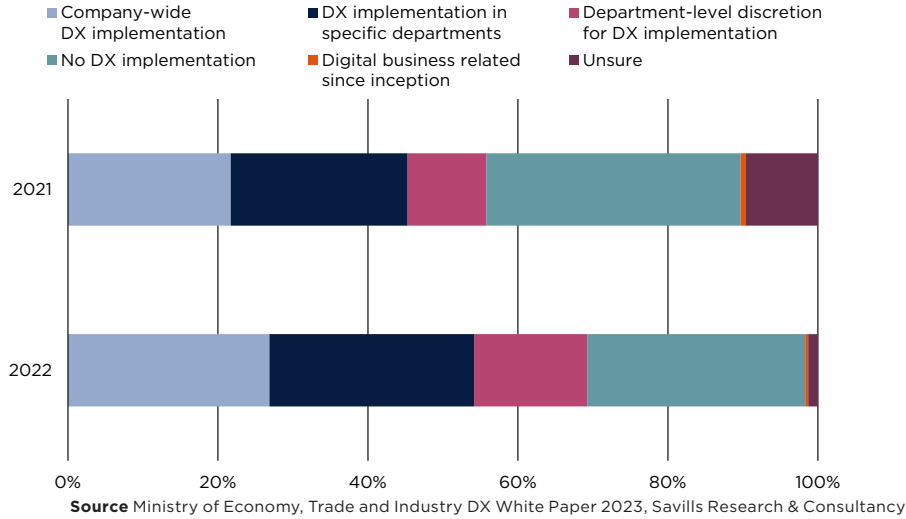


# Japan Data Centres

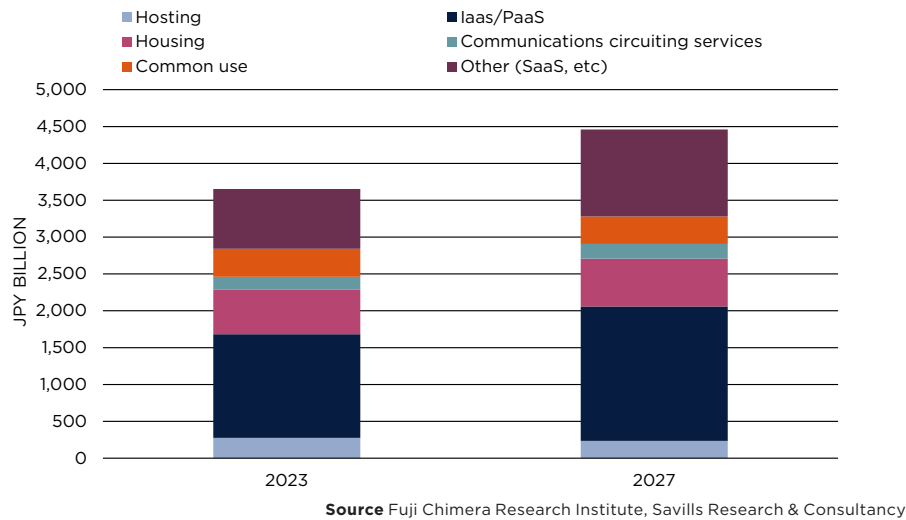


# Data centres benefit from boom in cloud services

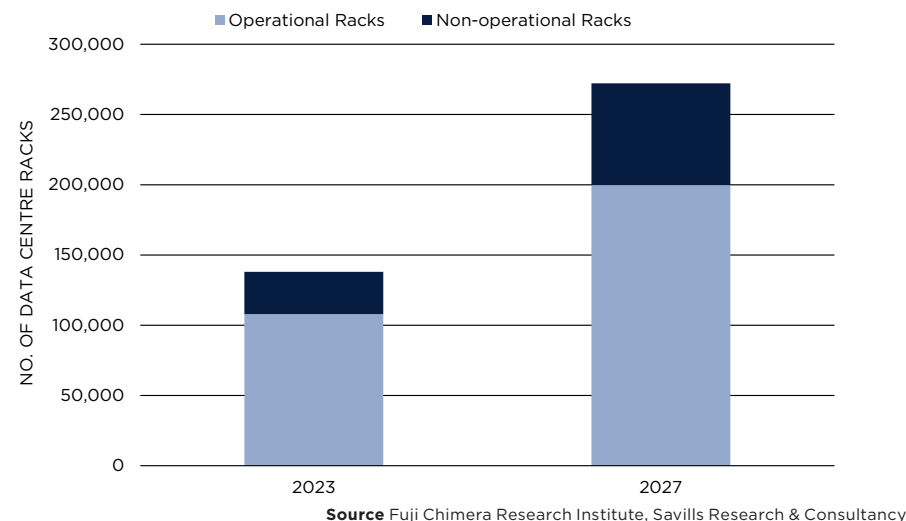
**GRAPH 1: Japan Digital Transformation Implementation, 2021 vs 2022**



