GLOBAL DATA CENTRE INSIGHTS 2024

Alvarez & Marsal

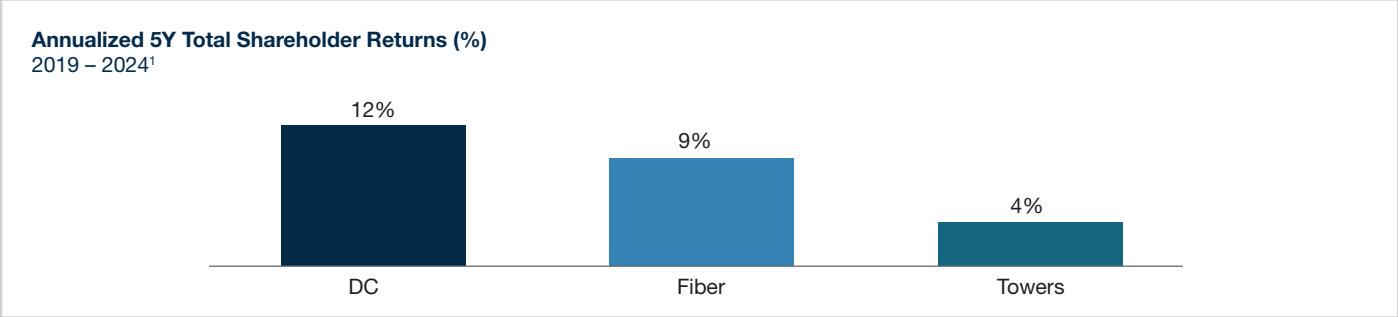
LEADERSHIP. ACTION. RESULTS.℠

Section 1: Executive summary

1. Data centre investment thesis

Data centres have seen significant investment globally over the past few years, driven by the growth of cloud adoption, generative artificial intelligence (Gen AI) and data sovereignty regulations. As an asset class, data centres have outperformed other digital infrastructure sectors in total shareholder returns, driven by expectations for the revolutionary changes available with large compute power.

Figure 1: Annualized 5Y total shareholder returns



[1]2024 figures are calculated based on LTM data as of Nov 2024
Source: A&M data and analysis, S&P Capital IQ

We see three key characteristics that continue to make data centres an attractive investment.

Secular growth drivers

Stable revenue streams

Hybrid asset class

Secular growth drivers

Digital transformation and cloud adoption: The ongoing shift towards digital solutions and cloud computing continues to drive demand for data centres. This trend is expected to persist as businesses increasingly rely on cloud services for scalability and efficiency.

Artificial intelligence expansion: AI is rapidly becoming a major demand driver for data centres, necessitating significant computational power and storage capabilities for both training and inference processes.

Data sovereignty regulations: As governments enhance data sovereignty requirements, the need for in-country hosting of data will accelerate globally.

Stable revenue streams

Long-term contracts: Compounded by high switching costs, make these assets a stable revenue stream.

Hybrid asset class

Core infrastructure with growth opportunities: Data centres are increasingly viewed as a hybrid asset class, combining the stability of core infrastructure with significant growth potential. Innovations in modular design and edge computing allow data centres to expand and adapt to new technological demands without substantial new investments.

Scalable business model: National, regional, and global data centre platforms are increasingly providing integrated services.

Investors may consider further exploring three themes in the future:

Built-to-suit data centres

Regional platforms

Local specialists

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i. **Built-to-suit data centres**
Hyperscalers such as AWS, Microsoft and Google[1] may need custom facilities that cater to specific requirements such as advanced cooling, high rack density or high-performance computing, in which case they would be a primary tenant with large capacity needs for such data centres.

ii. **Regional platforms**
Regional data centre platforms provide multi-site platforms for enterprises, government and hyperscalers that cover multiple redundancy zones and offer distributed workloads.

iii. **Local specialists**
Local data centre providers provide specific expertise and specifications needed by domestic customers. For example, edge data centre operators focused on content delivery or data centre operators focused on government workloads with data sovereignty requirements.

[1]Source URL: Top 10: Hyperscalers | Data Centre Magazine: https://datacentremagazine.com/articles/top-10-hyperscalers

1. Data centre definitions and overview

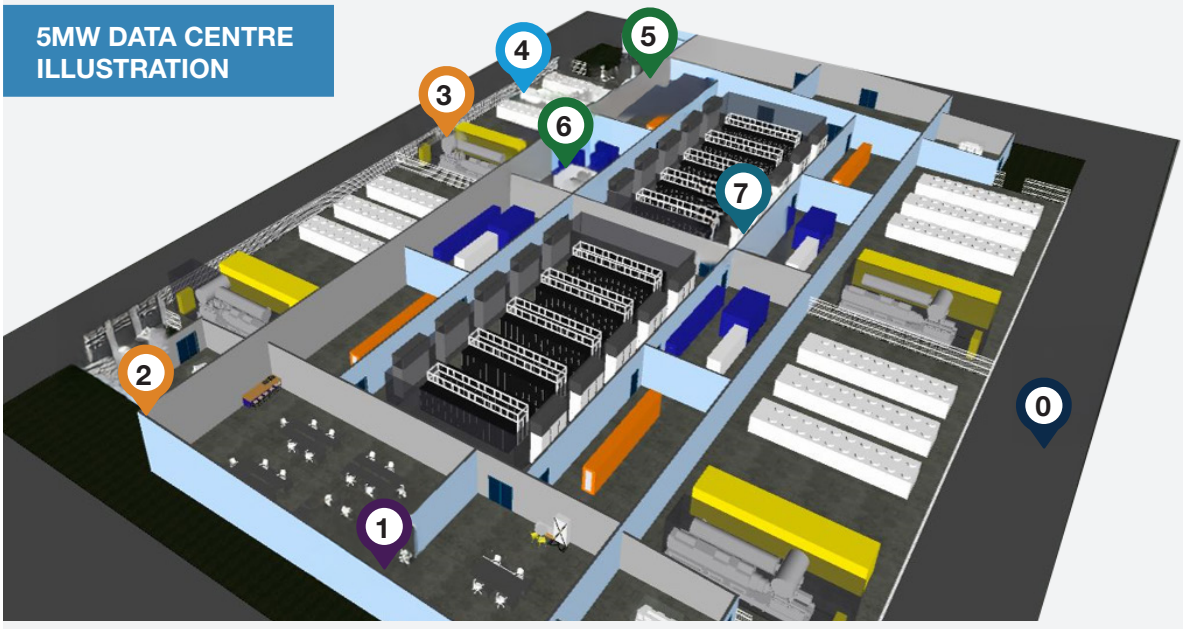
Data centres provide data storage and compute power to process data. Typically, data centres consist of three primary components:

Base infrastructure: Includes land, core and shell buildings, loading bays, staircases, parking, site improvements, and utility connections that house the core IT and essential operating infrastructure.

Essential operating infrastructure: Encompasses electrical systems (substations, transformers, switchgear, uninterruptible power supply (UPS), power distribution units, generators), mechanical systems (heating, ventilation & air conditioning (HVAC), chillers, cooling towers, fans, pumps, piping, computer room air conditioning), connectivity systems (fiber conduits, optic cables, networking equipment, patch panels, meet-me-rooms), security systems (barriers, gates, cameras, biometric scanners, monitoring systems), building monitoring systems, and fire/life safety systems.

Core IT infrastructure: Comprises computer servers (central processing units (CPUs), graphics processing units (GPUs) and random-access memory (RAM)), data storage devices, networking equipment, routers, server racks, ladder racks, cabinets, fiber optic cabling, power whips, power strips, cages, aisle containment systems, switchboards, firewalls, storage devices, and mainframe computers.

Figure 2: Illustrative example of typical data centre floor plan layout



BASE INFRASTRUCTURE

- 0. Core, shell
- 1. Reception/security & offices

CORE IT INFRASTRUCTURE

- 2. Intake substation
- 3. Standby generator & fuel storage
- 4. Chillers/coolers
- 5. Main electrical switch room
- 6. Ups & battery plant room

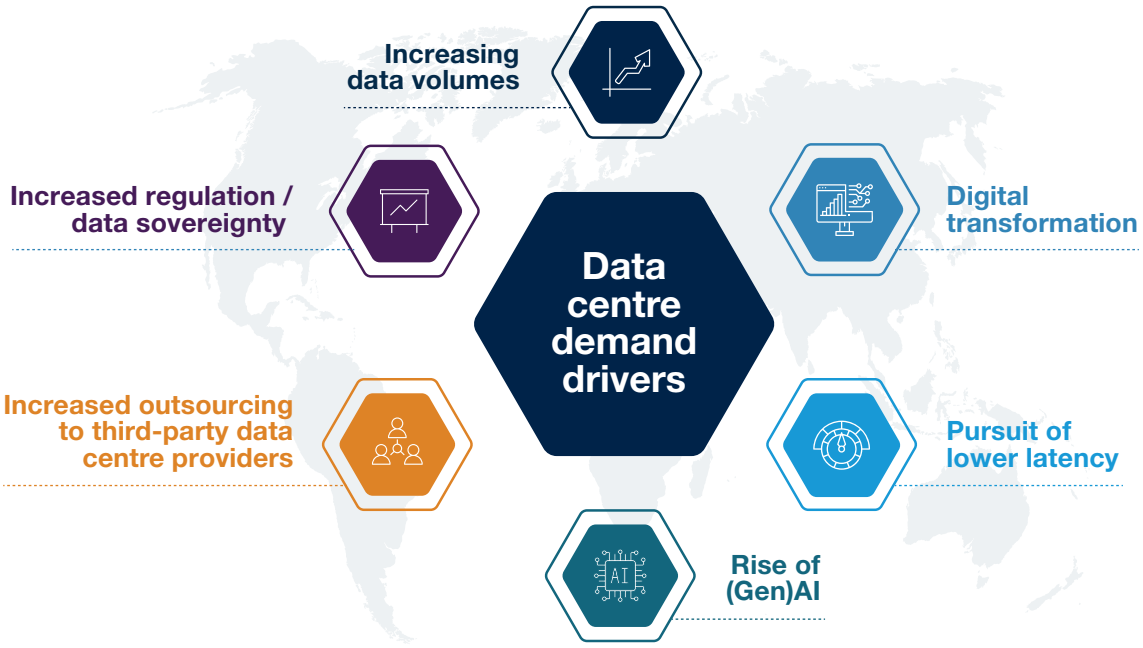
ESSENTIAL OPERATING INFRASTRUCTURE

- 7. Data hall (servers, switches, cooling)

Source: A&M data and analysis, Atmos Consulting Australia

2. Industry drivers

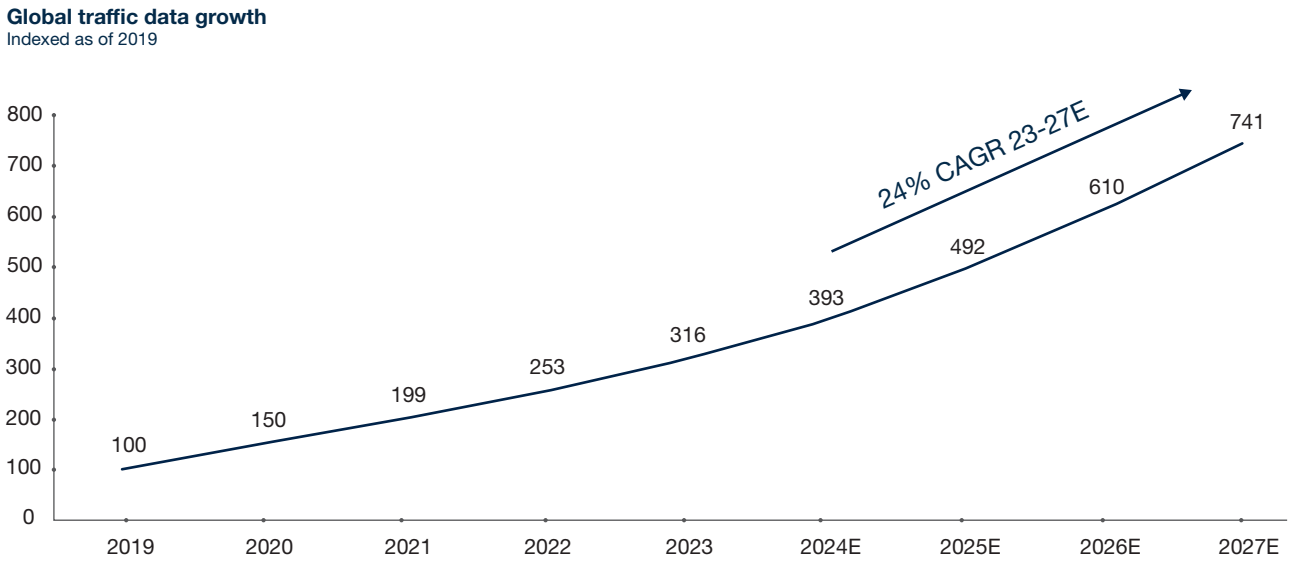
Key drivers of data centre demand:



Driver 1: Increasing data volumes

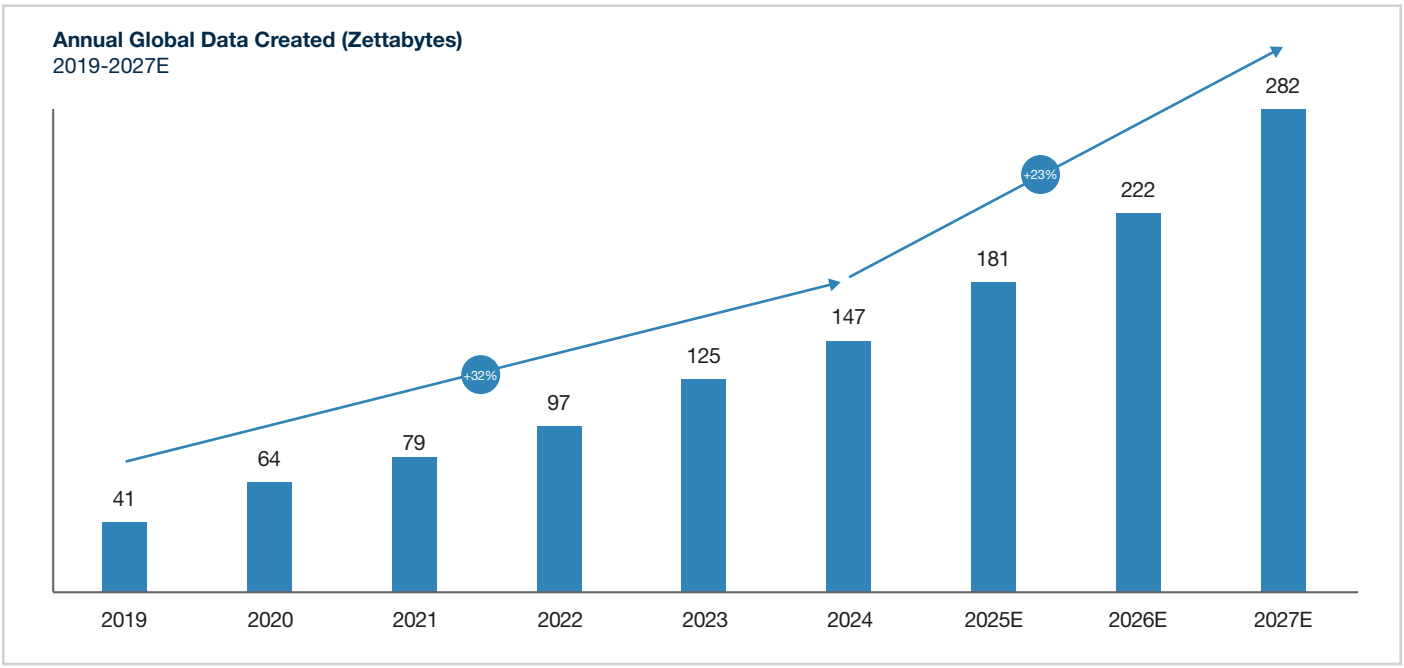
Global data traffic is expected to grow by 24 percent through 2027 driven by the proliferation of IoT devices, advancements in AI, continued growth of cloud computing, and the explosion of social media and digital content, among other use cases. Such large data transmission relies on a vast distributed infrastructure of subsea cables, terrestrial fiber and network towers, with data centres as the fulcrum of this infrastructure.

Figure 3: Global annual network traffic data



Source: A&M data and analysis, IDC Global, Statista

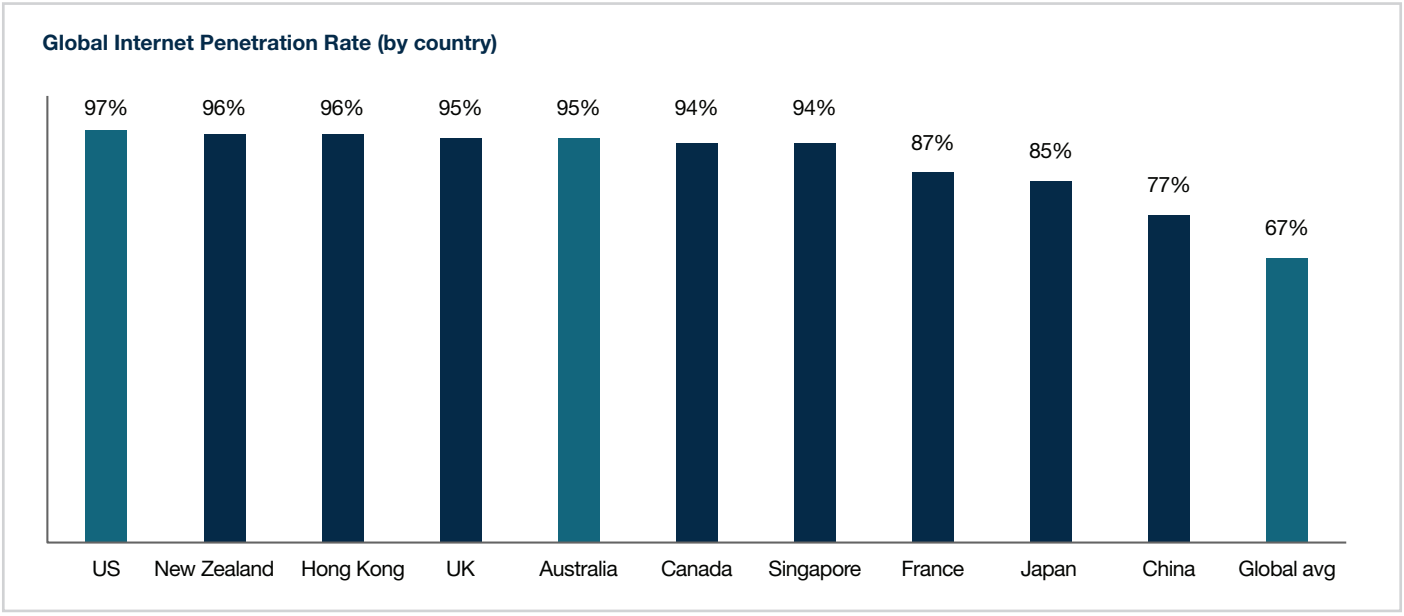
Figure 4: Global data growth



Source: A&M data and analysis, IDC Global, Statista

Global internet penetration is typically higher than 80 percent in developed countries while the global average is 67 percent. As internet penetration grows, and local mobile networks and fiber optic infrastructure advances, global data growth will continue to accelerate.

Figure 5: Global internet penetration

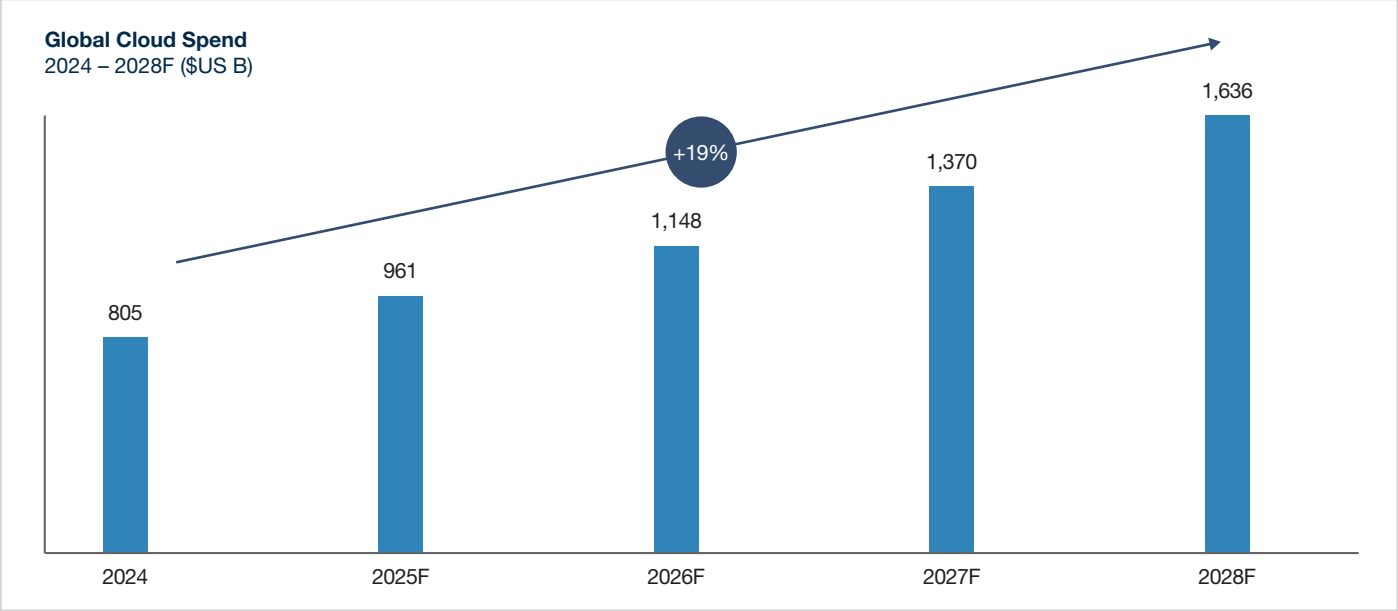


Source: A&M data and analysis, World Bank, International Telecommunication Union (ITU)

Driver 2: Digital transformation

Localized storage and software are shifting to cloud-based systems driven by greater computing speed, efficiencies, and the ecosystem of cloud providers. This is shifting IT to a centralised computing platform contract with services delivered from large data centres over IP networks. Global cloud spend is expected to grow at 19 percent through 2028, which in turn will drive investments in data centre infrastructure across countries to support cloud workloads.

Figure 6: Global cloud spend

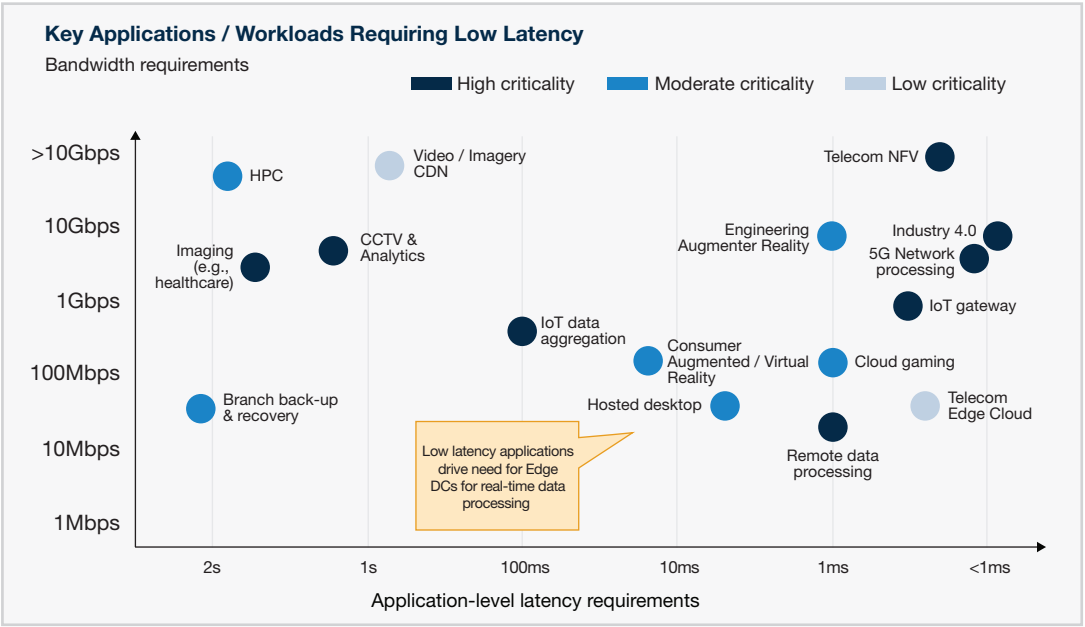


Source: A&M data and analysis, IDC Global

Driver 3: Pursuit of lower latency connectivity and experience

Both consumers and government enterprises are increasingly seeking lower latency to ensure a seamless customer experience and reliable real-time data processing, which is driving increasing edge data centre investments and upgrades in fiber connectivity. The US, in particular, has entered a phase of meaningful growth in edge data centres.

