and the Northern Corridor Highway connecting to Serdang, will be improved. Both projects will be fully financed by the public sector.

Agriculture is another key sector in Zone Z15, with the inclusion of initiatives comprising the cultivation of **superfruits**, such as **fig** and **gac fruit**, and a seed centre to increase the agricultural output of the State.

ZONE Z16:
Greater Butterworth-Permatang Pauh-Bukit Mertajam Growth Corridor



Strategic Development Map of Zone Z16

Catalytic projects in this node include the **expansion of Penang Port in Greater Butterworth** and various **agriculture projects in Permatang Pauh**.

Bukit Mertajam will have an additional catalytic project to spur **transit-oriented development** in the district surrounding the **Bukit Mertajam train station**. This zone will also have infrastructure projects catered to alleviate the high pressure on the existing infrastructure. These would include the **Penang Port expansion**, which will increase its throughput capacity by **300,000 Twenty Foot Equivalent Units (TEUs)**, and the **traffic improvement projects at Juru-Sungai Dua**, one of the most utilised routes on the mainland part of Pulau Pinang.

ZONE Z17: Kepala Batas-Tasek Gelugor Growth Node



Strategic Development Map of Zone Z17

This zone will have catalytic projects in **tourism, agriculture** and **connectivity infrastructure**.

Tasek Gelugor will be focusing on **modern agriculture** and acts as a focus centre for NCER's agriculture programmes, such as **cash crops** and **organic paddy**. These catalytic initiatives in agriculture will be jointly financed by the public and private sectors.

Another high-impact strategic project within this zone is the **Penang Eco Innovation Park** in **Bandar Bertam**. To further enhance the **connectivity and accessibility** of the industrial park, **infrastructure developments for rail** are already planned, including a **new station at Kubang Menerong**.

Guar Kepah archaeotourism is a catalytic project in tourism, which will be financed through a public-private partnership. This initiative will focus on the upgrading of tourism attractions and supporting facilities.

ZONE Z18: Seberang Perai Aquaculture Zone



Strategic Development Map of Zone Z18

As a zone with high accessibility to the seashore, areas near the **Sultan Abdul Halim Muadzam Shah Bridge** or **Penang Second Bridge** and **Pulau Jerejak** will focus on the **aquaculture** sector. To spur the sector's growth, this zone will have a catalytic project for the farming of **oyster, fish** and **shrimp**. This initiative will be jointly financed by the private and public sectors through the anchor company business model.

ZONE Z19: George Town Development Zone



Strategic Development Map of Zone Z19

Zone Z19 is primed to be a multipurpose zone that is focused on increasing the overall economic activity in the State, with catalytic projects in **infrastructure improvement, education, medical wellness, agriculture** and **ecotourism**.

Two major projects centred around infrastructure improvement in this zone include the **expansion of Penang International Airport** and **Swettenham Pier Cruise Terminal**. The latter project is estimated to cost RM155 million and will be fully financed by the private sector.

Catalytic programmes to grow Pulau Pinang's potential as an **ecotourism** destination include initiatives such as the upgrading of tourism attractions at **Batu Ferringhi** and **Teluk Bahang**.

ZONE Z13: Transkrian Development Zone



Strategic Development Map of Zone Z13

This zone covers the area where Kedah, Perak and Pulau Pinang intersect. Due to its soil fertility and adequate rainfall, **agriculture** has been identified as a key enabler to spur growth in Zone Z13.

To achieve this, several modern agriculture projects will be implemented, such as the cultivation of **superfruits, cash crops** and **Estate Management Model (EMM)**.

**ZONE Z20:
Penaga-Kepala Batas Food Security Zone**



Strategic Development Map of Zone Z20

Zone Z20 focuses on **agriculture** and **aquaculture** programmes to develop Pulau Pinang's capacity towards **self-sufficiency in food production**. Key catalytic projects and programmes centred around these sectors include **Estate Management Model 2.0** and **cash crop** initiatives to develop the capabilities of local farmers and increase their output.

Agrotourism is another focus area in this zone, with catalytic projects to upgrade tourism attractions in **Penaga** and **Kepala Batas**. This initiative will be implemented through a public-private partnership.

**ZONE Z21:
Balik Pulau-Teluk Bahang Biodiversity Zone**



Strategic Development Map of Zone Z21

Zone Z21 will be focusing on the enhancement of **ecotourism** in **Teluk Bahang**. This includes the upgrading of current tourist attractions and supporting facilities in the vicinity, which will be jointly financed by the public and private sectors.

Agriculture and aquaculture are the key focus areas for this zone, with catalytic projects such as the **Durian Valley**, **oyster satellite farming** and **fish cage farming**.

**ZONE Z22:
Kuala Muda Biodiversity Zone**



Strategic Development Map of Zone Z22

Kuala Muda possesses a wealth of **biodiversity resources**, most prominently **mangrove reserves** which function as a natural protection against harsh waves and floods. To prevent environmental degradation while pursuing economic growth, the zone will be promoted as an **ecotourism** site. Key projects identified in this zone includes the **upgrading of tourism attractions and supporting facilities** in Kuala Muda.

Economic Drivers



Manufacturing

Pulau Pinang is undeniably the heart of NCER’s manufacturing sector, particularly in the **E&E industry** which had started its journey in the State since more than 40 years ago. Hence, the strategic development framework for Pulau Pinang will be focusing on the **R&D&C sector**. The R&D&C sector for the **E&E industry** in Pulau Pinang is also seen as one of the initiatives to retain and attract local skilled workforce to the State, as it offers greater value and covers wide range of economic verticals in the current digital era.



Logistics & Connectivity

Another competitive edge of Pulau Pinang is its excellent logistics network and connectivity, as reflected in the State’s heavy contribution to the export market. In addition, Pulau Pinang offers both air and sea connectivity which act as the primary logistics infrastructure in NCER and Southern Thailand. The Penang International Airport for instance, has recorded the highest value of exported goods compared with other Malaysian airports due to the vibrant E&E industry in the State. The Penang Port complements this aspect by being a gateway of import and export activities for both NCER and Southern Thailand.

Under this strategic development plan, **connectivity** in the State will be **further enhanced** through the **traffic improvement initiative** which will be undertaken in the **mainland areas of Pulau Pinang**, namely, **Seberang Jaya, Juru, Butterworth** and **Permatang Pauh**.



Agribusiness

The agriculture industry in Pulau Pinang will adopt a **two-pronged strategy**, which entails enhancing the **agricultural value** throughout the entire state and **supporting the growth of seed R&D&C** via an R&D&C centre, which is a high-value initiative aimed at reducing the country's dependency on imported seeds.

The **agriculture** and **aquaculture** ecosystem in Pulau Pinang will be complemented by the anchor company business model for projects involving **superfruits**, as well as **Estate Management Model**.



