

GAINING SPEED

Cloud computing and 5G to boost internet data centre demand

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Insights & Recommendations

With the commercialization of 5G and fast growth in cloud computing, Tier-1 cities in China have seen rising demand for Internet Data Centres (IDCs). New IDC approval is hard to obtain due to high energy consumption. Although the “New Infra” program should accelerate new supply in the long-run, occupancy rates in Tier-1 cities should remain high over the next 2-3 years. We recommend:

- > Investors should focus on IDC assets in Tier-1 cities due to strong demand and scarcity of supply.
- > Investors should pay extra attention to adjacent cities as they become targets for spillover demand from Tier-1 cities, even as these cities are tightening the approval of IDC developments.

“NEW INFRASTRUCTURE” TO DRIVE DATA DEMAND

In March 2020, China announced its “New Infrastructure” program for the data era. Rather than building highways and bridges, the strategic program aims to boost technology development, with a focus on deploying 5G networks and internet data centres (IDC). Meanwhile, the cloud computing services sector has experienced a boom as work, shopping and entertainment increasingly shifted online during and after the COVID-19 epidemic, fundamentally increasing the demand for data processing and therefore the demand for new data centres. Cloud computing vendors account for 73% of the client base of GDS, a leading IDC developer and operator in China. The commercialization of 5G applications, such as autonomous driving, industrial IoT, and wearable devices, should also spur demand for computing power and real-time data processing, requiring high-speed, low latency, reliable networks and cloud storage.

IDCs are concentrated in megacity clusters

In 2018, the number of server racks in use reached 2.45 million in China, 65% of which were located in Megacity clusters that surrounding first-tier cities like Beijing, Shanghai, Shenzhen and Guangzhou.

Note: USD1 to RMB7.07 at the end of Q2 2020. 1 sq m = 10.76 sq ft.
Source: China’s Ministry of Industry and Information Technology (MIIT)

Figure 1: IDC’s supply-demand imbalance in Tier-1 cities

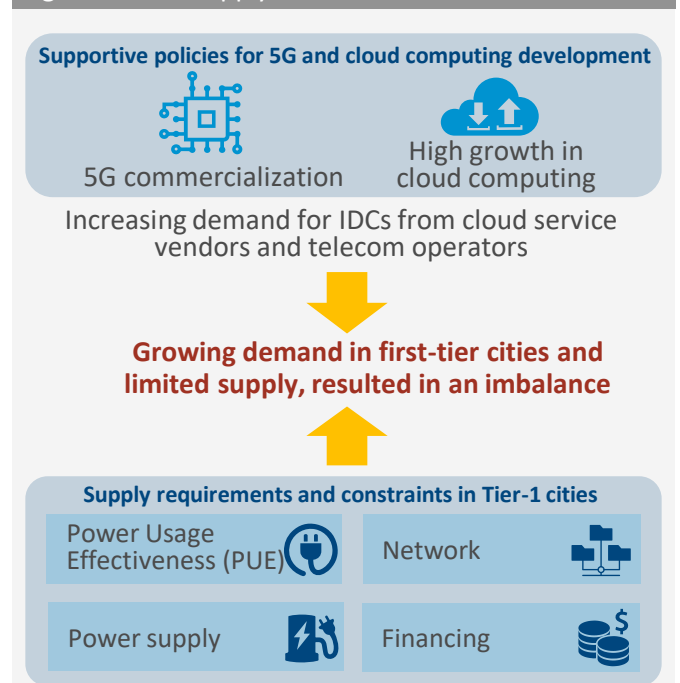
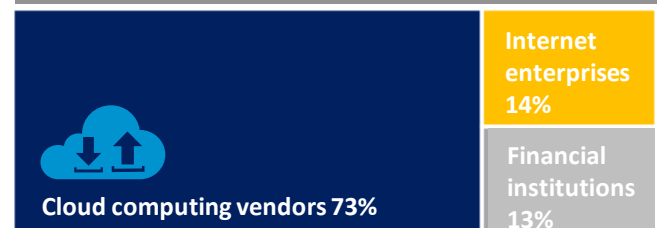


Figure 2: Client structure of GDS Holdings (GDS.O)



