Data Centre Research Report MALAYSIA

Knight Frank

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Malaysia's Green Leap:
Data Centres at the Forefront

Malaysia continues to lead the SEA-5 Data Centre Opportunity Index, demonstrating strong opportunities compared to regional competitors

Malaysia has once again secured the top position in the Knight Frank SEA-5 Data Centre Opportunity Index, solidifying its status as a leading data centre hub in Southeast Asia. With a significant annual take-up of 429 MW, Malaysia outperforms other countries in the region. This strong demand can be attributed to the significant take-up recorded in Johor and the improved take-up in Klang Valley. The nation's ongoing efforts in strengthening digital infrastructure, coupled with investor-friendly policies and investments from tech giants, have contributed to Malaysia maintaining its top spot in the SEA-5 market.

Malaysia has attracted RM141.72 billion in digital investments during the first ten months of 2024—three times the approved digital investments for the entirety of 2023 (RM46.2 billion). These investments are projected to create 41,078 job opportunities.

Over the past year, Malaysia has emerged as a preferred location for major cloud providers, including Microsoft, Amazon Web Services (AWS), Google, and Oracle. Collectively, these companies have announced a total investment of USD 23.3 billion in cloud and infrastructure developments across the country.

Knight Frank SEA-5 Data Centre Opportunity Index

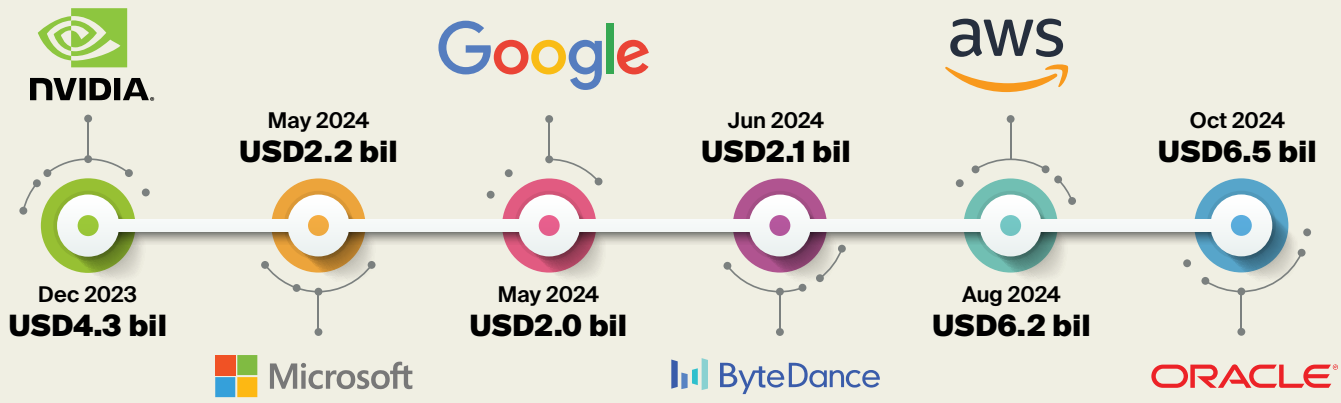
Rank 2024	Rank 2023	Market	Take Up per annum (MW)	2025 GDP Growth Forecast
1	1	Malaysia	429	5.5%
2	2	Indonesia	93	5.2%
3	5	Thailand	31	3.5%
4	4	Philippines	1	7.5%
5	3	Vietnam	3	7.0%

The Knight Frank SEA-5 Data Centre Opportunity Index (SEA-5 Index) examines the key markets within the SEA-5 to understand each respective country's current data centre ranking against its peers. The index takes key data centre elements such as recent take up & supply figures, existing & future cloud availability zones (AZs), subsea fibre connectivity, alongside other important data centre investment factors such as population sizes, GDP growth and ease of doing business as a foreign investor in these markets.

Notable highlights include:

- NVIDIA announced a USD 4.3 billion investment in Johor for the development of AI infrastructure.
- Microsoft revealed plans in May 2024 to invest USD 2.2 billion in new cloud and artificial intelligence (AI) infrastructure over the next four years.
- Google announced USD 2 billion investment to establish its first data centre in Elmina, Selangor, and develop a cloud region in Malaysia.
- ByteDance committed USD 2.1 billion to build an artificial intelligence hub in Malaysia.
- Amazon Web Services (AWS) announced an investment of USD 6.2 billion through 2038, including the launch of the AWS Asia Pacific Region and local AWS data centre services.
- Oracle unveiled plans to invest more than USD 6.5 billion to open a public cloud region in Malaysia in October 2024.

Investments by Tech Giants into Malaysia between December 2023 to October 2024



Source: Various News Announcements, Knight Frank Malaysia Research

The increased interest from global technology companies reflects the Malaysian government's ongoing efforts to enhance the country's digital economy. Key initiatives have focused on strengthening infrastructure, establishing clear regulatory frameworks, and promoting sustainability, which are the factors critical for the development of a robust data centre ecosystem.

These measures provide a structured foundation for the sector's growth, supporting both the physical expansion of data centres and the optimization of their operations. Such developments position Malaysia to meet rising regional demand for digital infrastructure while fostering a stable investment environment.

