



© Commonwealth of Australia 2017
May 2017 / INFRASTRUCTURE 3218



Table of Contents

1.	INTRODUCTION.....	2
1.1	Why do we need a National Freight and Supply Chain Strategy	2
1.2	Building on Past Reforms	3
1.3	Inquiry Approach.....	4
1.4	How to Make a Submission	5
1.5	Consolidated Questions.....	6
2.	FREIGHT IN AUSTRALIA – ARE WE COMPETITIVE?	8
2.1	What is moving where, why and how?	8
2.2	Competitiveness in the Australian freight sector	9
3.	NATIONAL CRITICAL ISSUES AND EMERGING TRENDS	11
3.1	Urban Growth Pressures	11
3.2	Port Corridor Pressures - Protecting Land, Sea and Air Connections	12
3.3	End-to-end supply chain integration and regulation	13
3.4	The Air Freight Market.....	15
3.5	Changing Technology.....	16
4.	NEXT STEPS.....	18
4.1	Capacity Forecasting	18
4.2	Key Drivers of Change for Use in Scenario Planning.....	18
4.3	A National Freight Performance Framework	18
4.4	Submissions.....	18
	ATTACHMENT A: STRUCTURE OF AUSTRALIA'S FREIGHT NETWORK	20
	ATTACHMENT B: INQUIRY TERMS OF REFERENCE.....	23



1. Introduction

In November 2016 the Australian Government committed to the preparation of a *National Freight and Supply Chain Strategy* (the Strategy) in line with a recommendation made in Infrastructure Australia's 2016 *Infrastructure Plan*¹.

To initiate work on the Strategy, which will eventually be developed with jurisdictions through the Council of Australian Governments (COAG) Transport and Infrastructure Council, the Australian Government has initiated an Inquiry into freight and supply chain priorities. The Inquiry will be guided by an expert panel bringing industry expertise into the process.

The Inquiry will provide advice and evidence for the development of the Strategy, with clear short, medium and long term priorities for action, over a range of key reform areas.

1.1 Why do we need a National Freight and Supply Chain Strategy

The Strategy is being undertaken in the context of a growing Australia and the need for a freight system that boosts the nation's prosperity and meets community expectations for safety, security and environmental amenity into the foreseeable future.

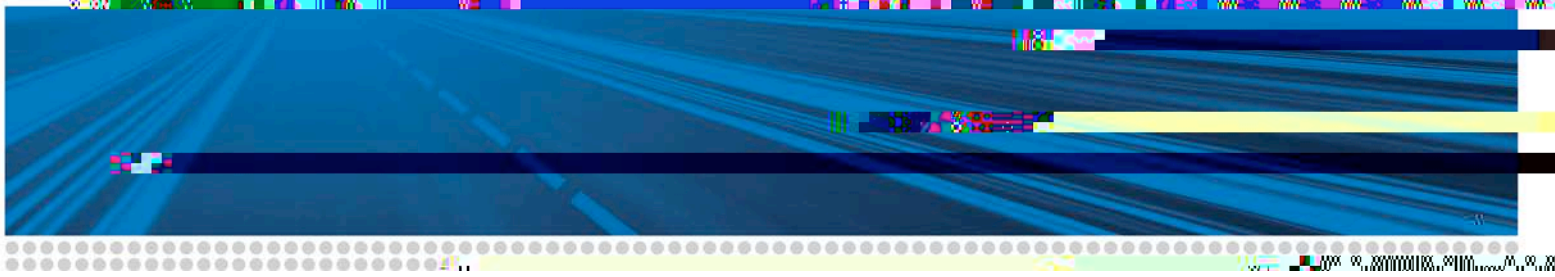
This growth is being driven by Australia's growing population and from increasing demand for Australian resources and produce, especially in Asian markets. Australia is one of the fastest growing countries in the world, with our population projected to grow from 24 million at present to 30 million by 2030, the majority in urban areas². Like Australia, global population forecasts indicate an increase in the number of extremely large cities, particularly in Asia. This will result in increased demand for mineral resources and products, particularly agricultural products. Australia needs to ensure it has the infrastructure to compete with other resource rich countries to supply the products necessary for these growing cities.

