

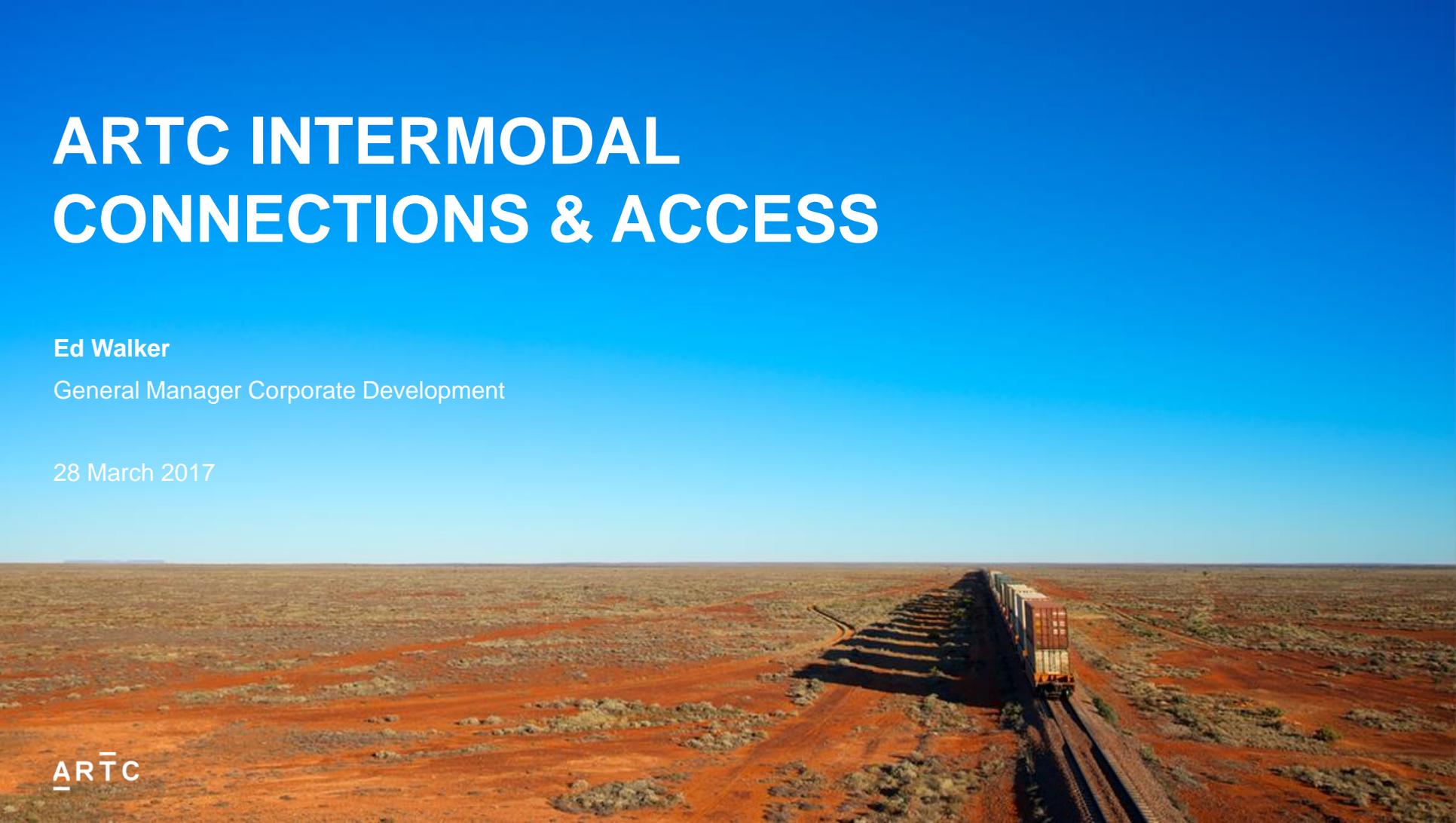
ARTC INTERMODAL CONNECTIONS & ACCESS

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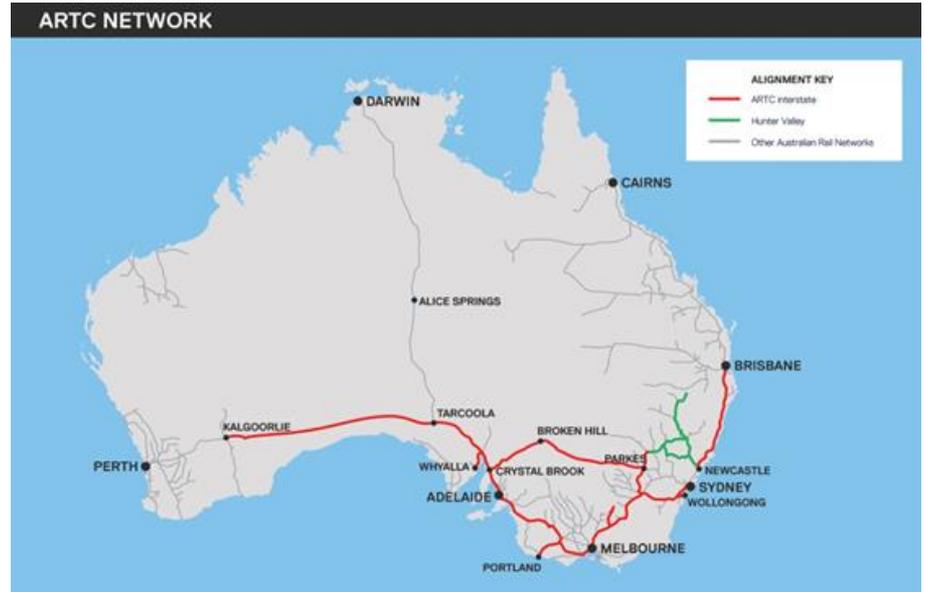
28 March 2017

ARTC

An aerial photograph of a long freight train traveling through a vast, flat, arid landscape. The train consists of numerous flatcars, each carrying a large container. The terrain is a mix of reddish-brown soil and sparse, low-lying vegetation. The sky is a clear, bright blue. The train is positioned on the right side of the frame, receding into the distance towards the horizon.

ARTC OVERVIEW

- Controlling, operating and maintaining 8,500 kilometres of standard gauge rail infrastructure:
 - Interstate mainline network (intermodal and general freight)
 - Hunter Valley heavy-haul” coal network
- 1,150 staff located at 30 regional and city based locations across Australia.
- Separate Inland Rail Division recently established to progress the development of Inland Rail, with over 100 staff across project offices in Brisbane (Inland Rail HQ), Toowoomba & Sydney



