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Department of Industry,
Science and Resources

Office of National Rail
Industry Coordination

National Rail Procurement and Manufacturing Strategy

November 2023

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National Rail Procurement and Manufacturing Strategy

A part of the National Rail Manufacturing Plan

November 2023

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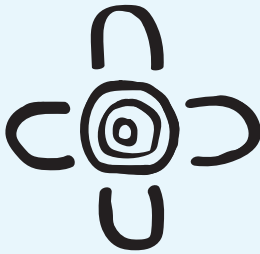
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Acknowledgement of Country



In delivering Australia's National Rail Procurement and Manufacturing Strategy, we pay our respects to our First Nations people, their Elders past and present, and their ancestors, who have always cared and continue to care for our lands and communities. We recognise the First Peoples of this nation and their ongoing cultural and spiritual connections to the lands, waters, seas, skies and communities.

We thank First Nations people for their continuing custodianship of the country that we live and work on today. We extend that respect to all First Nations peoples.

Ministers' foreword

The Australian Government is committed to building a Future Made in Australia.

The National Rail Manufacturing Plan is an ambitious, long-term commitment to grow domestic manufacturing capabilities in rail rolling stock. The plan will help address our growing transport needs, reduce our domestic emissions and deliver good jobs in our regions and outer suburbs. Increasing domestic manufacturing capabilities will also help provide the economies of scale required to design uniquely Australian trains and components and compete in export markets and global supply chains.

This National Rail Procurement and Manufacturing Strategy outlines tangible actions the Australian Government will take to grow a sustainable national rail manufacturing sector, increasing productivity and local industry participation. Its 6 pillars achieve 3 objectives:

1. harmonise and simplify rolling stock procurement across Australia to increase productivity and boost local industry participation
2. investigate early opportunities to boost Australia's domestic capability in manufacturing passenger rolling stock, freight and heavy haul manufacturing
3. identify early opportunities to support the key enablers of rolling stock manufacturing: research, innovation, jobs and skills.

The strategy complements other Australian Government initiatives to revitalise Australian manufacturing capability. The \$15 billion National Reconstruction Fund (NRF) is the largest investment in Australian manufacturing by a government in Australian peacetime history. The NRF identifies transport as a priority sector.

The Industry Growth Program, announced in the last Budget, will deliver advice and grants for businesses to commercialise ideas and build a pipeline of investment-ready projects in NRF priority sectors, including transport.

The delivery of the strategy will be supported by the National Rail Manufacturing Advocate and the Rail Industry Innovation Council. The council brings together talented leaders, researchers and innovators to provide expertise on ways to improve research and innovation between industry, customers, researchers and designers.

The strategy is the result of extensive stakeholder consultation across governments, industry and the research community. We thank each person, organisation and state and territory government for their contribution and are committed to continue to work collaboratively with them to deliver the strategy in the national interest.



The Hon Ed Husic MP
Minister for Industry
and Science



Senator the Hon Tim Ayres
Assistant Minister for
Manufacturing and
Assistant Minister for Trade

Executive summary

The National Rail Procurement and Manufacturing Strategy (the strategy) is a key part of the National Rail Manufacturing Plan (NRMP).¹ The strategy outlines how the Australian government will work with states and territories, industry, unions and other stakeholders to help deliver a more collaborative approach to passenger rolling stock procurement and grow a competitive rail manufacturing sector.

Stakeholders have highlighted a range of barriers that stand in the way of achieving this goal, including workforce and skills shortages. However, the biggest structural challenge is the fragmented nature of the Australian market in passenger rolling stock. States and territories lead on passenger rail procurement, with decisions focused on local outcomes. Suppliers seeking a national presence must navigate competing local content policies, different and complex procurement processes, inconsistent technical and manufacturing standards and incomplete information about the national forward pipeline of work.

These inconsistencies make it hard for companies bidding for work, provide little incentive for longer term investment in manufacturing capacity or capability and undermine the ability of companies across the supply chain to achieve scale and efficiency. The result is a higher price tag for our trains and trams, and skilled workers lost to more stable sectors.

The strategy sets out actions, grouped under 6 pillars, to address these challenges.

- **Pillar 1:** Develop a nationally coordinated approach to rolling stock procurement
- **Pillar 2:** Harmonise standards for manufacturing rolling stock
- **Pillar 3:** Adopt a national local content approach
- **Pillar 4:** Maximise opportunities for freight and heavy haul rail manufacturing
- **Pillar 5:** Improve research and innovation outcomes in the rail sector
- **Pillar 6:** Establish the foundation for good jobs and rewarding careers in rail manufacturing

Pillars 1 to 3 seek to drive a national approach to rolling stock procurement, removing the barriers to achieving scale and efficiency and providing a clearer case for investment in new manufacturing capability and capacity. It will help create the conditions for companies across the supply chain to achieve greater stability, with positive impacts on workers and local economies.

¹ See Figure 3 for further information on the National Rail Manufacturing Plan and how it relates to this strategy.

Pillar 4 addresses the opportunity of bringing scale, coordination and collaboration to the domestic manufacture of heavy haul and freight rolling stock which is used in mining, agriculture and other commodity sectors. World-leading work is underway in the Pilbara in Western Australia to design and build heavy haulage and freight wagons that withstand heat and dust. Queensland is investigating the use of batteries and hydrogen in heavy haul rail. Victoria's condition monitoring technology is already being used in heavy haul rail. This strategy will investigate options to connect these kinds of initiatives and explore opportunities to strengthen heavy haul and freight rail manufacturing nationally.