In its 2011 report, *Strategic Transport Infrastructure Needs to 2030*, the Organisation for Economic Co-operation and Development (OECD)³, acknowledged that, "major international gateway and corridor infrastructures are crucially important to the exports and imports of all the products and resources that the economies of all countries need ... [and] current gateway and inland transport infrastructure capacity will not be adequate to meet 2030 demand." Australia is no exception and

¹ Infrastructure Australia (2016), *Australian Infrastructure Plan*. http://infrastructureaustralia.gov.au/policy-publications/publications/files/Australian_Infrastructure_Plan.pdf

² Australian Bureau of Statistics Cat 3222.0 *Population Projections Australia*.

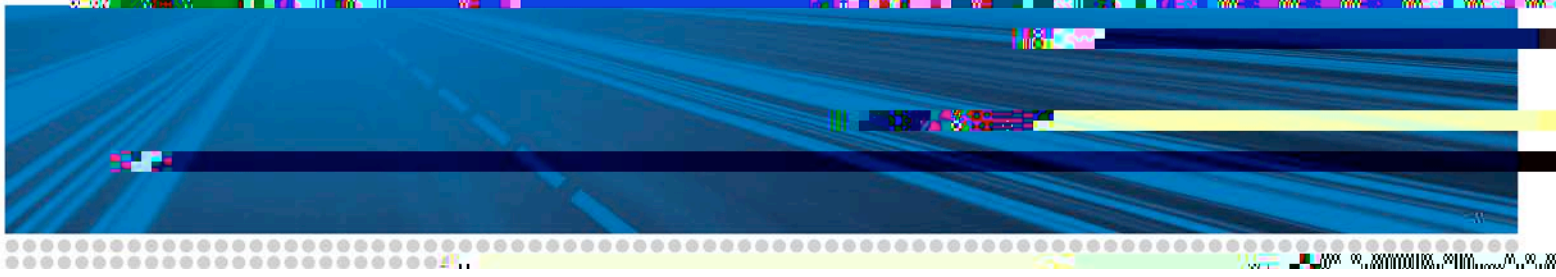
³ OECD (2012), *Strategic Transport Infrastructure Needs to 2030*, OECD Publishing, http://www.keepeek.com/Digital-Asset-Management/oecd/economics/strategic-transport-infrastructure-needs-to-2030_9789264114425-en#.WQ-suhFdBaQ#page3



must engage with emerging demands before freight infrastructure becomes a barrier to productivity growth.

However, the increasing cost of land transport infrastructure and services raises questions about future funding models. Escalating costs of transport infrastructure limit the ability of the governments to fund all necessary transport infrastructure requirements and has meant consideration of alternate funding sources⁴. Because of these escalating costs, the National Transport Commission (NTC) has noted it is imperative the allocation of funds and resources for moving Australia's freight is done in the most efficient manner possible⁵.

It is not just a matter of optimising the use of funding, but also ensuring regulatory and operational settings optimise long-term n



term master plans for nationally significant ports and airports, improved freight data, performance and planning assessment and implementation tools.

The key freight routes map, for example, has already assisted governments to agree national





1.5 Consolidated Questions

In responding to questions set out in the paper it would be appreciated if, where relevant, respondents could:

- Identify where they are in the supply chain (in terms of the system (i.e. import/export, intra/inter domestic or urban freight) and the specific commodity(s) being transported;
- Identify the priority issues, whether they be 'regulation', 'productivity', 'technology' or 'infrastructure'; and
- Identify the time horizon for each issue.

2.1 *What is moving where, why and how?*

- What infrastructure is used in your supply chain and how well does it perform?
- What changes would you like to see to make your supply chain work better?
- What data gaps are you aware of in relation to Australia's freight and supply chains?

2.2 *Competitiveness in the Australian freight sector*

- In your view, is Australia's freight system internationally competitive?
- What are the key indicators which tell us this?
- How important is freight movement to your business competitiveness?
- Are regulatory factors affecting productivity for your business? How could this be improved?