Figure 7: Growing demand for low latency use case applications



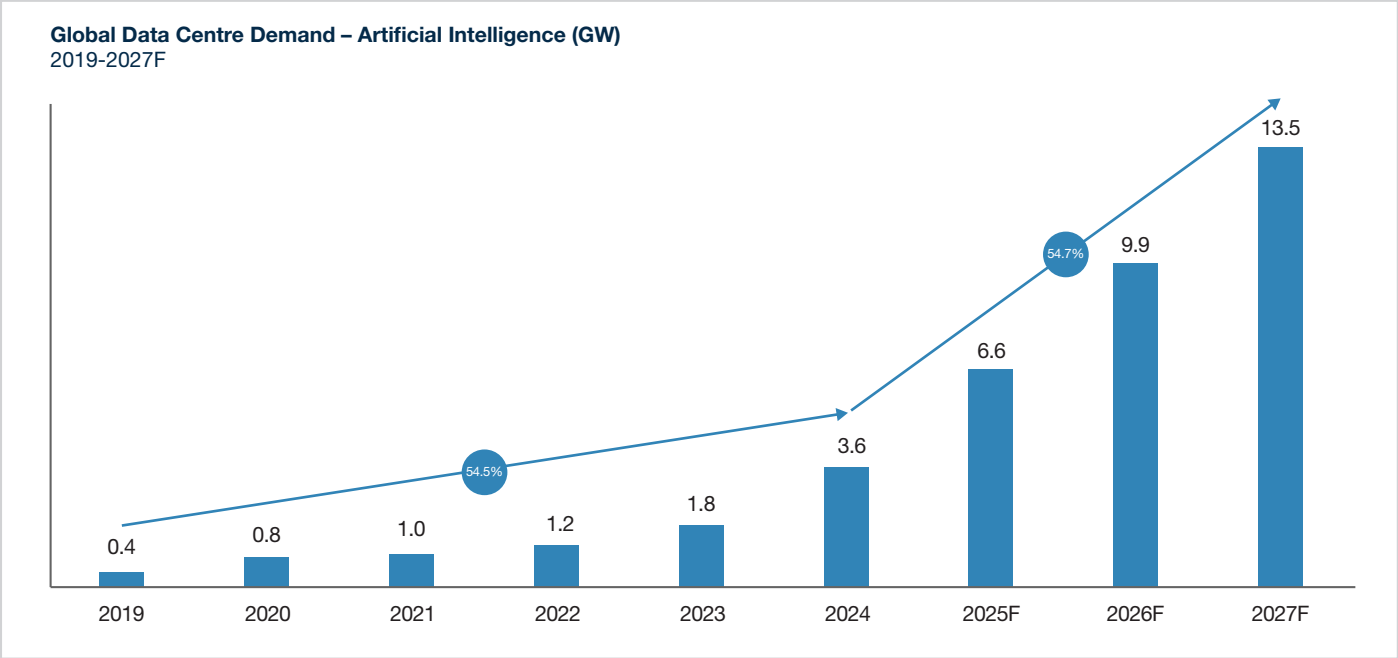
- **Business-critical edge workloads are also increasingly demanding** (e.g., industry 4.0, telecom network functions virtualization (NFV), 5G network processing), requiring sub-1ms latency with huge data volume consumptions
- **Developments in edge computing technology** (e.g., container, processing, 5G networking, secure computation) are accelerating growth of edge workloads
- Data centre interconnect networks need to evolve into next-gen designs to support the **latency, scalability and reliability requirements** of edge use cases

Source: A&M data and analysis, Uptime Institute

Driver 4: Rise of Gen AI

The advancement and integration of AI technology into modern day society has seen global demand increase ~55 percent from 2019 to 2024 and is projected to continue growing at this rate until 2027. As AI models become more widespread in consumer and enterprise use cases, the computational power required for training these models and supporting applications increases rack power density, notably among hyperscale and AI customers. This increased compute demand drives growth and investment in greenfield and upgrades in brownfield data centres.

Figure 8: GenAI demand growth



Source: A&M data and analysis, Citibank: Data Centre Powerplay: The Chips Have to Go Somewhere, Goldman Sachs: AI is poised to drive 160% increase in Data Centre power demand

Training and maintaining new AI models are resource-intensive tasks, presenting challenges to data centre operators. As AI and high-performance computing (HPC) expand, data centres will require innovative cooling technologies and advanced temperature management systems to address these demands.

Driver 5: Increased outsourcing to third-party data centre providers

Businesses increasingly focus on core functions while outsourcing IT compute requirements to streamline operations. Working with data centres offers enterprises several advantages:

- **Interconnectivity:** Data centres offer direct B2B or carrier network connections, enhancing speed and connectivity.
- **Resilience:** Enterprises utilize specialized data centre providers to ensure operational stability, guaranteeing uptime, security, and lowering redundancies.
- **Minimizing operating costs:** Data centres provide value-added solutions such as efficient power usage or innovative cooling technologies.
- **Scalability:** Data centres offer the ability to scale workloads up or down according to business needs, providing flexibility and control.
- **Reducing capital expenditure:** Businesses reduce costly upfront and ongoing capital expenditure associated with acquiring and maintaining IT infrastructure.

Driver 6: Increasing regulation on data privacy and the need for data sovereignty

Data sovereignty is a secular trend driving in-country data centre solutions. This is driven by the complexities of managing data storage across diverse jurisdictions.

In Australia, the prioritization of data privacy by public and private sectors fuels demand for localized data storage solutions, shaped by legislative mandates like the Privacy Act 1988 and initiatives like My Health Record. Frameworks such as Australia's Digital Transformation Agency's Hosting Certification Framework and the 2021 National Data Security Action Plan discussion paper provide directives regarding data sovereignty and protection against foreign government cyber interference.

Similar trends are observed in the United States. Frameworks from the Federal Trade Commission (FTC), the National Institute of Standards and Technology (NIST), the California Consumer Privacy Act of 2018 (CCPA), and the Health Insurance Portability and Accountability Act of 1996 (HIPAA), provide guidelines and standards for data protection and related local data storage protocols.

3. Industry segmentation

The geographic location of a data centre influences the nature of demand, profile of customers, and eventual returns. Data centre markets are categorized as either tier 1 or tier 2 based on factors such as population size, economic activity, internet penetration, and connectivity to regional fiber networks.

Tier 1 vs. tier 2 markets

Global data centre markets are generally bifurcated between tier 1 and tier 2 markets.

Figure 9: Tier 1 vs. tier 2 markets

Global tier 1 markets

Tier 1 attributes (illustrative)

- Major metropolitan area
- Significant internet penetration, usage, and connectivity
- Greater than 300MW of capacity
- Strategic proximity to major telecommunications, financial, and/or internet hubs
- Reliable sources of power, water, and land supply

Example tier 1 markets (illustrative)

North America

- Atlanta
- Chicago
- Columbus
- Dallas
- New York / New Jersey
- Northern Virginia
- Oregon
- Phoenix
- Salt Lake City
- San Francisco Bay Area
- Toronto

Europe

- Amsterdam
- Dublin
- Frankfurt
- London
- Paris
- Zurich

Asia Pacific

- Beijing
- Hong Kong
- Mumbai
- Seoul
- Shanghai
- Singapore
- Sydney
- Tokyo

Global tier 2 markets

Tier 2 attributes (illustrative)

- Relatively smaller metropolitan area
- Relatively less internet connectivity
- Less than 300MW of capacity
- Relatively less presence of telecommunications, financial, and/or internet hubs
- Less reliable sources of power, water, and land supply

Example tier 2 markets (illustrative)

North America

- Austin / San Antonio
- Boston
- Charlotte
- Denver
- Houston
- Las Vegas
- Los Angeles
- Miami
- Montreal
- Kansas City
- Seattle

Europe

- Berlin
- Madrid
- Milan
- Oslo
- Warsaw

Asia Pacific

- Adelaide
- Auckland
- Bangalore
- Brisbane
- Jakarta
- Johor Bahru
- Kuala Lumpur
- Manilla
- Osaka
- Taipei
- Townsville

Source: A&M data and analysis, CBRE, DC Byte

Carrier neutral data centres

Carrier neutral data centres connect to multiple internet service providers (ISPs) and telecommunications providers, offering clients flexibility and improved network performance through diverse provider options and cross-connects.

Figure 10: Types of neutral data centres

Enterprise: These data centres serve the needs of a single (or a few) small to large organization(s). These facilities are typically built-to-suit and can be housed on the same premises as the customer or offsite. Ownership can vary between the user and a third-party operator. Significant data scale is typically required to justify the cost of having your own dedicated data centre.

Colocation: These data centres serve multiple customers, whether hyperscale, enterprise, small and medium sized businesses, or others. These facilities are typically standardized in technical design. Colocation data centres are typically operated by a third party that provides power, security, cooling, as well as networking components and IT support. As a result, multiple end-users co-exist in a colocation facility.

Hyperscaler: These data centres serve a single (or few) hyperscale customers. These facilities are typically built-to-suit. Given the large data scale required, customers tend to be social media platforms, search engine providers, AI companies, and computing and web services providers. Because these sites deliver high power density relative to compute cycle costs, AI workloads typically run within hyperscale data centres. Further, because AI workloads may not require real-time compute, like online video games, applications tend to be latency tolerant.

Edge: Often called micro data centres, edge data centres are smaller in scale, relatively less common today than other data centre types and located near end-users to minimize latency and enable real-time data processing. Demand for low-latency solutions is driving edge data centre growth. Edge facilities are typically built in a standardised manner.

Overall, while customer use cases may differ, demand is largely the same across types of data centres.

Contract structure and terms

Data centre contracts vary by customer size, term length, specifications, and market conditions. Hyperscaler contracts for entire data centres (i.e., asset contracts) typically last 10-20 years on a triple net lease basis, including insurance, maintenance, and utilities. Electricity costs are passed through and a function of consumption and local electricity prices. Often hyperscalers have 10-year leases with two five-year renewal options including an option to purchase at contract-end. Sub-leasing to end customers is possible, subject to certain conditions.

By contrast, operating contracts are typically shorter in duration with varying renewal structures. Retail contracts may be 1-3 years, wholesale contracts 2-5 years, tier 2 hyperscale contracts 5-10 years, and tier 1 hyperscale contracts up to 15 years. Hyperscale customers can usually terminate with 6-9 months' notice, while smaller retail customers may require 30-days' notice and can often shift to a monthly renewal model.

For both asset and operating contracts, payments are typically monthly. Asset contracts are typically leased per square meter or per rack space. Operating contracts price per rack or per kw dependent on rack density. Price escalators are based on local inflation or fixed rates. Renewal terms are typically impacted by market conditions.

4. Barriers to entry

The data centre industry faces significant barriers to entry, which, coupled with increased demand, particularly in recent years from digitalization and GenAI, have contributed to a shortage of supply. This shortage may also lead to increased regulation of future supply.

Factors contributing to barriers to entry include:

i. **Location and site:** Proximity to customers in major metropolitan areas is preferred to reduce latency, but land availability and cost often constrain supply.

ii. **High capital expenditure:** Significant investment is required for construction, operation, and maintenance over an extended period. Coordination with construction partners and regulatory bodies is critical to ensure seamless operations.

iii. **Expertise in design and construction:** The global skill shortage is a constraint, since the development of a data centre requires specific expertise and skilled personnel as well as skilled staff to operate and maintain facilities on an ongoing basis, both constrained by global skill shortages.

iv. **Network and energy grid connectivity:** Access to substantial and continuous power with reliable backup depends on the location and requires significant investment and coordination with power and water suppliers, telecommunications carriers, and ISPs.

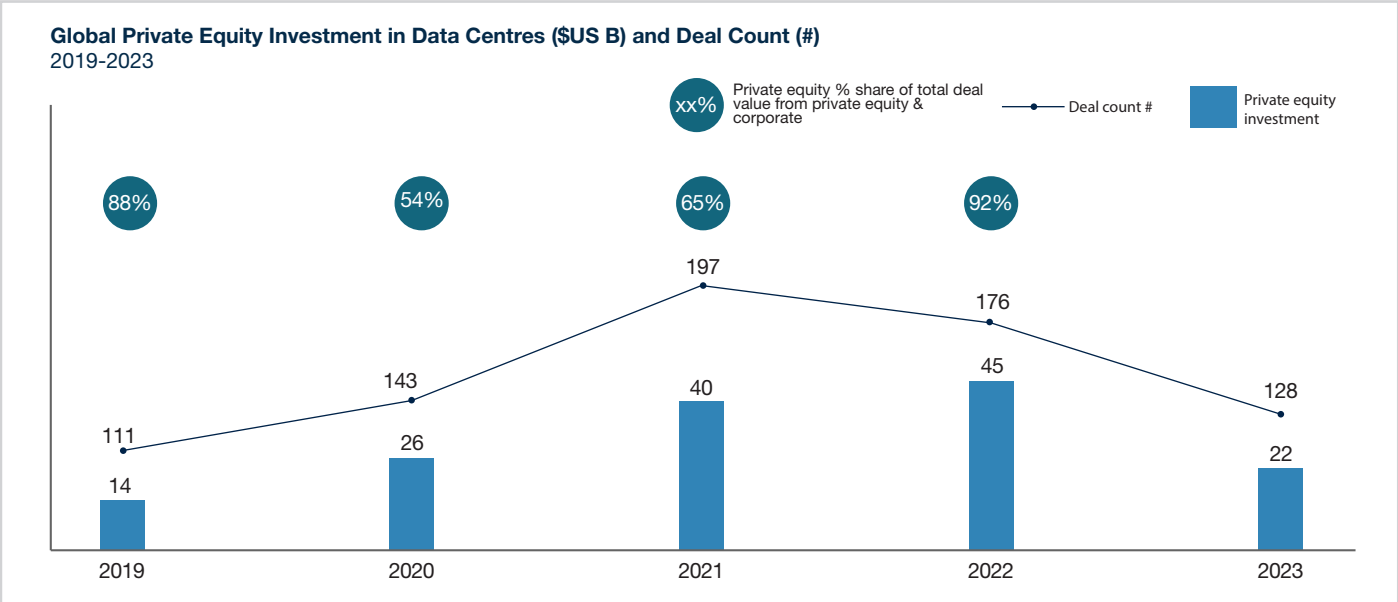
1. Global data centre market

There is increased global demand for scalable and efficient facilities in the data centre market following the adoption of advanced technologies such as AI and big data analytics. The global installed capacity of data centres is expected to grow at a compound annual growth rate (CAGR) of 15.9 percent from 2024 to 2027, reaching 60.6 GW in 2027.

