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Meeting the 2050 Freight Challenge

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Environmental consideration

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Abbreviations

ACCC	Australian Competition and Consumer Commission
ALC	Australian Logistics Council
ARTC	Australian Rail Track Corporation
ATC	Australian Transport Commission
BITRE	Bureau of Infrastructure, Transport and Regional Economics
COAG	Council of Australian Government
CPRS	Carbon Pollution Reduction Scheme
DfT	Department for Transport (UK)
DITRDLG	Department of Infrastructure, Transport, Regional Development and Local Government
GDP	Gross Domestic Product
IA	Infrastructure Australia
IPA	Infrastructure Partnerships Australia
IPART	New South Wales Independent Pricing and Regulatory Tribunal
NCP	National Competition Policy
NTC	National Transport Commission
OECD	Organisation for Economic Cooperation and Development
PC	Productivity Commission
PPP	Public Private Partnership
PwC	PricewaterhouseCoopers
T & L	Transport and Logistics

Contents

Executive summary

An efficient transport industry allows other industries to be efficient, and creates wealth in all sectors of the Australian economy

ASCIANO[1]

Freight matters

Freight matters to the future health of the Australian economy, to the natural environment and to the quality of life enjoyed by all Australians. Freight plays a vital part in all our lives, yet is often the forgotten piece of the transport debate. The freight industry brings food to our dining tables each day; transports consumer goods to our homes; carries raw materials and components to our factories; delivers coal to our power plants; and supplies bulk minerals to foreign markets.

Transport and logistics *"is the oil in the engine of Australia, without which our nation would grind to a halt".*[2] The transport and logistics industry is a critical part of the Australian economy, responsible for:

- generating 14.5 per cent of GDP, with Australia's supply chain worth an estimated $150 billion every year;
- providing more than one million jobs across some 165,000 companies[3]; and
- supporting the competitive pricing of Australian exports in international markets.

▼ Figure 1

Australia's nationally significant port, road and rail network links

Source: Exports and Infrastructure Taskforce (2005), pg12

1 Asciano (2008) a
2 Australian Logistics Council (2008) d
3 Australian Logistics Council (2008) c
4 IBISWorld (2008)
5 IBISWorld (2008)
6 Australian Logistics Council (2008) c

The freight task is forecast to treble by 2050

It is expected that Australia's freight task in 2020 will be double what it was in 2006 and by 2050 it will be triple its current size.

There will be a continuation of the recent trend towards a dominance of road transport until 2020. In a business as usual scenario, where no major reforms are undertaken, IBISWorld has forecast that following a peak in road freight dominance in 2020 coastal shipping and later rail freight in 2030 will experience renewed market share growth, to road freight's detriment.[4]

Underlying this data, IBISWorld forecast strong growth in billion tonne kilometres for all domestic freight modes to 2020 and beyond to 2050.

Forecasts produced by IBISWorld for Infrastructure Partnerships Australia suggest that the freight task is set to increase from 503 billion tonne kilometres in 2008 to 1,540 tonne kilometres in 2050.[5]

In addition to changes at the national level, there will be increased diversity in modal share of the freight task across jurisdictions. For instance, by 2050 the share of road freight in each of the five largest states will vary from 30 per cent in NSW to 5.7 per cent in South Australia.

These forecasts demand immediate action as key transport links are already experiencing capacity constraints and congestion as a result of inadequate infrastructure. Further growth will increase the demand for transport services at a local, state and national level, placing existing freight corridors under severe pressure and compounding the inefficiencies that currently exist.

With many of our key freight transport links already congested, it is critical that efficiency is improved and, where necessary, additional capacity is provided. Supply chain costs represent a significant cost of doing business with up to 10 per cent of the final cost (and carbon footprint) of a product derived from its transportation. If capacity constraints and inefficiencies in the freight transport network remain unaddressed, it will have significant implications not only for the sector, but across the national economy.

Every one per cent increase in efficiency will save the economy around $1.5 billion in costs associated with transport and logistics (based on current values).[6]

Transport productivity reform has stagnated

NATIONAL TRANSPORT COMMISSION[9]

Freight and the environment

Like all industries, the freight sector can have some negative affects on society. Government and the sector have demonstrated a commitment to reducing the negative impacts of the industry on local communities. Various government jurisdictions have enacted a range of regulations to minimise the costs of these factors on biodiversity, the community and local amenity. Key areas of reform include the impacts of fuel emissions, noise and waste, such as spills and refuse.

A key challenge for the industry is the transition to a low carbon economy. Carbon emissions from transport in Australia total 14 per cent of total national emissions. Over the period 1990 to 2006, while overall transport emissions grew by 27.4 per cent, emissions from freight grew by 40 per cent. Freight transport emissions now contribute around four per cent of our national emissions total and are forecast to more than treble to 13.5 per cent by 2020.[7]

Without action to curb greenhouse gases, such as addressing imbalances in the modal-mix, promoting the use of alternative fuels and low emission vehicles and establishing additional necessary capacity, emissions from freight transport will potentially exceed two-thirds of the national target by 2050.[8]

The transport of freight can also have significant local effects. It can contribute to local air pollution, noise pollution and visual impacts. While freight, on average, constitutes only a small share of overall rail and road traffic, in dominant freight corridors, the specific impact of freight on local communities can be significant.

The freight industry supports moves to a national system of environmental standards and approvals. This system will help to ensure the local impacts of freight can be minimised for the broader community.

In line with the commitment of the Commonwealth Government to reduce emissions, the freight industry is investing in low carbon technology in order to reduce emissions and enhance the environmental sustainability of the sector.

The reform agenda must be bold

Meeting future demand while increasing economic efficiency, safeguarding the environment and minimising negative social impacts of freight movements presents an unprecedented challenge. This challenge requires radical reform of the current framework of governance, planning and regulation in the freight sector.

The Australian freight and logistics industry has been the focus of numerous reports, including inquiries by:

- the Productivity Commission;[10]
- the Export Infrastructure Taskforce;[11]
- the National Transport Commission (NTC);[12]

7 Total Environment Centre Inc (2008), p.6.
8 Dimopoulos (2008)
9 National Transport Commission (2008) p. 3
10 National Productivity Commission (2005)
11 Exports and Infrastructure Taskforce (2005)
12 National Transport Commission(2008) b
13 Australian Logistics Council (2008) c
14 Department of Transport and Regional Services (2004)
15 Bilfinger Berger Australia & InfrastructurePartnerships Australia, (2008)

- the ALC's National Strategy for the Transport and Logistics Freight Supply Chain Industry;[13] and

- the Commonwealth Government's White Paper introducing Auslink.[14]

These studies have created a solid base of analysis which has effectively made the case for change. Bottlenecks, ineffective policy and delayed investment cost Australian business millions in export dollars and inhibit further economic growth.

Some of the key barriers which must be addressed to allow the freight transport sector to meet Australia's future needs include:

- a need for stronger national leadership;

- more effective coordination between jurisdictions and industry bodies;

- a need for truly integrated long-term (50 year) planning across transport modes to focus on achieving efficient end-to-end movements in a freight supply chain, often featuring multiple modes;

- the complexity of existing market structures;

- regulatory burden and complexity, in terms of both the amount of regulation and the number of bodies which administer it;

- pricing of infrastructure access that does not reflect actual costs and creates market distortions, a situation which may be further complicated in the short term by the transitional arrangements for the Carbon Pollution Reduction Scheme (CPRS);[15] and

- an investment environment that can be unattractive to private sector investors.

Immediate action is required to meet these challenges

To address these barriers there are three key priority areas that require the immediate attention of the nation's political and policy leaders:

- creating stronger national leadership and coordination in the freight sector;

- making more efficient use of existing assets through better regulation and market reform; and

- developing a more positive environment for further private investment.

Central to achieving these outcomes is the empowerment of a national body, either Infrastructure Australia or the National Transport Commission (NTC), to take the lead in developing a new integrated national freight transport plan.

Recommendations

The message is loud and clear: the time for talking has to end. It's time to deliver the integrated passenger and freight transport system Australia deserves.

NATIONAL TRANSPORT COMMISSION[16]

1 The **key recommendation** of this report is the establishment by the Commonwealth Government of a **national freight coordination body** with responsibility for developing a **national freight plan** which:

- Provides clear, national leadership to develop a new long term vision for the freight sector;
- Develops and delivers a national freight policy, identifying key policy reforms; and
- Identifies key priority projects for investment and has strategic control of ongoing funding.

Further reforms that will help the sector meet the 2050 challenge include:

2 Adopting a planning and regulatory approach that is integrated across both jurisdictions and modes of transport.

3 Reviewing the structure and operation of the freight market to ensure there is competitive neutrality between modes of transport and the market is able to function efficiently, including streamlining access regimes and accelerating implementation of pricing reforms.

4 Implementing a new national multi-modal pricing regime that incorporates social and environmental externalities.

5 Reviewing the regulatory environment for the freight sector and recommending changes to reduce the regulatory burden, including the possibility of establishing a single national freight regulator – with core responsibility in the areas of safety and environmental regulation.

6 Creating a favourable environment for private sector investors, including the application of a gateway model for procurement.

16 National Transport Commission (2008) b, pg 4

7 Linking Commonwealth Government infrastructure funding, including the Nation Building (formerly Auslink) program, to the achievement of identified reform outcomes.

8 Actively seeking private sector involvement in long term planning through the appointment of an advisory board to the national freight governing body as well as through supporting private sector project development.

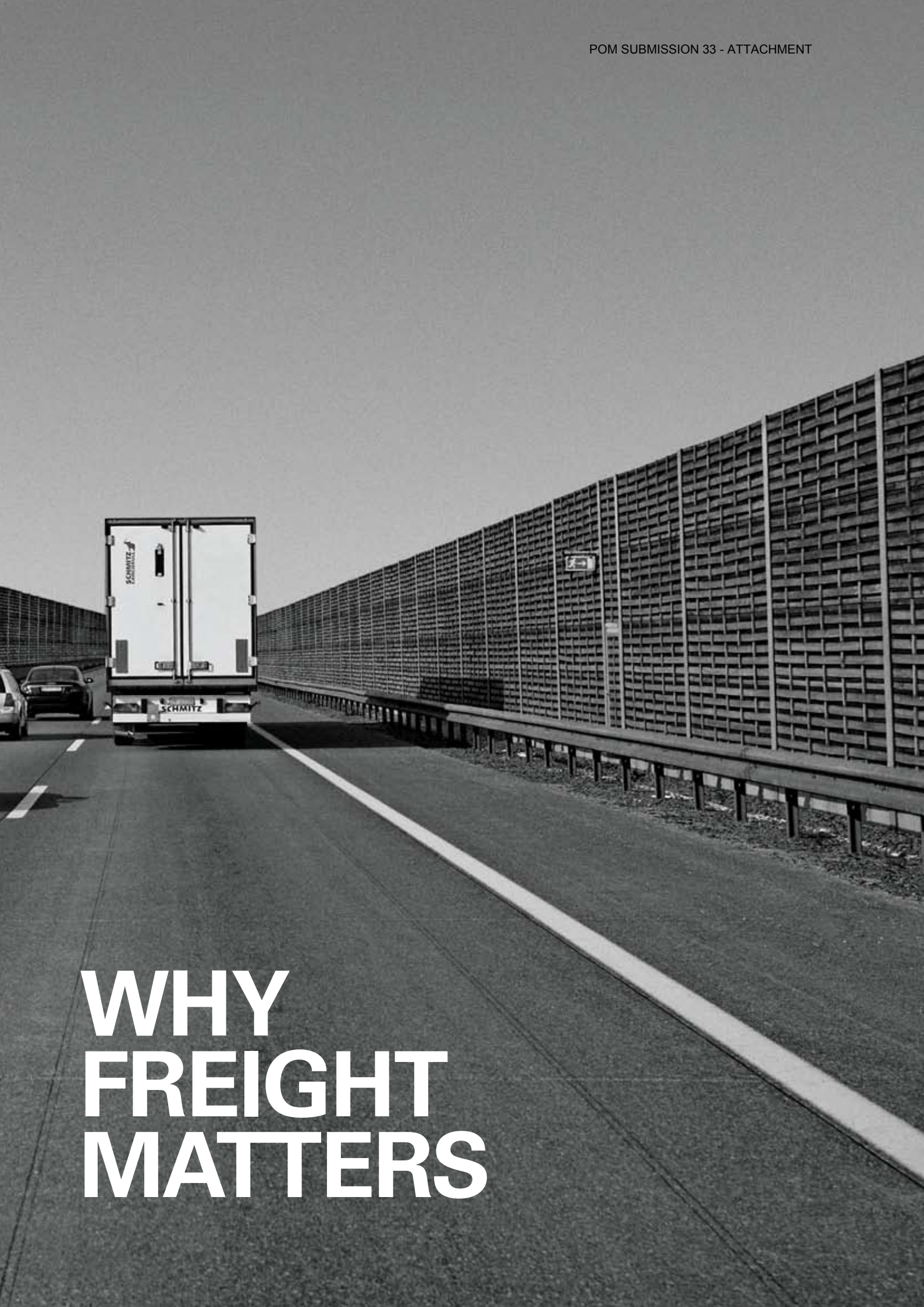
9 Maintaining implementation of the CPRS, as Australia's emission trading scheme, in order to reduce uncertainty impacting investment decisions within the sector. The proposed transitional assistance should be mode neutral, potentially through applying the assistance to aviation, rail and maritime industries in addition to road transport.

Specific opportunities for reform and investment stemming from the CPRS include:

- accelerated pricing reform to more equitable pricing of externalities across transport modes; and
- increased government support for the development and use of hybrid and biofuel compatible heavy road and rail vehicles as well as sea vessels.

10 Maintaining a rigorous and transparent approach in identifying priority areas for investment, regulatory reform and the allocation of government funding through periodic review and reprioritisation of the national freight plan.

11 Establishing a system of intermodal facilities in support of major ports and airports in order to relieve the pressure on these facilities. In advance of the establishment of these facilities necessary land and corridor reservations must be identified.



WHY FREIGHT MATTERS

1. Why freight matters

…going forward, there needs to be a much stronger focus on lifting the performance of the national freight transport system as a whole and achieving outcomes that are economically, environmentally and socially sustainable in the long-term.

PRODUCTIVITY COMMISSION[17]

Scope

This paper enquires into the policy, regulatory and other measures required to create an integrated public policy framework that will allow Australia to meet its future freight challenges. This Paper also outlines ideas to create an appropriate private investment environment for Australia's freight task up to 2050.

Introduction

The operation of the national freight sector is integral to the wellbeing of all Australians – and its efficiency has a direct impact on national and individual prosperity. However, the importance of an efficient freight system is not always appreciated. The Australian Logistics Council's *National Strategy for Transport & Logistics* (2008-2015) reinforces this point:

> *"Without transport and logistics (T&L), Australia doesn't move. Both our national and the global economies depend on T&L. Efficient freight systems T&L is are critical for everything that occurs in our modern society."*[18]

Many countries have identified the need for a smarter and more integrated freight strategy to cope with congestion and surging demand. For example, Scotland's National Transport Strategy and Freight Action Plan states:

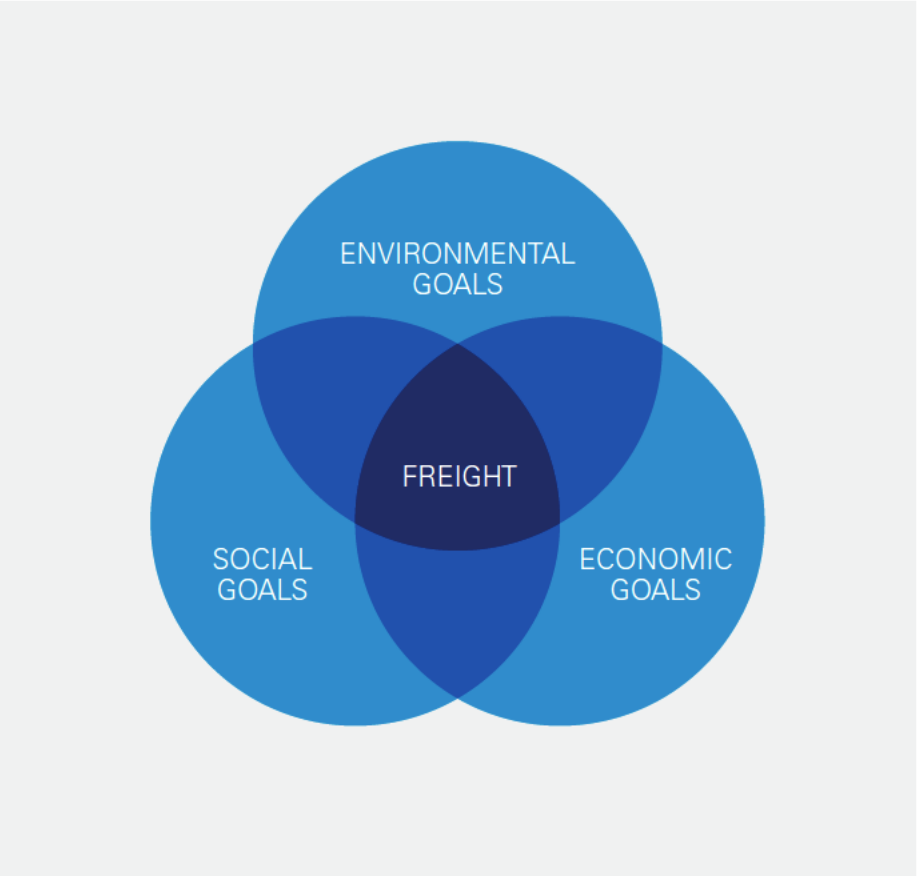
> *"The everyday products we take for granted - cornflakes, shoes and soap - have all at some point moved as freight. Industry stakeholders - both suppliers and users of freight transport - have told us that to compete effectively Scottish businesses need to have reliable and efficient routes to local, national and global markets. The efficient and competitive movement of goods through the entire supply chain is therefore a key element in meeting consumer demand and supporting and enabling economic growth. At the same time, the impact of the movement of freight on congestion and the environment cannot be ignored.*
>
> *We recognise that the public and private sectors have to work in partnership if Scotland is to develop the flexible and sustainable distribution network needed to compete in a rapidly changing global economy. That is why we adopted a partnership approach..."*[19]

17 Productivity Commission (2005), pg 210
18 Australian Logistics Council (2008) d
19 Scottish Executive (2006)

Like all infrastructure, freight assets underpin the fabric of daily life. It influences Australia's economic, environmental and social goals. This concept is demonstrated in Figure 2. To examine the role played by freight in any one of these areas without consideration of the others would be to the detriment of the national interest.