Summary of notable announcements related to the data centre ecosystem in Malaysia

Infrastructure	Tenaga Nasional Berhad (TNB) launched the Green Lane Pathway in August 2023 to expedite electricity supply for data centres, reducing implementation timelines from 36–48 months to just 12 months, a significant boost to operational readiness.
	The Malaysian government has reinstated the cabotage exemption for undersea cable repair ships in June 2024, ensuring faster and more efficient connectivity repairs—a critical move following its revocation in November 2020.
Sustainability	The National Energy Transition Roadmap (NETR), launched in July 2023, prioritizes increasing renewable energy in the power mix, targeting 31% by 2025 and 40% by 2035.
	The Corporate Renewable Energy Supply Scheme (CRESS), introduced in 2024, supports renewable energy adoption by corporations, enabling data centres to meet sustainability goals while aligning with global environmental standards.
Regulatory / Policy / Incentives	In June 2024, the Ministry of Investment, Trade, and Industry (MITI) announced special incentives to attract investments in artificial intelligence (AI) data centres.
	A comprehensive data centre planning guideline was released by PLANMalaysia in October 2024, covering zoning, buffer zones, and real estate requirements for data centre projects.
	MITI is set to finalize Sustainability Development Guidelines in the near future, addressing critical issues such as energy, water and carbon usage efficiency.
	The Prime Minister unveiled plans for AI regulations, focusing on ethics and governance, on 1st October 2024 to ensure responsible technology development.
	Efforts are underway to develop a new investment incentive framework based on a "scorecard" approach, which is set for launch by mid-2025.
	The Prime Minister has also introduced the National Cloud Policy, designed to enhance public service efficiency, foster economic growth, and ensure robust data security and inclusivity by leveraging cloud technologies.

Source: Knight Frank Malaysia Research

Infrastructure

TNB: Setting a solid foundation for Data Centre Players

The focus of major data centre investments is increasingly centreed on resource management, particularly energy and water. Knight Frank Malaysia engaged with Tenaga Nasional Berhad (TNB) to gain deeper insights into the Green Lane Pathway, an initiative introduced in August 2023.

According to TNB, the establishment of the One Stop Centre (OSC) for Data Centre (DC) investors aims to enhance the efficiency and comprehensiveness of electricity supply delivery within the stipulated timeframe. By streamlining the processes and providing a centralised platform, the OSC facilitates multiple TNB services and divisions to meet the requirements of the Data Centre industry.

With the Green Lane Pathway, power supply is guaranteed within 12 months, working alongside the OSC providing dedicated support services for data centre investors. This makes Malaysia a more competitive place for data centre operators aligned with DC consumers' requirements for faster supply delivery to the DC facilities. This endeavour has positioned TNB as amongst the best utility companies to provide fast-track supply within 12 months to DC consumers.

The supply process includes Application & Study; Technical & Commercial approval; Procurement; Construction, Commission; and Energisation. All these processes are streamlined and refined to meet the 12-month timeline. In some cases, an interim supply of lower voltage is provided to energise the site temporarily.

Apart from Green Lane Pathway, TNB is constantly strengthening the electricity infrastructure under the Grid-of-the-Future flagship initiative as a means to unlock Malaysia's Energy Transition ambition and ensure reliable energy supply to customers.

Sustainability

Sustainability Agenda in Data Centre

The sudden influx of data centre investment has raised concerns about resource management, as data centres are power-hungry assets. The private sector, comprised of data centre operators, has adopted innovative technologies in both data centre design and operation, aiming to improve energy and water efficiency.

Sustainability remains a cornerstone of Malaysia's data centre strategy. Under the National Energy Transition Roadmap (NETR), the Ministry of Energy launched the Corporate Renewable Energy Supply Scheme (CRESS), a framework that allows renewable energy developers to access the grid. The objective is to encourage the adoption of renewable energy among corporate entities in Peninsular Malaysia. This initiative allows participants to supply or procure electricity via open access to the grid network, with charges for system access set in advance.

To date, a few data centres have participated in CRESS. The first was a virtual power purchase agreement (VPPA) between AirTrunk and ib vogt in February 2024. Later, the operator partnered with Pekat Solar to install rooftop solar at its JHB1 data centre campus. In December 2024, a Bilateral Energy Supply Contract under CRESS for data centres was signed between Bridge Data Centres and TNB for the operator's incoming 400MW data centre in Ulu Tiram. GDS Holdings also inked a VPPA with Cenergy SEA Bhd to power its data centre in Johor.

As the sole energy provider in the country, TNB plays a critical role in paving the way for sustainability in data centre operations. For data centres exploring green technology, TNB offers three potential green schemes depending on the customers' long-term requirements: rooftop solar photovoltaic (PV) solutions, Malaysia Renewable Energy Certificates, and Green Electricity Tariff.

The solutions offered by TNB support the country's efforts to achieve net zero emissions by 2050, in line with the National Energy Transition Roadmap (NETR) projects announced in July 2023. TNB was identified to champion three (3) key NETR projects and generate another 3,000 megawatts (MW) of Renewable Energy by 2040. This can be achieved through additional 500 MW large-scale solar park (LSSP); 2,500 MW hybrid hydro-floating solar (HHFS); and co-firing hydrogen and ammonia projects.

Regulatory / Policy / Incentives

Strengthening Investment Confidence Via Enforcement of Guidelines

The release of the data centre planning guideline, known as Garis Panduan Perancangan Pusat Data (GPPPD) in October 2024 has provided clarity to data centre players in the market regarding criteria for site selection, zoning, and development procedures. This has laid a clear and solid foundation for the requirements, enabling investors to navigate the process when making investment decisions in setting up data centres in the country.

The Ministry of Investment, Trade, and Industry (MITI) is set to finalize Sustainability Development Guidelines in the near future, addressing critical issues such as power usage efficiency (PUE), water usage efficiency (WUE), and carbon usage efficiency (CUE). This is to achieve environmental sustainability with the emergence of more data centres in the short to medium term. These guidelines will serve as one of the requirements for incentive applications for future data centre investments in the country, suggesting that the country is shifting its focus to attract green and sustainable data centre investments.

