



Australian Government
**Department of Infrastructure
and Regional Development**



Submission to the Senate Rural and Regional Affairs and Transport References Committee: Australia's Rail Industry

February 2017

Table of contents

TABLE OF CONTENTS	1
INTRODUCTION	2
Australian Railway Networks and Operations.....	3
Freight Rail.....	4
Urban Passenger Rail.....	5
Regional Passenger Rail	6
Investment in Australia's Rail Industry.....	6
State of the Rail Manufacturing Sector	9
A. RAIL AS A REGIONAL EMPLOYER.....	10
Employment in the Rail Industry	10
Rail Industry Manufacturing	11
Infrastructure Managers Providing Employment in Regional Australia	14
B. AUSTRALIAN RAILWAY MARKET	17
Australian Industry Participation (AIP)	17
National Partnership Agreement.....	19
C. NATIONALLY COORDINATED APPROACH TO RAIL MANUFACTURING	20
The Office of the National Rail Safety Regulator (ONRSR) and the Rail Industry Safety and Standards Board (RISSB).....	20
Harmonisation of Australian Rolling Stock Standards	21
D. ANY OTHER MATTERS	22
Rail Manufacturing Cooperative Research Centre (CRC).....	22
Australasian Centre for Rail Innovation (ACRI)	22
CONCLUSION.....	25

Introduction

Rail is Australia's long distance and heavy lift mode of choice, able to move high volumes of people and freight much more efficiently than road over longer distances. This includes iron ore, coal, and agricultural produce from our regional areas to our cities and ports for export. In urban centres rail helps contribute to national productivity by offering passengers an effective way of moving from home to work. The rail sector is supported by a diverse rail manufacturing and maintenance market, and labour force, that stretches across the continent and has strong links with regional areas.

This submission by the Department of Infrastructure and Regional Development (Department of Infrastructure) provides background on Australia's railway industry and more specifically the railway manufacturing industry, including its size, operations and, where information is available, how it impacts on communities.

The Australian Government develops national rail policy and supports cross jurisdictional regulatory bodies such as the Rail Industry Safety and Standards Board through funding and championing of the safety co-regulation model at a national level. The Australian Government also provides equity and grant funding to the Australian Rail Track Corporation (ARTC) and directly to states and territories for rail projects. This Commonwealth role is largely managed by the Department of Infrastructure.

The Australian Government owns ARTC, which operates 8,500 km of the national interstate railway track. It is run on a commercial basis with an independent Board. The metropolitan and regional networks are largely owned and operated by states and territories and the private sector.

Rail is critical for Australia's economy. In 2014-15, freight rail carried almost 1.2 billion net tonnes of freight, or approximately 49 per cent of our national freight task, and there were approximately 849 million urban heavy and light rail passenger journeys. Without rail the nation would face significant logistics and congestion challenges, which would affect our national competitiveness.

In supporting the rail industry, the Australian Government is investing over \$4.4 billion on passenger rail projects and over \$3.1 billion (including equity-funded projects) on freight rail and intermodal projects over the period 2013-14 to 2019-20.

Underpinning the Australian rail sector is the rail manufacturing and construction industry, which is transitioning from a period of rapid growth, fuelled by the construction phase of the mining boom, to a more mature market driven by the ongoing extraction phase of the mining boom, with infrastructure operators and investors making increasing use of global supply chains for rail products. Spending by successive state and Australian Governments on passenger and freight rail projects has partially offset the decline from the construction phase of the mining boom.

While integration into the global economy has increased competition from high volume overseas manufacturers, such as locomotive and infrastructure manufacturers, Australia retains a strong local locomotive and rolling stock manufacturing industry.

The rail sector has built or refurbished just over 450 freight locomotives in Australia over the last 15 years, mostly in regional rail manufacturing centres. While numbers of locomotives in operation fluctuate year to year, this equates to approximately 22 per cent of Australia's current operational locomotive fleet. Australia's small to medium rail businesses are integrating into the global rail supply chain by targeting areas of technical sophistication and high safety standards. Component manufacture, installation and fit-out, and maintenance are the main activities in the market.

Employment in the railway manufacturing sector, and the wider railway industry, has largely stabilised following falls from peaks in 2011. Ongoing domestic repair and manufacturing work is likely to keep employment levels stable into the future. Approximately 49 per cent of rail manufacturing and repair workers are employed in a regional area such as Ballarat and Bendigo in Victoria and the Newcastle region in New South Wales. The slight drop in manufacturing workers has been counter balanced by a 17.7 per cent increase in rail freight transport workers.

These numbers suggest that the rail manufacturing industry is continuing to contribute to regional economies and retaining a core workforce in regional areas that will retain skills and technological capabilities.

As part of its work to support the rail industry, the Australian Government is actively engaging with industry and jurisdictions to reduce possible barriers to growth and generate improvements in productivity. This includes ensuring an extensive range of innovation and entrepreneur policies and programs are available to rail manufacturers, overseen by the Department of Industry, Innovation and Science (Department of Industry).

