

Demand for data centres goes viral

When pandemic is a blessing in disguise

November 2020



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The pandemic propulsion

The data centre business has received strong tailwinds over the past six month or so from an unlikely source – the Covid-19 pandemic. Even as the pandemic and associated restrictions threw life and business out of gear, stalling growth in most sectors, it became a massive catalyst for digital adoption.

To be sure, the government had already begun to push India towards becoming a digital economy with its Smart Cities and Digital India initiatives before the pandemic struck. However, the crisis accelerated the transition to the digital medium as almost all aspects of daily life – be it banking, education, or shopping – switched to the digital medium almost instantaneously, leading to a boom in India’s digital ecosystem.

The upshot has been an exponential growth in data generation, and this has created unparalleled demand for data centres in India.

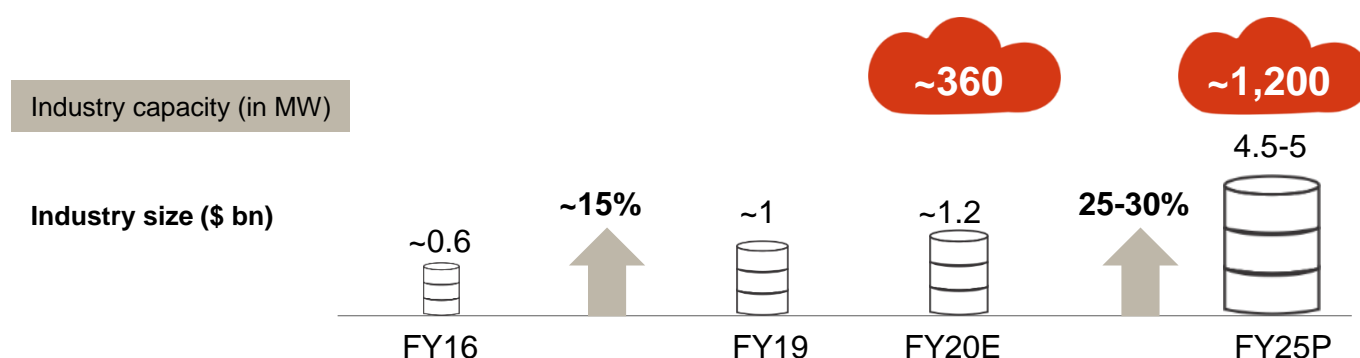
Add to this the government’s norms on data localisation, and the industry has a booster such as never before.

Growing data volume, need for local storage

The Indian data centre industry, which accounts for 1-2% of the global pie, is estimated to have clocked a modest compound annual growth rate (CAGR) of 15-20% since fiscal 2016 to touch ~\$1billion in fiscal 2019 and ~\$1.2 billion in fiscal 2020. This growth rode on a sharp increase in internet penetration from ~30% in fiscal 2016 to ~55% in fiscal 2019.

Also, on account of COVID, data consumption has seen sharp 38% rise on-year in Q1FY21. On the back of this, we expect the industry to log a rapid 25-30% CAGR to \$4.5-5 billion by fiscal 2025. The growth drivers include an exponential surge in data being generated and a growing need for local data storage in line with the government’s thrust on data localisation.

Industry capacity, which stood at ~360MW in fiscal 2020, is expected to expand more than threefold to reach 1,100-1,200 MW by fiscal 2025 **on the back of \$4-5 billion investments** announced over the past three years for both brownfield and greenfield expansion of projects.

