Star Special

THE STAR, WEDNESDAY 15 JULY 2026

PENANG: POWERING PROGRESS

Propelling new possibilities

Guided by visionary projects, Penang reimagines its future to elevate its community, technology and sustainability to even greater heights.

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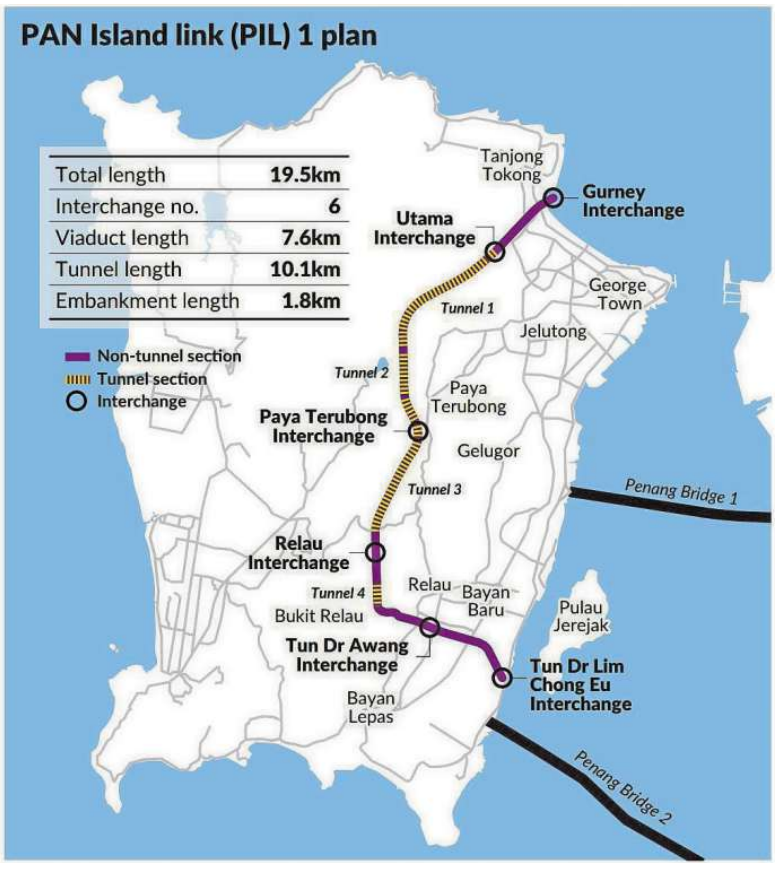

(Left) An artist's impression of the proposed PIL1 running through buildings beside hills in Penang and (right) a map showing PIL1's major parts including interchanges, tunnels and viaducts.

Shaping tomorrow's commute

Proposed Pan-Island Link 1 promises stronger travel resilience

By LO TERN CHERN
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ONE day, motorists travelling from the northern tip of Penang island to Bayan Lepas may no longer have to weave through George Town's busy roads.

The proposed Pan-Island Link 1 (PIL1), planned under the Penang Transport Master Plan (PTMP), aims to provide that alternative.

Despite the ongoing construction of the Mutiara Line Light Rail Transit (LRT), Penang infrastructure and transport committee chairman Zairil Khir Johari said the highway remains a key part of the state's long-term transport plans.

He said the LRT would form the backbone of Penang's public transport system, while PIL1 would serve a different corridor by linking the island's northern residential and tourism belt with the south.

"A mature transport network cannot depend on one mode alone; it must combine rail, buses, roads, pedestrian access and last-mile connectivity," he said.

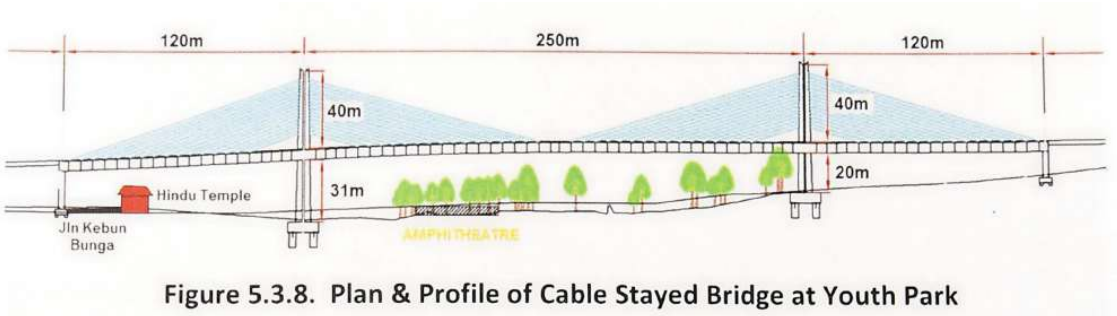
The project, currently estimated to cost RM8.88bil, involves a 19.5km dual three-lane, toll-free highway linking the North Coastal Paired Road near Persiaran Gurney with the Tun Dr Lim Chong Eu Expressway, Penang International Airport and both Penang bridges.

It comprises 10.1km of tunnels, 7.6km of viaducts and 1.8km of embankment roads, with six interchanges planned along the route. Its centrepiece is a 10km tunnel within the island's eastern hill range.

An artist's impression released when the project was first unveiled shows the highway climbing after Jalan Gottlieb before crossing City Park, formerly known as Youth Park, without intermediate pillars before entering the tunnel.

Zairil said the illustration reflected the project's design intent to minimise the footprint within the park and reduce impacts on the surrounding environment and public amenities.

"While the crossing is expected to incorporate a longer-span solution with limited or no intermediate piers within the park itself, it is not necessarily a cable-supported or suspension bridge system similar to the main span of Penang Bridge," he said.



An artist's impression of the proposed PIL1 crossing City Park (formerly known as Youth Park) with no pillars on the field. The project aims to reduce the number of motorists travelling from the northern tip of Penang island to Bayan Lepas and they may no longer have to weave through George Town's busy roads.

The final design, he added, would be determined after detailed engineering, safety and environmental assessments.

He said PIL1 would provide an alternative to existing north-south routes, reducing traffic pressure on George Town and improving overall network resilience.

"It will not solve congestion alone but when combined with LRT, feeder buses and traffic management, it can significantly improve daily mobility," he said.

Zairil pointed out that the highway would also improve connectivity between residential areas and key economic centres, boosting labour mobility, business access and logistics efficiency.

On environmental concerns, he said the project would only proceed after complying with all regulatory requirements, with measures including tunnelling, slope protection, drainage control and environmental monitoring to minimise impacts.

Funding, he said, remains the biggest challenge, but the project's inclusion under the First Rolling Plan of the 13th Malaysia Plan for a feasibility study had opened the possibility of federal funding.

PIL1 was first proposed as part of the PTMP unveiled in 2015, and received conditional approval for its Environmental Impact Assessment (EIA) from the Department of Environment in April 2019, subject to 56 conditions.

The approval paved the way for detailed design and tender preparations, but the project was subsequently delayed as the state awaited approvals for the Penang South Reclamation, the original funding model for the PTMP, before the Covid-19 pandemic further slowed progress.

Looking ahead to 2040, Zairil said the Mutiara Line would anchor Penang's public transport system while PIL1 would provide strategic road capacity and network resilience.

"Its role is not to encourage unlimited car dependency, but to complete the island's transport infrastructure so that Penang can grow in a more connected, resilient and economically competitive manner," he said.

