Data centre investment opportunities in APAC are expanding beyond the established 'Tier 1' markets

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The data centre boom in the Asia–Pacific (APAC) region has mainly taken place in a select group of cities and countries. These 'Tier 1' markets account for most of the data centre capacity in APAC, and have been where cloud providers have focused deployment of their infrastructure.

However, there are signs that growth in data centre capacity in Tier 1 markets is slowing down and that the demand for data centres is spreading to other places in APAC. As such, investors must recognise the new opportunities that are emerging beyond the Tier 1 markets, while understanding the key demand drivers and challenges.

A small number of Tier 1 markets have accounted for most of the data centre capacity and supply in APAC

The emergence of cloud computing has been one of the main drivers of the demand for data centres worldwide; Cisco's Global Cloud Index (GCI) expects over 95% of data centre traffic to be cloud traffic by 2021. The main reason for this is that enterprises are increasingly using the 'public cloud' – infrastructure managed and provided by cloud service providers – for their computing requirements.

Leading cloud service providers in APAC have focused their deployment of cloud regions in key Tier 1 markets (see Figure 1).[1] A cloud region typically involves having multiple data centres present in the local market to serve as availability zones – this has driven the demand for data centres particularly because cloud service providers often rely on wholesale leases with data centre operators rather than building their own facilities.

Figure 1: Presence of cloud regions in Tier 1 markets, by cloud service provider, Asia–Pacific

Market	Alibaba	Amazon	Google	Microsoft	Tencent
Australia (Sydney)	✓	✓	✓	✓	✗
Hong Kong	✓	✓	✓	✓	✓
India (Mumbai)	✓	✓	✓	✓	✓
Japan (Tokyo)	✓	✓	✓	✓	✓
Mainland China – Tier 1 cities[2]	✓	✓	✗[3]	✓	✓
Singapore	✓	✓	✓	✓	✓

Source: Analysys Mason

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[1] A cloud region is a location where the cloud providers house and operate their infrastructure (for example, servers) at data centres. Each cloud region is isolated from, and independent of, each other.

[2] This includes Beijing and Shanghai, which have been the main data centre hubs in mainland China.

[3] In line with Google's exit from mainland China in 2010, Google Cloud Platform is not offered directly in the country.

Data centre capacity and demand in APAC have thus been mostly concentrated in Tier 1 markets thus far, with some markets effectively serving as regional hubs. For example, a large proportion of Southeast Asia's data centre requirements are being addressed via Singapore, resulting in it accounting for over 60% of data centre capacity despite having only ~2% of internet users in the region.

The demand for data centres in APAC is spreading to new 'Tier 2' markets

Growth in data centre capacity and demand appears to be slowing in Tier 1 markets because:

- the cost of building and operating data centres can be especially high
- land is becoming difficult to obtain to build additional facilities
- some governments are tightening their control of new data centre supply.

In addition, the demand for data centres is spreading to other markets, driven by the desire of cloud service providers to expand geographically and the need to address data localisation regulations.

Cloud expansion

Cloud service providers are seeking to broaden their reach and offer improved performance (such as via reduced latency) and will thus drive data centre demand in Tier 2 markets. Figure 2 reveals examples of such markets where cloud service providers are increasing their local presence and are therefore driving the demand for data centres. These Tier 2 markets include: (a) new and/or distinct geographical markets (for example, Indonesia), and (b) secondary cloud regions in existing geographical markets (for example, Osaka).

For example, Amazon Web Services and Google Cloud have announced new cloud regions in Indonesia, which is expected to drive the demand for data centres. The effects of this are already starting to be observed; new players such as IndoKeppel and Space DC have announced new data centres to capture this opportunity in Indonesia.

Figure 2: Presence of cloud regions in selected Tier 2 markets, by cloud service provider, Asia–Pacific

Market	Alibaba	Amazon	Google	Microsoft	Tencent
South Korea	✗	✓	Planned	✓	✓
Mainland China – Tier 2 areas[4]	✓	✓	✗	✗	✓
Japan (Osaka)	✗	✓	✓	✓	✗
Indonesia	✓	Planned	Planned	✗	✗
India (Chennai)	✗	✗	✗	✓	✗
Malaysia	✓	✗	✗	✗	✗
Taiwan	✗	✗	✓	✗	✗
Thailand	✗	✗	✗	✗	✓

Source: Analysys Mason

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[4]   This includes non-Tier 1 cities/regions such as Chengdu, Chongqing and Ningxia.

Data localisation regulation

Regulation requiring selected data to be stored locally can also contribute to the demand for data centres in Tier 2 markets. For example, Vietnam has introduced its Cybersecurity Law, which requires data to be stored in Vietnam – such measures can drive data centre demand to be addressed locally rather than relying on overseas Tier 1 hubs such as Singapore.

The new Tier 2 markets may present challenges for data centre players

The Tier 1 markets share commonalities that have facilitated the growth in data centre supply in these places, such as:

- excellent international connectivity via multiple submarine cable systems
- reliable power supply
- availability of extensive domestic fibre from multiple providers.

The Tier 2 markets may not share these characteristics, which could be a challenge for data centre operators. For example, while Indonesia appears to be one of the next growth areas in Southeast Asia, the approximately 10-hour power outage throughout Greater Jakarta in August 2019 highlights the issues that data centre operators may face. Such challenges must be identified and closely evaluated in conjunction with an assessment of market demand to make a comprehensive evaluation of data centre investment opportunities.

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Analysys Mason has conducted multiple due diligence exercises and market studies on data centres worldwide for investors, and has a strong understanding of the key drivers and challenges that need to be evaluated. We have also worked with industry players such as telcos to develop their cloud and data centre strategies. For further information, please contact Jay Lee (Manager) at jay.lee@analysysmason.com or Lim Chuan Wei (Partner) at lim.chuan.wei@analysysmason.com.