Global market themes include, but are not limited to:

Increased data centre investments: Significant funding is coming from private equity, infrastructure investors, and large corporations, with deal flow up 40 percent from 2020 to 2021 and strong momentum continuing through 2023. Private equity and infrastructure funds are the main contributors, representing over 90 percent of total deal value in early 2022.

Figure 11: DC investment activity globally (2019-23)



Source: A&M data and analysis, PitchBook Data, Synergy Research Group: Data Centre M&A Deals on the Rise Again, Heading Towards Record Levels

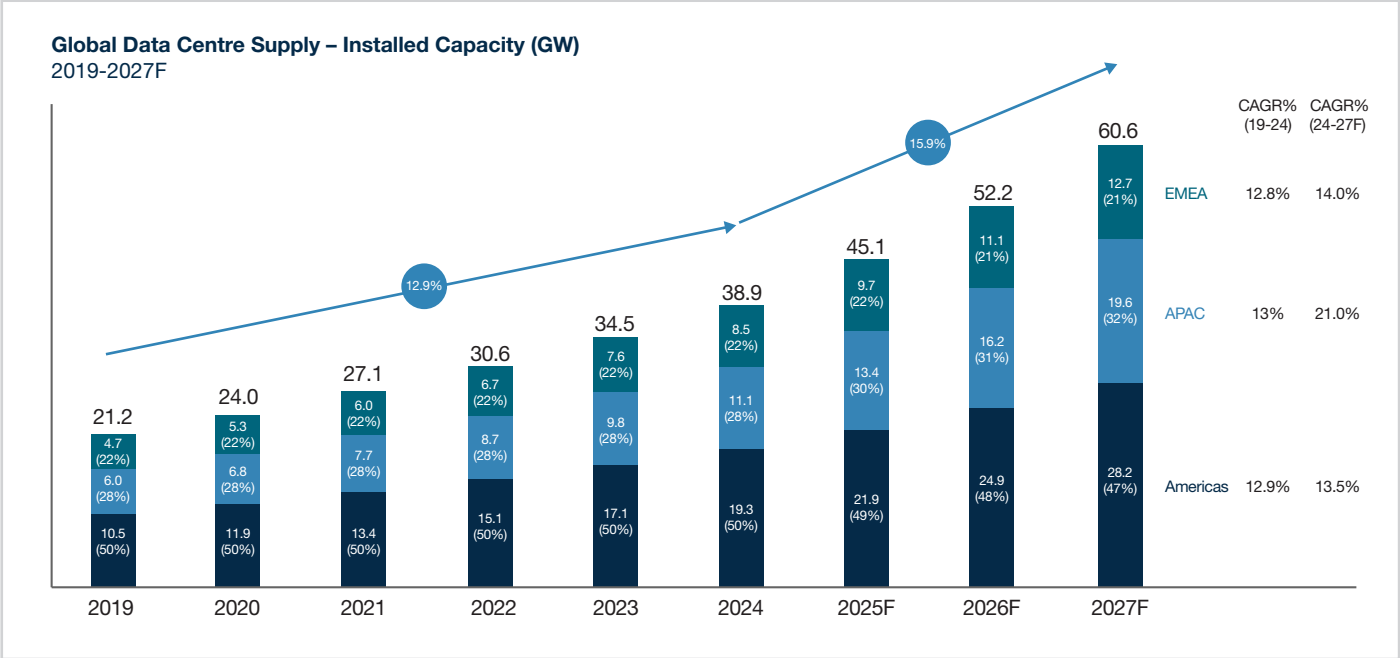
Increased digitalization: Growth in data centre demand historically was driven by higher internet penetration, mobile usage, cloud computing penetration, and industries like retail, e-commerce, digital finance and entertainment, as well as growing public sector adoption. Investment and innovation in GenAI (e.g., natural language processing, image generation) and high-performance computing (HPC) (e.g., financial risk management, medical imaging processing, energy exploration) is expected to drive similar future demand for data centre services across categories.

Sustainability: Growing emphasis on sustainability from enterprises and stricter governments regulations are driving data centre operators to strengthen ESG initiatives, using advanced cooling technology, renewable energy, and efficient water use to reduce their carbon footprint.

Global supply

Global supply is expected to grow at an accelerated pace in the coming years at 15.9 percent CAGR to reach 60.6 GW by 2027. The APAC region is projected to lead this growth at 21 percent, driven by a surge of new investments. The Americas and EMEA (Europe, the Middle East and Africa) are expected to experience similar growth rates of 13.5 percent and 14 percent, respectively.

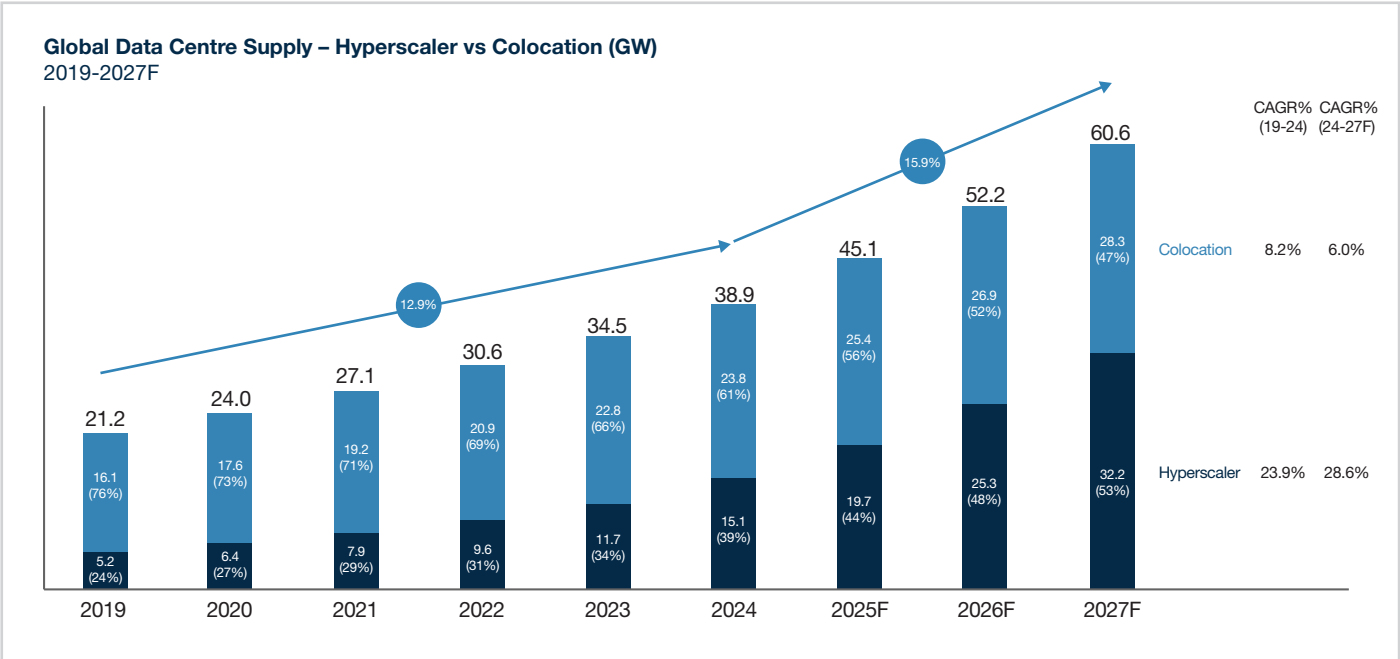
Figure 12: Global data centre supply, FY19-27F, by region



Source: A&M data and analysis, Cushman & Wakefield: 2024 Global Data Centre Market Comparison, Savills: Asia Pacific Data Centers, IDC: Datacenter IT Power Capacity in Asia/Pacific

Hyperscalers are expected to grow 28.6 percent. In contrast, colocation services are anticipated to grow at a more modest pace of 6 percent.

Figure 13: Global data centre supply, FY19-27F, by hyperscaler vs. colocation

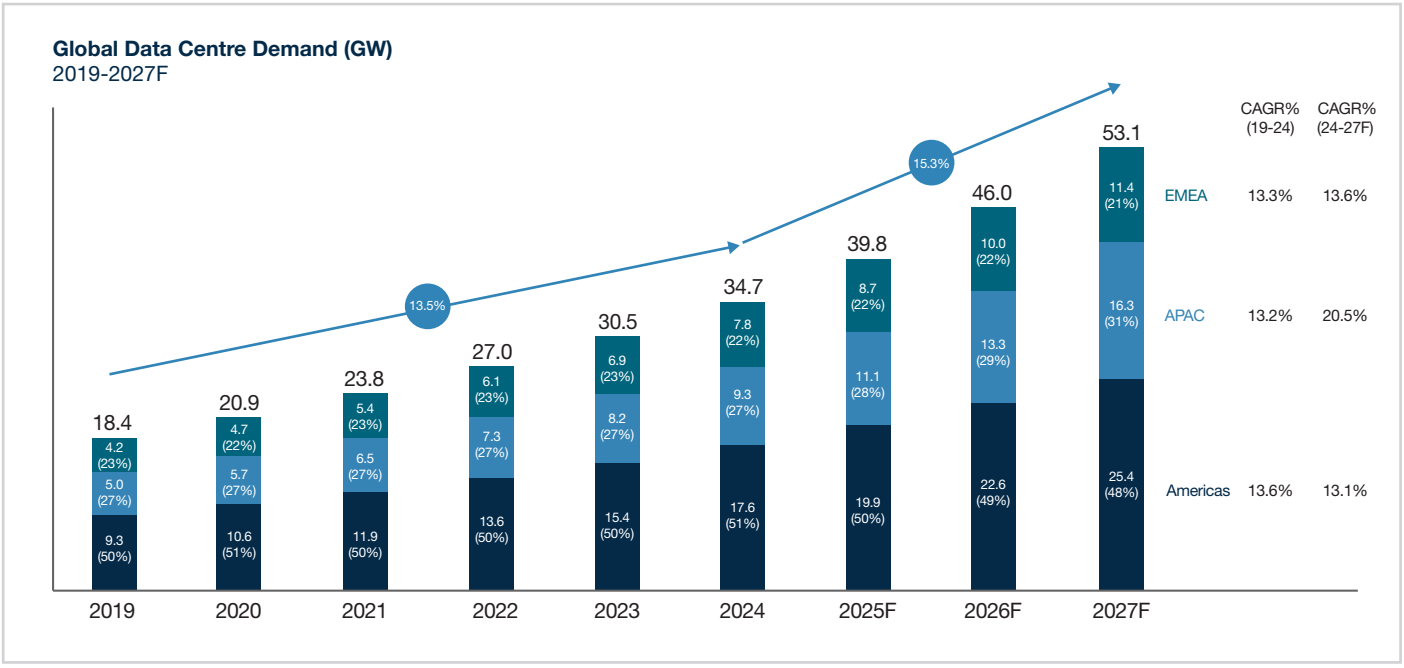


Source: A&M data and analysis, Synergy Research Group: Hyperscale Operators and Colocation Continue to Drive Huge Changes in Data Centre Capacity Trends

Global demand

Global demand is projected to hit 53 GW by 2027, led by the APAC region with a 20.5 percent growth rate, reaching 16.3 GW. The Americas and EMEA are expected to grow more moderately at 13.1 percent and 13.6 percent, reaching 25.4 GW and 11.4 GW, respectively.

