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Port of Melbourne



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Regional Rail Link

Project Work Packages

Southern Cross

NTSR Franchise Project

2014-2015 Contract Period

City - Murrumbidgee River

Advanced

2014-2015 Contract Period, 2016-2017, 2018-2019 & 2020-2021

Excelsior - Clear Park

Advanced

2014-2015 Contract Period, 2016-2017, 2018-2019 & 2020-2021

Clear Park - West Werribee Junction

Advanced

2014-2015 Contract Period

West Werribee Junction

Advanced

2014-2015 Contract Period

Design & Construct

Advanced

2014-2015 Contract Period

Rail Systems

Advanced

2014-2015 Contract Period



Nation Building Program



Damian Colclough

Transport for New South Wales



Port of Melbourne



Rail Futures Conference

Current issues on rail freight

Damian Colclough
Executive Director, Freight Industry Branch
Freight, Strategy and Planning
Transport for NSW

15 September 2017



Freight Industry Branch – Transport for NSW



A freight train is shown on a gravel track. The train consists of several yellow and blue locomotives pulling flatcars. The flatcars are covered with blue tarps. The train is moving away from the viewer. In the background, there are trees and utility poles under a blue sky with some clouds. A semi-transparent blue box is overlaid on the left side of the image, containing the title and a list of statistics.

NSW Freight Task

- In 2016, the NSW economy generated 445 million tonnes of freight.
- Freight is worth \$66 billion to the NSW economy.
- Value of products moved by freight in NSW exceeds \$200 billion.
- Freight accounts for 12 percent of NSW Gross State Product.



Overview

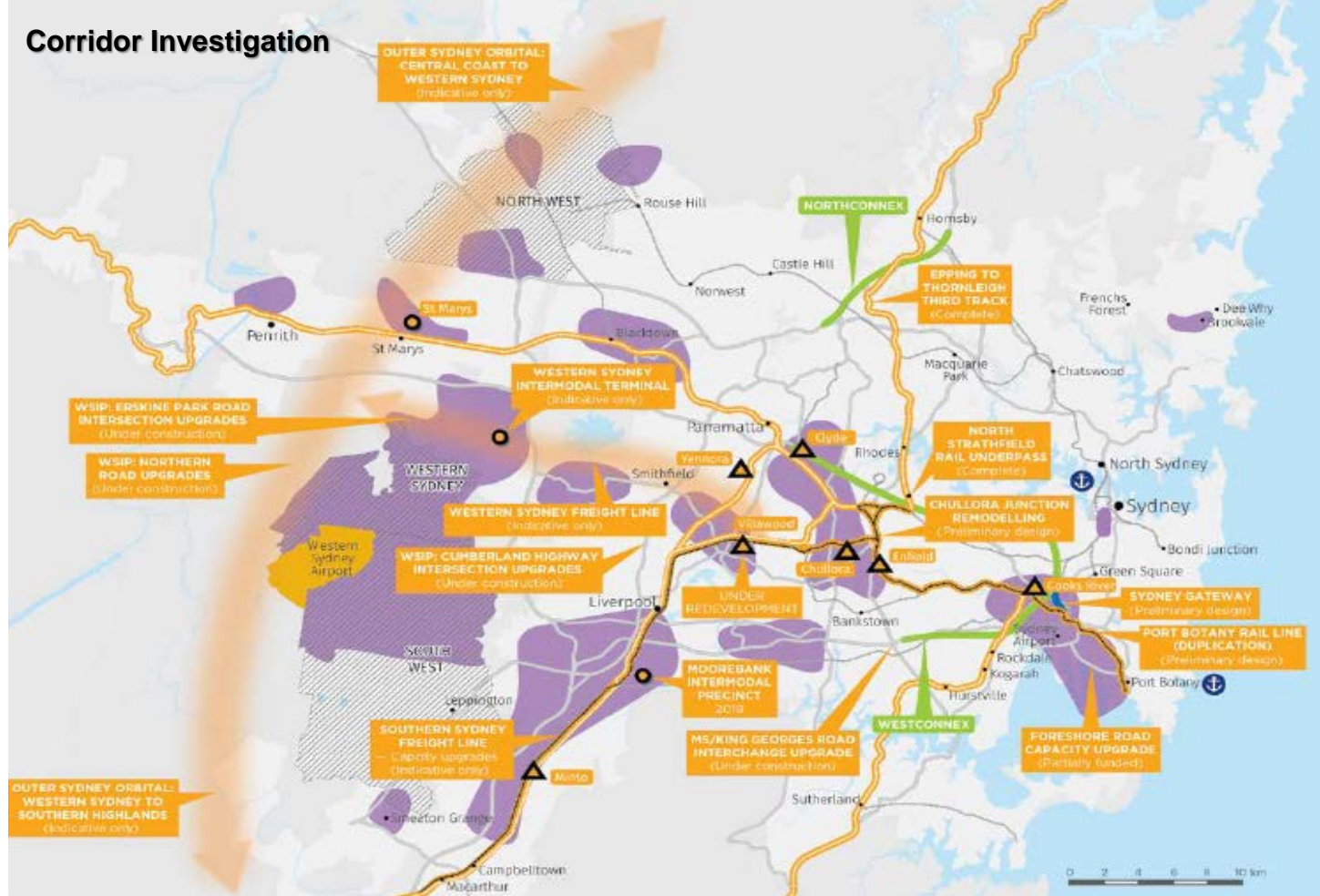
- Almost 90 per cent of coal is moved by rail, followed by agriculture with almost 50 per cent moved by rail.
- Wholesale and retail freight, food, construction materials, import and export containers and waste and fuel are majority moved by road.
- Coal (rail) and retail freight (road) have a natural advantage to be moved by specific freight modes.
- Commodities like grain are contestable and can move by either road or rail (depending on which mode is the most cost effective).



National Freight and Supply Chain Strategy - 2016

- The Australian Government recently announced it will develop a National Freight and Supply Chain Strategy.
- The aim of the Strategy is to increase the productivity and efficiency of Australia's freight supply chain.
- Transport for NSW are working with the federal government Department of Infrastructure and Regional Development (DIRD) to align the NSW Freight and Ports Plan with the National Freight and Supply Chain Strategy.

Corridor Investigation



An aerial photograph of a port and industrial area, likely Sydney, Australia. The image shows a large body of water with several yellow gantry cranes along the pier. In the foreground, there are numerous white storage tanks and stacks of colorful shipping containers. The background shows a dense urban area with buildings and a clear blue sky. A semi-transparent blue box is overlaid on the image, containing the title and a list of bullet points.

