The race to become a data hub

By Hazel Vincent de Paul

Southeast Asia is witnessing a speedy expansion of data centre development, with countries such as Singapore, Indonesia and Thailand competing to become the regional hub for digital infrastructure. Amid this highly competitive landscape, Malaysia is positioning itself as a strong contender to take the lead.

Not only is it strategically located at the intersection of major international submarine cable routes, Malaysia also has a lower rate of natural disasters, access to 24 submarine cable networks and robust international connectivity.

In addition to these geographic advantages, which make the country a crucial gateway between East and West, it offers reduced latency and facilitates efficient data transmission across Asia and beyond.

"Unlike Singapore, which faces land scarcity and high operational costs, Malaysia benefits from abundant land availability at competitive prices," says Datuk Akmal Ahmad, director of real estate and infrastructure division of Johor Corp (JCorp) and deputy chairman of JLand Group.

Developments such as the Johor-Singapore Special Economic Zone capitalise on these benefits, providing advanced facilities such as the Ibrahim Technopolis (IBTEC) and Sedenak Tech Park (STeP).

These specialised zones offer robust infrastructure and tailored incentives. STeP provides scalable infrastructure and utilities such as high-capacity power and water supply designed for hyperscale and generative artificial intelligence (GenAI) data centre operations.

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On the infrastructure side, "Malaysia offers affordable land, great connectivity and reliable water supply, which are crucial for data centres, especially for cooling solutions," says Vishy Narayanan, Asia-Pacific digital & AI leader at PwC.

Targeted government policies and incentives such as the Malaysia Digital Economy Blueprint (MyDIGITAL) support the country's aim of climbing to the top spot by outlining its digital economy strategy and incentives, such as investment tax allowances.

On the regulatory front, initiatives such as Johor's State Data Centre Development Planning Guidelines and the federal government's Guidelines for Sustainable Development of Data Centres promote sustainability by incorporating metrics such as power usage effectiveness, water usage effectiveness and carbon usage effectiveness to enhance energy efficiency and minimise environmental impact.

Moreover, the government aims to foster a business-friendly environment by streamlining regulatory processes and working closely with industry stakeholders. Initiatives such as the Corporate Renewable Energy Support Scheme (CRESS) highlight Malaysia's commitment to connecting data centres with clean energy providers.

"These are among the government initiatives to drive growth, which have been proven effective, attracting significant investments in this sector with RM114.7 billion approved between 2021 and 2023, signalling robust growth," says JCorp's Akmal.

Governmental support is further exemplified by the AI Technology Action Plan. Launched in 2024, it focuses on accelerating AI adoption, ethical regulations and AI-enabled public services. The forthcoming National Artificial Intelligence Office (NAIO) underscores the country's dedication to its digital economy, PwC's Vishy adds.

Malaysia isn't just preparing to meet future demands, but also positioning itself as an AI ecosystem enabler.

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SUSTAINABILITY AND TALENT DRIVE DATA CENTRE AMBITIONS

The road to winning the regional data centre hub race isn't without its share of obstacles. After all, energy costs, power reliability, renewable energy availability, sustainability and environmental regulation compliance are hot-button issues that need to be addressed with data centre companies in Southeast Asia.

Currently, the environmental concerns typically associated with data centres are being tackled through a combination of competitive energy costs, strong renewable energy initiatives and stringent environmental regulations.

Malaysia is further addressing environmental concerns and energy stability through regional collaborations like the Asean Power Grid. This focuses on energy interconnectivity and renewable energy integration among Asean member states, enhancing the stability and resiliency of energy supply across Southeast Asia.

The development of world-class digital and physical infrastructure needs to be accompanied by an AI-skilled workforce — a challenge for Malaysia currently, especially in areas such as AI and data analytics, which are critical in running advanced data centres, Vishy stresses.

To meet the growing demands of the industry, Akmal feels it is essential to enhance educational curricula, foster industry partnerships for training programmes and implement initiatives to address skill gaps.

Collaborations with agencies such as TalentCorp and Johor Skills are key to ensuring a steady supply of skilled talent for data centre operations, helping to meet the sector's evolving workforce requirements, he adds.

SCALING UP WHILE FINE-TUNING THE DETAILS

To date, Malaysia has seen significant investments from major hyperscalers in specialised tech parks such as STeP and IBTEC. These parks are designed to cater to the stringent requirements of global data centre operators, offering advanced facilities that integrate sustainable energy solutions.

Furthermore, hyperscale data centre projects in Malaysia are attracting contract manufacturers such as Taiwan-based Wiwynn, a subsidiary of Wistron Corp, to the country.

While the hyperscaler ecosystem is growing, Vishy contends that it requires further development in key areas to compete with regional leaders. For example, it is essential to enhance enabling infrastructure, offer competitive incentives and integrate the local ecosystem.

Competitive financial incentives, faster regulatory approvals and clear policies on data privacy and cross-border data flows are crucial to attracting hyperscalers. Additionally, fostering collaboration between hyperscalers, local businesses and start-ups can drive innovation and create thriving, symbiotic ecosystems.

"Without scalable data centres, high speed connectivity and robust cloud platforms, hyperscalers will struggle to establish and expand their operations," says Vishy, adding that "investments to build the necessary local capabilities that will propel Malaysia to the forefront of AI development and adoption will need to continue".

5G, AI AND A BOOMING DIGITAL FUTURE

In the next five years, Malaysia's data centre market is expected to grow, driven by digital consumption, technological advancements and government initiatives, Akmal believes.

The rollout of 5G technology will fuel demand for data processing and storage as well as enable faster data transmission and real-time applications. Government programmes such as Jendela, which expands high-speed fibre optic access, are improving infrastructure and boosting Malaysia's appeal as a data centre destination. The rise of AI technology will further drive data demand.

"There's a growing demand for cloud computing and AI across industries. Malaysia's AI Technology Action Plan is designed to position the country as a leader in this space, which definitely makes it more appealing to investors looking to tap into that demand," says Vishy.

"We're seeing a shift towards smaller, localised language models that better understand regional cultures and languages. Malaysia's rich linguistic and cultural diversity is a natural fit for companies developing these kinds of AI solutions." ●

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Vishy, PwC