

Data Centers In South And Southeast Asia: Balancing Risk And Reward

September 10, 2023

Key Takeaways

- Data center capacity to grow at a compound annual growth rate of between 10% and 25% in South and Southeast Asia (except Singapore) over the next few years, spurring investment and funding opportunities.
- Investing in data centers will allow providers such as telcos and real estate companies to diversify their revenue and assets.
- There are risks, however, given the capital intensity of the business. Local partnerships and prudent expansion will be key to containing emerging-market risk including evolving regulation, the availability of stable interconnectivity, and power supply infrastructure.

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Data centers form a rising asset class in South and Southeast Asia. Rapid digital transformation, accelerated by the pandemic, is fueling a surge in demand for data processing and data storage capacity among consumers and enterprises alike. They're not alone. So-called hyperscalers such as large internet service providers, cloud and network service providers and multimedia companies are also driving higher data demand to expand their business and reduce network latency.

Regional telcos, real estate companies, and international data center providers are keen for a slice of the growing pie in South and Southeast Asia. For them it's a way to diversify their revenue sources and assets and retain customers.

That said, data center investments are capital intensive and take time to generate income. This could pressure the balance sheets of providers. Data center providers could also face higher execution risks as they expand into less mature markets in the region.

We believe foreign investors could reduce potential execution risks by partnering with local firms that can provide local knowledge, stable power supply, connectivity infrastructure and/or land banks in emerging countries. Leverage control and a sustainable funding structure will be key to containing financial risks given high upfront costs and long payback periods.

Digitalization Will Spur Growth Across South And Southeast Asia

Data center capacity (measured by net uninterruptible power supply) in Malaysia, Indonesia, and India will increase at a compound annual growth rate (CAGR) of between 10% and 25% over the next five years, according to 451 Research, part of S&P Global Market Intelligence.

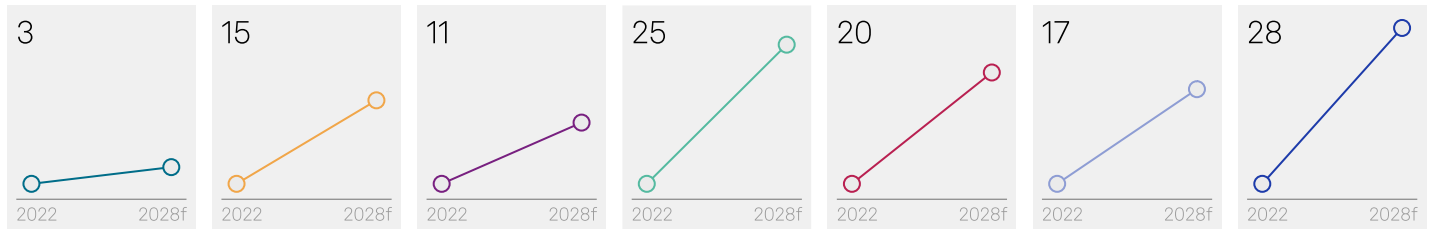
These countries share some common favorable attributes: a rising online penetration rate, localized content, and a young population. Enterprises are also digitalizing their operations and migrating to the cloud.

In contrast, Singapore will grow at a modest pace. This is because it is a more established market with constraints over land and power supply.