Tourism

Pulau Pinang is ranked among the highest in terms of local and foreign tourist arrivals in Malaysia. The cultural heritage of the State is most prominent in its capital city of George Town. The historical core of George Town has been designated as a UNESCO World Heritage Site since 2008. As such, the strategic development framework in Pulau Pinang's tourism sector will be predominantly focused on the **George Town Development Zone**. This is further supported by the existing cruise terminal in the city, namely, the Swettenham Cruise Terminal, which will be prioritised in the development. Guar Kepah Archaeology Centre will also be further enhanced under this framework.



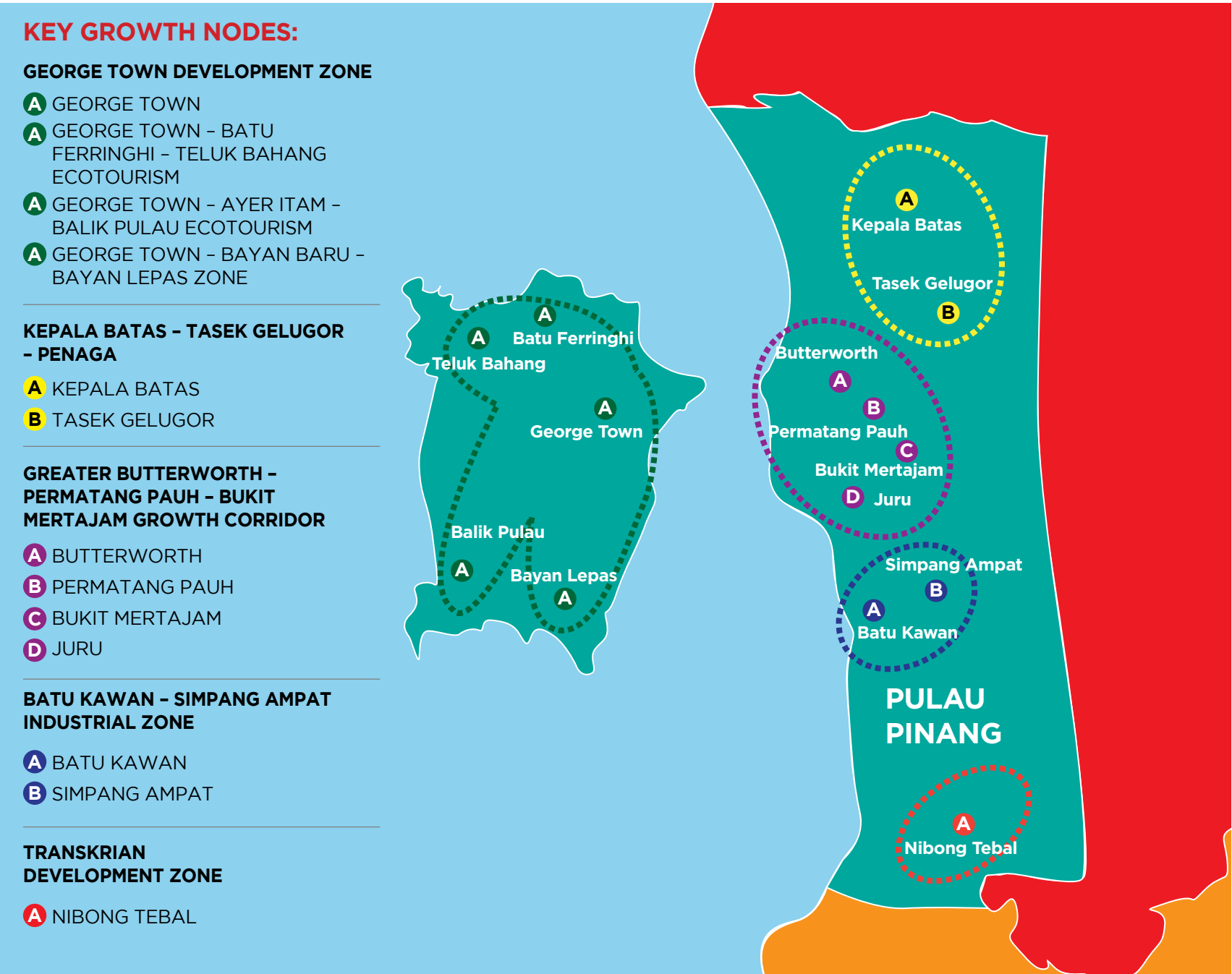
Human Capital

Pulau Pinang has made great strides in widening the *rakyat's* participation in education and nurturing its local skilled workforce. The industrialisation of Pulau Pinang since the 1970's has accelerated its human capital development to meet the requirements of the industry. As a result, the State has a better educated population than the other three states in NCER. Moving forward, the focus of human capital development in Pulau Pinang will be elevated to include more **research and innovation-based activities**, to enable the local workforce to compete at the **high-end of the industry's value chain**.

The State will also continue to benefit from NCER's human capital development programmes to uplift the socioeconomic well-being of the locals, such as **empowerNCER**, **entrepreneurNCER**, **NCER Talent Enhancement Programme (NTEP)** and **Dana Usahawan Bumiputera (DUB)**.

Mapping of Economic Clusters by Key Growth Nodes

- Aligning Shared Prosperity Vision to NCER Strategic Development Plan for Pulau Pinang



Catalytic Projects and Programmes in Pulau Pinang

1

Penang Transport Master Plan (PTMP)

- The implementation of a comprehensive, efficient and well-connected transport strategy

2

Road & Highway Network

- Juru – Sungai Dua traffic improvement
- Juru – Sungai Dua elevated highway
- Northern Corridor Highway Phase 1B (Bt. Kawan – Serdang)

3

Tasek Gelugor Rail Infrastructure

- Kubang Menerong new railway station
- New township development areas

4

Penang Eco Innovation Park

- Development of a new SME industrial park in Bertam (approx. 1,000 acres) to promote industry development

5

Penang Port Expansion

- Upgrading of North Butterworth Container Terminal wharf to optimise berth and quay utilisation
- Extension of existing berth for Swettenham Pier cruise terminal

6

Penang International Airport Expansion

- Upgrading of airport capacity from 6.5 mppa to 12 mppa

7

Human Capital Programmes

- Continuation of empowerNCER, entrepreneurNCER, NCER Talent Enhancement Program (NTEP) & Dana Usahawan Bumiputera
- Implementation of new Human Capital programmes such as Centre of Excellence IR 4.0 (CoE IR 4.0)
- Single campus model for TVET Talent Development

8

Research, Development and Commercialisation Hub

- Pulau Pinang will be positioned as the hub for research, development & commercialisation activity (R&D&C) in NCER
- To be supported by CREST initiatives, COEs and Seed Centre
- NCER Technology Innovation Centre (NTIC) will be established
- Single campus model for R&D&C

9

Agribusiness

- Implementation of Agribusiness initiatives such as superfruits, cash crop, EMM 2.0, aquaculture (abalone & oyster farming), seed centre and agrotourism via Anchor Company model in Balik Pulau
- Permatang Pauh Agro Park
- Relau Agrotourism