Freight and Ports Plan

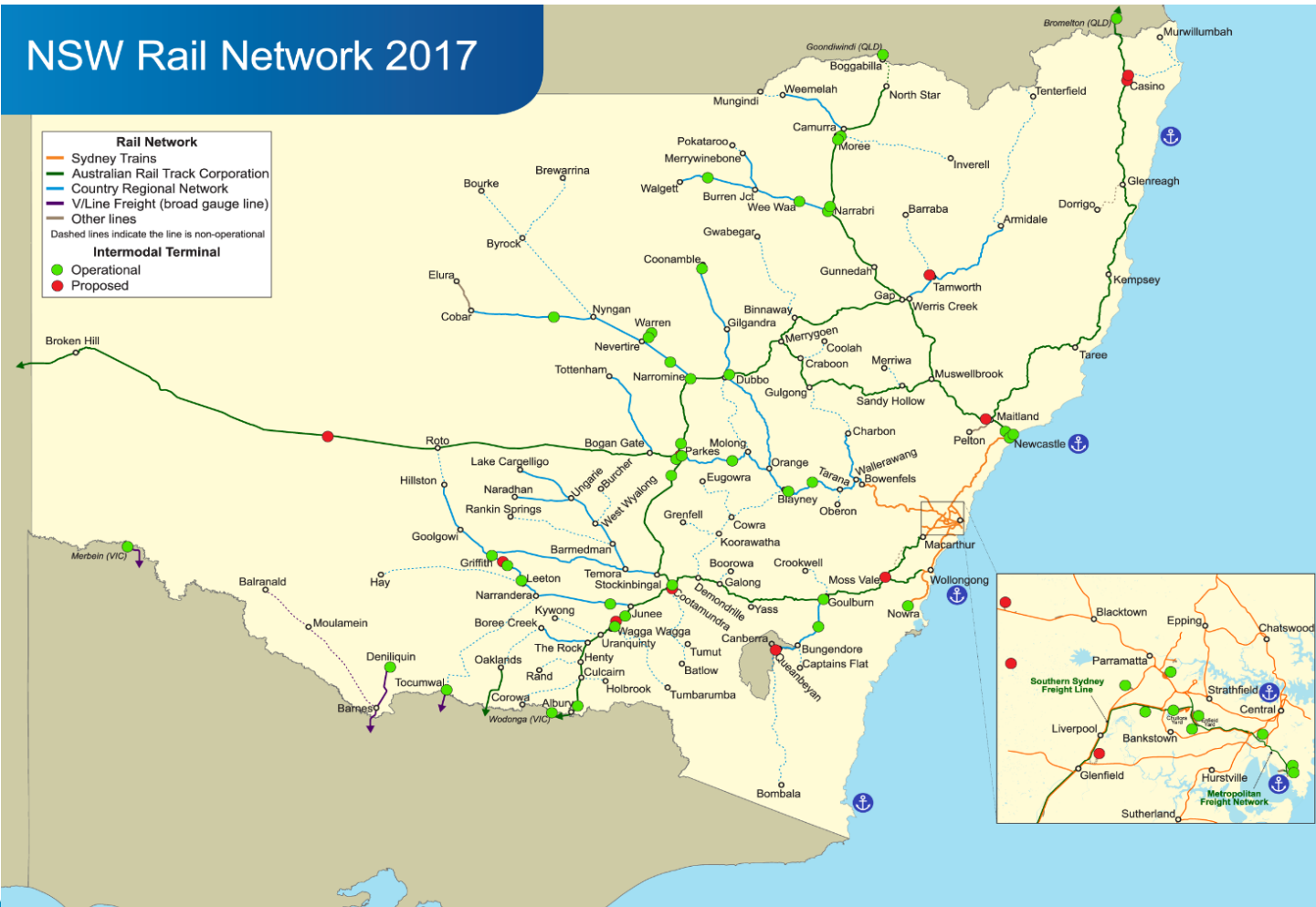
- The NSW Freight and Ports Strategy was released in December 2013, setting out key objectives and initiatives for freight in NSW
- The Strategy also established direction of freight planning in NSW over a 20 year timeframe.
- We are now refreshing this document as a Freight and Ports Plan, a key component of the NSW Government's overarching Future Transport Strategy.
- Consultation with stakeholders has already commenced.

An aerial photograph of a port and industrial area. In the foreground, there are numerous white cylindrical storage tanks and stacks of colorful shipping containers. A road with a white dashed line runs along the right side. In the background, a large body of water is visible with several yellow and red cranes. The city skyline is visible in the distance under a clear blue sky. A semi-transparent blue rectangle is overlaid on the left side of the image, containing a list of freight initiatives.

Freight initiatives

- Intermodal terminals
- Inland Rail
- Fixing Country Rail
- Fixing Country Roads
- Cargo Movement Coordination Centre
- Port Botany Rail Line Duplication

NSW Rail Network 2017



Metropolitan Freight Network



An aerial photograph of a large industrial facility, likely a grain processing plant. In the foreground, a blue and yellow train is stopped on tracks. To the right, there is a large, long building with a grey roof. The background shows a flat, open landscape under a blue sky with scattered clouds. A semi-transparent blue box is overlaid on the left side of the image, containing text.

Melbourne to Brisbane Inland Rail

- \$10.7 billion total project cost - funded by Commonwealth (\$9.0 billion) plus ARTC and private sector investment
- ARTC is primarily responsible for delivering a transformative, nation building infrastructure project that has the potential to provide early benefits to NSW.
- Over 40% of the total project cost of Inland Rail will be invested in NSW – over \$4 billion of investment
- Of the 13 individual projects, 7 will be undertaken in NSW.



Fixing Country Rail

- Round One is underway and will provide up to \$150 million for projects that improve freight productivity and efficiency in and out of regional NSW
- 48 Expressions of Interest were received by 14 July 2017. These are being considered for shortlisting to the next, Project Development phase.
- Announcements will be made soon through the freight website:

<https://www.transport.nsw.gov.au/projects/programs/fixing-country-rail>



Fixing Country Roads

- Round Three closed for Full Applications on 1 September 2017.
- \$100 million is available in Round Three of \$543 million committed to the initiative from Rebuilding NSW
- The program provides vital funding for council managed roads and bridges with the aim of improving freight productivity, connectivity and safety in regional NSW areas.
- Announcements on successful projects to be funded under Round Three is expected later in 2017 and can be found through the freight website:

<https://www.transport.nsw.gov.au/newsroom-and-events/media-releases/fixing-country-roads-round-3>



Example: Ardlethan Grain Hub

Rail, road and industry investment coming together





Example: Burren Junction Upgrades

Fixing Country Roads Round 1 and Fixing Country Rail Pilot



Burren Junction video





Cargo Movement Coordination Centre (CMCC) delivering road and rail benefits

- Based at Port Botany, the CMCC was established in 2014 and works with road carriers, rail operators, stevedores and related supply chain stakeholders.
- It aims to maximise use of existing network capacity and continuously improve the efficiency of cargo movement through Port Botany, Port Kembla and regional NSW.
- The port contributes \$3.2 billion to gross state product each year. Transport for NSW must ensure they are working alongside industry leaders and stakeholders to keep up with a thriving industry.

An aerial photograph of Port Botany, showing a large industrial area with numerous white storage tanks, colorful shipping containers, and yellow cranes. The port is situated along a body of water, with a city skyline visible in the background under a clear blue sky. A semi-transparent blue box is overlaid on the left side of the image, containing white text.

Cargo Movement Coordination Centre (CMCC) delivering road and rail benefits

- NSW Government target is to double the proportion of container freight movement by rail through NSW Ports by 2020 (from 14% in 2012/13 to nominal 28%)
- In 2016/17 = 19.1% rail mode share at Port Botany (up 6 percentage points in 2 years). The rail mode share for 2016/17 also had some monthly highs in the 20-21% range.
- Rail Volumes at Port Botany for the last financial Year 2016/17 = 436,748 TEUs (up 22% on previous year) on Port landside volumes of 2.3 Million TEUs pa
- NSW Ports 30 year Masterplan shows container growth will triple in next 30 years and the low and high container growth forecast scenarios to 2045 predict between 7.5 and 8.4 Million TEUs pa for Port Botany and rail volumes of 3 Million TEUs pa

Competition in the rail industry

- There are some significant issues around competition in the rail industry. These include:
 - Achieving the critical mass for rail operations – (high barrier to entry).
 - Access to capital can be difficult with short term freight contracts.
 - Access to terminals, especially in urban areas, can be difficult.
 - Some initiatives need a Commonwealth solution – like mass distance charging. Rail companies have been pushing for trials of "mass-distance-location" pricing that would charge trucks based on their weight, distance travelled and the roads they use.