▼ Figure 2

The role of freight in delivering economic, social and environmental goals



Given the size and distance from major overseas markets, an efficient and cost-effective freight transport system is particularly important to the competitiveness of Australia's manufacturers and exporters, and ensuring competitors benefit from the lowest possible prices.

PRODUCTIVITY COMMISSION[21]

Economic impacts

The relationship between freight infrastructure and economic growth is one of interdependence. Economic growth increases the demand for freight infrastructure. Equally, freight infrastructure allows and supports economic growth. This interdependence is illustrated in Figure 3. Failure on the supply side can be as economically damaging as a lack of demand.[20]

The freight industry is of particular importance to the Australian economy, given Australia's unique geographic and demographic characteristics. Australia's remoteness from other countries, its size and the dispersion of its population add to the price of our imports as well as locally manufactured goods, placing greater emphasis on the need for efficient internal freight networks. The efficiency of supply chains is directly reflected in the price that consumers pay for goods.

In addition, efficient internal freight networks will ensure the competitiveness of our exports. Efficient transport of Australian exports to world markets maximises the economic returns to the Australian economy, as well as providing a source of taxable revenue to support the provision of public services.

A number of inefficiencies have been identified in the current operation of the transport industry which impact on the productivity of the freight network:

- the Bureau of Infrastructure, Transport & Regional Economics (BITRE) has estimated that, without action, congestion on urban roads alone will restrict the mobility of people and freight and cost the economy a forecast $20 billion a year by 2020. This will impact on both commuters and freight operators, forcing transport and goods and services prices up;[22]

- truck congestion at Port Botany in Sydney has led the New South Wales Government to announce an off-peak incentive scheme, which had been recommended by the New South Wales Independent Pricing and Regulatory Tribunal (IPART), to mitigate high levels of peak period congestion and spread this volume more evenly throughout the 24 hour span of port hours via a price incentive;

- morning and afternoon curfews for the arrival and departure of rail freight are in place on the Sydney metropolitan rail network, to accommodate the track requirements for commuter rail services; and

- port congestion in Queensland and New South Wales already cause shipping delays for coal exporters – delays which have been linked to reduced export sales and profits.[23] The estimated losses suffered due to the insufficient coal supply chain in the Hunter Valley include export revenue losses of more than $2 billion between 2005 and 2010.[24]

20 See for example Edwards (2007), pg 37
21 Productivity Commission (2005) pg 209
22 Australian Transport Council (2008) pg 2
23 See, for example, AAP (2007)
24 NSWMC Ltd (2008)
25 Department of Climate Change (2008)
26 Total Environment Centre (2008)

▼ **Figure 3**

The inter-relationship between growth and demand

Environmental impacts

A range of environmental impacts can occur through the establishment and operation of freight infrastructure. The potential impacts of the industry on environmental sustainability, biodiversity and intrinsic environmental characteristics, as well as the well-being of the community, must be considered in the project assessment process.

The transport sector contributes around 14 per cent of Australia's greenhouse gas emissions. Road transport contributed 90 per cent of this with the remainder coming from rail, domestic aviation and shipping.[25] Passenger transport is responsible for the majority of emissions, but emissions from freight transport are growing more quickly.

Over the period 1990 to 2006, when overall transport emissions grew by 27.4 per cent, emissions from freight grew by almost 40 per cent. Freight transport emissions now contribute around four per cent of the national emissions total and without effective action, are forecast to more than triple to 13 per cent by 2020.[26]

The response of and adaptation by the freight industry to the proposed Carbon Pollution Reduction Scheme (CPRS) will be pivotal, not only in helping many Australian industries meet their short-term targets, but also in ensuring the longer term environmental sustainability of the Australian economy.

Additionally, the liveability of the community can be affected by environmental factors, such as noise, dust and light. These impacts must be appropriately considered in the project assessment process and sufficient mitigation measures put into place.

Social impacts

It is important to note the overlap between freight and passenger transport operation and assets. Any improvements in freight infrastructure and transport should be viewed in the context of the potential decongestion and safety benefits they provide to passenger transport.

Congestion is becoming an increasingly common and persistent problem in metropolitan centres. Freight infrastructure can play a role in alleviating congestion pressures. In many instances, such as areas directly surrounding ports and intermodal facilities, freight is a primary cause of urban congestion. Effectively solving freight issues will, in many areas, provide significant relief to urban passenger congestion.

Safety is an important aspect of freight transport. For example, heavy use of road freight on Australia's north-south eastern seaboard corridor (between Melbourne and Brisbane) increases the safety risk to passenger transport, which also shares this corridor.

The annual cost of road accidents to the Australian economy has been estimated at $18 billion.[27] According to figures released by the Australasian Railway Association, rail transport is up to 20 times safer than road; therefore increasing the modal share of rail freight could potentially yield economic gains in the avoidance of costs associated with collisions and other accidents.[28] Furthermore, the lack of adequate bypass routes affects the safety of pedestrians, as freight traffic is forced to travel through built-up urban and residential areas.

Any holistic analysis of freight infrastructure assets should therefore take account of the interests of passenger transport sharing these assets, and vice versa.

27 New South Wales Parliament Joint Standing Committee on Road Safety (2008), p. xi
28 Asciano, (2008) a

THE CHALLENGE AHEAD

2. The challenge ahead

Work conducted by IBISWorld for Infrastructure Partnerships Australia indicates that the freight task facing Australia is set to triple by the year 2050. It is forecast to increase from 503 billion tonne kilometres per annum in 2008 to 1,540 billion tonne kilometres per annum in 2050.[29] IBISWorld forecasts are illustrated in Figure 4.

The projected tripling of the domestic freight task is set against the background of a quadrupling in real GDP over the same period, from $1.13 trillion to $4.5 trillion, and the near doubling of the Australian population to reach 37.8 million.

Demand for passenger and freight transport is directly linked to population growth. IBISWorld projects substantial population growth, which will in turn increase the demand for freight. This makes the need for meaningful reform more pressing.

Goods transported as freight can be broadly classified into two categories:

1. **Bulk** freight includes cargo that is typically unpackaged, carried loose, and loaded directly into the hold of a ship.

2. **Non-bulk** freight is typically packaged and loaded into the transport mode by storage unit, e.g. pallet or container, and often includes ready-for-market consumer goods.

The growth in freight is set to be driven primarily by non bulk container freight. It is forecast to grow by almost 250 per cent, from 182 billion tonne kilometres in 2008 to 631 billion tonne kilometres in 2050. Non-bulk freight growth will be driven by the sustained long term growth of imports, as the Australian economy becomes increasingly reliant on international markets to meet consumer demand for goods.

Bulk freight is also set to grow, albeit at a lower rate than non-bulk freight, as international demand for Australian bulk exports eases in the long term. Bulk freight is expected to increase by 183 per cent from 321 billion tonne kilometres in 2008 to 909 billion tonne kilometres in 2050.

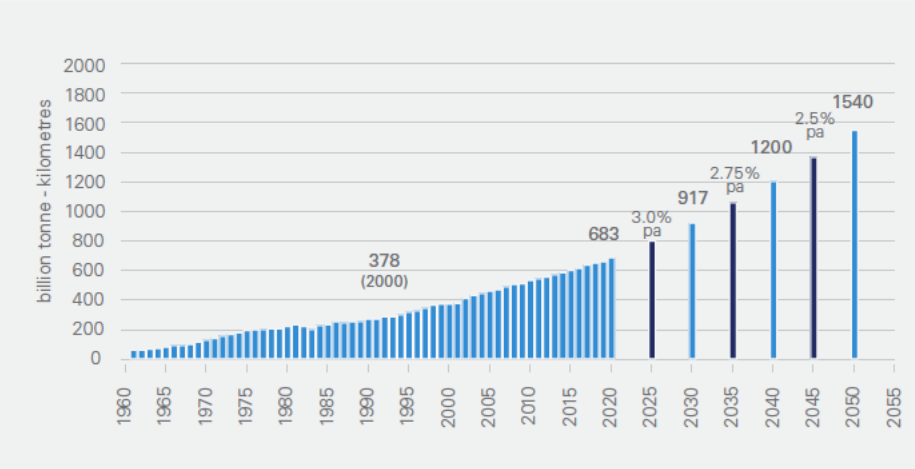
The expected growth in non bulk and bulk freight is illustrated in Figure 5, while overall growth is represented in Figure 6.

29 Unless otherwise stated, all charts and data quoted in this chapter are drawn from IBISWorld (2008). PwC has not subjected these figures to scrutiny or any form of audit.

▼ **Figure 4**

Australia's domestic freight growth, 1961 - 2050

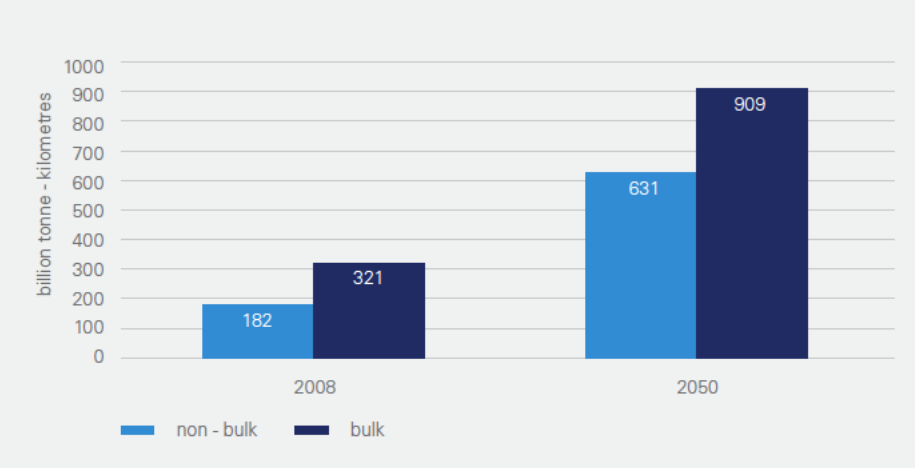
Source: IBIS World



▼ **Figure 5**

Growth in bulk and non-bulk freight, 2008-2050

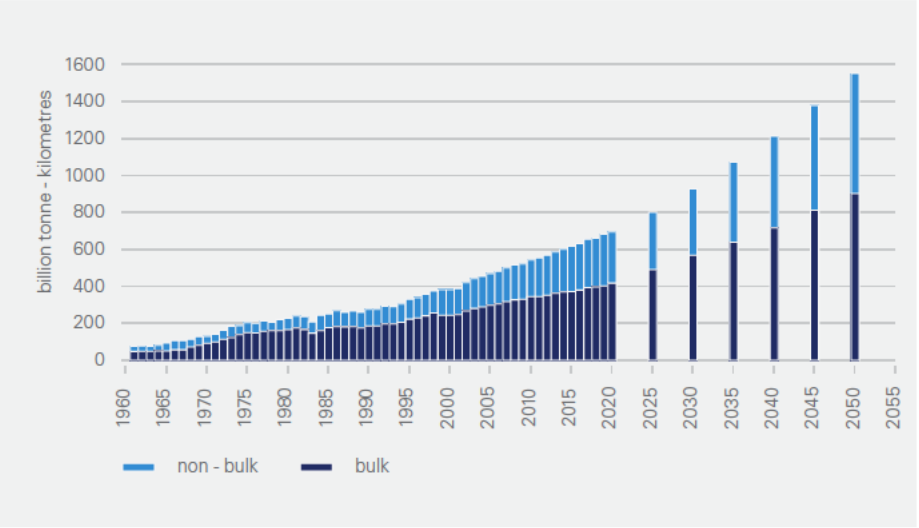
Source: IBIS World



▼ **Figure 6**

Australia's domestic freight task, bulk and non-bulk, 1961 - 2050

Source: IBIS World (2008)



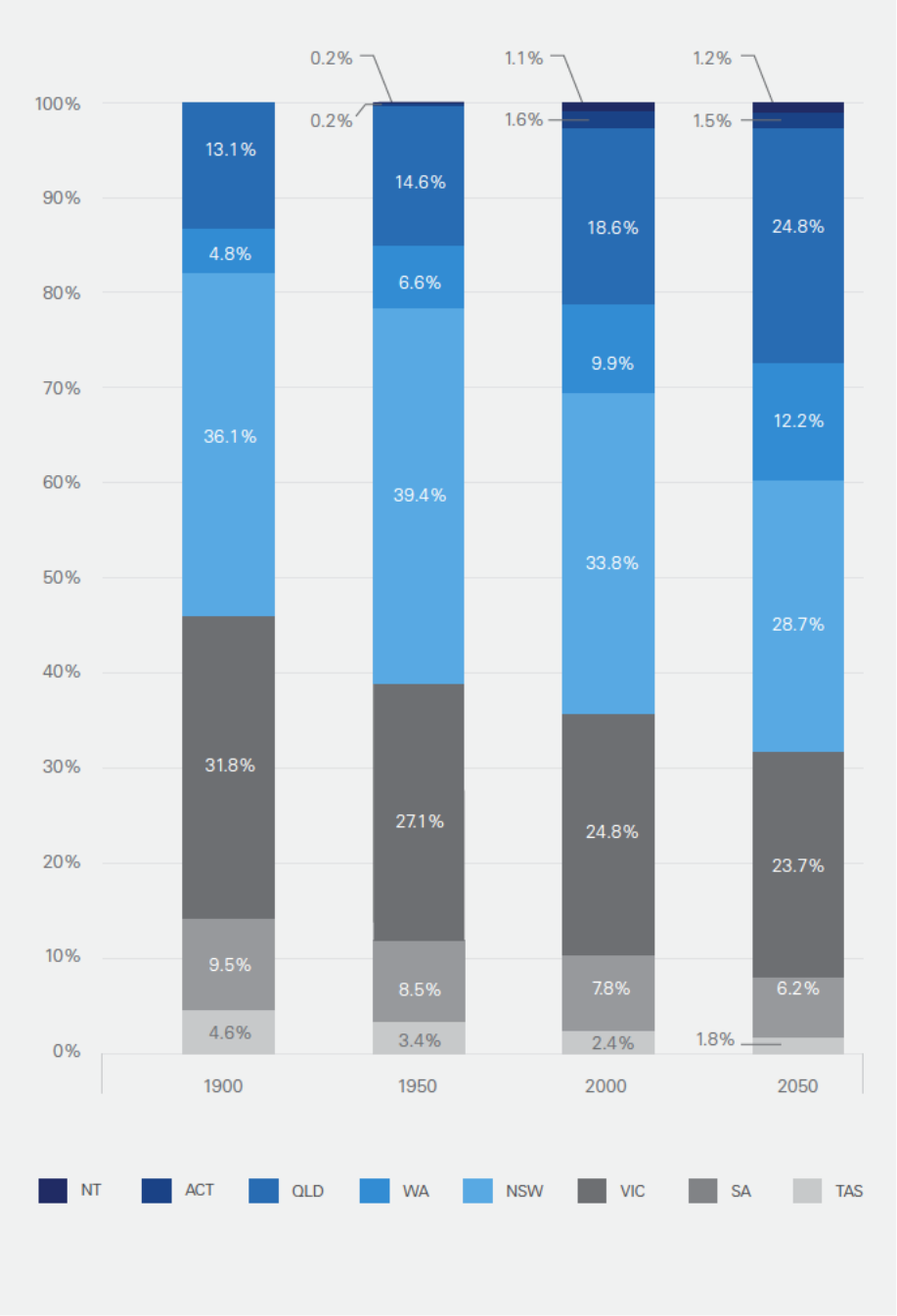
A series of other factors will further contribute to an increase in the freight task facing Australia. These include:

- demographic changes – population growth in Queensland, the Northern Territory and Western Australia will increase the required geographic reach of Australia's freight networks;
- IBISWorld projections of strong population growth along the eastern seaboard are underscored by the increasing concentration of population in the region. Forecasts indicate the region's share of the total Australian population will increase from 81 per cent in 2008 to 90 per cent by 2050. These projections are shown in Figure 7.
- structural change – Australia's changing industry mix and import/export activity;
- the mining sector will continue to grow but with different geographical patterns, as older deposits are depleted and new more distant ones developed;
- sustained economic growth is likely to lead to a significant increase in the import of manufactured goods, primarily through seaborne containerisation;
- refinement in inventory management – such as just in time supply chains and increased 24 hour shift working in logistics chains; and
- changing consumer behaviour - for example, the popularity of eBay, which has created a demand for increasingly personalised logistics requirements.

▼ **Figure 7**

Australian population distribution - shares of total by states and territories, 1900-2050

Source: IBIS World (2008)



Modal shares

The transit of international freight to Australia is naturally dominated by sea transport in both non-bulk and bulk freight. The dominance of the mode will continue to 2050 as a result of the nature of the freight task and the absence of any viable alternatives.