According to the project's initial Environmental Impact Assessment (EIA), PIL1 was proposed as Penang island's second north-south spine road to relieve chronic congestion on the existing road network, particularly the Tun Dr Lim Chong Eu Expressway, where traffic volumes at Jelutong had already exceeded 100,000 vehicles a day.

The study also recorded more than 81,000 vehicles daily on both Jalan Sultan Azlan Shah in Jelutong and the Penang Bridge.

It estimated the new highway would cut travel time between Persiaran Gurney and Penang International Airport from about 45 minutes to 15 minutes, while increasing average peak-hour travel speeds across the island by up to 30% in the morning and 39% in the evening by 2030.

The EIA also projected that PIL1 would divert 19% to 30% of north-south traffic from existing roads during peak hours, with between 5,700 and 7,900 vehicles an hour expected to use the highway during the morning peak.

Without PIL1, the study warned that average peak hour speeds on Penang island could fall to about 20.8 kph by 2030, further worsening congestion and affecting economic growth.

The ultimate tech sanctuary

How Penang's Silicon Island is engineering tomorrow's chips

Silicon Island will be the gold standard in sustainability and community inclusion, spearheading the next chapter of Penang's manufacturing evolution.

The Green Tech Park is expected to commence operations as early as 2028. Beyond industrial growth, Silicon Island is also designed to create a thriving environment where people can work, connect and flourish.

THE global semiconductor industry is entering a new era defined by resilience rather than efficiency.

As the global technology sector enters an aggressive AI supercycle driving exponential demand for purpose-built chips, Penang stands uniquely positioned with a sophisticated industrial ecosystem and ready infrastructure to sustain this relentless computing revolution.

For decades, multinational corporations built supply chains around the idea of global optimisation, locating manufacturing where costs were the lowest and logistics most efficient.

Today, that calculus has changed. Geopolitical tensions, export controls, critical mineral dependencies and supply chain disruptions have prompted firms to rethink where to invest and manufacture.

With high-level diplomacy taking place around the world, directly or indirectly affecting global economies, rigid semiconductor export controls and critical mineral chokepoints remain firmly intact.

This vulnerability underscores a pressing need for diversification.

Across the global semiconductor industry, many companies are accelerating "Plus One" strategies, seeking locations that offer political stability, strong infrastructure, skilled talent and long-term certainty.

The AI supercycle is also accelerating demand for increasingly sophisticated chips.

Those requirements increasingly point towards Penang – the northern Malaysian state long celebrated as the "Silicon Valley of the East".

It has spent over five decades building one of Asia's most successful electrical and electronics (E&E) manufacturing ecosystems and today accounts for a significant portion of Malaysia's exports in this sector.

But the state's ambitions extend beyond preserving its position within the global semiconductor value chain. It is currently undertaking major infrastructure projects to expand its capabilities and meet the surge in demand.

Key to that is the 2,300-acre Silicon Island off the southern coast of Penang Island.

This mega development represents a master-planned evolution from traditional backend assembly into integrated circuit (IC) design, semiconductor capital equipment, automated test equipment, advanced packaging and high-value wafer fabrication.

It positions the state to become a critical global node in the next generation of semiconductor manufacturing.

While Penang originally established its reputation through semiconductor assembly and testing operations, the future lies further up the value chain.

AI, high-performance computing, electric vehicles and next-generation communications technologies are driving unprecedented demand for advanced chips.

Silicon Island was designed specifically to support this transition. Rather than a mere expansion of industrial land, it is in fact a strategic evolution of Penang's economic model.

The Bayan Lepas advantage

Silicon Island is not an isolated venture. Its location directly leverages its proximity to the Bayan Lepas Free Industrial Zone (FIZ) – one of the world's most established E&E manufacturing clusters.

Since the 1970s, it has been the beating heart of Penang's industrial economy, attracting some of the world's largest technology companies such as Intel, AMD, Bosch, Infineon, Broadcom, Renesas, HP, Dell, Plexus and Motorola Solutions, along with an extensive support network.

However, with demand for industrial space growing through the decades, available land within the zone has become increasingly scarce.

Silicon Island provides the room needed for future expansion while maintaining immediate connectivity with the existing ecosystem. For foreign direct investors, this geographic proximity offers a powerful advantage.

Instead of building operations in isolation, new entrants gain access to a mature ecosystem comprising over 4,300 technology-related companies, established logistics networks, specialised suppliers and a highly experienced workforce.

The result is a plug-and-play environment that drastically reduces costs, shortens development timelines and accelerates time-to-market for incoming tech giants.

Architecting an elite talent ecosystem

As global demand for AI-capable chips skyrockets, the engineering talent gap widens. Industry captains and insiders often point to talent shortages as one of the biggest challenges to future semiconductor growth.

With Silicon Island expected to create approximately 220,000 direct, indirect and induced job opportunities and also fulfil the national mandate of producing 60,000 highly-skilled engineers by 2030, Penang has aggressively invested in building a sustainable talent pipeline.

Initiatives such as the Penang Silicon Design @5km+ will help cultivate a dynamic IC design ecosystem and strengthen its capabilities in high-value activities.

Central to this is the Penang Chip Design Academy @PSDC, which provides targeted upskilling and reskilling opportunities for engineers seeking to stay relevant in this rapidly-evolving sector.

There is also the Penang Skills Development Centre's (PSDC) AI for Manufacturing Programme (AIMP), which seeks to attract and retain highly skilled talent while strengthening connections between industry, academia and aspiring professionals.

Simultaneously, the Penang Future Foundation continues to nurture the next generation of STEM talent through scholarships and educational opportunities, affording local students pathways into the state's technological transformation.

Together, these initiatives ensure that incoming multinational corporations not only have access to a robust ecosystem, but also a world-class pool of talent to power operations.

State-building and empowerment

Large-scale developments often raise concerns about the impact on surrounding communities. But far from displacing local heritage, Silicon Island seeks to set a global gold standard for community inclusion through its Social Impact Management Plan (SIMP).

The development includes initiatives that ensure economic growth benefits local stakeholders rather than leaving them behind.

Under one programme, local fishermen are provided with advanced, higher-capacity vessels and engines equipped with modern navigation technologies, enabling them to improve operational efficiency and increase potential yields.

Furthermore, through strategic educational pipelines, the children of these traditional communities are also empowered with the resources to become tomorrow's automation engineers and tech innovators.

Such commitment to inclusive development reflects a broader vision for Penang's future – where economic competitiveness and social progress advance together.

Driving sustainability

With environmental, social and governance (ESG) considerations increasingly influencing global investment decisions, companies today need to ensure operations meet stringent sustainability standards.

As a result, industrial developments can no longer focus solely on economic outcomes. They must also address environmental stewardship, community well-being and long-term resilience through its infrastructure and policies.

What sets Silicon Island apart from other manufacturing and industrial hubs is its provision of green technology infrastructure and emphasis on sustainable operations. This has resulted in Silicon Island being accredited with a 5-Diamond Low Carbon City accreditation.

A prime example will be the Green Tech Park (GTP), targeted to commence operations as early as 2028, which was designed to host lower-carbon manufacturing.

Phase 1 of GTP will be supplied with 100% renewable energy and incorporates dual sewage treatment plants. This provides future tenants with infrastructure that supports their decarbonisation strategies and broader sustainability objectives.

With some 400 acres of land reclaimed thus far, the development continues to move forward.

The Silicon Island Experience Centre is scheduled to open in the fourth quarter of 2026, offering investors, stakeholders and the public a glimpse into the project's long-term vision.