Summary of Planning Requirements for Greenfield Data Centre Development

Component	Description
Category of Land Use (Land Title)	• Building • Industrial
Permitted Land Use (Zoning)	• Data Centre is permitted to be developed on the land with industrial zoning (light and medium industrial zone) and commercial zoning (refers to the gazetted Structure Plan / Local Plan)
Plot Ratio, Plinth Area, Building Height, Setback	• Subject to the gazette Structure Plan / Local Plan and Uniform Building By Laws 1984
Open Space Requirement	• Reserve and gazette 10% of land as open space; or • Reserve and gazette 5% of land as open space for approved master layout
Utility Reserve Requirement	• 1.5 meter wide utility reserve should be provided on the left and right side of the road reserve
Buffer Zone	• A 50m buffer zone should be provided between the data centre building and residential areas / schools; or • Buffer zone is not required if the noise level is below 5db from the original noise level.

Source: Data Centre Development Guidelines (Garis Panduan Perancangan Pusat Data), PLANMalaysia

Strategic Partnerships in Malaysia's Data Centre Market

A rapid surge in strategic partnerships or mergers and acquisitions took place following the rapid growth of data centre investments in the country. These collaborations and partnerships span across various sectors, including real estate, energy, technology, and other parts of supply chain, which can be broadly classified into three types:

List of strategic partnerships related to Data Centres in Malaysia

Real Estate Developers / Investors & Data Centre Operators	**Klang Valley** • Sime Darby Property entered into two built-to-lease agreements in May and December 2024, to build and lease data centres for Google in Elmina Business Park Phases 1 and 2. • Bridge Data Centres formed a joint venture with Mah Sing Group Bhd, in May and October 2024, to develop data centres in Southville City, Bangi. • Jakel Group partnered with PiDC Holding Bhd to develop a 51MW data centre in Cyberjaya. • Earlier in February 2023, GAW Capital announced a joint venture with A3 Capital to develop the Infinaxis data centre in Cyberjaya. Construction commenced in October 2023 and was topped out in November 2024. **Johor** • In December 2023, YTL Power International Bhd, the developer of YTL Green Data Centre Park, announced a collaboration with NVIDIA Corp to build AI infrastructure in Malaysia. **Sarawak** • Following the formation of FutureData Sdn Bhd, a Singapore-Sarawak consortium, the consortium announced the development of its first data centre for Global Telecommunications Group in October 2024.
Data Centre Supply Chain Companies / New Ventures	**Kedah** • In October 2024, AREA Group commenced construction of a data centre campus following the signing of a Heads of Agreement (HoA) with Northern Gateway Sdn Bhd, the master developer of the Delapan Special Border Economic Zone (SBEZ), in January 2023. • Maxland Bhd, a timber company, plans to develop a data centre in Kulim. The company signed a Memorandum of Understanding (MoU) with Global Data Centre Sdn Bhd for data centre development. **Johor** • MN Holdings, an underground utilities and substation engineering company, partnered with China's Shanghai DC-Science Co Ltd to develop a data centre in Johor. **Sarawak** • AIZO Group ventured into the data centre development through a partnership with Netrunner Sdn Bhd, a Special Purpose Vehicle (SPV) to attract data centre investments to Sarawak. The planned data centre development, known as Sarawak Data Centre Park (SDCP) will be located in Kuching, and powered by Sarawak Energy Bhd (SEB).
Partnerships Amongst Data Centre Operators	**Klang Valley** • Basis Bay and ST Telemedia Global Data Centres (STT GDC) formed a joint venture to develop a data centre campus in Cyberjaya. **Johor** • Telekom Malaysia entered into a joint venture agreement with Nxera MY Pte. Ltd, an indirect subsidiary of Singtel to develop and operate a data centre campus in Johor.

Source: Knight Frank Malaysia Research

In addition, the growth of data centres has provided significant spillover benefits to the construction sector. It has stimulated demand for local suppliers, contractors, and service providers, including Sunway Construction Group, Gamuda Engineering, IJM Construction, and Binastra Corp Bhd. This growth indirectly drives the need for skilled professionals in fields such as engineering, cybersecurity, and IT, thereby creating high-value job opportunities for the nation.

Market at a Glance

As of end 2024, there are a total of 54 operational data centres in Malaysia, offering live IT capacity of 504.8 MW. Key focus remains on Klang Valley and Johor, with Sarawak, Negeri Sembilan, and Kedah emerging as upcoming data centre locations in the country.

Distribution of Data Centres' IT Capacity in Malaysia

Region / State	Existing Supply		Future Supply (Under Construction & Committed)	
	No. of Data Centres	Estimated IT Capacity (MW)	No. of Data Centres	Estimated IT Capacity (MW)
Johor	12	396.9	28	898.7
Klang Valley	37	107.0	28	378.5
Penang	3	0.4	-	-
Sarawak	2	0.6	2	17.8
Negeri Sembilan	0	-	2	16.0
Kedah	0	-	1	2.0
Total	**54**	**504.9**	**61**	**1,313.0**

Source: DC Byte, Knight Frank Malaysia Research

While Klang Valley has the highest number of data centres, Johor currently leads the nation in terms of IT capacity, accounting for close to 80% of the total live IT capacity in the country. It is also worth noting that Johor will be the first state to hit 1GW when the supply under-construction and committed become operational in the future.