Source: GDS, Colliers International

IDC DEMAND SPILLING OVER FROM TIER-1 TO ADJACENT CITIES

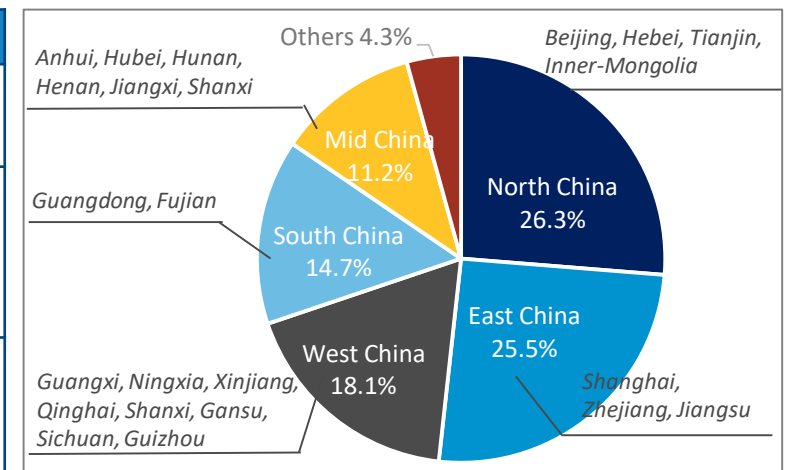
- > **Demand is strongest in Tier-1 cities.** Due to the sheer amount of data generated in Tier-1 cities, the demand for new IDCs remains extremely strong. However, IDC approval is hard to obtain due to high energy consumption and limited industrial land supply. Although the municipal governments of Beijing, Shanghai, Guangzhou and Shenzhen all released policies to promote the development of advanced IDCs, we expect the total scale to stay limited. Demand growth and supply scarcity also drove IDC assets in Tier-1 cities to become a heated sector for investment with seven major deals done in the past two years. The high value of land in Tier-1 cities is also contributed to the popularity of data centres with investors.
- > **There is a shrinking window of opportunities in major adjacent cities.** In the meantime, IDC vendors have been actively developing facilities in smaller cities adjacent to Tier-1 cities, including Hangzhou and Suzhou in East China, and Langfang and Huailai (located in Zhangbei) in North China, to name a few. However, these cities are tightening the approval of new data centres, leaving IDC vendors with shrinking opportunities for development.

Figure 3: Policies in Tier-1 cities to promote development of advanced IDCs

Time	Region	Latest policy on IDC	Major target
June, 2020	Beijing	Action Plan to Accelerate the Construction of New Infrastructure (2020-2022)	Control the total amount of IDC and improve the quality IDCs.
May, 2020	Shanghai	Promotion of Construction of New Infrastructure Action Plan Notice (2020-2022)	Control the total energy consumption of the manufacturing industry and construct more IDCs suitable for cloud computing.
June, 2020	Guangzhou Shenzhen	Issuance of Layout Plan of 5G Base Station and Data Centre (2021-2025)	Build new types of data centres (edge computing*, low latency), data centres with long latency (>= 20ms) to be moved out.

Source: Colliers International. *Edge computing moves the processing and storage adjacent to each other.

Figure 4: IDC distribution in China



Source: China's Ministry of Industry and Information Technology, Colliers International

Figure 5: Investment and acquisition of IDC projects in China since 2017

Sino-Ocean Capital	GLP	Bain Capital	GIC	Actis	Gaw Capital Centrin Data	Jinquanyuanhe Capital Pins Capital Group
Aug 2017	Mar 2019	May 2019	Aug 2019	Aug 2019	Nov 2019	Apr 2020
Investment of RMB900 million in IDC vendor UNIQLLOUD	GLP acquired 60% share of IDC vendor CLOUD-TRIPOD	Wangsu Sci&Tec sold its IDC operations ChinData to Bain Capital	GDS Holdings sold 90% of its non-first-tier city projects to GIC	IDC vendor Chayora received USD180 million investment from Actis Asia Real Estate Fund	Centrin Data and Gaw Capital co-set up fund to invest in IDC projects	DR.PENG Technology sold its IDC projects to two PE funds with a price totaling RMB2.3 billion.

Source: Colliers International

OUTLOOK: BEIJING AND SHENZHEN OCCUPANCY OVER 90%

Tier-1 occupancy rates should peak in 2020.

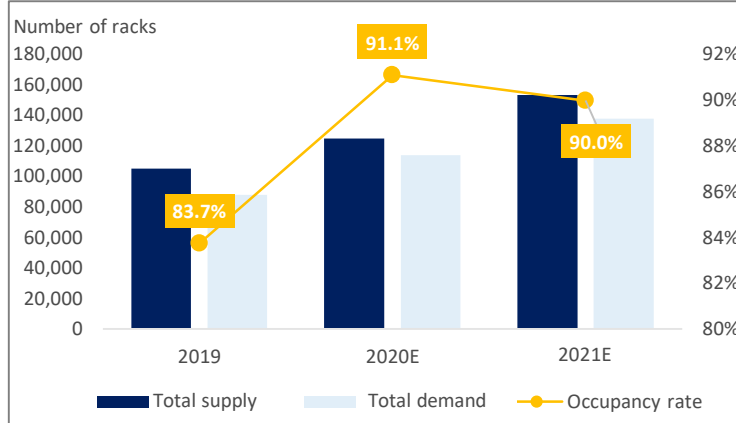
While COVID-19 boosted demand for IDCs, new supply in Tier-1 cities is still restricted, driving the occupancy rate to a peak in 2020. Occupancy should remain high in the next 2-3 years. IDC asset prices should see solid growth.

