

PRISM

PENANG REGIONAL INDUSTRIAL SUPPORT MEASURES

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PENANG REGIONAL INDUSTRIAL SUPPORT MEASURES (PRISM)

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PREAMBLE

The Penang Regional Industrial Support Measures (PRISM) is an internal paper written to reflect key discussions held internally within Penang Institute as well as those carried out within the state's economic policy ecosystem over at least the last five years. These include meetings with the Penang2030 Advisory Committee, the Penang State Economic Recovery Consultative Council, and the Economic Development portfolio of the Executive Council, among others.

PRISM measures exhibit a focus on: (1) short-term and medium-term goals, and; (2) facilitating more inter-sectoral and intra-sectoral synergy.

PRISM has functioned as an inspirational document in the formulation of the Penang Strategy for Economic Ecosystem Development (SEED), carried out in collaboration with the Chief Minister's Office. It identifies key areas considered vital to Penang's economic advancement, involving the state's major and emerging industries. Digitisation is an integral vehicle for growth and deepening of talents across these key areas.

By using a cross-sectoral approach to identify the pressing needs of various industries, PRISM has determined three **Key Areas for Policy Input** which need strong and effective policy input:

1. Talent Pipeline and Skills Enhancement
2. Infrastructure Resilience
3. Transport and Logistics Capacity Building

Effective measures in these key areas are vital for advancing the socio-economic wellbeing of the people of Penang. For Penang to remain competitive in a challenging and changing global environment, its liveability standards must be continuously improved, and its economic prowess enhanced. Synergy across industries, institutions and state boundaries is an untapped force that Penang—and the country as a whole—can leverage for economic empowerment, social unity, and national cohesion.

Based on their level of strategic importance and sustained contribution to the state's economy, the following economic sectors are recognised as **Key Growth Sectors** for Penang in the immediate future:

1. The Manufacturing Sector
2. The Tourism Sector
3. Creative Industries and Business Services
4. The Agro-based and Agritech Industry

Key Areas for Policy Input

F1. Talent Pipeline and Skills Enhancement

Building a competent and future-ready workforce is essential to ensure continued economic advancement. A whole-of-society approach to address talent development and acquisition is urgently needed to keep up with technological changes across the key economic sectors.

Measures	Short-term/ medium-term
F1.1 Work closely with federal agencies to monitor, at higher frequency and granularity, the shortage of skills, skills demand and skills gaps occurring at the state level	Short-term
F1.2 Transform Penang into a preferred destination for skilled talents	Medium-term
F1.3 Increase training and development programmes by expanding public-private partnerships to enhance the upskilling and reskilling of workers	Short-term
F1.4 Proactively ensure that training supply is responsive to skill demand	Medium-term
F1.5 Enhance state-based school programmes to support high-demand skill pathways by providing training and development to school teachers to enrich the national education system	Short-term
F1.6 Promote TVET and STEM education as an option for further education, and create a monitoring mechanism for placements and for ensuring job security	Short-term
F1.7 Increase the participation of women in the workforce by improving the quantity, quality and accessibility of child care and elderly care services, and increasing support for return-to-work	Medium-term

F2. Infrastructure Resilience

In order to create future growth, a resilient infrastructure and a robust logistics network are needed. Ensuring the reliability of the internet and access to water is necessary for upgrading the quality of life in residential, commercial and industrial areas, especially in Seberang Perai. Additionally, improved maintenance of public housing and green spaces is needed to improve the standard of living in every residential area.

Measures	Short-term/ medium-term
F2.1 Upgrade internet access and ensure stable internet connection to the public and to businesses across all areas in Penang, with a special focus on Seberang Perai and rural areas	Medium-term
F2.2 Improve water security and minimise water disruption for private households and industries	Short-term
F2.3 Improve the management of safety and environmental hazards and increase liveability, including life-cycle considerations, by working with the construction sector and local authorities	Medium-term
F2.4 Champion inclusive spatial development of affordable housing in areas nearer to work, school and hospital	Medium-term
F2.5 Modernise and improve the maintenance of public housing, including expanding and enhancing green spaces and community parks	Medium-term
F2.6 Encourage on-site solar power generation across the whole of Penang, including industries, households and government offices, to ease the load on the electricity grid	Medium-term

F3. Transport and Logistics Capacity Building

Improving the local transportation system is essential for enhancing mobility, which is vital to economic development. An efficient transportation and road system will lower costs and increase efficiency across economic sectors. Better public transportation systems will alleviate road and traffic congestion and enhance accessibility for both the general public and Penang's many tourists. It is also necessary to raise the liveability of Penang, achieve Sustainable Development Goals (SDGs), and transform Penang into a zero-carbon state, in line with the Penang Green Agenda. On a larger scale, expanding the capacity of Penang's airport and seaport is crucial to support and reflect Penang's outsized contribution to national exports.

Measures	Short-term/ medium-term
F3.1 Transform Penang's public transportation system towards the mode of transportation choice	Medium-term
F3.2 Collect information about road users' preferences and behaviours as well as traffic data in highly congested areas	Short-term
F3.3 Increase airport and seaport capacity, flight connectivity and shipping lines	Medium-term
F3.4 Increase efficiency of airport and seaport service at the port and customs	Medium-term

Key Growth Sectors

S1. The Manufacturing Sector

Penang's economy is primarily driven by its manufacturing sector, which accounts for almost half of its total output. The electronics and electrical industry contributes over 70% of Penang's manufacturing output, and a third of output nationally. To keep up with technological advancements and increased regional competitiveness, the state must be committed to working closely with industries and universities to build a resilient and sustainable manufacturing ecosystem that prospers and grows alongside local and foreign large and SME manufacturers.

