

Defining Trust in Global Data Centre and Colocation Operations.



Introduction.

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And in a world that sees huge growth in e-commerce, hybrid IT, Tier-2 hyperscale services, and the continued migration of on-line applications to the cloud, trust in data centre operations requires new definitions.

For e-commerce alone, the factors underpinning this colossal growth, expected to create a market worth US\$5.5 trillion in 2022, include the expansion of online wholesale, post-COVID changes to shopping habits around the world, the rise of buy-now-pay-later (BNPL), and the continued growth of an affluent middle-class in the APAC region¹.

As a result, multinational corporations need to scale their million-dollar businesses to become trillion-dollar enterprises.

The huge volume of data that comes with such extraordinary growth requires the adoption of strategic data and infrastructure operations that future-proof colocation decisions and, ultimately, scalability. Multinational companies now seek new colocation sites - and trusted partners - to add to their global coverage, in the APAC region in particular.

Defining trust in colocation data centre operations therefore has to address a complex equation that evaluates resilience, speed, capacity, security, political stability, connectivity, risk, ESG, sovereignty, and the infrastructure itself.

In this e-book, we set out some of the factors that should be considered when answering a simple question: who should companies trust with their data centre operations.

In the global data centre market, Australia has a lot to offer multinational corporations. It's a top-10 global location for top-tier data centre operations with large market size, fast fibre connectivity and large cloud availability².

This growth reflects the jurisdictional benefits Australia has to offer within the broader APAC region, underpinned by the Australian Privacy Principles that help create clarity around data security and privacy, and strengthened by the move by the Australian Federal Government to outsource its data centre operations to commercial entities, including Macquarie Data Centres.

Global Data Centre Markets: Top Ten 2022

Source:
Cushman & Wakefield²

*Ranking Tie

1 **Northern Virginia**

2* **Silicon Valley**

2* **Singapore**

4* **Atlanta**

4* **Chicago**

6 **Hong Kong**

7 **Phoenix**

8 **Sydney**

9 **Dallas**

10* **Portland**

10* **Seattle**

One word sums up future
data centre demand.

More.

Let's set the scene.

Predicted growth in the global data centre market to reach US\$288 billion by 2027.

More data, more applications, bigger expectations will lead to an increased demand for computing infrastructure.

Global online transactions and e-commerce - in B2B and B2C - continue to grow, with B2B e-commerce predicted to be worth US\$18.9 trillion by 2027³, and B2C e-commerce worth US\$7.7 trillion by 2028⁴.

Alongside this new, post-pandemic paradigm sit other drivers⁵. Autonomous systems and ever more devices connected to the Internet of Things will accelerate the requirement for edge servers connected to more data centres of larger sizes.

Electric vehicles will see an increase in the requirement to download software updates, and new opportunities to create new consumer value, including new user experiences now possible inside their vehicles, based on new concepts not yet developed.

The demand for more power required to support the associated computing infrastructure will in turn accelerate the demand for more-efficient power management within data centres, new risk mitigation models to minimize or remove power outages, and new expectations around sustainable or renewable power generation.

Advanced applications such as AI, digital twinning and GIS mapping will become the norm.