3.1 *Urban Growth Pressures*

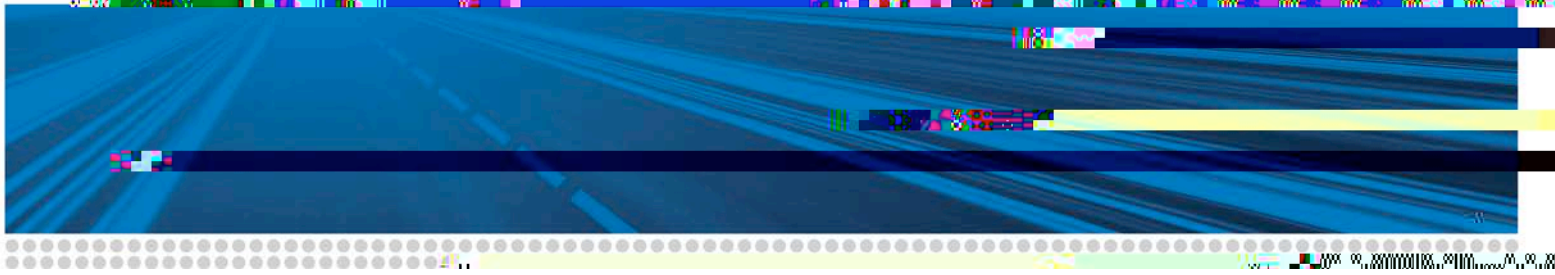
- What are the key issues for freight in Australia's major cities?
- How can Australia's urban networks better prioritise passenger and freight services in the most effective manner possible?
- How are our cities and supply chains being impacted by changing consumer behaviours such as online shopping?
- What are the critical last mile issues you face in urban areas?

3.2 *Port Corridor Pressures - Protecting Land, Sea and Air Connections*

- Do you face, or expect in the future to face, problems moving your freight through Australian air, land or sea ports?
- How can Australia's maritime channels be appropriately maintained and able to accommodate bigger ships?
- How are other countries dealing with the landside implications related to distributing cargo from bigger ships?

3.3 *End-to-end supply chain integration and regulation*

- How effective is your supply chain at transitioning your freight between modes and across boundaries?
- What regulations do you have to deal with in your supply chains?





2. Freight in Australia – are we competitive?

All industries relying on transportation to move their goods look for ways to optimise their supply chains, reduce cycle times, improve service and cut costs. In turn, leaner and more agile supply chains reduce the cost of goods and services, encouraging increased demand and driving economic growth, while also making Australia more competitive globally.

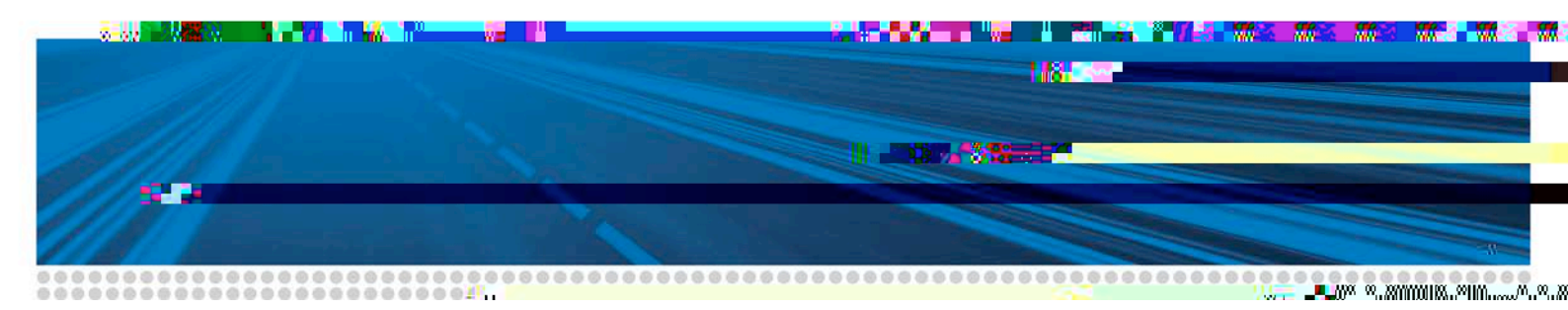
Just as enhancements made by infrastructure owners to the transport network potentially offer supply chain managers new ways to achieve value, those supply chain managers must also ensure they choose the most efficient transport mode for a given freight task. An integrated supply chain perspective is therefore central to managing the performance and future design of each element of Australia's national freight infrastructure, whether ports, airports, roads, rail or intermodals.