Interest in developing data centres is also observed in the Northern region and East Malaysia. In the Northern region, AREA Group acquired a 30-acre land within the Delapan Special Border Economic Zone (SBEZ) in Bukit Kayu Hitam to develop Phase One of the hyperscale data centre campus known as AREA Data Centre Campus (ADCC). Phase 2 of ADCC will span across 126 acres and is scheduled to begin construction in two years. Another data centre development will be by Maxland Bhd, which has entered into a 60-year lease agreement with Kulim Technology Park Corp Sdn Bhd to lease 4.57 acres of land in Kulim Hi-Tech Park for data centre development.

Maxland Bhd and Global Data Centre Bhd are set to collaborate on a new data centre project, as evidenced by their recent Memorandum of Understanding (MoU).

Across the South China Sea, Sarawak currently houses a Tier-IV data centre, namely Irix Data Centre, located in Santubong. The Tier-IV data centre is located alongside its own Cable Landing Station (CLS) and Internet Exchange (IX). It is a green data centre and will operate on hydroelectric power via its direct connectivity to the Baleh Hydroelectric Dam, scheduled for completion in 2027. Another notable data centre park development is by the FutureData consortium (TCG Group and Cyclect) in Kota Samarahan. The 500MW data centre park has recently announced that it will house its first data centre for Global Telecommunications Group with 17MW IT capacity.

Additionally, there is another new data centre park currently being planned in Kuching, known as the Sarawak Data Centre Park (SDCP). This project is set to become the state's first energy-efficient Tier-IV data centre hub. In October 2024, Sarawak Energy Berhad (SEB) signed an MoU with Netrunner Sdn Bhd for the sale and purchase of electricity. Netrunner Sdn Bhd, a special purpose vehicle (SPV) responsible for attracting data centre investments, has signed a separate MoU with AIZO Berhad for the joint development of the SDCP.

Klang Valley

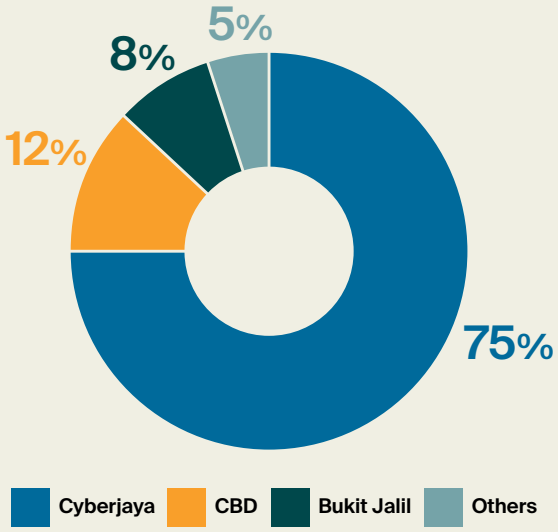
The data centre landscape in Klang Valley recorded significant growth between 2020 and 2024, with a compound annual growth rate (CAGR) of 43.7%, representing 93MW of IT capacity added per annum. This is nearly 7.5 times the growth in 2015-2020, which was approximately 12 MW per annum.

As of the end of 2024, a total of 37 data centres, offering 107.0 MW of IT power, are currently operational in Klang Valley. The total IT capacity is expected to reach 500MW, taking into account the pipeline of around 378MW of IT capacity.

Geographically, Cyberjaya, which has been well-established as a key data centre location, continues to be a core location, with 75% of the capacity concentrated there. This is largely due to Cyberjaya being mooted as the digital hub for the country in the 90s and being home to several small data centres.

Locations in the city centre and central business district (CBD) account for approximately 12% of the capacity. There are also a number of emerging data centre locations. For instance, NextDC is developing a data centre in Petaling Jaya, while Technology Park Malaysia in Bukit Jalil will have a number of data centres from Bridge Data Centres, Amazon Web Services, and EdgeConneX.

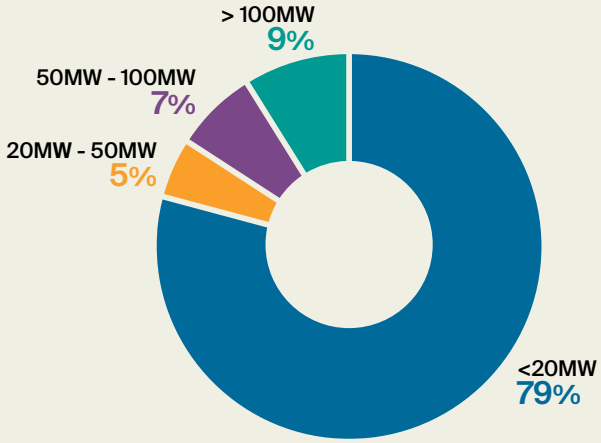
Distribution of Live IT Capacity in Klang Valley



Source: DC Byte, Knight Frank Malaysia Research

Data centres in Klang Valley are mostly small-scale developments of less than 20MW, accounting for about 80% of the total in the area. The region is expected to welcome several data centres with capacities exceeding 100MW, including data centres for both Google and Amazon Web Services (AWS). In Cyberjaya, EdgeConneX plans for a 200MW campus, and Vantage Data Centres plans a 256MW campus.

