

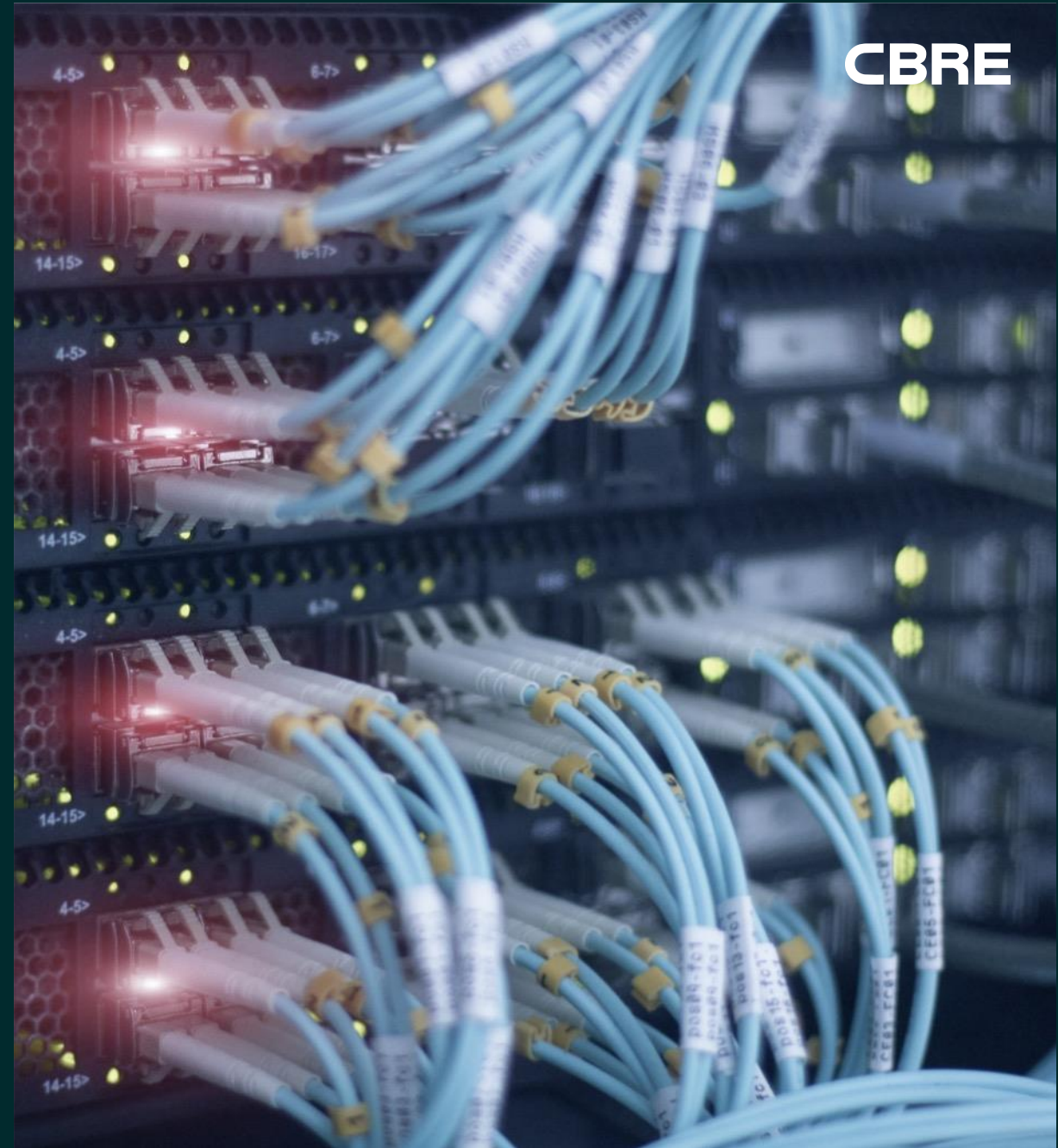
Intelligent Investment

Asia Pacific Data Centre Trends Q1 2024

REPORT

ASIA PACIFIC
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CBRE RESEARCH
APRIL 2024

