



Market Insight Report Reprint

Japan's colocation and edge facilities show steady growth despite hyperscaler rush

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The country's unique market structure offers growth across hyperscaler, colocation and the edge segments, although power constraint remains a hurdle for providers. Japan could be the heart of the datacenter market in North Asia as the allure of Hong Kong diminishes with growing Chinese oversight.

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Introduction

451 Research recently attended the W.Media Digital Week Northeast Asia virtual seminar, which looks into digital transformation trends and datacenter growth in the Hong Kong, mainland China, Japan, South Korea and Taiwan markets post-COVID-19. Cloud is driving growth across major markets in Asia-Pacific; none of it more apparent than in Japan, which in recent months has seen a few new hyperscale facilities built in Inzai, about 40km out of Tokyo.

However, the Japanese market remains fairly insular, while there is shifting demand seen from localized e-sports and gaming apps that do not need to be close to subsea cable landings. This could lead to a rise of edge facilities across Japan. The seminar also heard that providers and investors are increasingly bullish on new regions, including Hokkaido, which has significant renewable energy capacity.

THE 451 TAKE

Japan is a unique market that is at the forefront of technology and yet has a rather insular domestic economy. The dichotomy is inevitably an advantage for the datacenter industry, which can expect to see growth in both the hyperscale and enterprise colocation segments. This is crucial because margins are typically lower in the wholesale segment. For now, however, the hyperscaler wave rushing into Japan is still going on strong, thanks in part to the global push by Chinese cloud players – Tencent Cloud is expected to launch a datacenter there in June. As Inzai grows to be the new hyperscaler hub, land and power constraints remain two huge hurdles for areas surrounding Tokyo and Osaka. It remains to be seen if more providers will take up offers from local governments to build facilities in the colder northern region, or even in the central industrial area in Nagoya. Despite the challenges, Japan could be the heart of the datacenter market in North Asia as the allure of Hong Kong diminishes with growing Chinese oversight, while mainland China remains a challenging market for most international providers.

Inzai the hyperscaler cluster

Dubbed the ‘Ginza of datacenters’ after the shopping district in Tokyo, Inzai has grown into a hyperscaler hub with the presence of AWS and soon, Google, which has indicated plans to build a datacenter in the coastal city located within the Chiba prefecture in greater Tokyo. In March, Equinix launched its first hyperscale xScale facility in Inzai under a joint venture with GIC. Colt was an earlier mover, with three facilities in the city; its Inzai 3 launched in November 2020 and was almost sold out, Takashi Kondo, the product and sales director, Asia, for Colt Data Centre Services said during the session titled ‘Growth projections for Japan DC Hubs: Where, When and How.’

Inzai's rise is due to its accessibility to central Tokyo, and it is close to the Wada and Emi submarine stations in the south of Chiba. Tokyo's position as the connecting point between trans-Pacific and intra-Asia links has contributed to its growth as one of the largest datacenter markets by operational square feet in Asia-Pacific.

Meanwhile, Inzai is expected to see bandwidth growth as MC Digital Realty, a joint venture between Digital Realty and Mitsubishi, is building a terrestrial dark fiber cable with a bandwidth of up to 100Gbps with Arteria Networks. The link will connect MC Digital Realty's NRT 10 facility in Inzai to landing stations at the northern part of Ibaraki prefecture and the Minami-Boso area of Chiba prefecture, bypassing the need to interconnect in Tokyo, according to the provider. NRT 10 is expected to be ready in August 2021, while the first phase of AirTrunk is scheduled for completion in the second half of 2021.

The emergence of Inzai shows that proximity to cable landing stations, landbank and power availability are the main factors heavily influencing site selection for international players expanding in Japan. Nevertheless, power shortage remains a struggle for providers in Japan after its nuclear power plants were turned off after the Fukushima disaster in 2011. The Tokyo 2020 Olympics, expected to take place this summer after the delay

in 2020, has also diverted infrastructure and utility resources in Japan. Wholesale electricity prices hit record highs earlier in January as a result of cold snaps and severe shortage of LNG, which accounted for 40% of Japan's electricity generation.

Colocation and edge not lagging behind

Unlike in other markets, legacy colocation at smaller providers in Japan is still growing steadily even as hyperscalers are now taking the lead, panelists at the seminar concurred. The 2011 Tohoku earthquake was the trigger event that led to enterprise adoption of colocation, while most colocation providers in Japan offer managed services. Colt's Kondo believes that colocation's growth will overtake that of hyperscalers in five years' time.

At the same time, providers will be interested in building more edge facilities due to growing e-commerce and gaming activities. These two segments have minimal latency needs, while the localized nature of the Japanese platforms reduces the need for facilities to be built close to cable landing stations around Tokyo and Osaka. However, power utility is again a challenge when edge datacenters proliferate across the country.

Heading up north

Investors are increasingly bullish on Hokkaido prefecture, the northern region with colder climate and significant wind power for new builds, according to Edward Tay, CEO of Sistema Asia Capital. He believes that technology innovation and high-performance equipment will help to address latency issues in the more remote areas as resources in Tokyo and Osaka become scarcer. NTT is understood to have relocated some of its facilities to Hokkaido, while internet service provider Sakura Internet has built a datacenter in Ishikari, northern Hokkaido, which fully operates without backup air conditioners from October through May under -18 Celsius temperatures. Kyodo New Digital is planning for a datacenter in the city of Bibai, also in Hokkaido, which has a hybrid cooling system that uses air and snow, according to media reports.

NTT Communications, NTT East, Fujitsu, Softbank Telecom, NEC, Sakura Internet and HEPCO are among the companies with multi-tenant datacenters operating in Hokkaido.

Sustainability is on almost every industry's agenda, and the Yoshihide Suga government aims for carbon neutrality by 2050. The Japanese government has announced that it will subsidize 50% of the cost for providers to either build zero-carbon datacenters or upgrade existing facilities to be more eco-friendly as part of the \$7.3bn budget for the current fiscal year.

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