INLAND RAIL PROPOSED ROUTE



THE INLAND RAIL SERVICE OFFERING - BUILDING WHAT INDUSTRY WANTS



Reliability



Price



Transit time



Freight available
when the market wants

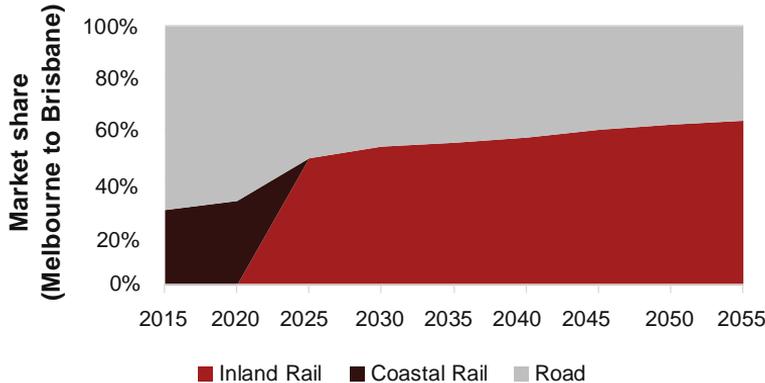
» Inland Rail - Key technical characteristics that underpin the service offering

Train Length	1800m with future proofing for ultimate 3600m train length
Axle Load / Max Speed	21 tonnes @ 115km/h, 25 tonnes @ 80km/h, with future proofing for 30 tonnes @ 80km/h
Double Stacking	7.1m clearances for double stack operation
Interoperability	Full interoperability with the interstate mainline standard gauge network Dual-gauging in Queensland to provide for connectivity to the Queensland narrow gauge regional network Connections to the NSW Country Regional Network to provide for standard gauge connections to the ports of Melbourne, Port Kembla, Sydney, Newcastle, Brisbane, Adelaide and Perth.