**GRAPH 2: Forecasted Data Centre Services Market Value by Service, 2023 vs 2027**



**GRAPH 3: Forecasted Number of Data Centre Racks in Japan, 2023 vs 2027**



## DIGITAL TRANSFORMATION IN JAPAN

The pandemic has expedited demand for digital infrastructure in Japan, which has served as a catalyst for economic growth and investment, with foreign direct investment into communications having seen significant increments over the past few years to more than JPY300 billion in 2022. Since the government started its focus on semiconductor policies in 2021, investments of more than JPY2 trillion have been announced.

Indeed, the need for digital security has heightened, especially amidst international disputes like those observed between the United States and China. Greater interest in the semiconductor industry has risen in turn, and TSMC will be constructing a JPY1 trillion fabrication plant to be completed in 2024 in Kumamoto. Furthermore, chipmaker Rapidus, led by the former CEOs of Tokyo Electron and Western Digital Japan, is planning to begin full-scale 2-nanometer production in 2027. Overall, this paradigm shift has signified increasing demand for data centres to serve as a base for digital infrastructure.

## GROWTH OF DATA CENTRES IN JAPAN

The rise of digital transformation has also served as a tailwind to the rapid expansion seen in the data centre sector, with significant growth forecasted in upcoming years. A survey conducted by the Ministry of Economy, Trade and Industry, showed an increasing number of companies that have made digital transformation initiatives from 2021 and 2022 (Graph 1). Moreover, according to Fuji Chimera Research Institute, the market value of data centres is expected to have expanded from around JPY2.1 trillion in 2018 to JPY3.7 trillion in 2023, and is forecast to grow to JPY4.4 trillion in 2027. In physical terms, the number of server racks is expected to double from around 138,000 in 2023 to 272,000 in 2027, underscoring the extent of the market expansion in Japan.

Around a decade ago, the market was dominated primarily by domestic IT companies such as NTT and NEC. However, many international competitors have since made significant advances into the market, which is also where most of the upcoming growth lies. For instance, GLP has reportedly secured more than half of the land and power supply in its plan to invest up to JPY1.5 trillion to build 900MW of data

centres in Japan – approximately equivalent to the current stock in the market as of 2022. Many other data centre operators and developers, including Equinix and Colt DCS, have also made notable advances in the market and have announced plans to continue expanding.

**HYPERSCALE VS LOCAL DATA CENTRES**

Hyperscale data centres are typically owned and operated by major corporations, and often have more than 5,000 servers with capacities upward of 20MW. In Japan, many such data centres are located on the outskirts of major urban areas such as in Inzai, Chiba, and situated in clusters due to the large amount of land and energy required for operational use. On the other hand, local data centres are much smaller in scale by comparison, and tend to be located in closer proximity to central business districts. However, many older local data centres tend to house outdated, company-tailored IT systems that have become more difficult to maintain. The Japanese government’s digital transformation push has resulted in companies moving away from these legacy enterprise systems, and migrating to cloud-based solutions that hyperscale data centres provide.

Nonetheless, there is still the need and the demand for local data centres situated closer to central areas. Firstly, some companies like to maintain their IT systems in a hybrid fashion, using both cloud services provided by hyperscale data centres, as well as some form of in-house storage, which

could be either in-office or colocation space. Colocation data centres close to central areas have an advantage here as they can provide customers relatively easier physical access compared to those situated further afield.

**INVESTMENT TRENDS**

While the announcements of multiple hyperscale data centre projects have stolen much of the spotlight in the data centre market, local data centres in central business districts have also gained some traction.

Indeed the conversion of office buildings to local colocation data centres appears to be

**The data centre market is forecast for augmented growth over the next few years, with multiple hyperscale projects in the pipeline. At the same time, local data centres are also seeing strong interest from users and investors as an entry point into the burgeoning market.**