After half a century building the foundations of a world-class semiconductor ecosystem, Silicon Island will anchor the next chapter in Penang's manufacturing evolution.

As global supply chains continue to evolve, regions capable of combining stability, talent, sustainability and industrial excellence will emerge as preferred destinations for investment.

This makes Silicon Island more than just a land reclamation project. It is a blueprint for how a mature industrial economy can reinvent itself for decades ahead and ensure that prosperity is shared across communities, industries and generations.

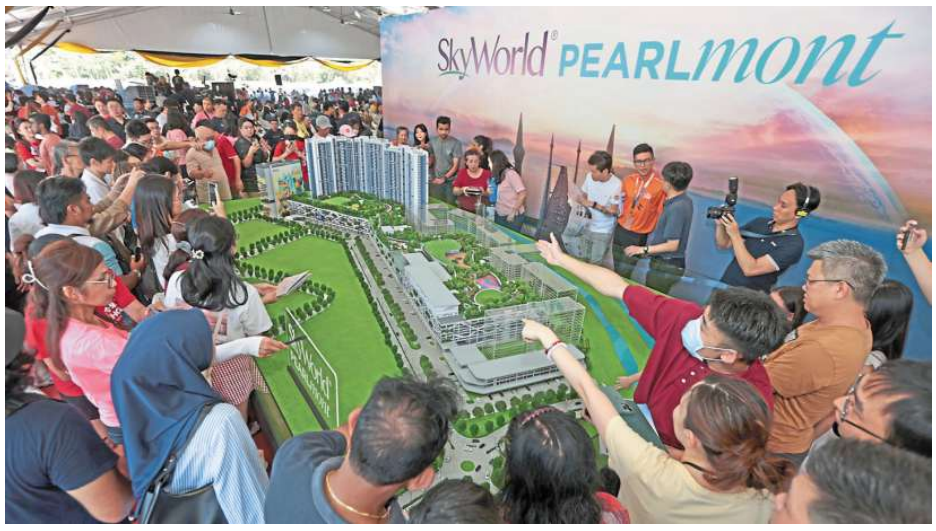
A newly constructed bridge now connects Gurney Drive to Andaman Island, quickly becoming a popular spot for locals and tourists. — CHAN BOON KAI/The Star

An aerial view of the Silicon Island reclamation project site. — Photo courtesy of Silicon Island Development Sdn Bhd

Blueprint for a better community

Penang puts connectivity and integrated townships in focus

Anwar (centre) viewing a mock layout of SkyWorld Pearlmont with (from left) Housing and Local Government Minister Nga Kor Ming, SkyWorld Development Berhad chief executive officer Lee Chee Seng and SkyWorld founder and executive chairman Datuk Seri Ng Thien Phing during the project's groundbreaking ceremony in Seberang Perai. — ZHAFARAN NASIB/The Star



SkyWorld Pearlmont incorporates Malaysia's first vertical school within such a development, allowing education facilities to be integrated into high-density urban communities.

By ARNOLD LOH
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FOR generations, Penang's growth was measured by how far the city spread from George Town.

Today, a different idea is taking shape.

Rather than simply building more homes, planners and developers are creating integrated townships where people can live, work, study, shop and relax within the same community.

Rail links, commercial centres, schools, parks, healthcare and public spaces are increasingly being planned together instead of as separate pieces added over time.

It reflects a broader shift in how urban centres are evolving. As land becomes scarcer on the island and the mainland continues to attract more residents and investment, Penang's next generation of townships is reshaping not only the skyline but everyday life.

Fresh frontier

Nowhere is that transformation more visible than Silicon Island, where an entirely new urban district of 930ha (about 1,300 World Cup football fields) is emerging from the sea off the southern coast of Penang island.

The reclaimed island is planned with industry, housing, commercial developments, public parks and infrastructure integrated from the outset, rather than fitted in afterwards.

A new state administrative centre is planned there, while the future Mutiara Line LRT depot will anchor the island's role in Penang's transport network.

Sustainability has been woven into the master plan through extensive green spaces, renewable energy initiatives and a greater emphasis on public transport, cycling and walking.

Instead of expanding an existing town, Silicon Island offers planners the rare opportunity to design an urban district from a clean slate, creating room for future industries, businesses and communities to grow side by side.

Connected living

Across the island in Bayan Lepas, another vision of integrated urban living is taking shape.

Hunza Properties' Penang International Commercial City (PICC) has been planned around the idea that accessibility increasingly defines the value of a township.

The mixed-use development combines homes, commercial space, healthcare, retail and offices within one master-planned precinct.

Its location places it alongside several of Penang's biggest infrastructure projects, including the expansion of Penang International Airport and the future Mutiara Line LRT.

"Property has always followed infrastructure. When airports expand, rail lines are built and roads improve, people naturally want to live and invest nearby.

"Penang is experiencing several of these changes at the same time, making this a very significant period in the state's development," said Hunza's group managing director Datuk Khor Siang Gin.

The township itself will have direct access to a future LRT station, with upgraded roads and a first-of-its-kind sky bridge network designed to reduce dependence on private vehicles for daily errands.

The concept reflects a growing preference for neighbourhoods where residents can accomplish much of their daily routine without travelling beyond their integrated township.

Mainland momentum

Perhaps the biggest story is unfolding across the channel.

More than 54% of Penang's population now lives in Seberang Perai, making the mainland the state's demographic centre of gravity.

That shift has naturally been followed by greater investment in roads, flood mitigation, water infrastructure, housing and public transport, gradually transforming the mainland into Penang's next major growth corridor.

Housing projects are following the same trend.

SkyWorld's Pearlmont development in Seberang Jaya introduces concepts that are becoming increasingly common in modern township planning.

Besides affordable homes, it incorporates Malaysia's first vertical school within such a development, allowing education facilities to be integrated into high-density urban communities.

Prime Minister Datuk Seri Anwar Ibrahim said the concept could become a model for future developments, noting that having schools within or beside residential projects improves convenience, enhances safety and helps families save on transport costs.

SkyWorld's wider plans in Seberang Jaya and Batu Kawan will add thousands of affordable homes over the coming years, supported by construction technologies aimed at improving quality and shortening building time.

The developments reflect the growing confidence that future economic opportunities will increasingly be shared between the island and mainland.

Waterfront vision

Penang's changing urban landscape extends to its northern shoreline as well.

At Andaman Island, long-term plans continue to shape a waterfront township centred on marinas, promenades, public spaces and coastal living.

As the development gradually takes shape over the coming decades, it adds another dimension to Penang's expanding collection of new urban communities, each with its own character and planning philosophy.

Taken together, these projects point towards a common direction.

Whether rising from reclaimed land, growing around future rail stations or expanding across the mainland, Penang's newest townships are moving beyond the traditional housing estate model.

They are being designed as complete communities where connectivity, convenience and quality of life are expected to go hand in hand.

As Penang continues to evolve, these emerging growth hubs will help shape not only where people live, but how they experience the state for decades to come.

A financing lifeline for businesses

Govt expands assistance to help firms weather rising costs and global headwinds

By ARNOLD LOH
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Sim (centre) launching the Johor edition of the Empowering Malaysian Businesses Carnival. — Photo courtesy of Kuskop

THE timing could not have been better.

Just as thousands of micro, small and medium enterprises (MSMEs) felt the pressures from the conflict in the Gulf, government financing packages arrived to shore them up.