Pillar 5 considers how to leverage our research and innovation systems to help ensure Australia's rail manufacturing sector can meet current and future challenges and grow export markets. Mass production of low-value products will not deliver the high value-add opportunities that will most benefit our national economy or grow our export potential. But Australia's advanced engineering design skills need to better link with our rail manufacturing supply chain to increase local production of rolling stock components and create a sustainable and stable demand. The strategy will deliver on these outcomes.

Finally, Pillar 6 is about helping to build the workforce required to deliver these projects in Australia. That requires working with businesses, unions, experts and education institutions to ensure that vocational training and skills delivery support good, well-paid jobs and careers that are attractive to young people, broaden workforce participation and lift productivity. The strategy will build on the work already underway in this space, including the work of Jobs and Skills Australia.



The case for action: why now?

In 2019, the Australian rail industry contributed around \$30 billion (1.5%) to the national economy and employed over 165,000 full-time equivalent people (ARA 2020) in ‘above and below’ rail design, manufacturing, construction, maintenance and operations.

Rolling stock manufacturing is a small but important part of the story. On average, the sector directly employs around 5,900 people and has contributed \$875 million in industry value added (IVA) every year over the last decade to June 2023. However, Australia remains a net importer of rolling stock and components. While exports averaged \$50 million over the last decade, the average value of imports was over \$1.1 billion over the same period (IBISWorld 2023).

Australia’s rail manufacturing sector has previously played a more substantial role in the provision of government owned rolling stock, supporting thousands of high-quality enduring jobs and creating economic value in our communities. With the support of state and territory governments and other stakeholders, Australia can grow a more globally competitive rail manufacturing sector that lifts productivity, improves social and environmental outcomes, and creates economic value. The Australian rail manufacturing sector faces well understood challenges. Change to address these challenges will require commitment and a strong spirit of collaboration across jurisdictions. And there are national and global factors that strengthen the case for reform.

Rail interoperability is a priority for National Cabinet and has been a major focus for the Infrastructure and Transport Ministers Meetings (ITMM) over recent years. While the interoperability agenda has a focus on rail safety outcomes, it also has a productivity focus which can be addressed in part through national cooperation on rail procurement and manufacturing.

State and territory governments are set to make significant investments in rolling stock. An assessment of publicly available rolling stock procurement pipelines suggests this investment will be around \$19 billion between 2023 and 2032. This includes around 500 new passenger train and light rail vehicles across 13 known current procurements in 6 states and 2 territories. Almost two-thirds (65%) of this new rolling stock are expected to be manufactured and assembled in Australia and there is opportunity to improve outcomes through national cooperation.

Projected population growth in major urban and regional centres will continue to drive demand and subsequent investment in passenger and freight rail. In addition, much of Australia’s current rail infrastructure and **rolling stock is ageing and will require asset renewal over time.**

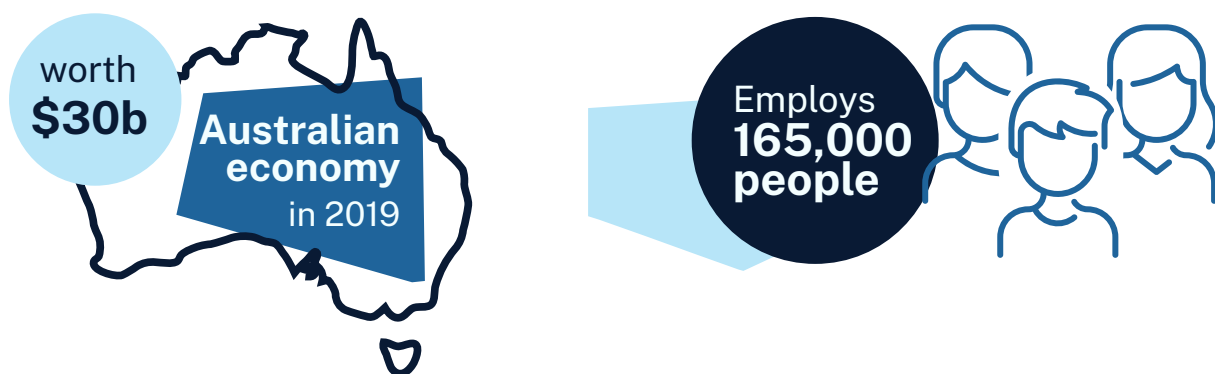


Figure 1: the Australian rail industry

Rail must play a role in Australia's commitment to reach net-zero emissions by 2050. Transport is the third-largest source of our national emissions. A modal shift to rail for freight and passengers could reduce emissions ninefold compared to traditional road transport. New technologies will further reduce rail emissions.

A stronger domestic manufacturing sector will strengthen our supply chains. The rise of a more uncertain global trading environment increases the risks of disrupted supply chains and overdependency on imported manufacturing. This requires a response that considers the national exposure to domestic and international supply chains.

This strategy describes how we will enhance our domestic capability whilst upholding our international trade commitments. With the right focus, ambition and national collaboration, Australia can again be a regional and global leader in advanced rail manufacturing.