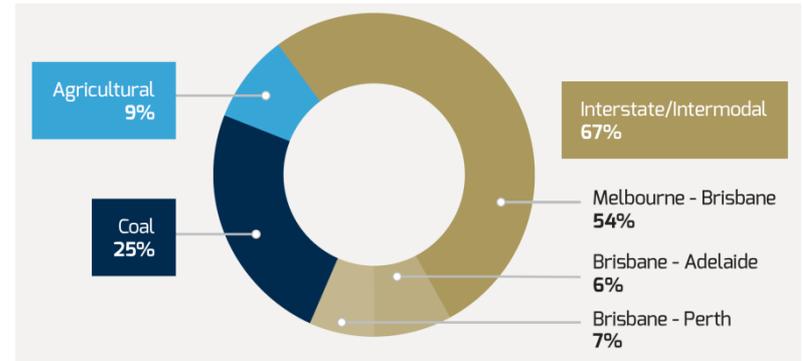
SERVICE OFFERING DRIVES DEMAND GROWTH

- The Service Offering underpins the demand growth driven by Inland Rail, with Melbourne-Brisbane rail market share increasing from 26% in 2013-14 to 62% by 2049-50.
- **Inland Rail will serve a variety of freight markets**, not just Melbourne-Brisbane with significant demand from coal and agricultural commodities.

Intercapital freight mode share with Inland Rail
Melbourne to Brisbane



Inland Rail Net Tonne Km by market - 2050



TERMINALS

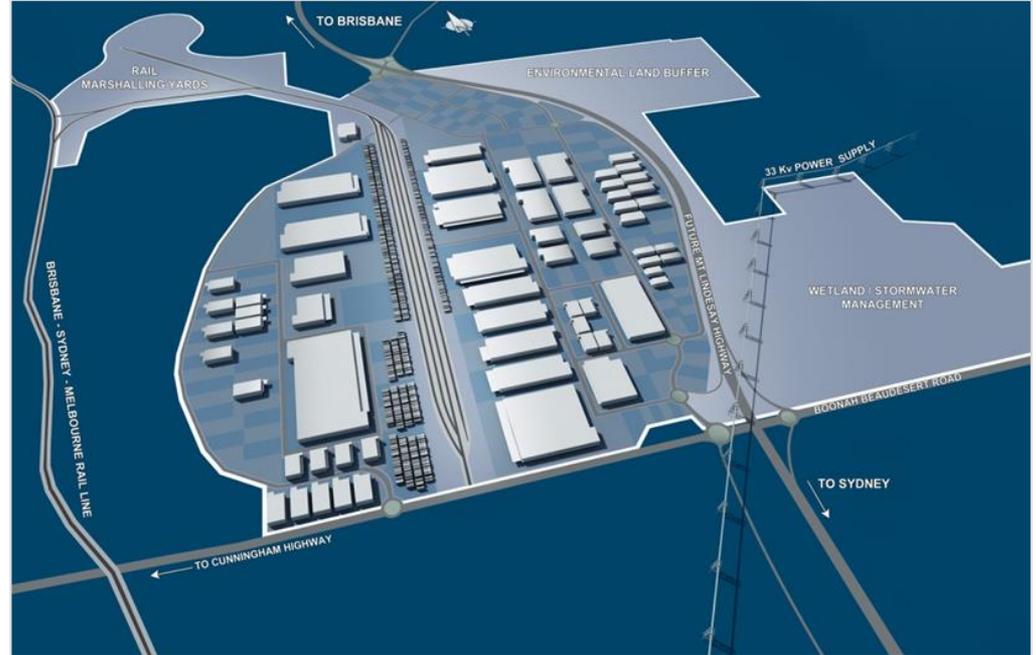
An aerial photograph of a shipping terminal. The ground is paved and marked with white lines. Numerous stacks of intermodal containers in various colors (blue, red, yellow, white, grey) are arranged in rows. Several yellow and red forklifts are visible, some near the stacks and others in the open areas. A semi-truck is parked on the right side. The overall scene depicts a busy logistics hub.