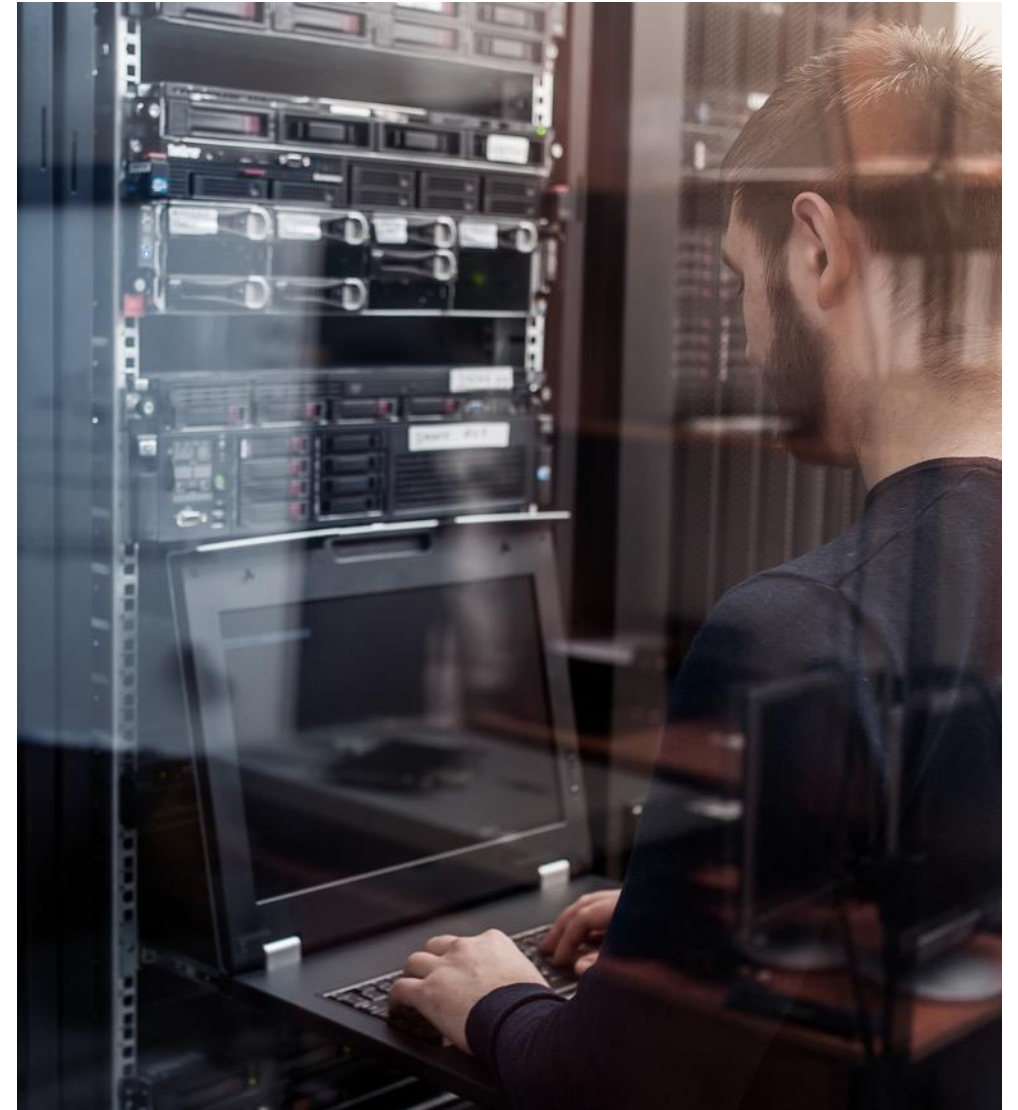


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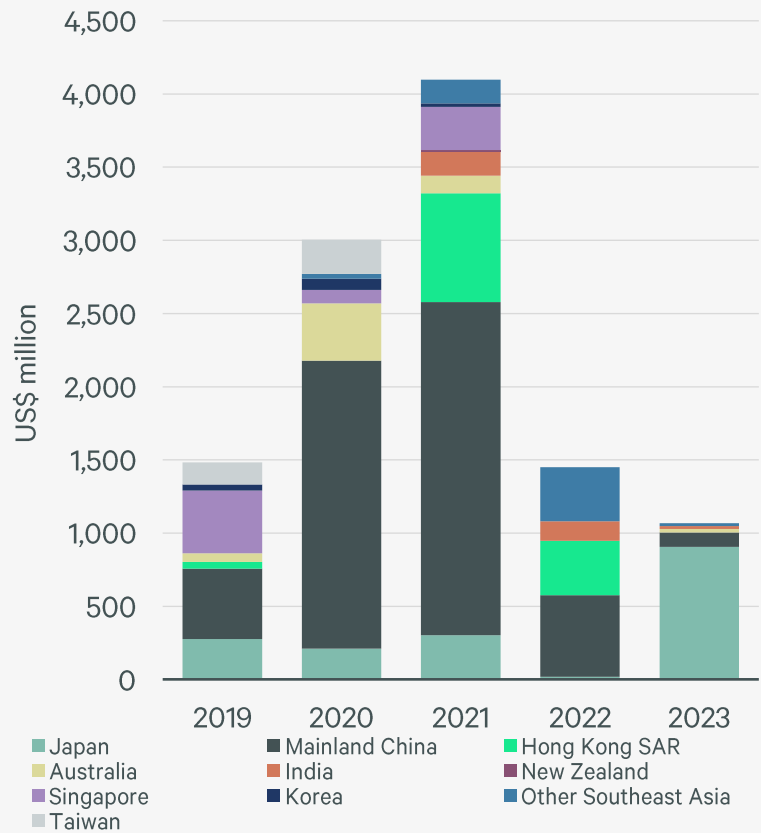
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Capital Markets Insights

- Investor demand for data centres is strong, with a wide range of buyers seeking stabilised assets. However, there remains a lack of stock for sale.
- Prevailing high interest rates continue to weigh on data centre investment, with full-year investment volume falling by 26% y-o-y to US\$1.1 billion in 2023. Activity remains focused on Japan as this is the market with the most active development pipeline. Major deals of note in 2023 were the TIS Inc’s acquisition of a data centre in Shinagawa for US\$528.8 million as well as the sale of a Blackstone-owned property in Osaka for US\$359.7 million.
- Activity in emerging markets such as Indonesia, Malaysia and Thailand is more development-focused, with investors seeking to buy land and form joint ventures. Recent examples include a partnership between GDS and Indonesia Investment Authority and Keppel’s joint venture with Mitsui Fudosan.
- Investment volume in 2024 is expected to recover from last year’s low base, driven by deals in Japan. Activity elsewhere will be limited.
- Some investors eyeing data centres are wary of the level of operational risk and potential brand damage arising from power outages; a trend that is pushing them towards forming joint ventures with experienced operators. Other concerns include the longevity of demand from major cloud services providers.

Figure 1: Asia Pacific direct data centre investment volume



Note: Entity transactions included
Source: MSCI Assets, CBRE Research, March 2024.

- Investors are increasingly cognisant of the pressures data centres are exerting on power supply. In some markets, especially Korea where several deals have been pulled after residents’ protests forced local authorities to rule against development permit applications, this is now a political and governance issue.