Domestically, the freight task is largely undertaken by road or rail, with coastal sea freight playing a less significant role, Figure 8. Road and rail have largely replaced sea freight except on the longer haul corridors within Australia, due to two factors;

- the evolving nature of road and rail freight. Both modes have experienced ongoing substantive efficiency and capacity improvements during recent years; and

- the service limitations inherent with a dedicated coastal shipping service, where efficient vessel size is large relative to the task.

Despite the dominance of particular modes within the domestic and international task, due to their specialised applications, each mode is vital in meeting the challenge of the freight task.

Air freight is highly specialised due to the inherent constraints on aircraft size and the nature of goods that can be carried. Air freight provides efficient freight services in areas that require high speed services or delivery to remote areas. Air freight therefore has a limited role, but is crucial in providing freight services for small, high value goods as well as those to remote areas. It has also traditionally played a significant role in the transport of mail.

Sea freight continues to play an important role in the domestic bulk commodity segment of the freight industry. In particular, established freight routes connecting Western Australia and Queensland have recently experienced renewed growth and profitability within the southern states, in part as a result of the location of most significant rail assets-sea freight's major competitor.

Road freight transport has traditionally been best at servicing markets that have dispersed origins and destinations and as a result road transport tends to dominate inter city freight on the shorter corridors. The introduction of larger freight vehicles, such as B doubles, has increased profitability over longer distances, allowing road to compete with rail for long-haul freight tasks such as Melbourne - Brisbane.

Rail freight is suited to high volume, bulk commodities over both long and short distances. Accordingly, rail has traditionally dominated the freight market for agricultural and mining commodities. Rail also plays a specialised role in servicing ports and other dedicated facilities where operators favour rail over road.

Within the provision of non-bulk freight services, rail is generally more suited to longer haul distances in order to offset the additional handling to facilitate inter-modal service. It is within this segment particularly that road freight has successfully captured market share from rail through the introduction of larger, higher productivity vehicles.

The freight task mode share in Figure 9 illustrates that, in a business as usual scenario, there will be a modal shift, away from rail towards road towards 2050. Over the same

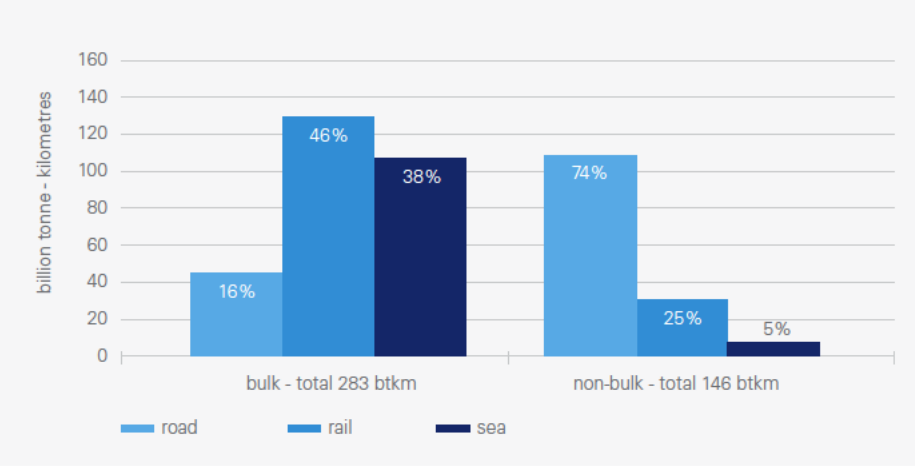
period sea freight's modal share will continue on a long term decline trend until 2020, when growth in the modal share of sea freight will resume.

The IBISWorld analysis forecasts continued growth in road's share of the freight task until 2020, to the detriment of other modes.

▼ **Figure 8**

Modal share in the domestic freight task

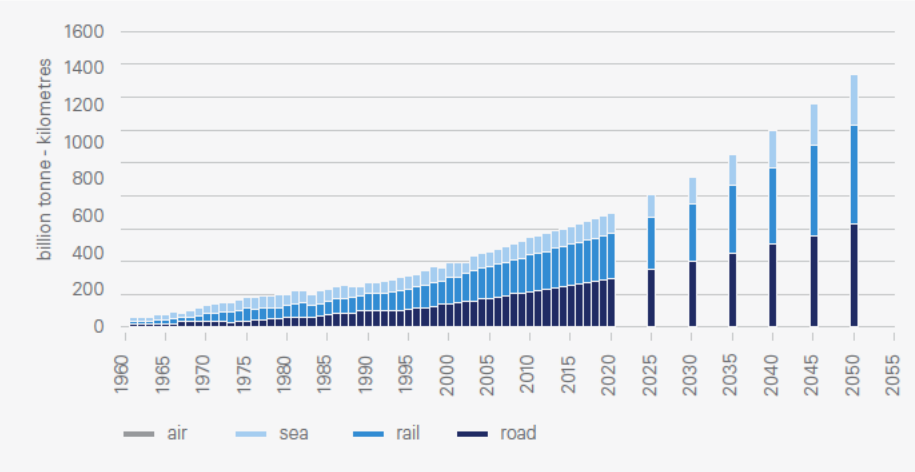
Source: Productivity Commission (2006)



▼ **Figure 9**

Australia's domestic freight task modal share, 1960-2050

Source: IBIS World (2008)
Note: Air freight is represented on this figure however as it represents less than 0.3% of the freight task it is not visible



Following 2020, both coastal shipping and rail are forecast to experience renewed growth in modal share to 2050. The growth in the two modes over the long-term horizon to 2050 will occur in response to three factors:

- national population growth – IBISWorld project the Australian population will reach 37.8 million by 2051. This would prima facie raise the transport task by some 76 per cent from 2008 levels if per capita consumption was to stay constant.
- demographic trends associated with population centres shifting to centres economically serviced by sea and rail freight, such as:
  - Western Australia, Queensland and the Northern Territory;
  - coastal communities; and
  - capital cities.
- measures to reduce carbon consumption, including the introduction of the Carbon Pollution Reduction Scheme

However, there are a number of barriers that may limit the ability of coastal shipping and rail to expand to meet demand. These barriers include the requirements for high levels of investment and, for coastal shipping, competition for capacity with international freight.

This analysis is supported by work previously undertaken by the BITRE that showed continued growth in road transport, to the detriment of rail and coastal shipping, to 2030.[30] This analysis forecast relative growth in road freight over all other modes in most corridors in the period to 2020. The exceptions to this trend were two long-haul interstate corridors:

- Melbourne–to–Brisbane corridor, Figure 10, where growth in rail freight is forecast to outstrip road freight; and
- Eastern states to-Perth corridor, Figure 11, where both coastal shipping and rail are forecast to exceed road freight growth.

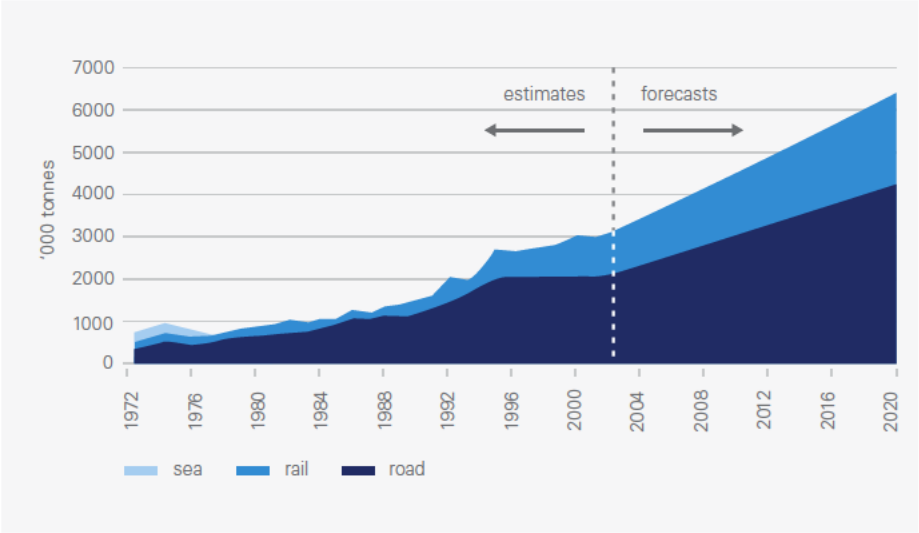
These two corridors are among the longest logistic chains in Australia and will be the first to experience the impacts of population pressures due to the high population growth projected for Queensland and Western Australia.

30 BITRE, (2006)

▼ **Figure 10**

Melbourne-to-Brisbane freight corridor by mode, 1972 - 2020

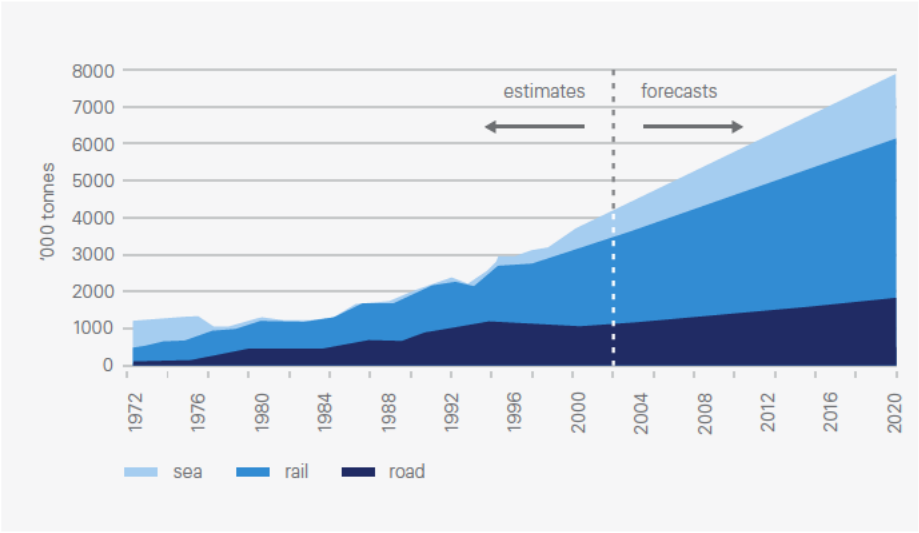
Source: BITRE (2006) pg 99



▼ **Figure 11**

Eastern states-to-Perth freight corridor by mode, 1972 - 2020

Source: BITRE (2006) pg 99



The need for multi-modal investment and the efficient use of infrastructure assets

Over recent decades, investment in transport infrastructure within Australia has been dominated by road transport. This imbalance has resulted in a substantial shift over time to the use of roads as the dominant transport mode in many major transport corridors, including some inter-city or long distance journeys that would naturally suit other modes like rail. For the first time in over twenty years, 2008 saw road funding fall below 70 per cent of total transport infrastructure expenditure to 51 per cent. The greatest proportion of this funding was redirected to rail, with harbour and ports also a major beneficiary, Figure 12.

The Australian Government is undertaking a major reform and renewal process of nationally significant infrastructure, including reform and investment prioritisation of freight networks. A stated aim of the Infrastructure Australia process includes the reversal of the perceived underinvestment in supporting infrastructure for rail and other non-road transport modes. The process spearheaded by Infrastructure Australia and supported by the economic stimulus packages has resulted in new investment in rail, port and road infrastructure.

The Infrastructure Australia Interim Infrastructure Priority List was released on 19 December 2008. The Interim Priority List contains over 90 projects, conservatively estimated as costing over $212 billion.

The Interim Priority List incorporates more than $69 billion for 40 road projects and 26 rail projects (including eight freight projects) worth over $93.4 billion. Freight rail projects alone were worth over $16 billion, equivalent to the entire national expenditure on transport infrastructure during 2008. The Interim Priority List also incorporates six port and airport projects costed at approximately $6 billion. While substantive, the projects do not address some of Australia's greatest requirements in these areas, including the planned expansion of some key export ports.

In early 2009, the Infrastructure Australia Advisory Council provided the Australian Government with its final National Infrastructure Priorities List. The Priority List detailed 10 projects for immediate funding and 28 additional pipeline projects for further analysis. Of the projects identified within the Priority List, five freight projects were identified for immediate funding with a further 19 freight projects in the pipeline. These projects included seven rail projects, nine roads, three intermodal terminals, six ports and an airport upgrade, valued at more than $32 billion.

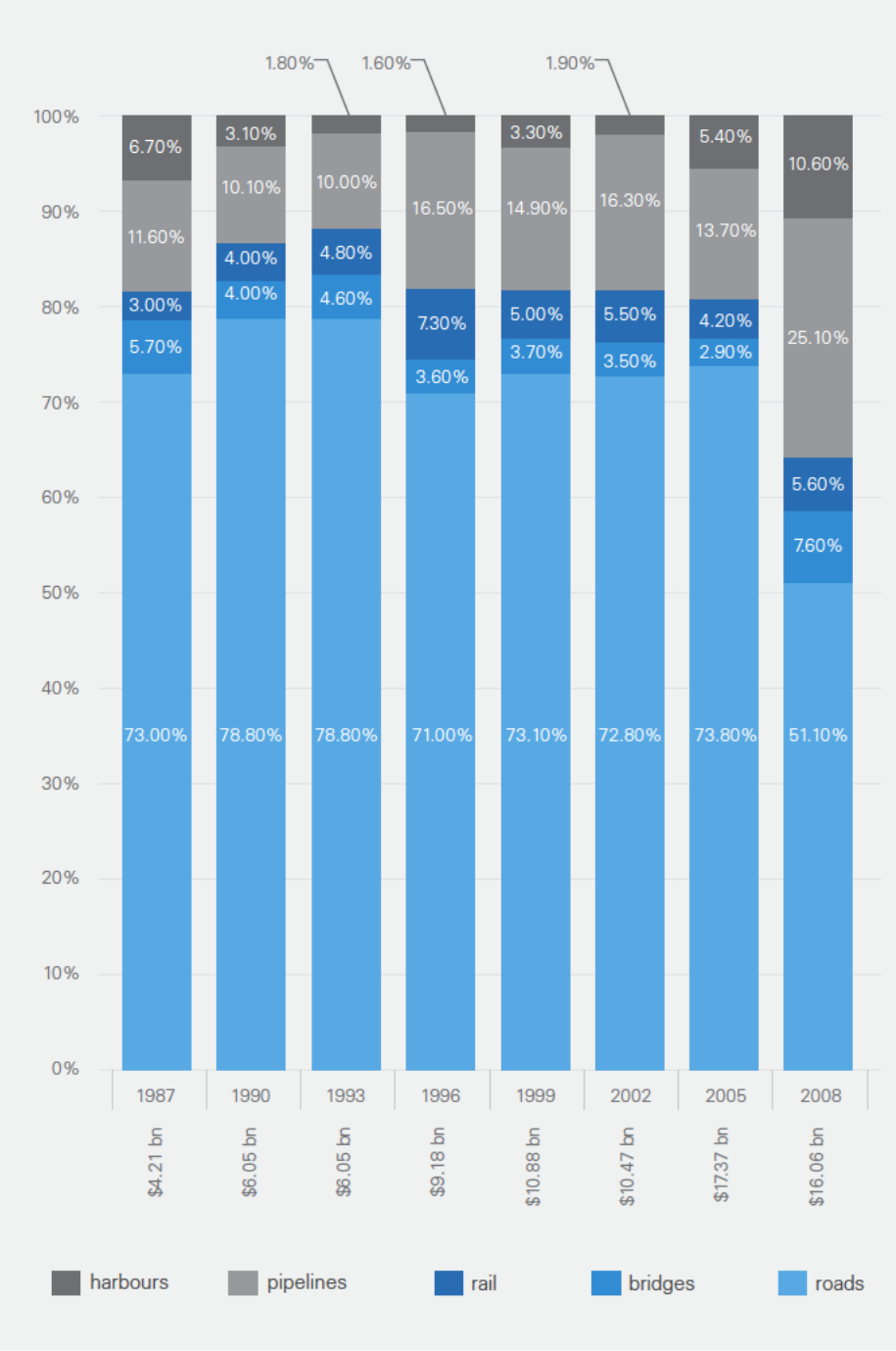
The Australian Government has significantly invested in freight projects through the 2009-10 Federal Budget and the various economic stimulus packages announced during 2008-09.

The Budget specified the use of the Building Australia Fund to partially finance five key freight projects identified by Infrastructure Australia. The Building Australia Fund will be used to provide $3 billion to three key road projects on Network 1 (N1) between

▼ **Figure 12**

Investment in transport infrastructure (per cent of total), 1987 - 2008

Source: IBIS World (2008)



Melbourne and Cairns: the Hunter Expressway – F3 Branxton Link ($1.451 billion), the Pacific Highway – Kempsey Bypass ($618 million) and the Ipswich Motorway ($884 million). In addition to the Building Australia Fund, $488 million will be made available from the Nation Building program to fund duplication of the Bruce Highway between Cooroy and Curra. Funding available for road freight projects through Budget totalled $3.488 billion.

The Building Australia Fund will also be utilised to provide $389 million for ports, including the Oakajee Port Common-User Services ($339 million) and Darwin Port Expansion ($50 million).

In addition to the freight projects funded through the Budget process, the Nation Building and Nation Building and Jobs economic stimulus packages announced during 2008-09, funded a number of road and rail freight projects. These packages included a mix of projects later identified as priorities by Infrastructure Australia, and 'shovel-ready' local projects such as the Black Spots programme, which will improve local freight movements. Approximately $4.691 billion was set aside for 15 major road projects with an additional $1.6 billion for 17 rail projects.