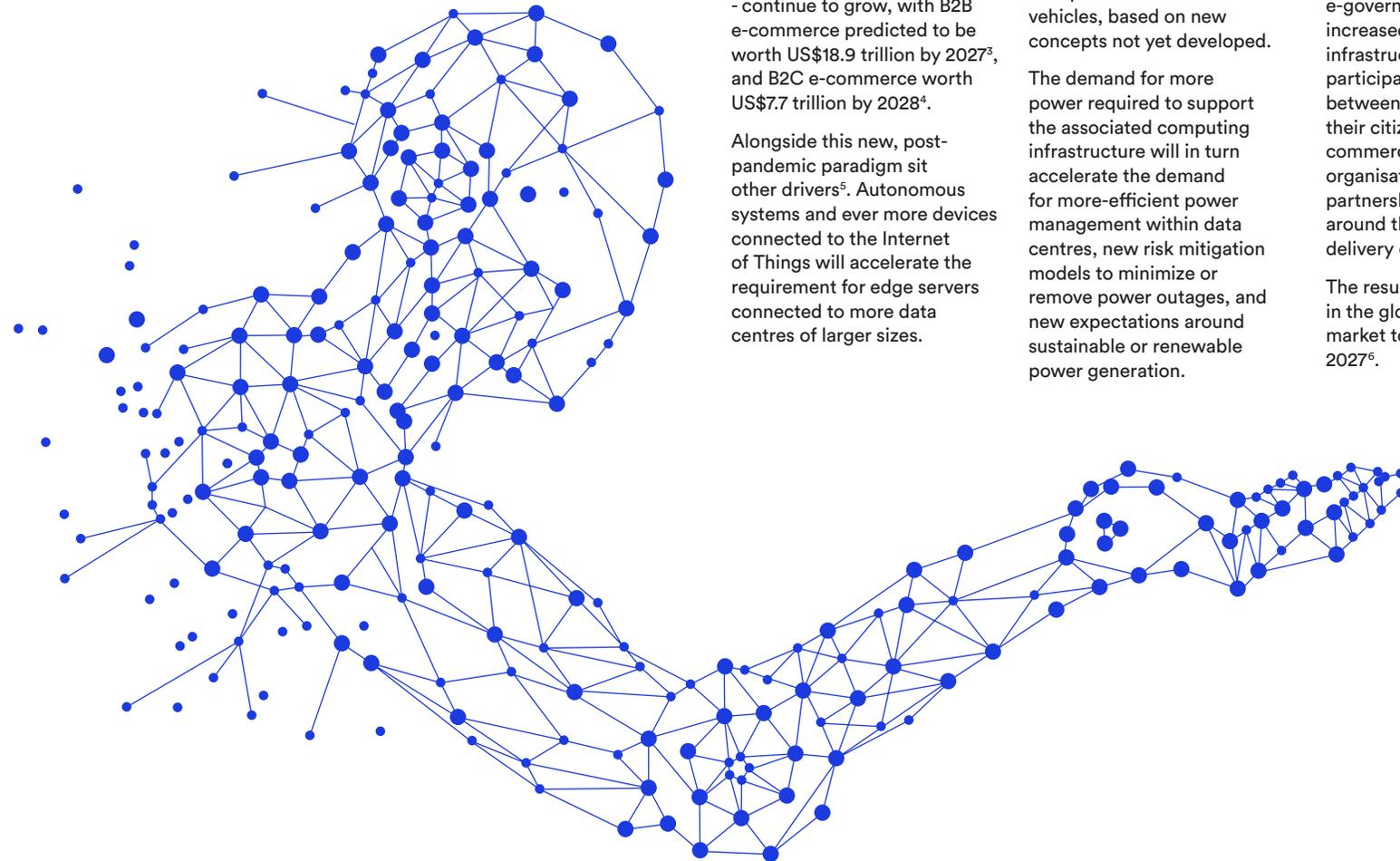
And complementing this commercial momentum is e-government. This will see increased demand for digital infrastructure to support digital participation and engagement between governments and their citizens, and new commercial opportunities for organisations to form new partnerships with governments around the world for the delivery of services online.

The result? A predicted growth in the global data centre market to US\$288 billion by 2027⁶.

Australia is a fast-growth, global centre for colocation data centre operations. Inbound investment in data centre development to Australia was AU\$3.8 billion in 2021, nearly 30% of the total investment globally⁷.

Deciding where to engage, and with whom, is the next big decision facing organisations from around the world.

Where does trust play its part?



New thinking for a less certain world.

New factors now affect the ability to access global data, particularly around data sovereignty. As risks change, the demand for colocation data centre operations in countries or regions that are politically stable and as far from potential conflict as operationally sensible will increase⁸.

This reflects the growth of globalisation over the last 10 years, which has had huge impacts on the way international organisations do business.

Over the past three years, the impact of COVID on logistics, supply chains and e-commerce growth created yet another seismic shift - in some markets, ecommerce growth has increased by as much as five times as a result of the pandemic⁹.

Now, geopolitical issues, political instability and inflation have been added to the list of strategic stress points when organisations plan where they house their data and their operations.

The war in Ukraine has exposed latent risks around the supply of fossil fuels and energy into western Europe. Operators and customers must continually assess the potential impact of conflict on data centre infrastructure. If physical data centres are in war zones, power could be disrupted for the medium-term to long-term, compounded by disruptions to diesel fuel supplies.

Worse still, buildings could be hit, by accident or as strategic targets designed to undermine political opponents or to disrupt supply chains or broader economies through the loss of data. Even the deliberate or accidental cutting of global internet access in an area of conflict could make a colocation data centre, and the data it hosts, inaccessible.

Elsewhere, new tensions and posturing around Taiwan serve to emphasise the risks around silicon chip supplies and shipping, including to data centres¹⁰. Both have direct and indirect implications for national, regional and global GDP, and the ability for organisations to grow.

And in Australia, two cyber-attacks have reminded every company of the risks that remain a fact of life.

If planned data centres cannot be commissioned on schedule because of semiconductor constraints, large capex investments become stalled, with significant financial repercussions to the business.



Sovereignty & governance.

With cloud services and always-on commercial e-commerce the norm, two significant characteristics of the data centre and colocation market are changing. Both have important consequences for multinational companies, companies seeking to do business with governments in particular.