- Power supply is now regarded as a commodity and one that is becoming more challenging to acquire, especially considering the huge quantum that is required for the newest and most advanced facilities.
- ESG remains on investors’ agenda but the lack of assets for sale means investors are more focused on pricing and underwriting rather than issues that while making for good optics, aren’t necessarily essential.
- Other obstacles to incorporating ESG principles and practices in investment objectives include the lack of renewable energy in markets such as Singapore and Hong Kong SAR.
- Some data centre owners are nevertheless exploring pathways to improving the sustainability performance of their facilities in the medium to long term.

Australia

Occupier market

- Many service sector and telecommunications companies operate large legacy data centres but are now shifting away from this model due to the high costs incurred in running such facilities, many of which are now out of date and inefficient compared to newer product.
- As Australian corporates follow the trend in the U.S. and Europe and move away from an in-house model towards a co-location and cloud approach, there is huge demand for land from data centre operators in Sydney and Melbourne.
- Many industrial developers across the country are now considering powered shell data centre developments to obtain exposure to the asset class. Whilst data centre operators have historically been reluctant to partner with industrial landlords, some groups are now considering this form of ownership as land and power becomes harder to procure in key markets.

Supply/ Vacancy

- New supply is almost fully contracted amid strong demand from AI and continual rapid cloud adoption.
- Due to long lead times for data centre construction off the back of shortages of certain materials such as chips and transformers, construction timelines have increased significantly. This will constrain supply in the medium to long term and have a knock-on effect on price.