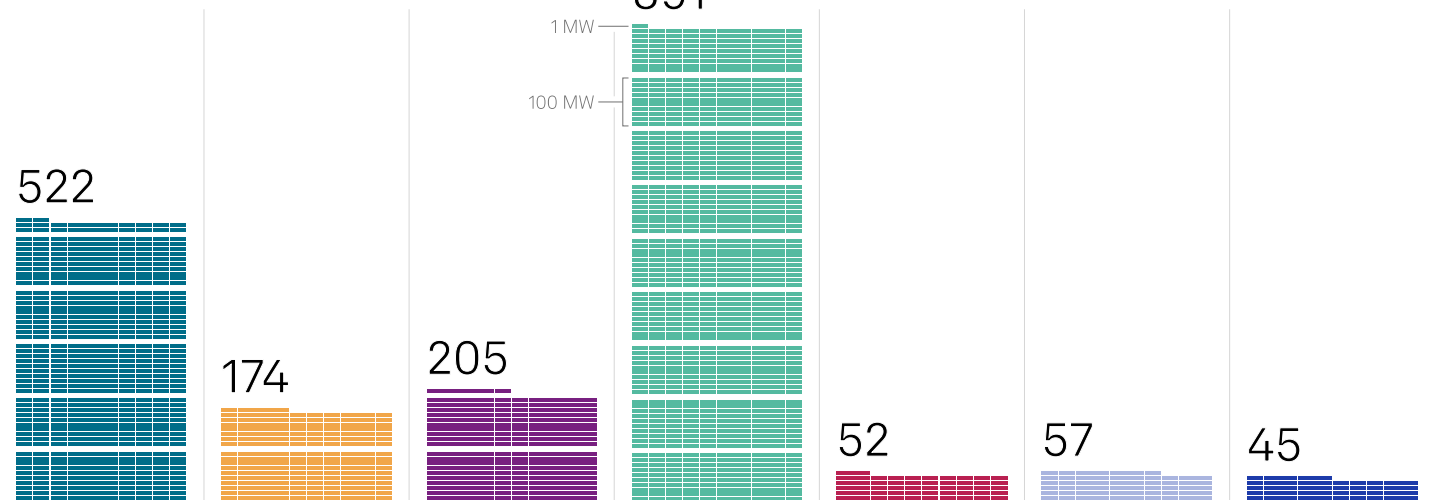
Surge in data center investments prompting funding demand

Singapore	Indonesia	Malaysia	India	Philippines	Thailand	Vietnam
	Greater Jakarta	Cyberjaya Kuala Lumpur Johor	Mumbai Bengaluru NCR Chennai	Metro Manila	Bangkok	Hanoi Ho Chi Minh

2022-2028 data center capacity* CAGR (%)



Estimated capacity* 2022 (MW)



*Data center capacity as measured by net uninterruptible power supply. CAGR--Compound annual growth rate. MW--Megawatts. NCR--Northern Capital Region.
f--Forecast. Sources: 451 Research, S&P Global Ratings.
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The growth potential of the data center industry is attracting a multitude of players, ranging from telcos to real estate companies.

Telcos See Data Centers As The Next Growth Engine

Telcos in South and Southeast Asia see data center investments as a natural extension of their core business. This is because they can use their connectivity infrastructure and experience in running capital-intensive businesses in a regulated environment. Telcos also have an existing enterprise customer base to tap and to whom they can offer bundled services. This could increase customer stickiness.

For example, Philippines-based telco PLDT Inc. is building its 11th data center--a 36-megawatt (MW) site in Laguna. Once complete, this will more than double PLDT's current 28MW capacity. Singapore Telecommunications Ltd. (Singtel) is also building data centers (including via partnerships) in Singapore, Indonesia, and Thailand to increase its gross data capacity to 155MW by 2026, from its current capacity of 60MW.

Telcos also see data centers as part of the solution to offsetting waning growth in other areas such as their traditional voice and mobile businesses. And with the ramp-up of 5G revenue still some time away, data centers may help fill the void. In the long run, data centers also offer monetization opportunities if telcos plan to recycle their capital and reinvest in other emerging opportunities. Data centers with favorable locations, good network connectivity, and high-capacity utilization can be valuable and have high price multiples.

This situation is not unique to South and Southeast Asia. European telcos invested heavily in data centers a decade ago when colocation was booming. Many of them exited the data center market from 2015 to reduce debt and raise funds for core business such as spectrum spending. PCCW Ltd. from Hong Kong also sold its data center business in 2021 for US\$750 million, and proceeds of the transaction helped control its leverage.

Data center investments may not offer the strategic value of 5G to telcos' core operations. However, larger data capacity benefits telcos by improving network reliability and reducing latency as data consumption grows. It also complements other offerings such as cloud and information and communication technology services.

However, we recognize risks from telco-operated data centers. In the U.S. market, for instance, many telcos have exited the data center business because they have been unable to compete effectively against specialized providers. Data centers run by telcos may not be managed independently and may lack a dedicated salesforce, which can result in a lower utilization rate. Their facilities are seldom carrier-neutral and therefore may lack interconnection, which we view as an important competitive advantage for data centers.

Real Estate Companies To Serve Investment Demand

Real estate companies are also investing in the data center space. This is because data centers offer a means to diversify assets and revenue sources, and share many characteristics with traditional property leasing. As an asset class, data centers were more resilient during the pandemic than hospitality and retail.