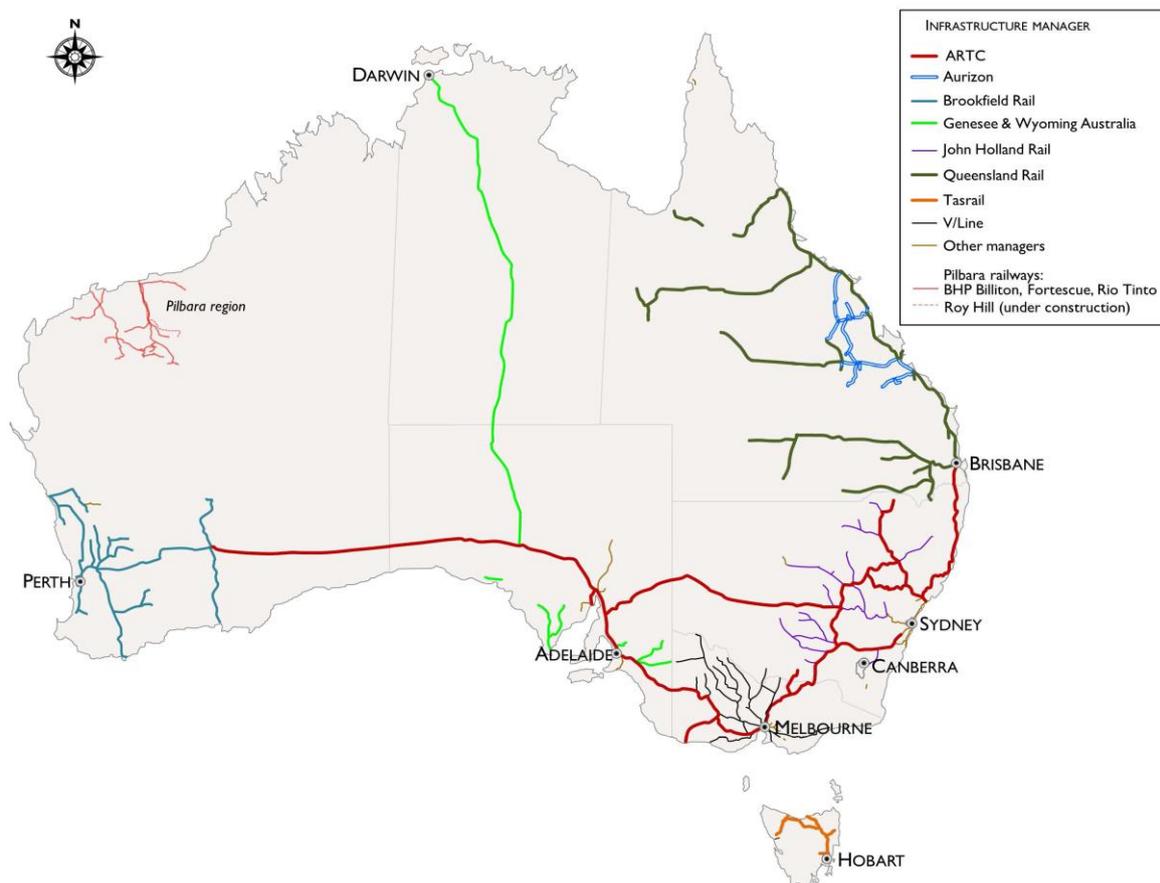
The submission incorporates input from the Department of Infrastructure's Bureau of Infrastructure, Transport and Regional Economics (BITRE) and the Department of Industry, which has primary carriage for the Government's industry and innovation policy agenda.

Australian Railway Networks and Operations

Australia's railway network extends to approximately 33,300 route-km. Of this, the ARTC, referred to in the Inquiry Terms of Reference, operates 8,500 km of standard gauge interstate track. Australia also has approximately 291 route-km of operational light rail track¹.

¹ Trainline 4, Bureau of Infrastructure and Transport Regional Economics, November 2016.

Australian Rail Infrastructure Networks and Managers²



Metropolitan rail network managers not shown on this map due to scale include: Airtrain CityLink Limited (Brisbane Airport); Sydney Trains; MTM (Metro Trains Melbourne); Adelaide Metro (SA Department of Planning, Transport and Infrastructure); and Transperth (division of WA Public Transport Authority).

Freight Rail

Rail's role in the Australian economy has increased sharply in recent years. Rail now accounts for almost 50 per cent of Australian freight transport activity. This has risen significantly from approximately 36 per cent in 2000³. Freight rail is both significant to the domestic economy and an enabler to major export supply chains.

² Trainline 4, Bureau of Infrastructure and Transport Regional Economics, November 2016.

³ Trainline 4, Bureau of Infrastructure and Transport Regional Economics, November 2016.

In 2014-15, rail carried more than 1.2 billion net tonnes of freight. This is up from 1.04 billion tonnes in 2012-13, when it was reported that rail contributed around \$5.1 billion to the Australian economy. In tonnage terms, around 98 per cent is bulk freight, predominantly iron ore and coal transported on dedicated freight rail networks such as those in the Pilbara, and 2 per cent is intermodal freight. While smaller when measured as pure tonnages, intermodal traffic tends to be moved over much longer distances.

The transportation of agricultural produce from rural areas to ports, predominantly for export, is also a significant aspect of the Australia's railway industry. Average annual grain production between the years 2010-15 was 45 million tonnes. Rail has traditionally dominated grain transport over long distances and in September 2016 there was an estimated 5,100 route-km of operational railway track predominately used for grain haulage. There are 18 major ports in Australia that regularly export grain.

Urban Passenger Rail

Weekday commuting to central city areas is the key passenger rail task. Almost 80 per cent of Australia's economic activity occurs in the major cities. Each of the mainland state capitals operates urban passenger rail services in both private (franchised) and public ownership.

In 2014-15 there was a total of approximately 849 million urban passenger journeys in Australia. This includes 646 million urban heavy rail journeys across our largest cities; Sydney, Melbourne, Brisbane, Adelaide and Perth. Sydney has Australia's busiest urban heavy rail network, with approximately 292 million passenger journeys in 2014-15. The overall total also includes 203 million light rail passenger journeys, mainly in Melbourne (182.1 million)⁴.

There are a number of urban rail projects either under construction or in the detailed planning phase to help address city congestion. These include Sydney Metro, Melbourne Metro, Brisbane's Cross River Rail, the Perth Forrestfield-Airport Link, the Canberra Metro Light Rail, and expansion of the Sydney, Adelaide and Gold Coast light rail networks. As these projects progress they are likely to create significant domestic demand for rail related manufacturing and construction products and services.

Additionally, the Department of Infrastructure and Transport for NSW are conducting a joint Scoping Study of Rail Needs for Western Sydney to define the need, timing and service options for rail transport to service Western Sydney and the Western Sydney Airport and a concept design for rail works at the Airport site. Both pieces of work are scheduled to be delivered around the middle of 2017.

