BUILDING THE NEXT MILE

BY KIRAN JACOB

WITH its ample land, Johor has positioned itself as an attractive destination for investors seeking scalability and flexibility in infrastructure design for large-scale data centre developments.

The expansion of data centres in the state will boost land value and enhance the desirability of the surrounding areas through the development of infrastructure such as roads, utilities and telecommunication networks, says Alvin Gan, head of technology consulting at KPMG Malaysia.

Johor is ranked as the largest data centre market in Malaysia and ninth-largest in Asia-Pacific, according to resource site Baxtel. Additionally, Johor has 13 data centre facilities across more than 1.65 million sq ft of land mass, with four more data centres being constructed.

More importantly, this stays true to the state's digital ambition as outlined in the Johor Sustainable Development Plan 2030, in which a key pillar is the building of the digital economy.

To develop this digital economy, digital

The GDS Nusajaya Tech Park Data Centre Campus is GDS' first such centre in Southeast Asia

infrastructure — which provides the essential foundation for cloud computing, big data analytics and digital service — is much needed. This will, in turn, create a robust platform for businesses to embark on digital transformation and innovation, says Cheam Tat Inn, managing director of Equinix Malaysia.

"I think the part where Johor has done tremendously well is the spillover effect of data centres, leading to adjacent sectors coming into the state because of the availability of robust data management sectors. [This creates] the opportunity to capitalise on those facilities and create the integration of a higher value digital economy," says UEM Sunrise Bhd CEO Sufian Abdullah.

Equinix aims to help develop the digital economy in Johor with the establishment of an International Business Exchange (IBX) data centre in Johor, named JH1. With an initial investment of US$40 million (RM190 million), the facilities will provide a platform for innovation, job creation and the development of a digitally skilled workforce.

The establishment of data centres in Johor will positively impact the state's employment level, agrees Gan. This is because data centres require skilled professionals for their design, construction, maintenance and operations. Consequently, this will lead to the creation of high-value job opportunities in various fields, including IT, electrical engineering and facility management.

"The emergence of downstream industries servicing data centres presents a promising opportunity for Johor to delve into advanced technologies. Collaborations with foreign data centre players would also offer the chance for knowledge exchange and growth within the nation's own data centre development initiatives," says Lee Kun Thye, director of Knight Frank at its Johor branch.

"The recent launch of the YTL Green Data Center Park in Kulai was hailed as a pivotal

move to attract diverse multi-skilled talents and draw foreign direct investments," adds Gan.

The 500MW data centre campus will be fully powered by solar energy and offer dark fibre connectivity to Singapore, which will provide direct and ultra-low latency network connections to data centres in Singapore and other locations in Malaysia.

On its part, Equinix will actively collaborate with the private sector to attract and nurture tech professionals through education and training programmes. For example, Equinix's Career Pathway Programme emphasises the company's dedication to fostering a diverse and inclusive workforce.

"A data centre is so much more than just a box for storing data. It's a platform for capturing the full value of data, particularly in the case of colocation data centres such as Equinix IBX facilities," says Cheam.

"The presence of data centres in Johor offers significant advantages for residents

"Johor offers advantages such as lower land prices and utility costs compared with Singapore, while still being located close enough to benefit from the spillover effect of Singapore's status as a prime Asian data centre hub."

Lee

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Gan

[by] creating job opportunities across sectors such as construction, engineering, facility management and security. This contributes directly to the local economy and provides diverse employment prospects for Johoreans," he adds.

PRIME LOCATION

Johor's emergence as a data centre hub can be attributed to the wide presence of tech parks in the state, says KPMG's Gan. These parks provide data centre investors with the flexibility to choose environments that precisely match their business objectives.

Tech parks with a specialised focus on data centre development offer features such as plug-and-play infrastructure, prime locations, ample space and eco-friendly power sources.

Nusajaya Tech Park (NTP) in Iskandar, Johor is one example. A collaboration between UEM Sunrise (KL:UEMS) and CapitaLand Ltd, the tech park houses data centres such as Equinix and GDS Holdings.

GDS has established the GDS Nusajaya Tech Park Data Centre Campus there, its first such centre in Southeast Asia.

