



Key facts

Building New Zealand Rail Skills for the Future

May 2025



The New Zealand rail industry plays a critical role in the transport system, supporting economic growth, sustainability, and connectivity.

However, the sector faces significant workforce challenges, including skill shortages, an ageing workforce, and multiple barriers to talent attraction and retention. Key challenges include the lack of clear career pathways, limited education and training programmes specifically tailored to rail, and ongoing difficulties sourcing specialised skills such as signalling engineering and traction line maintenance. Additionally, diversity within the sector remains limited, particularly for women and Māori and Pacific Peoples professionals.

Skills shortages

More than one in four people in the rail workforce is likely to retire within the next 10 years. Specialist skills, including signalling engineering, overhead traction, and digital rail systems, remain in high demand but are difficult to source locally.

Limited pathways

New Zealand lacks dedicated polytechnic and university qualifications for rail engineering and operations. While vocational training exists, engagement with tertiary education providers is inconsistent, limiting development opportunities.

Barriers to talent

The sector struggles with low awareness among young professionals, outdated perceptions of rail careers, and limited pathways for career progression. Flexible working and diversity initiatives are needed to improve retention and inclusion.

Technological advancements

The sector's move towards digital signalling, automation, and predictive maintenance requires new skills in data analytics, cybersecurity, and digital engineering. Without proactive training initiatives, the workforce may struggle to build the expertise needed.

Fragmented investment

The cyclical and uncertain nature of infrastructure funding has led to workforce instability, with inconsistent demand for skills. A long-term, bipartisan rail investment strategy is essential to provide stability and support workforce planning.



20% of employees over 60 years old

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More than one in four people likely to retire within the next 10 years



Only 27% of organisations offer scholarships or apprenticeships

The New Zealand rail workforce

There are **5,324 employees within the rail sector**, with 4,189 (78.7%) identified as working within Operations (42.3%), Maintenance (24.8%) and Technical (11.6%) roles. The remaining employees (21.3%) provide customer and support functions for rail organisations.

The rail workforce **spans a variety of occupations, including train drivers, infrastructure maintenance workers, and engineering specialists in signalling, traction, and rollingstock maintenance**. Administrative and customer service roles also form a crucial part of the sector's operations.



How rail roles are changing



Attraction, retention, and diversity of rail sector

The most significant barrier to attraction is a **lack of awareness about career opportunities** (55%). There is substantial underreporting in demographic data, resulting in **slight underrepresentation of Māori (10%) and Pacific Peoples (5.7%)**. Meeting future workforce demand will require **increased gender diversity**..



Gender distribution across rail sector roles, from report data

Talent, skills and capabilities of rail sector

Rail infrastructure faces the most acute skill shortages, particularly in **signalling engineering, traction and overhead electrical systems, structural civil engineering, and track design**. These require specialised technical knowledge that is not widely available in New Zealand. A limited pool of subject matter experts and restricted local training capacity has resulted in ongoing reliance on international expertise, particularly from Australia, the UK and Canada.

Further, the **educational pipeline for infrastructure roles lacks formal rail-specific pathways**. Most engineers enter the sector with university degrees in mechanical, civil, or electrical engineering, gaining rail knowledge through project experience or in-house development.



Ease of recruitment by roles

Recommendations

1. System setting

Establish long-term foundations for workforce sustainability through infrastructure planning, procurement, and regulatory reform.

Recommendation	Priority	Action
1.1	Critical	Encourage the government to review and update the New Zealand Rail Network Investment Programme and associated infrastructure programmes to ensure long-term infrastructure investment certainty for rail, aligned with wider infrastructure needs of New Zealand.
1.2	Critical	Encourage national and local governments to review procurement frameworks and policies to strengthen and prioritise local workforce development requirements.
1.3	Low	Encourage the government to review regulatory frameworks and policies to identify opportunities that enhance interoperability of rail infrastructure systems and reduce barriers to the adoption of new technologies.

2. Attraction, retention and diversity

Position rail as a modern, inclusive, and attractive career sector through branding, visibility, and better workforce insights.

Recommendation	Priority	Action
2.1	Medium	Encourage New Zealand rail organisations to utilise and leverage the ARA's Work in Rail platform to promote New Zealand rail careers and pathways.
2.2	Medium	Rail organisations, in collaboration with Stats NZ, to establish a consistent framework for collection of workforce demographics.
2.3	High	Encourage New Zealand rail organisations to promote the ARA's Professional Certificate in Rail as a trans-Tasman pathway for foundational rail knowledge.

3. Talent, skills and capabilities

Build a future-ready rail workforce through planning, education partnerships, international collaboration, and mobility pathways.

Recommendation	Priority	Action
3.1	Critical	Rail organisations and government stakeholders to explore the development of a sector-wide workforce plan that identifies the skill shortages and the plan for addressing skill gaps into the near and long term.
3.2	Medium	Ensure alignment of priority rail skills classifications between New Zealand and Australia support workforce mobility, skills recognition, and training consistency.
3.3	High	Encourage rail organisations to consider adoption and implementation of the Rail Industry Worker (RIW) program in New Zealand to enhance skills portability and competency management.
3.4	High	Collaborate with New Zealand Universities to develop and include rail- specific modules in degree and qualification courses in New Zealand, leveraging existing successful models of engagement used by the ARA and Australian universities as a guide