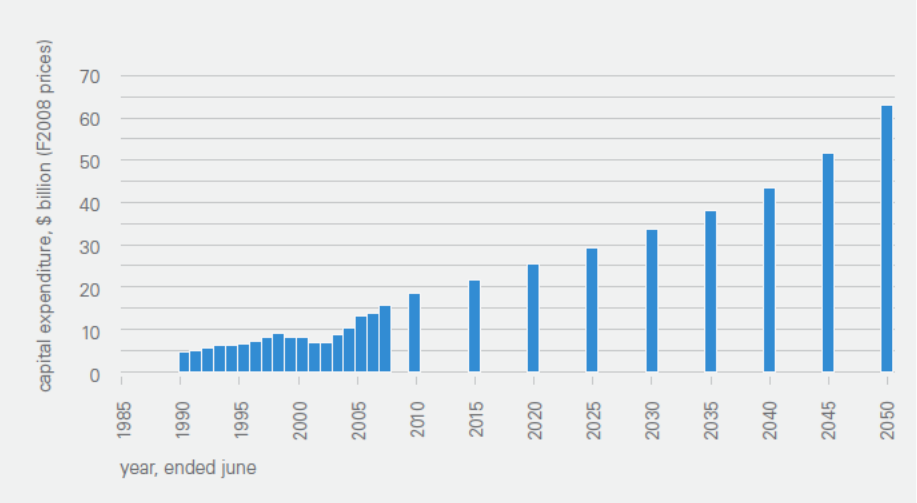
The Federal Budget and the two economic stimulus packages committed by the Australian Government during 2008-09, approximately $8.425 billion was made available in road funding (80.89 per cent), $1.6 billion for rail (15.36 per cent) and $389 million for ports (3.73 per cent).

The recent investment in transport infrastructure and the Infrastructure Australia project pipeline provide a notable signal to the market highlighting investment priorities, however there is clearly a requirement for additional funding to alleviate congestion and accommodate growth in demand. IBIS World forecast that transport infrastructure investment will require an annual increase to almost four times 2008 levels ($16 billion) to $62.5 billion per annum by 2050, Figure 13.

▼ **Figure 13**

Transport infrastructure investment (expenditure $), 1985 - 2050

Source: IBIS World (2008)
Note: Excludes airports



In order to address the 2050 freight task it will be essential that funding for new transport infrastructure is used to address underinvestment in rail and maritime transport infrastructure, followed by a return to a investment portfolio which reflects the proportional share of the various modes of the freight task. As demonstrated by the long-term trend towards road funding, and the investments through recent stimulus packages, the proportion of ongoing funding available to rail and coastal shipping will require a substantial increase. Without significant investment in new rail and sea freight capacity over the short to medium-term it will not be possible for those modes to accommodate desired demand growth.

Delivering productivity – the role of efficiency and capacity

In the last decade, efficiency and capacity has been increased by reform and innovation **within modes**.

In road, the reforms led by the NTC have partially streamlined national trucking operations, while investment in both roads and trucks has facilitated growth in vehicle size, axle loads and driver productivity.

In rail, the formation of the ARTC, investment to address the maintenance backlog, especially on the North-South corridor, and privatisation/ corporatisation of rail operators has allowed some growth in rail capacity and productivity. Following the formation of the ARTC, progress on a number of previously stalled reforms has been achieved. Recently this has included:

- the $4.7 billion Nation Building Infrastructure Investment Package announced on 12 December 2008 provides funding for a variety of efficiency boosting projects, many of which are urgently required, particularly in the Hunter coal supply chain.

- the National Train Communications System (NTCS), a single Next G communication system using GPS and wireless broadband based technology, will replace the current 'on train' communication system, which requires freight trains to carry eight different radio sets to operate in all Australian jurisdictions.

- the Nation Building package included a commitment to expand the trial of the Advanced Train Management System (ATMS) which provides a next generation train control system to deliver a safer operating environment.

Failure to provide cross-jurisdictional coordination in safety and operational regulatory requirements will continue to create inefficiencies across all freight transport modes. Further regulatory reform to facilitate the removal of inconsistencies that impact on freight transport is needed, particularly at intersecting jurisdictional boundaries, such as:

- separate driver and vehicle licensing and rules in different states and territories; and

- requirement for B-triple and quad-axle B-double vehicles to physically de-couple at various points within the network.

Due to the size of the challenge the Australian freight industry will face in 2050, it is essential that a significant wave of investment-driven improvements must also occur **across modes**. The productivity gains available from reforms targeted at single modes will not be capable of delivering the necessary productivity uplift.

Boosting public awareness of the importance of freight

Freight infrastructure usually operates behind the scenes resulting in the role freight plays in Australian society often being overlooked. We rarely visit ports, intermodal terminals or freight rail lines. This has led to a lack of awareness of the importance and complexity of the freight industry. For example, consumers have come to take for granted:

- the year round availability of local and exotic fresh fruit and vegetables on supermarket shelves;
- the ability to purchase just about any item, from any corner of the world, and have it delivered with minimal cost and delay to their doorstep (the Amazon and eBay phenomenon are examples in point);
- a wide selection of gourmet products, such as exotic foods, perfumes and artworks, which often rival domestic choice and price; and
- the reduced costs of everyday staples like food, textiles, and shoes, as well as luxury and electronic goods such as jewellery, plasma TVs and computers. Many of these goods are imported from specialised high quality producers or low cost production countries.

In reality, there are very few areas of our lives that are not enhanced by the provision of efficiently running freight networks. Even the ink on this page and the paper these words are printed on (or the computer screen upon which it is being read) will almost certainly have been part of a long and complex supply chain, at the very least including a rail trip from a local factory to an export port in its country of origin, passage by sea cargo to Australian shores, a second rail journey to an intermodal or distribution depot and then a road journey for delivery to retail markets.

Yet despite these positives, public awareness and opinion concerning the freight industry often occurs only when:

- infrastructure use or development impinges upon residential locations, especially when it poses the threat of noise or visual pollution or suppressed land values;
- transportation systems become congested as passenger and freight services compete to use the same infrastructure;
- public safety is put at risk, again because of both passenger and freight being required to share the same infrastructure; or
- consumers experience delays receiving goods purchased due to issues relating to freight infrastructure capacity.

In many ways, this negative image of freight is more damaging than the lack of public awareness, because it can lead to public opposition to investment, development and improvement of crucial freight infrastructure and therefore a lack of political support for freight projects.

A recent initiative by the BBC in the United Kingdom has sought to focus public attention on the integral role freight plays in the global economy by tracking a shipping container, and its various contents, around the world for a year. "The Box", as the project is called, will not only display the role containerised transport plays in delivering everyday consumer goods, but also the integral role of port operations, rail and road supply chains, fuel costs and bottlenecks in facilitating or hindering a journey.

A similar initiative to highlight the importance of the freight industry on everyday lives would undoubtedly have a similar positive impact in Australia and elsewhere. However, stopping short of a television series, there are a number of smaller steps and initiatives that can be undertaken to enhance public perceptions and encourage a fuller understanding of the importance of freight in our day-to-day lives:

- further research is needed to articulate the direct, quantifiable link between inefficient or inadequate freight systems and the impact this has on household budgets and the environment;

- the freight industry should, conscious of the impact that it has on individual people, engage with the general population and not just its (almost exclusively) corporate customers; and

- while individual companies can all help boost the image of the industry, the industry as a whole needs to act as one to get behind any major initiative, if it is to gain significant traction.

31 Asciano (2008) b

The consequences of failing to act

The future image painted by the IBISWorld forecasts presents a challenging task for Australia. The magnitude of growth across key corridors and across modes within those corridors will require a sustained substantive response from both the public and private sectors.

Under normal circumstances, a task of the magnitude of the 2050 freight challenge would be extremely challenging. However, given existing inefficiencies in the current use of freight infrastructure assets and insufficient historical investment, it becomes an even larger requirement.

The cost of getting the freight task wrong is immense. The impacts of investment in freight infrastructure, or a lack thereof, are seen across the entire Australian economy. The freight task affects every one of our lives. Everything we buy, sell and consume.

The freight challenge is not simply a question of how much we pay for the goods we buy. It is also directly related to the capacity of Australian businesses to grow, and in turn to create jobs. Appropriate freight infrastructure investment also contributes to an efficient commuter transport environment. This provides people with more time to spend as they desire rather than in transit, with their families, at work, in education or simply enjoying leisure time.

There is a pressing need to understand the challenges ahead and to ensure appropriate measures are taken that allow the freight sector to address these challenges. If this can be achieved, then the sector can play its part in helping the Australian economy to grow as well as achieving environmental and social goals. Meeting the freight task should be seen as pivotal to achieving the broader goals of:

- increasing the standard of living for all Australians;
- generating better social outcomes and an enhanced quality of life; and
- promoting environmental sustainability and reduced greenhouse emissions.

The current example of the coal ship queues in Australia indicates the result when supply chains are not supported by policy, planning or investment certainty.

ASCIANO[31]

THE CASE FOR NATIONAL LEADERSHIP

3. The case for national leadership

The transport of freight to, from and around Australia spans many different jurisdictions and many different modes:

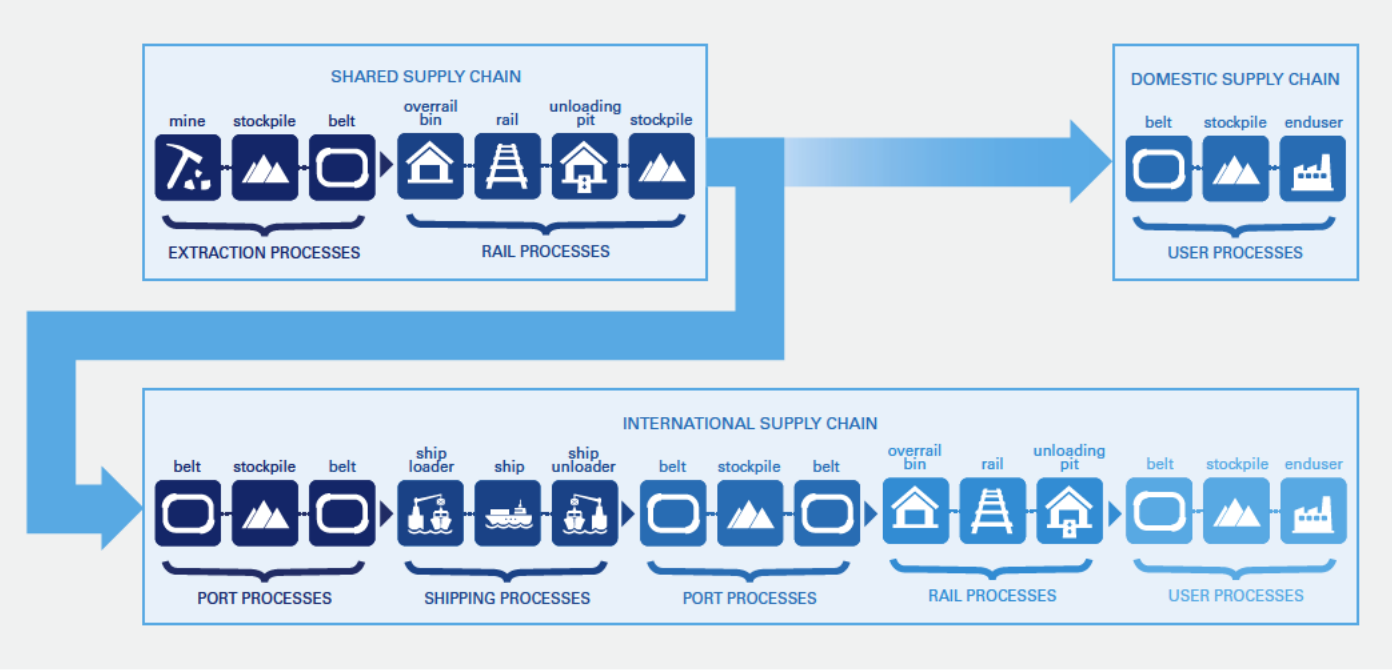
- large ocean-going vessels[32], some longer than three football fields, bring oil and bulk containers to and from our shores and export coal, minerals and agricultural products around the world.
- freight trains, some of which are three kilometres in length, move containers, commodities and agricultural products across our continent and to the nation's ports.
- bigger, faster and more efficient cargo freight and passenger aircraft transport lightweight but high-value goods to and from Australia and between our cities.
- large articulated trucks, some being over 50 metres long and weighing over 200 tonnes, move freight from mine to railhead, from city to city, from port to shopping centre, in a variety of journeys between 20 kilometres and 2000 kilometres.
- over two million light commercial vehicles deliver our shopping to our homes, parcels to businesses and supplies to schools and hospitals.

The defining feature of the freight task in Australia is the extent to which all these journeys are interlinked, forming part of long supply chains. Supply chains are becoming longer and increasingly complicated in a highly mobile global economy. This is demonstrated in Figure 14.

▼ **Figure 14**

International and domestic supply chains

Source: Adapted from Cantwell, S. (2007)



32 Some iron ore ships can carry over 350,000 tonnes in a single shipment.

33 Transport and logistics News (2008) a

A lack of clear leadership?

Despite the national and integrated nature of the freight transport industry the governance of this sector is fragmented and lacks cohesion. There are a number of national bodies that provide leadership or coordinate policy, regulation and/or investment for different aspects of the transport sector. These include:

- The Commonwealth **Department of Infrastructure, Transport, Regional Development and Local Government** (DITRDLG) has national oversight of transport issues and the control of significant funds. However, it has limited formal powers to direct coordination at the jurisdictional level.
- **The Australian Transport Council** (ATC) is designed to facilitate the co ordination and integration of all transport policy issues, but is reliant on the convergence of interests across, and cooperation and support from, jurisdictions.
- **The National Transport Commission** (NTC) is charged with leading regulatory reform, but has no direct control over investment decisions, asset ownership or operational coordination, and relies on governments to implement its findings.
- **The Bureau of Infrastructure, Transport and Regional Economics** (BITRE) provides economic analysis, research and statistics on infrastructure, transport and regional issues to inform government policy.
- **AusRoads**, the association of Australian and New Zealand Government road transport and traffic authorities, aims to promote improved road transport outcomes.
- **The Australian Logistics Council** (ALC) is a not for profit company that exists to lead the development of logistics and supply chain management in Australia, both domestically and internationally. Members include all Australian governments and senior leaders in the logistics field.
- **The Australian Competition and Consumer Commission** (ACCC) enforces the Trades Practices Act and is the competition watchdog for the freight industry.
- The newly-created body **Infrastructure Australia** (IA) advises the Commonwealth Government on infrastructure funding and reform priorities, but has no direct powers over the freight sector or related issues.

Even the rail line that runs between Perth and Brisbane has four different owners that have four different ideas, and unfortunately they can't coordinate that plan.

DON TELFORD, CHAIRMAN (FORMER), AUSTRALASIAN RAILWAY ASSOCIATION[33]

In addition, significant powers and responsibilities affecting freight reside with state jurisdictions, such as control of:

- arterial road networks;
- ports;
- some parts of the freight rail network;
- passenger rail networks, which directly affect rail freight corridors; and
- a range of regulatory functions such as safety and licensing.

Due to the different scope, purpose and powers given to each body, effective and comprehensive leadership has so far proven elusive. Institutional fragmentation has led to a lack of coordination and responsibility between the various levels of government, planning authorities and the private sector. This has had a number of significant impacts.

No single organisation has the authority to drive the freight agenda forward or to provide leadership to promote the national interest. Without this leadership, it is unlikely the sector will be able to respond to the challenges of demand growth and under-investment. For example, no one organisation has the task of researching and publicising the scale of the undertaking facing the sector in the long term so that action can be taken to meet that task.

Planning and decision-making in Australia's freight industry is "short term, ad hoc and fragmented across jurisdictional boundaries." [34] This view has been echoed by a number of other reports, which cite the significant complexity of attempting to traverse such a diverse group of institutions, all with differing structures and mandates.[35] In addition, competing interests can result in "patch-protection and bureaucratic processes [also serving in] blocking meaningful transport reform."[36]

Confusion over who has final responsibility for ensuring the national freight network meets the needs of users and society. This confusion could impede or block progress when negotiations or compromises are required. It is also conducive to blame-shifting across jurisdictions and levels of government. This has resulted in decisions failing to be made in a timely manner and a lack of progress in regulatory reform.[37]

A lack of national prioritisation for future investment in freight infrastructure assets. This results in poor public investment decisions and significant industry uncertainty, ultimately providing a disincentive for complementary private sector investment.[38]

There is no freight sector 'champion'. No single organisation has responsibility for championing freight and explaining to decision-makers and the public the importance of an efficient freight sector. This may lead to freight investments 'missing out' on funding allocations, due to a lack of fully developed, high value for money initiatives being championed during allocation processes. This also means there is no 'single voice' that has the authority to speak on behalf of the freight sector to government in policy debates.[39]

34 Department of Transport and Regional Services (2004), p viii.
35 See for example, NTC (2008) Export and Infrastructure Taskforce (2006), and the Productivity Commission (2005).
36 National Transport Commission (2008) b, pg 6
37 National Transport Commission, (2008), pg 3 and Export Infrastructure Taskforce, (2006), pg 44-45
38 Infrastructure Australia is of course designed to address this issue. Serious data deficiencies also hinder nationally prioritised and intermodal decisions. Current data is largely constrained to modes or jurisdictions, with little consistency and lack of co-ordination resulting in duplication and redundant information (as noted in reports by the National Transport Commission (2008), National Productivity Commission (2005 & 2006) and Export Infrastructure Taskforce (2005)). Subsequent uncertainties in demand and take-up rates can affect the sizing and scope of projects, resulting in either inadequate capacity or overly optimistic demand forecasts upon completion.
39 For example, the Hunter Valley Coal Chain Logistics Team, Australian Rail and Track Corporation and Infrastructure Partnerships Australia.
40 Transport & Logistics News (2008).
41 For example, the recent success enjoyed by the Hunter Valley Coal Chain Logistics Team or co-ordinated efforts led by the NTC to introduce comprehensive road pricing measures.
42 Further examples of the regulatory fragmentation across the freight industry can be found in chapter 4.
43 National Transport Commission (2008) b

Fragmented long term planning

The historical pattern of development in Australia has resulted in an enduring focus on modes of transport and local geographies. Planning has not kept up with the functional reality of multimodal, interstate supply chains or freight corridors. As a result, Australia has a disjointed freight network characterised by world class assets that often fail to 'couple' or 'link' with each other, particularly when this involves difficult or costly decisions such as increasing rail freight capacity between Sydney and Newcastle. This has been exacerbated by the division of responsibilities, governance, regulation and ownership.