2.1 What is moving where, why and how?

- What infrastructure is used in your supply chain and how well does it perform?
- What changes would you like to see to make your supply chain work better?
- What data gaps are you aware of in relation to Australia's freight and supply chains?

Continuing growth in freight volumes has given rise to a range of increasingly complex challenges for the Australian community. In recognition of this, all levels of government have agreed on the need to apply a national focus and to collaborate with industry to deliver a streamlined, integrated and multimodal transport and logistics system, capable of efficiently moving freight throughout Australia.

Freight transport activity is often measured in terms of tonne kilometres (the movement of one tonne of freight, one kilometre). The Australian domestic freight task has been increasing strongly for the last 40 years. Rapid growth in the rail freight task has been driven by rail's movement of iron ore in the Pilbara region and, to a lesser extent coal freight exports in NSW and Queensland. In contrast, coastal shipping freight has not changed significantly in scale over the last 40 years and has decreased slightly since 2006–07⁷. Rail now accounts for around half of the domestic freight task, road approximately a third and coastal shipping for just under one-



The National Transport Commission notes the domestic freight task increased by 50 per cent in the 10 years to 2016 and is forecast to grow another 26 per cent by 2026⁹.

In addition to its role in meeting the national freight task, the freight sector is also a significant driver of national economic outcomes. Freight rail alone added \$13.2 billion to the Australian economy in 2013 (making up 0.7% of the total national economy), employed over 15,000 people and paid over \$1.2 billion in wages annually¹⁰. Any changes or productivity benefits gained in the industry will therefore have a direct effect on the national economy.

Air freight is comparatively small by volume but is also growing at a rapid rate and is high in value. In the 10 years to 2015-16, international air freight volumes rose 37 percent to almost a million tonnes¹¹. Estimates of domestic air freight are only available for recent years. Bureau of Infrastructure Transport and Regional Economics data indicates the volume of domestic air freight reached 435,000 tonnes in 2016¹².

Data is a valuable asset (as the recent surge of interest in big data exemplifies). However, its value depends on its fitness for purpose, accessibility and accuracy. The Productivity Commission has found that data problems such as the absence of consistent and comparable data limit analysis and benchmarking of public infrastructure used in Australia, making project selection and investment more difficult¹³. This potentially has implications for Australia's entire infrastructure selection and investment process, introducing a level of uncertainty (and therefore risk and extra costs) into major project developments.

2.2 Competitiveness in the Australian freight sector

- In your view, is Australia's freight system internationally competitive?
- What are the key indicators which tell us this?
- How important is freight movement to your business competitiveness?
- Are regulatory factors affecting productivity for your business? How could this be improved?

⁹ National Transport Commission (2017), *Who moves what where: Better informing transport planning for Australians*, discussion paper,

