



IRSC 2022

INTERNATIONAL RAILWAY
SAFETY COUNCIL

SEVILLA, OCTOBER 16-21, 2022



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Better Together

Co-Regulation of Safety in Australian Railways



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About the Rail Industry Safety & Standards Board (RISSB)



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About RISSB

- RISSB is the only organisation accredited to develop Australian Standards for the rail industry in Australia (and NZ) and forms the core of what we do.
- RISSB is not for profit, member-based and funded by industry and government.
- RISSB is *industry's partner in co-regulation*.



A brief history of rail in Australia



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A brief history of rail in Australia

- Private operators commenced building railways in the 1830's - 1860's, with the exception of South Australia whose railway was built by the S.A. Government
- Problems arose during the 1880's when lines from neighbouring states started to meet and 3 different gauges had been adopted
- In 1910, a conference of Railway commissioners chose 4 ft 8+½ in (1,435 mm) to be the standard gauge
- The defined interstate rail network was progressively created from 1930's to early 2000's linking east-west and north south of the country

Legislation was state based and regulated until the creation of the Rail Safety National Law and the formation of the Office of the National Rail Safety Regulator.

Railway accident investigations now fall under the remit of the Australian Transport Safety Bureau, although some states have retained investigation bodies.



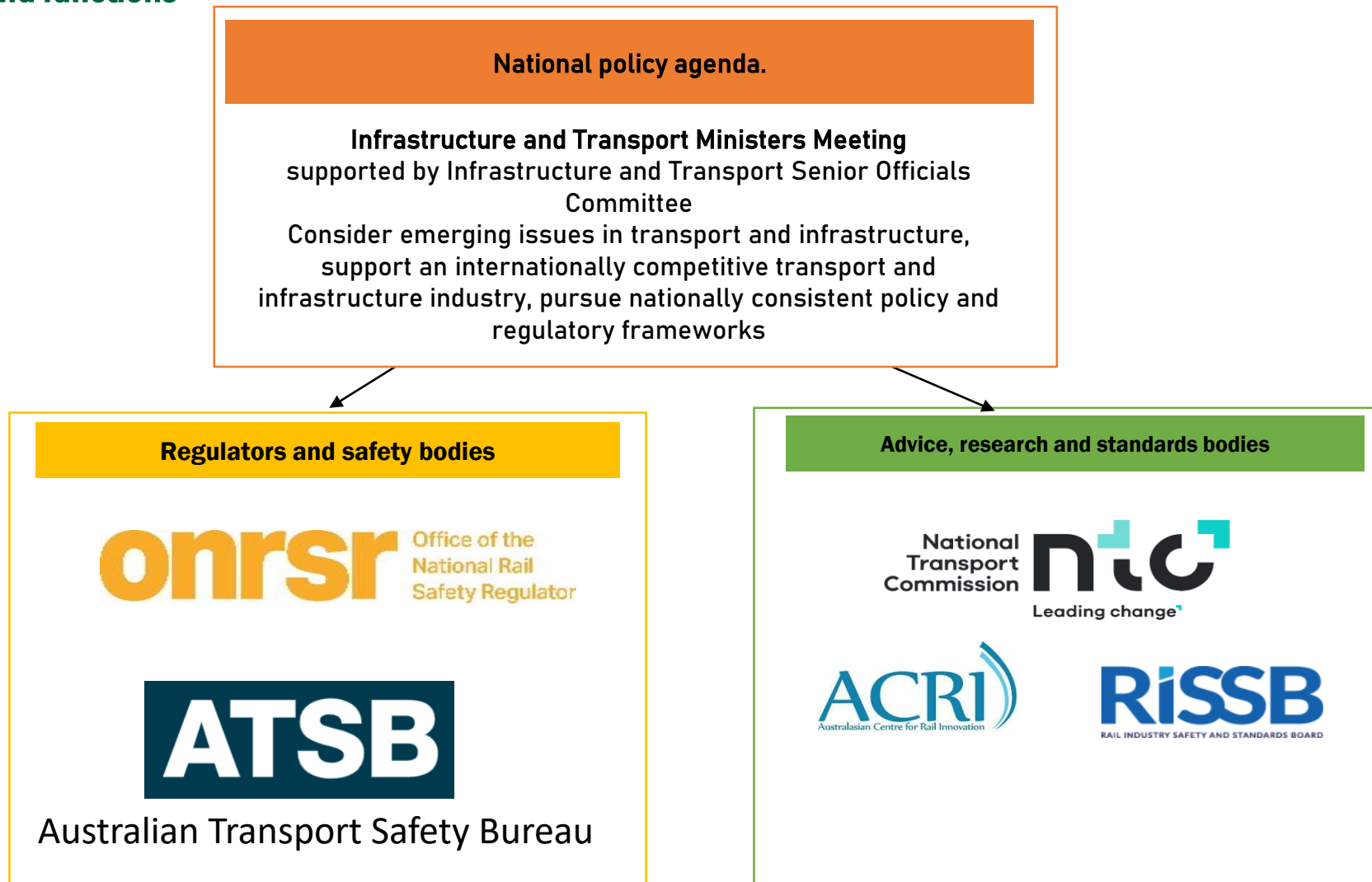
The national context



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Transport bodies and functions



Transport bodies and functions



- The Office of the National Rail Safety Regulator encourages and enforces safe railway operations and promotes and improves national rail safety.



- The Rail Industry Safety and Standards Board develops Australia's Standards, Codes of Practice, Guidelines and Rules for the rail sector to enable harmonisation and interoperability.