10

Transkrian Special Agro Economic Zone

- Agribusiness – Superfruits initiatives in Nibong Tebal
- Promoting Nibong Tebal as an ecotourism and agrotourism destination - Black Thorn durian as a new potential tourism product for the mainland

11

Tourism

- Various tourism initiatives to promote mainland tourism such as the upgrading of infrastructure for Guar Kepah Archaeology Site and Penang Hill cable car
- Balik Pulau Ecotourism

PERAK



Ipoh is a city rich in history, as well as great potential to become a city of the future

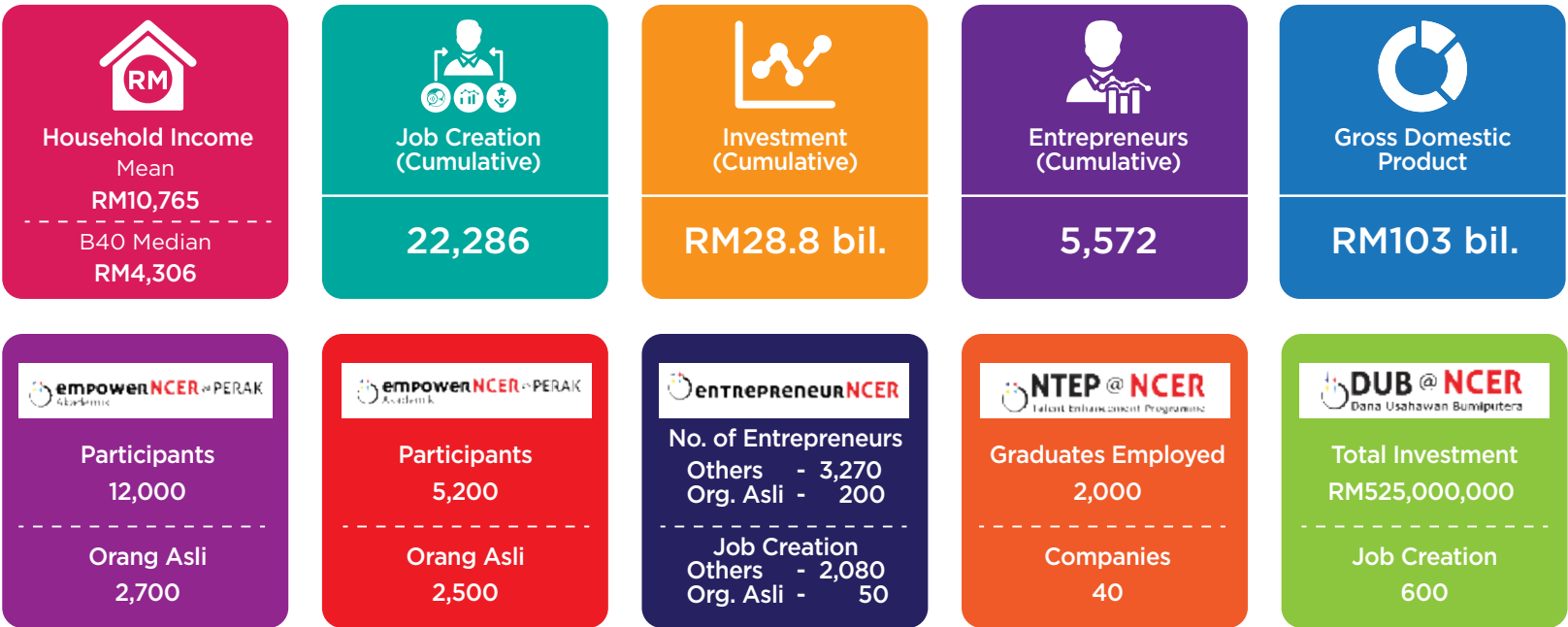
“SEVERAL KEY PRIORITY SECTORS HAVE BEEN IDENTIFIED TO LEVERAGE ON THE STATE’S VALUE PROPOSITIONS, COMPRISING ECOTOURISM, HERITAGE TOURISM AND ARCHAEO TOURISM, MODERN AGRIBUSINESS, AUTOMOTIVE, AND AN ECONOMIC HUB FOR CREATIVE INDUSTRIES.”

Aspirational Vision

Perak has built a strong industrial foundation, relying on manufacturing as a robust engine of growth. Moving forward, the State is diversifying its industrial portfolio to include other economic verticals, such as **E&E products**, as well as **logistics** and **transport equipment**. Emphasis would also be placed on unlocking the potential of Perak’s **tourism** sector, which is blessed with rich natural endowments as well as heritage and eco-based tourism attractions.

Under the NCER Strategic Development Plan (2021-2025) for Perak, which is aligned with Perak 2040 Development Plan, several key priority sectors have been identified to leverage on the State’s value propositions, comprising **ecotourism** and **heritage tourism**, **modern agribusiness**, **automotive** and an economic hub for **creative industries**.