Rising energy prices, supply disruptions and an uncertain global outlook have pushed up costs, placing pressure on businesses still rebuilding after years of disruption.

The government responded by raising MSME support this year to RM60bil, comprising RM50bil under Budget 2026 and a further RM10bil in financing and guarantees.

Entrepreneur and Cooperatives Development (Kuskop) Minister Steven Sim said the extra support demonstrates the government's determination to help Malaysian businesses remain competitive amid the global energy supply crisis.

"The government is aware of the challenges SMEs face in the current economic climate.

"We're dealing with both fiscal and structural challenges. To deal with that, we need money and reconfiguration," he said.

Young and energetic, Sim was determined to "hit the ground running", knowing that he had less than two years left in the government's term to deliver results.

On his first day at Kuskop, Sim unveiled the ministry's ABCD strategy: Accelerated productivity, Bureaucracy reduction, Capital accessibility and Develop market access.

Soon after, he set clear key performance indicators through the PowerUp 10K campaign.

Under the campaign, RM15bil is being mobilised this year, up from RM10bil in 2025, to help 10,000 businesses scale up and train 100,000 entrepreneurs.

It went beyond financing. Kuskop allocated at least RM100mil to train entrepreneurs in business management, governance and operational readiness while helping businesses move up the value chain.

Its wider ambition was to lift MSME output towards RM750bil and develop high-growth firms, with 100 Malaysian companies targeted to achieve RM100mil in annual revenue.

By end-June, Kuskop had approved RM6.4bil in financing for around 220,000 enterprises nationwide.

The packages reflect the ministry's commitment to ensuring opportunities reach entrepreneurs across Malaysia's communities.

Sim (centre) officiating the inaugural Malaysia Brand Day at the Kuala Lumpur Convention Centre, which brought together some of the country's most prominent entrepreneurs, including Anne Eu (third from left) and Jimmy Choo (third from right). — Photo courtesy of Kuskop

For bumiputra entrepreneurs, Tekun Nasional's financing allocation for 2026 was raised to RM1bil from RM500mil.

Tekun is working to make small loans faster and easier to obtain, with a pilot project aimed at approving financing below RM20,000 within 24 hours. Applications of up to RM100,000 are processed within seven days.

"We want to offer a 24-hour processing period to facilitate MSMEs, so these small businesses do not have to wait long to secure financing," Sim said.

This year, Chinese MSMEs gained their first dedicated Kuskop financing initiative, with RM230mil from SME Bank, Bank Rakyat and SME Corp.

The scheme provides financing for working capital, asset purchases, modernisation and expansion.

"We want to provide more resources to the market so businesses can use financing not only as working capital, but as growth capital to modernise, expand and improve competitiveness," Sim said.

The aid has reached businesses such as Seng Fatt Metal Manufacturing in Bukit Mertajam.

Its 26-year-old operator, Sim Chun Wei, who is not related to the minister, secured an RM1mil SME Bank loan at 3.5% a year to expand production capacity.

The firm supports Penang's semiconductor industry, reflecting the many home-grown companies that work away from the spotlight but remain integral to Malaysia's industrial supply chains.

"Businesses like this may not always be known, but they play an important role in Penang's semiconductor industry," the minister said.

For Indian entrepreneurs, Sim introduced the Indian Entrepreneur Capital and Economic Stimulus Package, or Mudra, combining targeted financing schemes offered by five Kuskop agencies.

As of May 31, more than 3,200 Indian entrepreneurs had received RM62mil in financing under Mudra.

Further support comes through Bank Negara's RM5bil SME Stabilisation Relief Facility. Eligible MSMEs can apply for up to RM750,000 at a maximum interest or profit rate of 3.75% through 18 participating financial institutions.

Another RM205mil is available through the Sokongan Industri dan Perniagaan Rakyat, or Sinar, programme.

Its five initiatives include soft financing of up to RM5mil, capacity enhancement loans of up to RM1.5mil, Prestij financing of up to RM1mil, grants of up to RM200,000 and a 50% discount on MSME-status certification applications.

Businesses with good repayment records can receive rebates of up to 30%.

The scale of support reflects the importance of MSMEs, which employ more than eight million people, almost half the national workforce.

More than 300 MSME development programmes worth over RM60bil have been planned this year, covering financing, skills, market access, infrastructure, technology and innovation.

Finding the right programme can be daunting when support is spread across 50 to 60 ministries and agencies.

Kuskop has built a one-stop portal for grants, financing, training and business assistance at www.kuskop.gov.my/hebatkanperniagaanmalaysia/.

"We understand that one of the main complaints from SMEs, especially small business owners, is that they do not know which agencies to approach," Sim said.

Kuskop's reforms go beyond financing.

A new law is being drafted to replace the Cooperative Societies Act, modernise administration, strengthen governance and make it easier for cooperatives to conduct business and invest.

With 16,468 registered cooperatives, nearly 7.3 million members and assets valued at RM186.7bil, the sector is a substantial economic force.

"This means one in every four Malaysians is a cooperative member," Sim said at National Cooperatives Day 2026 in Penang recently.

The new legislation is intended to equip the movement for its next phase of growth, ensuring financing, stronger institutions and sound governance advance together.

The first trolleybuses in Penang began operating in 1925. Pictured above is one of the earliest electric trolleybuses, fitted with a 'lifeguard' bumper designed to prevent pedestrians from being dragged under its wheels. — Photo courtesy of Areca Books

Old tracks point to a new future

Once a pioneer in public transport, Penang is laying the foundations for its biggest mobility overhaul in decades

By LO TERN CHERN and ARNOLD LOH
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STAND at the Lebuh Chulia-Jalan Penang junction today and the past still peeks through the road.

There, set into the street, are steel tramlines from another age, laid when Penang was young enough to believe that public transport could be elegant, useful and part of everyday city life.

They were dug up by accident in 2004 during utility works, after decades buried beneath the road, like an old memory refusing to die.

For many passing motorists, they are merely strips of metal in concrete. For Penang, they are a reminder that the state was once ahead of its time.

Long before traffic jams became a daily tax on the human spirit, George Town had a public transport system that could make visitors from Melaka, Kuala Lumpur or Taiping stop and stare.

It had steam trams, horse trams, electric trams and trolleybuses. It even had what was described as the smallest trolleybus in the world, a nine-seater built in 1934 to shuttle passengers from the Lower Station of the Penang Hill funicular railway to Jalan Air Itam.

Old tracks

The first recorded tramway in Penang operated in the 1880s, run by a man remembered as Mr Gardiner.

His steam tram ran from Pengkalan Weld to Air Itam, with part of the route laid into the streets.

Another line later connected Pengkalan Weld to Penang Botanic Gardens.

At a time when the internal combustion engine was still finding its way into the world, Penang already had a rail-based urban transport system.

The steam trams later gave way to horse trams after local authorities became concerned about steam locomotives on the streets.

Then came electric trams in 1905, their trolley poles reaching up to overhead wires as they moved through George Town.

Between 1905 and 1922, electric trams were profitable and served routes to Air Itam, Jelutong and the prison.

At their peak, they operated at 11-minute intervals, which sounds almost mythical today to anyone who has waited for transport under the noon sun.

By 1925, trolleybuses arrived. They did not need rails, running instead on rubber tyres while drawing power from overhead lines.

For decades, they kept Penang moving. During World War II, when motorised buses were taken for military use, trolleybuses stayed because they had to be connected to electric lines and were therefore of little use to the army.