The current focus on mode or location, as opposed to a supply chain or transport corridor, has had a number of impacts.

Planning is fragmented across the freight sector and there is a lack of co-ordination and integration across the national freight network.

Successful, coordinated planning efforts are rare, and are often driven by the enthusiasm and dedication of one organisation or individuals involved.[41] As a result, there is a lack of medium and long-term planning along particular corridors or supply chains.

Operations and services are also fragmented across and within modes.[42] This fragmentation can lead to inefficiencies in infrastructure use, with opportunities for collaboration to create efficiencies across or between parts of the network not taken up.

Successful coordination and integration efforts are often held back by genuine concerns or uncertainty about competition law. There is also a diffuse set of legitimate interests in any one corridor which, in the absence of corridor wide leadership responsibilities, can hinder agreement on the way ahead (see Box 1).

Drives and reinforces the complex regulatory structure. The modal mindset is reflected in the responsibility structures of state and territory governments, with components of freight networks falling under different ministerial portfolios and sitting within different government departments. While this structure may work for the operational aspects of administrating freight networks, care needs to be taken to ensure that policy and investment decisions are not made in isolation due to the organisational structures. The efficiency of infrastructure delivery can be affected by poor alignment of inter-jurisdictional planning laws, which can make development consent a complex and time-consuming task for public and private operators.

Diffuse funding sources. Similarly, the plethora of potential funding sources can also hold up the delivery of infrastructure, as agreement on who pays for what is often difficult to reach.[43]

The tight competitive market with road, where government infrastructure investment historically has favoured road over rail, has weakened rail's competitive position.

ASCIANO[40]

▼ **Box 1**

NSW Hunter Valley – export coal supply chain

Sources: Newcastle Port Corporation (2008) and New South Wales Minerals Council (2008)

The NSW mineral industry is valued at approximately $14 billion and accounts for two per cent of Gross State Product. The industry is expected to contribute $1.3 billion in coal royalties to the NSW Government in 2008 09.

The port of Newcastle, which handles coal exports from the Hunter Valley, is the world's largest coal export port and in 2007 - 08 handled 88.9 million tonnes. This represents 10 per cent of the world's total coal trade.

Since August 2003, the Hunter Valley's coal export infrastructure has been under strain and it has been claimed that significant coal export growth has been lost as a result of constraints in the system. Reports estimate that around 20-30 vessels per week are held in queue because of a lack of loading capacity. The opportunity cost due to lack of capacity in the coal supply chain is estimated to be in the order of $2 billion in lost sales between 2005 and 2010.

Private sector investment of $2.2 billion to increase port capacity at Port Waratah has been proposed. However, approval has not yet been granted as the NSW Government seeks third party access provisions for the new port infrastructure to help new entrants. The consortium behind the proposed investment believes that third party access would give competitors - who would not have paid for the new infrastructure - an unfair advantage.

An independent review, chaired by former NSW Premier, the Hon Nick Greiner, is reported to have proposed the removal of the common user provision so that the incumbent players could invest in new capacity and enter into long-term contracts, thereby ensuring certainty in relation to availability of port capacity for their operations.

During December 2008, Federal Resources Minister Martin Ferguson pressed the NSW Government for urgent resolution of the issue. Subsequently the Government released a proposal containing triggers requiring terminals to build new capacity on demand and access for new entrants and expanding producers.

Following the announcement of a proposal from the NSW Government the affected parties were given until 31 March 2009 to submit a framework for implementing a long-term access protocol. In response the ACCC issued a draft decision proposing to grant authorisation to Port Waratah Coal Services (PWCS) and Newcastle Coal Infrastructure Group (NCIG) for a short term capacity balancing system until 30 June 2009.

ACCC Chairman Graeme Samuel recently announced an agreement had been reached between PWCS, Newcastle Port Corporation and NCIG. The final remaining step, the signing of the contract, is expected in the near future.

44 Commonwealth Department of Transport and Regional Services (2004) pg viii.

RECOMMENDED ACTION: A NATIONAL GOVERNING BODY

A lack of integrated planning and coordination has been recognised by the industry and the Commonwealth Government. The White Paper underpinning the Auslink (now known as the Nation Building Program) noted that planning and decision-making in Australia's freight industry has been "short-term, ad hoc and fragmented across transport modes and jurisdictional boundaries."[44]

The economic, environmental and social importance of freight, coupled with the national inter connectivity of freight operations, means that there is a compelling case for a national solution. There needs to be national leadership and coordination of freight transport in Australia if the freight sector is to continue to support Australia's economic prosperity.

There has been some progress already in this area. Both the AusLink and ATC guidelines now include a corridor assessment approach to planning and funding infrastructure, with criteria not tied to a particular transport mode. This is an important progression away from the siloed nature of thinking about freight infrastructure that has characterised past policy and investment decisions. The Commonwealth Government has also directed the NTC to develop a national transport plan. However, more must be done.

The role of a single national governing body

The creation of a Commonwealth Government body with responsibility for developing national freight policy – or giving an existing body a new mandate - including the development of an appropriate regulatory framework and identifying key priority areas will provide a significant departure from the current regulatory and policy environment.

This proposed governing body would report directly to the Commonwealth Minister for Infrastructure, Transport, Regional Development and Local Government.

This governing body's primary role must therefore include:

- providing clear, national leadership to develop a new long term vision for the freight sector;
- developing and delivering a national freight policy and identifying key policy reforms; and
- identifying key priorities for investment and control of ongoing funding.

Key tasks for this new body would be to:

- develop user-focused, as opposed to provider-focused, plans for the future, built upon thorough analysis of trends and an identification of key capacity bottlenecks and solutions;

- build on ATC and NTC reforms to plan and make decisions across modes and geographies to embed cross-network co-ordination and deliver intermodal integration;

- advise on public investment priorities in light of these plans, taking a national perspective to prioritisation and identifying projects on the basis of rigorous, comprehensive and transparent economic appraisal;

- make recommendations on governance, structural and regulatory reform, and the ability to link Commonwealth funding to successful delivery of reforms, so that investment follows reform; and

- have the ability to make progress without the need to seek complex official or formalised agreements across jurisdictions when all parties are in agreement, except for major reform proposals.

Selection of an appropriate body

The diffusion of responsibility for freight policy and investment across a number of government bodies at various levels has significantly contributed to current governance failures. As a result, the establishment of an additional body with responsibilities within freight policy may serve only to further complicate and dilute leadership responsibilities.

The selection of an appropriate single governance body should therefore involve enhancing the role of an existing national body. The selection of the most appropriate body to undertake this task must recognise the priorities of these organisations and the capacity to of these organisations to be resourced to undertake further work.

Based on their current roles in freight and infrastructure reform, three prospective bodies are potentially appropriate institutions to act as a single freight governing body:

- The Australian Transport Council (ATC);

- the National Transport Commission (NTC); and

- Infrastructure Australia.

The ATC has led the development of many recent cross-jurisdictional reforms of the freight sector. However, as a peak ministerial council the capacity of the organisation to support an ongoing planning and implementation agenda is limited. In several areas major reforms led by the ATC have been hampered or delayed by the requirement to achieve unanimous support. Ideally the national governing body would have the ability to make binding national decisions without the need to seek jurisdictional agreement on individual issues.

Under the current arrangements, the NTC plays a significant leadership role in the development of nationally consistent, cross-modal and intermodal policy reforms in the freight sector. The NTC has recently undertaken significant planning for the necessary reform required to meet the future freight challenge through the 'Twice the Task' Report. The Report will provide a significant foundation from which to implement wider-ranging reforms of the freight sector, such as those discussed in later sections of this Report.

The role of the NTC in the advancement, implementation and monitoring of significant reforms to safety, vehicle standards and environmental regulation, such as emissions, also place the organisation in a strong position to respond to the emerging demands of a single freight industry regulator.

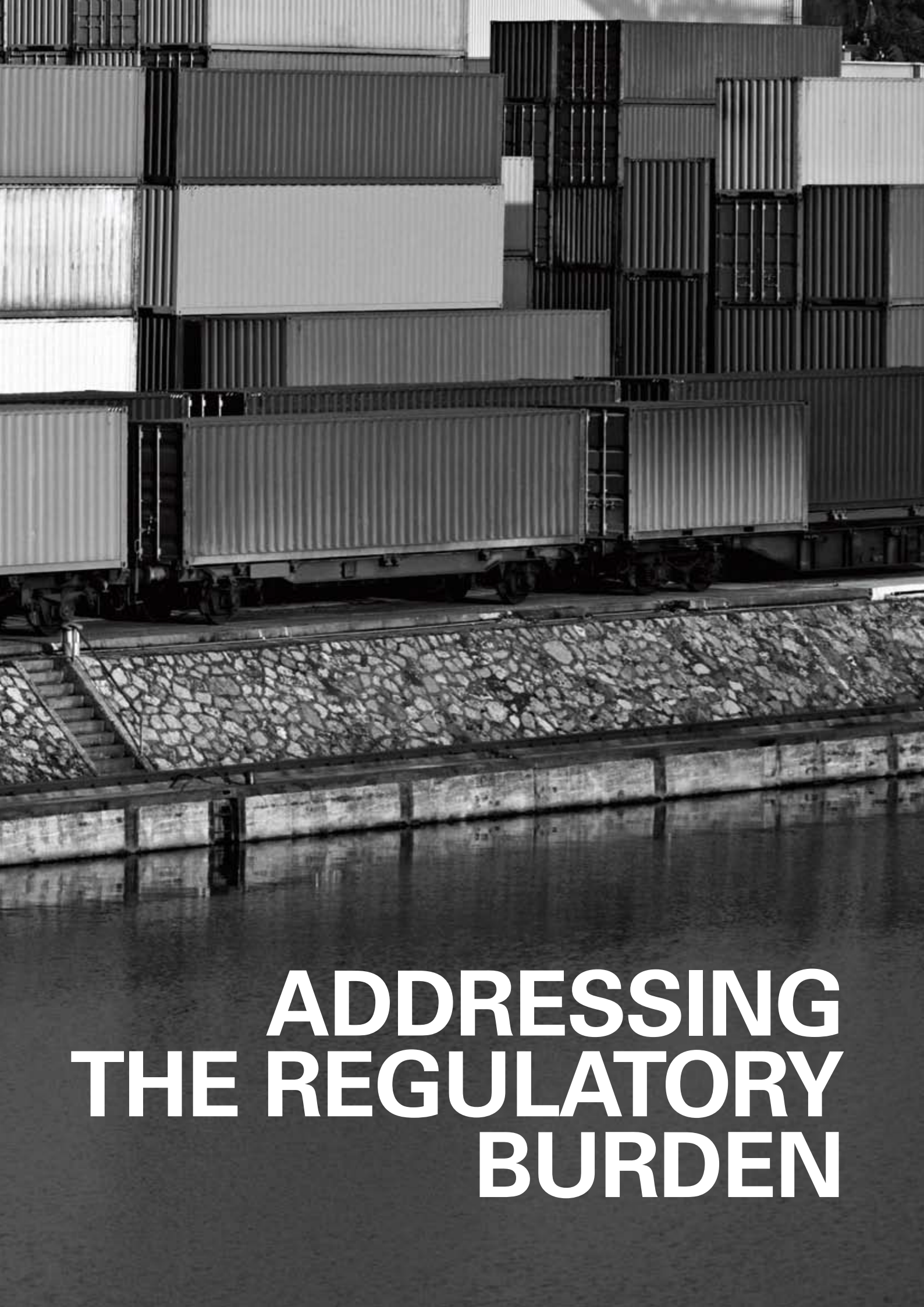
The recent infrastructure industry reform agenda lead by Infrastructure Australia has been instrumental in the prioritisation of infrastructure investment and the identification of regulatory reform. The role of infrastructure reform in supporting growth in the domestic and international freight task was identified as a key objective in the agency's Report to the Council of Australian Governments.

The role of a single national freight governing body would involve a mix of the relative strengths of the NTC and Infrastructure Australia: regulatory reform and investment prioritisation respectively. The identification of a single body would therefore build on the success of these two organisations.

This recommendation would best be delivered through the expansion of the powers of the NTC or Infrastructure Australia.

RECOMMENDATIONS

1. The Commonwealth Government should establish of a national freight coordination body with responsibility for developing a national freight plan which:
    - Provides clear, national leadership to develop a new long term vision for the freight sector;
    - Develops and delivers a national freight policy, identifying key policy reforms; and
    - Identifies key priority projects for investment and has strategic control of ongoing funding.
2. Adopt a planning and regulatory approach that is integrated across both jurisdictions and modes of transport.



ADDRESSING THE REGULATORY BURDEN

4. Addressing the regulatory burden

While a number of these blockages for urgent attention are infrastructure upgrades requiring government investment, many are relatively inexpensive regulatory or planning solutions, such as better planning for access to intermodal terminals and significant ports

IVAN BACKMAN, CHAIRMAN, AUSTRALIAN LOGISTICS COUNCIL[45]

Maximising the efficiency of freight assets requires a market and governance framework that gives priority to the freight task, provides incentives for private sector participation and integrates freight decisions into broader transport planning and delivery.

Freight assets typically have many natural monopoly characteristics, and the current profile and regulation of Australia's freight assets reflects the legacy of long standing government owned/operated monopolies and oligopolies.

Experience has shown existing market contestability arrangements and regulatory frameworks do not currently generate the most efficient use of freight assets.

The key priority for the freight sector is to review and address:

- **Market structures** surrounding freight assets. These will reflect the natural monopoly characteristics of freight infrastructure and the optimal market structures required to create incentives for operators to invest in additional operational efficiency, capacity and quality;
- **Regulatory frameworks** to minimise barriers to effective competition and balance the interests of investors and users of freight infrastructure to ensure the efficient provision of nationally significant freight assets; and
- **Pricing mechanisms** to ensure prices reflect the true financial and economic cost of freight services, recognising the role of price signals in achieving modal parity within the market.

It is critical to ensure that regulation is not used as a substitute for efficient market operation, and that appropriate market structures are created to allow for 'lighter touch' regulation that sends clear market signals to participants and encourages efficiency.

Efficient market structures

Over the last 20 years, in most developed economies, there has been a marked move away from government ownership and regulation of infrastructure with monopolistic and oligopolistic characteristics. This has been replaced with private infrastructure ownership and independent public regulation of the market.

Australia is no exception to this phenomenon. Regulatory and structural reforms introduced under the National Competition Policy (NCP) have led to a 2.5 per cent, or $20 billion, increase to Australia's GDP since 1990.[46] These reforms have boosted Australia's productive growth and played a key role in contributing to exceptional economic expansion, both in historical terms and relative to other countries.

Beginning in 1990, the electricity sector was the first to undergo significant structural reforms under the NCP framework. This involved dismantling poorly performing and fragmented government owned monopolies and creating a well regulated and competitive national electricity market.[47] These reforms are estimated to have delivered around $16 billion in benefits between 1995 and 2010 and led to real falls in electricity prices of some 24 per cent on average for all end-users since 1991-92.[48]

45 Australian Logistics Council (2008) b
46 National Productivity Commission (2005) pg XVII
47 For more detail on the structural reforms within the energy sector refer to Asia Pacific Energy Research Centre (2000), pg 77
48 Asia Pacific Energy Research Centre (2000), pg 77
49 National Productivity Commission (2005), pg 212

The NCP reforms in the electricity, water and telecommunications sector illustrate that the creation of a well functioning market is often the result of direct government restructuring. Regulation then plays a crucial role in the operation of the market once this structure has been defined. Regulation should facilitate efficient market structures, not act as a substitute.

While the NCP agenda led to some reforms within the freight sector, the Productivity Commission notes that:

> *"Unlike the energy and water sectors, there has not been a comprehensive and integrated national reform agenda for Australia's freight transport sector. Rather, reforms have traditionally been developed and implemented in a piecemeal fashion across transport modes and jurisdictions."*[49]

Current market structures within the freight sector do not always promote or encourage the most efficient use of freight infrastructure assets. The fact that many of these assets will display monopolistic or oligopolistic characteristics is no justification for this outcome. As demonstrated by the NCP reforms within the energy and water industries, markets can be constructed that result in the very efficient use of previously monopolistic or oligopolistic assets.

Some of the problems with the existing market structures for freight infrastructure assets include:

- inadequate levels of innovation in pricing reflective of long history of government ownership;
- underinvestment in capacity and quality infrastructure due to an absence of competition and limited financial capacity;
- a lack of private sector participation in infrastructure planning and delivery; and
- an excessive regulatory burden and inefficient market structure, as a result of multiple layers of regulation attempting to force efficiency rather than provide incentives.

The primary task for creating optimal market structures is to introduce as much competition as is required to create the incentives to:

- minimise costs;
- encourage innovation to ensure long term capacity; and
- provide adequate rewards for managing risks.