Challenges and opportunities: stakeholder views

The Office of National Rail Industry Coordination (ONRIC) and the National Rail Manufacturing Advocate (the advocate) met with more than 50 stakeholders across Australia to better understand the key issues affecting the Australian rail manufacturing sector.

Stakeholders included:

- state and territory governments
- large 'tier 1' companies or original equipment manufacturers (OEMs)
- small and medium sized companies that participate in the rail supply chain
- unions
- industry bodies such as the Australasian Railway Association
- researchers and universities.

In addition, ONRIC and Transport for NSW co-hosted a Future of Rail Manufacturing Workshop bringing together more than 100 rail sector specialists including manufacturers, technical services companies, researchers, unions, state and territory transport agencies and federal and state ministers. Attendees identified issues facing the sector and considered options to support sector growth.



Stakeholders were open about the challenges and opportunities they saw, and positive about the potential future of rail manufacturing in Australia. The diversity of stakeholders provided a rich evidence base to inform the development of the strategy. Stakeholder views can be categorised into 3 broad themes:

1. **Government procurement:** The absence of a national approach to rolling stock procurement acts as a brake on the efficiency and growth of Australia's rail manufacturing sector. Local content policies, different manufacturing standards (often bespoke) and the lack of a transparent and coordinated national procurement pipeline result in higher costs, business instability, lower investment and job insecurity.
2. **Industry growth opportunities:** Acknowledging the need to identify and support long-term growth opportunities, stakeholders saw immediate opportunities to build on existing capability in heavy haul rail manufacturing. In particular, given the innovations underway in the transportation of resources over long distances and environmentally challenging conditions.
3. **Foundational enablers: research, innovation, and skills**
 - a. **Research and innovation:** The fragmented rail market limits opportunities for domestic scalability. This limits R&D given the capital funding required to invest in research capabilities. Small enterprises particularly struggle due to budget constraints and the time it takes to realise a return on investment.
 - b. **Skilled workforce:** There are major challenges in recruiting and retaining skilled workers, in part reflecting an economy-wide issue. Rail also has an ageing workforce. An unpredictable procurement pipeline discourages investments in skills. Workers move from project to project, or exit the sector in times of low demand, often never to return.

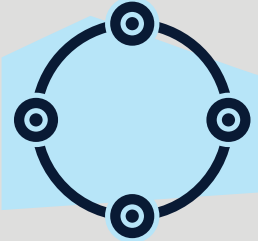


Figure 2 summarises these themes and key issues. Further information and background based on the insights gathered during consultations is available on the [ONRIC web page](#).

Figure 2: Key issues affecting Australia’s rail manufacturing sector

Stakeholder views on challenges facing the sector

1. Procurement		
<ul style="list-style-type: none"> • Inconsistent procurement approaches within and across jurisdictions • Manufacturers receive small orders with no long-term investment • Manufacturers unable to produce in large volumes • Limited pipeline visibility. 	<ul style="list-style-type: none"> • No mechanism or agreement for jurisdictions to adopt national standards for manufacturing of rail components. • Only safety issues are legislated. 	<ul style="list-style-type: none"> • Jurisdictions have their own local content policies • No mechanism or agreement for jurisdictions to adopt a national content policy • Duplication of existing supply chains, hindering ability to achieve scale.

Opportunities to respond through the National Rail Manufacturing Strategy

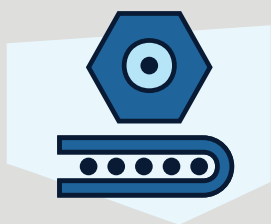
 <p>Pillar 1</p> <p>Develop a nationally coordinated approach to rolling stock procurement.</p>	 <p>Pillar 2</p> <p>Harmonise standards for manufacturing rolling stock.</p>	 <p>Pillar 3</p> <p>Adopt a national local content approach.</p>
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2. Early industry

- Opportunities exist to further Australia's advantage in **heavy haul manufacture**.

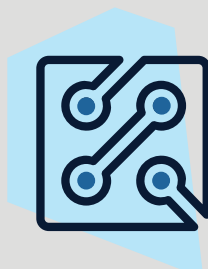
3. Industry enablers

- Australia **lags as an early adopter** of new technology and requires incentives to commercialise local R&D
- **IP constraints** can hinder research and innovation outcomes
- **Type Approval process** is onerous, hindering innovative solutions compared with overseas counterparts.
- The **skilled labour shortage** is compounded by an ageing workforce and competition from other sectors (mining, defence)
- More **inclusive culture** is required to attract and retain a diverse workforce
- **Rail manufacturing training needs to align** with traditional trade and non-trade occupations under the Australian Quality Framework (AQF).



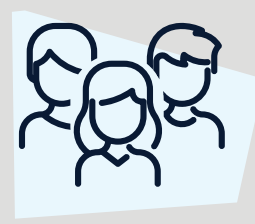
Pillar 4

Maximise opportunities for freight and heavy haul rail manufacturing.



Pillar 5

Improve research and innovation outcomes in the rail sector.

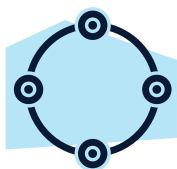


Pillar 6

Establish the foundation for good jobs and rewarding careers in rail manufacturing.