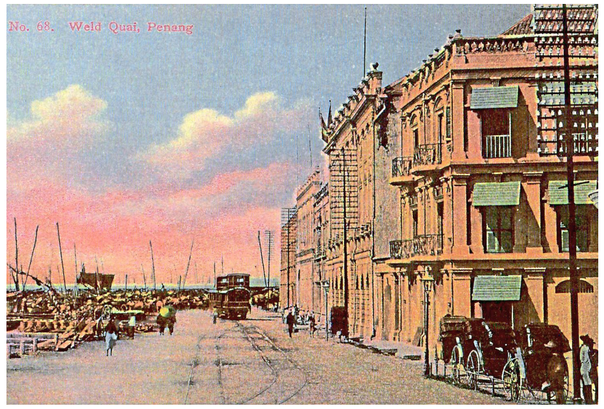
But Penang eventually fell for the motorised bus and the private car, as many cities did.

By July 1961, the last trolleybuses were sold for scrap. The wires came down. The old electric age of George Town's public transport passed into history.

Car years

For years after that, Penang learnt to live by the engine.

Several massive concrete pillars supporting the elevated tracks of the Mutiara Line LRT have been erected along the road near Penang International Airport in Bayan Lepas. The mega public transport project is steadily taking shape, with safety barriers installed along the route to ensure smoother traffic flow and safer passage for motorists near the active worksite. — CHAN BOON KAI/The Star



A trolleybus making one of its final journeys along Penang Road before the service ended in 1961, while a steam tram travels along old Weld Quay. The steam tram service between Weld Quay and Air Itam was introduced by Mr Gardiner in the early 1880s, marking an early chapter in Penang's transport history. — Photo courtesy of Areca Books

Cars and motorcycles became freedom, habit and later, captivity.

Roads widened. Hillsides filled. Parking became a hunt.

Daily movement turned into a private negotiation between patience, petrol and luck.

The irony is that Penang never stopped being a compact place with strong natural corridors for public transport.

The island had employment centres, schools, hospitals, markets, tourist areas and old neighbourhoods close enough to be connected sensibly.

The mainland had room to grow and people who crossed the channel daily for work.

What was missing was a new backbone.

That is why the Mutiara Line Light Rail Transit project marks more than another construction job on a government chart.

It is Penang trying again.

MRT Corp Sdn Bhd chief executive officer Datuk Mohd Zarif Hashim said the project would support Penang's future economic growth, urban development and quality of life.

"Every successful city eventually reaches a point where its transport infrastructure must evolve to support its future ambitions.

"I believe Penang has reached that point," he said.

New line

Mutiara Line will be Penang's first LRT system, spanning 29.5km with 21 stations from Penang Sentral to the airport via Komtar and the Bayan Lepas industrial hub.

It was first proposed in 2015 under the Penang Transport Master Plan and is now being built under MRT Corp with a revised budget ceiling of RM16.8bil.

The line is scheduled to begin operations in December 2031.

For a state with about six million tourists a year and some 400,000 people travelling between the island and mainland daily, the project is being planned as more than a commuter line.

Mohd Zarif said public transport currently accounted for only about 5% of daily trips in Penang, with most commuters still relying on cars and motorcycles.

"As a fully elevated, grade-separated metro rail, Mutiara Line bypasses these bottlenecks entirely, providing journey times commuters can depend on regardless of road conditions," he said.

He said the line would connect where people lived with where they worked, studied, did business and spent their leisure time.

"In many respects, Mutiara Line will play the same role for modern Penang that the tram network once played for George Town," he said.

Sea bridge

The most dramatic part of the line will be its crossing over the Penang Strait.

The Federal Government's decision to extend the line from Komtar to Penang Sentral in Butterworth turned the project into a cross-strait metro system, linking the island and mainland by rail.

Earlier project details showed a bridge with vertical clearance of over 60m, not far below the Golden Gate Bridge's famous clearance and enough to make Penang's future ferry passengers look up.

The cross-sea link is expected to create a direct rail connection between Penang Sentral and the island, with the full end-to-end journey taking about 35 minutes.

For mainland residents working in the Bayan Lepas Free Industrial Zone, Penang International Airport area, Silicon Island or other employment centres on the island, this could change the daily arithmetic of life.

A person may choose to live in Seberang Perai, where housing is generally more affordable, and work on the island without being sentenced to the bridge crawl.

Mohd Zarif said the Mutiara Line was only the beginning of Penang's public transport transformation.

"One rail line alone cannot fundamentally change travel behaviour across an entire state," he said.

He said the LRT must be supported by feeder buses, park-and-ride facilities, pedestrian walkways, cycling infrastructure and improved first- and last-mile connectivity to make public transport practical from doorstep to destination.

A section of old railway track unearthed along Lebuh Chulia near Jalan Penang in George Town. — LIM BENG TATT/The Star

RSJ 'Small Light Type' No.27 passing the Anti-War Memorial while making its journey from Ayer Itam to the Jetty in the early 1950s, capturing a bygone era of Penang's public transport history. — Photo courtesy of Areca Books

Hill route

While steel rails will reshape movement across the island and mainland, another line is being drawn upwards.

The Penang Hill cable car project will create a 2.7km link from near Penang Botanic Gardens to the hill, offering a second way up to the state's most famous cool retreat.

The project, backed by a RM367.2mil financing facility from Bank Pembangunan Malaysia Bhd for concessionaire Hartasuma Sdn Bhd, is slated for completion in 2027.

The cable car is expected to ease pressure on the century-old funicular railway, widen access to Penang Hill and open new economic opportunities.

Its system is designed to carry up to 1,400 passengers per hour in each direction, though Penang Hill Corporation has clarified that this is an engineering parameter rather than a plan to flood the hilltop with that many visitors every hour.

There is another possibility in the air.

Chief Minister Chow Kon Yeow revealed that a second cable car line could one day link Gurney Bay to the lower station of the Penang Hill cable car.

Visitors could then park at Gurney Bay, ride above the seafront with Kedah in the distance, change cars near Botanic Gardens and continue up to Penang Hill.

That would connect a new reclaimed waterfront with a Unesco Biosphere Reserve, the shiny edge of Penang with one of its oldest green lungs.

Next chapter

Cities do not stay still, not unless they wish to become museums with traffic lights.

Penang has journeyed through the eras of steam, horsepower, electricity, diesel and the long reign of private vehicles. Now, the state stands on the cusp of another transport revolution.

The Mutiara Line may later be extended towards Tanjung Bungah and Air Itam on the island, and towards Bandar Perda, Bandar Cassia, Bertam, Kepala Batas and Permatang Pauh on the mainland.

Such links would not merely move people.

They would change where people choose to live, how employers hire, how students travel and how tourists experience the state.

Mohd Zarif said his hope is that by 2040, traffic would no longer dictate how people experienced Penang.

"I hope young people won't choose where they study, where they work or where they live based on traffic.

"Instead, they will choose based on opportunity," he said.

The old tramlines at Jalan Penang are no longer just relics. Penang once knew how to move people well.

After decades of letting cars set the rhythm, the state is preparing to try again, this time with trains over the sea and cable cars above the trees.

A file photo showing an aerial view of vast development taking shape in Batu Kawan, with the second Penang Bridge and fish farms seen in the background. — CHAN BOON KAI/The Star

Chow looking at artist impressions of a new market complex during its ground breaking ceremony in Batu Kawan. — ZHAFARAN NASIB/The Star

Mainland moves to centre stage

Industrial and urban development are transforming Seberang Perai into Penang's next powerhouse

By ARNOLD LOH
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THE long-promised rise of Seberang Perai as Penang's next growth centre is no longer something on the drawing board.