⁴ Trainline 4, Bureau of Infrastructure and Transport Regional Economics, November 2016.

Regional Passenger Rail

Regional passenger rail, or non-urban passenger rail, provides inter-city, regional and long-distance passenger services. BITRE reported there were some 50 million of these passenger trips in 2014-15, although the figures are dominated by travel between either Sydney or Melbourne and a nearby city, such as Newcastle, Wollongong or Geelong⁵. These inter-urban services are largely commuter focused.

Investment in Australia's Rail Industry

Railway construction activity peaked during the construction phase of the mining boom between 2010 and 2013. However, overall construction values remain high when compared to the early 2000's. In terms of railway construction receiving Australian Government funding, a number of major works, including the Northern Sydney Freight Corridor, have recently been completed. The Australian Government is now considering further major rail projects including progressing implementation of its commitment to construction of the Melbourne-Brisbane Inland Rail and supporting proposals that have been identified as nationally significant⁶.

Value of railways infrastructure engineering construction work (\$ millions)⁷

	Private Sector for Private sector	Private Sector for Public Sector	Public Sector for Public Sector
2000-01	\$137.00	\$166.50	\$636.50
2001-02	\$400.20	\$97.90	\$811.00
2002-03	\$756.70	\$343.30	\$792.70
2003-04	\$378.70	\$941.10	\$848.00
2004-05	\$642.70	\$1,322.80	\$1,090.60
2005-06	\$606.60	\$338.20	\$951.30
2006-07	\$1,141.10	\$930.30	\$1,040.00
2007-08	\$1,677.80	\$680.40	\$969.20
2008-09	\$1,236.30	\$1,362.10	\$1,002.40
2009-10	\$1,391.50	\$1,543.20	\$2,108.00
2010-11	\$2,191.50	\$2,125.60	\$2,179.00

⁵ Trainline4, Bureau of Infrastructure and Transport Regional Economics, November 2015.

⁶ Transport Infrastructure, Yearbook 2015—Australian Infrastructure Statistics, BITRE.

⁷ Transport Infrastructure, Yearbook 2015—Australian Infrastructure Statistics, BITRE.

2011–12	\$4,149.10	\$2,498.30	\$1,168.90
2012–13	\$4,365.20	\$2,537.80	\$712.30
2013–14	\$3,934.30	\$2,224.40	\$444.30
2014–15	\$3,222.10	\$1,677.60	\$553.70

In line with investment, the gross value add of the rail manufacturing sector has declined over the last five years, as the construction phase of the mining boom has come to an end and investment in the mining sector has slowed.

The challenge for the domestic rail manufacturing supply chain now is how to most effectively integrate with global supply chains, and national and international end-users, as strong domestic demand declines.

Table: Rail industry gross value added⁸

ANZSIC Industry	Industry gross value added (\$ billions)	One year growth (per cent)	Five year growth (per cent)
Railway Rolling Stock Manufacturing and Repair Services	0.5	-3.8	-10.9
Rail Transport	8.6	5.0	4.5
Rail Industry	9.1	4.4	3.1

Notes: ABS cat. no. 8155.0 used to derive proportions to apply to gross value added data

Examples of direct Commonwealth investment which supports rail manufacturing in regional areas

Inland Rail

The Australian Government has committed a total of \$893.7 million towards the development of Inland Rail that will link Melbourne with Brisbane through regional Victoria, New South Wales and Queensland. The funding consists of \$300 million for preconstruction activities, with a further \$593.7 million in equity for the Australian Rail Track Corporation (ARTC) to make the project construction ready, including land acquisition. This will enhance local economies including

⁸ ABS Bureau of Statistics, cat. no. 5204, Australian System of National Accounts, 2014-15, table 5.

providing employment opportunities for construction related and other ancillary services during construction stages.

As of January 2017, \$137.07 million has been provided to the ARTC to continue preconstruction and development work including detailed Reference Design, environmental assessments, alignment studies and stakeholder engagement activities.

Adelaide to Tarcoola rail upgrade

As has been widely reported the Arrium owned Whyalla Steelworks was at risk of closure due to the falling demand for both its domestic and export steel products. Reduced demand is in the wake of falling steel prices and the supply of cheaper imported alternatives to Australian steel products.

On 9 March 2016, the Prime Minister, the Hon Malcolm Turnbull MP, announced that the ARTC would partner with Arrium Steel under existing contractual arrangements to fast track a rail upgrade project to replace approximately 1,200 km of rail on the section between Tarcoola and Adelaide.

The project will bring forward an order for approximately 73,000 tonnes of steel from Arrium over the next three years and create up to 130 direct and indirect jobs over the life of the project, as well as local jobs in the region.

The project will cost approximately \$252 million and will be fully funded by the Government.

Murray Basin Freight Rail Project

The Australian Government is committing \$220 million towards a \$440 million project to upgrade the Murray Basin Freight Rail Network which will restore, gauge standardise and upgrade more than 1000 km of railway line in the prime agricultural area of regional Victoria. The Murray Basin Freight Rail project will support the freight requirements of primary producers and the development of other freight dependent industries in the region. The project aims to better connect primary producers with the ports of Portland, Geelong and Melbourne to promote competition between these three ports, and provide an incentive for investment in grain handling and other facilities at both the upstream rail terminal and port ends of the supply chain.

Standardising the rail gauges in this area will improve port access and competition, and attract greater investment in port infrastructure. This project will provide an economical alternative to road freight and incentivise greater competition within the freight sector which will benefit business, primary producers and consumers. The project is expected to cater for an additional

311,000 tonnes of grain to be transported via rail each year. This represents a 10 per cent modal shift, reducing heavy vehicle road use and improving overall road safety for all road users⁹.