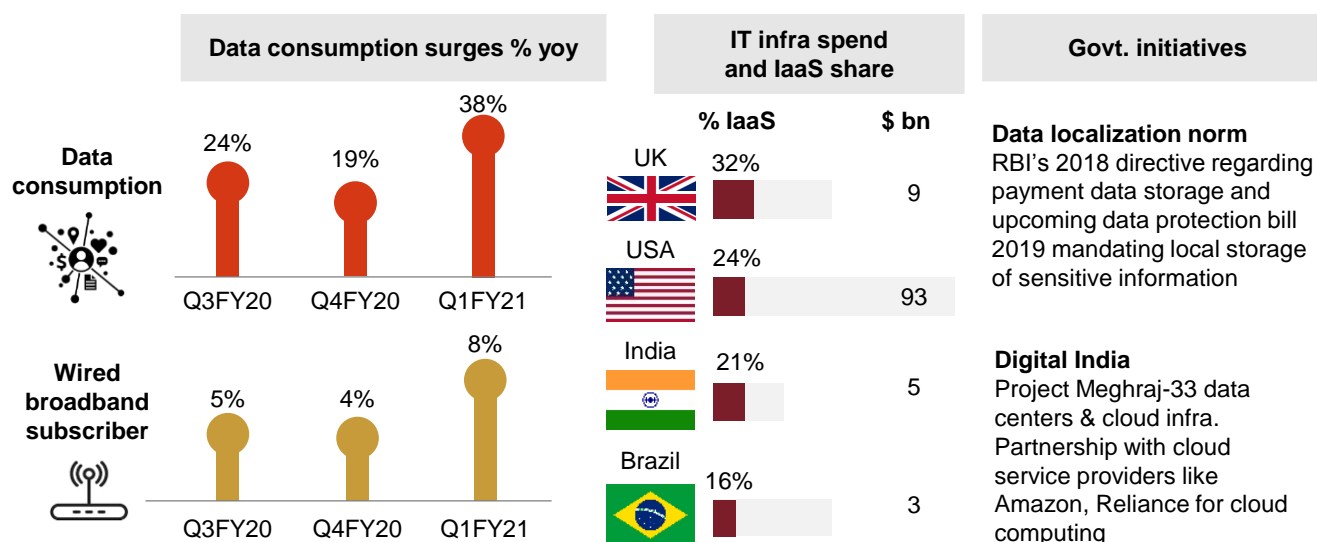


Source: CRISIL Research

CRISIL Research expects this rapid growth to be driven by:

- Need to expand capacity for data storage on account of exponential increase in data volume and penetration (~75% by fiscal 2025). This increase in data volume would be supported by:
 - High growth in e-commerce, increase in usage of social media, greater preference for over the top (OTT) platforms, the government’s impetus to the Digital India initiative and rapid digitalisation of services across industries (Industry 4.0 and 5G)
- Data localisation norms initiated by the government and regulators, that mandates storage of sensitive data within India, which, in turn, would support development of local data centres.

Huge potential for growth



Note: laaS data is of 2018

Source: TRAI, Industry, NASSCOM

Transition to laaS-based offerings, higher adoption by IT, e-commerce and media to boost demand for data centres

According to NASSCOM, as of fiscal 2020, more than three-fourth of the total IT infrastructure spend was concentrated towards captive and co-location based operating model.

By fiscal 2025, however, the share of infrastructure-as-a-service (laaS) in IT infrastructure spends is forecast to increase to more than 40%.

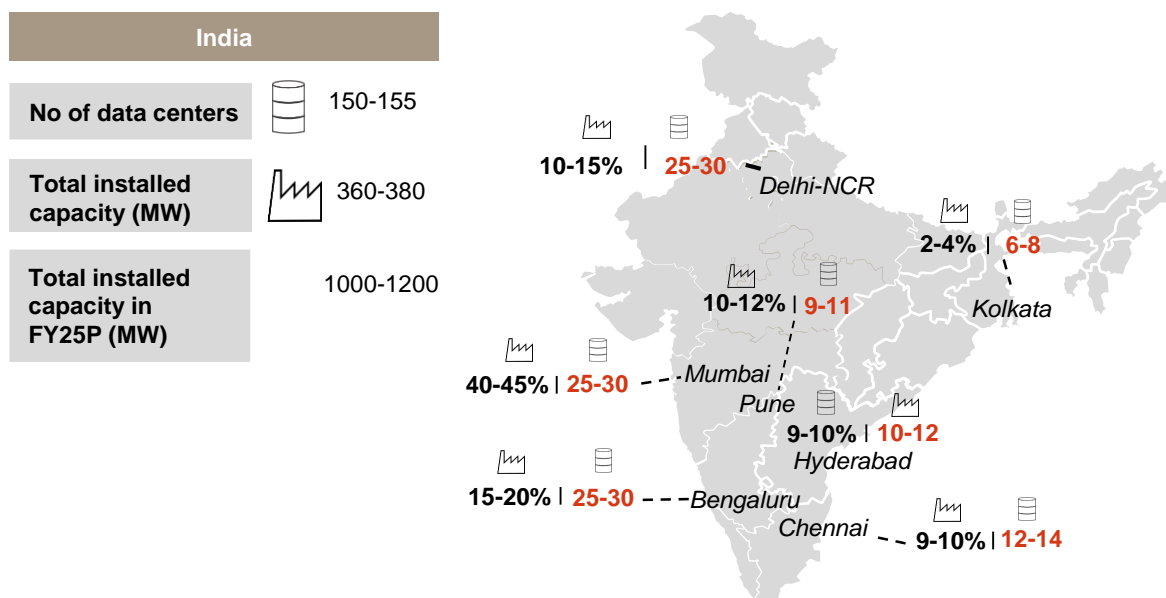
CRISIL Research expects the shift towards laaS to continue as rapid adoption of Industry 4.0-led revolution leads to exponential growth in data volume and increases the need for scalability of resources. This growth will be driven by non-regulated sectors. We foresee limited adoption from the banking, financial service and insurance (BFSI) sectors due to security and regulatory concerns.

