

# Datacentre Development in Aotearoa–New Zealand

## Datacentres sustain the digital economy around the world.

- ◆ Globally, there are around 12,000 datacentres, and the demand for more is expanding rapidly driven by the growth of cloud computing and artificial intelligence (AI). This includes a shift towards large, more energy-intensive 'hyperscale' facilities.
- ◆ In 2025, there were [56–80](#) operational datacentres in Aotearoa–New Zealand, with a concentration around the Auckland region. These were historically developed here to support latency-sensitive workloads (tasks), telecommunications infrastructure and access to skilled talent.
- ◆ Datacentres are increasingly recognised as [critical national infrastructure](#) because they support essential services, economic activity and national security. In addition, [Industry modelling](#) suggests that the development of sustainable digital infrastructure may contribute \$76 billion to our GDP by 2038.
- ◆ Despite having societal benefits, these developments can place significant demands on energy generation and transmission and distribution infrastructure as well as exacerbate existing environmental challenges.

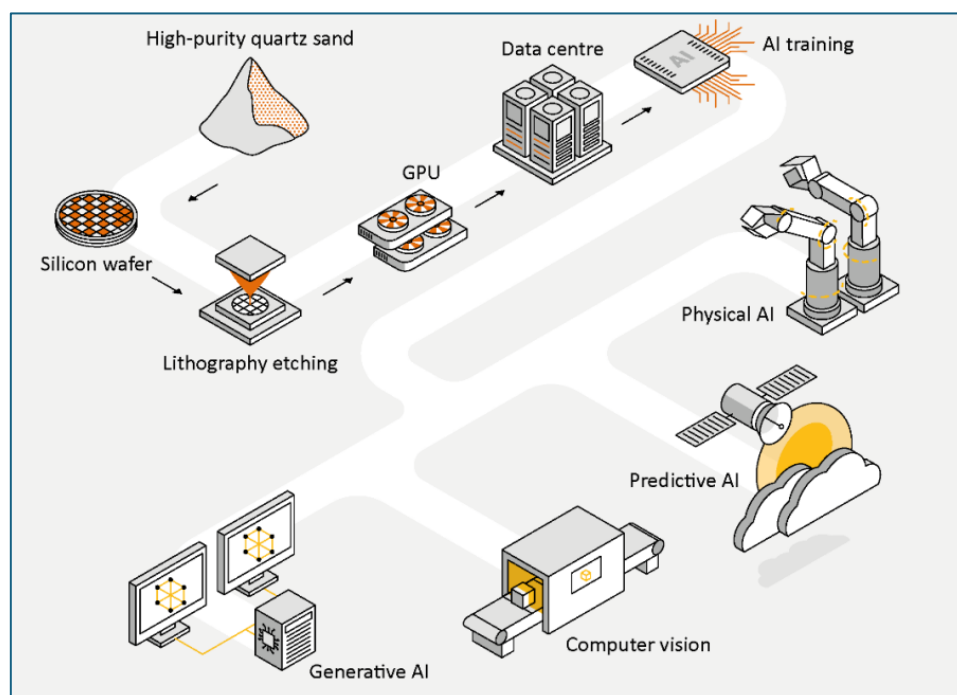
| Datacentre Categories |                                                                                                                                                                  |
|-----------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Enterprise            | • Traditional, privately owned on-site facility that is operated by a single organisation and tailored for specific workloads.                                   |
| Co-location           | • A service model where customers rent space, power, cooling and connectivity in a third-party facility, rather than building or operating their own datacentre. |
| Hyperscale            | • A comparatively massive datacentre designed to efficiently support very large, scalable computing workloads.                                                   |
| Edge                  | • A smaller facility located close to end-users or devices to reduce latency (i.e., wait times) and support local processing of data.                            |
| Modular               | • A portable facility that can be deployed as a temporary solution to increase capacity (e.g., a compact shipping container).                                    |