Edward Smelt

*Principal Engineer Infrastructure
Victoria*



Port of Melbourne



INFRASTRUCTURE
VICTORIA

INFRASTRUCTURE VICTORIA

→ Edward Smelt | Principal Engineer
Manager Strategy
Transport Sector Lead

WHO WE ARE AND WHAT WE DO



30-year
infrastructure strategy



Independent advice to
government



Research



OUR VALUES

Independence Influence Partnership Openness Innovation People

THE JOURNEY

FEBRUARY



foundations

MAY



options

OCTOBER



draft strategy

DECEMBER



final strategy

What's in it for me?

Recommendations relevant to Rail Freight Alliance interests

- ➔ Port rail shuttle
- ➔ Western Interstate Freight Terminal
- ➔ Regional rail gauge standardisation
- ➔ Inland Rail

Why Bay West over Hastings?

- ➔ Bay West has strong transport, land use, environmental and amenity advantages
- ➔ A better location for many of Victoria's exporters
- ➔ Bay West can handle initial overflow container capacity and is well suited to becoming Victoria's primary port in the longer term



What's next for Infrastructure Victoria?

- ➔ Continuing research program
- ➔ Awaiting Government response to 30-year strategy
- ➔ Update 30-year strategy in 2019
- ➔ Ready for any advice requests



A wealth of **information**



Navigation tool



Data and analysis



Research

Keep in **touch**

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THANK YOU

INFRASTRUCTURE
VICTORIA

Brendan Bourke

CEO Port of Melbourne



Port of Melbourne





PORT OF MELBOURNE

The Future of Port Rail

2017 | Rail Freight Alliance | Rail Futures Conference
14th-15th September 2017

OUR port

OUR TRADE

- > 2.6 million containers per year
- > 1000 new motor vehicles per day
- > 87 million revenue tonnes annually
- Total trade value around \$92 billion

OUR INFRASTRUCTURE

- 36 commercial berths
- 7 kilometres of quay line
- Over \$2 billion invested in port infrastructure over the last decade

OUR PORT

- > 500 hectares of land
- 100,000 hectares of port waters
- 21 kilometres of waterfront
- Four municipal councils

OUR PORT GATE

- Around 3000 ship visits per YEAR
- 10,400 truck movements per DAY
- 36 train visits each WEEK

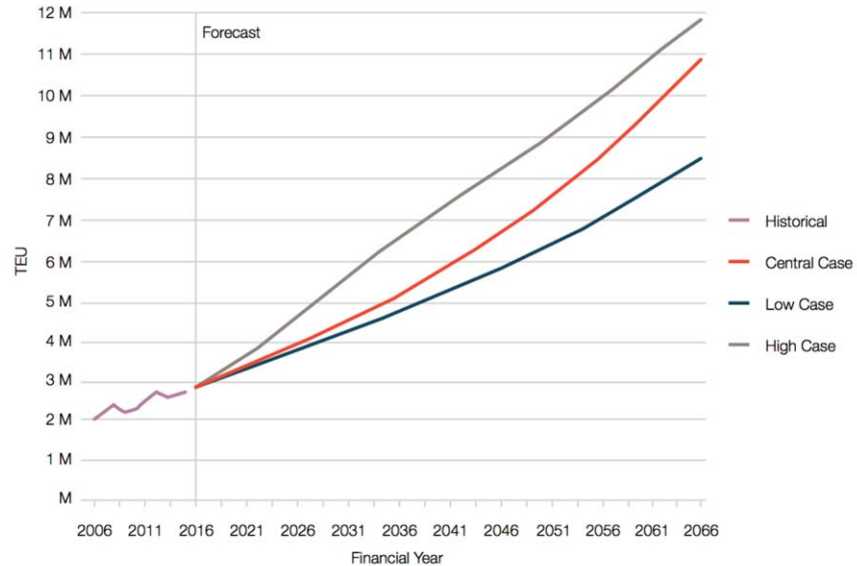


Freight Outlook

Demand for container port freight supply chain capacity is driven by demand for imports and growth in Victorian exports.

Historically, economic and population growth has driven growth in container trade volumes.

Our freight task is significant

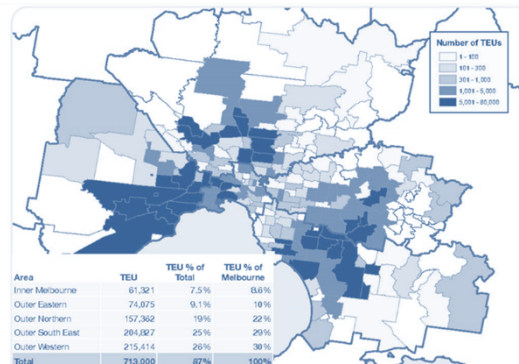


Source: Deloitte, Infrastructure Victoria Second Container Port Advice container trade forecasts for Victoria, 2017

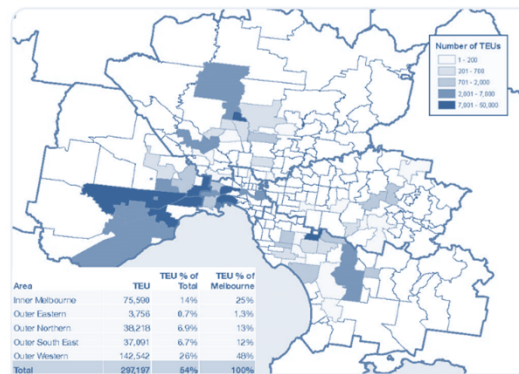
Understanding freight flows

- **87%** of import containers are destined for the Melbourne metropolitan area;
- **61%** of import containers are destined for the inner, outer-western or outer-northern Melbourne metropolitan area; and
- **43%** of export containers come from regional Victoria and the broader port catchment

Destination for full international and mainland import containers (metropolitan Melbourne)



Origin for full international and mainland export containers (metropolitan Melbourne)



Source: Port of Melbourne 2009 Container Logistics Chain Study

Planning for CHANGE

We need to think about our supply chain differently and plan for change



FACT

Melbourne is the fastest growing city – expected to reach **8m** by 2051



FACT

Over **5,000** trucks visit the port each day




FACT

> **70%** of containers are staged at a temporary location before they move to their destination