Investment market

- Investment activity in 2023 was limited due to a lack of investible product but data centres as an asset class remained keenly sought after by investors. Several existing legacy enterprise data centres were transacted over the course of 2023, and we expect this trend to continue.
- Other investment trends include Australian super funds making large platform investments into Europe and elsewhere around the globe. Examples in 2023 include AustralianSuper’s acquisition of a minority stake in Vantage EMEA for around US\$ 1.6 billion and Aware Super’s US\$500 million investment in U.S.-based operator Switch.

Trends to watch

- Renewable power will continue to be a key focus for data centre operators. Locations where large-scale renewable projects are more prominent, such as Perth and Queensland, will potentially attract new data centre development.
- Melbourne and Sydney are still the core markets for Australia driven by customer preference/ availability zones, however outer metro areas are becoming more sought after due to the larger requirements for power (such as 100+MW).

Selected market movements

- AirTrunk has submitted the planning application for SYD3 with a total capacity scalable to 320MW in Sydney.
- Macquarie Data Centres has commenced work to increase the capacity of IC3 SuperWest to 63MW in January 2024.
- Goodman is reportedly planning to redevelop the former ABC television studios in Sydney into an 80MW data centre.
- Rest Super has committed to invest US\$657 million in Quinbrook Infrastructure Partners, which provide exposure to renewable assets including the Supernode green data centre and battery storage campus in Brisbane.
- NextDC has acquired a 2022 built, partially fitted data centre (S6) in Artarmon, Sydney for around US\$121 million. The facility offers up to 13.5MW and is within proximity to its S3.

Key Stats - Sydney

Total Capacity (MW) – as of end 2023		773
2024 – 2026 Upcoming Capacity (MW)		314
2024 Outlook	Colocation Prices	▶
	Vacancy	▶
Indicative Cap Rate – as of Q3 2023		5.25% to 6.25%

Source: CBRE Data Centre Services, CBRE Research, March 2024.

Hong Kong SAR

Occupier market

- Supply has marginally outpaced demand. Mainland Chinese domestic firms have contributed the bulk of recent absorption, closely followed by multinational hyperscale take up, with several multi-MW transactions announced over the past three quarters.
- Take up from local IT service providers has increased, along with tier II and tier III hyperscale transactions.

Supply/ Vacancy

- The years from 2022-2025 mark a supply peak for new data centre supply in Hong Kong. 100MW+ of new capacity came on stream in 2023, with seven operators due to launch new facilities this year through early 2025. New supply will then drop from 2026, with further declines in 2027/28.
- Surplus supply has seen vacancy increase from around 25% in 2023 to ~30% in H1 2024. Despite recent take-up from hyperscalers and domestic occupiers, vacancy is expected to edge up further during the supply peak in 2024, followed by a return to mid-20% early next year.
- Power supply in most main areas for data centres in Hong Kong is already taken up by existing facilities. Operators considering new locations must build a new substation to serve their facility, which requires a four-year construction period.

Investment market

- Investment interest remains firm but deal flow has been slow. Many investors looking at older industrial buildings are assessing how such properties can be retrofitted and serve as data centres.
- Operators are continually assessing sites but greenfield and brownfield land for data centre development is limited. The next batch of government land won't be available until 2028.

Trends to watch

- Concerns around geopolitical issues have started to recede and foreign companies with a pre-existing presence in the city are willing to expand and relocate with increased size.
- Many data centre technicians were historically employed in the telecoms industry and are now approaching retirement. This is creating a big talent gap that operators are struggling to fill. Hiring from overseas is an option but new hires are often quickly poached by rivals.
- With power density approaching 10kW per rack or higher, achieving high power usage effectiveness (PUE) is a key priority. While AI can assist with power wastage and remove the human factor in monitoring cooling and airflow, obtaining sufficient GPU's remains a challenge.

Selected market movements

- Goodman has confirmed plans to retrofit Goodman Texaco Centre in Tsuen Wan to a 50MW data centre, with completion expected in 2026.
- AirTrunk’s second data centre in Hong Kong SAR (HKG2) is scheduled to be completed by end-2024, with total capacity scalable to over 15MW.
- ESR has closed a sustainability-linked loan of around US\$205 million, the first in Hong Kong, to fund its conversion of a building in Kwai Chung with a design capacity of 21.3 MW.