MODERN METROPOLITAN TERMINALS

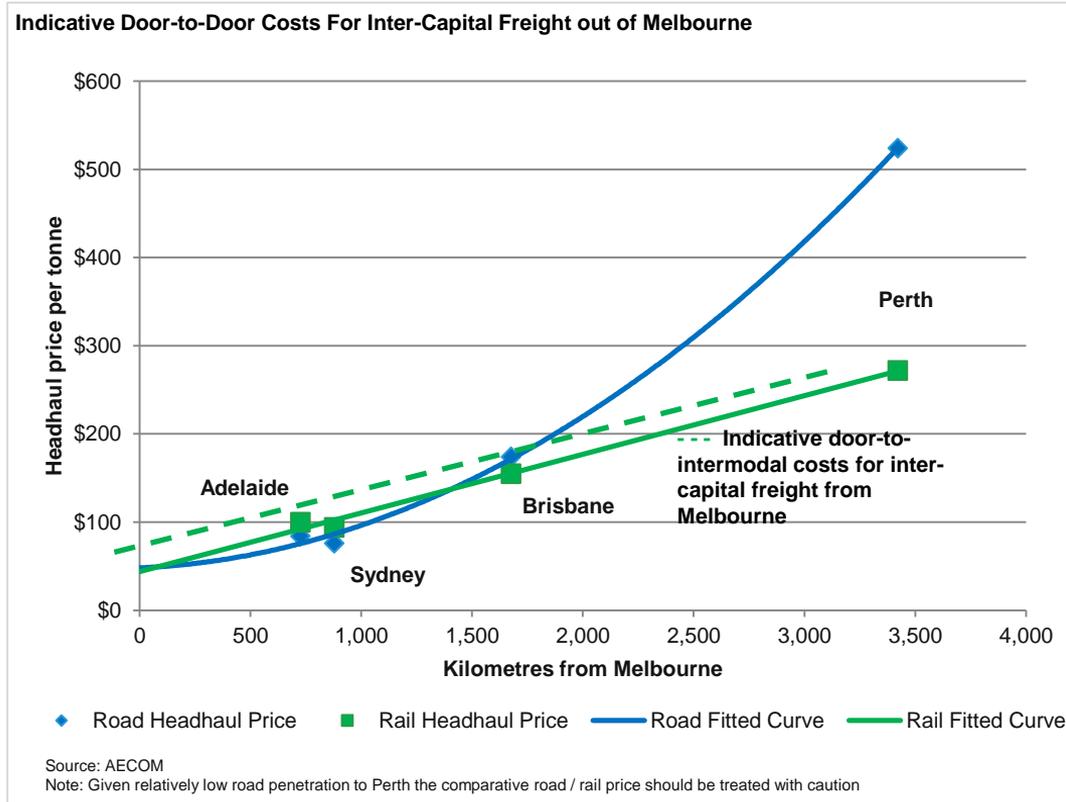
Characteristics:

- Sites are freight precincts not rail only facilities
- Likely to provide facilities for Interstate and Import/Export (IMEX) container movements
- Significant land for co-located logistics and general freight activities provide for significant land uplift value capture
- Terminal requires direct access to Interstate rail network
- Terminal requires B-Double road access at a minimum
- Site would be appropriately buffered from residential land encroachment

Potential Layout:



INTERMODAL: OPPORTUNITIES TO INCREASE MARKET SHARE



CRITERIA FOR SUCCESSFUL TERMINALS

- A terminal should be both cost competitive and time competitive.
- The location of the terminal should ensure that the 'Pick up and Delivery' (PUD) component of the freight journey should be minimised to enable modal shift from road to rail.
- The savings generated the rail leg of the journey should be greater than the lift costs at the terminal end.
- If the terminal is not cost competitive, a minimum volume throughput is required to offset the fixed costs.
- Support from local governments for land, statutory and strategic planning. In some instances, monetary incentives for infrastructure development may also be required.

WHAT TERMINALS WILL BE REQUIRED?

- The terminals required to support Inland Rail will depend on the location (e.g. metro vs. regional) and the type of freight (e.g. bulk vs. non-bulk)
- To realise the full value of Inland Rail, terminals will need to demonstrate seven key attributes (the relative significance of each attribute varies between metro and regional terminals reflecting differences in markets and other issues)

Terminal Attributes		Significance	
		Metro	Region
Terminal Capability	Ability to handle long trains, double stacking, 24/7 ops etc	●	●
Economic Scale	Capacity to deliver sufficient scale to optimise cost	●	◐
Connectivity	Connects to main arterial roads and market relevant rail networks	◐	◐
Capacity for Growth	Ability to scale to meet future demand	◐	◐
Market Access	Ability to facilitate competition as common user terminal	●	◐
Environmental	Ability to manage environmental issues such as noise	◐	◐
Catchment Demand	Located where there is sufficient demand to drive efficient scale	◐	◐

Legend ○ Attribute is of minor significance ● Attribute is highly significant

WHY BROMELTON?

- ARTC take a long-term view on decisions that will benefit and grow the rail freight industry – and believe investing in Bromelton aligns with this goal.
- The land is the only area on the eastern seaboard with current direct access to the interstate railway line between Melbourne and Brisbane. The site is also adjacent to B-double transport routes that are less than one hour's drive from the Port of Brisbane and the Brisbane CBD.
- Rail has historically suffered from a lack of support from a planning perspective. Traditionally rail terminals in Australia have been built across a small footprint in inner-city areas, only to be crowded out by urbanisation. ARTC acknowledge and commend the Queensland Government for their foresight in securing this land as a state development area back in 2008
- There are no immediate plans by ARTC to develop the Bromelton site, but early planning for that process has commenced.