- The Australian Centre for Rail Innovation undertakes research and strategic analysis to solve issues raised by the rail industry or other entities.



- The Australian Transport Safety Bureau is the national safety investigator for aviation, marine and rail modes of transport.




- The National Transport Commission leads national transport reform for road, rail and intermodal transport.

A number of key organisations progress transport reforms across Australia. Infrastructure & Transport Ministers' Meeting recognises key national bodies which support, advise and implement national transport reform.



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RISSB's role



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RISSB's role – Members & Projects

150+ members

- Members include:
 - Rail transport operators
 - Passenger operators
 - Freight operators
 - Heavy Haul
 - Network managers and owners
 - Consultants
 - Academia
 - Suppliers and manufacturers.

Projects focused on industry-driven safety issues:

Track Worker Safety
National Rules
Train Control Interoperability
Noise
National Vehicle Register
Smart Asset Management

In 2020 RISSB established a new Major Projects portfolio

RISSB's role - Driving harmonisation and interoperability

- RISSB plays an active role in the **National Rail Action Plan** - a set of actions agreed by Ministers focused on three areas (with RISSB leading or being a critical member of all):
 - **Skills and competencies** - meeting rail's critical skills and labour needs
 - **Harmonisation** - common rules for infrastructure standards and common standards for components for rolling stock
 - **Interoperability** - common rules for safe work, Interoperable communication and train control systems.
- **Sustainability/Climate Change** – this area is under development to align to the Net Zero by 2050 goals of government



This is critical to reduce costs and enhance safety and productivity

RISSB's role – Standards Development



RISSB's core function is to work hand in hand with industry to develop and publish Australian Standards as well as Codes of Practice, Guidelines and Rules.

Each year RISSB works with industry to publish approximately 20 new or reviewed Standards, Codes of Practice, Guidelines and Rules.