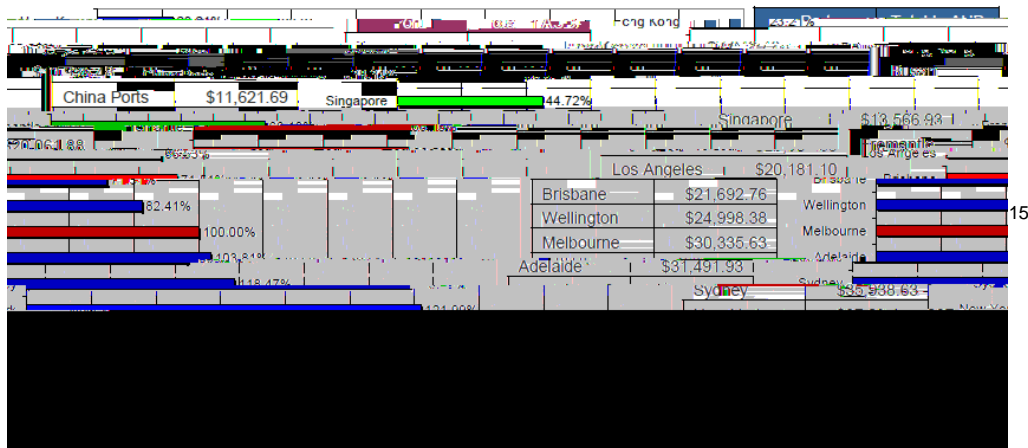
Productivity growth is a key source of long-term economic growth, business competitiveness and real per capita income growth. It is an important determinant of a country's living standards and wellbeing.

A key outcome of the Inquiry will be to establish whether inefficient infrastructure planning, delivery and operation has created congestion in freight networks and supply chains, ultimately harming national productivity and competitiveness.

A wide ranging assessment of Australia's international competitiveness prepared by McKinsey Australia for the Business Council of Australia¹⁴ concluded that Australia was competitive in a few sectors, but not currently competitive in other sectors, including the logistics and communications sector. While this was a broad brush assessment, it indicated that while labour productivity in this sector was similar to that in the USA, relative input costs were considerably higher, as they were for most other sectors.

However, there are indications that poor or decreasing productivity and high costs are not experienced across the board in the freight sector. Shipping Australia Limited compared costs in Australia's major container ports against international ports to examine relative costs (see graph below). It found that Australian ports are bunched in the middle of the table with lower costs than the assessed Japanese and European ports.