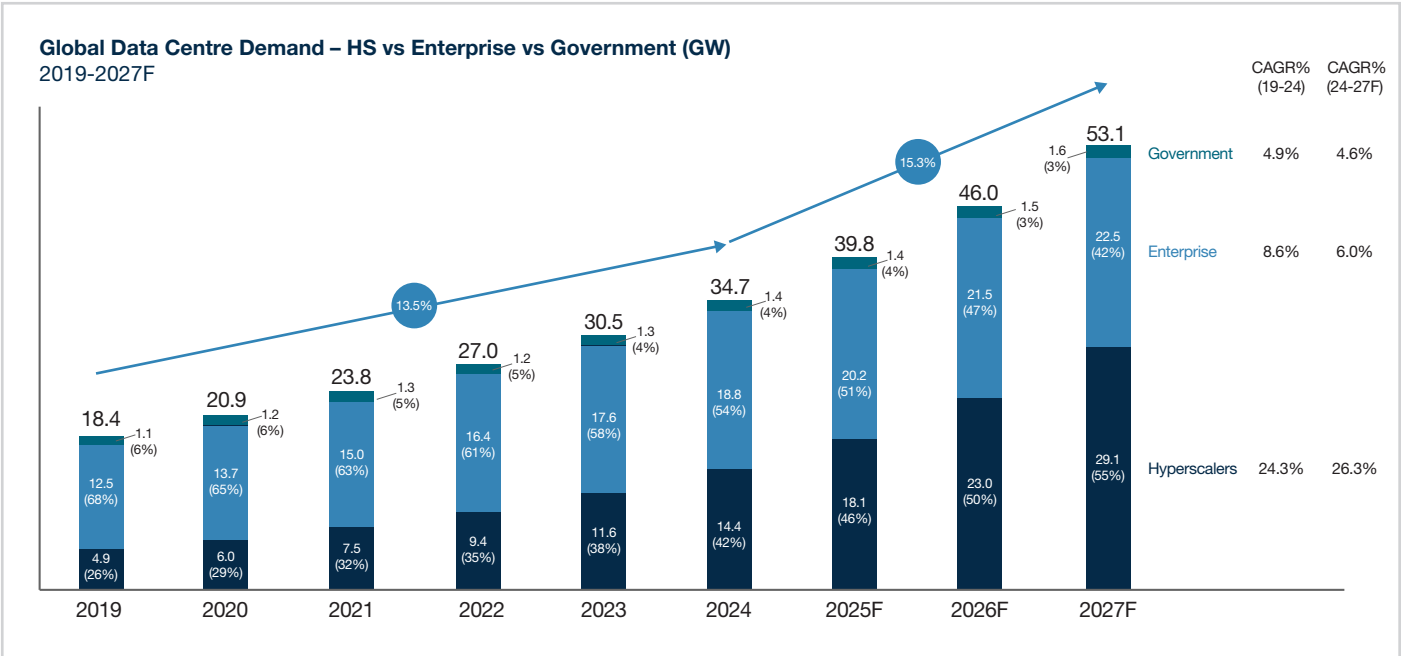
Figure 14: Global data centre demand, FY19-27F, by region



Source: A&M data and analysis, Cushman & Wakefield: 2024 Global Data Centre Market Comparison

Hyperscaler demand is expected to experience the fastest growth, projected to increase by 26.3 percent, reaching 29.1 GW by 2027, while government and enterprise are anticipated to grow more gradually, at 4.6 percent and 6 percent, respectively. By 2027, hyperscalers are projected to account for approximately 55 percent of global data centre demand.

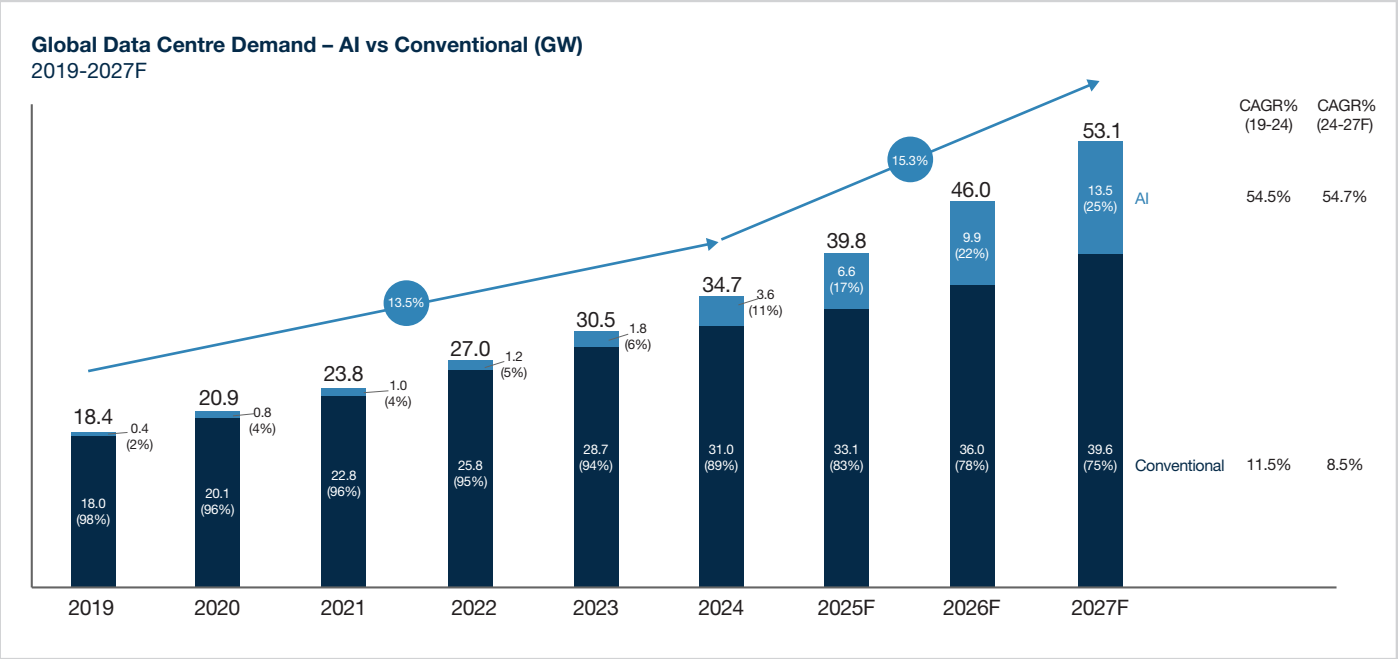
Figure 15: Global data centre demand, FY19-27F, by hyperscaler vs. enterprise vs. government



Source: A&M data and analysis, Cushman & Wakefield: 2024 Global Data Centre Market Comparison

Demand for AI workloads is expected to grow at a CAGR of 54.7 percent, reaching 13.5 GW by 2027. In comparison, conventional workloads are projected to grow at a rate of 8.5 percent.

Figure 16: Global data centre demand, FY19-27F, by conventional vs AI workload



Source: A&M data and analysis, Cushman & Wakefield: 2024 Global Data Centre Market Comparison

1. US data centre market

The US, as the world's most mature data centre market, continues to experience strong growth, driven by favorable macro conditions.

Market landscape

Major* data centre companies in the US

- Aligned
- Cologix
- Centersquare (Cyxtera/Evoque)
- Compass Datacenters
- CoreSite
- CyrusOne
- Databank
- Digital Realty
- EdgeConneX
- Equinix
- Flexential
- Iron Mountain
- NTT Data
- QTS
- STACK
- Switch
- Vantage Data Centres
- xScale (Equinix / PGIM JV)

*by megawattage

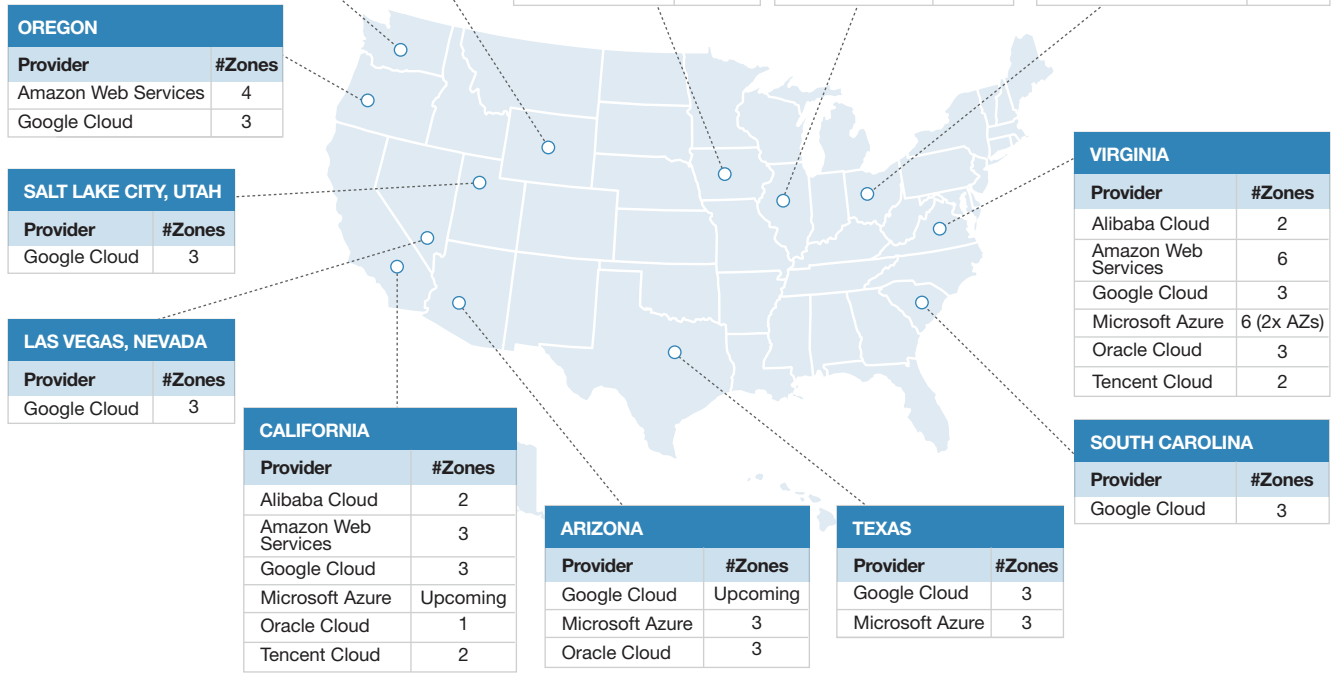
Note: There may also be other examples of Core and Shell providers in the United States, however, the above table is intended to set out the key data centre operators

Source: A&M Data and Analysis

Key hyperscale zones

Figure 17: United States hyperscaler availability zones

US Hyperscaler Availability Zones (AZs)
2024



WASHINGTON

Provider	#Zones
Microsoft Azure	3

WYOMING

Provider	#Zones
Microsoft Azure	N/A

IOWA

Provider	#Zones
Google Cloud	4
Microsoft Azure	3

ILLINOIS

Provider	#Zones
Microsoft Azure	3
Oracle Cloud	3

OHIO

Provider	#Zones
Amazon Web Services	3
Google Cloud	3

OREGON

Provider	#Zones
Amazon Web Services	4
Google Cloud	3

SALT LAKE CITY, UTAH

Provider	#Zones
Google Cloud	3

LAS VEGAS, NEVADA

Provider	#Zones
Google Cloud	3

VIRGINIA

Provider	#Zones
Alibaba Cloud	2
Amazon Web Services	6
Google Cloud	3
Microsoft Azure	6 (2x AZs)
Oracle Cloud	3
Tencent Cloud	2

SOUTH CAROLINA

Provider	#Zones
Google Cloud	3

CALIFORNIA

Provider	#Zones
Alibaba Cloud	2
Amazon Web Services	3
Google Cloud	3
Microsoft Azure	Upcoming
Oracle Cloud	1
Tencent Cloud	2

ARIZONA

Provider	#Zones
Google Cloud	Upcoming
Microsoft Azure	3
Oracle Cloud	3

TEXAS

Provider	#Zones
Google Cloud	3
Microsoft Azure	3

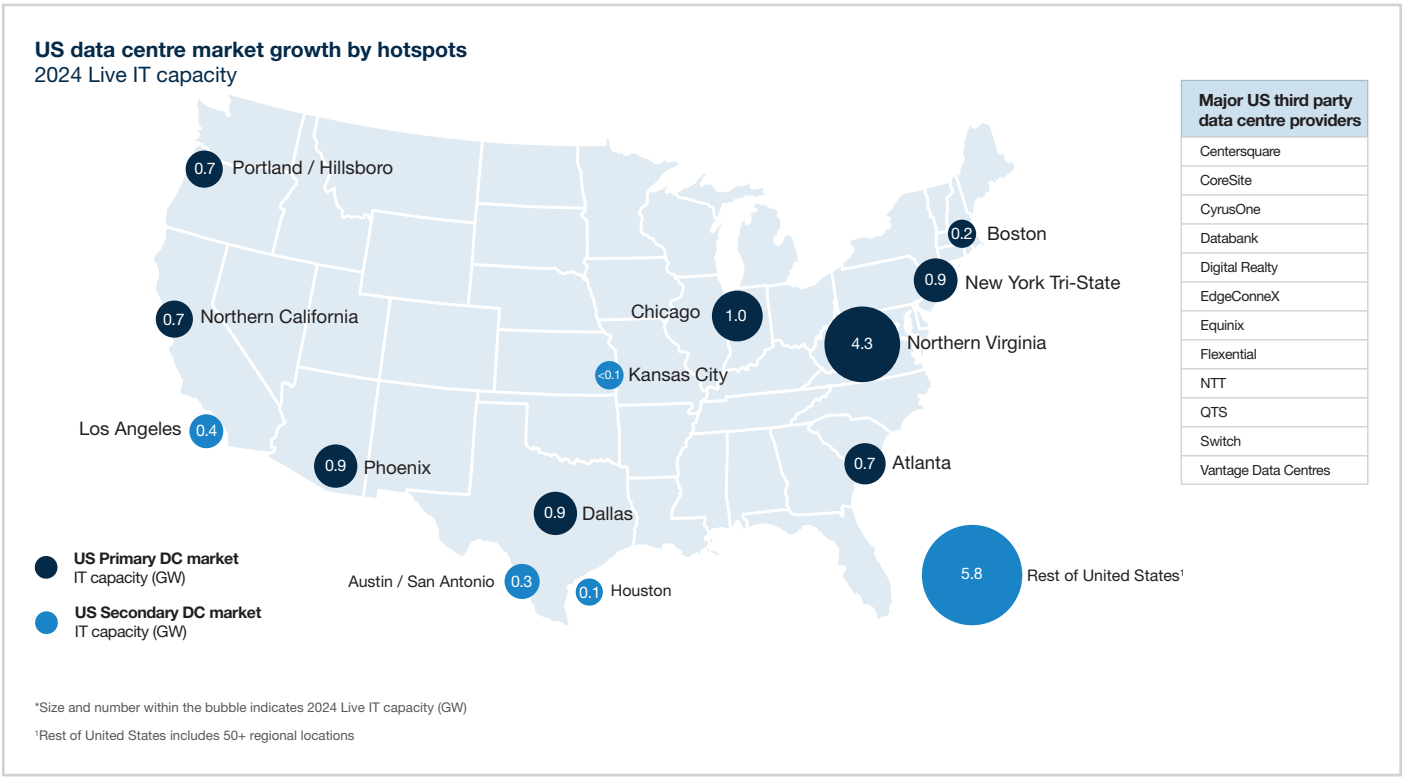
Not pictured: AWS has 2 additional regions, one in US-West and one in US-East, each with 3 availability zones

Source: A&M data and analysis

Capacity by region

Tier 1 cities dominate the US data centre landscape due to extensive infrastructure, robust connectivity, and high population density. Recently, tier 2 cities have gained traction because they provide customers lower operating costs.