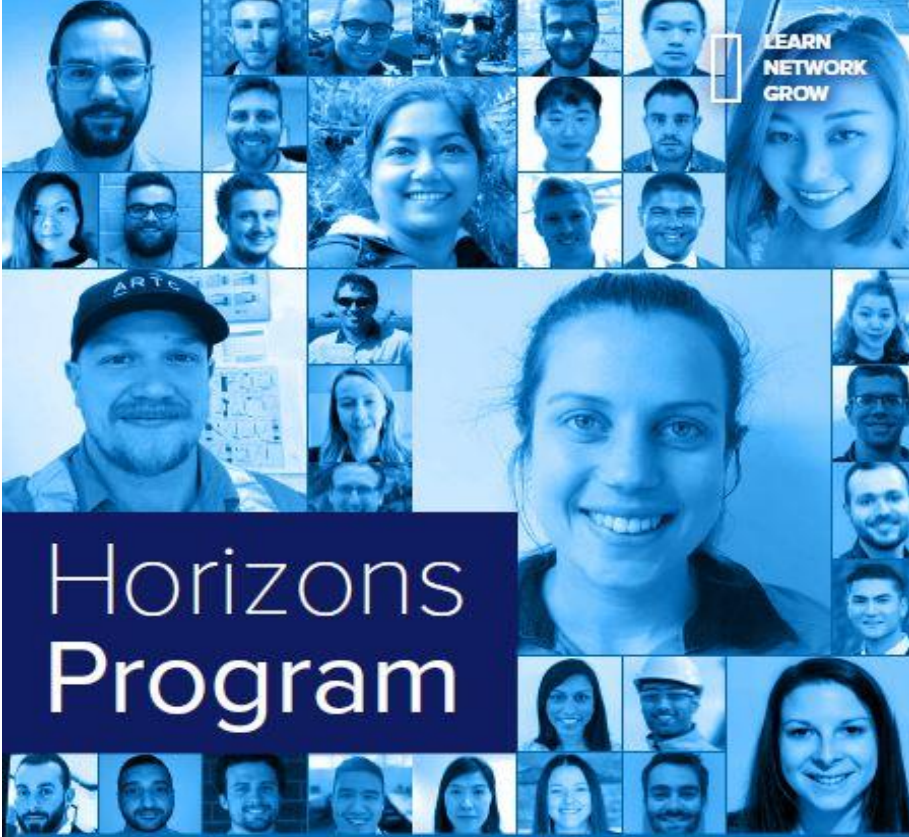
The Annual Work Plan is largely determined by industry through a priority planning process (PPP) but RISSB also takes into account feedback from CEOs and senior executives to balance technical and business demands.

Over 90% of industry use our publications and value add services in some way

RISSB's role

- Training & Education
- Industry Co-ordination and facilitation
- Conferences
- Custodian of the Australian Level Crossing Assessment Method
- Custodian of the Australian Rail Risk Model

RISSB provides value to Industry in many ways.



LEARN
NETWORK
GROW



Horizons Program

RISSB is offering a unique opportunity to up and coming technical professionals who want to take the next step in their careers and broaden their knowledge and understanding of technology in rail.

Participants will be taken on a practical professional journey, growing their knowledge of cutting-edge technology and developing an innovation mindset that will help position your business as a business of the future.

RISSB's Horizons Program: Developing tomorrow's technical leaders today.

rissb.com.au





The National Rail Action Plan (NRAP)

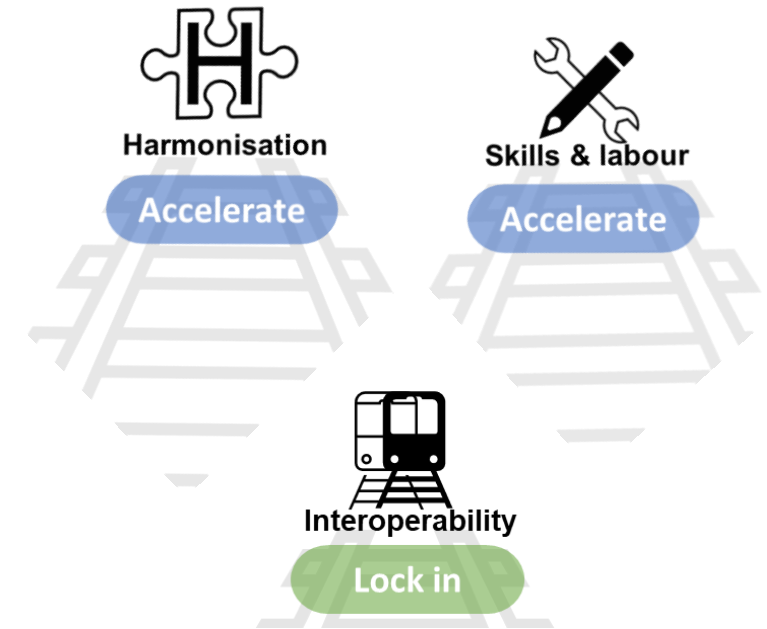
Why the focus on national rail reform?

\$155B± of rail projects underway over the next 10-15 years will define the Australian rail system for the next 50+ years – so there is a real sense of urgency to make the most of this opportunity.

Sitting behind all of this is government funding – around 90% of all this procurement is coming from governments in new rolling stock, signalling systems and infrastructure.