Implementing this next phase of nationally integrated structural reforms will present a greater challenge than previous reforms. However, experience from other sectors shows that it is possible and that the benefits delivered will flow on to the Australian economy.

RECOMMENDED ACTION: A REVIEW OF MARKET STRUCTURES

A detailed examination of how to progress market reform is a logical first step to ensure that benefits continue to flow to the Australian economy. Clearly, the precise nature of these reforms needs careful consideration and the NTC is already progressing reform in some areas.

This suggests that one of the first tasks for the new national body should be a timely, but comprehensive, review of the market structures currently defining the freight industry. It should make recommendations for further market structure reform. The review should consider, among other things, the following issues:

- conflicting priorities arising out of government ownership and regulation of assets operating in a commercial market place;
- the rate of progress towards the creation of a national market for freight infrastructure, i.e. the progress in creating nationally consistent access pricing and other reforms under the auspices of the NTC; and
- the inefficiencies and complexity caused by multiple access regimes in the freight sector.

RECOMMENDATION

3. Review the structure and operation of the freight market to ensure competitive neutrality between modes of transport and that the market is able to function efficiently, including streamlining access regimes and acceleration of pricing reforms.

50 National Productivity Commission (2005) pg 215
51 The Productivity Commission noted in its Road and Rail Freight Infrastructure Pricing report (p.47), the short-run marginal costs are the additional costs of providing one extra unit, given existing infrastructure capacity whereas the long-run marginal costs include the additional capital costs of meeting additional demand. Short-and long-run marginal costs are equal when capacity is optimal.
52 BITRE (2006)

Price distortions

The Productivity Commission identified *'achieving greater neutrality of pricing of road and rail infrastructure' as one of the more difficult issues in achieving efficient modal distribution'.* [50]

Achieving appropriate price models for all transport modes is essential to ensure appropriate sharing between each mode and within those modes. It is however important to recognise that additional costs imposed on the freight industry will result in increases of the cost of Australian exports on the global market place, as well as goods consumed within Australia.

It is therefore essential that a new model for modal pricing is applied across all modes and ensures appropriate cost burden within modes. In addition, if pricing is to be used as a tool to encourage modal-switching it is essential that sufficient capacity exists on alternative modes to ensure the transport and logistics industry can respond to changing demand.

The differences in road and rail infrastructure provision and charging arrangements lie at the heart of suggestions of competitive distortions between modes.

Broadly, these distorted signals imply that freight journeys are not necessarily being priced based on the overall lowest long-run cost to the community.[51] The current system of pricing, as it relates to all modes, fails to fully consider factors such as infrastructure development and maintenance costs, journey distance, vehicle mass, time of day as well as a range of externalities, such as greenhouse gas emissions and noise.

One consequence of the inefficient market structures and regulatory processes outlined above has been mixed pricing signals and ongoing distortions in the true cost of freight movements. This has led to a lack of consistency in cost recovery between and within modes.

BITRE has argued that infrastructure pricing should encourage two key objectives:

- to promote efficiency of use, so that users do not impose greater costs on society than they are willing to pay for in the short-run; and

- promote efficiency in investment, so that total costs for society over the longer run are minimised through adequate and timely investment.[52]

The role of these two factors is complicated by the role of economies of scale and the role of secondary asset use. The role of these factors and traditional pricing methodologies as they relate to specific freight modes varies greatly.

A significant body of work has recently been commissioned to examine the implementation of user charges based on the mass distance model. Work on this model to date should form the basis for future work to determine a pricing regime inclusive of broader externalities, where the cost is currently borne by the community.

The mass-distance location charging regime for road freight, being progressed through the NTC and COAG, is a strong step towards gaining consistent modal cost recovery. It is clearly important for long term success that the new regime is implemented in its entirety.

RECOMMENDED ACTION: ACCELERATE PRICING REFORM

The structure of a new pricing regime should as a primary purpose seek to encapsulate social and environmental externalities. Future pricing arrangements for both public and private infrastructure should be guided by the principles of recovering true financial and environmental costs of usage. Incorporating the latest technology and world's best practice into pricing systems will help to achieve this across all modes.

Since substantial reforms are underway, the key task now is to effectively implement the reforms. The new national governing freight body should be tasked with:

- setting out a plan to accelerate the reforms;
- overseeing the implementation of the pricing regime; and
- reviewing the impact of the new pricing structure and recommending further reforms, if and when necessary.

However, the administration of the access pricing regime and the altered registration and licensing regime should be undertaken by a separate, service delivery body. Consideration should be given to the use of private sector tolling expertise in the development, operation and ownership of the collection of revenue from a new pricing regime.

The implementation of the regime should be overseen by the Australian Government Department of Infrastructure, Transport, Regional Development and Local Government on an ongoing basis.

RECOMMENDATION

4. Implement a new national multi-modal pricing regime that incorporates social and environmental externalities.

53 Australian Logistics Council (2008) b
54 Exports and Infrastructure Taskforce (2005), pg 2.
55 Australian Logistics Council (2008) a
56 Export Infrastructure Taskforce (2005), pg 36-37
57 National Productivity Commission (2005) pg 214
58 Export Infrastructure Taskforce (2005) pg 2
59 Synergies (2008)

Regulatory complexity

Following the determination of the appropriate market structures for industry, it is essential that legislative arrangements are developed to ensure the smooth and efficient running of these markets. Existing regulation in the freight sector is complex and burdensome. This has been highlighted in a number of studies, including:

- a recent Export and Infrastructure Taskforce (EIT) report, which described the economic regulation system currently overseeing freight markets as "adversarial, cumbersome, complicated, time consuming, inefficient and subject to gaming by participants".[54]
- the Australian Logistics Council recently identified regulatory consistency as one of its top four infrastructure priority action areas to improve supply chain efficiency.[55]
- a recent survey by PwC found that the regulatory environment for their supply chains is a major challenge for 40 per cent of surveyed Australian industrial products companies. It rates as second only to rising fuel costs as a concern in the minds of senior executives.

A lack of clarity or consistency in regulation within jurisdictions, between jurisdictions and between industries was raised as a significant concern by both the EIT[56] and the Productivity Commission.[57] These inconsistencies have included:

- separate driver and vehicle licensing and rules in different state and territories;
- rules which require B-triples and some B-doubles to be physically adjusted (decoupled) as trucks cross jurisdictional borders;
- multiple environmental protection regimes; and
- multiple rail safety regulators.

Furthermore, dispersion of responsibility for different parts of the freight transport task adds to the complexity and burden of regulation. There are nine economic regulators across Australia, all applying different legislation and placing their own interpretations upon this legislation.[58] Even within a single regulator, substantial differences may apply to the regulation of different industries.

The frustrations associated with multiple regulatory regimes are best illustrated in the rail freight sector. Operators seeking access to the freight network need to deal with the operators of numerous infrastructure assets. All operate under different regulatory bodies, with conditions of access heavily dependent upon separate, differentially regulated, access agreements.

The rail freight industry has been described as '*one of the most over regulated industries in Australia*'. A recent report by economic consultancy Synergy estimated the '*unnecessary or avoidable*' costs of compliance with safety rail regulation as $42 million per annum. [59]

The current system of nine rail regulators and no single communications system is leading to delays and significant additional cost, impacting on rail's competitiveness in carrying the growing freight task

IVAN BACKMAN, CHAIRMAN, AUSTRALIAN LOGISTICS COUNCIL[53]

The pan-Australian operation of Pacific National requires dealing with six access regulators. This is not only a substantial commercial and administrative burden, but also impacts the operational efficiency of freight operations.

ASCIANO

Synergy further notes the significant cost of compliance with regulation. Synergy projects the true costs of complying with safety legislation, including efficiency costs, as up to $207 million per annum – roughly equivalent to the projected economic contribution of the proposed Enfield Intermodal Terminal.[60]

A national rail operator would potentially be required to comply with the requirements of:

- seven rail safety regulators with nine legislative and regulatory codes;
- three transport accident investigators;
- fifteen Occupational Health and Safety (OHS) Acts;
- six access regulators; and
- seventy-five environmental management Acts.[61]

Clear disjunctions exist in the regulatory environment that governs Australia's intermodal supply chains. The impact of this is manifested in many ways, including through:

- acting as a brake on commercial decision making and innovation, due to the long delays in reaching regulatory decisions;
- uncertainty as regulatory decisions do not necessarily create precedents to guide future decisions;
- an increase in the overall cost of the regulatory process, to infrastructure owners, operators, users and the regulatory bodies;
- inconsistent regulatory standards and requirements between modes results in market distortions as regulation may inherently reduce the prices of one mode relative to another, e.g. road vs rail; and
- decisions made within one jurisdiction contain little consideration of how they affect other jurisdictions or aspects of the supply chain, resulting in unnecessary complexity and costs being introduced into supply chains.[62]

In order to optimise freight networks it is essential that policy-makers and industry leaders are able to rationalise the arrangements that currently exist, and in the process implement new world-class systems.

60 Property Council of Australia (2006)
61 Asciano (2008) a
62 Exports and Infrastructure Taskforce (2005) pg 36 - 46
63 Transport and Logistics News (2008) a
64 Infrastructure Australia (2008)

RECOMMENDED ACTION: A NEW REGULATORY FRAMEWORK

Infrastructure Australia has already called for world-class infrastructure to be complemented by world-class regulation of this infrastructure.[64] Ideally, future regulation will revolve around simplicity and be 'light handed'. Such an environment would encourage private sector participation, innovation and flexibility to respond to evolving market conditions, ultimately improving the economic outcomes for Australian businesses and consumers.

To achieve this, the new national governing freight body should be tasked with reviewing the existing regulatory framework and making recommendations on the future regulation of the freight sector. Priority areas of reform should include:

- licensing and registration standards for freight and heavy vehicle operators;
- freight rail communication systems, including 'smart infrastructure' standards for use on below-track and above-track assets;
- environmental assessment regimes, including the implementation of a national environmental approval process;
- heavy vehicle and rail safety standards; and
- occupational health and safety standards and regulations.

The regulatory reform process should aim to achieve greater inter-jurisdictional consistency, simplicity and reduced compliance costs. To drive these reforms, recurrent Commonwealth Government funding available for state and territory government transport initiatives, should be linked to achieving identified reform outcomes.

In addition to the review of regulation, the enforcement programme accompanying these reforms should be examined and enhanced.

RECOMMENDATION

5. Review the regulatory environment for the freight sector and recommending changes to reduce the regulatory burden, including the possibility of establishing a single national freight regulator – with core responsibility in the areas of safety and environmental regulation.

A single regulator with one set of business processes and systems will cut red tape and allow rail operators to get on with the real job at hand – growing their business safely and playing a greater role in the growing transport task.

NICK DIMOPOULOS, CHIEF EXECUTIVE, NTC [63]

CREATING A WORLD-CLASS INVESTMENT ENVIRONMENT

5. Creating a world-class investment environment

Infrastructure investment leads to productivity gains when it is the cause of, not a reaction to, economic growth

EDDINGTON REPORT, UNITED KINGDOM[67]

Australia is one of the most attractive countries for private infrastructure investment.[65] However, it is clear from industry commentary and numerous independent inquiries that there is substantial room for improvement.[66] Adopting the recommendations specified in the previous chapter would represent a significant step towards achieving the required improvement. However, there are still a number of barriers that need to be dismantled, from an investor's perspective, to create a truly world-leading environment.

The formation of Infrastructure Australia is a promising step towards such an environment. The prioritisation process and resulting pipeline of required infrastructure will give investors clarity and allows long term strategic planning. New public private partnership (PPP) guidelines will provide welcome consistency, both across industries and jurisdictions.

More can be done: greater confidence as to financial viability and project delivery can be developed and greater engagement with the private sector can enhance project outcomes and financing capacity outside of public budgets. Such changes will help boost Australia's freight capacity through better use of public and private resources in a timely manner. It also sends a clear, positive message to foreign investors.

Barriers to private investment

The current investment environment, while progressive by world standards, displays a number of characteristics that act as a deterrent to both public and private investment. These include:

A need for greater prioritisation and clarity around future priorities To assist investors and operators to plan their approach to infrastructure in Australia, government should develop a clear and transparent long term pipeline of projects, which are integrated and multimodal to reflect the operational realities of freight supplies chains. This pipeline of projects should be incorporated into the national freight plan proposed in Chapter 3.

Projects in the pipeline should have an agreed delivery strategy, including financing arrangements, with the public sector contribution made clear. In particular, such a pipeline would encourage the private sector to allocate additional resources to their Australian operations in the knowledge that a good range of opportunities are forthcoming. This increases the level of competition for Australian assets. The creation and mandate of Infrastructure Australia, including the determination of long term investment priorities, has played a key role in resolving this issue.

65 Cheatham and Oblin (2007)
66 For example see PC (2005 and 2006) and EIT (2005)
67 Eddington (2006)

Uncertainty over commercial terms of private infrastructure ownership and development This clouds private investment decisions and, in the past, has led to sub optimal outcomes. The importance of certainty is heightened by the long lead time and ramp up periods required before returns from the substantial investment required in freight infrastructure start to emerge. Examples of this uncertainty are stevedores in major port facilities, who, without long term commercial certainty (for example long-term property leases), can be reluctant to invest in major capacity upgrades and efficiency improvements. Likewise, the average age of rail rolling stock in Australia is 20 years compared to eight years in the United States. Uncertainty around line access arrangements, intermodal facilities and pricing signals contribute to the reluctance of companies to invest in new rolling stock.

Uncertainty and inconsistency in financing guidelines for private infrastructure investment across jurisdictions and industries This increases the initial cost and complexity of the investment and diminishes the security on returns once the infrastructure is operational. The national PPP guidelines produced by Infrastructure Australia are an important step in the right direction. However, outstanding differences in approaches between jurisdictions add a layer of uncertainty and complexity for business.

A lack of private sector investment opportunities This stems from the tradition of public sector investment in and ownership of, key elements of fixed freight assets – notably port and railway infrastructure serving freight users. However, the current growth in demand for freight services implies that governments will need to harness private sector finance to ensure required infrastructure asset upgrades can be delivered in a timely manner and deliver the right outcomes for private sector operators. These investments will need to be co-ordinated across jurisdictional borders due to the nature of integrated supply chains, developed under a clear framework and assessed on a national basis.

The long life and capital requirement of rail and sea freight assets Due to the long life and high cost of investments in rail track, rolling stock and locomotive investments as well as port infrastructure and sea freight vessels, a high degree of market certainty is required for new investment decisions to be made. Current industry uncertainty is compounded by a lack of clarity over future pricing regimes, the costs associated with transition to a low carbon economy and economic circumstances.

A complex and often contradictory planning and approvals process This can stall or block the ability to use either public or private funding in a timely manner, acting as a barrier to market entry.

Need for greater private sector participation in planning and decision making Decisions by governments or regulators need to better facilitate the private sector contributions on the practical operational and commercial implications. This would increase efficiencies along supply chains as decisions would have been made with the full information on how these decisions affect other jurisdictions or parts of the supply chain. This process would also access the high quality working practices and efficient usage of assets, which are the hallmarks of private sector operations.

Uncertainty surrounding third party access regimes for privately owned infrastructure Third party access regimes for privately owned or maintained freight infrastructure assets are under consideration by several government jurisdictions and the judicial system. The question of third party access to privately owned freight assets, including rail lines, port facilities and some private roads, requires timely attention by government to provide the certainty necessary to encourage investment in private infrastructure.

Allowing third party access to private infrastructure allows competing players to share nationally significant infrastructure. This approach is clearly economically efficient as it avoids the unnecessary duplication of infrastructure. Nevertheless, the granting of third party access has clear costs to the owners, and other users, of freight assets, and so it is equally clear that the asset owner should receive fair recompense through access fees and some priority access protecting their rights to use infrastructure.

If infrastructure owners are not fairly compensated for these costs there will be a major disincentive to future investment. Therefore there is a strong case that third party access regimes should allow owners to recover reasonable returns from providing access to its infrastructure to avoid such regimes becoming a deterrent to private investment in infrastructure.

Third party access regimes therefore need to achieve an efficient balance between promoting investment and guaranteeing access - or risk achieving neither.

However, achieving the balance is not necessarily straightforward. For example, to encourage investment, third party access arrangements should allow infrastructure owners to price access in a manner that fully reflects the costs of access and to negotiate access arrangements that seek to minimise these costs. However, this may reduce the ability of third parties to access infrastructure, thus limiting competition and the benefits that arise from it.

A case study in the uncertainty that can be created by third party access and the difficulty in 'getting it right' is the use of rail assets in the Pilbara, as described in Box 2.

▼ **Box 2**

The Iron Ore Railway Network within the Pilbara

Within the Pilbara region three major miners, Rio Tinto, BHP Billiton and Fortescue Metals Group, own considerable rail and port infrastructure assets linking their extractive operations with export markets.

A railway subsidiary of Rio Tinto, Pilbara Rail, operates the largest privately owned rail network in Australia, including over 1100 kilometres of track. According to Rio Tinto, the company has spent, or committed to spend, US$8.6 billion since 2003 upgrading its infrastructure and expanding its mine-to-port network.

The success of the Pilbara railway network is largely attributable to the light-handed negotiate and arbitrate regulatory environment that has operated in the region.

A significant development with respect to these infrastructure assets has been the application by Fortescue for a third party access declaration of parts of BHP Billiton's and Rio Tinto's Pilbara Rail networks. These applications have been made under Part IIIA of the Trade Practices Act 1974.

In September 2008, the High Court ruled that the Pilbara Rail lines did not constitute 'the use of a production process' and therefore should be made available to third party access. This decision departed from existing precedence on the third party access issue and hence added to uncertainty surrounding the likely outcomes of third party access requests – an environment that complicates future decisions on private sector investments.