Key Stats – Hong Kong SAR		
Total Capacity (MW) – as of end-2023		613
2024 – 2026 Upcoming Capacity (MW)		296
2024 Outlook	Colocation Prices	▲
	Vacancy	▲
Indicative Cap Rate – as of Q3 2023		3.00% to 5.75%

Source: CBRE Data Centre Services, CBRE Research, March 2024.

Japan

Occupier market

- The first half of 2023 saw demand focused on Osaka, with cloud providers aggressively seeking sites for new set up. This was followed in the second half of the year by a surge in AI-related demand for space in the Tokyo CBD. Colocation demand has been steady.
- AI demand is focused on the Tokyo CBD as most companies are start-ups or VC-funded groups, meaning that having sites in central Tokyo is important for work flexibility.
- Demand from the hyperscale segment remains strong, especially from major providers. Plans for a new hyperscale data centre were recently announced in Hokkaido due to access to renewable energy and diversification from Greater Tokyo and Greater Osaka.

Supply/ Vacancy

- Japan’s new data supply will peak in 2025/2026 as several major schemes providing around 1,300MW of space are due to come on stream.
- Some operators of new supply have signed clients but others still have capacity available, meaning they will have to lower rates.

Investment market

- Data centre investors and developers are responding to growing AI demand by lodging bids for sites in the Tokyo CBD.
- Several investors including institutional groups and hedge funds who made data centre purchases five years ago are now considering exit strategies; a trend that could lead to increased sales in 2024.
- Higher power, construction and Mechanical, Electrical and Plumbing (MEP) costs are pushing down cap rates. Deals in 2023 were typically concluded at a cap rate of around 4%, a level set to decline this year.

Trends to watch

- Power costs almost doubled between 2020 and 2022 and remain a key challenge for the data centre industry. Construction costs also continue to rise.
- The labour shortage remains a serious issue, with unemployment standing below 3%, a level on par with the 1980s economic bubble. The government continues to consider relaxing immigration regulations to allow the entry of more skilled workers but little progress has been made thus far.
- Hokkaido and Kyushu are emerging as new frontiers in Japan’s data centre market as the government looks to support decentralised data centre development. Customised data centres for AI / GPU end-users are being constructed in these two markets.

Selected market movements

- Digital Core REIT has acquired a 10% stake in a data centre in Osaka from Mitsubishi Corporation for US\$52 million.
- CyrusOne has formed a US\$7 billion joint venture with Kansai Electric Power Company (KEPCO) for the development of 900MW of data centres across Japan.
- AWS plans to invest US\$15 billion in its existing cloud infrastructure in Tokyo and Osaka by 2027.
- SoftBank has announced plans to develop a data centre hub of 300MW+ in Tomakomai City in Hokkaido. Phase one of about 50MW will be delivered in 2026.
- Asia Pacific Land (APL) reportedly plans to build a 120MW data centre in Kitahyushu by 2027.

Key Stats – Greater Tokyo

Total Capacity (MW) – as of end-2023		892
2024 – 2026 Upcoming Capacity (MW)		407
2024 Outlook	Colocation Prices	▲
	Vacancy	▶
Indicative Cap Rate – as of Q3 2023		3.50% to 5.50

Source: CBRE Data Centre Services, CBRE Research, March 2024.

Singapore

Occupier market

- Demand is being driven by enterprises relocating current capacity from older data centres to brand new facilities. Some demand is also coming from new entrants. However, tight supply will impact options for enterprises, with deployment down to a KW basis rather than MW.
- For the enterprise segment, pricing continued to trend up in 2023 after strong performance in 2022 that was driven by lack of capacity and strong leasing demand. Momentum was strong in H1 2023 but dipped towards H2 2023.
- Colocation price for the enterprise segment is expected to be flat or mixed in 2024 as the Singapore market consolidates after the rapid growth over the past few years.

Supply/ Vacancy

- There is currently no news about future allocations beyond the 80MW awarded to four data centre operators in July 2023 by EDB-IMDA’s pilot DC-CFA exercise. Given that EDB-IMDA committed in July 2023 to allocate more capacity “in the next 12 to 18 months’, strong take-up of this 80MW would facilitate more capacity to be available for application.
- Some small pockets of space could emerge for the enterprise segment in 2024, but there will be no available options for the hyperscale segment.

Investment market

- Investment activity has been muted since the introduction of the moratorium on new data centre construction, with very few assets changing hands.