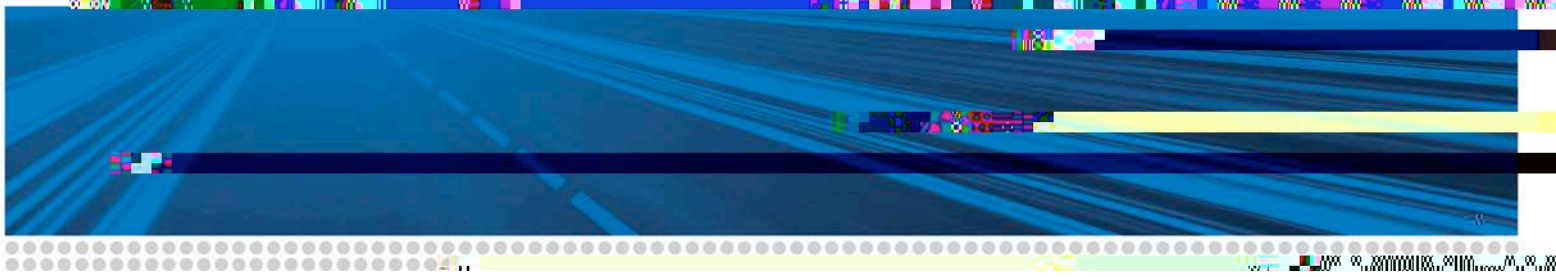
Graph: Port Price Index



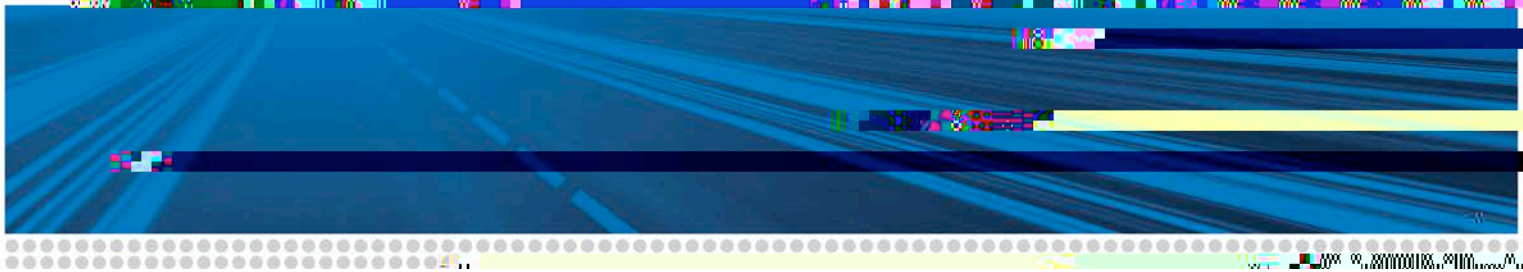
¹⁴ McKinsey and Company. Compete to Prosper: Improving Australia's Global Competitiveness. July 2014

<http://www.mckinsey.com/global-locations/pacific/australia/en/latest-thinking/compete-to-prosper>

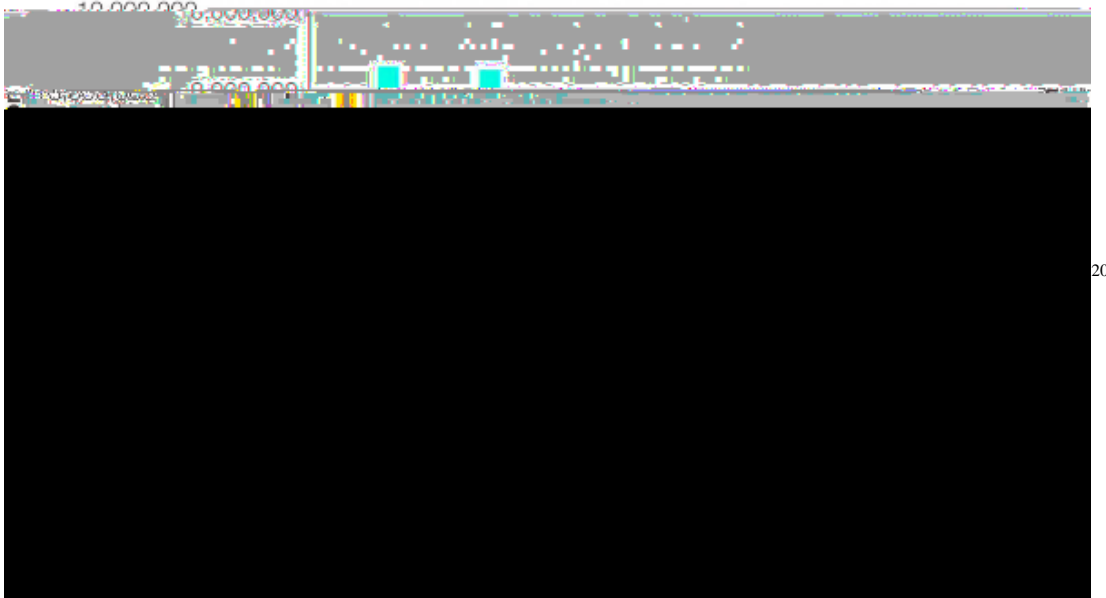
¹⁵ Shipping Australia Limited (2010), *International Port Cost Comparison Project*, https://shippingaustralia.com.au/wp-content/uploads/2012/01/L_InterPortCostCcomparison.pdf



