

Appendix 3

The ARA's Enablers

Extract from the Australasian Railway Association, *A National Rail Industry Plan for the Benefit of Australia*, September 2017, pp 11-15

THE FIVE KEY AREAS OF FOCUS:

1. Recognising the importance of rail for Australia's infrastructure development, urban planning and freight movements

Enablers to achieve this include:

1. Establishing and maintaining a complete catalogue of all rail industry projects/investments (commissioned and proposed) – the 'Rail Industry Investment Pipeline':

- This should reflect time lines
- Reflect costs of projects and employment potential
- Assess funding and resource issues
- Consider and rank priorities.

2. Draw on the study ARA has commissioned from Deloitte Access Economics reflecting the contribution rail makes to Australia:

- Spell out the impact rail has on the major economic drivers, both GDP and employment
- Reflect the impact rail has on externalities, such as congestion, commuting times, safety, emissions and social cohesion
- Present the 'true value' of rail findings in graphical format to aid wide distribution and understanding.

3. Removing any policy bias between transport modes:

- Road/rail pricing
- Corridor preservation for passenger, freight and high speed rail
- Salary sacrificing for public transport tickets
- Recognising the importance of integrated transport in city planning
- Supporting the development of intermodal freight hubs and rail to ports.

4. Promoting the advantages that flow from rail:

- Generating an improved mindset among policy makers about the benefits of rail
- Promoting the advantages of major rail projects such as Inland Rail and Sydney/Melbourne metros
- Educating patrons to see how rail fits into Australia's overall transport offering as a viable, alternative transport mode
- Cooperating with tourism promoters, such as cruise liners, airlines, hotel chains to include rail as part of the tourism offering
- Promoting rail as a worthy option for young career aspirants
- Generating improved diversity outcomes.

2. Harmonising standards, minimising regulations and maximising economies of scale

Enablers to achieve this include:

1. Progressing work being led by Victoria (through RISSB) in harmonising standards relating to bogies and glazing:

- Extending the harmonisation efforts to homologation and system specifications
- Removing conflicting requirements in emission standards.

2. Working with the Office of the National Rail Safety Regulator (ONRSR) to achieve harmonisation in all areas of safety, particularly:

- Completing the full engagement of all states with ONRSR
- Addressing the safety issues relating to the movement of vehicles in rail facilities
- Harmonising the requirements of drug, alcohol and fatigue management.

3. Reviewing the approach to tendering and procuring to achieve a greater consistency of approach and reducing costs:

- Drawing on ARA's analysis of recommendations from the Productivity Commission
- Developing education programs on 'best practice' tendering practices relevant to both procurers and suppliers.



3. Growing the capabilities of individuals and companies

Enablers to achieve this include:

1. Identifying the labour skills required for a high performing rail system that is abreast of emerging technologies:

- Commission a labour market analysis to identify gaps in required skills (Bis Oxford Economics has prepared a comprehensive proposal to undertake this analysis)
- Drawing on the skills analysis being undertaken by training academies in Victoria and New South Wales. Exchange best practices to avoid duplication of effort. In particular, extend interstate the progress being made by the Rail Academy Newport particularly in the area of signals engineering. Similarly, the approach of Sydney Metro to achieve groundings in demolition, tunnelling, civil construction, rail and heavy haul should be mirrored in other states
- Improving the linkages between government, industry and training institutions, including TAFE and universities.

2. Ensure training methodologies are leading edge and keep abreast of future skill needs and training requirements:

- The use of simulators and virtual reality should be pursued with some urgency noting Deakin University is renowned for its VR expertise and the wide spread use of simulators in NSW
- Engage with training institutions to share best practice
- Explore international approaches to training methodologies, noting that InnoTrans 2018 may provide this opportunity.

3. Don't assume current approaches to traineeships and apprenticeships best meet rail industry purposes:

- A need to engage with rail companies, including operators, suppliers and contractors to explore how traineeships and apprenticeships can be fit-for-purpose
- The old statement that rail provides a 'job for life' is no longer appropriate. Rather, developing an approach to training that builds 'skills for life' particularly in science, technology, engineering and mathematics (STEM)
- Encouraging the mobility of skilled labour to rail, especially those with STEM skills
- Considering the provision of incentives for companies undertaking training in areas of particular need.

4. Training at certificate, degree and post-graduate levels is to be encouraged:

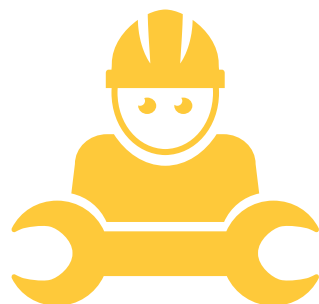
- Companies should consider offering cadetships to attract talented people to careers in rail
- Work experience for individuals across a variety of functions within the rail industry should be on offer
- Scholarships that offer international experience should be explored.

5. Promoting a bold and exciting image of rail to attract talented people:

- Considering whether rail companies could combine to undertake a program similar to the Australian Defence Force offering of a Gap Year described as a “fulfilling year of adventure, experiences, mateship, learning, leadership, and travel...it is a unique opportunity to get a feel for a career in the Services, without committing to a longer period”
- Retaining talent is as important as attracting talent
- Flexibility in working arrangements is required to appeal to a wider cross section of employees
- Maximising the benefits of gender balance in the workforce by supporting initiatives that focus on attraction, profiling, retention and networking
- Mentoring should become regular practice.

