

The Green Room

September 2024



Data Centres and Their Pivotal Role in Supporting AI as the 4th Industrial Revolution

AI-related capital expenditures now exceed \$300 billion, accounting for 20% of all new data centre demand. The rise of artificial intelligence (AI) is reshaping data centres globally, with the technology projected to reach a market value of \$2-4 trillion USD by 2030 and drive a 160% increase in data centre power demand.

“AI is at an inflection point, and many factors will influence its ultimate impact – including the extent of AI adoption, our ability to mitigate its footprint, and the pace of continued innovation and efficiency.”

Data centres will use 8% of US power by 2030, compared with 3% in 2022. Between 2023 and 2033, Europe's power demand could grow by 40-50% due to the expansion of data centres and accelerated electrification, according to Goldman Sachs Research. Europe, with the oldest power grid in the world, will require nearly €800 billion (\$861 billion) in transmission and distribution investments and €850 billion in renewable energy over the next decade.

Sustainability Considerations

AI data centres must be built with sustainability in mind, especially with their energy use and water required for fabrication and cooling.

Expected rise of data centre CO2 emissions and the social cost \$125-140 billion

Key opportunities and developments to achieving sustainability include:

- **Liquid Cooling:** Energy-efficient liquid cooling will become the norm for AI data centres.
- **Renewable Energy:** While renewable power reduces environmental impact, it does not reduce overall power demand. Challenges include power availability and the intermittency of renewable sources.
- **Energy Efficiency:** Improvements in IT hardware, software, algorithms, and optimised workloads will have a significant impact, beyond just focusing on cooling technologies.

The Future of AI Data Centres

Over the next decade, quantum computing and advanced AI models will likely take centre stage, requiring data centres to evolve continually. Emerging technologies will improve operational efficiency, with the industry collaborating with chipmakers like NVIDIA to develop new hardware and cooling solutions.

Tech like Neuromorphic computing which adeptly executes artificial intelligence algorithms by mimicking the intricate neural structure of the human brain, offers a more efficient and scalable architecture for future data centres than traditional solutions, balancing efficiency with cost and sustainability. This opens up possibilities in edge computing, robotics, sensory processing, and healthcare applications.

[Goldmansachs](#)

[NextDC](#)

[Macquarie Data Centres](#)

[Data Centre Magazine](#)

Content:

Data Centres and their role in supporting AI

Related articles to - AI & Data Centres
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Related articles

Major banks support tripling of nuclear energy use by 2050 to meet energy demands of AI and Data Centres

Significant backing of an increased role for nuclear energy in the global energy transition has been tabled on the sidelines of Climate Week in New York City, with financial institutions, government representatives and industry executives all voicing their support, given the huge demand coming down the line for data centres and AI technologies.

[Small Caps](#)

[Microsoft signs historic nuclear power deal to fuel AI data centres](#)

[Data Centres set to become \\$1.4trillion business](#)

Fund Managers

Pengana WHEB

WHEB's UK Fund will be adopting the 'Sustainability Impact' label in September 2024 under the UK Financial Conduct Authority's (FCA) Sustainability Disclosure Requirements (SDR) regime. WHEB is among the first fund managers to be able to do so, and a real testament to the authenticity of their investment approach. WHEB have welcomed and support the SDR's introduction in order to tackle widespread greenwashing, and encourage the level of impact reporting they have championed for over a decade.

WHEB were recently announced as award finalists for:

- 'Impact Manager of the Year' award at the LGC Investment Awards 2024
- 'Responsible Investor of the Year' award at Reuters Events Sustainability Awards 2024

Stewart Investors Worldwide Sustainability Fund will now be known as the **Stewart Investors Worldwide All Cap Fund**.
[Stewart Investors](#)

Realising the potential of Access to Diagnostics [Stewart Investors](#)

The World Health Organisation estimates that diagnostics influence 70% of healthcare decisions but only make up 5% of healthcare spending.

Diagnostics are not only important in driving better outcomes for patients, they are also vital in addressing one of the major healthcare problems facing the world – anti-microbial resistance (AMR).

Highlighting innovators: DiaSorin and bioMérieux

DiaSorin is a global diagnostics company based in Italy

It uses cutting-edge technology to develop a test called MeMed that allows doctors to quickly and easily distinguish between bacterial and viral infections. This not only improves patient outcomes, it will also help drive down unnecessary antibiotic use.

bioMérieux is a global diagnostics company based in France that is leading in Antimicrobial Stewardship.

[Stewart Investors](#)

The dangers of a short-term view - putting in perspective

Stewart Investors insight

It has been well documented that the volatility of stocks drops much more quickly than expected as investment timeframes lengthen – and that this effect gets stronger as the timeframe is extended.

