



## The Role of Technology in Aotearoa New Zealand's Sustainability Journey

A prosperous, resilient, and sustainable future for Aotearoa New Zealand will only be possible if businesses and institutions actively manage their social and environmental impacts. Technology plays a critical enabling role — helping measure, monitor, and reduce negative consequences, while accelerating innovation which can support resilience, regeneration and boost equity.

From reducing emissions and optimising energy systems to transforming agriculture, transport, and buildings, digital and emerging technologies are key to supporting more sustainable, productive, and inclusive outcomes. Technology enables smarter decisions, system-wide optimisation, and scalable change when coupled with behaviour change, good governance, and strong policy settings.

To support this, the NZTech Sustainability Sub-board showcases member-led sustainability solutions and has developed guiding frameworks, including:

- An **ESG reporting framework** to help tech companies align with sustainability expectations
- A **Climate Technology Roadmap Framework**, exploring how climate and environmental solutions can be accelerated across sectors through tech innovation

### Examples of Tech-Enabled Sustainability in Aotearoa

- **Energy and emissions optimisation**  
AI, IoT, and digital twin technologies are helping optimise the use of renewable energy, defer capital upgrades, and support the transition away from fossil fuels.

Example: Digital twin modelling for energy networks.

- **Precision agriculture**  
Agri-tech solutions, like real-time soil sensors, are reducing water and fertiliser use, lowering emissions, and improving land-use efficiency — a major challenge for New Zealand's agricultural economy.

- **Smart buildings and infrastructure**

Smart energy systems in commercial buildings reduce consumption and emissions through automation and real-time data.

Example: The B Office in Auckland uses intelligent energy management to minimise its carbon footprint.

- **Low-emission transport systems**

Technology underpins the growing national network of EV charging infrastructure and supports fleet transition, route optimisation, and behavioural nudges to shift transport modes.

## International Inspiration

New Zealand can draw on successful international examples:

- [Denmark's renewable energy leadership](#) and investment in smart grid technology offer a blueprint for decarbonising New Zealand's energy sector.
- [The Netherlands' precision agriculture and water management systems](#) are relevant to New Zealand's food production and climate resilience strategies.
- [Sweden has invested in Electric Road Systems \(ERS\)](#), allowing electric vehicles to charge while driving through conductive or inductive means embedded in the road infrastructure.

## NZTech's Role

The NZTech Sustainability Sub-board [maintains a growing list of climate technology examples](#), case studies, frameworks, and tools to help members and partners integrate sustainability into practice.

To help New Zealand become a global leader in sustainable transformation, technology is not just a sector but a catalyst when aligned with purpose, policy, and people.

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