Data Centre Size Distribution

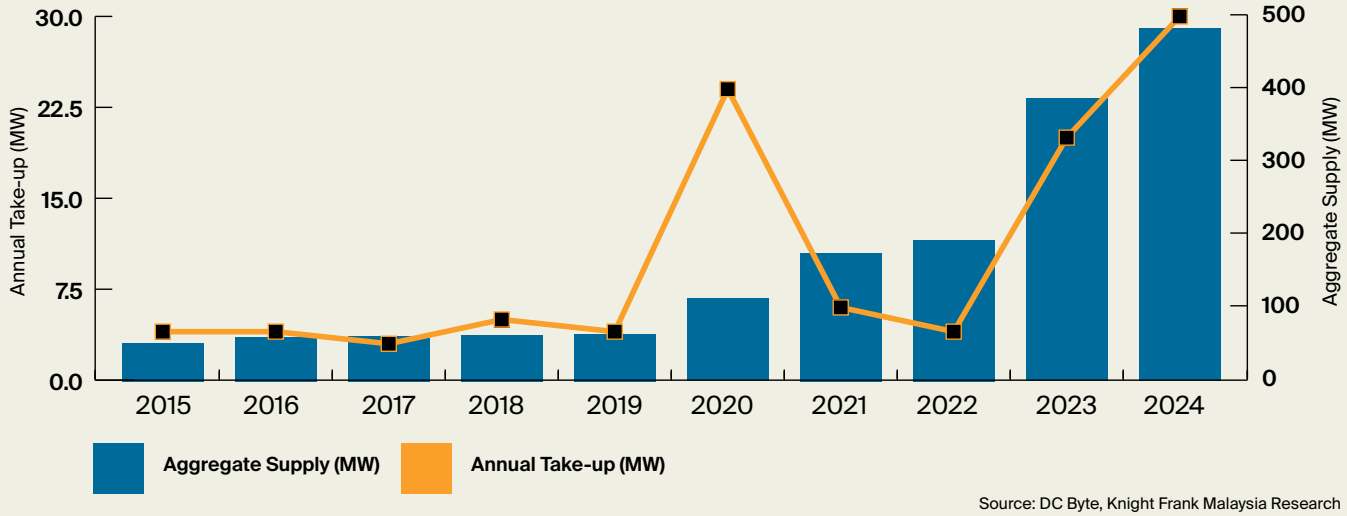


Source: DC Byte, Knight Frank Malaysia Research

In terms of operational data centres, Bridge Data Centres is the largest operator in the Klang Valley market, managing 26% of the built IT capacity, followed by AIMS operating at 20%. NTT Global Data Centres is the third largest operator, managing 8 data centres, encompassing 14% of the total IT capacity. However, the dominance of the market will shift in the future when the data centres by Google and Amazon Web Services are completed.

Approximately 84MW of capacity has been leased over the past 5 years, averaging approximately 17MW per annum for both colocation and self build data centres. Colocation supply in Klang Valley is operating at around a 22% vacancy rate, which is relatively stable as the vacancy rate over the past 5 years has been around 15% to 30%.

Klang Valley: Cumulative Supply and Annual Take-up



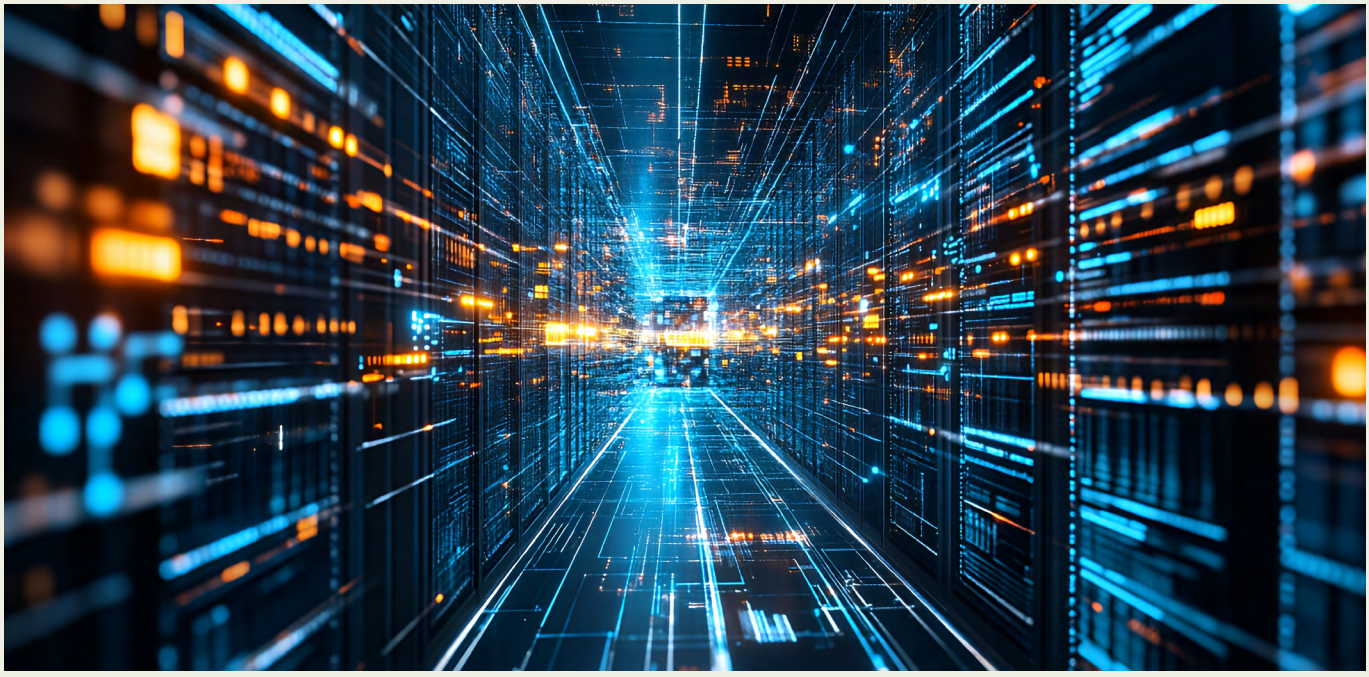
Source: DC Byte, Knight Frank Malaysia Research