The first is digital and data sovereignty. Governments around the world are introducing new data privacy and data sovereignty laws, including for commercial data. This has direct implications on where colocation services are based, accessed, certified and reported on.

As one example, the introduction in 2021 of the Data Security Law by China has implications for organisations seeking to do business with Chinese citizens, including the location of data. This includes Chinese citizens based overseas. Organisations will need to consider where their colocation partners are based, either as back-ups, or as primary data locations for regional or global operations.

The second is governance, sometimes as part of broader ESG compliance requirements and expectations, but often still in its own right.

Outsourcing data hosting to a colocation partner that is expert in maximising operational efficiency, with data centre infrastructure under management, and which can be tasked with ESG compliance, makes good sense, and removes complexity from what remains an essential requirement.

In the future, effective and accountable ESG compliance with the support of trusted partners will likely be regarded as a primary measure of data centre performance. Boards will expect to be updated on operational efficiency (around migrating to and operating in the cloud, for example), on the need for colocation infrastructure and its economic benefits, and on the cost and risk analyses behind these options. A well-briefed board can consider expenditure in cloud and associated colocation services when the business case around a faster payback, and an accelerated run rate in benefits, are explained clearly. Colocation data centre operations are part of this detailed argument.



The importance of trusted partners.

Cloud spending now outstrips on-prem investment¹¹. That will create new pressures on data centre real estate, services and expertise, around the world.

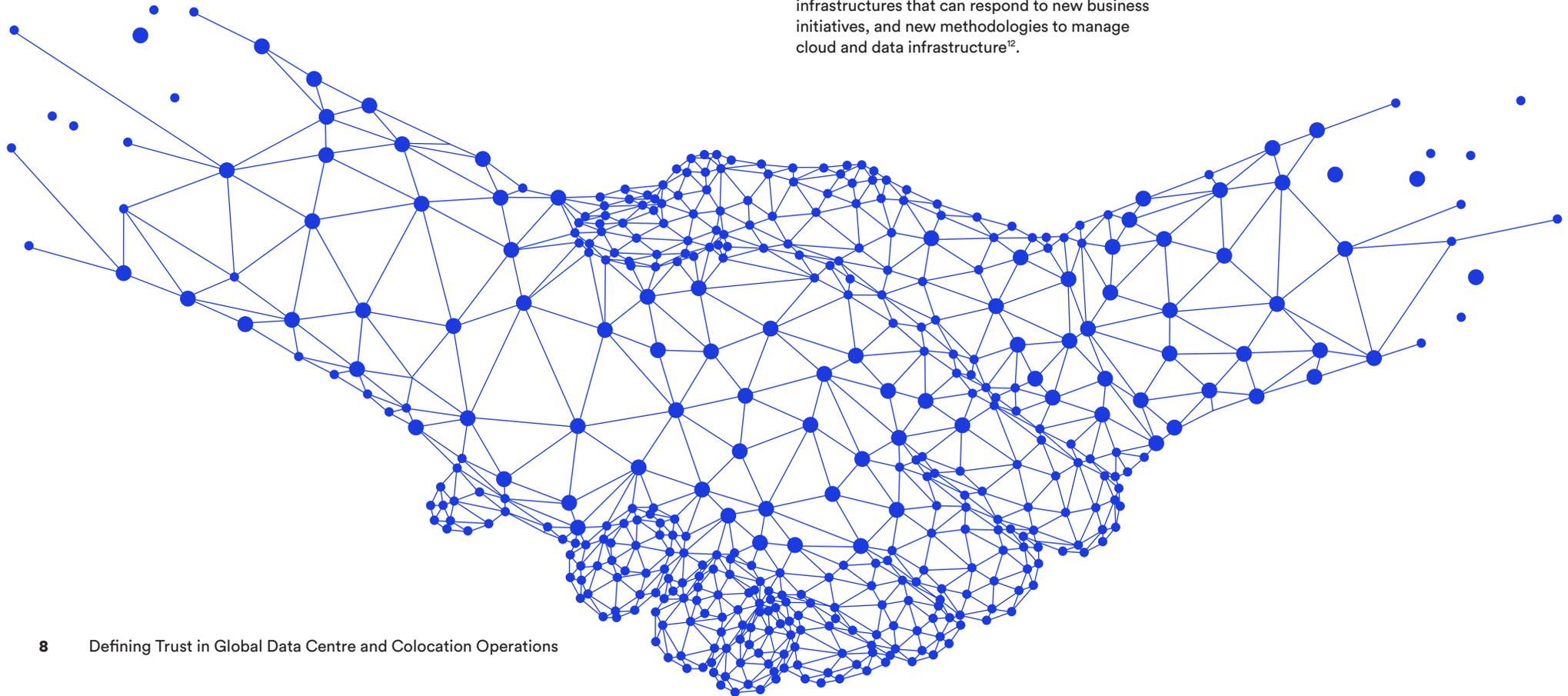
New areas of focus, including planning for growth even during times of economic headwinds, will see the demand for infrastructure solutions based on workloads (rather than physical data centres) grow.