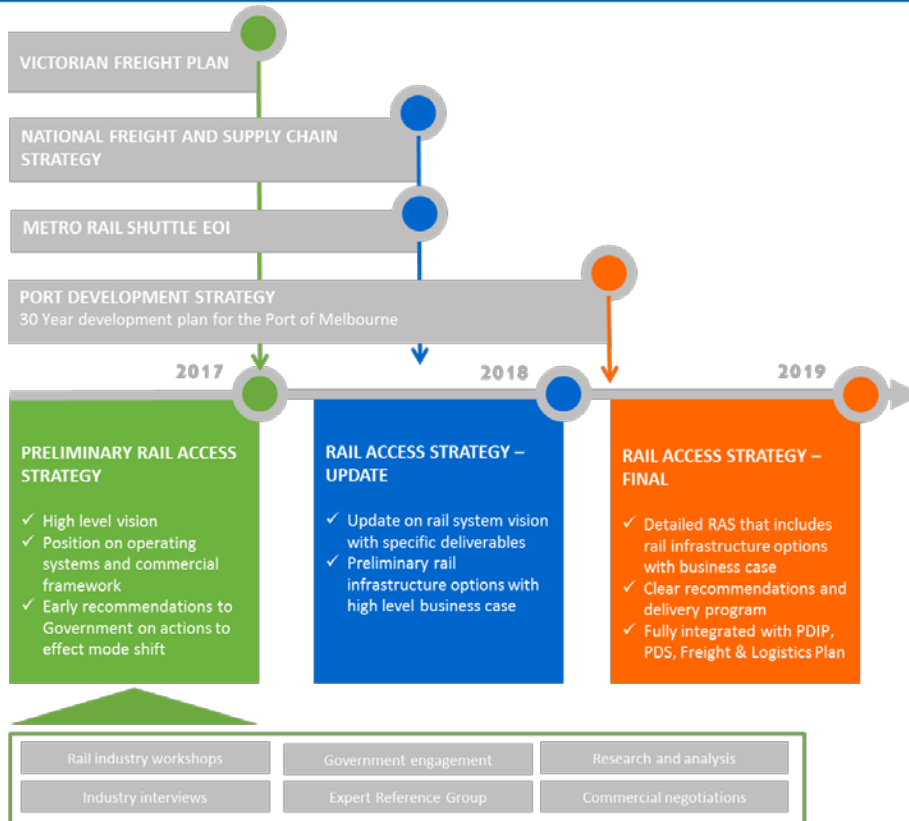
Port of Melbourne development objectives

DEVELOPMENT VISION

To support and drive Australian economic growth through the productive port and channel capacity and efficient supply chain connections

-  1 Optimising On-Port Efficiency & Productivity
-  2 Driving Port Capacity
-  3 Supporting Off-Port Supply Chain Efficiency
-  4 Promoting Environmental & Social Values
-  5 Creating Value for Stakeholders

Rail Access Strategy



Rail Access Strategy (RAS):

- Must be prepared within 3 years of the first lease being granted (Oct-19)
- Set out options for the improved movement of freight to and from the port by rail
- **One** of the options must be the development of a **port rail shuttle**
- Infrastructure options must be **capable** of being implemented within 5 years

Rail Access Principles

-  Minimise costs to the supply chain
-  Reliability and certainty
-  Scalability for volume increase over time
-  Ability to attract critical mass
-  Access and broad participation
-  Commercial viability to attract investment



Moving forward

- 50 year certainty
- Significant growth potential
- Future proof capacity
- Integrated network planning
- Agile to innovation



OUR Principles



Port of Melbourne



www.portofmelbourne.com

Jennifer Hall

*Ports Freight & Logistics
Specialist*



Port of Melbourne



Port container shuttle services

Infrastructure considerations for efficient rail usage



Jennifer Hall



Industry requirements

- Efficient terminal interface, on-dock (or as near as possible)
- Good governance of the rail terminal interface – policy, targets, minimise cost
- Dedicated freight rail infrastructure – passenger network interaction not sustainable
- Minimise activities restricting on-port rail servicing (e.g. long regional trains, excess lifts, additional road transport movements etc.)



What can facilitate efficient services?

- Empty container availability at inland facilities to enable triangulation
- On-site critical mass at intermodal terminals, i.e. warehousing/DCs, importers/exporters not requiring road movement
- High-frequency, short trains into port precinct
- Interaction of regional/inter-, intra-state services at major inland points
- Balance of import/export volumes in intermodal catchments



Barriers to entry

- Industry perception of rail
 - Costs (real vs. perceived, and modelling of commercial operations)
 - Benefits (capacity, service reliability, etc.)
 - Confidentiality of commercial information (what can be assured here by operators?)
- Community perception of rail
 - Corridor protection, rail noise considerations
- Environmental/market factors
 - Significant price competition on road transport
 - E.g. WA downturn in transport led to increased direct deliveries
 - Market efficiencies creating capacity for road transport

Geoff Smith

Managing Director SCT Logistics



Port of Melbourne





Intermodal Estates Linking Ports to National Rail



**Geoff Smith
Managing Director**



AUSTRALIA'S LARGEST **INDEPENDENT** RAIL OPERATOR



**PRIVATELY OWNED BUSINESS
COMMENCED IN 1974**

1ST PRIVATELY OPERATED TRAIN IN 1995

**LARGEST DEVELOPER OF RAIL INTERMODAL
TERMINALS IN AUSTRALIA**

**WE OPERATE THE LARGEST GENERAL FREIGHT
TRAINS IN AUSTRALIA**

**AVERAGE AGE OF LOCOMOTIVES
ARE 7 YEARS**

**EMPLOY 1,500 STAFF
47% REGIONAL AUSTRALIA**



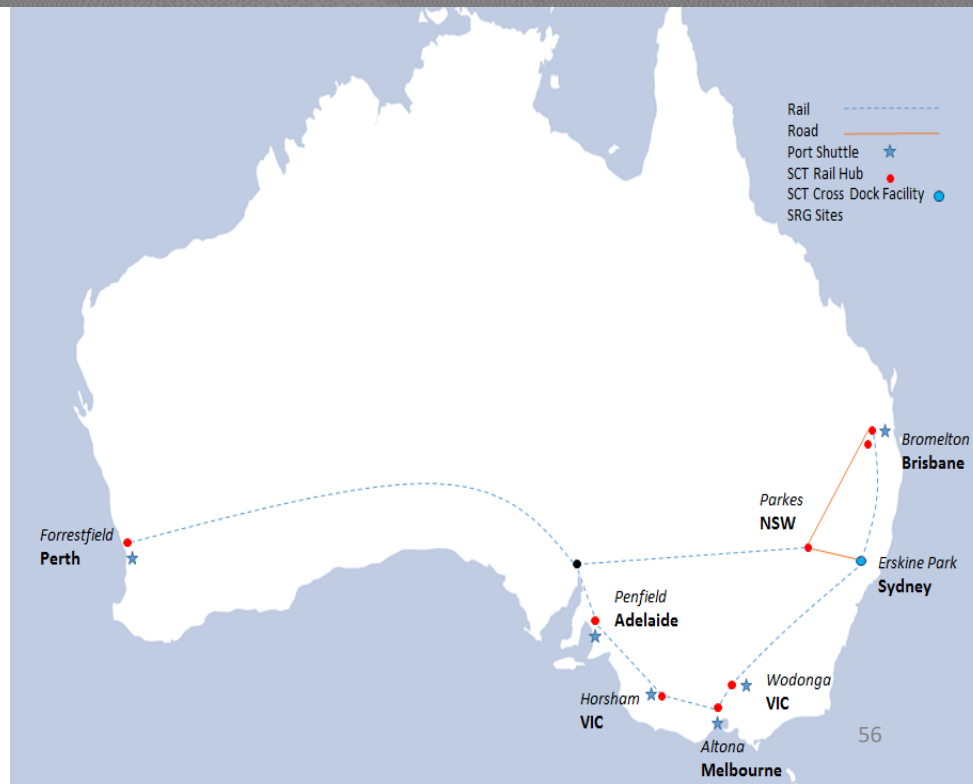
RAIL INTERMODAL TERMINALS – A KEY TO SUCCESS

Terminal Key Milestones

- Forrestfield, WA 1999
- Altona, VIC 2000
- Parkes, NSW 2006
- Penfield, SA 2012
- Wodonga, VIC 2016
- Bromelton, QLD 2017