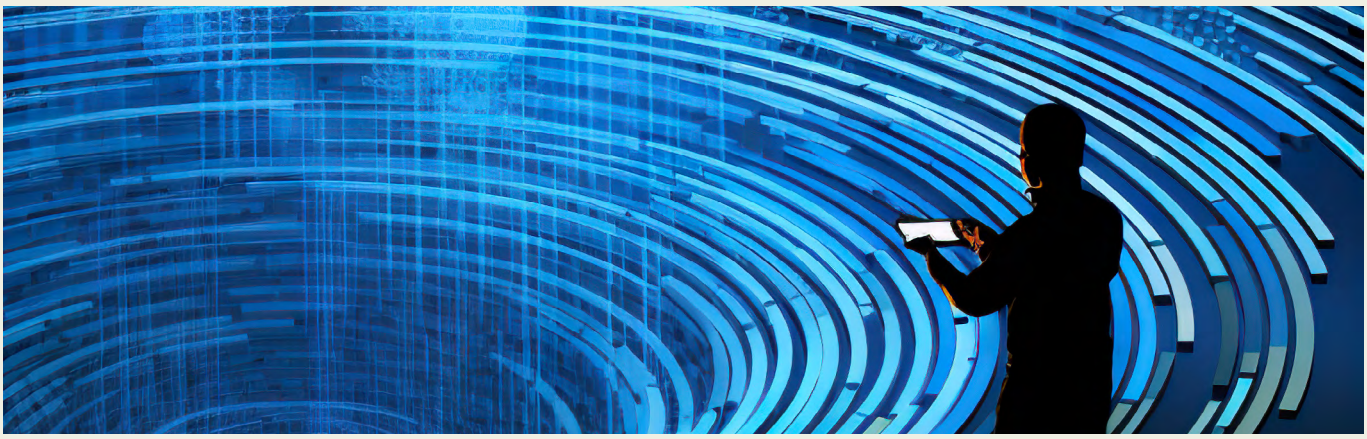
Note: Aggregate supply included live and pipeline (under construction and committed IT Capacity)

Selected Notable Land Transactions in 2022 - 2024

Date	Location	Consideration (RM Mil)	Buyer
Jul 2024	Cyberjaya	23.0	**Equinix, Inc**
Feb 2024	Cyberjaya	149.7	**Bridge Data Centres**
Oct 2023	Cyberjaya	74.9	**YTL DC South Sdn Bhd**
Sep 2023	Cyberjaya	158.7	**Amazon Data Services Sdn Bhd**
Aug 2023	Cyberjaya	182.8	**EdgeConneX Sdn Bhd**
Oct 2022	Cyberjaya	11.5	**VDC KUL 14 Sdn Bhd**
Oct 2022	Seksyen 51/51A, Petaling Jaya	148.2	**NextDC Sdn Bhd**
Jun 2022	Cyberjaya	22.9	**Infinaxis Data Centre**

Source: Bursa Malaysia / JPPH / Various News Announcements / Knight Frank Malaysia Research





Johor

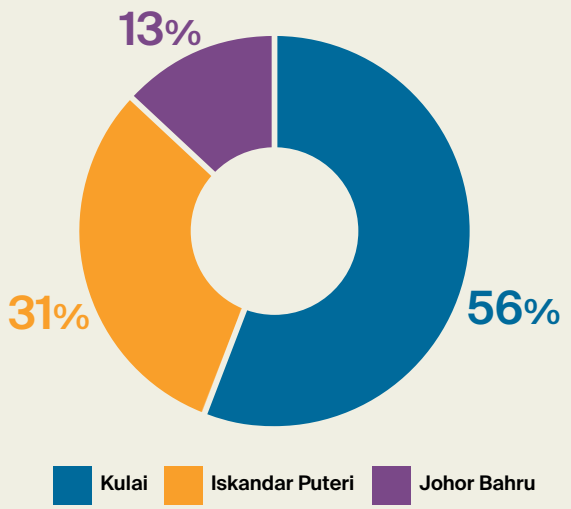
Johor remains an attractive location for data centres, and has surpassed Klang Valley in terms of IT capacity. The data centre market in Johor experienced exponential growth between 2020 and 2024, at 318MW per annum, recording an aggregate supply of 1,296MW as of the end of 2024, which is 56 times the state's capacity in 2020.

There are 12 operational data centres in Johor, which is approximately one-third of the number in Klang Valley, however, the total live IT capacity is close to four times that of the capacity operational in Klang Valley. The surge is attributed to international data centre operators starting to operate their data centres, including Airtrunk, Equinix, K2 Data Centres, and GDS Holdings.

Operational data centres are concentrated in the Kulai locality, where Sedenak Technology Park and YTL Green Data Centre Park are situated. This locality was also the first to attract multiple international data centre operators to invest and acquire land for data centre developments in Malaysia, such as Princeton Digital Group, K2 Data Centres, and the partnership between NVIDIA and YTL.

In the Iskandar Puteri locality, operational data centres are focused in Nusajaya Techpark, with recent completions including data centres by Equinix and GDS Holdings, on top of existing data centres operated by Telekom Malaysia.