Figure 18: Map of US data centre market, by live capacity

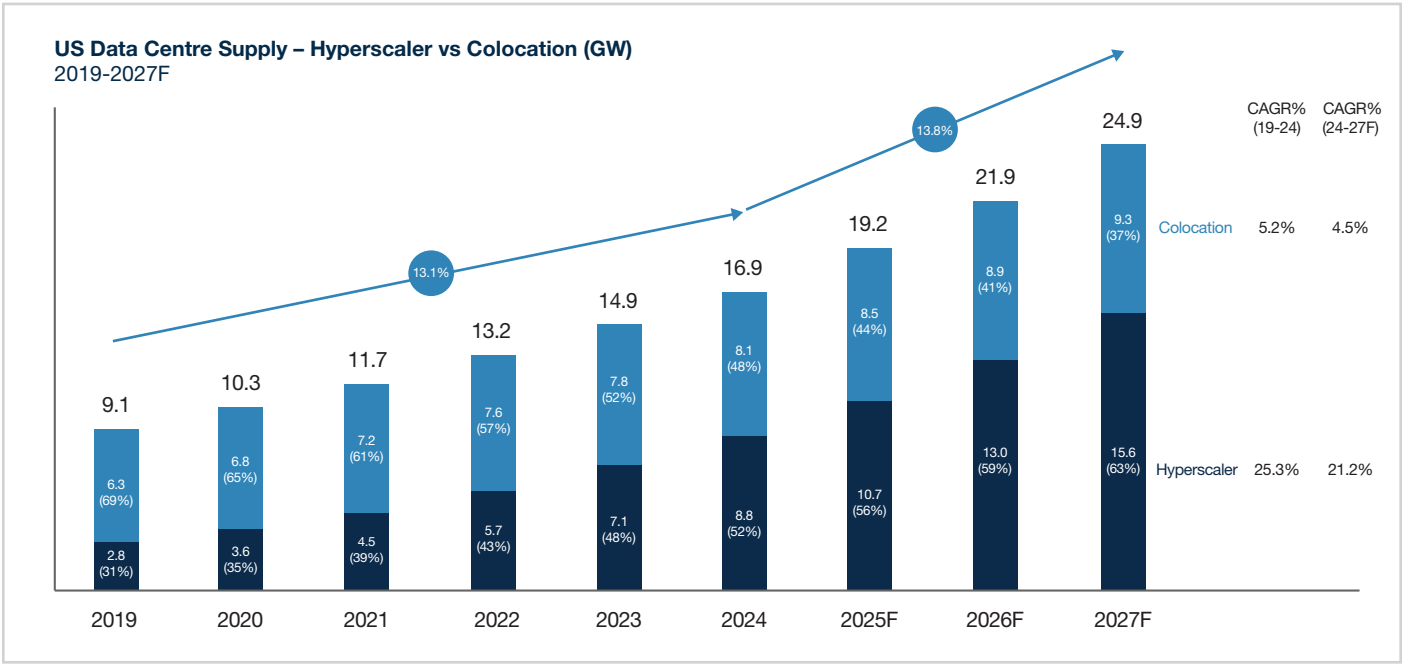


Source: A&M data and analysis, Cushman & Wakefield: Americas Data Centre H1 2024 Update, CBRE: North America Data Centre Trends H1 2024, JLL: US Data Centre Report 2024

US supply

US data centre supply is expected to grow at a 13.8 percent CAGR, reaching 24.9 GW by 2027. Hyperscaler capacity is projected to grow by 21.2 percent. In contrast, colocation capacity growth is expected to slow to 4.5 percent driven by the shift from traditional colocation to more flexible cloud-based infrastructure.

Figure 19: United States data centre supply, FY19-27F, by hyperscaler vs. colocation



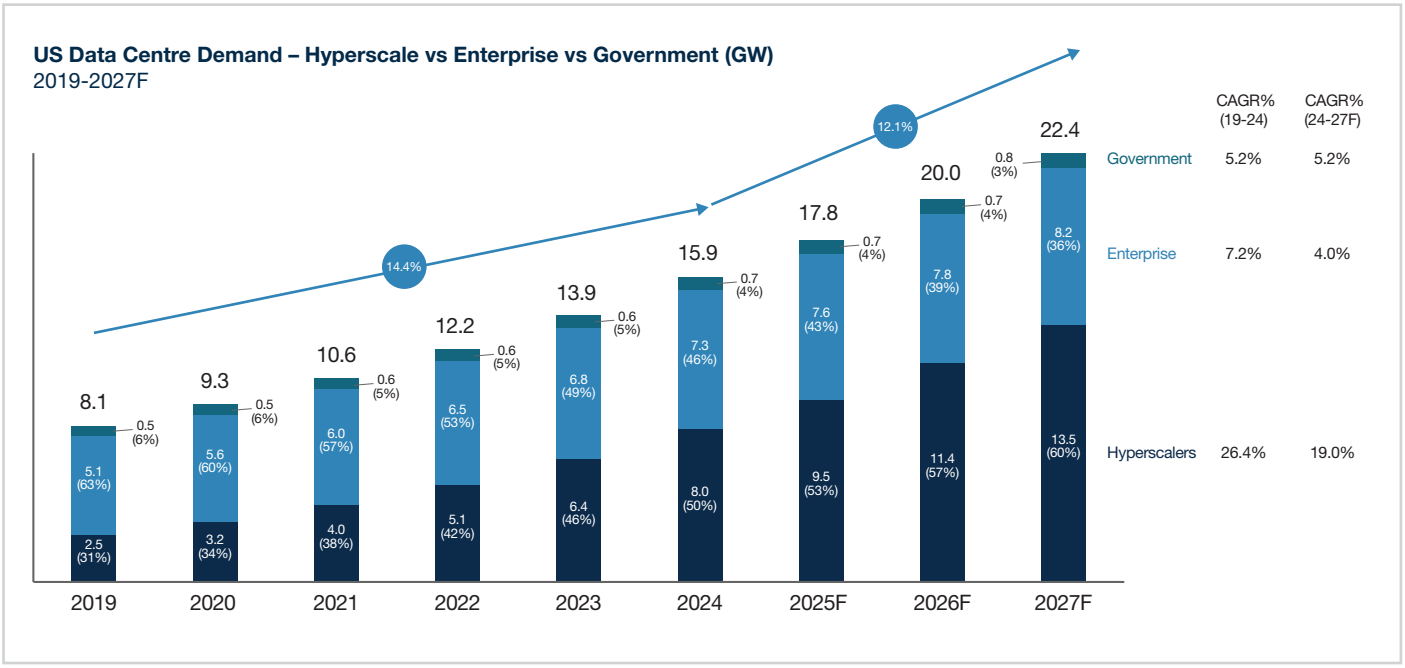
Source: A&M data and analysis, Mapletree Industrial Trust: Data Centre Market Overview 2024

US demand

US demand is expected to reach 22.4 GW by 2027. The demand is led by the hyperscale segment growing at 19 percent, reaching 13.5 GW by 2027. Enterprise and government segments are expected grow at 4.9 percent and 5.2 percent respectively.

Demand exceeding supply has sharply raised lease rates over the last five years, with costs often passed to customers with little resistance.

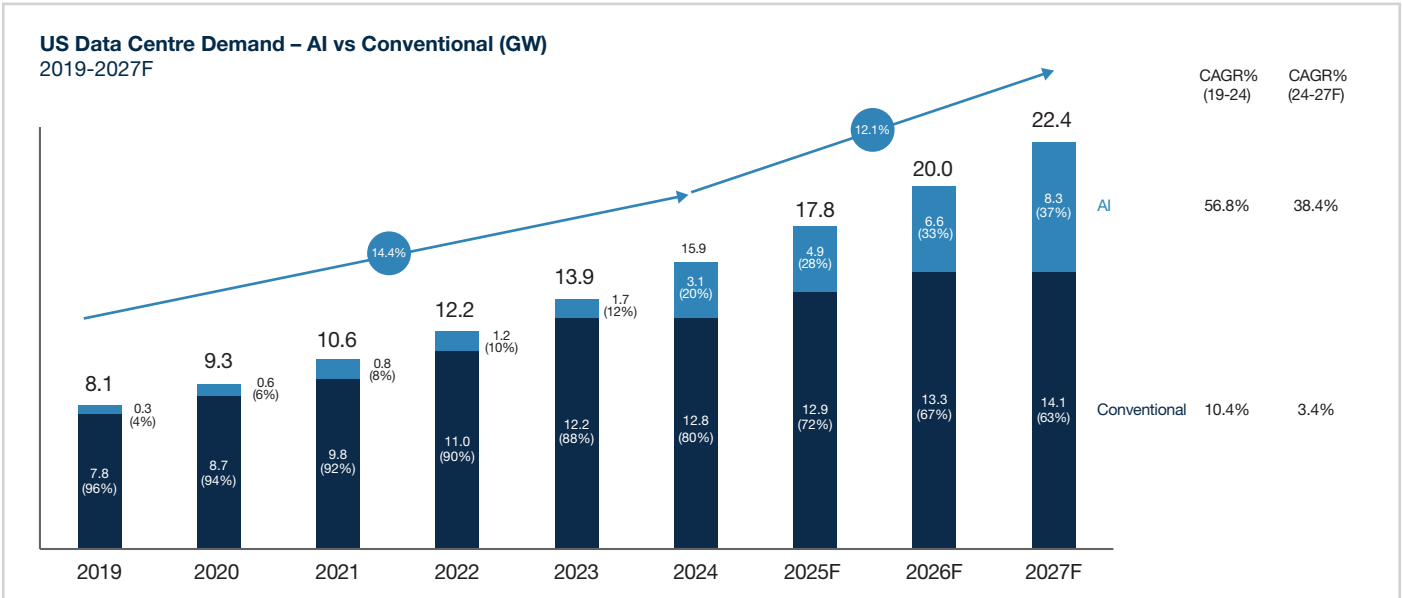
Figure 20: US data centre demand FY19-27F by hyperscaler vs. enterprise vs. government



Source: A&M data and analysis, CBRE: North America Data Centre Trends H1 2024, JLL: US Data Centre Report 2024, Goldman Sachs: Generational Growth - AI, Data Centres and the coming US power demand surge

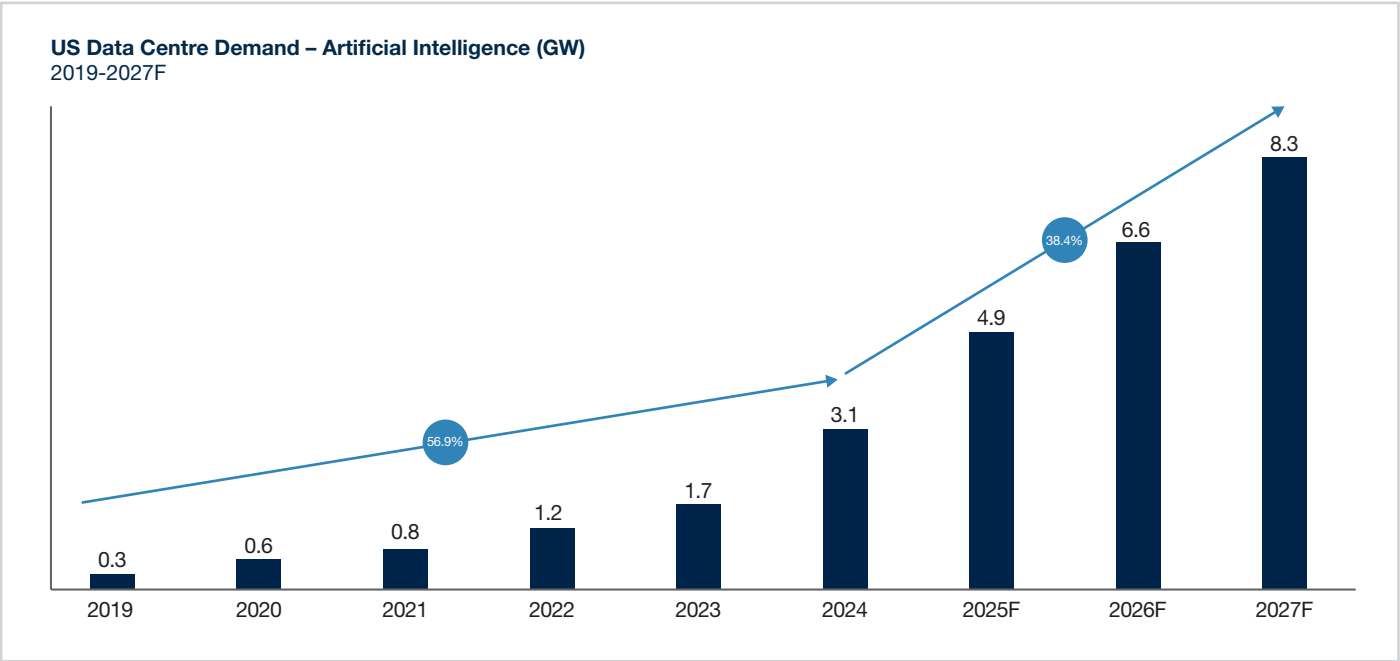
AI demand growth is expected to slow compared to previous years, forecasted at 38.4 percent from 2024 to 2027. On the other hand, conventional workloads will slow to 3.4 percent.

