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Article

The AI Data Centre Gold Rush

Jade Cummings

Oil fuelled the industrial revolution; now computer power fuels the AI revolution. Oil companies mastered refinement, distribution and control of the resource for success. Today, the companies controlling Graphic Processing Units GPUs), cloud infrastructure, and power-hungry data centres hold the leverage in our ever-increasing digital world.

Data-hungry AI technologies are placing unprecedented strain on digital infrastructure around the world, creating an urgent need for additional data centre capacity. The surge in demand is attracting strong investor interest, with global data centre deals reaching US$36.7 billion in the first half of 20241 with no sign of a slowdown.

While the investment potential in data centres is substantial, so are the associated risks, and data centres need to be built where electricity is cheap, cooling is efficient and local authorities compliant.

Securing power

AI-driven demand for data centre capacity is rapidly outpacing supply, with an estimated global investment of US$6.7 trillion in global investment needed by 2030 – and US$5.2 trillion of that to expand AI data centre capacity2.

The need for power is underscored by Meta’s recent 20-year deal with a nuclear plant to secure power for its AI operations3.

Governments and investors alike are recognising the strategic value of data centres. The US Stargate Project, which pledged US$500 billion toward AI infrastructure4, and growing investor interest demonstrates the increasing importance of data centre capacity to support the growth of the digital economy.

From ground to grid risk considerations

Securing suitable sites is a challenge. Traditionally greenfield land was the first pick, but now brownfield land is often preferred due its proximity to existing energy infrastructure but may carry hidden of legacy environmental risks and costly clean up liabilities.

Reliable infrastructure is essential, as data centres require uninterrupted power for cloud connectivity and cooling systems to prevent overheating.

Cyber risk is also a major concern. Attacks can disrupt power, connectivity, and data security, potentially triggering significant client claims and operational downtime.

Regulatory and political roadblocks

Geopolitical tensions and shifting trade policies also pose risks. For example tariffs on materials like steel are driving up construction costs and slowing down the supply chain threatening project viability, and impacting return on investment. Changes in local government policies can affect previously granted approvals in principle, potentially increasing costs or causing indefinite project delays before construction even begins.

Cross-border data regulations add complexity.

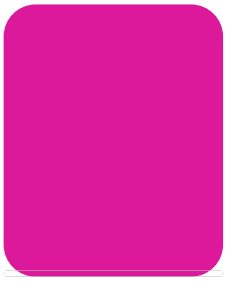
Added complexity arises with the increase of cross-border regulations, countries such as China enforce strict data sovereignty laws, impacting where data can be stored and processed. This further non-compliance carrying serious legal and financial consequences. Being ring fenced with where data must be stored, links directly to where the demand of the data centres needs to be.

Staying ahead of demand

As AI infrastructure continues to evolve, the emergence of more energy-efficient systems and distributed computing models is likely to reshape demand. Agility in adapting to these shifts will be key to maintaining sustained success.

While the investment potential in data centres is substantial, so are the associated risks. These include securing reliable energy sources, managing escalating construction costs, and adapting to regulatory, geopolitical and technological shifts.

As oil availability shaped the modern world, AI continues to reshape global computing and data centres will be a critical investment frontier, offering significant opportunities for those who can adeptly manage the associated risks and challenges.



Jade Cummings

M&A Product Leader - Asia Pacific

[1]AI Infrastructure to Require $7tn by 2030, says McKinsey | Data Centre Magazine

[2] AI Infrastructure to Require $7tn by 2030, says McKinsey | Data Centre Magazine

[3] Meta strikes 20-year deal to power AI data centres with nuclear energy | Engineering and Technology Magazine

[4] The Stargate Project: Trump Touts $500 Billion Bid For AI Dominance

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