

Korea Data Centers



New players are entering Korea's rapidly growing data center market

OVERVIEW

Demand for data centers in Korea continues to grow driven by the surge in data consumption. With vacancy approaching zero for centers in the Seoul Metropolitan Area, new market players such as institutional investors, asset managers, and construction companies have entered the market.

Growth of data traffic is accelerating with the adoption of new technologies such as artificial intelligence, big data, and cloud computing, generating unprecedented opportunities for data centers.

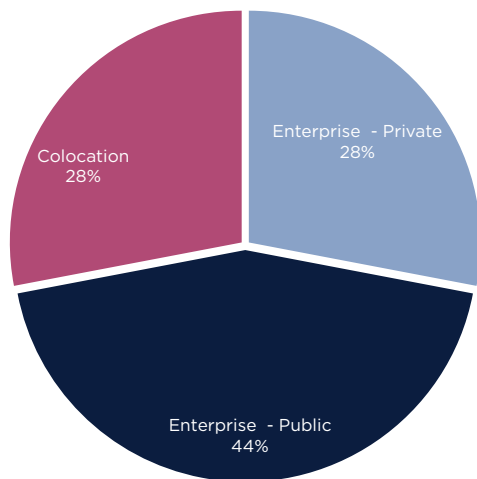
Traditionally, the dominant form of data center in Korea has been enterprise data centers, which are owner-occupied by private corporations and the public sector, representing 72% of the total at the end of 2020. Only a few are operated by major telecommunications companies as Colocation Data Centers (28% of the total), which are centers leased to end-users for commercial purposes.

However, robust growth in data consumption has led more corporations in the IT and finance industries to pursue enterprise data center development.

The increasing number of global cloud service providers in Korea has also impacted market dynamics. There are numerous projects under development or leased to the world's top data center operators, such as Equinix and Digital Realty Trust, providing cloud infrastructure for global cloud service providers (CSP) including AWS, Microsoft and Google.

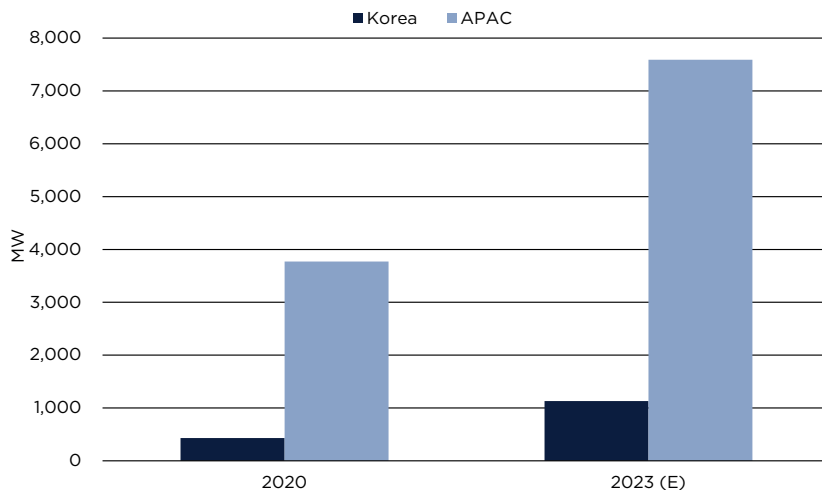
Recently, institutional investors seeking to capitalize on exploding market growth have become active in new colocation data center developments. The market is becoming more segmented now with interest from institutional investors, asset managers, and construction companies.

GRAPH 1: Korea Data Centers Stock By Type, 2020



Source Savills Korea, Korea Data Center Council

GRAPH 2: Korea Vs APAC Colocation Data Centers IT Capacity, 2020 to 2023F



Source Savills Korea, Korea Data Center Council, Gartner

TOTAL STOCK & NEW SUPPLY

Total supply equal to 190MW of IT capacity was added to the market between 2019 and February of 2021, and an additional 100MW is in the pipeline by the end of 2021.

According to the Korea Data Center Council (KDCC), the total capacity of colocation data centers reached 430MW in terms of IT load at the end of 2020, equal to 11% of total APAC IT load. Based on forecasts by Savills Korea, total commercial data center IT load in Korea is projected to increase by 700MW during 2021 – 2023 to represent 15% of total APAC capacity.

Future data centers expected in Korea during 2021 – 2023 will be concentrated in the Seoul Metropolitan Area (“SMA”), namely Ilsan, Gasan, Sangam, Anyang, and Yongin. The districts of Ilsan, Anyang and Yongin are likely to post the highest growth, boosting capacity by over 100% by 2023 compared to February 2021.

KEY MARKET PLAYERS

Against the backdrop of COVID-19 and surging data traffic, institutional investors, asset managers, and construction companies have emerged as suppliers of data centers, historically developed primarily by telecommunications companies.

Notable future developments include Pacific AMC’s project in Yongin-si, and Actis-GS E&C consortium’s project in Anyang-si. Rising interest among financial investors and construction companies is likely to support strong growth in construction volumes, leading to a growing number of sites being used as new data centers and related facilities.