One company that helps demonstrate this is Infineon Technologies (Infineon), a German-listed leader in the field of power management semiconductors.

[Below is a chart of the stock price of Infineon in the year to 30 June 2024](#)

In which case, the short-term gyrations in the share price will have provided no useful information about the company's long-term growth prospects, but they have provided opportunities to add the positions.

Infineon - stock price over 1 year



Infineon - stock price over 10 years



Highlighting Australian Unity

Australian Unity reported a significant increase in social impact, reaching \$2.01 billion for FY24, up from \$1.76 billion in FY23. This growth underscores the company's social value (CSV) framework, which integrates health, wealth, and care businesses that deliver social impact to customers, members and the community. The Group continues to guide its investment in initiatives that support its three priority outcomes: lifelong wellness, economic empowerment, and strong communities.

This value comes from supporting more Australians to age in place in their homes, which we know increases individual wellbeing, improves access to healthcare and alleviates the burden placed on hospitals.

[Australian Unity](#)

To support individuals and families in having those difficult but necessary conversations about ageing and the future with their loved ones, **Australian Unity has launched the Parenting Up podcast.**

While each episode explores a different topic, common throughout is the importance of open communication, empathy, and involving parents in decision-making processes to ensure their well-being and independence.

[Australian Unity](#)

Australian Unity have **won the Australian Property Funds Association's Environment and Sustainability Award 2024.**

Perennial Partners to take over management of Australian Unity's Future of Healthcare Fund.

[AU News](#)

Mercury more than doubles full-year profit

Mercury has more than doubled its full-year profit, as operating earnings improved thanks to high wholesale electricity prices and changes in the value of unhedged financial assets.

[RNZ News](#)

Meridian Energy to cut retail jobs

Meridian Energy has confirmed it is proposing to cut retail jobs across its Powershop and Meridian brands. The energy company says the proposed restructure would see a number of roles disestablished, along with new ones being introduced.

[RNZ News](#)

[Challenge to Meridian's claim power bills taking less of household spending](#)

Meridian's boss denies the energy company is profiteering and insists they've invested in the sector despite making millions in profits and dividend payouts.

NextDC raises \$750m for expansion into Asia

Sparked by the sale of Australian data centre giant AirTrunk to Blackstone for \$23.5 billion, data centre owner and operator NextDC is capitalising on the enthusiasm for digital infrastructure. NextDC is tapping investors for \$750 million to fund its expansion into Asia, including Malaysia.

This sale has triggered a re-rating of ASX-listed companies connected to data centres, with NextDC's share price surging more than 12% following the announcement.

[AFR](#)

[Technode](#)

NextDX Climate and Nature Report

This inaugural Climate and Nature Report explains the company's progress towards implementing commitment towards climate change and a nature-positive world. It details its response to the risks and opportunities presented by climate change and nature in alignment with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD) and Task Force on Nature-related Financial Disclosures (TNFD).

[MarketIndex](#)

Queensland Parliamentary Service SaaS overhaul a testament to buying local

Queensland Parliamentary Service (QPS) has partnered with Brisbane-based ASX100 software-as-a-service provider **Technology One** completely replacing its core back-office system in just eight months by leveraging the provider's innovative SaaS Plus implementation approach.

Technology One's SaaS-enabled tools empower QPS' dedicated team with data-driven insights at the touch of a button, creating significant cost-savings by reducing the manual intervention required.

[Technology One](#)

Inside TechOne's 'lofty' growth plans and how its share price tripled

CEO Ed Chung says being faster at implementing software than the big consulting firms has benefited both customers and investors.

[The Australian](#)

Pilbara Minerals and Latin Resources propose merger

As part of the proposed transaction, Pilbara Minerals, which has a market capitalisation of \$8.57 billion, will secure Latin Resources' flagship Salinas Lithium Project which has potential to become a top 10 hard rock lithium operation by production globally.

[Mining](#)

IGO Ltd to focus on lithium, warns of volatility

Lithium has been repositioned as IGO's key focus, ahead of copper and nickel.

[BusinessNews](#)

Immutep receives \$3.6 million R&D tax incentive from French Government. It also qualifies for cash rebates from the Australian Federal Government's tax rebate program.

[biotechdispatch](#)

Other News

Australia's largest solar salt project comes online

BCI Minerals has pushed the go button on its Mardie Salt and Potash Project in Western Australia's mineral rich Pilbara region.

[Mining](#)

Silent home wind turbine beats out solar panels: 1,500 kWh of free electricity

Turbines small enough to install on your roof.

Another key feature of the LIAM F1's development is its synergy with other renewable energy sources like photovoltaic cells and energy storage systems. This combination could significantly reduce reliance on the electrical grid, eliminate CO2 emissions, and save households considerable costs.

[EcoNews](#)

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