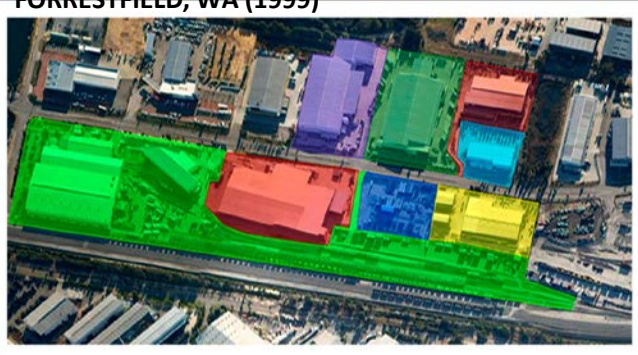
Key Features

- Average 10 km rail track per site
- Accommodating interstate/Regional and Port Rail services
- Large land parcels to accommodate our Customers on-site



SCT INTERMODAL TERMINAL DEVELOPMENTS

FORRESTFIELD, WA (1999)



ALTONA, VIC (2000)



PARKES, NSW (2006)



PENFIELD, SA (2012)



HORSHAM, VIC (2013)



WODONGA, VIC (2016)



BROMELTON, QLD (2017)



GOVERNMENT INITIATIVES – “CHANGING THE GAME”

- **Inland Rail**
 - Faster - 24 hours Melbourne to Brisbane
 - Longer - 130 Wagons / 3 kilometres
 - Heavier - 12,000 tonnes (340 B-doubles)
- **Modal Shift Incentive Scheme**
 - 9% of Port of Melbourne Rail volumes currently by Rail
 - These are all Regional volumes under pinned by MSIS
- **Port of Melbourne**
 - Desire to increase containers numbers coming in by Rail.
 - Government looking to cope with increasing population/freight demands
- **Road Pricing**
 - A game changer for Rail / levelling the playing field







CASE STUDY – MELBOURNE TO BRISBANE RAIL

- Developed our Bromelton/Brisbane Rail Intermodal Terminal (12 months).
- SCT's Wodonga Intermodal Terminal was under construction and provided an additional source of Rail volume.
- We provide Interstate Rail services to an entire Region.
- Two complete train sets:
 - 7 x Mainline Locomotives
 - 3.8 kilometres of Rail Wagons
 - 20 x Drivers
- Quadrupled our existing volumes
 - Currently: 150 – 200 Wagons (250 B-doubles) per week
 - 2018 projection: 200 – 250 Wagons (350 B-doubles) per week



CASE STUDY – HORSHAM RAIL INTERMODAL

- SCT took over this business in 2013
- We supported the Region through poor season from 2012 - 2015
 - 2012 – 6,122 containers (9,430 TEU)
 - 2013 – 7,768 containers (10,987 TEU)
- We achieved a peak volume season in 2016
 - 2016 – 18,182 containers (23,555 TEU)
 - 1 km per day, 6 days per week
- In partnership with DP World, in 2015 we re-opened West Swanston Rail and began delivery direct to Port.
- Along with other Regional; Rail Terminals, Horsham is supported by the Victorian Government Modal Shift Incentive Scheme (MSIS)
- 100% delivered on vessel/on time since 2013