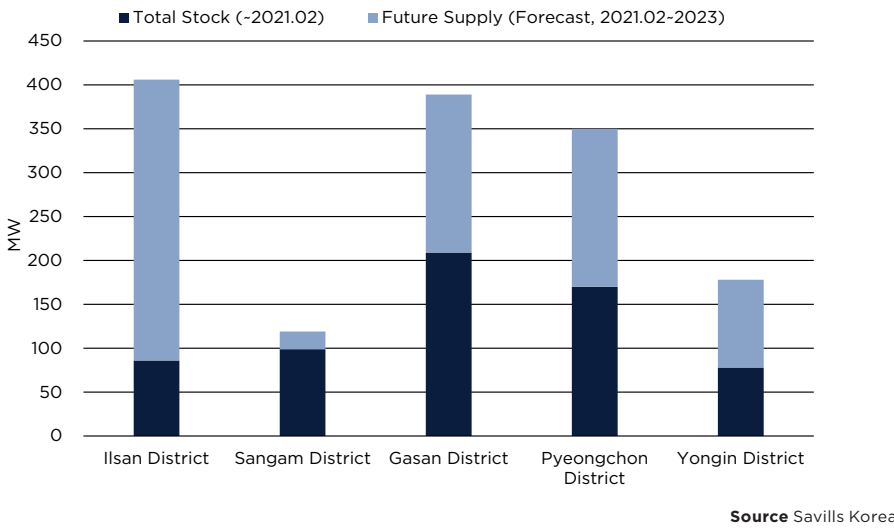
Going forward, securing end-users is likely to be the biggest challenge for Korea's data centers. While providers of data centers continue to add speculative capacity based on rising data demand, there is only a limited number of global cloud service providers who generate significant levels of leasing demand. As a result, developments which have not been subject to a thorough analysis of future supply and the business strategies of cloud service providers prior to launch may experience challenges in lease stabilization and operations.

Demand for data centers continues to grow driven by the surge in data consumption. With vacancy approaching zero for centers in the Seoul Metropolitan Area, new types of players such as institutional investors, asset managers, and construction companies have taken an interest in the market.

TRANSACTIONS AND INVESTMENT MARKET

Investment activity among asset managers was robust in 2020 with three notable transactions in 2020 amounting to KRW203 billion in terms of land price.

GRAPH 3: Accumulated Vs Future Total Data Center Supply For Key Districts, February 2021



KORAMCO AMC completed the acquisition of Hostway Data Center, adjacent to KT IDC in Bundang, Seongnam-si for KRW43 billion (KRW12.0 million/sq m land area). The center, which is providing hosting services for Hyosung ITX, Samsung Electronics, and other Korean corporates, will be operated by KORAMCO AMC until its fund maturity in 2026.

Meanwhile, Pacific AMC was selected as the preferred bidder for a new data center development in Jukjeon, Yongin-si and will deploy KRW115 billion (KRW3.3 million/sq m land area) for the project which has a gross site area of 35,332 sq m. The project, previously an industrial property, is located next to Jukjeon Digital Valley where corporates such as DB Insurance, Shinhan Group, and Hanhwa Group operate enterprise data centers. Yongin-si has emerged as an attractive location for data centers given its proximity to Seoul, with supply of seven centers in a 3 km radius from the project including SK Broadband and Sejong Telecom.

Another development project includes Pavilion AMC's KRW45 billion investment (KRW6.8 million/sq m land area) in a commercial data center project in Dongan, Anyang-si. Pavilion AMC, the project's financing vehicle, plans to deliver IT load capacity of 26MW and 2,400 server racks, having secured investments from foreign investor Actis and GS E&C, a domestic market leader in construction. Actis plans to secure CSPs or colocation providers as end-users upon completion of the project in Q3/2023.

TABLE 1: Major Transactions, 2020

TRANSACTION TYPE	CITY	NAME	BUYER	TRANSACTIONED AREA (SQ M)	TRANSACTIONED PRICE (KRW BIL)
Hard Asset	Seongnam-si	Hostway Data Center	KORAMCO AMC	3,588 (Land area)	43.0
Development	Yongin-si	N/A	Pacific AMC	35,332 (Land area)	115.4
Development	Anyang-si	N/A	Pavilion AMC	6,644 (Land area)	45.0

Source: Savills Korea

TABLE 2: World Top Data Center Operator, 2020

RANK	OPERATOR	MARKET SHARE	HEADQUARTERS
1	Equinix	11.1%	California, United States
2	Digital Realty Trust	7.6%	Texas, United States
3	China Telecom	6.1%	Beijing, China
4	NTT GDC	4.3%	Tokyo, Japan
5	China Unicom	4.2%	Beijing, China

Source: Structure Research

OUTLOOK

The current market trend of financial investors pursuing new developments is expected to continue. Given the difficulties in forecasting demand for new data centers from global cloud service providers and operators, the market may be oversupplied in the short-term.

Consideration of IT capacity requirements and site selection based on the strategic direction of operators and end-users will become more crucial to adequately respond to the rapidly growing data center demand.

Global data center operators active in Korea include Equinix and Digital Realty Trust, accounting for the first and second largest global colocation market share in 2020. Other market leaders are expected to enter Korea, pushed by strong growth of the domestic data center market.

International operators are likely to take on more data center projects in Korea from the development phase given their strong track record globally.



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