In March 2016 the Victorian Government awarded Geelong manufacturer Austrak an \$11 million contract to supply more than 125,000 concrete sleepers for the Project, supporting more than 20 jobs at their Port Wilson facility, as well as the almost 280 jobs the project is expected to create. The project is expected to see 95 per cent of its materials sourced from within Australia, with 90 per cent being sourced directly from regional Victoria suppliers.¹⁰

State of the Rail Manufacturing Sector

The IBISWorld *Railway Equipment Manufacturing and Repair in Australia: Market Research Report* forecasts that by the conclusion of 2016-17 rail manufacturing sector revenue in Australia will have contracted at an average rate of 3.4 per year over the last five years to a total \$2.6 billion¹¹. However, the Report also states that the rail manufacturing industry can expect growth over the next five years, through increased public sector spending and ongoing maintenance services. Small to medium businesses have remained viable by targeting the production of technically sophisticated and high quality products. Component manufacture, installation and fit-out, and maintenance are the main activities in the market. This work is likely to stay in Australia whereas the import of lower value-added products such as rolling stock shells is likely to increase. Several export opportunities will exist over the next five years with rail manufacturing consulting having the highest potential for significant growth due to valuable intellectual property developed by Australian firms. These firms should be able to generate revenue by providing specialist advice on foreign projects and, in some cases, taking part in component manufacturing.

⁹ Murray Basin Rail Project, Public Transport Victoria, Murray Basin Rail Project Business Case, Project documentation, www.ptv.vic.gov.au/projects/rail-projects/murray-basin-rail-project/

¹⁰ Premier of Victoria, The Hon Daniel Andrews MP, Victoria State Government, 2 March 2016, www.premier.vic.gov.au/murray-basin-rail-project-supports-local-manufacturing-jobs/

¹¹ IBISWorld Railway Equipment Manufacturing and Repair in Australia: Market Research Report, October 2016.

A. Rail as a Regional Employer

This addresses Part A of the Inquiry's Terms of Reference: the importance of the national rail industry as a regional employer and activity generator, and the potential costs of further decline of rail manufacturing on the national and relevant regional economies;

The national rail industry is a key regional employer and will continue to be into the future with the construction/assembly and maintenance of rolling stock and networks. The role of rail manufacturing, specifically related to rolling stock, is currently going through a period of change with a number of regional rolling stock manufacturers closing over recent years, including Bombardier Transportation at Maryborough in Queensland. As part of the transition, small to medium businesses are focussing on component manufacture, installation and fit-out, and maintenance.

There is a strong relationship between regional population distribution and the national road and rail networks. In the eastern states, regional centres tend to be able to access freight rail connections, including for a mix of grain, bulk commodities and/or container movements which carry for example, refrigerated meat from Dubbo to Port Botany and agricultural products from Mildura to the Port of Melbourne. In Western Australia regional centres such as Geraldton and Port Hedland tend to be connected to freight rail links carrying either grain or iron ore to the port.

Employment in the Rail Industry

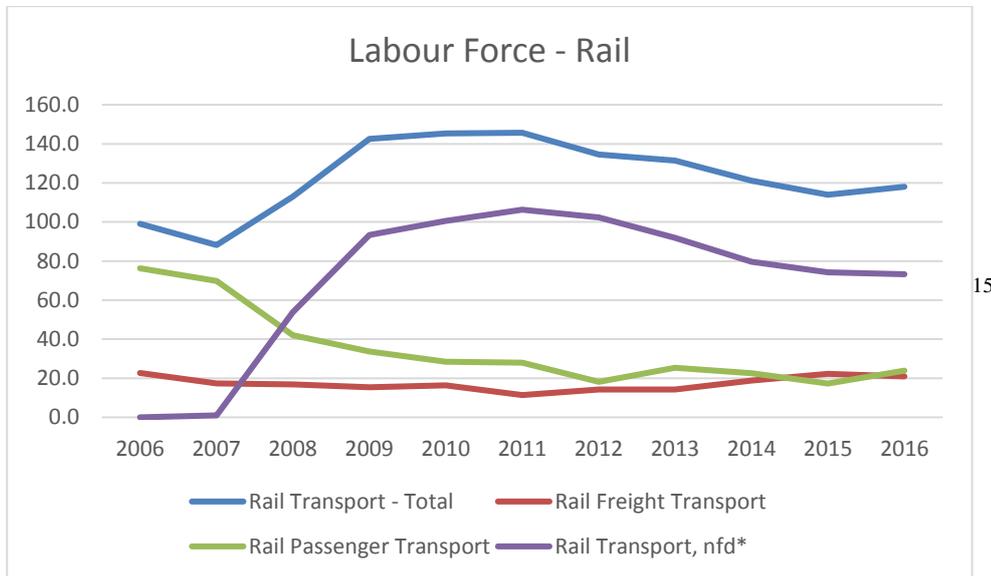
In the 2011 Australian Bureau of Statistics (ABS) Census, 5,898 people identified themselves as employed in the "Railway Rolling Stock Manufacturing and Repair Services"¹². Almost half of these, 2,906, were working outside of capital cities. Of these workers just over 50 per cent of the Regional Australia workforce were employed in two centres, 1,070 in the Newcastle Region in NSW and 490 were employed in Wide Bay QLD.

ABS 2006 Census figures identified 4,884 employees as rolling stock and repair workers (with 2,481 employed outside of the capital cities)¹³. However, it is unlikely that the ABS definition for railway rolling stock manufacturing captures the full rail manufacturing workforce, i.e. it may not cover those involved in the manufacture of track, signalling and trackside infrastructure production. The higher level ABS labour force statistics show that total employment in the rail industry is currently around 120,000 persons, after peaking in 2011 at around 145,000 persons¹⁴. This data does not give regional totals.

¹² Australian Bureau of Statistics (ABS) 2013, Census of Population and Housing 2011, TableBuilder Pro(cat. no. 2073.0), Canberra.

¹³ Australian Bureau of Statistics (ABS) 2009, Census of Population and Housing 2006, TableBuilder Pro (cat. no. 2065.0), Canberra.

¹⁴ Australian Bureau of Statistics 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Aug 2016



* - nfd - not further defined

Consistent with the ABS data, analysis by the Australasian Railway Association (ARA) indicated that the Australian railway industry employs 110,000 people, and identifies 16,000 in the manufacturing sector¹⁶.