Data centre demand to transition from captive to co-location and IaaS-based offerings

Data centre operating models	Share in IT infrastructure spends	+	-	Typical end-use industry
Captive	High Medium Low	<ul style="list-style-type: none"> Complete control from hardware to software selections along with security Free from vendor lock-ins 	<ul style="list-style-type: none"> High capex along with maintenance and security costs Difficulty in scaling up with increasing demand 	BFSI
Co-location	High Medium Low	<ul style="list-style-type: none"> Capex saving due to direct leasing of rack space Customisations over hardware as well as on software front available 	<ul style="list-style-type: none"> Capex required on hardware as well as software Hiring and training of staff required to manage systems 	BFSI Manufacturing Government IT/ITeS
IaaS	High Medium Low	<ul style="list-style-type: none"> No capex spend on IT hardware or software Hyper-scalability of infra based on demand Pay as use pricing models 	<ul style="list-style-type: none"> Inability of deploy customised solutions 	IT/ITeS Media E-commerce Telecom

Source: Industry, CRISIL Research

Majority of data centres concentrated in top four cities due to infrastructure availability



Note: 1) Data as of fiscal 2020E

Source: CRISIL Research, Industry

The data centre industry has been largely concentrated in top 4 cities, with Mumbai, Delhi, Bengaluru and Chennai accounting for ~60% of total data centre sites and more than 75% in terms of IT load capacities.

In terms of IT load capacities, Mumbai alone accounts for over 40% of total installed capacity, given the availability of required infrastructure in terms of adequate linkages with global cable landing stations, reliable power supply, broadband connectivity and skilled manpower.

Some state governments already have incentives in place for the data centre industry. For instance, Maharashtra and Telangana are offering incentives in land and electricity along with a special single-window clearance for permissions to set up data centres.

Next rung of cities to see next wave of growth

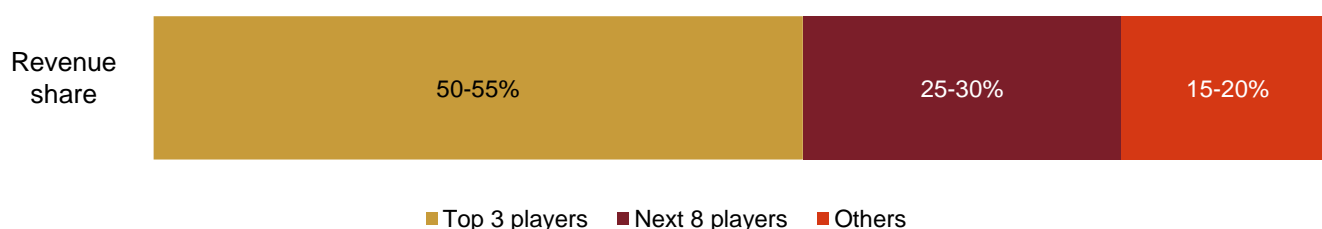
Due to lack of quality and reliable infrastructure across majority of locations in India, ~60% of the total number of data centres are located in the top four cities. In fact, the top seven cities accounted for more than 75% of the total data centres in India.

Players have only recently begun gravitating towards setting up data centres in other cities on account of high rental costs and space constraints in top 4 cities.