NRAP is focussed on how we leverage this growing pipeline of investment to:

- **Attract the next generation of rail workers**
- **to build an Australian rail industry that can deliver projects in a more cost-efficient way, and**
- **to make rail safer and more seamless.**



Supporting the Australian economy

NRAP is modernising the rail system so more freight and passenger trains run seamlessly and safely



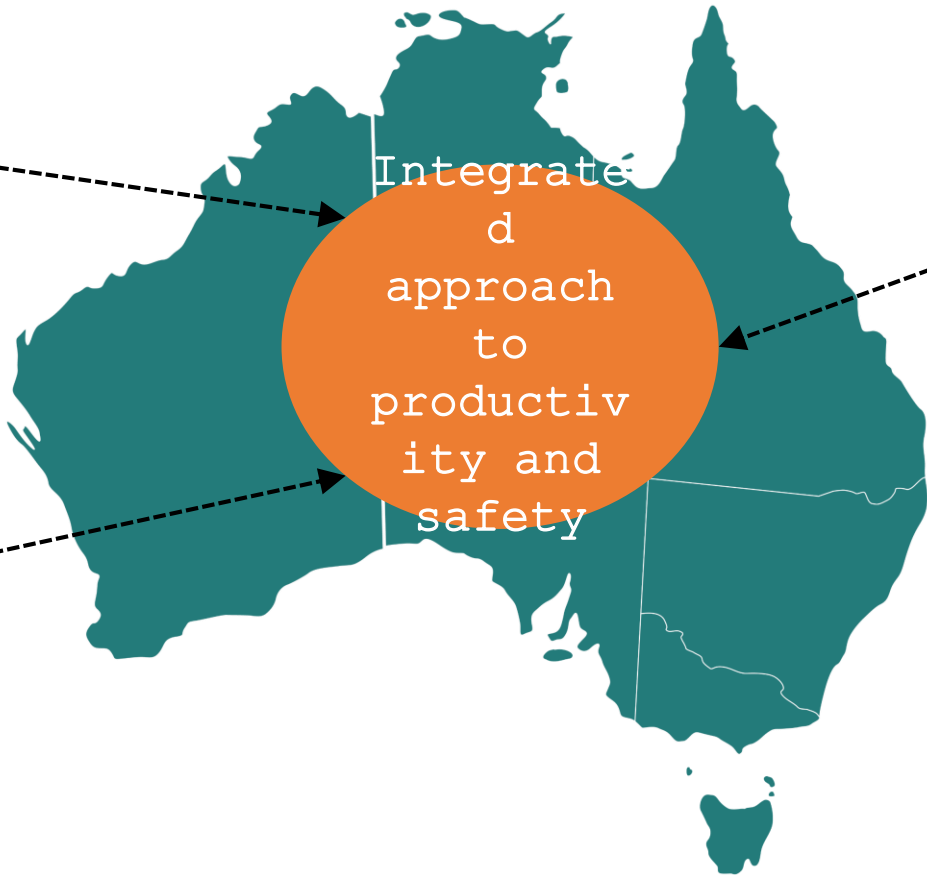
INTEROPERABILITY

Passenger trains part of the national agenda



HARMONISATION

More rail components built locally to common standards



Integrated approach to productivity and safety



SKILLS AND LABOUR
Jobs and skillsets recognised across borders