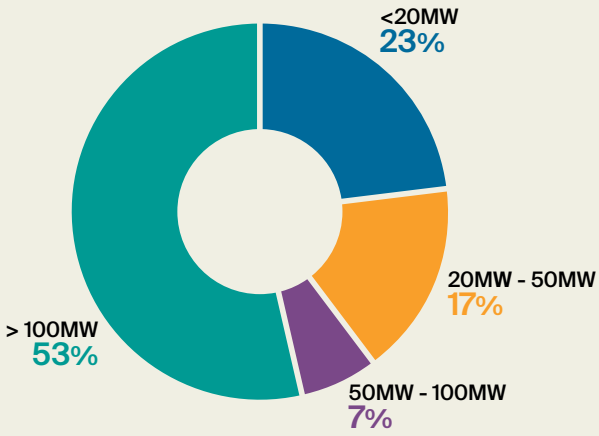
Distribution of Live IT Capacity in Johor



Source: DC Byte, Knight Frank Malaysia Research

While small-scale data centres dominate the Klang Valley market, the market in Johor is quite different, with 53% of data centres planned to have an IT capacity of 100MW or more. Apart from Microsoft, several notable data centre operators have announced plans for large-scale data centre developments, such as AirTrunk, Bridge Data Centres, EdgeConneX, GDS Holdings, and Princeton Digital Group.

Data Centre Size Distribution

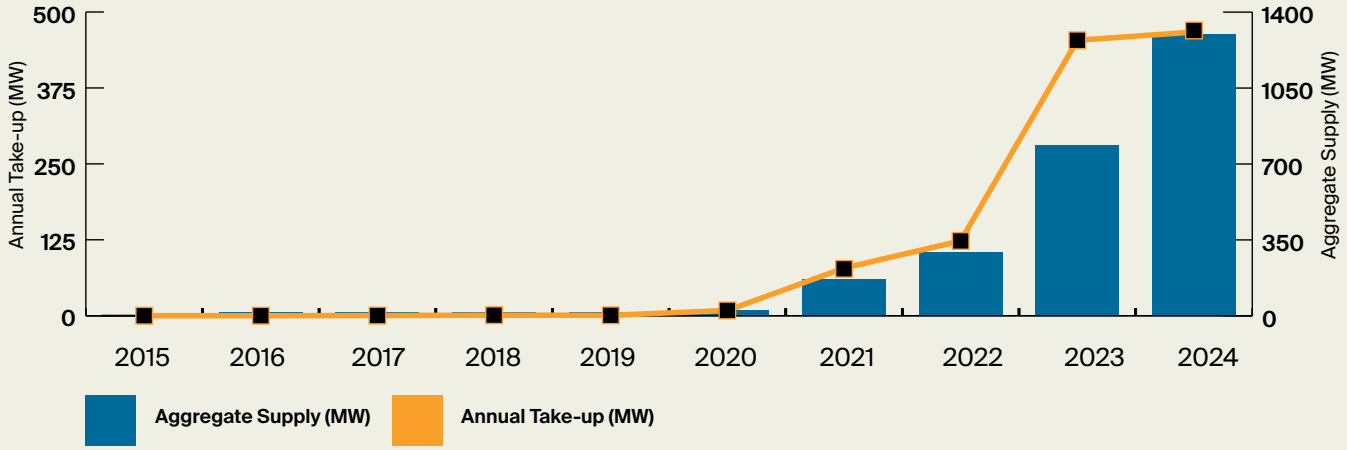


Source: DC Byte, Knight Frank Malaysia Research

Bridge Data Centres is the dominant player in the Johor data centre market, operating 32% of the built IT capacity. GDS Holdings and AirTrunk follow with 29% and 13%, respectively. Nevertheless, tech giants like Google may emerge as one of the top players, considering their active acquisitions in 2024.

Strong demand for data centre capacity has been observed in Johor over the past three years, averaging approximately 275 MW annually (colocation and self-built). Colocation supply has operated at consistently low vacancy rates of between 1% and 2% over the past two years. Additionally, the pipeline of upcoming data centres has shown promising pre-lease rates of 57%.

Johor: Cumulative Supply and Annual Take-up



Source: DC Byte, Knight Frank Malaysia Research

Selected Data Centre Land Transactions in Johor (2023 - 2024)

Date	Location	Consideration (RM Mil)	Buyer
Dec 2024	Nusa Cemerlang Industrial Park	120.0	**Data Cloud Innovation Sdn Bhd**
Oct 2024	Gelang Patah	239.9	**Computility Technology (Malaysia) Sdn Bhd**
Aug 2024	Gelang Patah	383.1	**NTT Data Group**
Jul 2024	Nusa Cemerlang Industrial Park	115.8	**Nanda Digital Sdn Bhd**
Jul 2024	Sunway City Iskandar Puteri	380.0	**Equalbase Pte Ltd**
Jun 2024	Off Jalan Kampung Lalang	178.2	**ST Dynamo DC Sdn Bhd**
Jun 2024	Gerbang Nusajaya	144.9	**Undisclosed DC Operator**
Jun 2024	Eco Business Park VI	402.3	**Microsoft Payments (Malaysia) Sdn Bhd**
May 2024	Southern Industrial Logistics Clusters (SiLC)	209.8	**Digital Hyperspace Malaysia Sdn Bhd**
May 2024	Ulu Tiram	238.3	**Bridge Data Centres Malaysia IV Sdn Bhd**
Apr 2024	Nusa Cemerlang Industrial Park	134.5	**Microsoft Payments (Malaysia) Sdn Bhd**
Mar 2024	Sedenak Tech Park	50.2	**Brightray Science Sdn Bhd**
Dec 2023	Southern Industrial Logistics Clusters (SiLC)	102.7	**AirTrunk Malaysia Two Sdn Bhd**
Nov 2023	Nusa Cemerlang Industrial Park	315.1	**Microsoft Payments (Malaysia) Sdn Bhd**
Nov 2023	Nusa Cemerlang Industrial Park	111.0	**Yu Ao Sdn Bhd**
Nov 2023	Nusa Cemerlang Industrial Park	117.0	**STT GDC 2 Malaysia Sdn Bhd**
Jul 2023	Sedenak Tech Park	155.5	**K2 Strategic Infrastructure Malaysia Sdn Bhd**
Mar 2023	Sedenak Tech Park	77.0	**Princeton Digital Group (SGPlus Two) Sdn Bhd)**