What we will do:

6 pillars to drive action



Pillar 1: Develop a nationally coordinated approach to rolling stock procurement

Australia has inconsistent procurement processes across states and territories. This prevents the sector from achieving economies of scale. Overcoming this issue requires a coordinated approach to procurement requirements, greater transparency of the national rail procurement pipeline, and cooperation across jurisdictions to manage or sequence procurement decisions. Success under this pillar will decrease regulatory and procurement burdens, reduce cost volatility, help Australian rail manufacturers plan for future work and create a more viable and stable rail manufacturing sector.

Action 1: Adopt a national framework for procurement

Scoping phase

Sub-action	Indicative timeframe (calendar year) ²
Map current rolling stock procurement frameworks and processes – identifying commonalities, inconsistencies, challenges and opportunities.	Quarter 1, 2024
Work with stakeholders to road-test ideas for policy reform that could support Australian rail manufacturing, including encouraging adoption of innovation and new technologies. Results to inform development phase.	Quarter 2, 2024

Development phase

Sub-action	Indicative timeframe (calendar year)
Design a national rolling stock procurement framework based on good practice procurement approaches appropriate to project size and scale.	Quarter 4, 2024
Note linkages with harmonised standards work in Pillar 2 and supply chain mapping in Pillar 3.	
Test draft framework with industry and unions.	Quarter 3 and 4, 2024

² Timeframes associated with actions throughout the pillars are indicative and may be adjusted as the work progresses.

Implementation phase

Sub-action	Indicative timeframe (calendar year)
Determine endorsement mechanism and governance pathways in consultation with the Infrastructure Transport Ministers Meeting (ITMM) and considering related intergovernmental agreements.	Quarter 2, 2025
National rolling stock procurement framework agreed by Australian Government and state and territory governments.	Framework adopted by Quarter 4, 2025

Action 2: Develop a more transparent pipeline for rolling stock procurements across Australia

Sub-action	Indicative timeframe (calendar year)
Working with states and territories, map the procurement pipeline nationally including current, future, and potential procurement.	Quarter 1, 2024
Include consideration of: <ul style="list-style-type: none"> a multi-decade time scale to include whole-of-life rolling stock maintenance, including complete overhauls and major refurbishments. limitations on available information (for example, states and territories may not be planning for procurements in 2026). demand projections that include future population growth, fleet profiles and government transport policies. 	
Publish national rolling stock procurement pipeline online.	Quarter 2, 2024
ONRIC to work with states and territories to ensure the pipeline remains current (see Action 3).	Ongoing

Action 3: Deliver a coordinated approach to timing of procurement at a national scale in accordance with fair market competition

Sub-action	Indicative timeframe (calendar year)
Develop a business case to identify benefits of coordinating procurement at a national level.	Quarter 2, 2024
Develop a framework and governance arrangements to support a coordinated, national approach to sequencing of state and territory rolling stock procurement, including consideration of market capacity.	Quarter 4, 2024



Pillar 2: Harmonise standards for manufacturing rolling stock

Harmonising standards for rolling stock will improve economies of scale, increase production runs and lower unit costs for Australian manufacturers. This will support a more competitive and efficient domestic rail manufacturing sector. This work will complement the current rail harmonisation work led by the National Transport Commission (NTC) and Rail Industry Safety and Standards Board (RISSB).

Options will be explored, in consultation with industry, to adopt a set of harmonised rolling stock manufacturing standards, complemented by a set of mandatory standards. Bilateral or multilateral agreements between jurisdictions can be encouraged to deliver benefits in upcoming rail projects.

Action 1: Identify existing standards that could be used in a national procurement framework and prioritise highest value outcomes

Sub-action	Indicative timeframe (calendar year)
Work with stakeholders to identify barriers to the adoption of national or global standard and identify opportunities to address these barriers, drawing on existing work.	Quarter 3, 2024
Identify opportunities to leverage and/or extend initiatives under the National Rail Action Plan to develop rolling stock harmonised standards.	Package of standards delivered by Quarter 1, 2025
ONRIC will consider the 3-tier standards framework that is being delivered by the NTC.	

Action 2: Achieve multilateral commitment to include standards in procurement

Sub-action	Indicative timeframe (calendar year)
Identify a pathway with states and territories to deliver a multilateral commitment on inclusion of package of standards for future procurements across the whole-of-asset lifecycle.	By Quarter 1, 2025
Facilitate agreement by state and territories to incorporate the standards package into procurement frameworks/processes.	Commitment provided and implemented by Quarter 3, 2025
Seek endorsement from state and territory transport ministers, noting complementarity of this work with the national rail interoperability reform agenda.	
Monitoring: Australian Government to work with states and territories to monitor implementation of commitment and make recommendations to strengthen implementation where appropriate.	Annually from Quarter 4, 2025



Pillar 3: Adopt a national local content approach

Differing local content policies (LCPs) can hinder the ability of companies to operate across jurisdictions, undermining industry efficiency, and limiting the establishment of a strong national rail manufacturing sector. A nationally consistent approach to LCPs would reduce unnecessary capital investment and duplication of capability, deliver greater industry stability, job security, and support a more cost-effective, competitive rail manufacturing sector.