Factories, townships, hospitals, commercial centres and transport links are spreading across the mainland, driven by industrial investment and a population that had already overtaken that of Penang island by 2020.

Department of Statistics Malaysia figures showed Seberang Perai had 946,092 residents that year, compared with 794,300 on Penang island. The mainland population has continued to grow.

Chief Minister Chow Kon Yeow said Seberang Perai is no longer merely supporting the state's development but has become one of its main engines of economic growth, investment competitiveness and long-term sustainability.

"What we are witnessing is the multiplier effect of industrial investment. Manufacturing does not just create factories; it creates an entire ecosystem of economic activity.

"We saw this transformation in Bayan Lepas over the past five decades and today, the same momentum is reshaping Seberang Perai," he said.

Chow, who is also Batu Kawan MP, said land constraints on the island have made the mainland Penang's natural growth frontier.

Nearly all the state's future industrial land pipeline is there, including Bandar Cassia Technology Park, Batu Kawan Industrial Park 3 and Penang Science Park South.

Batu Kawan Industrial Park has become a powerful demonstration of that shift. Once a quiet agricultural area, it now hosts major names such as Boston Scientific, Bosch, Dexcom, Micron Technology and Lam Research, whose Batu Kawan operation is the semiconductor equipment maker's largest manufacturing site globally.

The park had about 160 companies by 2021, ranging from multinational corporations to large Malaysian manufacturers. Boston Scientific later expanded its operations with its first distribution centre in Asia.

Chow said each investment generated demand for logistics, retail, hospitality, healthcare, education, housing and professional services.

New townships emerged, infrastructure improved, local businesses expanded and quality jobs were created, allowing growth to reinforce itself.

The transformation was taking place through several corridors, covering Batu Kawan, Bandar Cassia, Perai, Bukit Minyak and the northern mainland.

A view of the Penang Sentral transport hub in Seberang Perai. — CHAN BOON KAI/The Star

Butterworth was strengthening its position as a transport, commercial and waterfront destination while Bukit Mertajam continued to develop as a commercial and lifestyle hub.

The elevation of Seberang Perai to city status in 2019 gave the state its second city council and created the country's largest city council by jurisdiction, with MBSP administering to 747.8sq km.

Yet Chow's ambition is not for Seberang Perai to be known merely for occupying an enormous rectangle on the map.

"My vision is for Seberang Perai to become one of Malaysia's most liveable, productive and sustainable metropolitan regions, not because it is the largest, but because it is thoughtfully planned, economically dynamic and deeply people-centred," he explained.

He sees its three districts as complementary pillars of an integrated metropolitan region.

North Seberang Perai would remain the state's food resilience and ecological corridor, protecting productive farmland, rivers and mangroves while modernising agriculture through technology, precision farming and value-added agro-industries.

Chow believes the district could gradually develop into another industrial hub through the expansion of Bertam Industrial Park. Its tourism potential is growing through Bertam Resort and Water Park Penang, its mangrove ecosystem and the Guar Kepah Archaeological Gallery.

Central Seberang Perai would remain the state's industrial and commercial engine while becoming the metropolitan heart of the mainland.

Its concentration of educational institutions, healthcare facilities, commercial centres, hotels and government agencies put it in a position to support industries moving into artificial intelligence, automation, semiconductors and the green economy.

South Seberang Perai would be the frontier for advanced manufacturing, digital technology, clean energy, logistics and innovation.

Batu Kawan has been developing beyond its factories, with housing, education, commerce and new healthcare investments such as Columbia Asia Hospital forming a more complete urban ecosystem.

Chow said the test of progress is not confined to investment figures or gross domestic product.

"Can parents spend less time commuting and more time with their families? Can young people build rewarding careers without leaving Penang? Can families afford quality homes in safe, connected neighbourhoods? Can every child grow up in a clean, healthy and resilient environment?

"Those are the outcomes that matter," he said.

The forthcoming Seberang Perai Local Plan would guide land use, housing, industry, mobility, environmental protection and economic development while providing greater certainty for investors.

Chow said the state does not intend to shift growth from the island to the mainland. Both sides would complement each other, with Penang island building on tourism, heritage, innovation, high-value services and the digital economy while Seberang Perai provides room for industrial expansion, advanced manufacturing, logistics and sustainable urban development.

For generations, the mainland was Penang's agricultural powerhouse. Its fertile ground supported spices, sugar and rubber before padi, palm oil and coconut became dominant crops.

Industrialisation brought the Mak Mandin and Perai estates from the 1960s, followed by the relocation of Penang Port to the mainland in 1974 and the establishment of the Perai Free Industrial Zone in 1980.

Seberang Perai is now primed to become the north's leading urban centre, built not simply on its considerable size but on the lives, industries and communities growing within it.

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Forging a 'golden' tomorrow

Hunza Group is aligning its long-term vision with Penang's ambition to become one of Asean's leading economic centres

An artist's impression of the next phase of PICC, which will feature a landmark shopping mall, GBS tower and international hotel.

OVER the past five decades, Penang has transformed itself from a manufacturing hub into one of Malaysia's most dynamic economic powerhouses.

Today, it leads the nation in GDP per capita at RM80,584, well above the national average of RM59,167, excluding the Federal Territories.

This equates to approximately US$19,737 which, according to the World Bank's 2025 Atlas Method, places it comfortably above the high-income economy threshold of US$14,375.

Yet for Hunza Group founder and executive adviser Datuk Seri Khor Teng Tong, the state's success has never been defined by economic statistics alone.

"Penang has maintained a relatively stable environment for businesses to thrive, from politics to the economy, social development, environmental stewardship and technology adoption," he observed.

Equally important are the state's pro-business policies and collaborative ecosystem that allow industries to complement one another and create opportunities for growth far and wide.

That ecosystem has enabled Penang to establish leadership in its twin economic engines of manufacturing and services, particularly tourism and Global Business Services (GBS).

This has also laid the groundwork for its next phase of growth. Major infrastructure projects, including the expansion of Penang International Airport and the upcoming Mutiara Line LRT, are expected to further strengthen the state's connectivity with regional and international markets.

"These developments will continue opening opportunities for Penang to connect with the world, and for the world to discover more about Penang," said Teng Tong.

For Hunza Group, that future is embodied in its flagship Penang International Commercial City (PICC), an integrated mixed-use development that reflects how urban living is evolving.

As the state embraces a more cosmopolitan lifestyle driven by convenience, accessibility, connectivity and community-centred living, PICC is ideally poised as a future-ready destination where people can work, live, play and invest within a single self-contained ecosystem.

Strategically located in the centre of the island's most important growth corridors, Bayan Lepas, it is well-connected to the Free Industrial Zone (FIZ), the aforementioned airport and the upcoming Silicon Island mega development.

Rather than being another standalone development, PICC reflects a broader shift towards integrated, highly walkable urban communities where residential, commercial and lifestyle components are all seamlessly connected. And that vision is already taking shape.

City of the future

The first phase, MUZE @ PICC, has achieved approximately 70% occupancy, attracting professionals, international expatriates and high-value investors seeking quality urban living supported by comprehensive amenities and excellent connectivity.

Its sister development, SENZE @ PICC with 1,680 fully furnished serviced residences, is scheduled for full completion by December 2026 – remarkably just two and a half years after the launch of the project.