Source: Bursa Malaysia / JPPH / Various News Announcements / Knight Frank Malaysia Research

SEA-5 Overview

The SEA-5 data centre market boasts a total capacity exceeding 3GW, consists of both operational facilities and pipeline developments. This represents a significant increase of 1.7GW compared to 2022.

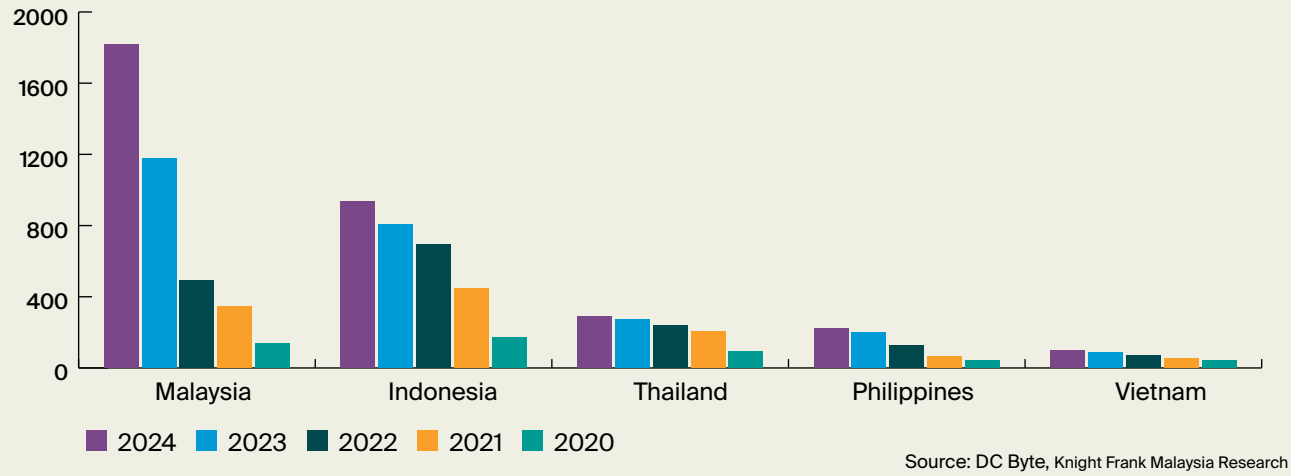
Over the past year, there has been notable growth in cloud regions across these countries. For example, Amazon Web Services has expanded into Malaysia and Thailand, Oracle Cloud has established a presence in Malaysia, and Microsoft has announced plans for a new data centre region in Thailand. The table below summarizes the presence of cloud regions and availability zones by major hyperscalers in the SEA-5 countries.

	Microsoft Azure	Amazon Web Services	Google Cloud	Alibaba Cloud	Oracle	Huawei	Tencent Cloud
Malaysia	●	●	●	●	●		
Indonesia	●	●	●	●		●	●
Thailand		●	●	●		●	●
Philippines		●		●			
Vietnam		●					

Source: DC Byte, Knight Frank Malaysia Research

Note: Live and announced Region / Local Zone as per public disclosures / news announcements as of Nov 2024. The above excludes cloud services that offered via local partnership.

Aggregate Supply of Data Centres in SEA-5 Cities



Source: DC Byte, Knight Frank Malaysia Research

MOVING FORWARD

Data centres are critical to powering the growing digital economy. However, their operations demand substantial energy and water to ensure the uninterrupted functionality of servers, cooling systems, and other IT equipment.

The sudden surge of data centre investments in Malaysia, especially in Johor over the past two years, has raised concerns about the nation's and state's ability to handle the increased demand for electricity and water resources. Stakeholders are questioning whether the existing infrastructure can sustainably support this rapid growth without compromising environmental commitments and local communities.

From a national perspective, the government is actively shaping the investment landscape for the data centre industry through comprehensive measures. In 2024, several key milestones were achieved, including the release of updated planning guidelines. Additionally, sustainable development frameworks and a new incentive system based on a "scorecard" approach are currently under development, reflecting the government's commitment to fostering a balanced and responsible growth environment.

The Johor State Government has also taken a strategic and decisive stance in addressing the resource challenges posed by this resource-intensive sector. Recognising the potential strain on energy and water resources, the state has implemented stringent guidelines in approving data centre developments. As a result, the state has rejected nearly 30% of data centre applications (reported in November 2024[1]) after considering factors such as the adoption of renewable energy, water management, resource readiness, and economic benefits.

Moving forward, the data centre industry in Malaysia will move into a stabilisation phase. With the private sector actively playing its role in utilising technology to reduce carbon footprints through innovation and bringing in best practices to the country, it is anticipated that the government will take an adaptive approach in its approach to the industry, fostering an investor-friendly environment through regulations, guidelines, and policies that balance sustainability and technological growth.

Source: [1] The Straits Times

Malaysia Data Centre Team

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Data Centres The APAC Report - March 2024

Data Centres The APAC Report - June 2024

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