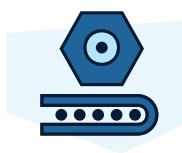
Visibility of the national supply chain will help identify opportunities to scale up and futureproof the rail manufacturing sector. For example, the National Reconstruction Fund will make targeted investments to support growth in the transport sector one of its priority areas.

Action 1: Map the national rolling stock manufacturing supply chain

Sub-action	Indicative timeframe (calendar year)
Map the national rolling stock manufacturing supply chain. Identify economic, social and geographic impacts of the current footprint, and strengths, gaps and interstate coordination opportunities.	By Quarter 2, 2024
Note: this work will also consider the review of the Freight Supply Chain Strategy being undertaken by DITRDCA.	

Action 2: Develop and adopt a nationally consistent rolling stock local content policy

Sub-action	Indicative timeframe (calendar year)
Develop a business case for the adoption of a nationally consistent Australia and New Zealand local content policy, in line with Australia's international commitments.	By Quarter 3, 2024
Develop model national content policy, based on mapping and stakeholder engagement, which considers whole-of lifecycle asset management approach and encourages competition.	Quarter 1, 2025
States and territories agree to incorporate model national content policy into rail procurement policies and frameworks.	Quarter 3, 2025



Pillar 4: Maximise opportunities for freight and heavy haul manufacturing

Australia has considerable expertise in freight and heavy haul rail, developed in response to challenges posed by its extreme environment and heavy load requirements. In Western Australia, a focus on innovation and local manufacturing, supported by the WA government, has seen the freight and heavy haul manufacturing sector grow. For example, Perth-based company Gemco Rail will build 100 iron ore railcar wagons for Rio Tinto – 40 wagons initially, followed by 10 every year over the next 6 years. It will also repair and refurbish key wagon componentry.

A feasibility study in Western Australia (DJTSI 2022) highlighted the importance of:

- innovation by local manufacturers to improve the efficiency and performance of wagons
- environmental, social and governance (ESG) considerations in decision-making. For example, local employment, First Nations training, employment and business engagement outcomes
- the potential for reducing carbon emissions through less reliance on overseas suppliers
- a collaborative approach to research, development and innovation from the major resource companies operating in Western Australia. This could address a range of common issues, including reducing rail carbon footprints and improving wagon design and longevity

Queensland also has substantial heavy haul rail networks which are supported by local manufacturing and maintenance services. A recent study looked at the use of batteries and hydrogen in Queensland's heavy haul rail (Knibbe et al 2022), concluding that batteries could support the decarbonisation of heavy haul rail. This may present diversification and growth opportunities for adjacent manufacturing sectors.

It is anticipated that rail freight will grow with improvements to inland rail and port connections, and as companies seek to decarbonise their supply chains by shifting from road to rail transport. The emerging critical minerals industry will also drive demand for heavy haul capacity.

Action 1: Build evidence base: map and assess domestic capability of freight and heavy haul rail manufacturing

Sub action	Indicative timeframe (calendar year)
Identify Australia's expertise and domestic capability in freight and heavy haul rail manufacturing – building on existing evidence base, business cases and research.	By end of Quarter 4, 2024
This work will provide input to the assessment of domestic rail manufacturing capability to be undertaken in phase 2 of the NRMP.	
Identify existing policy levers and initiatives across jurisdictions. Consider options to link work underway and drive a collaborative national approach. Identify growth opportunities in domestic and export markets.	By end of Quarter 4, 2024

Action 2: Develop priority growth plan to grow and strengthen the freight and heavy haul rail manufacturing sector.

Sub action	Indicative timeframe (calendar year)
Develop and publish a priority growth plan to support the freight and heavy haul rail manufacturing sector.	By end of Quarter 2, 2025
Note: This delivery of this action is dependent on assessment of existing policies and initiatives undertaken in Action 1.	



Pillar 5: Improve research and innovation outcomes in the rail sector

Stronger research capabilities and greater collaboration between researchers, innovators, industry and government will enable the rail manufacturing sector to boost productivity, take advantage of smart manufacturing opportunities, compete in international markets and progress Australia's zero emissions goals in transport.

The Rail Industry Innovation Council (the council) will play a key role in delivering the actions under this pillar. The council will also drive a more substantial body of work under Phase 2 of the National Rail Manufacturing Plan to assess the national rail innovation system and consider options to support stronger innovation outcomes.

Action 1: Encourage more effective collaboration and stronger connections between industry and the rail research sector

Sub action	Indicative timeframe (calendar year)
Identify and build connections between industry and the research and design sectors to support commercialisation and adoption of smart, sustainable rolling stock manufacturing in Australia.	Ongoing

Action 2: Improve industry awareness of government initiatives that support innovation and commercialisation

Sub action	Indicative timeframe (calendar year)
The Rail Industry Innovation Council will work with ONRIC to promote innovation and commercialisation initiatives within the rail manufacturing sector.	By end Quarter 2, 2024

Future actions

Under Phase 2 of the National Rail Manufacturing Plan, the council will map the national rail innovation system, consider the key barriers and enablers to developing and adopting innovation, and assess the value and focus of a priority growth plan to boost research and innovation outcomes in the rail sector. This work will build on evidence collected in Pillar 1 of this strategy to better understand the role of procurement in innovation outcomes and Pillar 3 work on supply chain competitiveness and resilience.



