# Industry Skills Australia

# RAIL INDUSTRY

## KEY CHALLENGES AND DRIVERS SUMMARY PAPER 2025

# About Industry Skills Australia

Industry Skills Australia (ISA) has been established as the Jobs and Skills Council (JSC) for the Transport and Logistics industry sectors, which includes Aviation, Maritime, Rail, Transport and Logistics, and the emerging sectors of Omnichannel Distribution and Logistics, and Air and Space Transport and Logistics.

Owned and led by industry, our JSC is committed to building a world-class supply chain workforce to increase productivity, create better jobs and build opportunities for individuals.

We will do this through:

- leveraging our more than 30-year history with the transport and logistics industry,
- undertaking research and data analysis to inform workforce planning,
- advocating for a workforce development approach in tackling industry skills issues, and
- developing priority training package products.

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# Purpose of the Key Challenges and Drivers Summary Paper

The purpose of this paper is to seek feedback on a summary of the key industry and skills-related trends identified for the Rail industry.

The main themes in this paper are drawn from extensive industry consultation conducted throughout the year including inputs from our Industry Roundtables, the Supply Chain Leaders' Summit and insights from our Strategic Workforce Planning Committee.

Feedback received on this paper will play a critical role in shaping the 2025 Rail Industry Workforce Plan, ensuring that contemporary drivers and challenges within Australia's Rail industry are correctly identified and developing forward thinking actions to address those challenges.

While every care has gone into ensuring the accuracy of the information contained in this Summary Paper, it is intended that this material will be validated by industry through our consultation and feedback activities over the coming months.

## How to provide feedback

Stakeholders are invited to submit their comments on the key challenges and drivers outlined in this paper via a survey by close of business on **Monday 3 March 2025.**

The information provided in this paper is deliberately brief. The purpose of this paper is to validate and confirm consultation and research findings to date.

Additional responses and requests for further information should be emailed to:

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# Key Challenges and Drivers

## A. Industry faces critical occupational and skills shortages

The Australian Rail industry faces significant workforce challenges to support the substantial investment in rail networks over the next 15 years.

- **Occupational shortages are a challenge in operational, engineering, technical, and training roles**
  - The industry is experiencing shortages in many occupations, including controllers, track workers, signalling engineers, drivers, maintenance workers, electrical technicians and tunnellers.
  - There are also significant shortages of trainers and assessors, with perceptions of the role being undesirable and poorly remunerated.
- **The Rail sector must adapt to retirements and evolving roles**
  - The Rail industry is facing an aging workforce, with many employees approaching retirement age. Action is required to address the upcoming wave of retirements expected around 2030. This includes understanding how existing roles will evolve and the impact of these retirements, as detailed in the ARA's report, ARA - The Rail Workforce - An Analytical Overview - December 2023.pdf
  - Existing roles will change due to technological advancements, and the impact of retirements will further strain the workforce.
- **Demand for specialised skills in automation and digital skills are increasing**
  - There is a growing need for specialised skills in automation, data analytics, and digital skills.
  - Addressing future skills demand requires understanding how roles will evolve and implementing strategies to attract and retain a skilled workforce.

## B. Rail organisations struggle to attract young and diverse talent

Representation of underrepresented groups, such as First Nations Australians and people with disabilities in relatively low in the Rail industry. Addressing these gaps is crucial for fostering a more inclusive and diverse workforce and addressing labour shortages.

- **Increasing representation of under-represented groups strengthens the workforce**
  - Female representation in rail operational roles is low, but initiatives like Women in Rail Strategy 2023-26 are improving participation. Increasing female representation promotes gender equality and brings diverse skills to the workforce.
  - The Rail sector's gender pay gap is significantly lower than other sectors and continues to improve, reflecting efforts taken to address gender disparities. This progress highlights the industry's commitment to creating a more equitable work environment. However, ongoing efforts are necessary to further reduce the gap and support workforce attraction and retention.
- **The Rail sector must diversify recruitment to stay competitive**
  - The Rail industry also competes with other sectors for workers, making it essential to draw from under-represented labour pools. Enhancing recruitment strategies to attract a broader range of candidates will be necessary for the industry to meet its future demands.
- **Improving the perception of Rail careers may help with recruitment challenges**
  - The Rail sector needs to better promote itself as a desirable industry, highlighting its green and technology credentials and gender pay gap performance which can be appealing to attract a new generation of employees.