Data centers with long leases and a high proportion of rental income (rather than service income) have a stable cash flow that is more akin to that of property leases. Centers with a well-defined cost pass-through mechanism and annual rental escalation will also be able to support stable cash flow and margins in an inflationary environment.

In most cases, we liken the wholesale data center leasing model more to property leases. Wholesale data centers generate revenue streams through the leasing of space, and charging for

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power consumption, depending on the contracts. Lease terms could range from five to ten years and, in some cases, impose high penalties on tenants if they terminate the contract early.

Proximity to densely populated areas is important for data centers because it reduces latency, or delay in the time data take to transfer. Wholesale data centers should also have access to affordable and available power given these facilities are sizable and consume a vast amount of power. The assets should also meet the reliability and performance metrics that customers value, such as uptime (a measure of system reliability), redundancy, and security.

Some real estate companies, such as Mapletree Investments Pte Ltd., CapitaLand Ltd., and ESR Group Ltd., have already invested in data centers in the region. Compared with globally renowned operators, they are still in the establishment phase. However, their strong investor base could mean fast expansion once they establish a good record.

Strategies Will Differ As Competition Heats Up

The entrance of international and regional data center providers will disrupt smaller markets that were previously dominated by a few key players, including regional telcos.

Global data center operators and selective regional telcos such as Singtel will look to build a regional platform. The aim is to build a one-stop solution for hyperscalers and enterprise customers that operate in multiple countries in the region.

We expect most of the local telcos, such as Telekom Malaysia Bhd., PLDT, and Advanced Info Service Public Co. Ltd. will focus on the domestic market, where they have strong expertise with more measured risks. Government-related telcos, such as Telekom Malaysia, will also benefit from their strong infrastructure and local presence for setting up secured locations for government and public data.

The unique position of local telcos in network infrastructure and enterprise customer base will allow them to gain more in the respective local markets.

Data Center Providers Pursuing Sustainability

We see sustainability-linked financing or green financing as an emerging trend for this power-intensive asset class. This is because of the relatively favorable terms and growing preference of lenders to fund less-pollutive or sustainable projects.

Green financing has more specific use of proceeds to fund green initiatives, such as building of energy efficient data centers, or procuring renewable energy. Sustainability-linked financing, on the other hand, is more flexible in its use of proceeds. Interest rates are tied to sustainability and environmental, social, and governance goals, which for data center providers could include the effectiveness of the use of carbon, power, and water, among others.

We have seen only a handful of cases of sustainability-linked loan (SLL) and green loan (GL) funding in South and Southeast Asia, but these loan types have the potential to be a key source to fund expansion. AirTrunk Operating Pty Ltd., an Asia-Pacific-focused data center provider based in Australia, recently completed a A\$4.6 billion SSL, more than doubling its initial A\$2.1 billion SSL in 2021.

Data center providers, especially larger ones, will continue to push for more efficient and energy-efficient sites. This reflects heightened investor and customer awareness about the environmental concerns and power intensity of the infrastructure. Investing in more energy-efficient data centers could curb providers' costs and attract tenants.

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Some data center providers are investing in renewable energy for use in their facilities or purchasing carbon credits to offset their relatively high carbon emissions.

Spillover Demand From Singapore To Boost Nearby Markets

Foreign data center providers will inevitably face execution risks as they expand into less mature markets in the region. This is because Singapore, the regional hub, is limited in its ability to meet the regional data capacity growth. It must balance its own sustainability concerns about land and power.

Limits on Singapore will benefit neighboring cities such as Johor Bahru in Malaysia and Batam in Indonesia, due to their close proximity to Singapore. For example, under its new Singapore strategy, known as SG+, Princeton Digital Group will spend US\$1 billion to build data centers in each of the two cities. Equinix Inc., Keppel Corporation, AirTrunk Operating Pty Ltd., GDS Holdings Ltd. and Bridge Data Centres Inc. are also planning to build or expand their facilities in the two cities.

That said, we believe Singapore will remain the regional data center hub. This status derives support from the country's open economy, political and power supply stability, and extensive regional undersea network infrastructure.