Pillar 6: Establish the foundation for good jobs and rewarding careers in rail manufacturing

Competition for skilled workers is currently strong and likely to intensify over the next decade. Job stability, investment in apprentice training, development of career pathways and workforce retention are being undermined by uncoordinated investment decisions across jurisdictions, as well as negative perceptions about the quality of employment opportunities in the sector.

Independent of other economic shifts, the other priorities of the government (including AUKUS, the National Reconstruction Fund and Industry Growth Program-led industrial investments and the shift to net zero and associated infrastructure requirements) will intensify the competition for workers through the life of the strategy and into the next decade.

The workforce is ageing, predominately male, lacks cultural diversity and is not being renewed at sufficient scale. Meanwhile, the skills required by a modern rail manufacturing sector are changing and increasingly need capability in new technologies.

Beyond whole of government coordination of research and planning through Jobs and Skills Australia, and the coordination of industry engagement through Jobs and Skills Councils, the rail manufacturing sector must collaborate to set out a shared approach across businesses, unions, state and territory governments, experts and education institutions to workforce challenges. This includes:

- creating good jobs and sustainable careers which attract and retain high quality new entrants to the industry
- identifying deficits and potential improvements to workplace culture, including a focus on more collaborative workplace relationships, a shared approach to higher productivity and adoption of new technology and skills
- improving the participation of women and under-represented groups through inclusive recruitment and retention strategies, and making the required changes to workplaces
- engaging with other government and industry programs around skills and training to ensure that existing work addresses the needs of the rail manufacturing sector.

Related skills and workforce initiatives

Jobs and Skills Australia provides independent advice on current, emerging and future workforce, skills and training needs. It works with unions, employers, state and territory governments, and education and training providers to improve skills development, employment opportunities and economic growth.

Jobs and Skills Councils (JSCs) will provide industry with a stronger voice to ensure Australia's education and training sectors deliver better outcomes for students and employers. The Transport and Logistics JSC and Manufacturing JSC will bring together employers, unions and governments to help find solutions to skills and workforce challenges, including in the rail sector.

National Rail Skills Hub (led by the NTC and partners) aims to address the challenge of a looming skills and labour shortage identified in the National Rail Action Plan. The hub will coordinate current industry and government training initiatives and activities.

The strategy does not seek to duplicate existing work across government. However, given the importance of skilled workers to delivering the strategy, and developing reliable national rail manufacturing capability, the National Rail Manufacturing Advocate, ONRIC and the Rail Innovation Council will work with stakeholders to ensure a joint approach to workforce development.

Action 1: Support the rail manufacturing sector to address skill shortages and to attract and retain talent.

Sub-action	Timeframe
Engage with and provide advice to relevant Jobs and Skills Councils and the National Transport Commission, to ensure their initiatives: <ul style="list-style-type: none">• address skills challenges in the rail manufacturing sector• provide training options that deliver high-quality skills as part of recognised frameworks that support long-term career opportunities.	Quarter 2, 2024
Gather stakeholder views and consult with experts and state and territory governments about measures to: <ul style="list-style-type: none">• improve the participation of women through modern recruitment and retention practices• create more inclusive workplaces for women and other under-represented groups.	Quarter 3, 2024
Develop a model workforce development strategy that responds to identified challenges within the rail manufacturing sector and is informed by best practice models in related industries. <ul style="list-style-type: none">• Include a focus on developing long-term, sustainable careers, more collaborative workplace relationships, more inclusive workplaces, a shared approach to higher productivity growth and adoption of new technology and skills.	Quarter 4, 2024
Promote and support adoption of the model by companies across the rail manufacturing supply chain.	

How we will work with stakeholders to implement this strategy

The Australian Government is committed to transparent and proactive collaboration with stakeholders to deliver the strategy.

In October 2022, to facilitate the delivery of the NRMP and commence stakeholder engagement, the Office of National Rail Industry Coordination (in the Department of Industry, Science and Resources) was established. In June 2023 the National Rail Manufacturing Advocate and the inaugural members of the Rail Industry Innovation Council were appointed. All 3 will have roles in the implementation of this strategy.

The Office of National Rail Industry Coordination (ONRIC) will take a coordinated national approach to lead implementation of the strategy in partnership with the National Rail Manufacturing Advocate, and working closely with Australian Government agencies, rail industry stakeholders, and the council. It will work collaboratively with states and territories as chair of the Intergovernmental Rail Industry Group. ONRIC will continue to undertake research, policy development, stakeholder engagement, and lead the implementation of the National Rail Manufacturing Plan.

The National Rail Manufacturing Advocate will lead the implementation of this strategy in partnership with ONRIC, through deep engagement with industry stakeholders across the supply chain, unions, and states and territories – looking for opportunities to improve competitiveness and grow the Australian rail manufacturing sector. The advocate works closely with ONRIC and is an independent adviser to the Australian Government minister responsible for rail manufacturing.

The Rail Industry Innovation Council will support the implementation of the strategy primarily through its leadership role under Pillar 5 – ‘Improve research, innovation collaboration and design’ and by monitoring general progress on this strategy, providing guidance and advice. The council will also identify opportunities for innovation and technology adoption, including on emissions reduction.