During October 2008, the Australian Treasurer, the Hon Wayne Swan MP, supported the ruling opening Goldsworthy railway and Rio Tinto's Robe River and Hamersley lines to third party access regimes for 20 years.

Despite the Treasurer's ruling on access to the rail infrastructure, the issue remains unresolved. Rio Tinto and BHP Billiton have both signalled their intention to appeal the decision to the Australian Competition Tribunal. A decision on this appeal may take over 12 months to be handed down.

The Western Australian Government has committed to a process to formulate a third party access regime for haulage services for iron ore. The key objective of the proposed regime is to provide for fair and reasonable access to the Pilbara railways.

The Assistant Treasurer and Minister for Competition Policy, the Hon Chris Bowen MP, has announced the Commonwealth Government in cooperation with the states and territories will conduct a review of Part IIIA of the Act. It is expected that new legislation streamlining the applications under the scheme will be presented to Parliament in mid-2009.

The current uncertainty characterising the market is clearly impacting on the ability of infrastructure providers and operators to make investment decisions. Central to the successful resolution of the issue will be the ability of government to deliver a regime achieving two objectives:

- priority access to infrastructure and fair compensation for owners; and
- support for the most efficient infrastructure solution and fair access to spare capacity for third parties.

RECOMMENDED ACTION: CREATING A POSITIVE INVESTMENT ENVIRONMENT

The work currently being undertaken by Infrastructure Australia will have a positive impact, helping to create an environment more conducive to investment. To further support the Infrastructure Australia process, it is recommended that:

- prioritisation of nationally significant freight project investments occur in an independent and transparent manner;
- recommendations are supported with the appropriate levels of funding and political commitment across all levels of government; and
- future tranches of funding, of national significance to the freight sector, be subject to the same analytical rigour as the Building Australia Fund and allocated via the same transparent prioritisation process.

The full capacity and resources of the private sector could be harnessed more productively if these four additional reforms are enacted.

Create more opportunities for the private sector.

Over recent decades, significant infrastructure developments have occurred where private companies have been free to invest where the market deemed investment was necessary. The investment of the private sector has occurred through partnerships with governments, such as alliancing and PPPs, as well as direct private sector investment, such as in the mining and minerals sector.

Through the greater facilitation of private investment by government, the community would be able to better capitalise on the skills and financial assets of the private sector.

The introduction of a gateway model, whereby public procurement of major projects, over $50 million, are required to examine private, as well as public, funding solutions should should be an initial step in project development.

One opportunity for this to be achieved is through a requirement on state Auditors General to examine current delivery model decisions and also the viability and compliance to their public sector comparators. In particular, state governments should be required to examine private funding solutions, including PPPs, before seeking Commonwealth Government funding.

68 Infrastructure Partnership Australia, The Australia Industry Group and the Australian Constructors Association (2008)

Take more risk in the public sector

Government has a clear interest in ensuring that long term operational and capacity targets are met. Private sector investment will be important to achieve the necessary investment levels to support this capacity increase. However, it will be essential to examine ways to improve potential commercial returns in order to encourage investment. In particular, the government could seek to take on more risk, with a number of options potentially facilitating this including:

- Infrastructure Australia or another Commonwealth entity forward-purchasing capacity and recovering the return on this investment in a higher user charge when the capacity is taken up;

- Commonwealth investment of patient equity (or a loan arrangement) that ultimately provides a suitable return for the risk taken; or

- by adjusting the rules relating to appropriate user charges for regulated assets, whereby generating a higher rate of return for owners would encourage capacity enhancements.

Include the private sector in the decision making process

This will ensure that the commercial, operator and user perspectives are taken into consideration. Building on the success of the Infrastructure Australia Advisory Council, the national governing freight body should be overseen by a similar governance structure formally incorporating public and private sector expertise.

In particular, the private sector should be encouraged to develop new proposals. An example of this is the approach has been adopted by the Chilean, South Korean and South African Governments.

Under the Chilean model, firms that approach the government with a project idea that is sufficient, and is in turn adopted, receive a 10 per cent project cost bonus if they compete in the tendering process. This approach increases the opportunity for the firm to compete within the tendering process and receive remuneration for the effort associated with the unsolicited project proposal's preparation.

Additionally, the firm from which the unsolicited bid originates also has their intellectual property rights protected for three subsequent years if the project is rejected and receive compensation if another company then wins the contract.[68]

It would be essential to ensure transparency in such a process, subject to the same evaluation parameters and scrutiny as solicited bids. However, such an approach would overcome concerns around protection of intellectual property and opens up a further avenue to new and innovative solutions.

Seek innovative and progressive financing and delivery methods

The design and implementation of flexible infrastructure funding initiatives has the ability to attract greater private sector interest in infrastructure investment and to ensure maximum benefit to all public and private stakeholders.

For example, the UK is pioneering a "partnership" approach to key assets where the private and public benefits of the assets are shared.

The United Kingdom Department for Transport (DfT) has designed an innovative framework to encourage private sector investment in crucial infrastructure that supports broader national transport policy goals. The scheme involves co-funding strategic development and transport solutions that have multiple beneficiaries beyond the private developer.

For example, under the model, rail enhancements to provide direct access to new port facilities, where the developer is the prime beneficiary, would be fully funded by developers. However, if enhancements such as new motorway lanes or bridges that also benefit a much wider section of the population (for instance, commuters) were required, the project would be co-funded by the government and the private sector.

A project is only considered eligible for co funding if it aligns with the wider policy goals of transport policy. The degree of public funding is underpinned by rigorous data collection and economic analysis, with the government contributing an amount determined by the total proportion of the benefits that flow to the wider community.

RECOMMENDATIONS

6. Pursue reforms that create a favourable environment for private sector investors, including the application of a gateway model for procurement.

7. Commonwealth Government infrastructure funding, including the Nation Building (formerly Auslink) program, should be linked to the achievement of identified reform outcomes.

8. Actively seek private sector involvement in long term planning through the appointment of an advisory board to the national freight governing body as well as through supporting private sector project development.

National emissions trading – the impact of uncertainty

Australia's establishment of a national greenhouse gas emissions trading scheme in response to climate change is sound economic and environmental policy and important for our future sustainability.

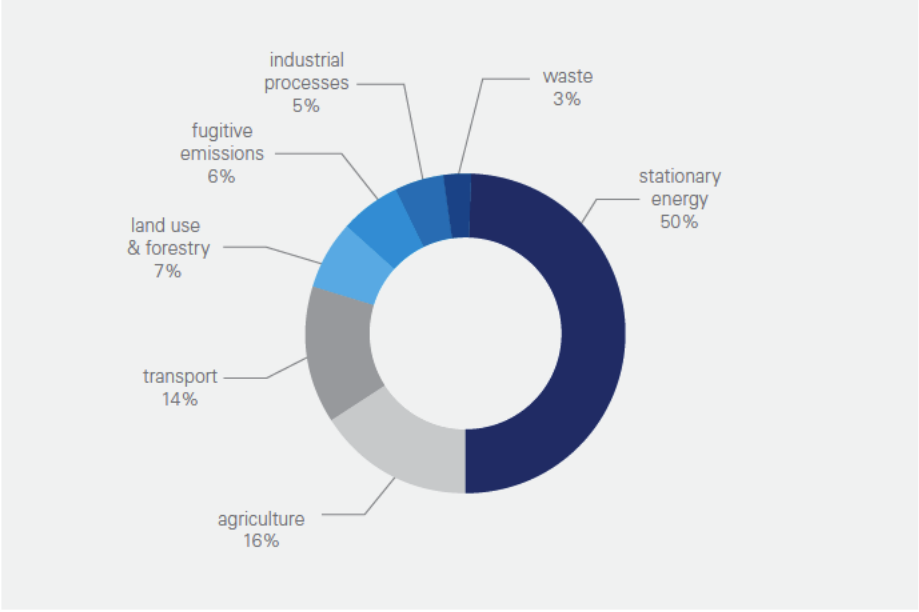
The proposed CPRS is the first emissions trading scheme in the world to include transport sector emissions. Other schemes, such as the European Union ETS have, to date, covered emissions from the energy and industrial sectors. As a result, the impact of emissions trading schemes on the transport sector is untested.

The freight transport industry is a significant user of energy and the emitter of greenhouse gas emissions and the CPRS will have an impact on the sector. The transport sector accounts for approximately 14 per cent of Australia's total greenhouse gas emissions. Heavy and light commercial road vehicles account for over 50 per cent of total transport related emissions and rail approximately two per cent.

▼ **Figure 15**

Sectoral share of Australian greenhouse gas emissions

Source: Department of Climate Change (2008), National Greenhouse Gas Inventory 2006



This is a window of opportunity for rail. We believe a stronger rail sector has a significant contribution to make in improving transport safety and reducing carbon emissions.

NICK DIMOPOULOS, CHIEF EXECUTIVE, NTC

The transport sector faces unique challenges in achieving emissions reduction. A paucity of alternative fuel options and technologies, and reliance on government investment and policies in support of transport infrastructure all shape the [freight] transport choices made in Australia.

ASCIANO[69]

The CPRS will create a new cost for some transport operators, which may flow through to customers in the form of higher freight prices.[70]

Despite this, the sector welcomes the introduction of the CPRS and recognises the important role that the freight industry will need to play in helping Australia reach its emissions targets.[71]

The CPRS is likely to encourage a shift from emission intensive modes of transport (e.g. road based) to less intensive modes (e.g. rail and coastal shipping) where in the context of other relevant factors it is operationally and economically justifiable to do so. Within modes, it may encourage use of more efficient vehicles and operations, and switching to the use of less emission intensive fuels.[72]

Such shifts will happen over time as the market responds to price signals. The industry's operations and investment patterns will adapt to these new price signals as they would any other change in market structure. However, reaction is likely to be slower than some other sectors given the long lead times required for infrastructure investment and development. This has the potential to create a degree of transitional disruption and will affect the time in which definite reductions in greenhouse gas emissions can be achieved.

The proposed CPRS structure has the potential to create further short term investor uncertainty in the following ways:

- **Pricing anomalies:** concessionary treatment of road freight compared to rail under the CPRS could have significant implications and is likely to distort the market in the short term, favouring road over rail while the concessions are in place. The possible exemption for international ships from the scheme risks compounding modal imbalances by creating an pricing incentive for the use of these vessels. These anomalies would exacerbate current market distortions and discourage long-term decision making.

- **Design and impact uncertainty:** the (largely unavoidable) uncertainty around the introduction of the scheme and the early price of carbon creates difficulties for investors. They are likely to be nervous about making large scale commitments in such an uncertain environment.

69 Asciano (2008)b

70 In the CPRS the government has undertaken to reduce fuel taxes to offset the initial price impact on fuel associated with the introduction of the CPRS scheme on road transport. Similar benefits will be available to businesses in the agriculture and fishing sectors, which are essentially unaffected by changes in excise.

71 Bilfinger Berger Australia & Infrastructure Partnerships Australia (2008)

72 Government can incentivise this switch: for instance the Australian Railways Association has proposed accelerated taxation depreciation for environmentally friendly rolling stock and infrastructure, since sympathetic taxation arrangements will encourage the introduction of new technology to speed faster deployment of environmentally efficient investment.

73 Further details on the suggested emissions trajectory and short term implications of the CPRS on the freight sector can be found in Bilfinger Berger Australia & Infrastructure Partnerships Australia (2008)

- **Emissions trajectory and review period:** the speed with which emission reductions are required and the period of time over which targets must be met may influence the level and type of investment in freight transport capacity. Large infrastructure investments such as rail links have long lead times and a clear, long term emissions trajectory will be important in supporting informed investment decisions.[73]

- **Transitional assistance:** The proposed transitional assistance, including the cuts to fuel excise and excise equivalent customs duty (fuel tax), for households and businesses will create uncertainty in the freight market and therefore delay the transition to low emissions transport modes, principally rail and sea freight, and perpetuate urban congestion issues.

- **Application of 'equivalent carbon cost' to shipping:** the inclusion of a specific measure to levy an 'equivalent carbon cost' on international ships carrying domestic cargo is an important initiative to ensure the competitiveness of domestic sea and rail freight against international vessels transiting on domestic freight journeys.

Nevertheless, within the context of the 2050 freight challenge the impact of these short term uncertainties will be relatively small and transitory in nature, assuming the efficient and equitable operation of the CPRS in the medium to long term.

In light of the current global economic situation it may appear that there are arguments for delaying the introduction of the CPRS beyond 2011. However, in the context of long term freight planning further delay would have a negative impact, since prolonged uncertainty would extend the period in which there would be inconsistency in price signals resulting from transitional arrangements.

Furthermore, the introduction of the CPRS makes it all the more important to achieve the reforms highlighted elsewhere in this report. These reforms have the potential to reduce costs, which will offset any additional costs associated with the introduction of the CPRS.

RECOMMENDED ACTION: MAINTAIN COMMITMENT TO THE CPRS

The key factors in assuring that the medium and long term impact of the CPRS on the freight sector is beneficial are:

- the scheme should be implemented on schedule in 2011, in order to reduce the period of uncertainty for the sector; and
- transitional arrangements should be short term, allowing the sector to adjust and respond to undistorted price signals as soon as possible.

In addition, policies to support a reduction in carbon emissions from the transport sector could complement the CPRS and reduce costs to the sector. Such policies could help to address the causes of high transport emissions that are beyond the direct control of freight transport operators (i.e. operational inefficiencies caused by network-wide issues). For example:

- targeted investment to address bottlenecks;
- development of effective strategies for intermodal terminals;
- mapping networks for high productivity vehicles; and
- fiscal measures to reduce congestion.[74]

Over the longer term, policies should focus on developing capacity in low emission modes along high volume corridors and encouraging investment in the research and development of low emission technology.

RECOMMENDATION

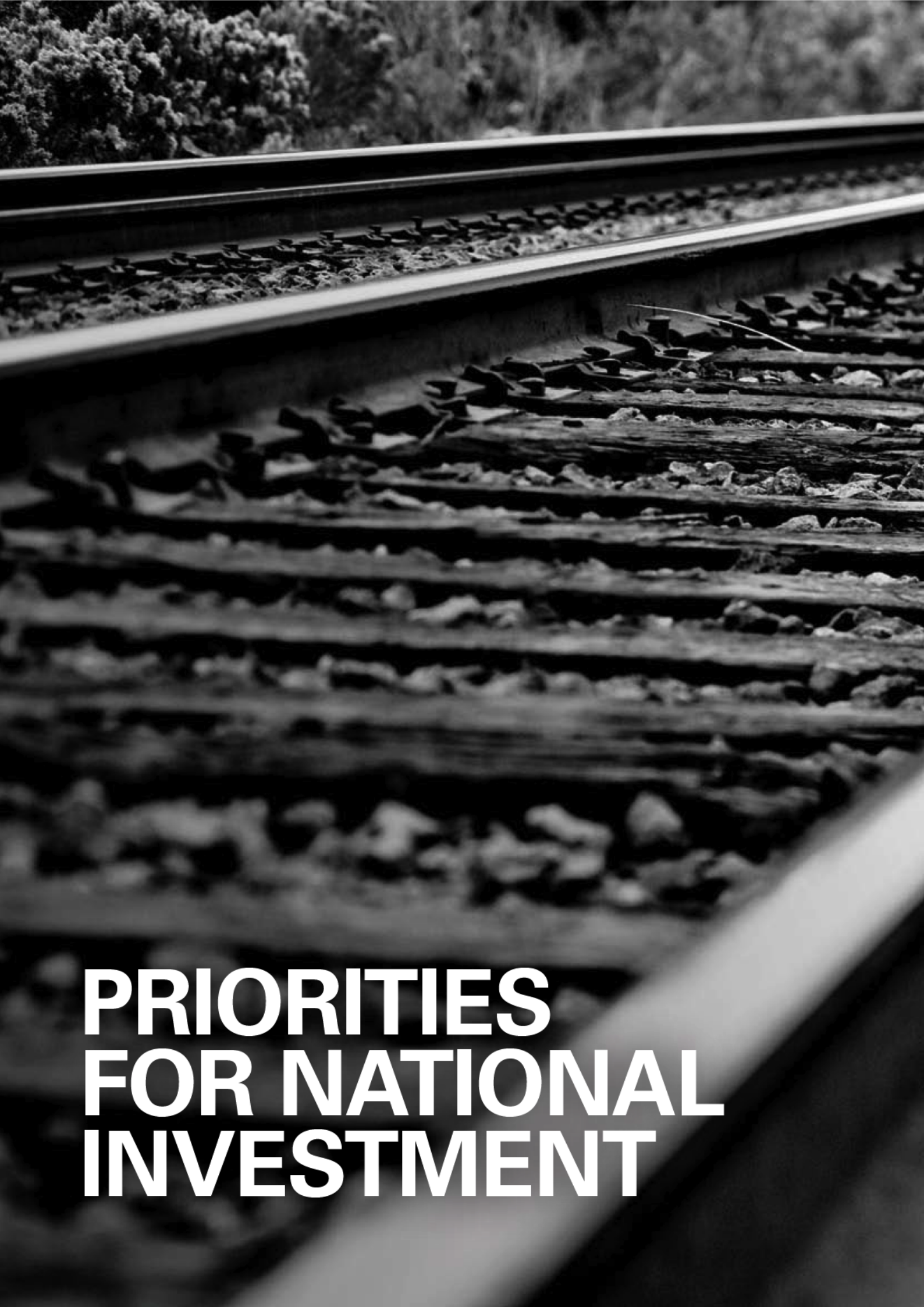
9. Maintain implementation of the CPRS, as Australia's emission trading scheme, in order to reduce uncertainty impacting investment decisions within the sector. The proposed transitional assistance should be mode neutral, potentially through applying the assistance to aviation, rail and maritime industries in addition to road transport.