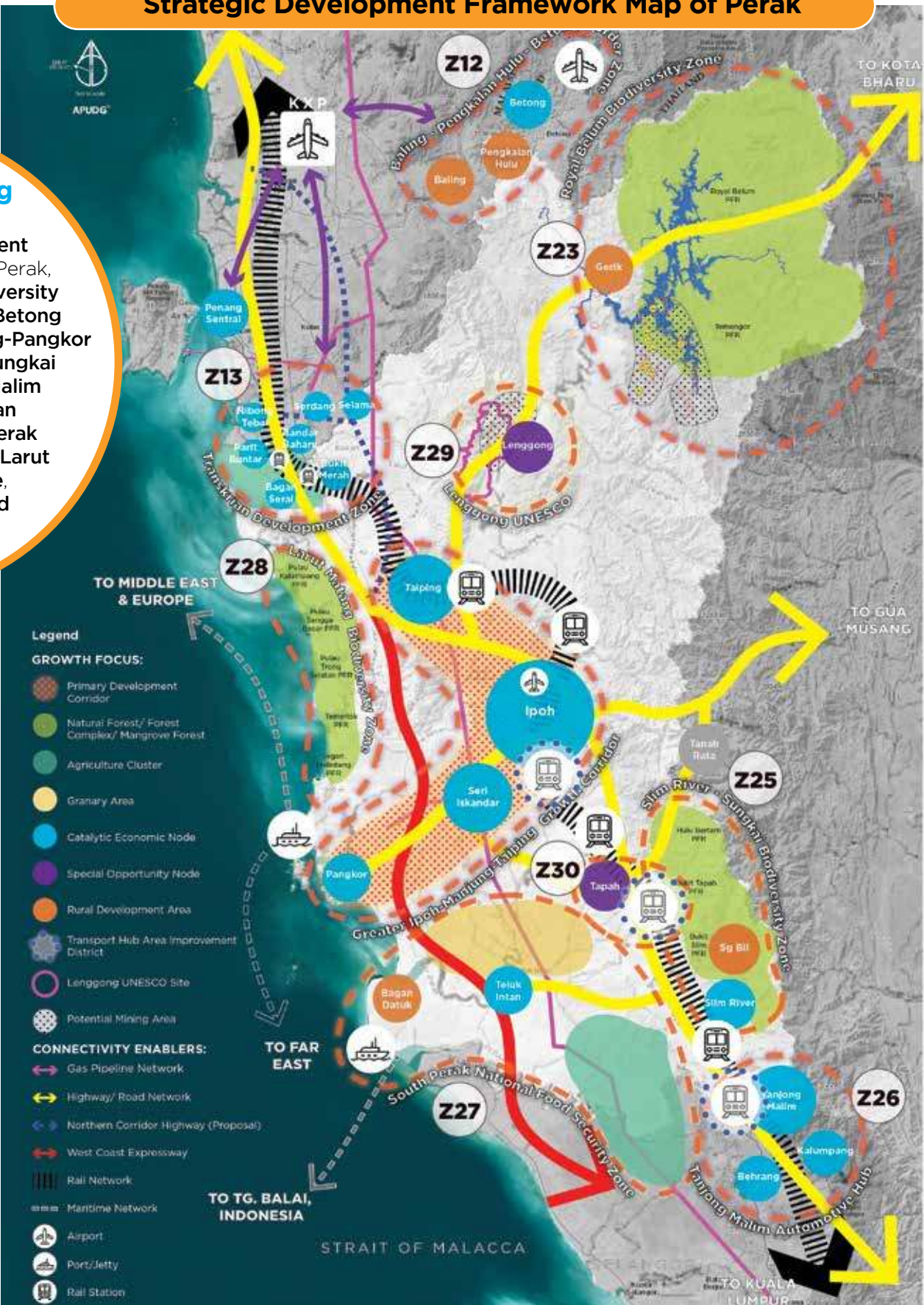
TARGETS FOR PERAK BY 2025



Strategic Development Framework Map of Perak

Strategic Positioning

A total of 10 Key Development Zones have been identified in Perak, namely, the Royal Belum Biodiversity Zone, Baling-Pengkalan Hulu-Betong Border Zone, Greater Ipoh-Taiping-Pangkor Growth Corridor, Slim River-Sungkai Biodiversity Zone, Tanjung Malim Automotive Hub, Transkrian Development Zone, South Perak National Food Security Zone, Larut Matang Biodiversity Zone, Lenggong UNESCO World Heritage Site and Tapah Education City.



PERAK STRATEGIC DEVELOPMENT FRAMEWORK

Z23 ROYAL BELUM BIODIVERSITY ZONE

Royal Belum Biodiversity Area

- UNESCO World Heritage Site
- Ecotourism

Gerik

- Ecotourism Gateway Town
- Rest & Refresh
- Tourism Service Centre

Temengor

- Sustainable mining

Z12 BALING – PENGKALAN HULU – BETONG BORDER ZONE

Pengkalan Hulu

- Sustainable mining
- Border tourism
- Archaeotourism

- Ecotourism

- Special Development Zone (SDZ):
 - Community-based tourism
 - Cottage & resource-based industries

Z24 GREATER IPOH – TAIPING – PANGKOR GROWTH CORRIDOR

Greater Ipoh

- Digital economy
- Financial administrative centre
- Urban tourism
- Heritage tourism
- Medical tourism

- Tanjung Tualang niche tourism
- Education
- Urban revitalisation
- Ipoh Station Area Improvement District
- Geopark

- Ipoh Airport
- Manufacturing
- Sustainable mining
- Renewable energy generation
- Silver Valley Technology Park

Seri Iskandar / Perak Tengah

- Education hub
- Pasir Salak heritage tourism
- Dairy farm
- Agribusiness (Paddy EMM & cash crops)

Taiping / Kuala Kangsar

- Royal Town
- Heritage tourism
- Manufacturing
- Bukit Larut ecotourism

Manjung

- Lumut Port
- Logistics
- Heavy industry
- Aquaculture – Oyster & Abalone

- Maritime industry
- Segari Turtle Conservation
- Livestock
- Cash crops

Pangkor Island

- Pangkor Duty Free Island
- Ecotourism
- Fishery & Aquaculture
- Island tourism

Z25 SLIM RIVER – SUNGKAI BIODIVERSITY ZONE

Titiwangsa Range Ecotourism Belt

- Ecotourism
- Forest conservation
- Orang Asli Community & Heritage Programme

Slim River – Sungai Bil Tourism Node

- Community-based tourism
- Cottage & resource-based industries

Natural / Renewable resources

- Underground water tapping
- Renewable energy generation

Z26 TANJONG MALIM AUTOMOTIVE HUB

- Automotive
- Education hub
- Tanjong Malim Station Area Improvement District
- Ecotourism

Z13 TRANSKRAN DEVELOPMENT ZONE

Parit Buntar / Bagan Serai National Granary Area

- Paddy EMM & cash crops
- Bukit Merah ecotourism

Z27 HILIR PERAK NATIONAL FOOD SECURITY ZONE

Sg. Manik

- National Granary Area
- Modern Agriculture

Bagan Datuk

- Coconut
- Aquaculture and fisheries
- Superfruits
- Hutan Melintang Jetty

Teluk Intan

- Heritage tourism
- Oleochemical
- Aquaculture and fisheries industries

Z28 LARUT MATANG BIODIVERSITY ZONE

- Ecotourism
- Mangrove conservation
- Aquaculture and fisheries

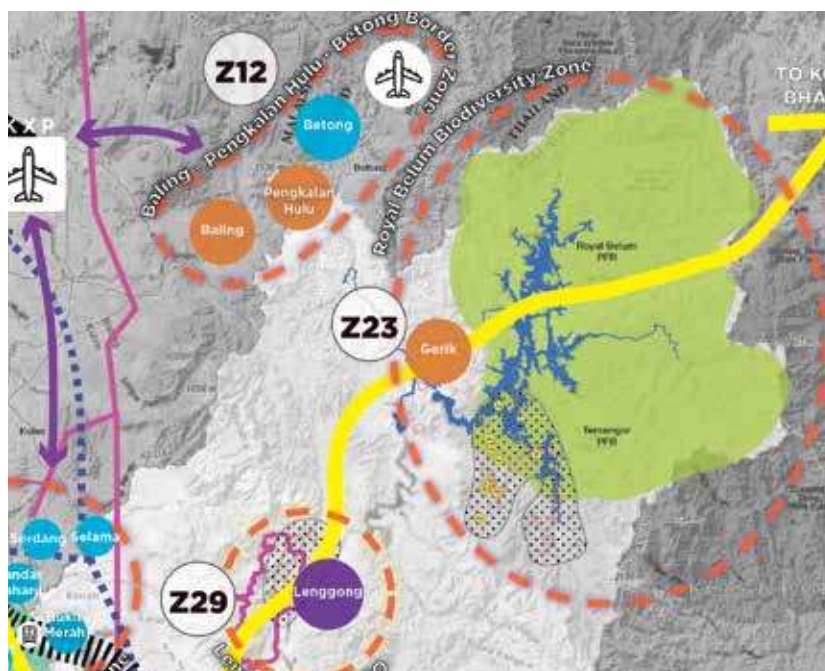
Z29 LENGGONG UNESCO

- Archaeo-ecotourism
- Mixed agriculture
- Sustainable mining

Z30 TAPAH EDUCATION CITY

- Ecotourism
- Underground water tapping
- Orang Asli Inclusivity Programme
- Kossan Glove City