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Freeing up skills

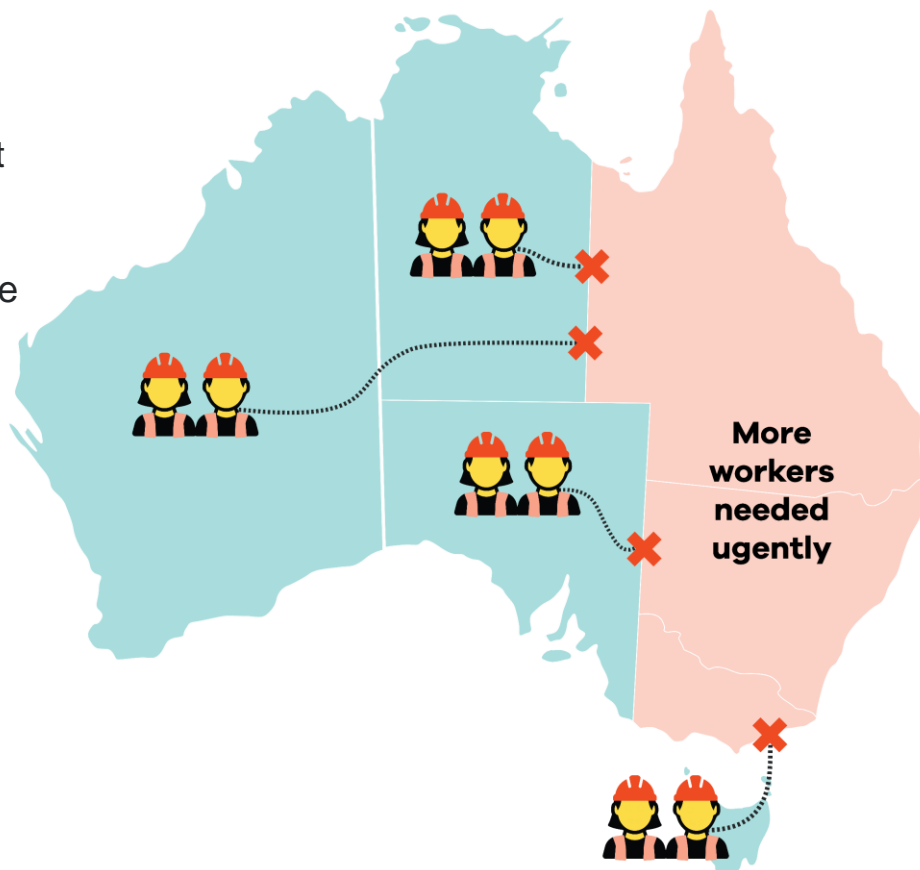
Unlocking portability to close the growing skills gap



The rail workforce is aging at **2.6 times faster than all industries**. By 2023 the infrastructure workforce will be **48% short of demand**



It takes 16 years to be a signal expert in NSW, not recognised in other states



Training time for rail specialists and engineers could be halved



Digital learning will open up jobs and skills development to attract younger people

Harmonisation of standards

Supporting regional supply chains



Opportunities for more local jobs



Opportunities for regional jobs from graffiti-proof fabric to brakes and wheel-sets