When engaging with stakeholders we will:

- **engage flexibly** and remain **open to hearing** industry, unions and government feedback while implementing the strategy and delivery phases of the NRMP
- **work collaboratively** with states and territories:
 - bilaterally
 - multilaterally, through the Intergovernmental Rail Industry Group (IRIG)
 - through appropriate ministerial forums.
- have an **‘open door approach’** that ensures industry participants can easily bring ideas and concepts to our attention. This includes quick, time-critical wins
- be **responsive to the challenges and opportunities of SMEs** across the supply chain as well as emerging industry participants who want to enter rail manufacturing.
- be **transparent about the progress we make** under this strategy and the broader plan. To support this, ONRIC will publish an annual progress report on [its webpage](#).

The National Rail Manufacturing Plan: **connecting this strategy to the big picture**


This strategy is a key part of the National Rail Manufacturing Plan (see Figure 2).

The National Rail Manufacturing Plan (NRMP) is the Australian Government's commitment to help grow a more globally competitive rail manufacturing sector that lifts productivity, improves social and environmental outcomes and creates economic value. The NRMP aims to deliver:

- a nationally coordinated approach to government procurement and investment
- a more efficient domestic supply chain selling to local and export markets
- global leaders in research, design, innovation, and adoption
- rewarding careers and a highly skilled, diverse workforce.

The NRMP will be rolled out over 3 phases.





Phase 1: Establish a strong foundation for growth and pursue high value early opportunities

The National Rail Procurement and Manufacturing Strategy (this document) is the deliverable under Phase 1.

Phase 2: Identify opportunities for Australian manufacturing in the global supply chain

Phase 2 of the NRMP investigates the domestic capability of our rail manufacturing sector and identifies opportunities to participate in the global supply chain. Working closely with stakeholders, we will explore:

- Australia's design, research and innovation capabilities
- the skills required to deliver and grow manufacturing capabilities in Australia
- how to effectively enable growth and/or establish market share within the global supply chain to develop/improve highly skilled advanced manufacturing jobs.

We will map the national rail innovation system, identify opportunities and work closely with Jobs and Skills Australia, the National Transport Commission, and states and territories to support the growth of a highly skilled workforce.

Phase 3: Develop domestic capability in priority growth areas

Phase 3 will build on the stakeholder engagement and mapping undertaken in Phase 2 to develop domestic capability in priority growth areas. Priority growth plans may target opportunities such as:

- growing the capabilities of SMEs
- attracting new capital
- facilitating innovation and research
- boosting export and trade
- developing a world-class workforce.

Figure 3: The National Rail Manufacturing Plan

Driving a globally competitive rail manufacturing sector to lift productivity, improve social and environmental outcomes and deliver economic value





Global leaders in research, design, innovation and adoption



Rewarding careers and a highly skilled, diverse workforce



Identify opportunities for Australian manufacturing in the global supply chain

Assess domestic rail manufacturing capability

- Evaluate domestic rail manufacturing capability and growth challenges
- Identify high value manufacturing growth areas for domestic and export markets
- Select and test growth areas for implementation

Map national rail innovation system

- Evaluate Australia's rail research and innovation ecosystem
- Identify research and innovation priorities to support growth areas

Q1–Q4 2024



Develop domestic capability in priority growth areas

Develop and implement rail sector priority growth plans

Based on outcomes of phase 2, develop plans to deliver in priority growth areas, with a focus on:

- Growing relevant supply chain capability
- Attracting new capital and capability
- Facilitating targeted research and innovation
- Boosting sector exports
- Supporting development and growth of world class workforce

Q3 2024–Q4 2025+

Related government priorities

This strategy, and the National Rail Manufacturing Plan, complements a range of other Australian Government priorities and initiatives, including the below.

National Reconstruction Fund (NRF)

The Australian Government has established the \$15 billion NRF to facilitate increased flows of finance into the Australian economy. Investments will aim to diversify and transform Australian industry, create secure well-paid jobs, and boost sovereign capability.

The NRF will operate in a commercial manner and target a positive rate of return for its portfolio. It will provide finance (including debt and equity) to drive investments in 7 priority areas of the Australian economy:

- renewables and low emission technologies
- medical science
- transport
- value-add in the agriculture, forestry and fisheries sectors
- value-add in resources
- defence capability
- enabling capabilities.

Co-investment plans will identify high-level investment opportunities and broader reforms to support industry growth and competitiveness in each NRF priority area. ONRIC and the National Rail Manufacturing Advocate will provide relevant industry insights to inform the development of the transport co-investment plan.

Industry Growth Program

The Industry Growth Program (IGP) provides advice and matched grant funding to SMEs and startups so they can commercialise ideas and grow their businesses. Innovative SMEs and startups play a crucial role in the economy, but many have difficulty bringing their ideas to market and scaling up. The IGP will support early-stage businesses in their most challenging development phase. Projects in priority areas of the NRF (which includes the transport sector) will be eligible to apply for the IGP.

National Cabinet Rail Interoperability priority and the National Rail Action Plan

Refer to following page.

Transport and Infrastructure Net Zero Roadmap and Action Plan

The Australian Government is developing a Net Zero 2050 plan, as outlined in the 2022 Annual Climate Statement to Parliament. In 2022, the government legislated that Australia's greenhouse gas emission targets will reach net zero by 2050. By 2030 Australia aims to reach emissions of 43% below 2005 levels.

