Engineering New Zealand
Te Ao Rangahau

ENGINEERING A BETTER FUTURE FOR NEW ZEALAND, TOGETHER
NEW ZEALAND FIRST

Engineers are problem solvers whose work underpins almost every aspect of society. High-performing infrastructure is essential to economic prosperity and improving how we deliver and manage it must be a national priority. Engineers are central to this. The profession generates around $16 billion a year for New Zealand's economy – 5.5% of our GDP – and leads the design of resilient infrastructure tailored to our unique natural environment.

Engineering New Zealand is the largest professional body for engineers in New Zealand, with over 23,000 members across a broad range of engineering disciplines. With both a regulatory and membership role, we are a leading voice for engineers and the construction and infrastructure sector within New Zealand.

We are doing what we can to regulate, provide training and advocate for the profession. Our focus is on supporting bold, coordinated and practical system reform; advocating for a sustained pipeline of infrastructure work; ensuring infrastructure is resilient now and into the future – with a workforce to deliver it.

We would like to partner with you to deliver the system improvements that would help not only the profession but improve the lives of New Zealanders. This document outlines our priorities and how we can help support you to drive change.

New Zealand needs a bold approach to infrastructure

- Over the years, New Zealand's infrastructure pipeline has become increasingly subject to political change. Each change in government often reshapes the existing pipeline, widening the country's infrastructure deficit and affecting employment. We strongly advocate for a consistent, long-term approach to infrastructure planning that reliably meets the needs of our population.
- The halting of government-funded infrastructure projects has significantly impacted skilled workers across the industry. Many have lost their jobs or sought opportunities overseas. Over the past year, more than 2,000 roles have reportedly been lost across 60 engineering firms, while construction sector employment has declined by 12,000, further exacerbating the long-term shortage of engineers we are facing.
- To strengthen stability in the sector, we urge government agencies and local councils to prioritise and accelerate renewal and maintenance work. This should focus on roading and water infrastructure, while adopting innovative procurement approaches that foster closer collaboration with the industry.

Infrastructure system reform is vital to a prosperous New Zealand

- Clear guidance from government on expectations for infrastructure procuring agencies, along with robust monitoring, is essential. Engineering New Zealand supports the Infrastructure Commission's system work being expedited, particularly initiatives focused on maintaining existing assets. Deferred maintenance leads to chronic problems and higher future costs. We advocate for a process where maintenance funding is ringfenced and used as needed.
- There is an increasing need to monitor all stages of the infrastructure pipeline, especially tracking when project funding reaches the market and when construction begins. These are key early indicators of industry health. Continuous evaluation and applying lessons learned are critical to improving outcomes.

- Engineering New Zealand encourages greater collaboration between government agencies, supported by the Infrastructure Commission and Crown Infrastructure Delivery, to enhance procurement practices and enable government agencies to become smarter, more informed clients. This should include empowering agencies with medium-to-large infrastructure portfolios to appoint Principal Engineering Advisors at senior levels.

We need infrastructure that is resilient

- Engineering New Zealand supports reform of the legislation underpinning our emergency management sector. The current framework is outdated and needs updating and clarification to support the high functioning system needed to manage our growing disaster risk. Recent weather events have exposed significant gaps in how the system responds, reinforcing the need for a better approach.
- We recommend a national approach to resilience. Buildings must be located appropriately, and when they are in high-risk areas, they must be designed for resilience. Councils need clear authority and tools to require resilient design in building and resource management systems – such as reliable hazard data, a risk-based consenting model, and the ability to require additional design responses in high-risk areas.
- New Zealand must ensure that our riskiest earthquake-prone buildings are remedied quickly. This will require a balance between remediation progress and protection of human life. Ultimately, the prohibitive costs involved in the existing system have caused inaction by building owners, leaving many buildings unaddressed. We are supportive of ongoing efforts to improve this balance – and engineers are integral to this and are very willing to participate.
- We strongly support the commitment to improve New Zealand's fire safety system. All regulatory and guidance material must be integrated and follow a "Life of a Building" approach to ensure alignment between all parties throughout the construction, use and change to the building.

A sustainable pipeline of skilled workers is required to deliver the infrastructure New Zealand needs

- New Zealand needs a strong cross-government approach to engineering workforce development and planning. This includes attracting engineers back from overseas and those who have left the profession due to lack of work. Strengthening our university and vocational system to support this is key, including stronger investment in engineering tertiary education.
- New Zealand requires 1,500 to 2,300 additional engineers each year to meet demand and sustain economic growth and the current down-turn and loss of engineers is exacerbating the long-term skill shortage. Our historic reliance on overseas talent to fill skill shortage gaps is no longer a sustainable strategy. Engineering New Zealand, Waihanga Ara Rau and ACE New Zealand have developed a long-term skills action plan. This includes the work we are doing, such as our free STEM programme for schools – the Wonder Project.

Effective planning and robust resource management are vital to the delivery of critical infrastructure

- New Zealand needs clear, practical documentation to improve the resource management system. Fewer, well-defined national directions and standards will make it easier for users to navigate and operate within the system.
- Engineering New Zealand supports development-enabling reforms. However, good outcomes require a careful balance between enabling development and protecting environmental resources incentivising sensible, innovative and cost-effective outcomes.
- Integrated spatial planning is essential. Building the right infrastructure in the right places at the right time can transform how we manage growth and support development across New Zealand. Once infrastructure is in place, changes are costly. Without strong planning, there is a high risk that infrastructure will not meet future needs.
- Māori must remain central to environmental and development planning. As kaitiaki of New Zealand's natural resources, Māori bring centuries of traditional environmental knowledge. Engineering New Zealand is committed to integrating Māori innovation and mātauranga Māori into planning and development systems.