

LOGISTICS & CONNECTIVITY

ENHANCING MOBILITY AND CONNECTIVITY

THE Penang government is on a mission to enhance mobility as well as encourage more people to live in the state and have more tourists visit its attractions. It is also working to move up the value chain in the semiconductor industry, which requires infrastructure to be able to support the anticipated growth.

Malaysia Airports Holdings Bhd (MAHB) and MRT Corp are pivotal in this journey, being the key agencies behind the upgrading of the Penang International Airport (PIA) and construction of the LRT Mutiara Line. These federal government-supported projects are poised to not only position Penang as an economic Asean leader, but to also facilitate a sustainable movement of people in and out of the state.

MAHB: SECURING PENANG'S POSITION AS A REGIONAL TRADE, LOGISTICS AND TOURISM HUB

The ongoing global trade uncertainties have put stronger emphasis on the need for regional cohesiveness and resilience. MAHB says it is taking the lead from the federal government's proactive stance to strengthen inter-Asean trade.

"Penang, already integrated into the global supply chain and mature industrial ecosystems, is well positioned to benefit from the strong regional linkages," it says in an email interview.

The outlook remains positive. In 2024, Penang attracted RM31.38 billion in approved investments, a strong indicator of investor confidence despite the global headwinds.

"The state's established position as a leading manufacturing hub, underpinned by a strong industrial base and strategic role in the global supply chain, places it in a prime position to capture new investment opportunities," says MAHB.

The airport operator is collaborating with partners and stakeholders to develop a future-ready cargo ecosystem focused on enhancing automation, digitalisation and real-time track-

ing. The new Penang International Logistics Aeropark will boost cargo capacity, support integrated multimodal logistics and attract new investments to position PIA as a competitive hub in the region.

Some key initiatives include collaborating with airlines to expand regional routes and increasing flight frequencies for high-demand routes. It is also launching new routes to underserved cities in China, India, the Middle East and Australia

"We are offering aeronautical and non-aeronautical incentives to encourage international expansion and increase cargo capacity via passenger aircraft belly hold," says MAHB.

Limited freight connectivity is a challenge, it points out. It says PIA relies heavily on belly cargo on passenger flights, with limited dedicated freight services to key destinations such as North America and Europe. This affects time-sensitive shipments.

"There is also an imbalance in trade flow, where there is a mismatch between import and export volumes, which impacts freight economics, reducing the commercial viability of certain direct cargo routes," it adds.

PIA offers comprehensive cargo handling services to support traditional trade and rising e-commerce demand, including express handling services for time-critical shipments, often used by major e-commerce and courier players. It also has cold room facilities for temperature-sensitive cargo, such as pharmaceuticals/medical supplies and perishables; a dangerous goods room compliant with International Air Transport Association (IATA) standards for handling hazardous materials; and a secure valuable cargo room for high-value items.

To effectively compete with established regional logistics centres, the state needs to have a competitive edge. Embracing cutting-edge technologies such as blockchain, artificial intelligence and data analytics can help improve supply