3. National Critical Issues and Emerging Trends



Australian population growth by capital city and region



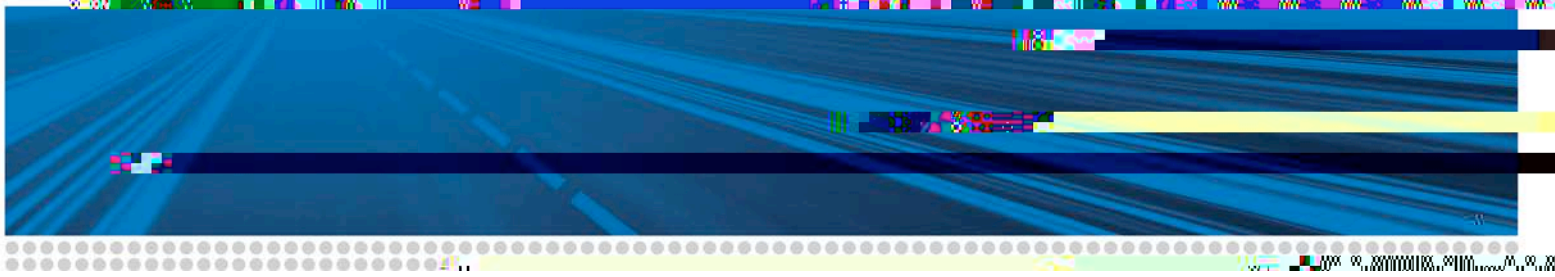
3.2 Port Corridor Pressures - Protecting Land, Sea and Air Connections

- Do you face, or expect in the future to face, problems moving your freight through Australian air, land or sea ports?
- How can Australia's maritime channels be appropriately maintained and able to accommodate bigger ships?
- How are other countries dealing with the landside implications related to distributing cargo from bigger ships?

The performance of airport, port and intermodal terminals is strongly linked to the performance of the wider aviation, maritime and land transport networks. Impacts on the freight transport corridors, and competition for those corridors from passenger transport, will affect the performance of key terminals. Planning, technology and pricing are important means of ensuring a well-supporting network for our terminals.

Over time economic growth and the enlargement of market areas, primarily due to the growth of trade and transport, has supported the expansion of ports, airports and warehousing facilities. This continuing expansion of freight nodes is being challenged by growing population density in areas

²⁰ Australian Government (2016), *Smart Cities Plan*, <https://cities.dpmc.gov.au/htmlfile>

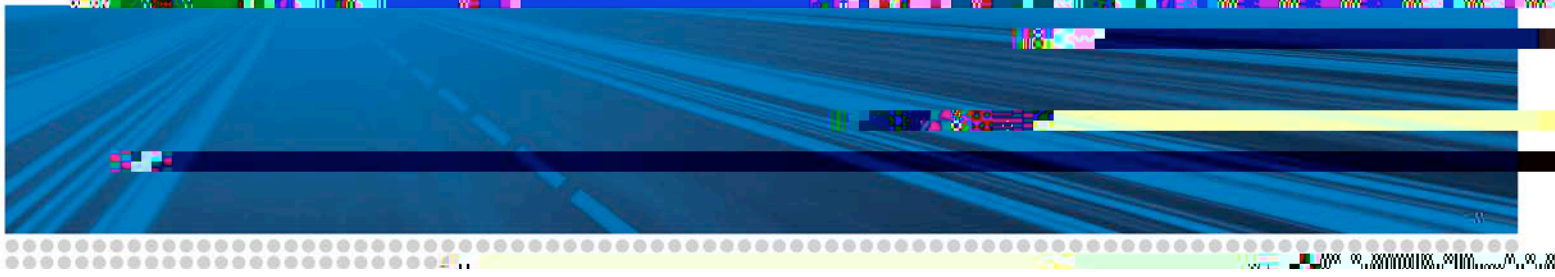


surrounding key transport infrastructure and increasing land costs causing conflicts over adjoining land uses, and growing congestion.

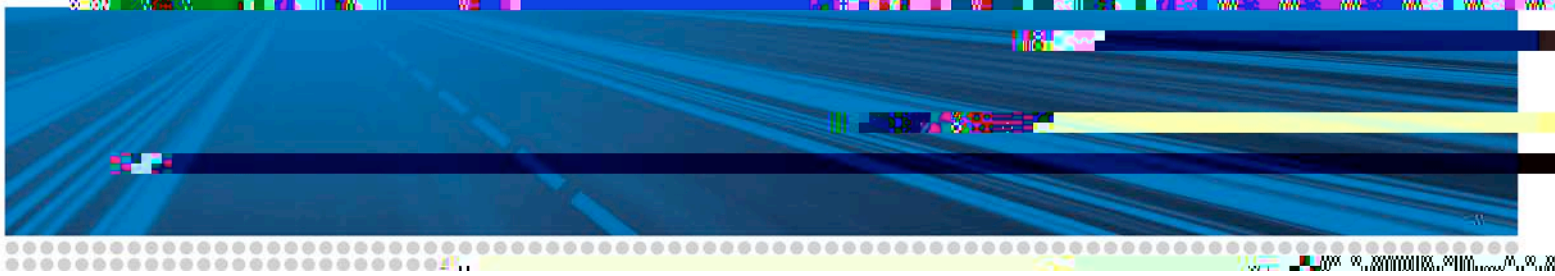
Freight corridor protection, for current and future use, is a vital component to ensuring the seamless transition to a future where the freight task will be 80 per cent greater in 2030 than the task in 2010.