## C. Lack of Rail interoperability hampers labour mobility

Australia's rail networks have evolved independently, resulting in 29 different networks using three rail gauges and 11 signalling systems.

- **Improving national rail interoperability will enhance workforce mobility**
    - o Differences in standards and regulations for rolling stock, components, operating rules, and communication systems across jurisdictions create significant operational challenges and impact labour mobility. Improving national rail interoperability is a National Cabinet priority, and current investments in infrastructure offer an opportunity to work towards a harmonised network across Australia.
    - o Inconsistent approaches to training and assessment and the lack of mutual recognition of skills hinder workforce mobility. Establishing mutual recognition of entry-level skills can improve workforce mobility, interoperability, and productivity.
- **Streamlining training requirements can cut costs and downtime**
    - o Contractors operating across multiple jurisdictions face significant costs and downtime due to continual retraining requirements. The National Transport Commission's (NTC) blueprint for nationally recognised entry-level rail skills training aims to reduce training time and costs.
- **Some RTOs are not meeting industry expectations for training quality**
    - o Some Rail Infrastructure Managers (RIMs) do not recognise training from certain RTOs stemming from concerns around training quality.

## D. New skills needed to address technical changes

The Rail sector is undergoing significant changes with digital technologies bringing benefits like increased capacity, enhanced safety, and improved passenger experience.

- **Digital transformation in Rail requires a shift in workforce skills**
    - o There are shortages in skills needed to operate and maintain digital, automated, and new technologies related to rail signalling, communications, asset management, and more.
    - o The Building Australian Rail Skills for the Future report highlights the need for the workforce to pivot from traditional techniques to digital skills, identifying key digital skills and occupations critical for the future of Rail.
    - o Increasing digital skills requirements may impact the knowledge levels required for some occupations, affecting the Australian Qualification Framework (AQF) levels of associated qualifications. Digitisation presents an opportunity for transformative change in the Rail industry, necessitating a workforce with appropriate skills to ensure a smooth transition.
- **Cross-JSC collaboration is crucial for building transferable digital skills**
    - o Collaboration across Jobs and Skills Councils (JSCs) is essential to develop a model for describing digital skills in training packages, facilitating transferable skills.

## E. Rail training capacity falls short of industry demands

The Rail industry needs better training facilities, more qualified trainers, and greater RTO availability to meet workforce demands and address skilling challenges.

- **The Rail industry needs better training facilities, flexible delivery models, and cost-effective resources to meet workforce demands**
    - o Insufficient training facilities, technology, and learning resources limit the industry's ability to address skilling challenges.
    - o More flexible training delivery models and stronger partnerships between industry and RTOs are needed to meet industry needs.

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- o Developing quality training and assessment resources is often not commercially viable due to thin markets for some Rail qualifications.
- **There is a shortage of qualified trainers**
  - o There is a critical shortage of qualified Rail industry trainers, assessors, and subject matter experts.
- **Limited RTO availability is restricting access to Rail qualifications**
  - o Only five out of 21 rail qualifications have more than 10 RTOs with the scope to deliver them, while 12 qualifications have five or fewer RTOs to deliver them.

## F. Skills gaps for cybersecurity threats

The Rail sector faces significant challenges with cyber security, a relatively new concern for industry. New technologies and innovations increase the risk of cyber-attacks.

- **Cyber security is a growing challenge for the Rail industry**
  - o Organisations are challenged to detect, report, and resolve cyber security risks. The industry needs to manage increasing cyber security risks and implement effective measures for management, monitoring, and compliance.
  - o Disruption caused by compromised systems and cyber-attacks can have severe repercussions on infrastructure, operating systems and safety.
- **Investment is needed in cyber security skills**
  - o The Rail sector needs to invest in skills to understand and protect against cyber security threats.

## G. New skills demand rise as Rail shifts to clean energy

The Australian Government is heavily investing in clean energy initiatives focused on decarbonisation and new industry development.

- **Decarbonising Rail will reshape industry skills and jobs**
  - o Electricity is projected to play a larger role in Rail transport, which is expected to double by 2050. Battery electric trains and hydrogen fuel cells are emerging options to replace the existing diesel fleet. There is uncertainty about the workforce and skills needed to support the transition to decarbonisation in the Rail industry.
- **Clean energy investment has the potential to boost regional economies**
  - o Government investment in clean energy initiatives, such as regional hydrogen hubs and electric vehicle charging infrastructure, is expected to drive economic growth and job creation in regional areas. These investments will support Australia's transition to a low-carbon economy.

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