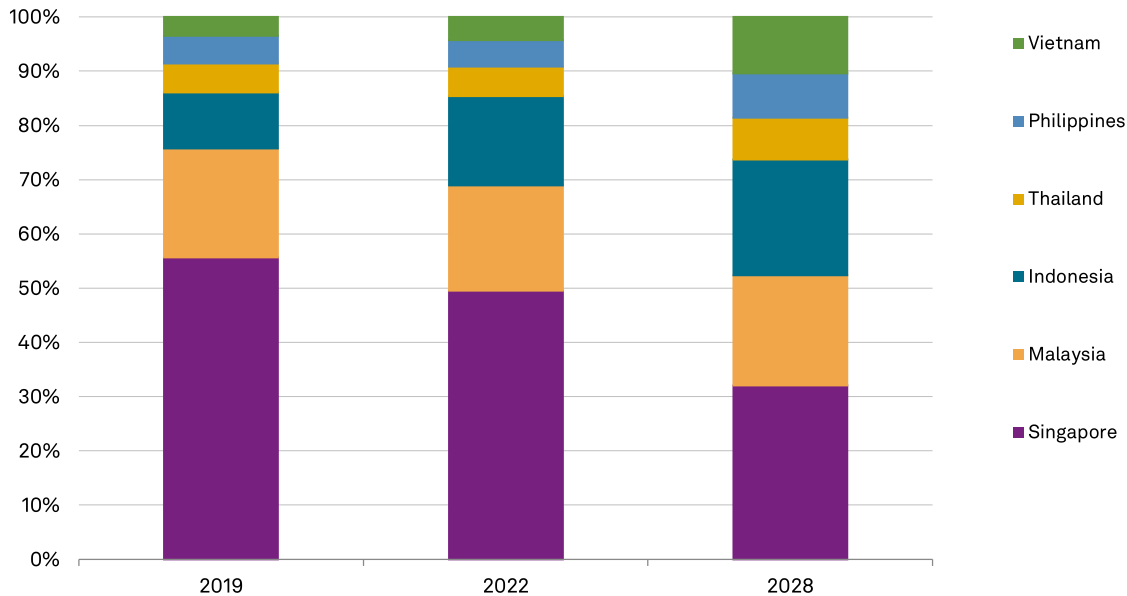
Following the recent expiry of a three-year moratorium on new projects, Singapore has approved four new data centers in July 2023. At 80MW, the approved capacity is higher than the around 60MW capacity guided in 2022. However, it still won't be enough to meet demand.

Malaysia and Indonesia are clear beneficiaries of the investment flows (see chart 1).

Chart 1

Emerging markets benefit from influx of new data center capacity

Data center capacity contribution by countries



Data center capacity as measured by net uninterruptible power supply. Sources: 451 Research. S&P Global Ratings. Copyright © 2023 by Standard & Poor's Financial Services LLC. All rights reserved.

Evolving Data Regulation Will Shape Investment Demand

Countries with tighter data localization rules could drive more investment flows to serve domestic data center demand. This could, however, affect foreign investments as these rules increase operating costs.

Since data is increasingly considered a resource, with potential links to national security, governments in the region have various restrictions on cross-border data transfer and data localization rules. Under these rules, certain data, especially sensitive personal data or activity, must be stored and processed locally.

In October 2022, Vietnam tightened its data localization rules, stating that 10 foreign-owned businesses spanning telecoms, cloud, ecommerce, online payments, and social media must store the data of internet users locally. Malaysia also has a personal data protection act that generally prohibits the transfer of personal data outside the country.

Singapore, in contrast, has a long-standing policy to support data mobility.

However, these rules are constantly evolving as governments re-evaluate their stances on data control. This poses significant risks for data center demand. In the past two years, India and Indonesia have clarified their data protection policies and loosened restrictions on cross-border

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data flow. This is to support foreign investments and align with policies to grow a digital economy.

Local Partnerships To Alleviate Execution Risks

Tie-ups between foreign and local firms will gain pace as a means of curbing risk. Operating in emerging markets can involve less predictable regulations, and doubts about the availability of stable fiber and power infrastructure.

Local partnerships are a popular option for foreign data center providers entering South and Southeast Asia. Most of them have partnered with local telcos, power, property developers, and conglomerates to secure power, land, and connectivity. Some countries may also have restrictions on foreign ownership of land.

In return, local providers could tap the operators' technological know-how and expertise in managing data center assets.