The advent of bigger ships is an issue that many countries are currently grappling with. While the progressive introduction of bigger ships by international shipping lines reduces the carbon footprint and operating costs per container, many ports do not have the depth of water or landside connections required for the 6,000 TEU container ships.

0000.013rs

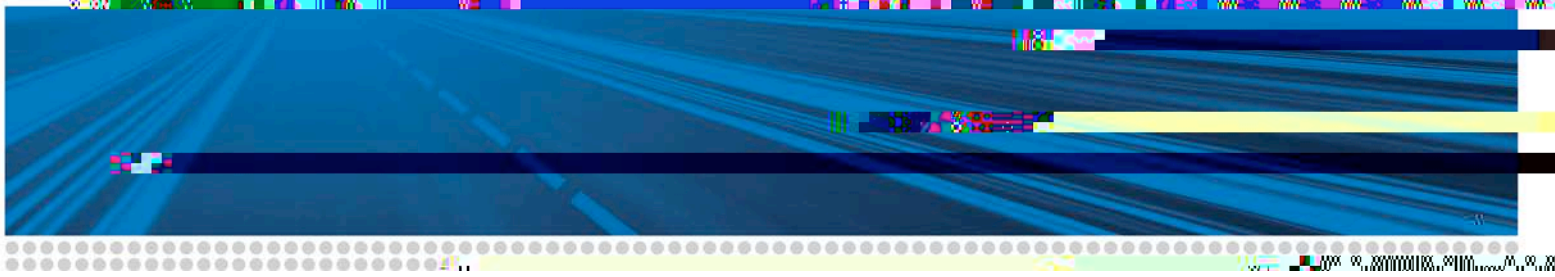


and the multiple country and jurisdictional



nearly quadrupled from 1985 to 2013²³ and reached the million tonne mark in 2016. Domestic freight in 2016 totalled 435,700 tonnes²⁴.

The major outbound air freight products by weight in 2011 were perishable food, including meat, vegetables, fruit, fish and crustaceans. These represented over 40% of Australia's outbound air freight by weight. As they often come from regional locations and are perishable, such products



Providing input to the issues paper is your opportunity to help develop and steer the freight and supply chain at a national level for the next 20 years. Please send your submission to:

By email: freightstrategy@infrastructure.gov.au

By post: Freight and Supply Chain Priorities
Department of Infrastructure and Regional Development
GPO Box 594
CANBERRA CITY ACT 2601

Submissions are open until 28 July 2017.



Attachment A: Structure of Australia's Freight Network

Infrastructure assets are long lived (typically 35 to 100 years). The bulk of the infrastructure that will be used to handle the freight task for the foreseeable future is already in place today. Most of this infrastructure is in the form of common user facilities, which will continue to need to service a diverse range of changing and differently growing freight needs. Lifting the efficiency and productivity of existing freight transport infrastructure stock will be critical for supporting future growth.

Current freight network structure

Australia's current freight infrastructure is the legacy of land transport and coastal shipping routes that evolved from the original six independent British colonies federated under the Commonwealth of Australia in 1901. Key periods of construction and technological development included:

- from the early 1800s - coastal shipping facilities in place of effective land transport to export ports;
- 1860s to 1900s – significant regional/intrastate railway construction, including agricultural