ZONE Z23: Royal Belum Biodiversity Zone



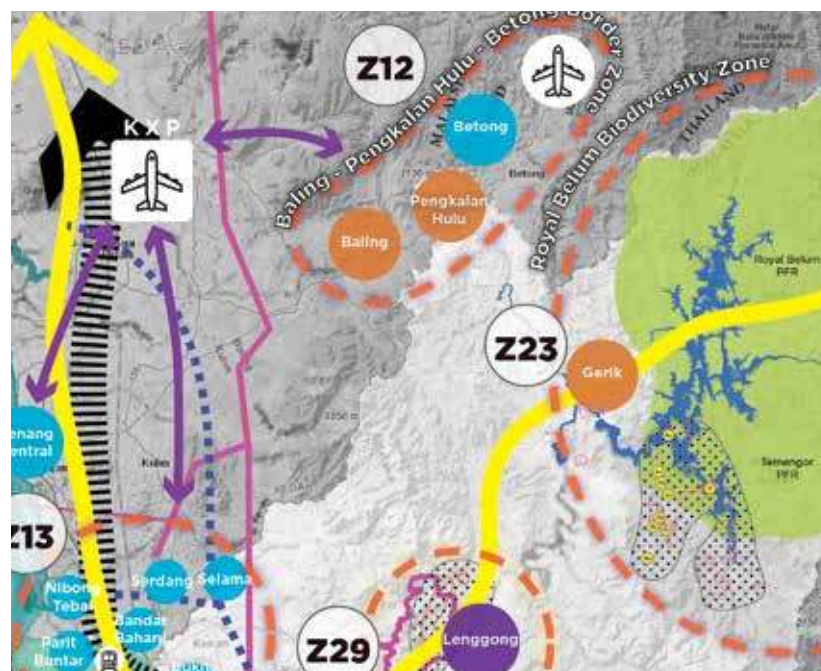
Strategic Development Map of Zone Z23

Development in Zone Z23, which covers **Royal Belum State Park, Gerik and Temengor**, will involve catalytic projects that are focused on **ecotourism** and **sustainable mining**.

To promote ecotourism, key attractions and supporting facilities, including hospitality-related infrastructure such as **retail, F&B and hotels**, will be upgraded within the Royal Belum Biodiversity Zone and Gerik. These initiatives will be executed through private-public partnerships.

Temengor possesses a wealth of mineral resources and will thus be the focus centre for the zone's sustainable mining activities which will be led by private investments.

ZONE Z12: Baling-Pengkalan Hulu-Betong Border Zone



Strategic Development Map of Zone Z12

Zone Z12, which includes **Pengkalan Hulu**, is a multipurpose zone focusing on **agriculture** and **ecotourism**.

High-impact and catalytic agriculture projects in the area would include the cultivation of **cash crops** to develop contract farmers under a private-public partnership.

A private-sector led **sustainable mining** programme will also be implemented in **Pengkalan Hulu** to ensure that mineral resources in the area are extracted without harming the environment.

ZONE Z24: Greater Ipoh-Taiping-Pangkor Growth Corridor



Strategic Development Map of Zone Z24

Zone Z24 consists of **Greater Ipoh, Seri Iskandar and Perak Tengah, Manjung, Taiping and Pulau Pangkor**. It will be a multipurpose zone focused on increasing the overall economic activity in Perak with catalytic projects in **infrastructure improvement, manufacturing, agriculture and tourism**. Plans in Greater Ipoh are centred around the development of connectivity infrastructure, including the **West Coast Expressway** and the **second phase of Northern Corridor Highway**.

Various high-impact tourism programmes will be developed in this zone including **heritage tourism** programmes in **Ipoh, Taiping and Pasir Salak**. These initiatives will be focusing on the enhancement and upgrading of tourist attractions. Among the tourism projects that have already been planned for Perak are **Ipoh Heritage Tourism** and **Pangkor as a duty free island**.

Zone Z24 will also cover the digital economy sectors, comprising the establishment of **Global Business Services (GBS) centre** in **Ipoh** and **Silver Valley Technology Park** to focus on **cutting-edge applied technologies** industry.

Agriculture is another key sector which will be further intensified in the districts of **Perak Tengah** and **Manjung**. To develop this sector in these areas, several catalytic projects will be introduced, such as **organic paddy farming** and **cash crop initiatives**.

ZONE Z25: Slim River-Sungkai Biodiversity Zone



Strategic Development Map of Zone Z25

Zone Z25 will be focusing on catalytic **tourism projects** and programmes which include the upgrading of tourism attractions in the **Titiwangsa Range Ecotourism Belt (Tapah-Tanjung Malim)** and the development of a Tourism Service Centre. The centre will house tourism-related facilities and infrastructure such as **retail, F&B and hotels** to better serve travellers.

A unique catalytic project has also been identified to include the participation of **Orang Asli community** by leveraging on their culture and heritage. Under this programme, the private and public sectors will collaborate to develop **community-based and cottage-based industries** to improve the quality of life of the Orang Asli residing in the area.

ZONE Z26:
Tanjung Malim Automotive Hub

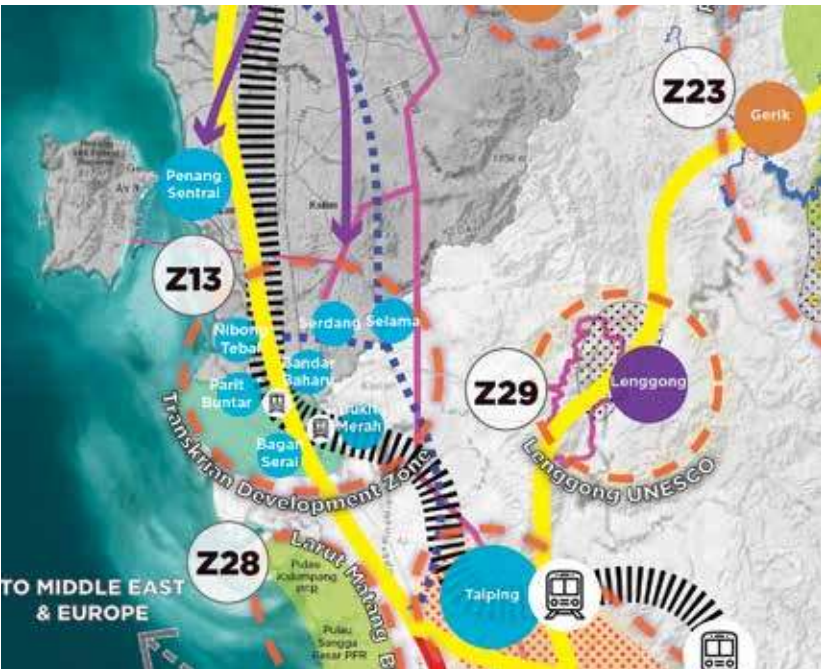


Strategic Development Map of Zone Z26

Zone Z26 will be concentrating on enhancement projects to strengthen **Tanjung Malim’s positioning** as one of the prominent **automotive hubs in NCER**. This includes a feasibility study for the development of a PROTON City PLUS interchange.