THANK YOU

Michael Clancy

Manager Business Development

ARTC



Port of Melbourne



ARTC

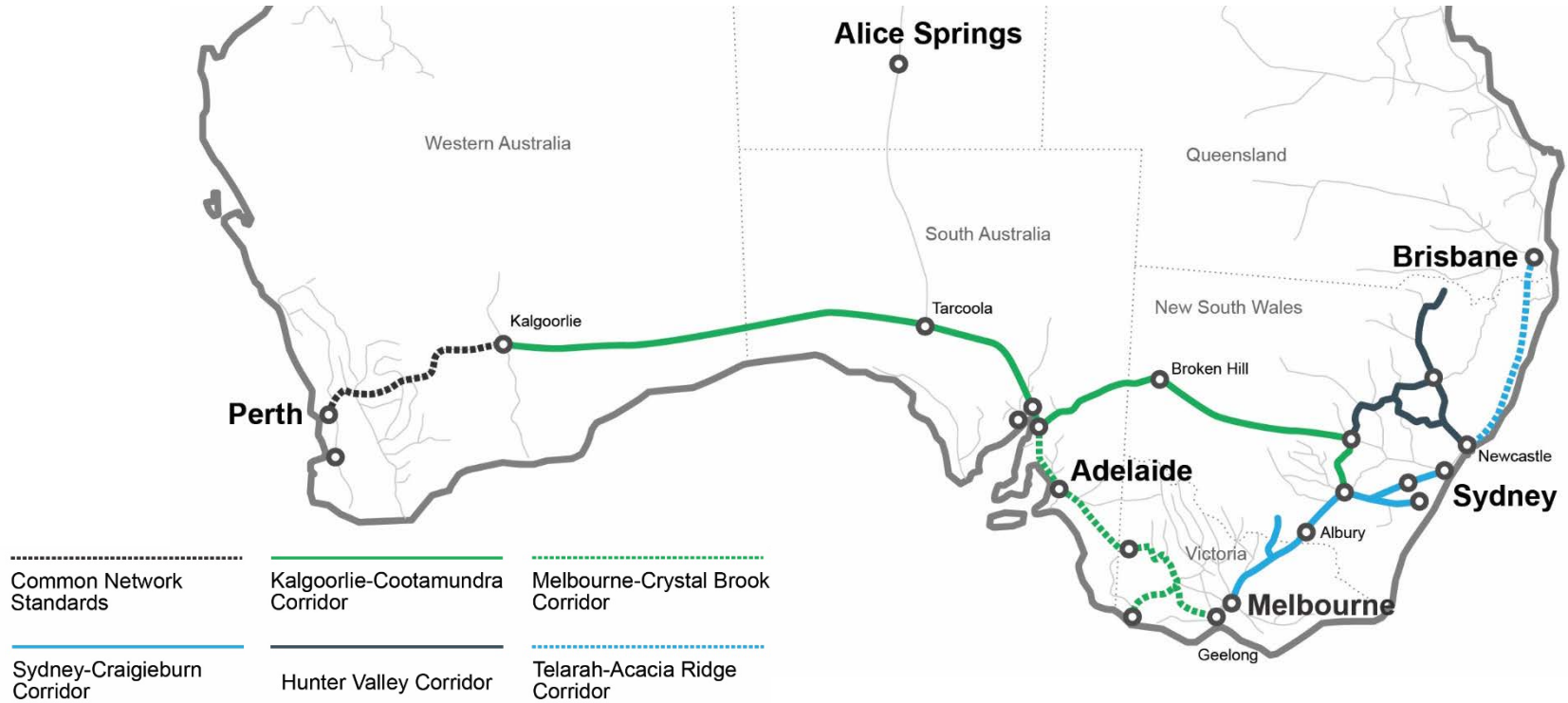
September 2017

Michael Clancy, Manager Business Development





ARTC: AUSTRALIA'S LARGEST RAIL FREIGHT NETWORK



INTRODUCTION TO ARTC – CUSTOMER BASE



Steel— 4%



Intermodal—22%



Passenger—3%



Grain—2%



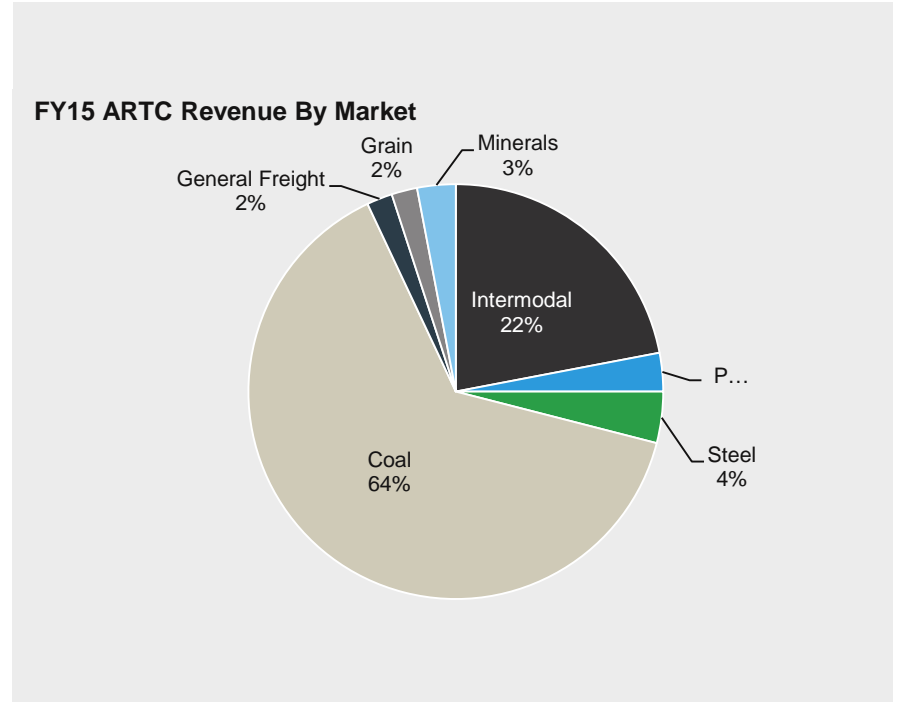
Coal— 64%



Minerals—3%



General Freight—2%

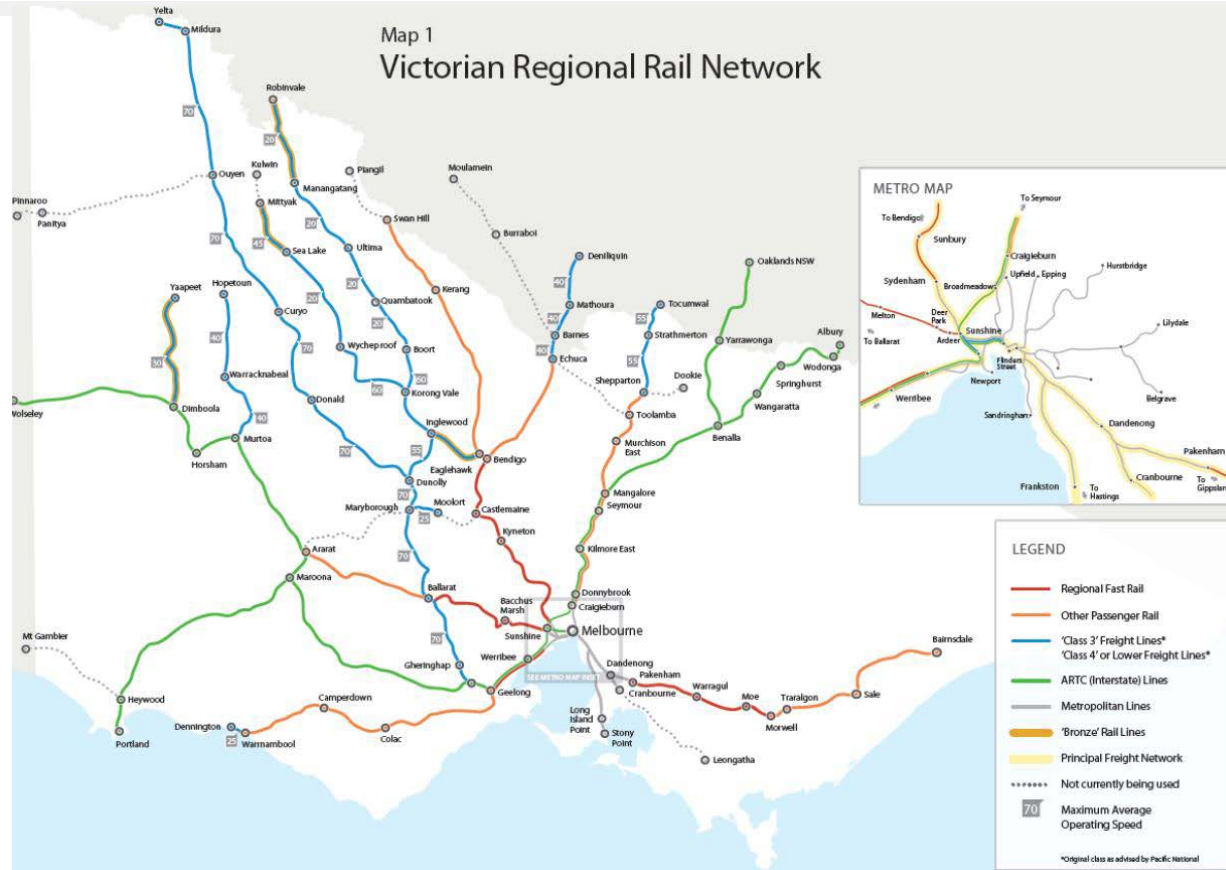




ARTC IN VICTORIA

ARTC IN VICTORIA

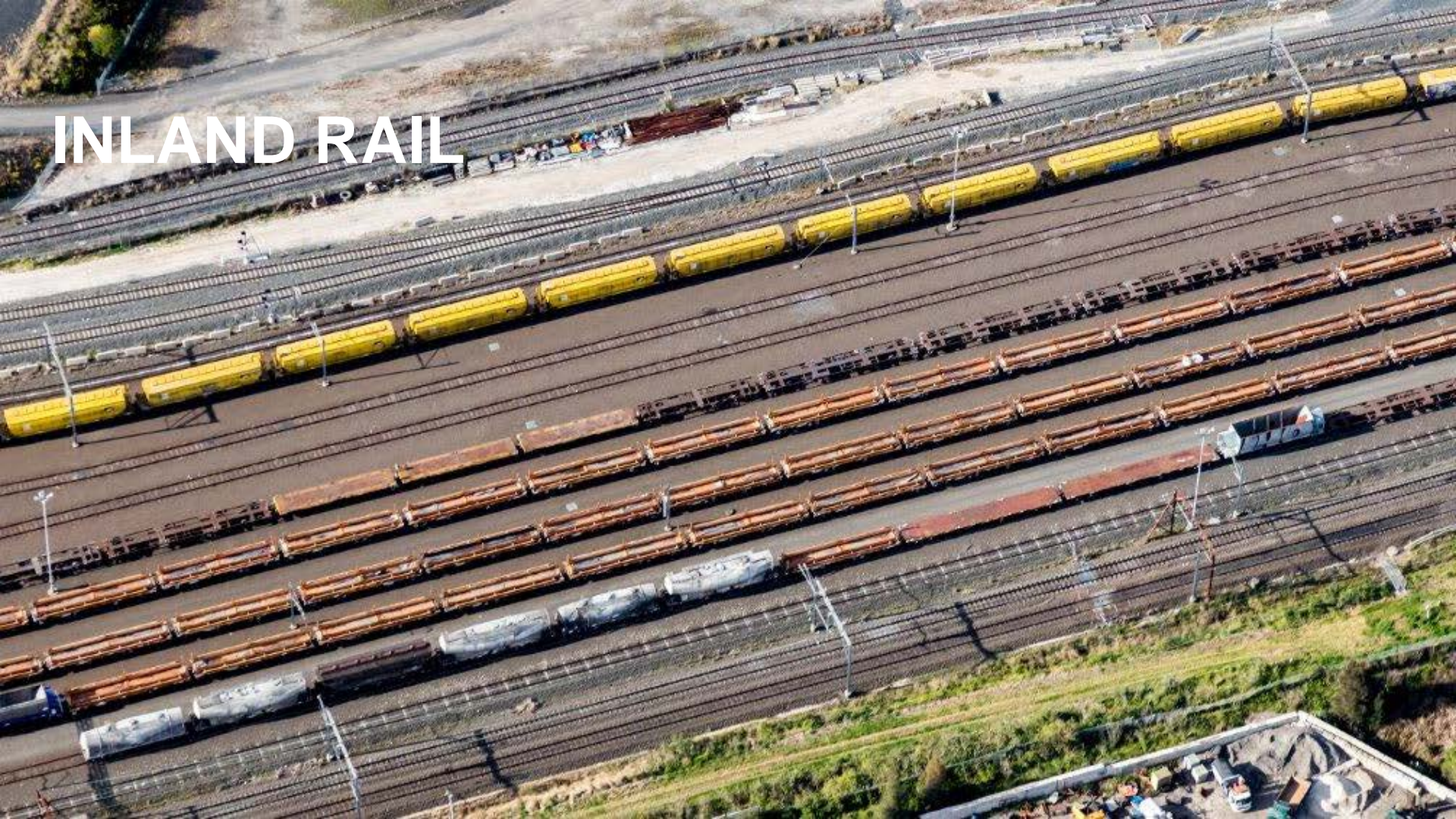
- ARTC took up the Victorian lease in 1998
- In 2009, the Victorian Government extended the lease for the Victorian Corridor to 45 years
- Agrees to conversion of west track to standard gauge on North East Line
- ARTC works closely with state based transport providers and agencies