Besides being the group's first fully furnished residential offering, it also marks an impressive milestone of 20,000 homes delivered by Hunza to owners in Penang and beyond.

The next milestone for PICC will come in the fourth quarter of 2026, when construction is expected to begin on its commercial hub.

This phase will comprise a landmark shopping mall, a dedicated GBS tower and an international hotel, expanding PICC beyond residential living into a destination for retail, commerce and tourism.

This commercial hub's expected completion in 2031 will coincide with the commencement of operations for the Mutiara Line LRT and newly-expanded airport.

These transport links – along with the two Penang Bridges – will make PICC a vibrant urban nexus where residents, businesses, tourists and investors converge throughout the day.

Within the development itself, a first-of-its-kind sky bridge network will connect all its components, enhancing walkability while reinforcing the concept of an integrated city within a city.

Beyond creating commercial spaces, Hunza Group believes the development would also help generate high-value employment opportunities while encouraging greater collaboration among businesses through an environment designed for interaction, innovation and connectivity.

In many ways, PICC mirrors Penang's own journey – from Malaysia's second-smallest state to an internationally recognised centre for business, technology and investment.

Hunza Group founder and executive adviser Datuk Seri Khor Teng Tong.

Hunza Group managing director Datuk Khor Siang Gin.

Teng Tong believes this convergence of major infrastructure projects, economic expansion and integrated township developments signals what he describes as "Penang's Golden Five Years", where the state will take significant leaps forward.

"It's my belief that Penang will undergo a major transformation over the next five to 10 years, and that will sustain us for a long time ahead," he shared.

As one of Penang's homegrown developers, he said Hunza Group is excited to be playing an active role in that journey.

The group's expansion into retail, GBS, office spaces, hospitality and healthcare through PICC is supporting the state's ambition of becoming one of Asean's leading economic powerhouses.

Building momentum

Hunza Group's commitment extends beyond physical property development in Penang.

As one of the pioneers in marketing properties in the state internationally, it has helped introduce the Pearl of the Orient to overseas buyers, expatriates and investors across Taiwan, Shanghai, Shenzhen, Guangzhou, Xiamen, Singapore, Hong Kong, Macau, Indonesia and other regional markets.

This has supported retirement living, Malaysia My Second Home (MM2H) and lifestyle migration.

The group's continued momentum is reflected in its upcoming portfolio.

In the 2026/2027 financial year, it will launch a new phase of its Seri Impian township in Sungai Petani, Kedah, alongside Banyan Residensi, its first affordable housing development in Seberang Perai, Penang.

It would also continue to strengthen its presence through existing projects across Penang such as PICC.

"We are strategically looking at ways to unlock the value of our landbanks in line with the shifts in the market – whether that be consumers' preferences, economic movements, social transformation or the wider geopolitical development," said Datuk Khor Siang Gin, the group managing director of Hunza.

"While PICC remains our marquee development for the next decade, we also look to diversify our development approach in various areas so that we can continue to build homes, spaces and communities for different segments of the market."

That longstanding commitment to community building and quality has been recognised by a slew of industry awards since 2009.

The latest was a FIABCI Malaysia Property Award in the Affordable Housing Super High-Rise category for its first affordable housing development TreeO in 2025.

The coming years will see more milestones for the company itself.

In 2028, Hunza Group will celebrate its 50th anniversary, underscoring the longevity of a homegrown Penang brand that has grown alongside the state it calls home.

The legacy established by Teng Tong is now continuing under Siang Gin, who is leading both the group's property development business and its construction arm, Masuka Bina Sdn Bhd, ensuring Hunza Group remains well positioned for Penang's next era of growth.

Masuka Bina also recently secured its first external, multi-million construction contract for a tertiary institution in Perak.

"As a leading developer with long-standing heritage in Penang, we have full confidence in the state's future.

"We will continue supporting the state's development while creating homes and spaces that help power Penang's progress and its aspirations to become the best state to work, live, play and invest in Malaysia," Teng Tong added.

Building greener horizons

From protecting a vital stopover for migratory birds to strengthening water security and its Unesco-recognised treasures, Penang is driving more sustainable growth

By ARNOLD LOH
arnold.loh@thestar.com.my

A fisherman's boat chugging along an estuary sheltered by the 8km long swath of coastal mangrove forest in North Seberang Perai amid white egrets seeking refuge there. — Photo courtesy of Buletin Mutiara

FOR centuries, thousands of birds have stopped along the coast of mainland Penang during their annual migrations across the planet.

Some travel from breeding grounds in Siberia, northern China, the Russian Far East and Alaska before continuing to South-East Asia, Australia or New Zealand.

The mangroves and mudflats of Penaga provide a vital place for them to rest and replenish their energy with worms, molluscs, crabs and other marine life.

Penang Chief Minister Chow Kon Yeow announced plans to include the mangrove forest in the East Asian-Australasian Flyway (EAAF) network in his speech at the recent state investiture ceremony.

The EAAF is one of nine major migratory waterbird routes around the world. It supports more than 50 million migratory waterbirds and links important wetlands across 22 countries.

Penang hopes to nominate an 8km coastal stretch in Penaga as a Flyway Network Site, giving greater recognition and protection to an ecosystem already known internationally for its biodiversity.

The area is part of the Teluk Air Tawar-Kuala Muda wetlands, where researchers have recorded nearly 60 shorebird species, including the critically endangered spoon-billed sandpiper and endangered Nordmann's greenshank, great knot, Far Eastern curlew and black-faced spoonbill.

Conservation is not the only focus in Penang.

International finance

Penang is continuing with its proposal for the Penang International Financial Centre (PIFC) to complement the state's position as Malaysia's Silicon Valley.

For more than five decades, Penang has built a globally recognised electrical and electronics manufacturing ecosystem. It now wants the financial services needed to support the next stage of that growth to be available closer to the industries they serve.

Chow has described the PIFC as a nexus between technology and finance, with services such as supply-chain financing, venture capital, private equity, Islamic fintech and digital financial infrastructure supporting the semiconductor industry.

Such a centre could help promising local companies secure capital, expand research and development, commercialise technology and move further up the global value chain.

It would strengthen Penang's ability to attract investors seeking a location where manufacturing expertise, engineering talent, technology companies and specialised financial services operate within the same ecosystem.

The state has formed a task force chaired by Chow to prepare a white paper and strategic action plan for the Finance Ministry.

Early engagement has begun with Bank Negara Malaysia, the Securities Commission Malaysia and the Labuan Financial Services Authority.

Chow (second from right) pointing out a detail to Penang Water Supply Corporation chief executive officer Datuk K. Pathmanathan (right) during an inspection from an elevated walkway at a water treatment facility in South Seberang Perai, as state rural development, agrotechnology and food security committee chairman Datuk Rashidi Zinol (third from right) and other officials look on. — Photo courtesy of Buletin Mutiara

Rather than compete with Kuala Lumpur, Labuan or Johor, the PIFC is intended to complement existing financial centres by concentrating on Penang's particular strength in technology and advanced manufacturing.

Water security down south

Penang is also strengthening water supply services in South Seberang Perai through a series of projects centred on Sungai Kerian.

Two facilities have been completed: a compact water treatment plant capable of producing 6.4 million litres per day and a dissolved air flotation plant at the Bukit Panchor Water Treatment Plant.

The compact plant has operated since March last year and supplies about 4,000 consumer accounts as an interim measure.