That in turn demands trusted partners to deliver secure, scalable infrastructure.

Gartner makes the recommendation that organisations should create partner ecosystems that have the capacity to create agile, flexible infrastructures that can respond to new business initiatives, and new methodologies to manage cloud and data infrastructure¹².

This strategic approach also distinguishes between the role of the IT director - to drive strategic value from technology - and the role of the infrastructure and organisation (I&O) director - to deliver the infrastructure required to deliver this value, and to create this differentiation for the organisation.

Taken together, the collective growth of online e-commerce, 5G, the IoT and cloud services alongside other drivers of growth will see a continued trend towards on-demand data centre capacity being offered and managed by trusted infrastructure partners.



Defining trusted data centre partnerships.

Macquarie Data Centres services government and commercial customers, including multinationals, around Australia.

We share the same DNA as our ASX-listed parent company Macquarie Telecom Group: to bring change to customers which historically have been overcharged and underserved in the telecommunications, data centre and cloud services markets.

With over 20 years' experience building, running and managing data centres, Macquarie Data Centres has led the transformation of trusted data centre operations to help Australia as part of a global market.

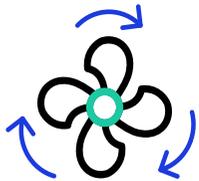
Trust needs to be defined and made accountable. Macquarie Data Centres is trusted by over 42% of Australian Federal Government agencies. With Tier III, Tier IV and forthcoming Tier V solutions, we deliver the security and certification requirements to protect and support Australia's largest government and intelligence agencies, in a jurisdiction with some of the world's most-stringent public service standards¹³.

Trusted by Australia's Federal Government, hyperscalers and the Global Fortune 500.

Sovereign	100% Sovereign Australian Owned	
Experienced	Over 20 years' data centre experience	20+
ASX	Listed on Australian Stock Exchange	
NPS	Net Promoter Scores of 80+	
Clearance	200+ Government Cleared Engineers	
Trust	Trusted by the highest offices of the Australian Federal Government	

Secure, Sovereign & Compliant.

Certifications for data centres endorse colocation providers' quality and integrity. These criteria reflect legal and security standards essential to secure levels of reliability and confidentiality. As a sovereign data centre vendor, Macquarie Data Centres has earned the trust of multiple global hyperscalers and large multinationals, Fortune 500 companies, Australian businesses of all sizes, and almost half of all Australian Federal Government agencies.



N+1 power and cooling design



ISO 27001 Information Security Management



ISO 9001 Quality Management System



ISO 14001 Environmental Management System



ISO 45001 OH&S Management System



PCI-DSS 3.2.1



SSAE SOC 2 Type I and II



SOC1 Type 2 Certification



SCEC Zone 2 and higher



Federal Government Certified Strategic Hosting Provider



DISP Certified - Defence Industry Security Program



200+ engineers security cleared to government standards

Conclusion.

Much can be done to define trust and accountability.

Colocation partners must demonstrate the fundamentals of trust to their customers. It starts with the basic foundations of the operational model and builds from there.

In a rapidly-growing global digital e-commerce and cloud services market, the ability to scale services, to increase floor space, to manage energy use and power consumption, to have rigorous cyber security protocols in place, and to have headroom available for short-term business needs, are all essential.

And in a world where data is multiplying at the rate of 2.5 quintillion bytes of data every day¹⁴, consumers and businesses have a stake in the trust that underpins everything.

To understand the changing nature of external constraints and contexts that include data privacy, sovereignty and governance, colocation service providers must be able to demonstrate compliance, flexibility and a continuing commitment to future investment.

They must also be able to differentiate themselves based on quality of services, excellence in delivery, the expertise of their personnel, and the strategic quality of the value they add.

Organisations should therefore develop their own policies on trust, defining it in terms relevant to the business and making the expectations around colocation partners explicit and accountable.

Trust-gaps can then be researched, assessed, and closed. Boards and management teams can be updated on any risks and consequences that might result from these decisions, and commitments agreed to before investments are made.

Around security, redundancy, infrastructure resilience, disaster recovery, cyber security, location and the quality of personnel should all be assessed.

Data centres therefore play an important role in the management of trust around data, as part of a much larger 'ecosystem of trust'. Anchored on the management of physical and logical security of a data centre and its associated infrastructure, this trust is fundamentally built on a symbiotic relationship between client and data centre service provider.

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Data Centre Partner?
Talk to us today.**