ARTC IN VICTORIA – PREVIOUS INVESTMENT

- Further Government (State & Federal) stimulus investment in the North East was focused on a specific range of significant improvements to the track and associated infrastructure including:
 - A rail bypass and new rail station at Wodonga (and, as a result removed 11 railway level crossings from Wodonga)
 - New passing lanes, crossovers and turnouts
 - Re-signalling
 - Removal of antiquated dog spiked rail with continuously welded rail
 - Gauge conversion of the west track
 - Concrete re-sleepering of both the east and west tracks
 - Upgrading local level crossings
 - New platforms at Euroa, Avenel and Violet Town Stations
 - Improvements to 32 rail bridges which needed critical safety improvements

INLAND RAIL





THE NATIONAL FREIGHT CHALLENGE

By 2030 we will need to move more than **32 million tonnes** of freight on our highways and railways between Melbourne and Brisbane.

Without additional investment in infrastructure capacity, the repercussions will be felt at state and national levels.

That's the equivalent of almost

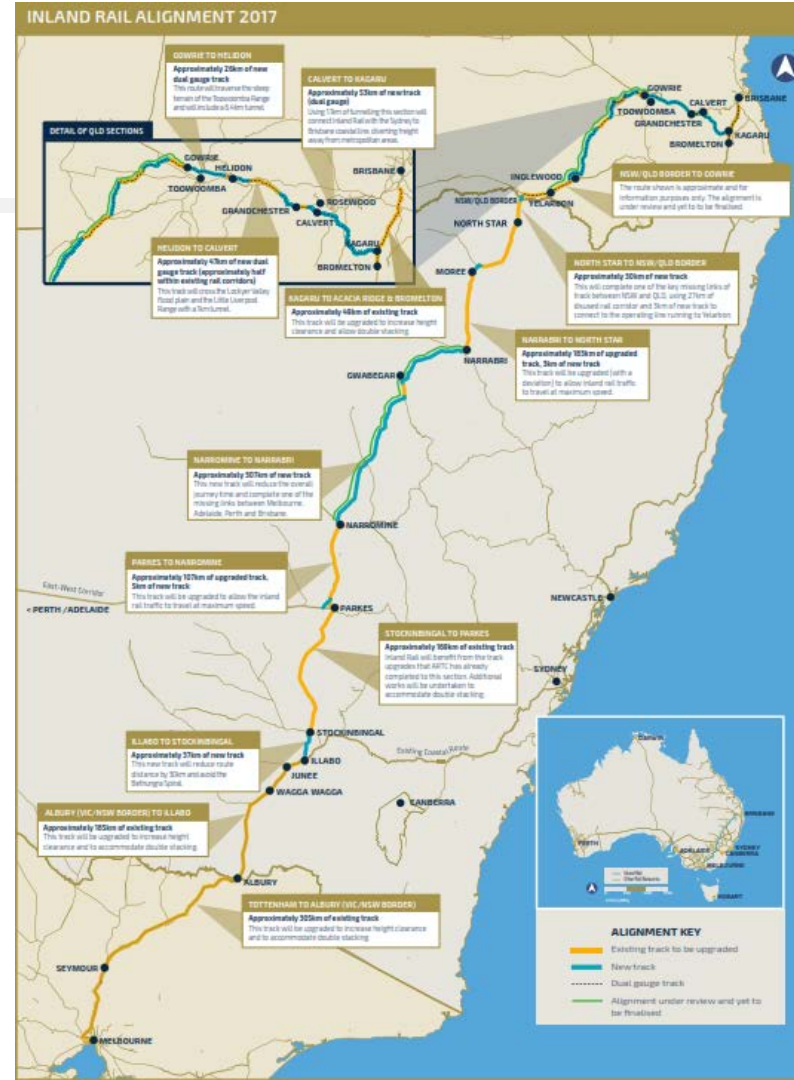
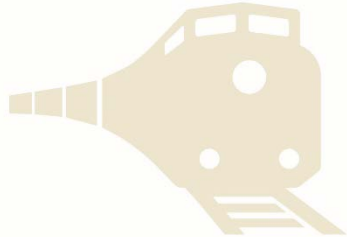
1.2M 

B-double truck loads of freight **every year.**



UTILISING MUCH OF THE EXISTING NETWORK

- Inland Rail - a new **1700km freight rail line** via regional VIC, NSW and QLD
- A **road-competitive rail service** based on transit time, reliability and cost (<24 hours Melb-Bris)
- **Double-stack capability**
- **Utilises more than 1200km of the existing network** – reducing community impacts and land costs



BUILDING WHAT INDUSTRY WANTS

- The Inland Rail Service Offering is central to Inland Rail and reflects the priorities of freight customers – Inland Rail as a road competitive service that offers competitive pricing, 98 per cent reliability, a transit time of less than 24 hours and freight that is available when the market wants
- The Service Offering was developed in consultation with customers, rail users, including rail operators, freight forwarders, end customers, and other key stakeholders