Rail suppliers are mostly small and medium-size enterprises (SMEs), with 86 per cent Australian ownership¹⁷. However, the industry has a high level of market share concentration, with the top four players accounting for an estimated 75.6 per cent of industry revenue in 2015-16 (UGL, Downer EDI, Bradken and Bombardier Transportation). The smaller firms typically specialise in niche markets and are usually engaged by the larger firms as sub-contractors. Market share concentration is expected to increase over the next five years as the large players continue to consolidate their market position¹⁸.

Rail Industry Manufacturing

Manufacturing remains integral to Australia's economic performance through its contribution to national output, employment, Research and Development (R&D) performance and export income.

¹⁵ Australian Bureau of Statistics 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, Aug 2016

¹⁶ Australasian Railway Association, Rail: Growing the Australian Economy, November 2014

<http://www.ara.net.au/key-issues/rail-industry-group>.

¹⁷ Australasian Railway Association, Rail: Growing the Australian Economy, November 2014

<http://www.ara.net.au/key-issues/rail-industry-group>.

¹⁸ IBISWorld, Railway Equipment Manufacturing and Repair in Australia: Market Research Report, Report snapshot,

<http://www.ibisworld.com.au/industry/default.aspx?indid=257>.

Rail equipment manufacturing includes the production of locomotives, multiple unit passenger train set, and rolling stock such as wagons and passenger carriages.

Over the last 15 years there have been over 450 locomotives built, or re-built, by the Australian rail manufacturing sector, mostly in regional rail manufacturing centres. While fluctuating from year-to-year, this means that approximately 22 per cent of Australia's current locomotive fleet aged 15 years or younger was built in Australia¹⁹.

Since 2010, UGL Ltd. has dominated Australian locomotive manufacturing. The company has built 58 locomotives at its plant in the Newcastle Region of New South Wales. Other Australian manufacturers (involved in either building or re-building locomotives) are EDI Rail in the Newcastle Region (New South Wales) and Southern Shorthaul Railroad in Bendigo (Victoria). The imported locomotives were built in the USA, China, and Germany. The USA was the highest overseas maker of these locomotives, manufacturing 135 locomotives introduced into Australia since 2010. Of these, approximately half are used hauling iron ore trains in the Pilbara region of Western Australia.

Manufacturers of rail equipment in Australia include Bombardier Transportation, (Dandenong, Victoria), Downer EDI (Maryborough, Queensland and Newcastle Region, New South Wales), Southern Shorthaul Railroad, (Bendigo, Victoria), UGL Ltd. (Bassendean, Western Australia and Chullora and Newcastle Region, New South Wales), and Alstom, (Ballarat, Victoria). However, due to the downturn in the mining industry and following the introduction of many new locomotives since 2010 there has been a decline in demand for additional locomotives. As a consequence, Downer EDI signed a contract with US based EMD locomotives which meant that they phased out local locomotive production in 2014. Downer EDI are now selling EMD locomotives within Australia and locally are concentrating on repairs and maintenance.

The manufacture of passenger rolling stock is also subject to fluctuations. In early 2014 the Queensland Government announced an order of 75 new six-car trains and maintenance services for a period of 30 years, including construction of a purpose-built maintenance centre under a 32-year public-private partnership to be provided by a consortium led by Bombardier. The new commuter trains are being designed and engineered in Australia and manufactured at Bombardier's facility in India. In late 2015 Bombardier closed its Maryborough facility after 40 years of rail manufacturing. This is a sign of Australia's increasing integration into the broader global rail manufacturing supply chain.

¹⁹ BITRE (2016), Liaison with industry and internal data analysis

Example of Australian Passenger Rail Power Cars and Carriages Manufactured Since 2000²⁰

	Australian Manufactured	Overseas
NSW	375	626 (Partial construction in China with final assembly and testing in Australia)
Vic	162	711
SA	60	
WA	96	
Qld	260	
Light Rail	33	145

There are initiatives to harmonise rolling stock standards and develop a coordinated national approach to procurement which could see the proportion of domestically produced passenger rail car sets rise going into the future.

Recent Major Passenger Rail Manufacturing Contracts

Victoria – High Capacity Metro Trains

A contract to build 65 new 7-car high capacity metro trains (HCMT) was let by the Victorian Government in November 2016 and has been valued at up to \$2 billion. The contract has been let to the Evolution Rail Consortium which comprises Downer EDI, CRRC Changchun and Plenary.

Evolution Rail has committed to a fleet local content level of 60 per cent, with the entire fleet to be built in Newport in Melbourne's west. In addition:

- new maintenance facilities in Pakenham East, about 60km south east of Melbourne, will comprise 87 per cent local content and provide 100 new long-term ongoing jobs for the community;
- the contract will create 1,100 highly skilled local jobs, of which 15 per cent will be allocated to apprentices, trainees and engineering cadets.

²⁰ BITRE (2016), Internal data analysis

New South Wales – Intercity Trains

In October 2016, the NSW Government announced it is delivering a new intercity fleet to replace the trains carrying customers from Sydney to the Central Coast, Newcastle, the Blue Mountains and the South Coast. The new trains will come into service progressively, with the first trains anticipated to be delivered in 2019.

The contract to build and maintain more than 500 new train carriages has been awarded to RailConnect, a consortium of UGL, Hyundai Rotem and Mitsubishi. The trains will be built in South Korea.

UGL will provide local support through design and testing phases of the project. UGL Ltd. will also be responsible for maintenance and asset management from a new purpose built intercity fleet maintenance facility at Kangy Angy on the NSW Central Coast which is expected to provide up to 200 jobs. UGL Ltd.'s portion of the contract is expected to generate revenue of around \$570 million, primarily in relation to the maintenance and asset management services.

New South Wales – Waratah Suburban Trains

In December 2016, the NSW Government announced an order for 24 additional Waratah-style trains, in a contract reportedly worth more than \$1.5 billion. This is to help address a major surge in passenger growth, over 10 per cent in the last year.