Along similar lines, supporting infrastructure will also be enhanced in the zone, such as **improvements in broadband and utilities services in the automotive hub** and a **potential natural gas pipeline extension from Bidor to Tanjung Malim**. These initiatives are aimed at improving the industry ecosystem and the supply chain of automotive hub in this zone.

ZONE Z13:
Transkrian Development Zone



Strategic Development Map of Zone Z13

Zone Z13 covers the area where Kedah, Perak and Pulau Pinang intersect. With its fertile soil and adequate rainfall, **agriculture** has been identified as a key enabler to spur growth in this zone.

To achieve this, several modern agriculture projects have already been planned for this zone, such as the cultivation of **superfruits, cash crops** and **Estate Management Model (EMM)**.

ZONE Z27:
South Perak National Food Security Zone



Strategic Development Map of Zone Z27

Zone Z27 covers four nodes comprising **Teluk Intan, Bagan Datuk, Trolak** and **Sungai Manik**, and it focuses on **infrastructure improvements, tourism** and **agriculture** activities.

Bagan Datuk will be positioned as a **tourism destination** due to the presence of mangrove reserves and its historical value, while **Teluk Intan, Trolak** and **Sungai Manik** will be positioned as a **key food production hub** for the region.

Catalytic agriculture projects that will be implemented in the zone consist of contract farming and satellite farming for **cash crops, livestock** and **aquaculture**.

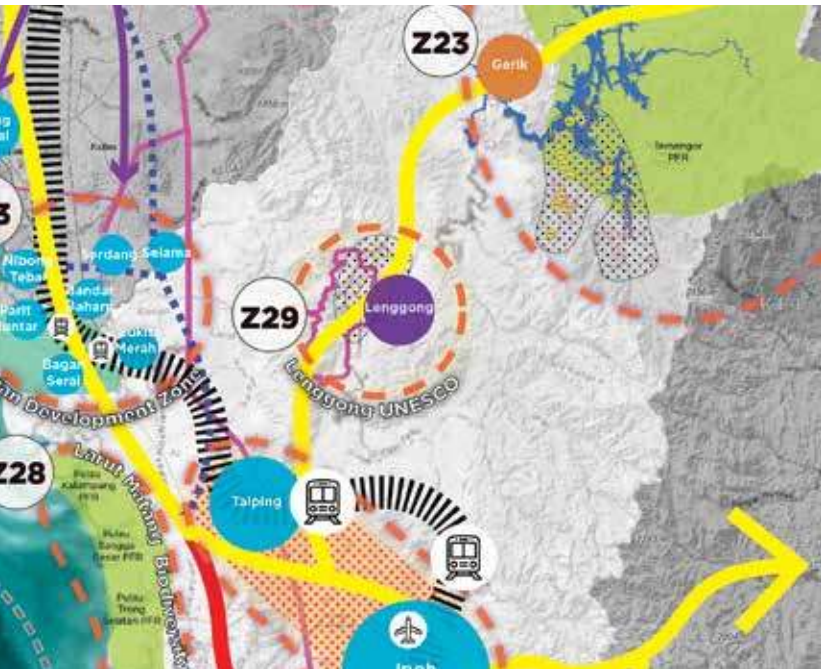
ZONE Z28:
Larut Matang Biodiversity Zone



Strategic Development Map of Zone Z28

Zone Z28 possesses a wealth of biodiversity resources, including mangrove reserves that will be leveraged for **ecotourism** purposes. A catalytic project that has been identified for this area is the upgrading of current tourism attractions and enhancements of supporting facilities. This initiative will be financed through public-private partnerships.

ZONE Z29:
Lenggong UNESCO World Heritage Site

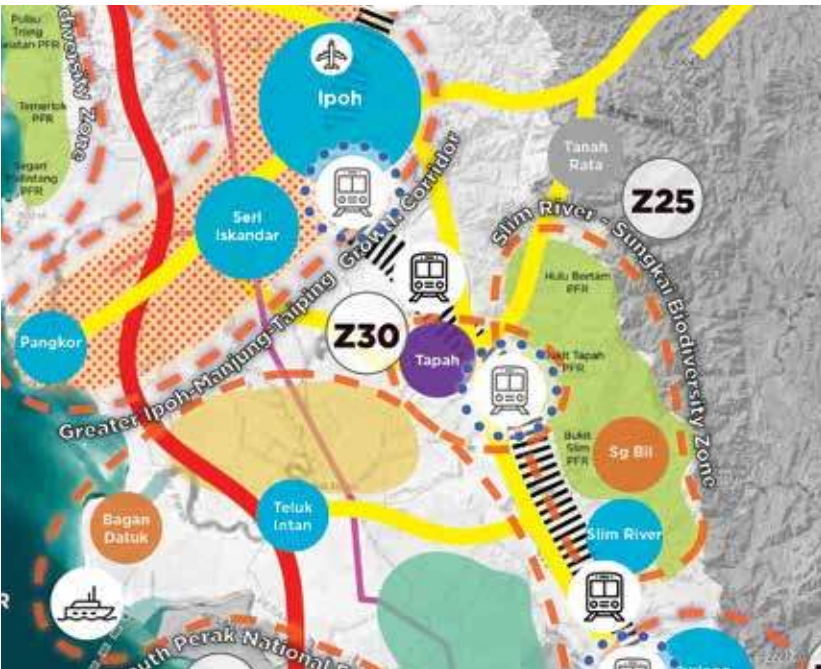


Strategic Development Map of Zone Z29

Zone Z29 will be focusing on two sectors, namely **agriculture** and **archaeotourism**. To increase the income of local farmers, satellite farming for **cash crops** and **fruits** will be implemented in Lenggong Agro Valley. This initiative will be jointly developed by the public and private sectors through the anchor company business model.

Lenggong Valley possesses a wealth of archaeological resources and has thus been identified to have archaeotourism potential. To leverage on this, tourism attractions in the area will be upgraded via private-public partnerships.