Passenger and freight rail both play an important role in the future of transportation as Australia works towards achieving net zero by 2050. In recognition of this, the Australian Government is developing a net zero transport sector plan which will include rail.

How this strategy relates to the National Rail Action Plan

Advancing national rail interoperability is a National Cabinet priority which is being addressed through the [National Rail Action Plan](#) (NRAP).

The NRAP is an agreed set of actions being delivered by the National Transport Commission (NTC) on behalf of the federal, state and territory governments and key members of the rail industry. It aims to improve the safety and productivity of rail operations and support delivery of rail infrastructure. It will also create opportunities for rail manufacturers to supply rolling stock and components.

Three priority areas have been identified for action under the NRAP:

- addressing skills and labour shortages
- harmonising rules and standards across jurisdictions
- advancing interoperability of freight and passenger rail.

To address these priority areas, the NRAP will deliver mandated critical interoperability standards (including interoperable signalling systems) and streamline rolling stock approvals.

Some of the NRAP's actions will benefit the rail manufacturing sector, including NRAP's work on skills and standards harmonisation. However, the growth of a domestic rail manufacturing sector is not NRAP's key focus.

In contrast, the primary goal of the National Rail Manufacturing Plan and the National Rail Procurement and Manufacturing Strategy (this document) is to grow and strengthen the rail manufacturing sector. It considers a broad range of challenges and opportunities beyond those identified in the NRAP.

ONRIC will work closely with the NTC, federal, state and territory transport agencies, industry, and unions to ensure that the delivery of this strategy is informed by work underway in the NRAP.



Source: National Transport Commission

The National Rail Action Plan and related initiatives are being led by the National Transport Commission. For further information see the [NRAP web page](#) and [National Rail Skills Hub](#) website.

Glossary

Term	Definition
Above rail	<p>The construction and maintenance of freight and passenger rolling stock including:</p> <ul style="list-style-type: none"> • locomotives • passenger cars • freight wagons • trams • light rail vehicles • associated components and systems.
Australian Qualifications Framework	The national policy for regulated qualifications in Australian education and training. It incorporates the qualifications from each education and training sector into a single comprehensive national qualifications framework.
Below rail	The construction and management of railway infrastructure, including rail infrastructure assets and network services.
Decarbonise	To stop or reduce carbon gases, especially carbon dioxide, being released into the atmosphere as the result of a process, like the burning of fossil fuels.
Domestic capability	The industrial, economic, logistical, research and educational capabilities required by a country to achieve objectives including safety, defence, health and wellbeing, food security, energy and key materials supply, infrastructure security and environmental sustainability.
Interoperability	The ability of different railway systems and rolling stock to operate together seamlessly without any compatibility issues or safety concerns.
Inter-government Rail Industry Group (IRIG)	IRIG is the meeting of senior officials providing input and advice for the development of the strategy and the NRMP.
Infrastructure and Transport Ministers' Meetings (ITMM)	The ITMM provides a forum for intergovernmental collaboration, decision-making and progressing priorities of national importance.
Industry value added (IVA)	The market value of goods and services produced by the industry minus the cost of goods and services used in production.
Local content policy (LCPs)	<p>LCPs for public sector procurements set requirements for:</p> <ul style="list-style-type: none"> • where materials, components or other value-added activities are sourced to deliver contracts • where goods are manufactured or assembled.
National Rail Action Plan	<p>A plan to define and address the rail industry's critical challenges of:</p> <ul style="list-style-type: none"> • skills and labour shortages • lack of national standards • interoperability issues.

Term	Definition
National Reconstruction Fund (NRF)	The NRF will provide finance (including debt and equity) for projects that diversify and transform Australia's industry and economy.
Net zero emissions	Cutting greenhouse gas emissions to as close to zero as possible, with remaining emissions re-absorbed from the atmosphere.
Net Zero Roadmap and Action Plan	One of the 6 sectoral plans to drive Australia's emissions to its 2035 and 2050 targets. The roadmap and action plan will help Australians secure long-lasting benefits from the transition to net zero, while managing and minimising the impacts of the transition.
ONRIC	Office of National Rail Industry Coordination
Procurement	The process of acquiring goods and services, including on behalf of another entity or third party.
Rolling stock	Freight and passenger locomotives, including: <ul style="list-style-type: none"> • passenger carriages • freight wagons • trams • light rail vehicles • associated components and systems.
Standards harmonisation	The plan to reduce or eliminate different: <ul style="list-style-type: none"> • standards for common rolling stock components • different operating rules for similar communications and control systems used across Australian railways.
Tier 1, 2 and 3 companies in the rolling stock manufacturing supply chain	<p>Tier 1 consists of companies that provide the shell (body), design and final assembly of railcars or locomotives. They are assumed to have a central role as assembler of components, playing a pivotal role across the whole supply chain. Examples of Tier 1 companies are Alstom, Downer and UGL.</p> <p>Tier 2 companies make rail parts and provide discrete services such as propulsion, electronics, and body and interior.</p> <p>Tier 3 includes companies that supply materials to companies in the top 2 tiers.</p>

References

ARA (2020a), [*The value of rail*](#), Australasian Railway Association, accessed September 2023.

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