Specific opportunities for reform and investment stemming from the CPRS include:

- accelerated pricing reform to more equitable pricing of externalities across transport modes; and
- increased government support for the development and use of hybrid and biofuel compatible heavy road and rail vehicles as well as sea vessels.

74 National Transport Commission (2008)


NO SMOKING



PRIORITIES FOR NATIONAL INVESTMENT

6. Priorities for national investment

The Commonwealth Government's Nation Building Program is a welcome reform to the national infrastructure market. Collaborative reform of the legislative and regulatory environment is essential to drive efficiencies in the freight sector. However, as described in Chapters 4 and 5 above, these reforms must also be complemented by investment from both the public and private sector in infrastructure that will build capacity, the benefits of which will flow through to the broader economy.

The Global Financial Crisis has resulted in a significant downgrading of the budget outlooks for most Australian governments, reducing their capacity to invest in freight infrastructure. The Commonwealth Government has signalled that implementing previously committed to Nation Building Program over accelerated timeframes will be a central tenant of the national response to the economic crisis.

It is essential that both the public and private sectors are able to invest in key capacity building infrastructure that will produce multiplier effects through the broader industry.

In line with previous recommendations in this paper calling for coordination in planning, investment in the freight sector must be based on an integrated approach. The investment environment must recognise the role that all modes will play in meeting the challenge posed by the trebling of the freight task by 2050. There are a number of priority areas that funding should be directed towards to ensure that this challenge can be met.

The following are put forward as priority areas for investment, acknowledging that thorough cost-benefit analysis would need to be undertaken prior to any investment being agreed to ensure that projects with a strong benefit cost ratio are pursued.

Investment made today will provide a foundation for the sector and economy over the coming decades. Investment must recognise the role that each mode and modal integration will play in meeting the challenge posed by the trebling of the freight task by 2050.

Interstate and inter-capital city transport

The optimal operating environment for rail freight involves transport of high quantities of goods over long distances. As such, the major east-west and north-south interstate corridors provide the greatest opportunity for rail to provide a more competitive solution than road.

A significant program of renewed investment to upgrade and increase capacity on the main rail freight corridors within Australia has the potential to realign the share of the freight task between sea, rail and road. This investment will also lead to improved environmental outcomes, due to transitions to lower emission modes.

East-West Corridor

The east-west rail corridor carries over 80 per cent of freight travelling on this corridor by land, up from around 60 per cent in the 1990s. The increased use of rail in the corridor

75 Marchant (2008)
76 ARTC (2008)
77 Ernst and Young, (2006)

follows a period of significant investment in increasing reliability and capacity within the corridor during the early 2000s.[75]

ARTC has recently undertaken works to allow double stack containers on the east-west corridor. Double stacking is available for all services between Adelaide and Perth. Ideally, cost-benefit analysis would also be undertaken to examine the viability of measures to extend capacity for double stacking beyond Adelaide to Melbourne and Sydney. This work should be coupled with other industry initiatives such as the examination of future intermodal terminal capacity in Sydney and Melbourne.

During June 2008, works to increase the clearance at six structures on the railway between Parkes, New South Wales and Crystal Brook, South Australia, were finalised allowing higher capacity rolling stock to use the Parkes-Perth section of the Sydney-Perth corridor.

It is essential that investment in the corridor is sustained over coming decades, targeting the further development of capacity, reliability and efficiency. It is important that a comprehensive cost-benefit analysis is applied to the modification of existing assets within the corridor as well as potential alternate routes on the corridor, to support high capacity rolling stock, including double container stacking.

North-South Corridor

The ARTC recently stated *'This corridor has been languishing for decades with significant falls in market share since the 1960's.'*[76]

A report for the former Australian Government Department of Transport and Regional Services (now the Department for Infrastructure, Transport, Regional Development and Local Government) in 2006 found rail operations on the corridor were not competitive with road freight.[77] Furthermore, the corridor's inter-capital reliability was poor, with fewer than 50 per cent of trains arriving on time, and service availability was not competitive with road freight.

Despite the current deficiencies of rail along this corridor, Asciano and QR estimate that one intermodal train between Brisbane and Sydney has the capacity to replace approximately 145 trucks, save 45,000 litres of fuel and reduce greenhouse gas emissions by 130 tonnes.

The ARTC has invested substantially to address many of the areas of past neglect on the corridor. However more is needed to enable a major long term role for rail. The ARTC is nearing the end of a $1.6 billion investment in the eastern coastal route. In the short-term, this work is expected to deliver savings to transit times and increased capacity on the corridor.

The case for a new 'inland' railway connecting the major capitals of the eastern seaboard was also recently assessed. The study is an important part of the Australian Government's long-term plan for the future of the Melbourne-Sydney-Brisbane corridor. The first stage of the study found the inland route should follow existing track for the majority of the route, excluding the section between North Star and Brisbane via Toowoomba.

High productivity vehicles

High productivity road vehicles were first introduced to Australia during the 1980s. Over the following period, Australia is generally accepted to have adopted the most progressive approach to these vehicles of OECD countries.

Since 1996, year on year growth in the take up of high-productivity road vehicles has averaged over 28 per cent, Figure 16, however the proportion of these vehicles to rigid vehicles remains low, three to 17 in 2005.[78]

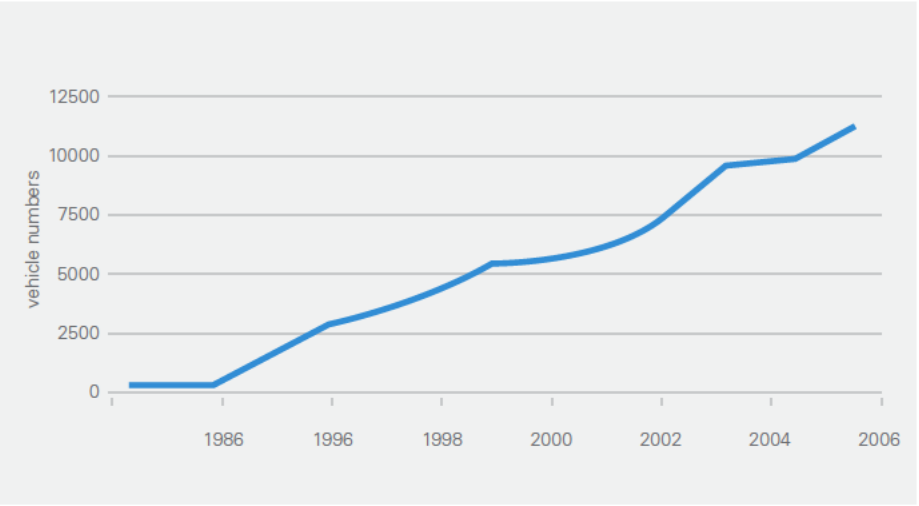
The further use of high-productivity vehicles has the potential to reduce total freight journeys and many negative impacts associated with freight, such as noise and greenhouse gas emissions.

Reforms to support access for high productivity vehicles to additional sections of the network have the potential to improve the efficiency through increased capacity and/or usage. This will improve the freight sector's ability to meet the 2050 freight challenge and help expediently alleviate existing bottlenecks.

▼ Figure 16

Growth of B-doubles in Australia

Source: Victorian Department of Transport (2008)



78 Hassall (2005)

Road and rail freight transport could benefit greatly from a series of reforms to promote the use of high productivity vehicles. These reforms include:

- creating nationally accepted standards for the use of B double and B triple vehicles including guidelines to ensure appropriate access plans to the road estate, recognising safety issues.
  - The Australian Government has announced a reform programme aimed at streamlining inter-jurisdictional arrangements for the road freight sector. These reforms are welcome and much needed.
- increasing the capacity of existing and proposed rail networks to support high capacity rolling stock, high-power locomotives and increased train lengths.
- to support high capacity coastal shipping, consideration must be given to the expansion of current port facilities including through additional berths and channel dredging.
  - consideration must also be given to the investment programme underway to support the expansion of international freight and how the domestic freight task could leverage these investments.
- investment in supporting infrastructure upgrades, such as bridges and tunnels, to handle new and higher weight vehicles.
- consideration of maintenance impacts of increased axle weights on network assets.
- safe heavy vehicle operating environments. For instance, some foreign jurisdictions have placed limitations on access for some vehicle types to some areas of the road estate.
- a national heavy vehicle registration scheme.

'Sydney's existing intermodal network for export and domestic containers comprises six relatively small intermodal container terminals that will be significantly capacity constrained before 2020'.

ERNST & YOUNG[79]

Intermodal facilities

Intermodal facilities provide vital additional capacity for over crowded port and airport facilities. The existing network of intermodal terminals servicing Australian ports and airports, while generally sufficient to meet current demand, will simply fail if faced with a tripling of the freight task as projected by IBISWorld.

In order to meet the demand for additional domestic freight capacity to service airport and port facilities, it is essential that a national system of intermodal facilities, serviced by both road and rail, is established. In order to facilitate this process, governments will need to prioritise the identification of land for the construction of intermodal terminals and the establishment of suitable links to established road and rail corridors.

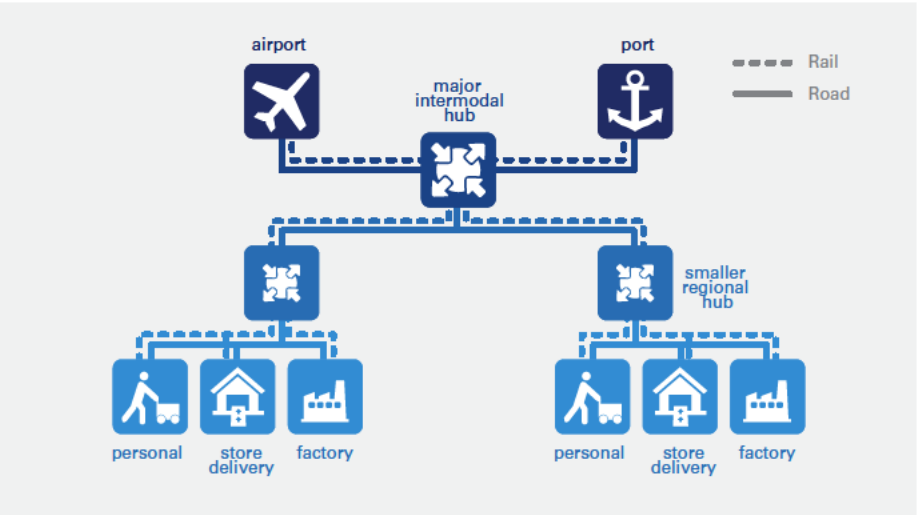
IPA supports a freight transport model that uses multi-level intermodal facilities. For example, a model that is based on a single major intermodal hub, serviced by road and rail and feeding multiple smaller regional facilities, requires further exploration, see Figure 17.

A multi-level intermodal facility has the potential to reduce congestion and promote the development of high capacity transport links. In particular, high capacity, specialised rail links between major intermodal facilities, ports and airports could significantly reduce congestion.

An example of this type of model is that introduced by Australia Post to facilitate the creation of mega-processing centres, supported by smaller regional distribution hubs. The new system created a two tier transport network, the first being the disparate customer locations to smaller regional hubs, with the second more centralised tier focused on journeys between these hubs and the mega-processing centre.[80]

▼ Figure 17

Multi-level inter-modal freight network



79 Ernst and Young (2006)
80 Hassall (2005)
81 Saha International and Infrastructure Partnerships Australia (2007)
82 BITRE (2006)

Ports and airports

Ports and airports are the gateways for both international and domestic freight to Australian markets. Airport and port facilities in most Australian cities and major export hubs are already near capacity. The ability of these facilities to expand is severely limited by access to suitable land for the establishment of new facilities and transport links, due to their proximity to urban areas.

In order to facilitate the long-term development of air and sea freight facilities a number of reform measures to increase the life of established assets, and to facilitate the development of new facilities, could be considered:

- additional land is set-aside under regional and metropolitan planning strategies to support the construction of expanded port and airport facilities, supporting transport corridors and intermodal facilities;
- provision for larger ships, including dredging and investment in land-side infrastructure; and
- establishment of Special Economic Zones for encompassing clustering of major industries supporting economic assets, such as ports, airports and intermodal terminals. These zones would be governed by special bodies established as collaborative ventures between Commonwealth, state and local government[81].

Metropolitan areas

Australia's major metropolitan areas represent many of the greatest barriers to the efficient operation of the freight network. Congestion in metropolitan areas impacts on the operation of both passenger and freight services, on both road and rail.

BITRE have estimated the costs of road congestion on the Australian economy will reach $20 billion by 2020, with around $7 billion of that borne directly by business.[82] The cost of congestion, and other effects of non-freight rail demand, such as the use of curfews in Sydney, are clearly also significant.

The projected growth in freight to 2050, partnered with the increased reliance on both road and rail during that period suggests that without substantial investment in increased capacity the costs of congestion will continue to grow. Capacity improvements to the public road network, and the separation of freight and passenger rail freight will reduce the impacts of congestion and will benefit both passenger and freight users.

RECOMMENDED ACTION: DEVELOP AND IMPLEMENT PRIORITY INVESTMENT PIPELINE

The Commonwealth Government has placed infrastructure planning at the centre of its reform agenda and the national response to the Global Financial Crisis.

A central component of the infrastructure investment agenda is the development and assessment of infrastructure projects against an established prioritisation methodology to determine critical investments.

The use of a prioritisation method based on a cost-benefit analysis, should be incorporated into the national freight plan to determine long-term government investment priorities for future expenditure, including recurrent funding programmes, such as the Nation Building Program (formerly known as Auslink).

The investment in infrastructure through these programmes should be undertaken in a transparent and accountable assessment process examining the cost-benefit profile of these initiatives across all modes and externalities. The plan, including the prioritisation of investment, should then be subject to periodic review and reprioritisation.

RECOMMENDATIONS

10. Maintain a rigorous and transparent approach in identifying priority areas for investment, regulatory reform and the allocation of government funding through periodic review and reprioritisation of the national freight plan.

11. Establish a system of intermodal facilities in support of major ports and airports in order to relieve the pressure on these facilities. In advance of the establishment of these facilities necessary land and corridor reservations must be identified.

CONCLUSION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7. Conclusion

The Australian freight task has recently experienced a period of significant growth as a result of variations in supply and demand side industry drivers. The booming resources sector, renewed population growth and shifting demographics have led to a fundamental change in the nature of the industry within Australia.

Despite the onset of the Global Financial Crisis and the slowing resources sector, the freight industry is forecast to continue to experience robust growth – trebling in size by 2050.

This forecast represents a sizeable challenge for the industry. Investment in the freight sector over previous decades has been insufficient to provide for growth and existing market structures require substantial reform. Without renewed investment and the introduction of a new streamlined regulatory environment to improve efficiency and capacity, any increase in the freight task will only lead to further congestion.

To meet the challenge, governments and the industry must work together in a partnership to address regulatory and investment barriers to growth. Central to these reforms will be the development of strong national leadership and coordinated approach to planning that reflects the integrated nature of the freight task.

Further reforms to harmonise regulation and streamline its enforcement to reduce the administrative burden on freight operators are essential to deliver efficiency. By reducing these barriers and reducing uncertainty, an environment more attractive to private investors can be created. This will allow the sector to take full advantage of the considerable private sector skills and resources, which is currently underutilised in Australia.

To address these barriers and provide an environment in which the freight industry is able to respond to future challenge this report recommends the Commonwealth Government establish a **national freight coordination body** with responsibility for developing a **national freight plan** which:

- Provides clear, national leadership to develop a new long term vision for the freight sector;
- Develops and delivers a national freight policy, identifying key policy reforms; and
- Identifies key priority projects for investment and has strategic control of ongoing funding.

Further reforms that will help the sector meet the 2050 challenge include:

- Adopting a planning and regulatory approach that is integrated across both jurisdictions and modes of transport.

- Reviewing the structure and operation of the freight market to ensure. there is competitive neutrality between modes of transport and that the market is able to function efficiently, including streamlining access regimes and accelerating implementation of pricing reforms.

- Implementing a new national multi-modal pricing regime that incorporates social and environmental externalities.

- Reviewing the regulatory environment for the freight sector and recommending changes to reduce the regulatory burden, including the possibility of establishing a single national freight regulator – with core responsibility in the areas of safety and environmental regulation.

- Creating a favourable environment for private sector investors, including the application of a gateway model for procurement.

- Linking Commonwealth Government infrastructure funding, including the Nation Building (formerly Auslink) program, to the achievement of identified reform outcomes.

- Actively seeking private sector involvement in long term planning through the appointment of an advisory board to the national freight governing body as well as through supporting private sector project development.

- Maintaining implementation of the CPRS, as Australia's emission trading scheme, in order to reduce uncertainty impacting investment decisions within the sector. The proposed transitional assistance should be mode neutral, potentially through applying the assistance to aviation, rail and maritime industries in addition to road transport.

  Specific opportunities for reform and investment stemming from the CPRS include:

  – accelerated pricing reform to more equitable pricing of externalities across transport modes; and

  – increased government support for the development and use of hybrid and biofuel compatible heavy road and rail vehicles as well as sea vessels.

- Maintaining a rigorous and transparent approach in identifying priority areas for investment, regulatory reform and the allocation of government funding through periodic review and reprioritisation of the national freight plan.

- Establishing a system of intermodal facilities in support of major ports and airports in order to relieve the pressure on these facilities. In advance of the establishment of these facilities necessary land and corridor reservations must be identified.

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