ZONE Z30:
Tapah Education City



Strategic Development Map of Zone Z30

Zone Z30 consists of the area surrounding **Tapah** and will be focusing mainly on **infrastructure improvements** and positioning **Tapah as a new education hub**.

Key catalytic projects include **Tapah Education City**, which also covers the development of its surrounding infrastructure. Tapah Education City is a border-transcending project, whereby it is part of NCER's strategy to foster **talent development** for an advanced region. Its focus will be on creating the mechanism **to attract high-skilled talent** and **developing skilled talent** to support specialised industries.

Kossan Glove City, which will be developed by the private sector, is aimed at ramping up the rubber glove production capacity. Featuring integrated and modernised glove manufacturing facilities, it will also serve as the new base for Kossan, currently one of the world's largest rubber glove producers.

Economic Drivers



Pangkor, a key tourism asset in Perak

Tourism

The strategic development framework for tourism sector in Perak is planned to unlock the **ecotourism** potential at its best, as the State is the second largest state in Peninsular Malaysia. Out of the 10 development frameworks proposed for the State, seven projects contain tourism-related component, encompassing **ecotourism, heritage tourism, archaeo tourism and community-based tourism**.



Focus on high-value manufacturing

Manufacturing

The manufacturing industry in Perak is envisaged to tap into the existing manufacturing industries in the State, such as the **Tanjung Malim Automotive Hub** and **heavy industries in Manjung**. Notably, Tanjung Malim is already home to the national automotive company, PROTON, and it will be one of the key drivers for automotive players to establish their presence in the region. On the other hand, the Manjung district is home to Lumut Port, which gives a superior advantage for heavy industries to conduct their import and export activities seamlessly.

The **Silver Valley Technology Park (SVTP)** is one of the main manufacturing-related projects in Perak, with a primary focus on **high-value yielding activities** within the value chain, such as **R&D, design**, as well as **light to medium-light manufacturing**. This project is targeted to spur the inflow of local talent, as well as create a high-income community in the State.



Promoting the growth of digital industry

Digital Economy

The advent of digital era has changed the business landscape and created significant demand for skilled manpower in digital-related industries. The initiative within this scope will be focused in **Ipoh**, the capital city of Perak. Ipoh has established itself as one of the most liveable cities in NCER, with a strong digital infrastructure. As such, the development framework of digital economy in Ipoh will be targeting the **Global Business Services** industry, by being a platform for the digital industry to grow in the State.



Tin ore

Sustainable Mining

Back in the 1930's, Perak was historically the most productive tin-producing district in the world. Thus, the **revitalisation** of this sector will unlock the State's mineral resources by having **sustainable mining activities** at specifically identified locations in the State, namely **Temengor, Pengkalan Hulu and Lenggong**.



Ipoh Railway Station

Logistics

The focus of logistics industry in Perak will be on **air and sea connectivity**, particularly the **Sultan Azlan Shah Airport in Ipoh** and **Lumut Port**. The upgrading of the Sultan Azlan Shah Airport is in line with the State plan to have more international tourist arrivals, in tandem with its numerous ecotourism initiatives. As one of the sea ports in NCER, Lumut Port will also be among the key value propositions for Perak to attract the inflow of more foreign direct investments.



Adding more value to agriculture sector

Agribusiness

In line with NCER's aspiration to elevate the value chain of agribusiness industry in the region, Perak will benefit from NCIA's programmes such as **Estate Management Model (EMM)**, **modern agriculture** and **high-value cash crops**. The initiatives will **uplift the rural areas** in the State, with the aim of **increasing the local community income** and adding more value to the agriculture industry.



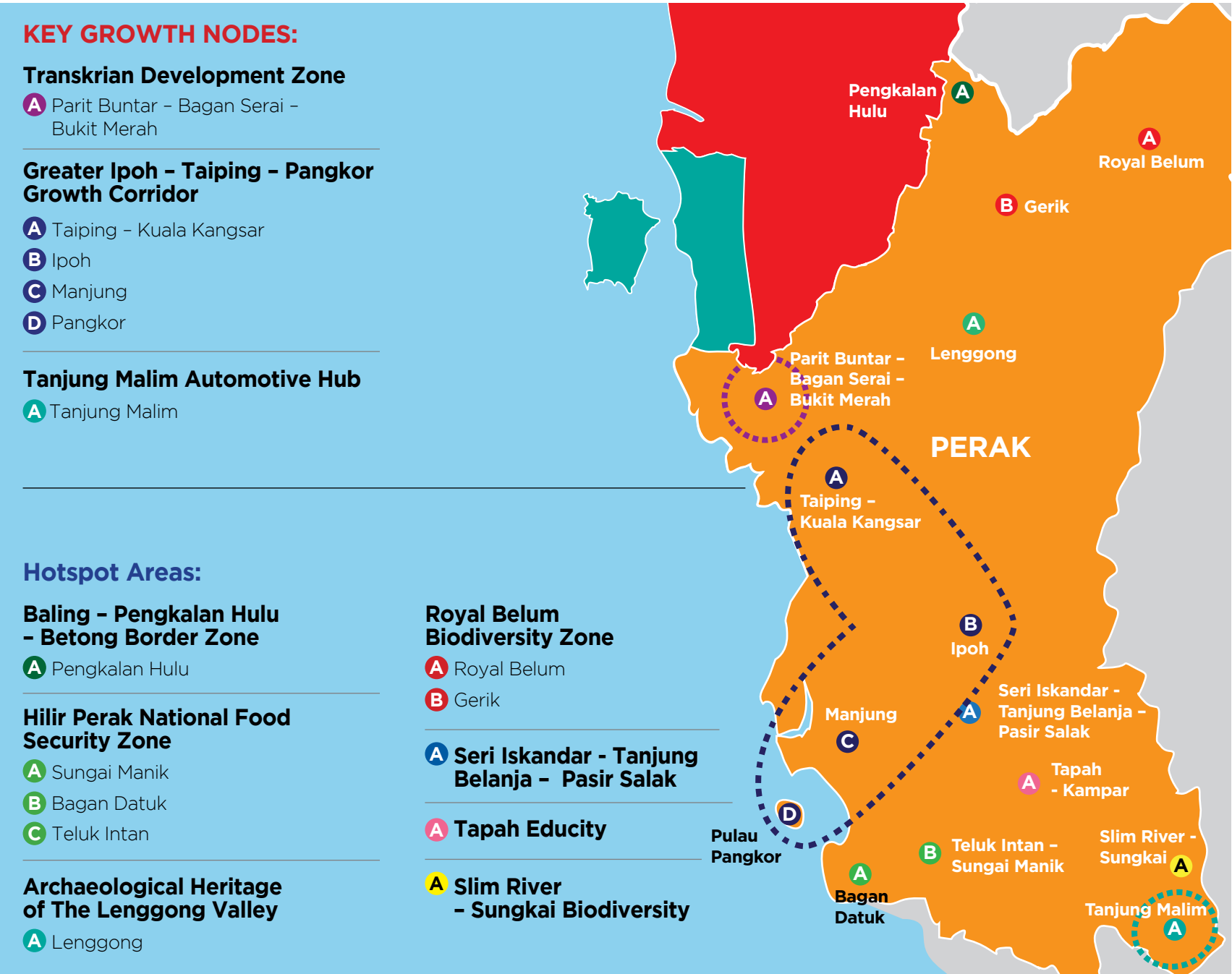
Young Perakians being exposed to the world of robotics

Human Capital

Perak has constantly developed **skilled, competitive and highly marketable local talent**, who are on par with graduates from institutions of higher learning in other states. As such, the high-impact projects planned in the State are set to **retain its talent pool** and aspire to **produce a higher skilled workforce** in the face of increasingly competitive industry. For instance, the Global Business Services initiative in Perak is anticipated to hire a significant number of **skilled workers** with **digital-related skills**.