China's CRRC Changchun Railway Vehicles company will manufacture and deliver the 24 new eight-car trains to Australian engineering company Downer EDI, which will assemble them and hold the 25-year maintenance contract at the Reliance Rail maintenance centre in Sydney's west.

Following savings based on the competitive tender process for the Waratah trains, NSW announced \$300 million in savings that will be re-invested into a new country XPT fleet. The contract for the new XPT fleet will set a target for 100 per cent assembly in NSW, with a preference towards regional NSW, to boost jobs and skills.

Infrastructure Managers Providing Employment in Regional Australia

Much of Australia's rail network is in rural and remote areas, which creates vital employment and training opportunities for these communities as well as supporting regional economies. This will continue to be the case into the future.

Inland Rail is the most significant freight rail project currently on the Australian Government's forward infrastructure agenda and provides an example of the impact that rail can have on regional communities. The project will provide a direct 1,700 km rail freight corridor between Melbourne and Brisbane and connect south-east Queensland by rail with Adelaide and Perth. The new rail line traverses, west of the Great Dividing Range, inland regions of Victoria, New South Wales and Queensland and consolidates recent enhancements to the existing rail network. The Inland Rail

Business Case states that the majority of the construction and capital expenditure will occur in regional areas. The project is estimated to create up to 16,000 direct jobs during construction, and an average of 600 jobs per year when Inland Rail becomes operational.

Examples of railway infrastructure managers in regional Australia

Aurizon is Australia's largest rail freight operator transporting more than 250 million tonnes of Australian commodities - connecting miners, primary producers, and industry with international and domestic markets. Aurizon operates and manages Australia's largest export coal rail network, the Central Queensland Coal Network. The 2,670 km track network comprises of four major coal systems and one connecting system serving Queensland's Bowen Basin coal region and is governed by 99 year lease arrangements with the State of Queensland.

Aurizon reports that 69 per cent of its workforce, or over 4,500 employees, live and work in regional communities, 80 per cent of those in regional Queensland. Aurizon's total regional economic contribution in the 2015 financial year was \$3.28 billion. This consisted of:

- \$1.71 billion directly spent by Aurizon in regional communities;
- \$620 million spent by its regional workforce on local goods and services; and
- \$950 million spent by Aurizon's suppliers on regionally-based goods and services²¹.

Genesee & Wyoming Australia (GWA) owns nearly 5,000 km of track in South Australia and the Northern Territory, including the 2,200 kilometre Tarcoola-to-Darwin railway. GWA also provides a coal haulage service in NSW. GWA has more than 600 employees, 110 locomotives and 2,000 wagons²².

Brookfield Rail is the manager and operator of the 5,500 km of open access, multi user rail freight network in the southern half of Western Australia. Brookfield Rail has 430 employees that manage train access, train control, train signalling and communications, and rail construction and maintenance. Brookfield Rail has three train control centres in Perth and the regional centre of Bunbury and Northam. Over the past fifteen years, Brookfield Rail has invested over \$2 billion in the freight rail network and associated infrastructure²³.

V/Line is a major employer with a workforce of 1,654, many of whom live in regional Victoria. In addition to being a passenger service operator, V/Line also provides access to, and maintains, 3,520 km of rail track used by passengers and freight rail services²⁴.

John Holland Country Regional Network delivers rail operations and maintenance services on behalf of Transport for NSW as the manager of NSW's country railway network. They provide

²¹ FY2015 Sustainability Report, Aurizon.

²² Genesee & Wyoming Australia website, https://www.gwrr.com/operations/railroads/australia/genesee_wyoming_australia.

²³ Brookfield Rail website, <http://www.brookfieldrail.com/about-us/>.

²⁴ V/Line website, <https://corporate.vline.com.au/About-V-Line/Our-company>.

network access for freight and passenger rail customers and maintain more than 5,000 km of existing rail infrastructure throughout regional New South Wales. John Holland employ more than 400 people in nine locations across urban and regional New South Wales, including Bathurst, Dubbo, Goulburn, Narrabri, Newcastle (Network Management Centre), Nyngan, Parramatta (Head Office), Tamworth and West Wyalong.

Many John Holland employees live and work in the regions where they operate, including more than 10 per cent who come from local indigenous communities²⁵.

²⁵ John Holland Country Rail Network website, <http://www.jhrcrn.com.au/who-we-are/about-us/our-people/>.

B. Australian Railway Market

This section addresses Part B of the Inquiry's Terms of Reference: the state of the rail industry, barriers to growth and improved productivity, and the potential of Australia's rail industry as a skills and technology incubator, supplier of domestic rail needs as well as potential exports;

The Australian rail industry continues to change. While freight markets are adjusting to the end of the construction phase of the mining boom, investment and prospects for growth remain solid. Improvements in rail freight productivity have the potential to lower the cost of moving freight, contributing directly to increased national economic output, and increasing the use of freight rail at ports can reduce cost and increase competitiveness of export supply chains.

However, challenges remain. Recent work by the Department in consultation with jurisdictions and industry has identified the following areas for potential further reform to strengthen the rail sector:

- Access, pricing and interoperability (particularly in terms of differing infrastructure standards and operating processes between jurisdictions);
- Safety and incident regulation (need for completion of national rail safety law reform);
- Environmental regulation and corridor protection (preserving alignments for future rail developments such as Inland Rail);
- Funding and investment (ongoing need for government support to address capital costs of rail infrastructure and to consider social benefits such as safety and environmental outcomes);
- Performance measurement (greater transparency will lead to an increase in network efficiency).

Effective market operations necessitate degrees of intervention from governments, ranging from light handed regulation to direct investment and operation as appropriate. Initiatives to improve the functioning of the rail manufacturing industry and to address barriers to growth are discussed in Section C: Nationally Coordinated Approach to Rail Manufacturing.