CRISIL Research expects the share of Top 4 cities to decline marginally in the next five years as lack of space and higher rental costs along with improved infrastructure availability in next rung cities leads to some larger hyper-scale data centres being set up in those cities.

Industry structure highly concentrated; focus on Tier 4 data centres

The industry structure is highly concentrated, with the top 11 players accounting for more than 70% of the total revenue. This is on account of the high initial capex required to set up infrastructure and long payback period.



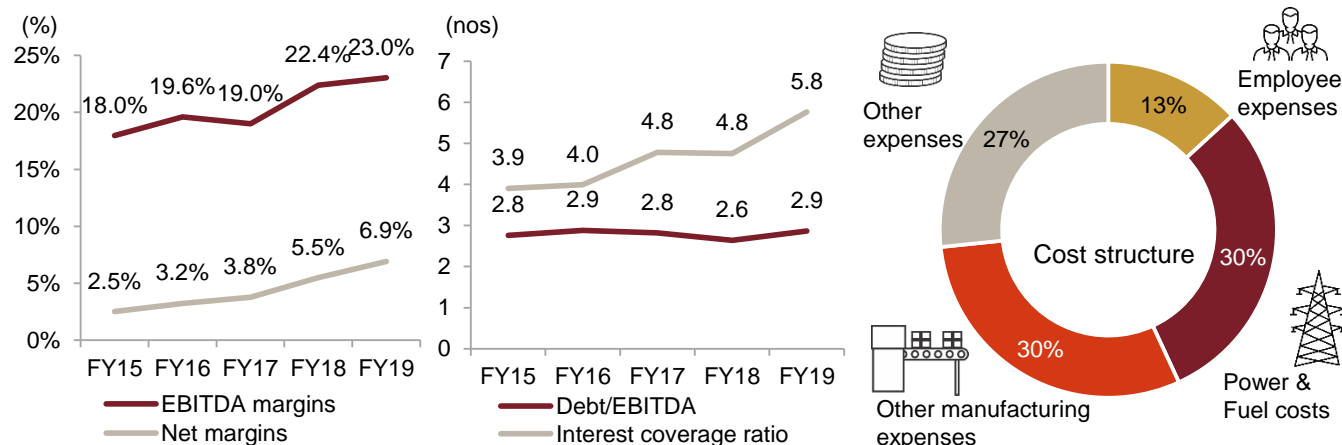
Note: Data as of fiscal 2019
Source: CRISIL Research

With increased focus on reliability, we expect demand for data centres to be concentrated on the Tier 4 type, which has the highest uptime (reliability) of 99.995%. This is also evident from newer investments that are concentrated towards either upgrading existing data centres to Tier 4 or setting up new data centres.

Margins trending up; debt metrics at comfortable levels

Operating margins have progressively expanded for the set of players to reach 23% in fiscal 2019 on account of higher utilisation of facilities, leading to positive operating leverage. This is because majority of the costs for the business are upfront in nature and gradual ramp-up of racks leads to higher incremental revenue for the players.

Margins look up; debt metrics at comfortable levels



Note: Top 11 companies are considered in the sample set for analysis

Source: CRISIL Research

Private equity, global players steadily increasing presence via acquisitions

Considering the challenges in setting up data centres, larger international players have acquired local players to foray into the Indian market. For instance, Netmagic was acquired by NTT, a Japanese firm. CRISIL Research expects such acquisitions and partnerships to continue, given the growth expected in the data centre business.

Year	Company	Investors	Investment type	Amount (\$ million)
2008	CtrlS	Och-Ziff Capital	PE investment	57
2012	Netmagic Solutions Ltd	NTT Communications	Acquisition (74% stake)	128
2015	NxtGen Ltd	International Finance Corporation (IFC), Axon Partners Group and Intel Capital	PE investment	13.5
2016	Tata Communications Ltd	ST Telemedia Global Data Centres	Acquisition (74% stake)	634
2018	Netmagic Solutions Ltd	NTT communications	Acquisition (balance stake)	35
2019	Tata Communications Ltd	ST Telemedia Global Data Centres	Acquisition (balance stake)	Undisclosed
2020	Nxtra Data Ltd	Carlyle Group	PE investment	235
2020	GPX Global Systems (India Operations)	Equinix	Acquisition	161

Source: Industry, CRISIL Research

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