Figure 21: US data centre demand FY19-27F by AI workload vs. Conventional



Source: A&M data and analysis, Citibank: Data Centre Powerplay: The Chips Have to Go Somewhere, Goldman Sachs: AI is poised to drive 160% increase in Data Centre power demand, Schneider: The AI Disruption

Figure 22: US data centre demand – AI



Source: A&M data and analysis, Citibank: Data Centre Powerplay: The Chips Have to Go Somewhere, Goldman Sachs: AI is poised to drive 160% increase in Data Centre power demand, Schneider: The AI Disruption

2. Australia data centre market

Australia, while less mature than the US and the global market, is seeing similar trends drive demand, positioning Australia as a fast-growing market, attractive to hyperscale and cloud-based deployments targeting a variety of industries, including energy, healthcare and financial services. Australia's public sector is also seeing increased digital investment, which should flow through to the private sector, largely driven by the Data and Digital Government Strategy, National Digital Health Strategy and the Digital Economy Strategy.

Market landscape

Major* data centre companies in Australia				
• AirTrunk • CDC Data Centres	• DCI Data Centres • Digital Realty	• Equinix • Fujitsu	• Global Switch • iseek	• NextDC • STACK

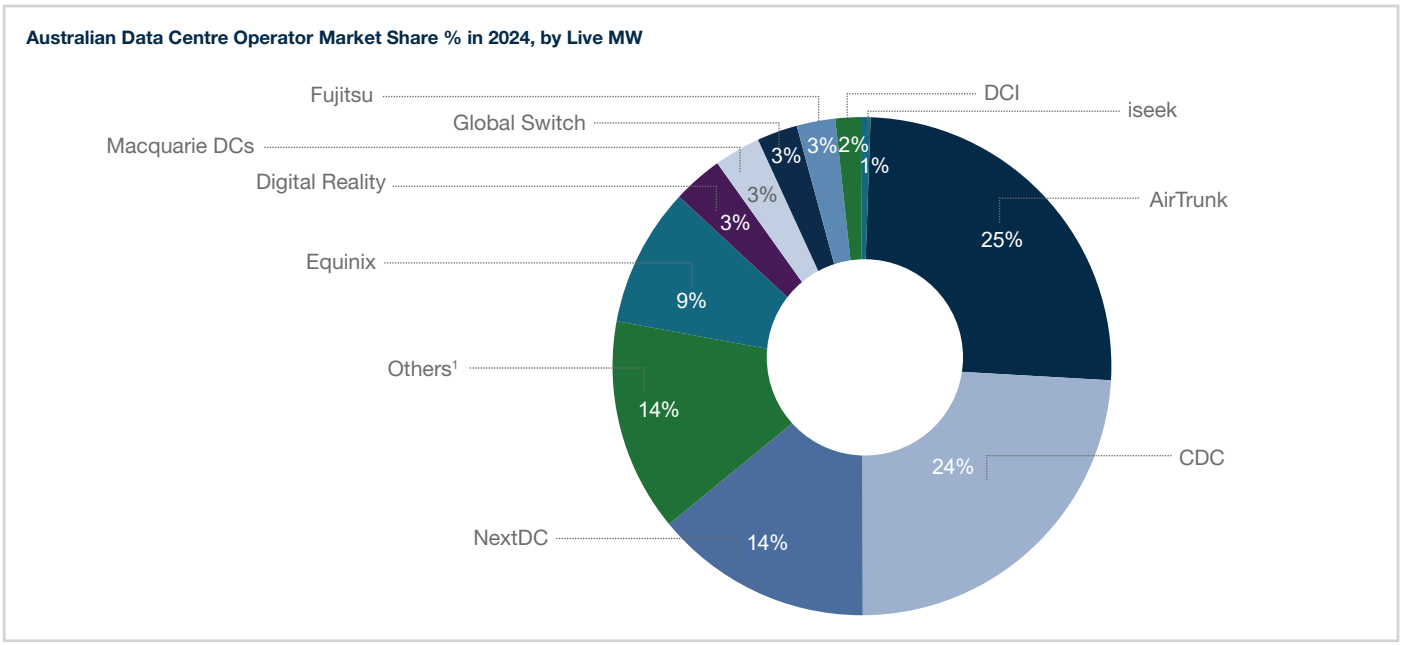
*by megawattage

Note: Australia excludes Goodman Group, an emerging Core and Shell provider in Australia that leases via asset contracts to major operators. There may also be other examples of Core and Shell providers in Australia, however the above table is intended to set out the key Operating data centre operators

Source: A&M Data and Analysis

The Australian data centre market is moderately fragmented. The top three players—AirTrunk, CDC, and NextDC—hold market shares of 25 percent, 24 percent, and 14 percent, respectively.

Figure 23: Key Australian data centre providers, by installed capacity 2024



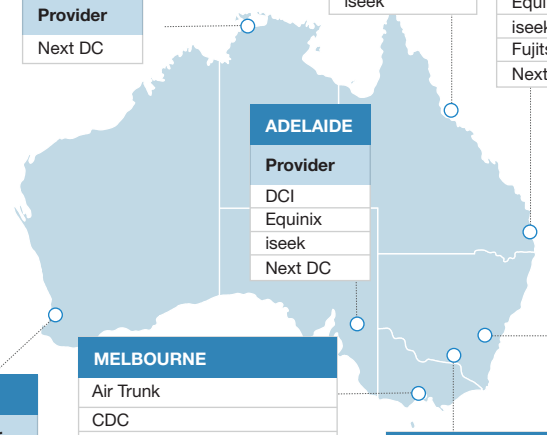
[1]Others includes ~25 to ~30 players
Source: A&M data and analysis, Company websites

Availability zones

Australia's data centres are concentrated in Sydney, Melbourne, and Canberra, driven by economic activities, concentration of end-users, infrastructure (telecom/power), subsea connectivity, low latency, and cloud provider access.

Figure 24: Australia Hyperscale Availability Zones and Major Third-Party Data Centres

Australia hyperscaler availability zones (AZs) and major third-party data centres
2024



DARWIN
Provider
Next DC

TOWNSVILLE
Provider
iseek

BRISBANE/SUNSHINE COAST
Provider
Equinix
iseek
Fujitsu
Next DC

ADELAIDE
Provider
DCI
Equinix
iseek
Next DC

SYDNEY
Air Trunk
CDC
DCI
Digital Realty
Equinix
Fujitsu
Global Switch
Keppel
Macquarie Data Centres
Next DC

SYDNEY AZs	
Provider	#Zones
Amazon Web Services	3
Azure	3
Google Cloud	3
Oracle Cloud	1

PERTH
Provider
Equinix
Fujitsu
Next DC

MELBOURNE
Air Trunk
CDC
Digital Realty
Equinix
Fujitsu
Next DC
STACK

MELBOURNE AZs	
Provider	#Zones
Amazon Web Services	3
Azure	3
Google Cloud	3
Oracle Cloud	1

CANBERRA
CDC
Equinix
Macquarie Data Centres
Next DC
STACK

CANBERRA AZs	
Provider	#Zones
Azure	3
Oracle Cloud	Unknown

Key

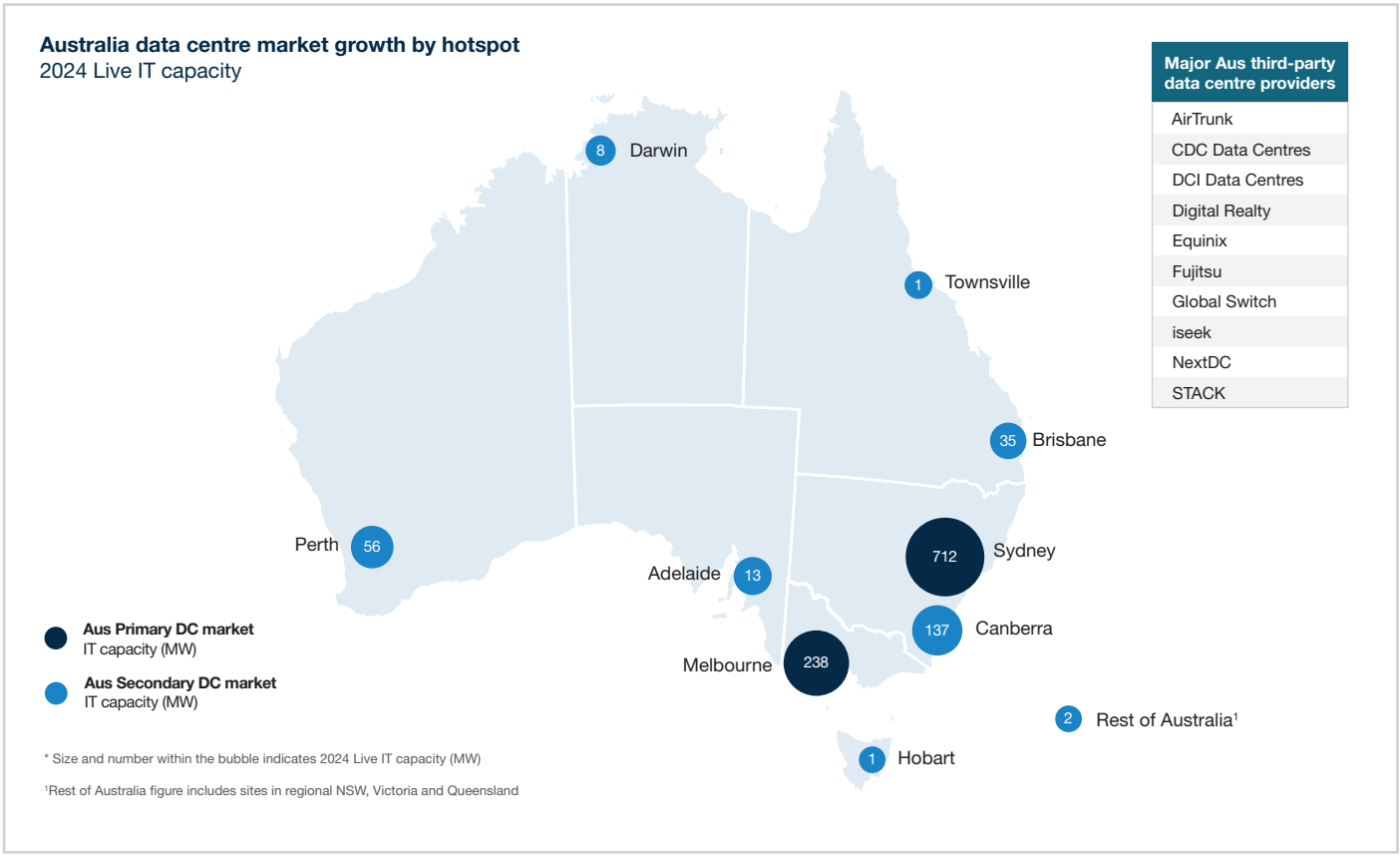
- Availability Zones (AZs)
- Third-party data centres

Source: A&M data and analysis, Company websites/announcements

Capacity by state

Tier 2 markets are seeing increased demand and investments due to congestion and competition in tier 1 markets.