Australian Industry Participation (AIP)

The Australian Industry Participation (AIP) policy is administered by the Department of Industry, Innovation and Science. It is underpinned by the AIP National Framework (the Framework), endorsed by Commonwealth, state and territory ministers in 2001. The key objective of AIP policy is that Australian industry should have full, fair and reasonable opportunity to supply goods and services to major projects. This is achieved through the development and implementation of AIP plans. States and territories have developed their own local industry participation policies and place requirements to develop local industry participation plans on projects they fund.

The Framework does not mandate a minimum level of Australian content and Australian suppliers must be competitive in terms of price, schedule and capability in order to secure contracts. This ensures activities under the Framework are consistent with Australia's international obligations, including those under the World Trade Organization and Free Trade Agreements.

At the November 2015 meeting of the Council of Australian Governments Industry and Skills Council (COAG ISC), council members supported procurement policies which promote growth of Australian industry and consider Australia's international obligations and best practice. Council members agreed to work collaboratively on a proposed discussion paper that will explore opportunities and challenges to increasing economic and industry growth through government procurement. To ensure a consistent and rigorous application of the Framework with the states and territories, the issue has been placed on the COAG ISC agenda. The *Australian Jobs Act 2013* (the Jobs Act) commenced on 27 December 2013 and requires proponents of major private and public projects (\$500 million and above) in Australia to develop and implement an AIP plan that ensures full, fair and reasonable opportunity for Australian entities to supply key goods and services to the project.

The Jobs Act created the statutory position of the AIP Authority to monitor compliance with the legislation and provide guidance to proponents. Since the Jobs Act commenced, the AIP Authority has approved 22 AIP plans for major projects around Australia, mainly in the resources sector.

Each AIP plan includes steps the proponent will take to publicise opportunities to supply goods and services to the project, the design standards used in the project and any supplier pre-qualification requirements. Proponents report at six monthly intervals to the AIP Authority on implementation of their AIP plans.

In addition to this, the Australian Government has requirements in place for its own procurement. Since 2010, companies bidding for major Government procurements of \$20 million or more have been required to prepare and implement an AIP plan as part of the tender process. These AIP plans outline the actions a tenderer will take to provide Australian suppliers, especially small and medium enterprises, with full, fair and reasonable opportunities to supply goods and services on a project.

An AIP plan was approved in July 2016 for the ARTC Inland Rail Programme. ARTC also has an AIP plan for the \$75 million Port Botany Rail Line Stage 3 project.

Summaries of each approved AIP plan are published on the Department of Industry, Innovation and Science's website²⁶ which also includes other projects with rail components including the Iron Road's Central Eyre Iron Project in South Australia, the New Acland Coal Mine Stage 3 Project in Queensland's Darling Downs and the recently approved Adani Carmichael Coal Mine in Central Queensland.

²⁶ Department of Industry, Innovation and science, Australian Industry Participation, www.industry.gov.au/aip

National Partnership Agreement

The Department does not mandate the use of local products for its infrastructure projects. However, the Infrastructure Investment Programme, administered by the Department, is delivered through the National Partnership Agreement on Land Transport Infrastructure Projects (NPALTIP) and requires a Local Industry Participation Plan (LIPP) for all projects in receipt of Commonwealth payments over \$20 million. Responsibility for procurement arrangements under the Infrastructure Investment Programme rests with the State and Territory governments who comply with the appropriate legislation and policies.

The purpose of the LIPP is to encourage full, fair and reasonable opportunity for Australian industry to compete for work in major public and private projects in Australia, consistent with the AIP National Framework, but is not specific to product use.

C. Nationally coordinated approach to Rail Manufacturing

This section addresses Part C of the Inquiry's Terms of Reference: the potential for Australia to benefit from a nationally-coordinated approach to rail manufacturing standards and rail procurement projects given the size of the Australian rail industry;

The Inquiry has asked about the potential benefits related to a nationally coordinated rail manufacturing standards and procurement. The Department is pleased to provide the Inquiry with information on both the operation of the Rail Industry Safety and Standards Board (RISSB) and work being done by the Victorian Government, both of which seek to capture the benefits of a more harmonised approach to rail standards across Australia. This work, along with commitments to major projects like Inland Rail, provide the central themes of action the Department is taking to address possible barriers to growth to the rail manufacturing industry identified in [Section B: Australian Railway Market](#).

The Office of the National Rail Safety Regulator (ONRSR) and the Rail Industry Safety and Standards Board (RISSB)

Australian governments have responded to the rail industry's calls for greater uniformity and consistency in governance through the establishment of the Office of the National Rail Safety Regulator (ONRSR) in 2013 and the enactment of a Rail Safety National Law, first established in South Australia and then mirrored by other jurisdictions. Queensland, the last jurisdiction to adopt this national approach, is currently in the process of implementing Rail Safety National Law.

Under the co-regulatory framework in rail, it is the rail industry's role to harmonise operational practices with the ONRSR providing the overarching regulatory framework and accreditation process. The RISSB is an industry owned and operated body that develops and manages national rail industry standards, rules, codes of practice and guidelines. In funding RISSB, the Australian Government has partnered with jurisdictions to provide a total of \$1.65 million annually, of which \$445,500 is from the Australian Government, a funding contribution which is matched by industry.

The purpose of developing nationally harmonised operational and management standards for the rail industry is to improve safety, efficiency and productivity outcomes. In developing its standards RISSB, similarly to the ONRSR, is generally focused on outcomes and performance rather than prescriptive rules.

RISSB has done significant work over recent years to create harmonised standards for rolling stock and has recently separated from its parent body, the Australasian Railway Association (ARA), to enable it to more effectively drive uptake of standards by industry participants.

Harmonisation of Australian Rolling Stock Standards

The Department is supporting Victoria to lead development of national rolling stock standards and eventually a national rolling stock procurement approach. This work is being undertaken through the Transport and Infrastructure Council. This initiative is seen as an opportunity to make Australian manufacturers more competitive both domestically and internationally. The Council has agreed to Victoria leading this work on behalf of all jurisdictions.