## The growing demand for datacentres raises serious environmental and social concerns.

- ◆ Datacentres are extremely energy and water intensive facilities. Globally, around [one-third](#) of datacentre energy demand and [one-quarter](#) of water consumption is used for cooling systems. A typical 'AI-focused' datacentre can consume as much electricity as [100,000 households](#), and global water consumption for datacentres is currently estimated to be around [560 billion litres per year](#).
- ◆ Some jurisdictions, including Amsterdam, Dublin, Santa Clara and Singapore, have [implemented temporary pauses](#) on new developments due to the concerns around energy availability, water scarcity and increasing utility prices. Aotearoa–New Zealand can look to learn from these regions as we develop datacentres.
- ◆ The hyperscale facility in Makarewa, Southland, is an example of the leadership Aotearoa–New Zealand should follow. It is deliberately designed with high-efficiency cooling and energy systems to minimise resource use, as it could require [double the energy needs](#) of the nearby Tiwai Point Aluminium Smelter.
- ◆ Our natural advantages—[renewable energy, water availability and an ideal climate](#)—will be placed under increasing pressure with rapid development. Careful planning, strong governance, effective legislation and innovation is required to balance growth with emerging concerns and to support our sustainable transition.

The development and operation of datacentres is managed by our legislative framework, but how data protection and environmental laws will evolve in the future remains uncertain.

- ◆ Aotearoa–New Zealand’s regulatory framework for datacentres and AI is [principles-based and technology-neutral](#), drawing on strong existing laws related to privacy, consumer protection and human rights.
- ◆ Current legislative and consenting frameworks—including the [Privacy Act 2020](#) and [Resource Management Act 1991](#)—ensure that large-scale facilities undergo extensive planning and consultation processes.
- ◆ However, there is uncertainty about: how existing laws will apply to emerging AI applications; data sovereignty and cross-border data flows; and future reforms and regulatory changes. For instance, the [Fast-track Approvals Act 2024](#) may accelerate datacentre developments and undermine existing processes.
- ◆ In addition, datacentre components generate a range of environmental waste products, which are often [exported to countries with weaker environmental regulation](#).



Source: International Energy Agency, (2025) [Energy and AI](#). Note: Various Types of AI Applications.

There are major challenges that lie ahead despite the positive progress that has been achieved.

- ◆ Aotearoa–New Zealand could position itself as a sustainable leader by refurbishing, remanufacturing and recycling electronic waste components and through sustainable developments, including through low-carbon energy use and water-efficient or “water-positive” designs.
- ◆ CDC is already demonstrating the benefits of a [closed-loop cooling system](#). Many of their datacentres recirculate water during operations and only require an initial fill, significantly reducing water use compared to global benchmarks. Spark has also designed a [multi-purpose datacentre](#) in Auckland that integrates a solar farm with a surf park to reduce both energy and cooling requirements.
- ◆ Balancing the economic demand for new datacentres with environmental and social concerns will depend on Aotearoa–New Zealand’s ability to: ensure new investment in renewable energy infrastructure; strengthen regulatory clarity, particularly around data governance and environmental standards; and share the benefits of datacentre developments equally across society.

Sources: Tech New Zealand, (2025). [Empowering Aotearoa New Zealand’s Digital Future](#); Ministry of Business, Innovation & Employment, (2025). [Event Briefing: Meeting with representatives from Datagrid New Zealand Limited](#); Williams & Brawley, (2025). [What are data centres and how sustainable are they?](#); Microsoft & Accenture, (2024). [New Zealand’s Generative AI opportunity](#); International Energy Agency, (2025) [Energy and AI](#); Boston Consulting Group, (2025). [Data centres as strategic infrastructure: unlocking value for NZ Inc](#); Ministry of Business, Innovation & Employment, (2025). [New Zealand’s Strategy for Artificial Intelligence: Investing with confidence](#); CDC, (2024). [Saving water on an epic scale](#); SparkNZ, (2024). [Spark secures resource consent for data centre in world-first sustainable development in Auckland](#).