In line with the Government's Shared Prosperity Vision 2030, the *rakyat* of Perak will continue to benefit from NCER's human capital development programmes, such as **empowerNCER**, **entrepreneurNCER**, **NCER Talent Enhancement Programme (NTEP)** and **Dana Usahawan Bumiputera (DUB)**, that are aimed at enhancing their skills and competitiveness, which will lead to higher income and better living standards.

Mapping of Economic Clusters by Key Growth Nodes and Hotspot Areas
- Aligning Shared Prosperity Vision to NCER Strategic Development Plan for Perak



Catalytic Projects and Programmes in NCER by State

1

Sultan Azlan Shah Airport Expansion

- Expansion of Sultan Azlan Shah Airport in Ipoh to drive industry development and ease passenger movement to Perak

2

Silver Valley Technology Park (SVTP)

- Development of a new technology park in Perak as a catalyst for high-value manufacturing and digital economy

3

Highway and Road Networks

- Development of NCH from Serdang to Changkat Jering (37 km)
- Upgrading of Ipoh-Lumut Highway (71 km)
- New interchange to support Tanjung Malim Automotive Hub
- WCE-Tapah Link (Bota to Tapah)

4

Tanjung Malim Automotive Hub

- Supporting the development of automotive industry in Tanjung Malim, including investment promotion and facilitation
- Enhancement of external infrastructure

5

Pangkor Duty Free Island

- Development of key infrastructure in Pulau Pangkor to support the Duty Free initiatives
- Implementation of tourism initiatives to increase tourist arrival in Pangkor

6

Human Capital Programmes

- Continuation of NCER Human Capital Programmes such as empowerNCER, entrepreneurNCER, NCER Talent Enhancement Program (NTEP) & Dana Usahawan Bumiputera
- Implementation of IR 4.0 Centre of Excellence (CoE IR 4.0)

7

Transkrian Agri Economic Zone

- New integrated agriculture initiatives via the adoption of Anchor Company business model, focusing on oyster, abalone, EMM 2.0, superfruits, cash crops and cockle (potential)

8

Tourism (Eco, Heritage, Archeo, Geo)

- Various tourism initiatives to promote Perak, such as the upgrading of infrastructure at the following locations:
 - Ipoh Heritage Tourism (Light & Sound, Digital Art Gallery & Kinta Riverwalk)
 - Hulu Perak (BTTR, Gerik & Lenggong Valley - UNESCO World Heritage)
 - Kinta Geopark

9

Sustainable Mining

- Airborne geophysical survey for mineral deposit exploration in NCER

10

Tapah Education City

- Development of Education City on a 1,000 acre piece of land, which has been positioned as a household name for producing technology-based, high-skilled and industry-ready graduates and workforce for NCER
- Development of external infrastructure

11

ICON@NCER

- The Integrated Economic Centre (I-CON@NCER) in Pengkalan Hulu is a new development approach for rural areas and less developed areas (LDAs)
- Potential area - Pengkalan Hulu

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2. YAB Deputy Prime Minister of Malaysia
3. YAB Menteri Besar of Perlis
4. YAB Menteri Besar of Kedah
5. YAB Chief Minister of Pulau Pinang
6. YAB Menteri Besar of Perak
7. YB Minister of Finance
8. Minister in the Prime Minister's Department (Economy)
9. YBhg. Chief Secretary to the Government
10. Members of the Northern Corridor Implementation Authority Council
11. Members of the State Steering Committee Meeting for Perlis
12. Members of the State Steering Committee Meeting for Kedah
13. Members of the State Steering Committee Meeting for Pulau Pinang
14. Members of the State Steering Committee Meeting for Perak
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 - b. Economic Planning Unit (EPU)
 - c. Implementation Coordination Unit (ICU)
 - d. Department of Statistics Malaysia (DOSM)
 - e. Jabatan Kemajuan Orang Asli (JAKOA)
16. Ministry of Finance
 - a. Public-Private Partnership Unit (UKAS)
 - b. Statutory Body Strategic Management Division (SBM)
17. Ministry of Agriculture & Food Industries
 - a. Department of Agriculture
 - b. Department of Fisheries
 - c. Department of Veterinary Services
 - d. Muda Agricultural Development Authority (MADA)
 - e. Malaysian Agricultural Research and Development Institute (MARDI)
 - f. Integrated Agriculture Development Area (IADA)
18. Ministry of Rural Development
 - a. Majlis Amanah Rakyat (MARA)
 - b. Lembaga Kemajuan Wilayah Kedah (KEDA)
 - c. Lembaga Kemajuan Wilayah Pulau Pinang (PERDA)
19. Ministry of Housing & Local Government
 - a. Federal Department of Town and Country Planning Peninsular Malaysia (PLANMalaysia)
 - b. Local Government Department
20. Ministry of International Trade & Industry
 - a. Malaysian Industrial Development Authority (MIDA)
21. Ministry of Tourism, Arts and Culture
22. Ministry of Education

23. Ministry of Works
24. Ministry of Transport
25. Ministry of Home Affairs
 - a. Immigration Department of Malaysia
26. Ministry of Science, Technology and Innovation (MOSTI)
27. Ministry of Environment and Water
28. Ministry of Energy and Natural Resources
29. YB State Secretary of Perlis
30. YB State Secretary of Kedah
31. YB State Secretary of Pulau Pinang
32. YB State Secretary of Perak
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35. State Executive Council of Pulau Pinang
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40. State Assembly of Perak
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47. PLANMalaysia@Pulau Pinang
48. PLANMalaysia@Perak
49. State Economic Development Corporation, Perlis
50. State Economic Development Corporation, Kedah
51. State Economic Development Corporation, Pulau Pinang
52. State Economic Development Corporation, Perak
53. State Development Office of Perlis
54. State Development Office of Kedah
55. State Development Office of Pulau Pinang
56. State Development Office of Perak
57. The people of the State of Perlis
58. The people of the State of Kedah
59. The people of the State of Pulau Pinang
60. The people of the State of Perak



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