Figure 25: Key Australian data centre providers, by installed capacity 2024

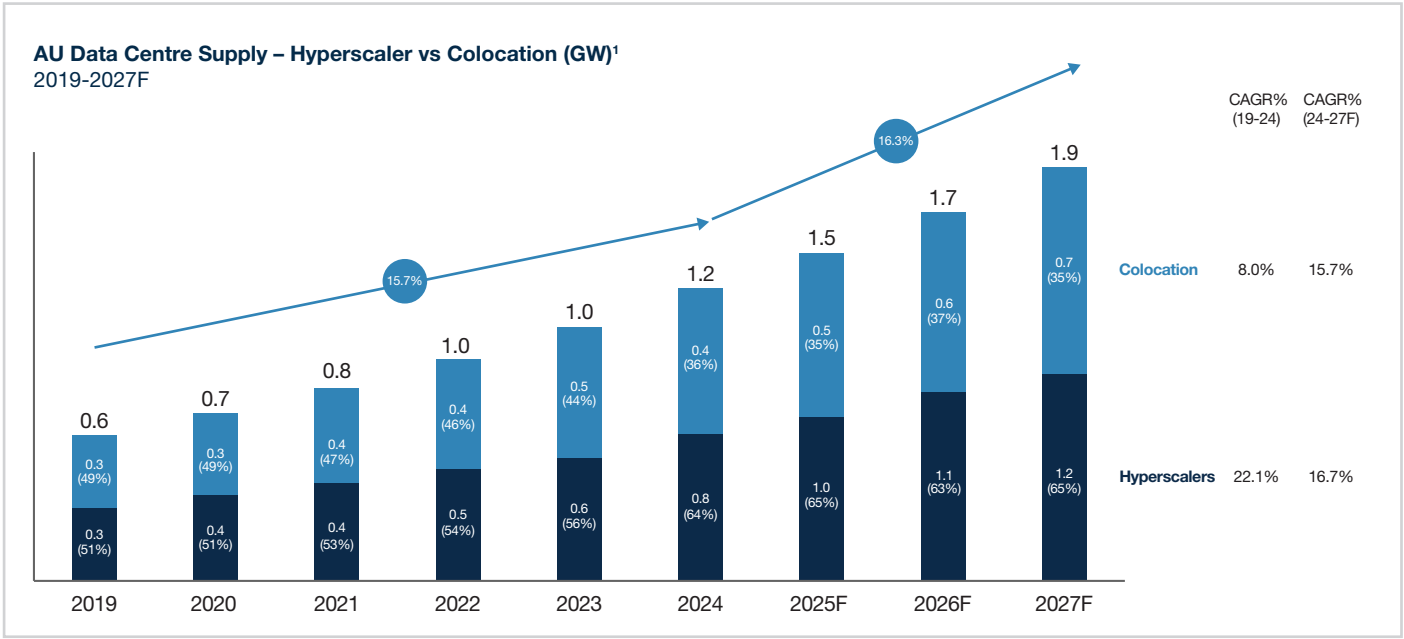


Source: A&M data and analysis

Australia supply

Australia's data centre supply is projected to grow at a 16.3 percent CAGR, reaching 1.9 GW by 2027. Hyperscaler and colocation capacities are expected to expand at similar rates, with hyperscalers growing at 16.7 percent to 1.2 GW and colocation at 15.7 percent to 0.7 GW.

Figure 26: Australian data centre supply, FY19-27F, by hyperscaler vs. colocation



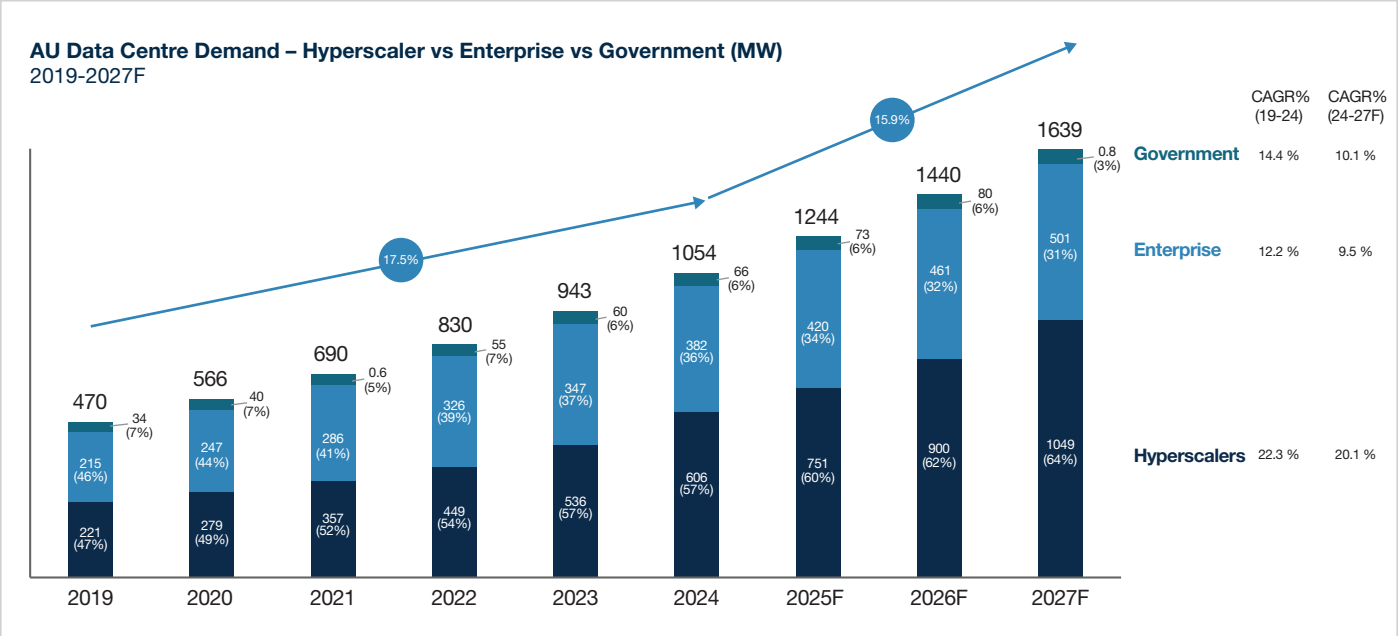
1) Based on Hyperscaler and Colocation capacity split across all facilities
Source: Morgan Stanley Equity Research, A&M data and analysis

Australia demand

Australia's data centre demand is anticipated to grow at a 15.9 percent CAGR, reaching 1.6 GW by 2027. Hyperscalers are expected to be a major contributor, with a projected growth rate of 20.1 percent. Government and enterprise demand is expected to grow at 10.1 percent and 9.5 percent, respectively.

Data centre demand in Australia has historically outpaced supply, with a demand CAGR of 17.5 percent versus 15.7 percent for supply, offering strong investment opportunities.

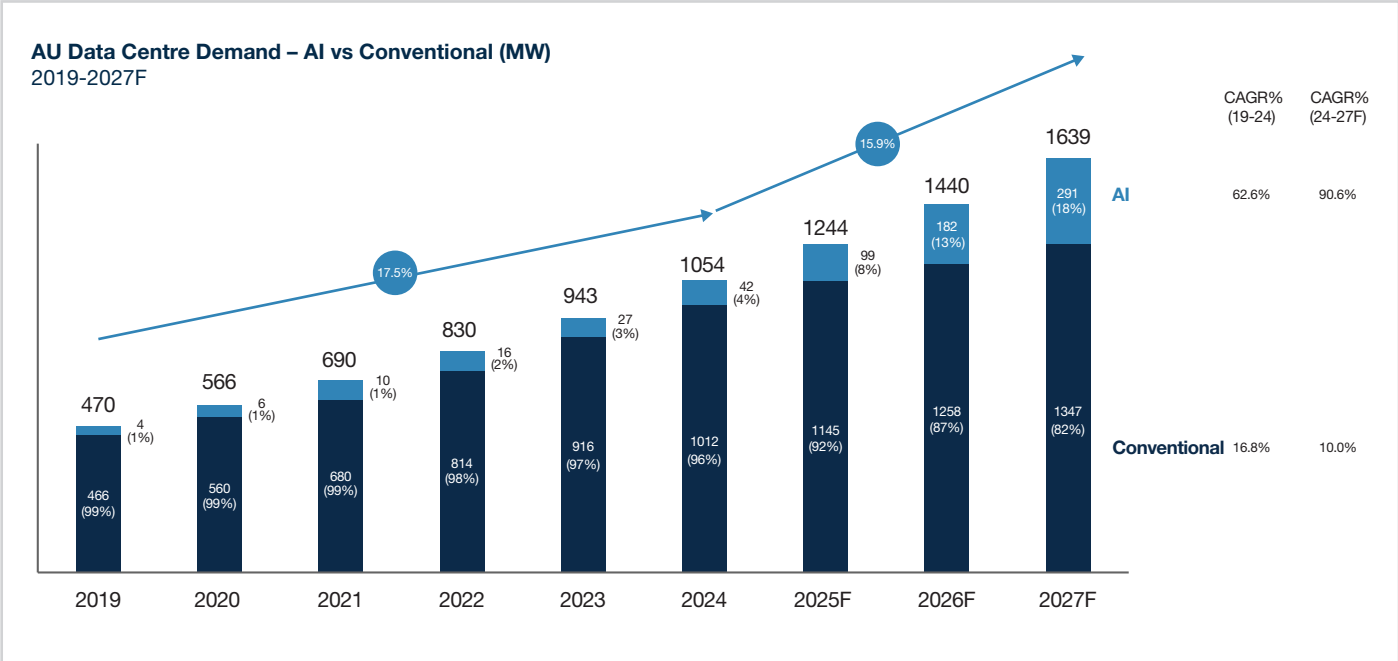
Figure 27: Australian data centre demand – hyperscaler vs. enterprise vs. government



Source: A&M data and analysis, Australian Bureau of Statistics, S&P Capital IQ

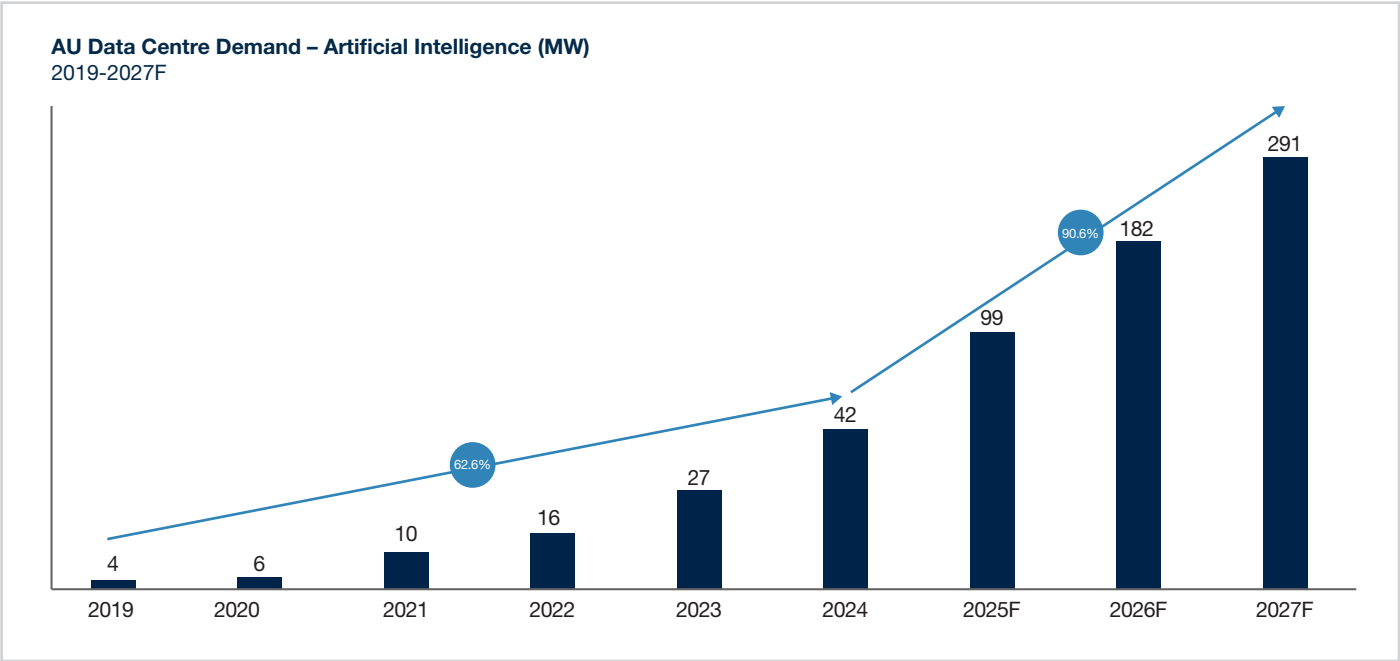
AI currently makes up 4 percent of data centre demand. Demand for AI workloads is projected to grow by 90 percent, reaching 291 MW by 2027, though it will remain smaller than the anticipated 1,347 MW for conventional workloads.

Figure 28: Australian data centre demand FY19-27F by AI workload vs. conventional



Source: A&M data and analysis

Figure 29: Australian data centre demand – Artificial Intelligence



Source: A&M data and analysis

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