Measures	Short-term/ medium-term
S1.1 Strengthen the business ecosystem through strategic industry clustering, and boost innovation and localisation through technology and knowledge transfers	Medium-term
S1.2 Create an ecosystem that enhances innovations and intellectual property cultivation in industries and universities and research institutions ¹	Medium-term
S1.3 Continue working closely with industries and state agencies to address human capital needs through activities in schools and colleges	Short-term
S1.4 Conduct a regular skills requirement survey in the primary manufacturing industries to monitor the current demand for human capital	Short-term
S1.5 Create more industry clusters and specialisations between the different public and private industrial parks in Penang	Medium-term
S1.6 Transform industrial estates into eco-industrial parks in compliance with ESG principles, benchmarking global best practices and international standards	Medium-term

¹ An example of this may be the model of Paul Drude Institute for Solid State Electronics in Germany.

S2. The Tourism Sector

The tourism industry—one of Penang's most important economic sectors—is currently undergoing a post-pandemic revival with the reopening of international borders. It plays a vital role in cultural promotion, infrastructure development and environmental conservation. The sector's rejuvenation must remain continuous while maximising the potential for upgrades and improvements to support the local communities and small enterprises that underpin the sector.

Measures	Short-term/ medium-term
S2.1 Explore the potential of developing and strengthening niche tourism sub-sectors	Short-term
S2.2 Re-energise existing tourism attractions such as Batu Ferringhi, both commercially and aesthetically	Short-term
S2.3 Develop and improve the capacity and work attitudes of service and hospitality workers	Medium-term
S2.4 Commission a baseline tourism study	Short-term
S2.5 Increase public-private initiatives and develop networks between tourism players and stakeholders	Short-term
S2.6 Promote experiential-based sustainable tourism initiatives	Short-term
S2.7 Establish the Middle Bank Marine Sanctuary (MBMS) in the Strait of Penang	Medium-term

S3. Creative Industries and Business Services

The creative economy has been identified as a driver of growth and development in many cities around the world, and Penang is no exception. In fact, with its vibrant arts scene, diverse cultural heritage, and many talented individuals, Penang is well positioned to leverage the creative economy. The creative economy has the potential to create new jobs and business opportunities across the region, particularly in areas such as design, advertising, and digital media. Start-ups in particular have emerged as an important driver for entrepreneurship and innovation. By supporting and nurturing the many talented individuals and organisations that inhabit the state’s creative ecosystem, Penang can achieve sustainable economic growth and social development.

An overwhelming majority of small businesses is involved in the providing of services, making them collectively key players in the sector. Some of the largest businesses in this sector operate under the outsourcing model, more popularly known as Global Business Services (GBS).

GBS is an emerging sector in Penang, and an increasingly important employer in the services industry. Globally, Penang is a preferred destination for GBS activities because of its multicultural and multilingual workforce and its favourable time zone for global operations. In order to create high-value jobs in GBS, firms can leverage digital transformation to provide specialised and non-routine services.

Measures	Short-term/ medium-term
S3.1 Expand the Skim Pinjaman Harapan microfinance scheme for SMEs while ensuring the sustainability of the fund	Medium-term
S3.2 Enhance access to funding for innovative creative and digital start-ups	Medium-term
S3.3 Diversify creative products to improve competitiveness, focusing on traditional products and traditional arts, tradespersons, and local designers	Short-term
S3.4 Support existing small business ecosystems; ensure the sustainability of George Town as a core business ecosystem	Short-term
S3.5 Ease access to the market for SMEs by advocating for SMEs and reducing information barriers to market access	Short-term
S3.6 Strengthen and upgrade the capabilities of physical and digital infrastructure to support small businesses	Short-term
S3.7 Promote a vibrant and creative ecosystem for the growth of small businesses	Short-term
S3.8 Increase opportunities for upskilling across the services sector	Short-term

S4. The Agro-based and Agritech Industry

To ensure a sustainable and safe food supply for the growing population, there is a strong need for sustainable agriculture solutions in Penang. Application of technology in agriculture (in what has been called smart farming or Agriculture 4.0), with innovative methods or mechanisation, is one of the solutions. In fact, the future of agriculture is clearly in technology and innovation. Additionally, there is high potential and opportunities for agropreneurship in Penang, ranging from organic farming to agritourism. With the right strategy, resources and support from the state and other players to ensure business sustainability, agropreneurs will be able to contribute to the sector's growth.

Measures	Short-term/ medium-term
S4.1 Develop and provide training programmes to develop the skills and knowledge of farmers in using agricultural technology	Short-term
S4.2 Curate and publish data and information generated on-farm in its local-specific context and which are needed as input in smart farming systems	Short-term
S4.3 Subsidise agricultural technology for smallholders for the purpose of facilitating adoption	Short-term
S4.4 Facilitate an ecosystem for agropreneurs to share best practices, insights and resources	Short-term
S4.5 Facilitate and encourage joint efforts and partnerships between the public sector, industry actors and the farming community to adopt agricultural technology	Short-term
S4.6 Facilitate sustainable business development in rural areas	Short-term
S4.7 Increase localisation of food supply chains	Short-term
S4.8 Digital pest and disease control solutions	Medium-term
S4.9 Plant protection and management training	Short-term
S4.10 Promoting vertical farming (VF) through smart greenhouses and indoor farming	Short-term
S4.11 Maximising the use of available space for urban farming and incorporating these in local plans	Medium-term

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