Beijing and Shenzhen should remain 90% occupied.

We foresee the demand in Beijing, Shanghai and Shenzhen to keep spilling over to adjacent cities in the next 2-3 years.

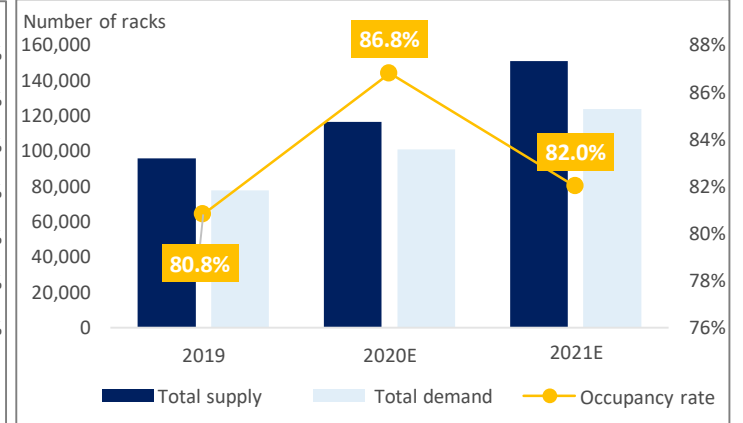
Supply in Guangzhou should alleviate demand pressure. We expect new supply to increase steadily, and occupancy rates to stay below 80% in the next 2-3 years.

Figure 6: Total supply, total demand and occupancy rate in Beijing



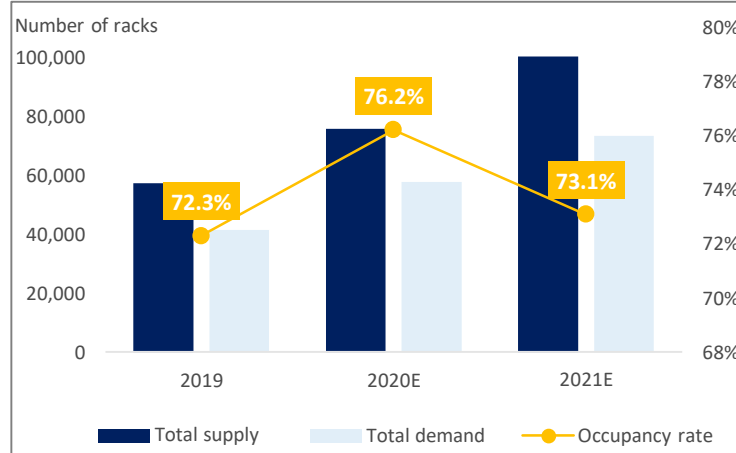
Source: Colliers International

Figure 7: Total supply, total demand and occupancy rate in Shanghai



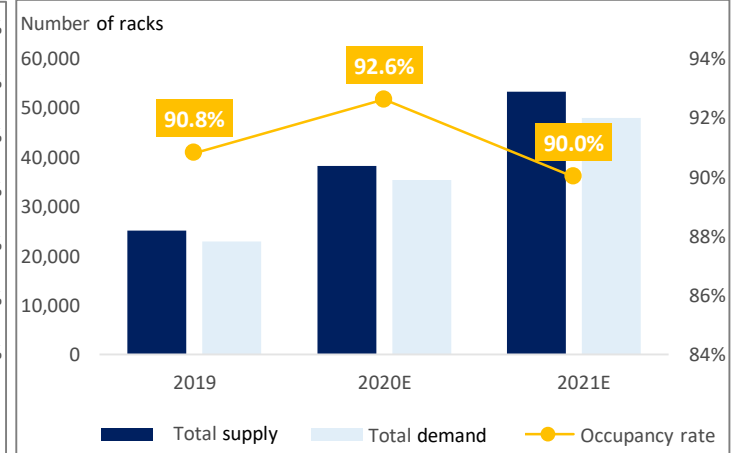
Source: Colliers International

Figure 8: Total supply, total demand and occupancy rate in Guangzhou



Source: Colliers International

Figure 9: Total supply, total demand and occupancy rate in Shenzhen



Source: Colliers International

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