"We've got the space, land, infrastructure and proximity to Singapore. In terms of security and access, we're able to provide more value-added propositions. [For] physical connectivity, the option is available for us to connect to alternative service providers, given our proximity to Singapore," says UEM Sunrise's Sufian.

"It's a question of coming in, telling us what your demand is and tapping the existing system. We've been managing the relationship with service providers quite well and they know that demand is especially high, especially in the last 1½ years, in Johor. Everybody's working hard to accommodate the demand.

"We can also supplement the need for sourcing clean energy. [This is through the renewable energy manufacturing site], which will balance the demand for clean energy in the area for those data centres."

Phase 1 of NTP has a total net floor area of 22,500 sq m, along with a total IT power capacity of 69.5MW. Phases 2 and 3 are currently undergoing land clearing.

There is also the Sedenak Tech Park (STeP), which is specifically designated for the development of data centres. STeP east and west have a combination of 1,400 acres of total area with 30 data centres within the tech park.

There are also seven strategic partnerships with investments amounting to RM27.7 billion. The tech park is developed by JLand Group.

Notable data centres in STeP include Keppel Data Centres, Bridge Data Centres and

Princeton Digital Group. The tech park is secure and equipped with abundant energy and water resources, which is critical for the operation of international standard data centres.

Singapore's ban on data centres in 2019 saw a surge of enquiries for data centre sites in Johor, says Knight Frank's Lee.

As Singapore implements more stringent criteria for data centre establishment, Johor is expected to welcome approximately RM17 billion in data centre investments in 2024, according to Zerin Properties. This is on top of the RM51.1 billion in data centre investments the state received in 2022.

"This trend was further fuelled by Microsoft's announcement of the setting up of their data centre in Sedenak, Kulai. Johor offers advantages such as lower land prices and utility costs compared with Singapore, while still being located close enough to benefit from the spillover effect of Singapore's status as a prime Asian data centre hub."

The investments from data centres are a boon to the state as they contribute to the state's revenue and allow for infrastructure development projects that will benefit the people of Johor in the long term, says Lee.

According to the Iskandar Regional Development Authority, Iskandar Malaysia recorded investments of RM22.4 billion in data centres.

Moreover, Johor's ability to attract significant FDI bolsters its position as a data centre hub, notes Gan. This is as the state witnessed a surge in FDI, with investments reaching RM70.6 billion in 2022 compared to RM7 billion in 2021.

"This influx of investment instils confidence in future investors, affirming Johor's status as a prime destination for data centre investment and ensuring its successful evolution into a major data centre hub," he says.

STAYING TRUE TO THE COURSE

Malaysia's semiconductor industry has propelled the country to become the world's sixth-largest semiconductor exporter. To replicate this success in the data centre sector, there is a need to provide similar enablers, says Gan.

Initiatives such as the formation of the Data Centre Task Force in Malaysia are crucial to help steer and facilitate the growth of this sector in the country.

"This is especially true in the light of the increasing adoption of artificial intelligence technologies where access to robust data centre infrastructure becomes paramount to facilitate the processing and analysis of vast amounts of data essential for AI applications," says Gan.

Sufian says, "There has to be a scalable impact [of data centre services] being allocated to local businesses as well. That is something that should be done through a conscious decision by data centre operators or through policy introduction."

However, there are still obstacles. For instance, the environmental impact of data centre developments due to their high consumption of energy has to be taken into account. There is a need for renewable and energy-efficient solutions to reduce the carbon footprint of data centres, to align with Malaysia's net-zero ambitions, says Gan.

"To address this concern, there's a shift towards green data centres, which utilise

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Cheam

UEM SUNRISE

more renewable energy sources like solar power, energy-efficient technologies and sustainable practices to mitigate environmental impact," says Lee.

There are also concerns over the struggle to attract and retain talents with specialised skills such as data scientists and cybersecurity engineers for data centre operations.

"To address the challenges, Malaysia's New Industrial Master Plan 2030 aims to enhance talent development through initiatives like mynext and MYFutureJobs and streamline access to high-skilled foreign talents," says Gan. ●

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