Nine different glass types and bogies down to one



Harmonised tunnel sizes in Melbourne, Sydney and Brisbane flow through to jobs

Interoperability

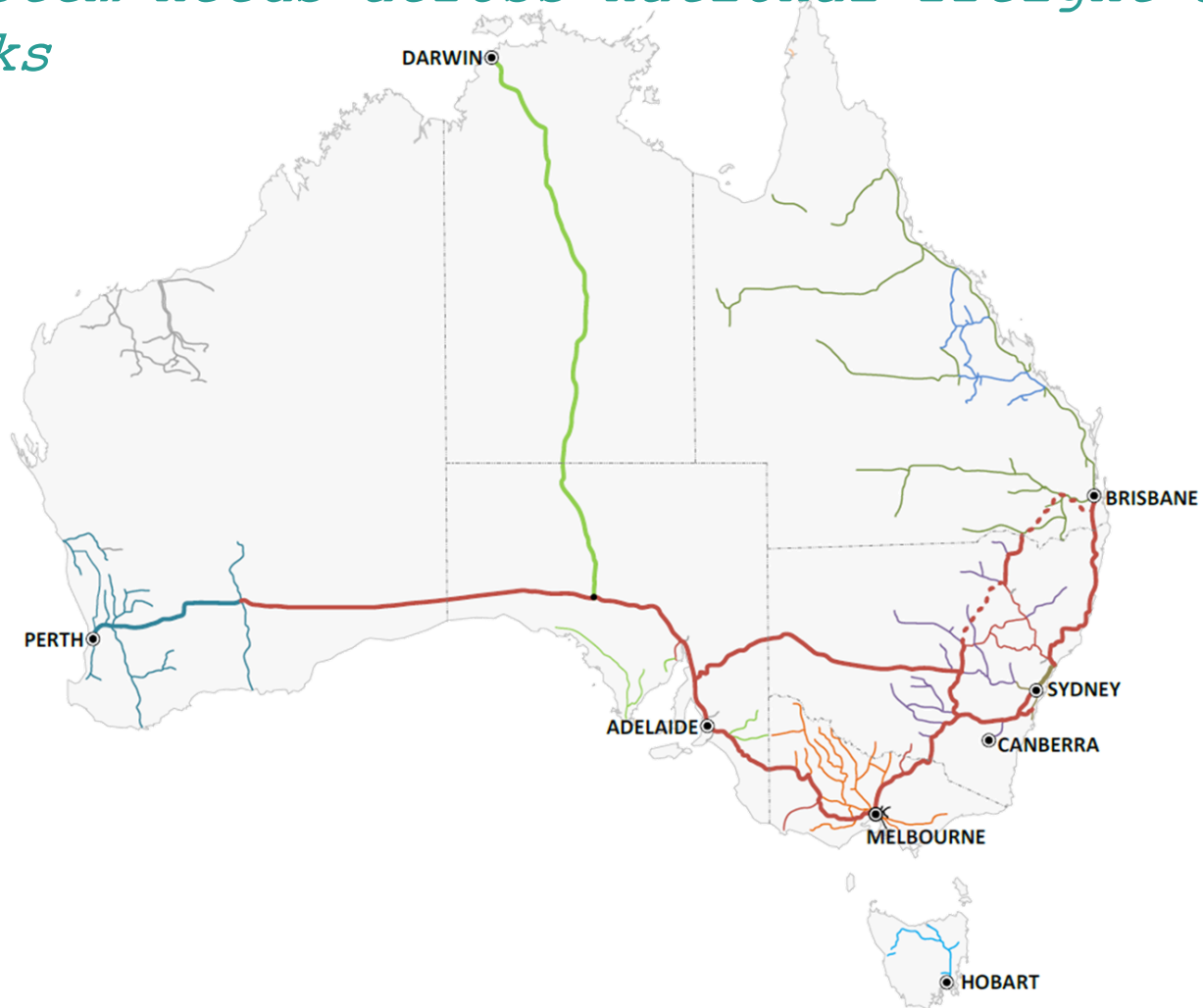
What the rail system needs across national freight and passenger networks



Including passenger trains in national rail reform



Bringing the best brains together to inform decisions about productivity and safety impacts



Working with industry to think about technology solutions to overcome legacy issues on old and new parts of the network



Facilitating national coordination at key city, regional and port inter-



The future of rail in Australia



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The future of rail in Australia

- Fully autonomous Passenger and heavy haul freight trains – have arrived
- Energy storage for locomotives – is coming very soon
- Catenary free running for light rail vehicles – has arrived
- Hydrogen and other fuels – is coming

The world of transport is changing, railways must learn to change at a much faster rate than we have ever done



Outcomes

Highlights 2022

↑ **27%**
INCREASE

27% increase in membership across all classes – RISSB now has **150+ members**

ARRM continues to underpin important industry risk-based decisions with strong industry participation from over **70 railway organisations**

ALCAM was successfully transitioned to **RISSB** in 2021

Accepted our **largest Horizons intake ever** for **Horizons Program 4.0**

Published Australia's first dedicated **national light rail Standard - AS 7601.1** Light Rail and Road Interfaces Part 1: Management of Light Rail Vehicle Movement



Partnered with **ONRSR, ARA, FORG, TrackSAFE and ACRI** to deliver a study into train conspicuity

Exceeded initial NRAP project delivery targets, delivering the following:

- Code of Practice - Rail Traffic Train Horn Use
- AS 7517 Wheelsets
- AS 7482 Railway rolling stock-Heating ventilation and air conditioning (HVAC)
- AS 7486 Railway energy storage: Rolling stock electrical energy storage
- The National Rolling Stock Register



Delivered 20 publications including **Standards, Codes of Practice and Guidelines**

Delivered the **22nd RISSB Rail Safety Conference** as a hybrid event attracting **188 delegates** and

Developed a National Framework for Rail Interoperability

Created The National Rolling Stock Register,



Delivered 11 Major Projects; including **5 *National Rail Action Plan projects**

Relaunched our **2022 face-to-face training program, Derailed Investigation and Analysis Workshop & Investigate Rail Safety Incidents**

Building on the successful delivery of Australia's first nationally harmonised rule (Network Communication), we have delivered a **second rule - Walking In The Danger Zone**



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