Table 1

Some notable partnerships

JV Company/Project	Local partner(s)	Foreign partner(s)	Date	Country/City
HDC Batam	PT Telkom Indonesia (Persero) Tbk, PT Medco Power Indonesia	Singapore Telecommunications Ltd.	2022	Indonesia, Batam
JK1	PT Astra International Tbk	Equinix Inc.	2022	Indonesia, Jakarta
BDx Indonesia	PT Indosat Tbk., PT Aplikanusa Lintasarta	BDx Asia Data Center Holdings Pte. Ltd.	2022	Indonesia, Jakarta
N.A.	PT Triputra Group	STT GDC Pte. Ltd., Temasek Holdings (Private) Limited	2021	Cikarang, in the region Bekasi, Indonesia
Data Center First Pte Ltd.	Gaw Capital Partners	Wong Ka Vin	2021	Indonesia, Batam
IndoKeppel Data Centre 1	Salim Group	Keppel DC REIT	2022	Indonesia, Bogor
N.A.	YTL Power International Berhad	GDS Holdings Ltd.	2022	Malaysia, Johor
AdaniConneX	Adani Enterprises Ltd.	EdgeConneX Inc.	2021	Multiple places in India
AIMS Group	Time dotCom Berhad	DigitalBridge Group, Inc.	2022	Malaysia and Thailand: Kuala Lumpur and Bangkok
GSA Data Center Co. Ltd.	Gulf Energy Development Public Company Ltd., Advanced Info Service Public Co. Ltd.	Singapore Telecommunications Ltd.	2021	Thailand, near Bangkok
Globe STT GDC, Inc.	Ayala Corp. and Globe Telecom, Inc.	STT GDC Pte. Ltd.	2022	Philippines: Metro Manila, Cavite and Davao

N.A.--Not available. Sources: Company announcements. S&P Global Ratings.

Balancing Leverage And Growth Aspirations Is Key

In a growing market, data center providers could be tempted to overspend. As such, maintaining control of leverage and securing a sustainable funding structure are crucial. This is especially so when providers engage in speculative development, without binding pre-commitments from

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customers. Until the revenue and cash flow start to flow, the construction phase could add leverage.

As sizable investments in data centers flow to the region, there emerges a longer-term risk: overcapacity. This could push providers with poor execution out of the race.

Two recent cases underscore the risk of overexpansion. The financial stress of VNET Group Inc., and the debt restructuring by Cyxtera Technologies Inc. in 2023. Cyxtera and VNET lease most of their facilities, which limits their ability to engage in sale-leasebacks or secure financing when funding environment tightens.

On the one hand, ownership of data centers (including land) can eliminate renewal risk (of property and land leases), provide greater financial flexibility for future fundraising, and allow owners to sell assets.

But there can be a sting in the tail. The long payback period, in a fast changing and emerging market, will require caution from those who step in.

Appendix

Table 2

Country	Singapore	Indonesia (greater Jakarta)	Malaysia (Kuala Lumpur and Johor)	India
Stage of data localization rules	Long-standing stance to support data mobility.	Cross-border data transfers eased in 2022 but risks of flip flopping.	Tight. Mainly on personal data and financial records covering various sectors.	Tight but new data privacy bill draft suggests easing cross-border data transfer. Risks of flip flopping.
Subsea cables (+under construction)	25 (+13)	53 (+6)	21 (+4)	15 (+7)
Key local telco players in data centers	Singapore Telecommunications Ltd.	PT Sigma Cipta Caraka	Telekom Malaysia Bhd.	Reliance Communications Ltd.
Key international or local non-telco players in data centers	Keppel DC REIT	PT DCI Indonesia Tbk.	Bridge Data Centres Inc.	Sify Technologies Ltd.
	Global Switch Ltd.	STT GDC Pte. Ltd.	AIMS Group	ST Telemedia
	ST Telemedia	Princeton Digital Group	NTT Global Data Centers	NxtGen Datacenter & Cloud Technologies Private Ltd.
	Equinix Inc.	NTT Global Data Centers Corp.	Strateq Data Centre Sdn Bhd.	NTT Global Data Centers

Sources: 451 Research, TeleGeography, S&P Global Ratings.

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Related Research

- Asia-Pacific 5G: Telcos Face A Billion-Dollar Balancing Act, July, 24, 2023

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