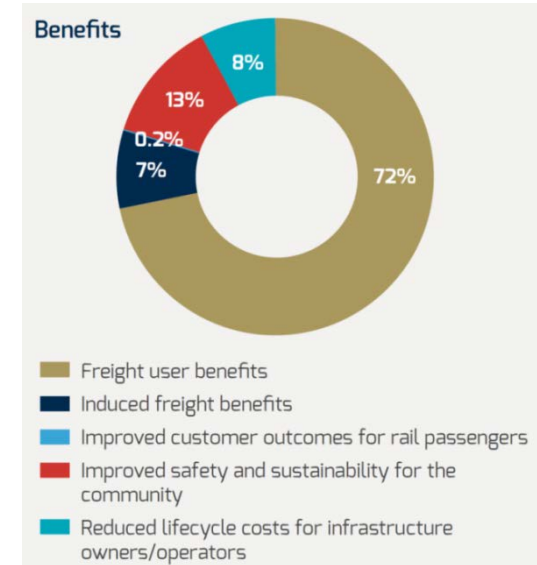




ASSESSED BY INFRASTRUCTURE AUSTRALIA – ON THE NATIONAL PRIORITY LIST

KEY FINDINGS OF THE BUSINESS CASE

1. **Potential for significant rail share uplift** – Rail share of Melb – Bris intercapital market increasing from 26% in 2013-14 to 62% by 2049-50
2. **Financial viability on an operations basis** – Cash flow positive once operational with revenues more than sufficient to cover ongoing operations and maintenance costs
3. **Positive net economic benefits over the long term** – 2.6 (Benefit Cost Ratio at a 4% discount rate)
4. **Driver of jobs and economic activity** - \$16b in additional GDP over construction (10 years) and operation (50 years)
5. **Supports firm, early commitment to proceed** – Inland Rail will be a catalyst for complementary supply chain investments



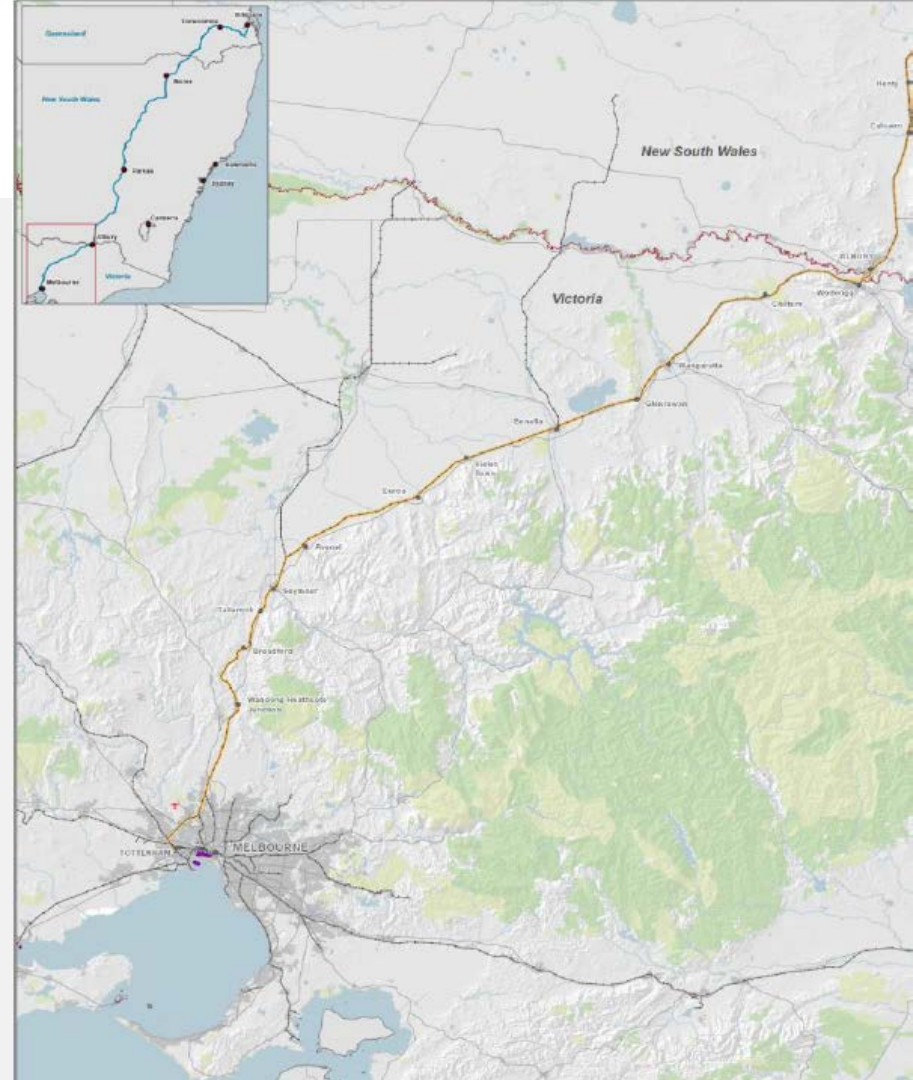
Source: PwC 2015
Distribution of Inland Rail benefits as a proportion of total benefits (discounted at 4%) excluding the residual value. Analysed over a 50 year appraisal period to 2073-74



INLAND RAIL IN VICTORIA

Enhancement works

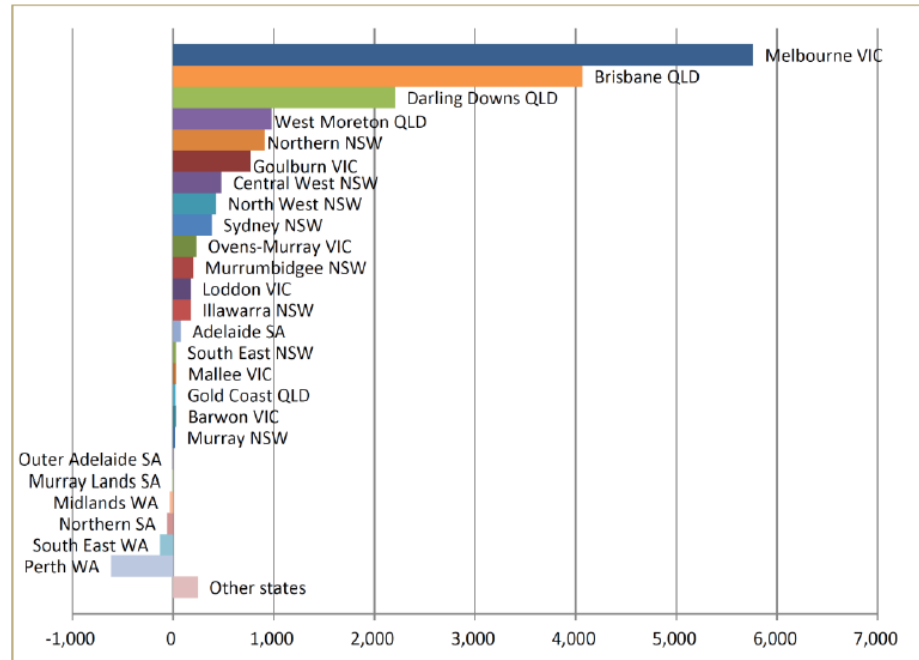
- 305km of existing rail corridor from Tottenham to Albury-Wodonga
- To enable double stacking and some capacity enhancements with new passing loops
- Currently in feasibility stage.



INLAND RAIL IN VICTORIA

REGIONAL BENEFITS – IMPACTS BY REGION

Economic impacts by region - Inland Rail construction and operations (GSP, 2014-15 dollars, \$ million, 4% discount rate)



INLAND RAIL IN VICTORIA

VICTORIAN BENEFITS

- The estimated economic impact of Inland Rail during construction and operation for Victoria is \$7 billion
 - Melbourne region (\$5.8 billion), Goulburn region (\$766M), Ovens-Murray (\$230M) and Loddon (\$172M)
- Inland Rail will help to entrench Victoria as the freight and logistics hub of the nation
- Inland Rail will significantly reduce congestion and enhance road safety on the Goulburn Valley Freeway and the Victorian section of the Hume Highway

THANK YOU