6. Programs for local companies to improve their capabilities to international standards should be on offer:

- Recognising the adverse impact on Australian rail if our capability to manufacture, refurbish and maintain our rolling stock and rail systems is lost to international competitors
- Ensuring Australia’s rail industry maintenance capability is not diminished should local manufacturing of rolling stock move offshore
- Recognising the export potential of high tech, high value skills, particularly those in design. This includes Australia’s training capability in all areas of rail
- Understanding that optimising the useful life of current rail assets, including infrastructure provides opportunities for capable local suppliers
- Examining the Supplier Continuous Improvement Plan (SCIP) implemented in the automotive component sector as an option
- Encouraging companies in other industry sectors, with relevant capabilities, to engage with the rail industry
- With an increasing tendency for suppliers to be required to demonstrate their capabilities to meet the standards prescribed through procurement processes (eg. the AVETTA process), developing training programs to assist suppliers understand these processes and to meet the standards required.



4. Maximising opportunities for rail companies

The enablers to achieve this are:

1. Amending the Australian Industry Procurement (AIP) thresholds to better reflect rail industry project values:

- Major projects require procurers to examine the capability of local companies to supply
- Coordinate procurement policies across government jurisdictions to achieve greater consistency and to facilitate competent local companies into the supply chain
- Tie local content provisions to outcome based measures such as economic activity, employment, capability, skills development, innovation, investment and long term reliability.

2. Governments and industry procurers should work with and encourage local industry to increase its capability to qualify in the supply chain on a commercially and technologically sound basis:

- Procurers should provide fair and reasonable opportunity to local industry to pre-qualify, tender and participate in rail related projects
- Buying practices, procedures and specifications should not disadvantage local industry
- State jurisdictions to ensure regulations, tendering processes and project specifications do not impede local suppliers.

3. Long term planning for government procurement of rolling stock taking into account whole of life costs:

- The number of trains per order and their timing should be optimised to achieve economies of scale
- Variations in train standards should be avoided to reduce the need for one-off designs, removing significant design costs
- Ensuring funding requirements are based on need rather than when funding is available.

4. The Productivity Commission and the House of Representatives Standing Committee on Infrastructure and Communications has proposed reforms to infrastructure procurement. These reforms should be pursued:

- More streamlined information for bidders, with only the preferred tenderer being required to provide detailed, non-design management plans
- A greater investment by government in the initial concept design of specifications (even to the point of ownership) which will assist in reducing bid costs
- Building Information Modelling (BIM) should be used to provide concept designs to reduce costs
- The issue of risk and its mitigation requires effective identification, management and allocation in the early stages of procurement ideally before final strategies are decided
- Generally, there should be no more than three shortlisted proponents for design and construct or manage and construct tenders and no more than two for early contractor involvement processes
- Education programs and guidelines on best practice tendering for both project procurers and proponents should be developed.

5. The Australian rail industry should seek to maximise its engagement in international supply chains:

- Austrade should engage with the Australian rail industry to foster international trade opportunities
- The trade opportunities should extend beyond products and services to technologies and know-how and into the education and training market, particularly in Asia and the middle east
- Austrade, in conjunction with the Commonwealth, State and Territory Governments and the ARA should take a delegation of Australian rail companies to Innotrans 2018 in Berlin.

5. Fostering innovation, research and development

Enablers to achieve this include:

1. Consider the establishment of a Centre for Rail Industry Capability (CRIC) modelled on the Centre for Defence Industry Capability (CDIC):

- CRIC would be an industry led organisation with the primary goal to drive innovation, productivity, excellence and competitiveness in the national rail industry, maximising its contribution to the Australian economy
- CRIC would provide a national coordinated approach to research and development, maximising the contributions to innovation by the CRCs for manufacturing and for innovation, the CSIRO and Australian universities with rail research activities
- CRIC would aim to generate commercial outcomes from its activities
- CRIC would focus on areas of competitive strength and strategic priority for the Australian rail industry identified throughout this Plan
- CRIC would have the option to pursue a solution-driven or problem-driven approach to innovation
- CRIC would investigate existing adjacent industry technology applicable to the rail industry.

2. The role of the Australian Centre for Rail Innovation (ACRI) should be reviewed:

- Examine whether ACRI could be restructured and its role widened with a financial model to support the role
- Barriers to accessing ACRI's research outcomes, when not IP/commercially protected, should be removed.

3. The role of Australian universities in rail related research and development should be better coordinated to provide a strong academic base for innovation:

- Examine the UK model, managed by the Rail Research UK (RRUK) Association. RRUK is a partnership between rail and UK research institutions undertaking relevant R&D. It is funded by the Rail Safety and Standards Board and Network Rail. The advantage is that duplication of research by various institutions is minimised through identifying the research specialisation of each research institute
- Set about creating a culture of innovation by introducing incentives for innovative projects

- Collaboration enables sustained good performance through sharing information, clarity over standards and the understanding of needs.

4. Refresh the collaborative study undertaken in 2012/13 by the Commonwealth's Rail Industry Advocate on behalf of the Commonwealth Government and the rail industry 'On Track to 2040 -preparing the Australian Rail Supply Industry for Challenges and Growth':

- This study provides an important roadmap for rail. Its findings and recommendations remain relevant and its implementation could be led by CRIC. The document can be viewed here <https://industry.gov.au/industry/IndustryInitiatives/AustralianIndustryParticipation/SupplierAdvocates/Documents/OnTrackTo2040-Roadmap.pdf>

5. Technology opportunities were identified as follows:

- Materials and manufacturing, including advanced design, low cost manufacturing systems, high performance materials for heavy haul, advanced manufacturing, advanced materials for light-weighting, simulation for materials and manufacturing
- Monitoring and management, including automated health monitoring for smarter infrastructure, automated control and operations, advanced asset management systems, safety threat detection and intervention, advanced data analysis and information systems, advanced operations management
- Power and propulsion, including energy regeneration, advanced braking systems, energy use management tools, electric motors and systems, emission reduction technologies, gaseous fuels.