Trends to watch

- Limited space and constraints on power supply mean development interest is spilling over to neighbouring countries, particularly Batam in Indonesia and Johor Bahru in Malaysia, although both these locations suffer from a shortage of skilled data centre technicians. More than 100MW of data centre capacity went live in 2023 in Johor Bahru, where hyperscale pricing is approximately half of Singapore’s.

Selected market movements

- OVHcloud launched its second data centre of 2MW in November 2023.
- KKR plans to acquire a 20% stake in Singtel’s regional data centre business for around US\$815 million. The agreement also provides for KKR to increase its stake to 25% by 2027.
- Big Data Exchange (BDx), the sitting tenant of OneTen Paya Lebar, has acquired the building for US\$104 million.

Key Stats - Singapore

Total Capacity (MW)		718
2024 – 2026 Upcoming Capacity (MW)		98
2024 Outlook	Colocation Prices	▶
	Vacancy	▶
Indicative Cap Rate – as of Q3 2023		5.75% to 7.00%

Source: CBRE Data Centre Services, CBRE Research, March 2024.

India

Occupier market

- 2023 was a quiet year for leasing as many companies remained in wait-and-see mode amid global economic slowdown. However, activity began to pick up strongly in Q4 2023 and there is a large volume of deals in the pipeline.
- India continues to attract new investment as several state governments have been providing preferential policies and/or incentives to facilitate investment from data centre operators and investors.
- Hyperscaler demand continues to grow, with many groups expanding to take on AI-related workload. Some hyperscalers have purchased land to develop their own facilities.

Supply/ Vacancy

- Mumbai is still India’s top data centre market owing to its status as the financial capital; presence of finance and BFSI industries; status as the main hub for investment; and its role as a host for landing stations connecting the country with the Middle East and Europe.
- Chennai is emerging as the country’s second most popular market due to its location on the east coast, which provides for excellent sub-marine cable connectivity to Southeast Asia.
- Total colocation data centre capacity currently stands at 1GW, more than double the figure from just 18 months ago. New data centre supply is projected to reach up to 250MW every year for the next five years.

Investment market

- Global investors retain a strong interest in the Indian data centre market, with many groups eying partnerships and joint ventures with local operators. M&A activity among operators is likely to pick up in the coming years due to the growing number of players, which should result in some consolidation before the market becomes too fragmented.

Trends to watch

- Challenges to future development include time-consuming approvals processes and the rising cost of land in major cities.
- Power availability is not a key challenge in data centre investment in India as many state governments have stepped in to ensure adequate and reliable power infrastructure for data centres.
- Lead times to procure equipment for MEP architecture have increased in recent years but have now stabilised at around six months.
- Competition for labour is increasing due to the large number of new public infrastructure projects currently underway but is not an acute issue like in other countries in this region.

Selected market movements

- Colt DCS has launched the first phase (22MW) of its 120-MW data centre in Navi Mumbai. Another 70-MW hyperscale data centre is expected to be completed in Chennai by 2027.
- Digital Connexion, a joint venture between Reliance Industries, Digital Realty and Brookfield Infrastructure, has completed its first project in Chennai with a capacity scalable to 100MW. Construction of another 40MW-campus is underway in Mumbai.
- Indian real estate firm Prestige Group is partnering with NTT for a 100MW data centre development in Bangalore.

Key Stats – India*

Total Capacity (MW) – as of end-2023		~950
2024 – 2026 Upcoming Capacity (MW)		~850
2024 Outlook	Colocation Prices	▶
	Vacancy	▶
Indicative Cap Rate – as of Q3 2023		8.25% to 9.50%

Note: Markets included are Mumbai, Chennai, Bangalore, Delhi- NCR, Hyderabad, Pune and Kolkata.
Source: CBRE Data Centre Services, CBRE Research, March 2024.

Korea

Occupier market

- Demand is being led by local conglomerates with AI requirements, such as electric vehicle companies, which are seeking data centre capacity.
- Cloud service operators, mostly foreign companies such as AWS, continue to display healthy requirements.
- SK Telecom, which recently invested in an AI company, is looking to expand its data centre portfolio in Korea and elsewhere to accommodate AI capabilities.
- Relocation demand is growing from on-premise data centres to colocation data centres. There is also some demand driven by enhanced requirements for data backup from finance and major IT companies.
- On the operator side, the market has historically been dominated by telecoms companies, but recent years have seen domestic real estate asset management companies enter the fray as they view data centres as investable assets.