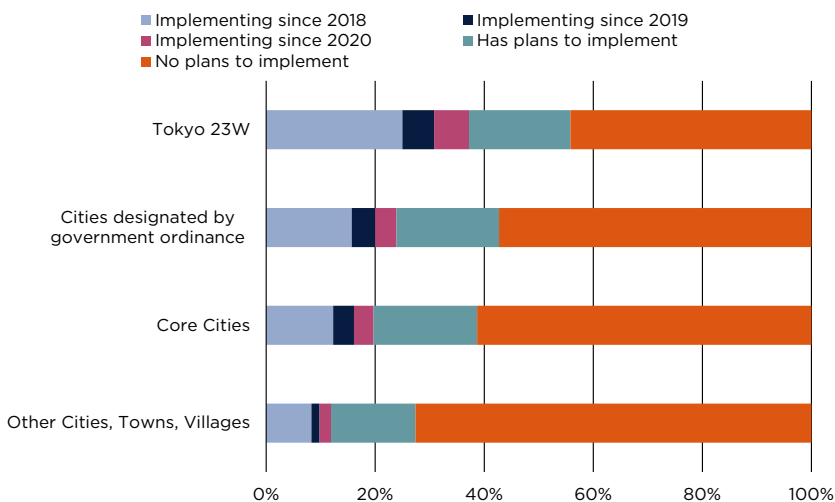
a viable strategy, considering that leases for data centres will be longer and can generally generate greater net operating income than a similar office building would, due to the specialised nature and scarcity of such properties.

One notable example would be the Gotenyama building located in Shinagawa, Tokyo, which Sekisui House REIT decided to sell to TIS for JPY70 billion in March 2023 at an appraised direct cap rate of 3.3%. While it is officially designated as an office building, the buyer TIS is leasing the building in its entirety, using it as a data centre as of March 2023. In addition, Hulic and Digital Edge are reportedly developing a data centre in Nihonbashi, which is likely to have been redeveloped from an office building. International investors have also been active, with Gaw Capital acquiring two buildings in Fuchu, Tokyo, which is a well-established data centre cluster close to the Tokyo 23W. Gaw Capital has plans to develop them into a data centre facility with a power capacity of 50MW. Indeed, investors looking to invest in the Japanese data centre market will more likely find opportunities in similar local data centres, as compared to the hyperscale market which is much more competitive.

**OUTLOOK**

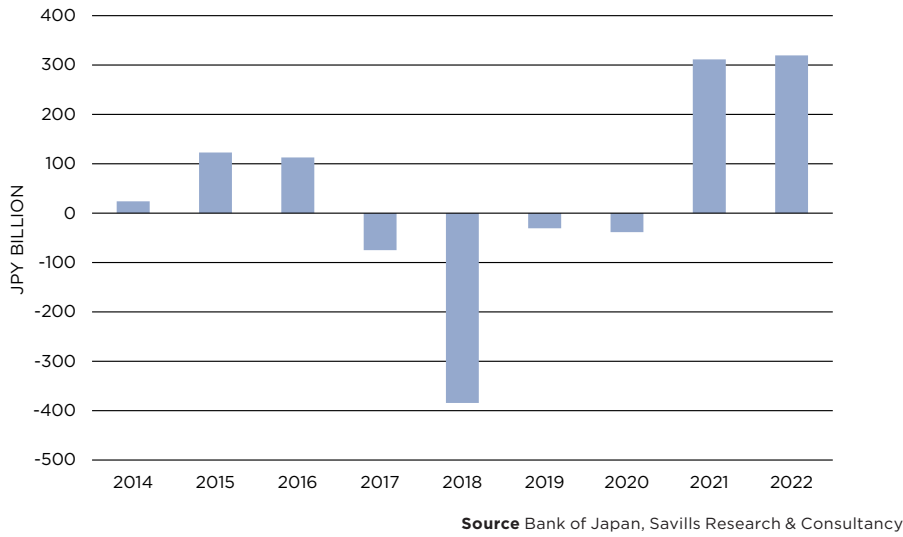
The data centre market in Japan is rapidly growing and expected to see considerable growth in the coming years, with multiple large hyperscale developments in the pipeline, particularly in the Greater Tokyo and Greater Osaka area. While the market has the potential to grow even beyond that, there are multiple constraints that will likely hinder this, especially in the case of hyperscale data centres. Firstly,

**GRAPH 4: Digital Transformation by Location**



Source Ministry of Economy, Trade and Industry DX White Paper 2023, Savills Research & Consultancy

**GRAPH 5: Communications Foreign Direct Investment in Japan by Year, 2014 to 2022**



land suitable for data centre development is scarce as there are various constraints pertaining to size and location. Next, the availability of power is another significant obstacle to overcome, as obtaining power can take years to secure.

Going forward, more investors are likely paying closer attention to the local data centre market, which is comparatively easier to break into. In addition, looking at Graph 4, many companies located outside of the Tokyo 23W have been notably slower in digital transformation, suggesting that there could be potential latent demand in the future if these companies are able to catch up on digital transformation. Foreign direct investment in digital infrastructure and communications technology is likely to continue expanding as seen in Graph 5. Overall, both the hyperscale and local data centre markets will likely see considerable growth.



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