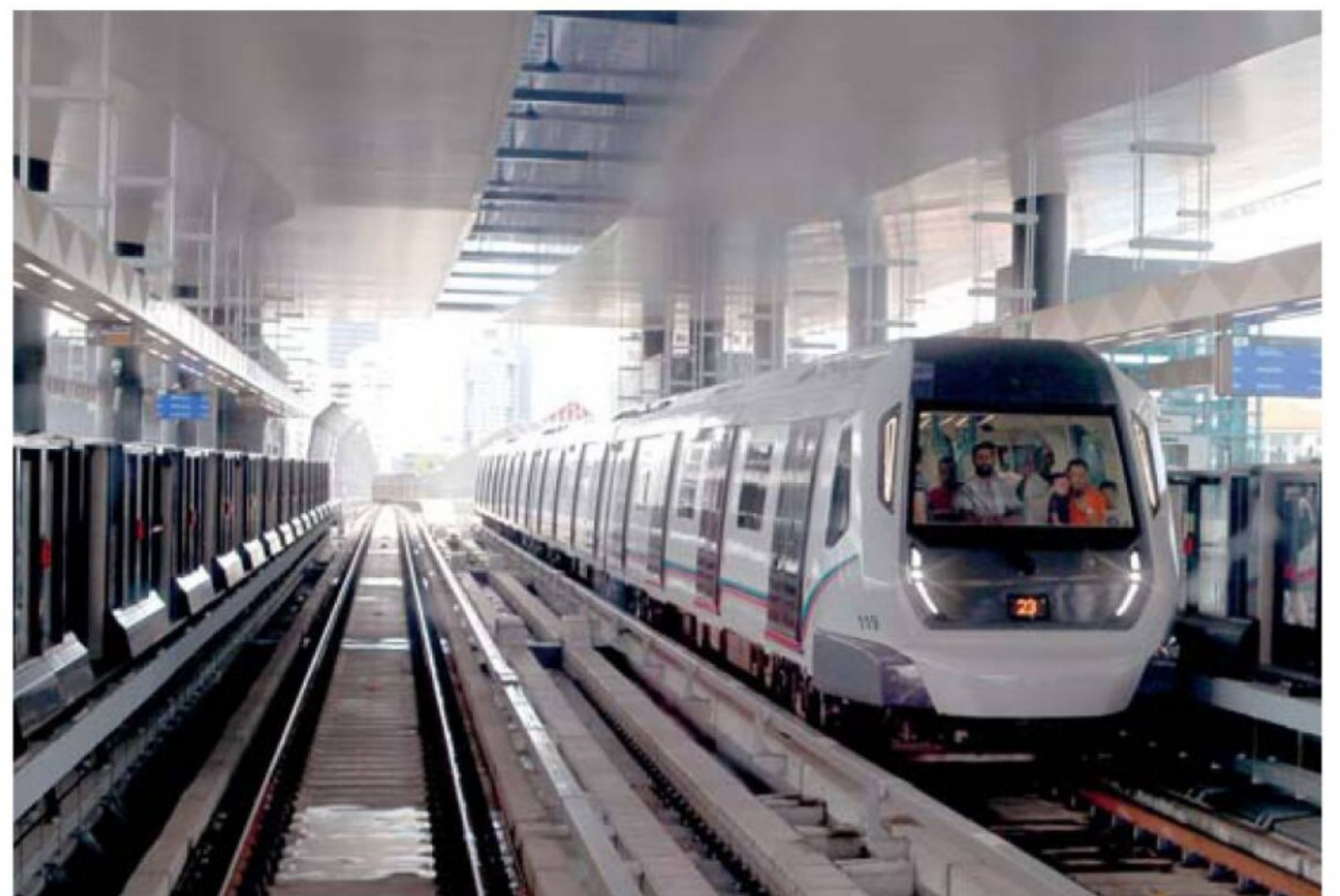
SUHAIMI YUSUF/THE EDGE

The LRT Mutiara Line is expected to be completed by 2031



chain management, boost operational efficiency and ensure seamless coordination among stakeholders, says Winnie Wong, director of business transformation at KPMG.

"Investing in the modernisation of its infrastructure, adopting sustainable logistics practices and offering customised solutions to meet the evolving demands of businesses can increase Penang's appeal as a logistics hub. By continuously adapting to industry shifts and strengthening partnerships with global and regional stakeholders, Penang can establish itself as a premier logistics hub in Asean, capable of meeting the increasing demands of international trade," she adds.



MRT CORP: ESTABLISHING THE FOUNDATION FOR PENANG'S RAIL CONNECTIVITY

The Mutiara Line — previously known as the Bayan Lepas LRT — has undergone several route refinements. “These adjustments were necessary to factor in ridership trends and connectivity needs across the island and mainland,” says MRT Corp CEO Datuk Mohd Zarif Hashim.

The Mutiara Line project, estimated to cost RM13 billion, will feature 21 stations and connect Silicon Island to Penang Sentral.

“Ridership patterns in Penang are currently split into three key segments: travel between the mainland and island, movement within the island, and tourist usage. But due to limited mobility options today, many Penangites still tend to stay in their local areas.

“The Mutiara Line has the potential to shift these patterns significantly, enabling seamless travel from the northern tip of the island to the southern corridor.”

With the Penang Silicon Island (PSI) development and other growth nodes in the south-



“Once we have developed a network, the multiplier effect will easily reach 5%, because rail doesn’t just move people. It changes how communities grow, how businesses operate and how people live.”

Zarif

ern region, Zarif foresees a transformation in Penang’s business and lifestyle landscape. The south is poised to become the next economic engine, while the north remains a vibrant hub for tourism, he says.

“The full end-to-end travel time on the Mutiara Line is 35 minutes. This makes commuting from one end of the island to the other viable for work and lifestyle. As PSI matures, Penang’s dynamics will shift — and our mobility planning must evolve accordingly.”

One of the current priorities for MRT Corp is securing land for the project. “We’re taking a cautious and detailed approach to land acquisition, especially where private land is concerned. That’s why we’re prioritising the use of government-owned land,” says Zarif.

“Because of that, our planning has to be very detailed. Since the 2018 proposal for the Bayan Lepas LRT, we have made adjustments like the location of the viaduct and the corridor.

LRT MUTIARA LINE ALIGNMENT MAP



MRT CORP

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MAHB

While the main corridor remains the same, we’re now working through key details like station entrances and park-and-ride locations,” he adds.

“Our aim is to avoid impacting private land altogether. That’s what makes the planning process especially complex.”

Utility relocation also has to be done as quite a number of stations use up the roads they receive, which typically house utilities, he explains. MRT Corp will need to relocate these or create a different trench so the LRT line can coexist with the utilities.

“We have to build a new utility trench on other roads so that we can use the existing corridor to construct the LRT line. So, depending on the relocation, some stations can commence construction as early as six months. But more



LIEW JIA TENG/THE EDGE

complex areas may take up to a year," says Zarif.

"Also, the roads in Penang are not that large. There isn't much corridor left and we have to be mindful of that. We also need to do all this while live traffic is flowing, which means careful, phased execution to minimise disruption."

He believes the Mutiara Line will serve as a crucial catalyst in establishing a broader rail network across Penang. He says internal assessments indicate that the state will eventually need at least three additional lines to see real transformation in mobility.

"We also have to connect the existing rail services like the Electric Train Services (ETS) and commuter, which is why we are connecting to Penang Sentral to set the rail foundation early on," he adds.

On economic impact, Zarif says that the LRT has the potential to deliver an economic multiplier of up to 5%, particularly as it reshapes how people move and where jobs emerge. "For now, we're targeting a multiplier of 2.5%, which will grow as the network expands," he says.

"Once we have developed a network, the mul-

Penang International Airport's expansion project is underway with a projected cost of RM1.55 billion and expected to be fully completed by 2028. This expansion will boost its annual passenger capacity from 6.5 million to 12 million



tiplier effect will easily reach 5%, because rail doesn't just move people. It changes how communities grow, how businesses operate and how people live.

"With improved and connected mobility, I hope we'll be able to attract more talent to Penang. When people aren't bound by limited transport options, they become more mobile — and that makes a real difference to where they choose to live and work." ● By Vanessa Gomes