A much larger 80 million litres per day plant is scheduled to be commissioned next year, followed by a 114 million litres per day Sungai Kerian plant by 2030.

The latter is among eight infrastructure projects under the Water Contingency Plan 2030, involving a total investment of more than RM600mil.

Once completed, the Sungai Kerian plants will allow more water for South Seberang Perai to be produced within the district instead of being transmitted over long distances from the Sungai Dua Water Treatment Plant.

Chow announced plans to include the Penaga mangrove forest in the EAAF network.

This will give Penang a better distributed water supply system with greater capacity to serve new homes, industries and commercial areas across the mainland.

Living laboratory

The 12,481ha Penang Hill Biosphere Reserve is Penang's other great environmental asset.

Recognised under Unesco's Man and the Biosphere Programme in 2021, it extends from the forests of Penang Hill to Penang National Park and includes water catchments, mangroves, beaches and marine areas.

A file photo showing an aerial view of the fisherman's jetty at Sungai Tembus in Penaga that cuts through the Penaga mangrove forest in the northwest of Seberang Perai Utara. — ZAINUDIN AHAD/The Star

A biosphere reserve is not intended to keep people out. It is a living laboratory where conservation, research, education and sustainable economic activity are brought together.

The reserve protects water catchments and habitats for endangered wildlife while supporting farming, fisheries, recreation and responsible tourism.

Its ancient rainforest gives Penang the potential to become an internationally important research centre for tropical biodiversity and climate resilience.

That recognition must now be translated into practical action.

The reserve's future will depend on strong scientific monitoring, careful visitor management and cooperation with the communities living within and around it.

Keeping heritage alive

George Town's Unesco World Heritage Site will soon have the new Cultural Heritage Hub in Lebuh Aceh.

Eight Category II heritage shophouses owned by Lim Kongsi Toon Pun Tong and leased to George Town World Heritage Incorporated will be restored and adapted for cultural, creative and community use.

The RM10mil project will include an interpretive centre explaining George Town's history, culture and architecture, a creative economy incubation centre and a flexible space for cultural practitioners.

Its design will connect the buildings, create gathering areas and transform the rear lane into a communal space while retaining the heritage character of the shophouses.

George Town World Heritage Incorporated previously spent about RM1.8mil stabilising and repairing the fire-damaged buildings.

The wider project now invites the private sector, organisations and individuals to participate in conserving the city while creating opportunities for artists, craftspeople and entrepreneurs.

Together, these initiatives reflect Penang's effort to balance economic ambition with water security, environmental stewardship and cultural continuity.

RECONCILING
PEOPLE, PLACE, AND MOBILITY

For more than three decades, the HARTASUMA Group has played a prominent role in shaping the nation's rail mobility systems. Through the delivery of rolling-stock solutions for Klang Valley's LRT network, the Group has long recognised that - at its best - mobility has the power to expand access to opportunity, strengthen economic participation and connect people more meaningfully to the places around them.

Today, that philosophy finds expression in a slightly different landscape.

Within the Penang Hill Biosphere Reserve (PHBR), HARTASUMA is undertaking the Penang Hill Cable Car Development (PHCCD) - a fully privately funded initiative that seeks to demonstrate how low-footprint accessibility, environmental stewardship and long-term economic value can coexist.

BEYOND THE CONCESSION

Whilst the 30-year Design, Build, Finance, Operate and Transfer (DBFOT) model provides the framework for delivery, HARTASUMA's vision extends considerably further.

"The Penang Hill Biosphere Reserve is one of Malaysia's most important natural landscapes, and one of only four designated UNESCO Biosphere Reserves in the country. Any intervention here must do more than improve accessibility; it must strengthen the long-term relevance and resilience of the landscape itself.

Our objective has always been to demonstrate that mobility, responsible development and conservation are not competing priorities. When planned with care, they can reinforce one another," said Tan Sri Ravindran Menon, Group Executive Director of HARTASUMA Group.

HARTASUMA views the development as more than a functional transportation project. It is the foundation of a broader ecosystem where the ropeway provides the physical connective artery linking the foothill and summit. Around it will sit a broader ecosystem of exploration and recreation programming, designed to encourage visitors to dwell longer, and engage more deeply with the landscape.

And supporting the physical "hardware" will be a digital ecosystem that enables visitors to plan, personalise and seamlessly navigate their time spent well in advance of arrival.

CONNECTING MORE THAN DESTINATIONS

What distinguishes the development is not the ropeway itself, but the unique relationship between the environments it connects.

At one end lies the storied Botanic Valley precinct, long regarded by locals as one of Penang's most cherished recreational landscapes. At the other sits the Penang Hill summit, home to one of the world's oldest tropical rainforests and a landscape of immense ecological significance.

Together, they form a rare dual-destination ropeway ecosystem, strengthening the relationship between these two environments, creating new opportunities for activation, exploration, and interaction across the development corridor. Separated by just 6.6 kilometres from Georgetown's thriving urban centre, the corridor also occupies a unique position within Penang's urban fabric. Unlike typical destinational ropeway installations situated within isolated ecosystems, this proximity allows programming to serve not only periodic tourist visitation, but residents and locals alike seeking access to wellness, recreation and low-friction social green spaces within minutes of the city centre.

Connecting the base and summit is a ten-minute journey aboard Doppelmayr's OMEGA V-10 gondola system. Drawing on expertise across 86 UNESCO Biospheres, the ride offers sweeping views over the canopy and towards the Andaman.

SUSTAINABILITY IN PRACTICE

Sustainability is embedded throughout the development, shaping decisions across environmental protection, local economic participation and long-term stewardship.

Situated in and around the PHBR, the project adopts low-impact construction methodologies, including specialised caisson foundations and carefully managed tree interventions designed to minimise ecological disturbance. Architectural designs are also targeting Green Building Index (GBI) Gold compliance.

As Penang Hill Corporation General Manager Datuk Cheok Lay Leng previously noted in The Star, the measures represent "an extra effort and investment by HARTASUMA, showing dedication to preserving the environment".

Beyond environmental considerations, the development is designed to strengthen Penang's tourism economy while ensuring investment remains rooted locally through the engagement of Penang-based consultants, architects and contractors where possible, creating immediate employment opportunities and long-term career pathways.

A SUSTAINABLE LEGACY FOR GENERATIONS

Ultimately, PHCCD seeks to demonstrate that greater accessibility to high-value natural landscapes need not come at the expense of heritage or biodiversity.

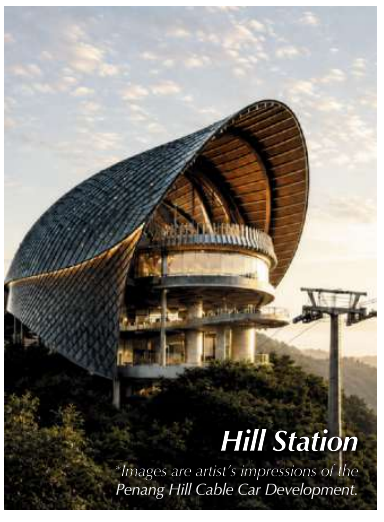
Through thoughtful planning, long-term investment and the creation of meaningful reasons for people to engage with the places around them, HARTASUMA aims to ensure that the PHBR remains relevant, accessible and valued for generations to come.

"Our objective has always been to demonstrate that mobility, responsible development and conservation are not competing priorities."

Commercial Plaza

Garden Station

Link Bridge to Hill Station



Hill Station

Images are artist's impressions of the Penang Hill Cable Car Development.