Supply/ Vacancy

- Recent years have seen an average of two to three new data centres completed per year but this will rise to five to six in from 2024-2025. There is a trend towards building larger facilities in terms of MW capacity.
- Most of the pipeline is hyperscale and has already been pre-leased, leaving limited capacity for enterprise users.

- While authorities are trying to encourage new data centre construction outside the capital to other locations, there is little demand from operators and developers, most of whom remain focused on locations across Greater Seoul.
- The government has stated there is no more existing power capacity for new data centre projects in Greater Seoul and that it will restrict power supply, especially for new data centres.

Investment market

- Investment demand is strong but aside from the sale of a few land plots, deals have been scarce. Lack of availability remains a major challenge along with vendors’ aggressive pricing that is well ahead of the market.
- The recently-completed-IGIS Hanam data centre is currently up for sale and will be the first transaction of an operational data centre in Korea, should the deal go through.

Trends to watch

- Public opposition to new data centre construction is growing as residents near proposed new developments raise concerns about proximity to high voltage power lines, electromagnetic waves and excessive noise.
- A global data centre operator recently cancelled a project in Anyang and sold the land to local manufacturer, which opted to build a factory instead.

Selected market movements

- LG CNS is partnering with IGIS Asset Management for domestic and overseas data centre investment.
- Major completions in 2024 will include SL2X and SL4 by Equinix in Seoul and SEL2 by Digital Edge in Incheon. The latter has a total capacity scalable to about 100MW.
- Korea’s largest data centre complex with a capacity of 1,000MW is being developed in Solasido in Jeonnam Province. The city plans to be home to 25 data centres by 2037.
- In partnership with four data centre operators, Busan city is going to develop an eco-friendly data centre cluster in Eco Delta City. The project is due to commence operations in late-2027.
- SK Ecoplant, DCT Telecom and KB Asset Management will jointly develop a 120MW data centre in Pohang, North Gyeongsang Province by 2027.

Key Stats – Greater Seoul

Total Capacity (MW) – as of end-2023		531
2024 – 2026 Upcoming Capacity (MW)		495
2024 Outlook	Colocation Prices	▲
	Vacancy	▶
Indicative Cap Rate – as of Q3 2023		5.25% to 7.50%

Source: CBRE Data Centre Services, CBRE Research, March 2024.

Definitions

Key Terms	Overview
Colocation Data Centre	Specialist, standalone data centre facility typically operated by a third-party provider for multiple occupiers. Companies share space and power infrastructure for storing and running their IT equipment, akin to a multi tenant office building or apartment complex.
Hyperscale Colocation	Denotes large power requirements (typically multi-megawatts, or at least more than 2MW), and end user is specifically a cloud provider or large tech company with requirements for scalable power, storage, and cooling.
Wholesale Colocation	Typically denotes larger power requirements (>500 kW) by enterprises, between retail and hyperscale deployment sizes.
Retail Colocation	Typically denotes smaller power requirements (can range from 10kW to 300 kW+) taking up fitted space, with less customization privileges.
“Carrier” Or “Neutral” Colocation Data Centers	CBRE exclusively tracks third-party carrier neutral colocation data centres across Asia Pacific, except in markets where carriers predominate (e.g. Korea, Taiwan).
Upcoming Supply	Data centre facilities that have been planned, qualified and authorized by the relevant local / municipal authorities and are currently undergoing pre-development / development of the powered shell.
Capacity	<p>The total quantum of useable, sellable IT capacity in a data centre facility (or market), inclusive of sold and unsold capacity. The unsold capacity includes both fitted and shell & core space.</p> <p>Fitted: The amount of power available immediately in fully fitted data centre space.</p> <p>Shell: The amount of power available in a data centre space that is pre-qualified for power and telecom access and amenable to data center use.</p>
Availability Zone	Hyperscale cloud are comprised of Availability Zones, which are technology infrastructure in separate and distinct geographic locations with enough distance to significantly reduce the risk of a single event impacting customers’ business continuity, yet near enough to provide low latency for high availability applications. Each Availability Zone has independent power, cooling, and physical security and is connected via redundant, ultra-low-latency networks.

Source: CBRE Asia Pacific Data Centre Solutions, 2024.

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