Victorian Department of Economic Development, Jobs, Transport and Resources (EcoDev) is also leading the process through the Industry and Skills Council to progress the harmonisation of rolling stock standards, and move towards the development of a coordinated national rolling stock procurement and maintenance pipeline. EcoDev with RISSB and the ARA, is consulting all jurisdictions.

The Victorian Government also has a commitment that at least 50 per cent of rail construction must take place locally.

The objective of this harmonisation is to:

- reduce national rolling stock procurement costs via economies of scale by enabling harmonised standards to be embedded as a requirement in jurisdictions' procurement frameworks for new national rolling stock orders;
- increase local content by growing demand for locally manufactured componentry; and
- develop the capability of Australian suppliers to be able to participate in global markets for rolling stock.

Victoria is engaging with jurisdictions to finalise a list of identified standards to harmonise and discuss next steps towards the development of a national rolling stock procurement and maintenance plan.

D. Any Other Matters

This section addresses Part D of the Inquiry's Terms of Reference: any other related matters.

This section of the submission includes additional information on bodies that have been established for the rail industry to promote jobs and skill in the Australasian rail industry, and may be available to provide further information on skills and industry promotion to the Inquiry.

Rail Manufacturing Cooperative Research Centre (CRC)

The Cooperative Research Centre (CRC) programme is an important part of the Government's Industry Innovation and Competitiveness Agenda.

The Rail Manufacturing Cooperative Research Centre was launched in July 2015 and is expected to help create jobs, reduce supply chain costs and assist in making Australian exports more competitive. Headquartered in Ringwood, Victoria, the Rail Manufacturing CRC was established with an Australian Government investment of \$31 million, with a further \$53 million in cash and in-kind contributions from the CRC's participants including CSIRO.

As well as boosting innovation in the rail industry, the Rail Manufacturing CRC is seeking to attract other manufacturing businesses into the rail supply chain, including from the automotive components industry.

Its Innovation Gateway Projects program offers businesses either currently working in the rail manufacturing supply chain, or with the potential to work in the rail manufacturing industry, the opportunity to enter into a partnership with a research organisation to collaborate on a commercial project to benefit the industry.

As part of its engagement with the broader manufacturing sector, the Rail Manufacturing CRC is working closely with the Advanced Manufacturing Growth Centre.

Members of the Rail Manufacturing CRC include innovative rail manufacturing multinationals, innovative smaller businesses and key research providers. Commercial members are Bombardier Australia, China CNR Corporation, Downer EDI Rail, Faiveley Transport, OneSteel, Sigma Air Conditioning and Simplex Factory Automation.

Research members are Central Queensland University, Deakin University, Monash University, Queensland University of Technology, RMIT University, Swinburne University of Technology, University of Queensland, University of Technology Sydney and the University of Wollongong.

Australasian Centre for Rail Innovation (ACRI)

The Australasian Centre for Rail Innovation (ACRI) provides professional, independent applied research, strategic analysis, advice and innovative solutions for the Australasian Rail Industry on significant challenges and opportunities affecting the rail industry.

ACRI was established by industry and state governments, without any Australian Government funding. Members include jurisdiction based transport agencies, industry and academic institutions. All ACRI research or analysis is proposed by industry, developed with industry guidance and endorsed by industry before commencing.

ACRI also has agreements with the United States General Railroad Administration and the United Kingdom Rail Safety and Standards Board to share knowledge and ideas and develop a dialogue for the betterment of rail.

Other Australian Government Funding Support Related to Rail

Advanced Manufacturing Growth Centre

The Advanced Manufacturing Growth Centre is a not-for-profit company established through the Government's \$248 million Industry Growth Centres Initiative to develop an internationally competitive, dynamic and thriving Australian advanced manufacturing sector.

Industry Growth Centres are being implemented in six sectors of Australian competitive strength and priority: Advanced Manufacturing; Cyber Security; Food and Agribusiness; Medical Technologies and Pharmaceuticals; Mining Equipment, Technology and Services; and Oil, Gas and Energy Resources.

Growth Fund

The Australian automotive industry is an industry in transition. The Government established the \$155 million Growth Fund in 2014 as a targeted and integrated response to the closure of the Australian automotive manufacturing industry, after the decisions by Holden and Toyota to cease passenger vehicle manufacturing in Australia in 2017.

The Growth Fund is helping automotive workers transition to new jobs, encouraging diversification by automotive supply chain firms, and accelerating new private sector business activity outside of car manufacturing in Victoria and South Australia. Rail manufacturers are eligible to apply for funding under the Next Generation Investment Programme.

For example, in November 2015 Victorian company Bombardier Transportation Australia Pty Ltd was awarded a grant of \$3.2 million under the Next Generation Investment Programme to expand its rail vehicle manufacturing capacity and capability at its site in Dandenong. This will be achieved through installation of assembly lines for robotic welding and electrical propulsion equipment, and extension of its final assembly and testing facilities.

Entrepreneurs' Programme

The Entrepreneurs' Programme is the Government's flagship initiative for business competitiveness and productivity at the firm level. It forms part of the Government's new industry policy outlined in the National Innovation and Science Agenda. This Agenda is a business-focused element of the Government's broader Economic Action Strategy and brings together and builds upon other economic reforms to make the most of Australia's strengths and business opportunities.

Conclusion

While the rail manufacturing industry is facing increasing competition from growing, global supply chains there remain opportunities for Australian businesses during the transition from a period of rapid growth, to a more mature market. Within the Australian context, rail manufacturing firms are adjusting to reduced domestic private sector demand and the need to gain the critical mass needed to maintain operations, in a market that is known for being variable. Firms are transitioning towards component manufacture, installation and fit-out, railway maintenance and the potential to export Australian rail manufacturing consulting services.

The Australian Government is working with jurisdictions and industry to address challenges for the rail manufacturing sector, including integration into global networks, promotion of standards harmonisation, and to develop a consistent pipeline of passenger rolling stock projects.