

**Infrastructure Australia
and the National
Transport Commission**

“The Proposed National Ports
Strategy”

May 2010

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Executive summary

Why this paper?

The purpose of this draft Strategy document is to progress a response to the Prime Minister's request that Infrastructure Australia and the National Transport Commission develop a National Ports Strategy for consideration by the Council of Australian Governments.

The National Transport Commission and Infrastructure Australia are seeking public comments on this draft. These may be provided to:

The Infrastructure Coordinator
Infrastructure Australia
GPO Box 594
CANBERRA 2601

What is the national significance of ports?

Australia is an island, whose place in the international economy and whose productivity, living standards and quality of life depends on trade performance. As such, it has long been recognised that Australia is a maritime nation with a high dependence of shipping and ports.

The international flows are channelled through Australia's gateways. The ports are the nation's most important gateways for goods. Consequently ports and freight infrastructure are of the utmost economic and social importance to Australia.

What are the challenges for Australia's ports?

Australia's ports and related land side logistics chains face major challenges from growth in the trade task. Future growth is forecast to be particularly strong in response to increased economic growth in the cities and in response to demand for Australia's exports.

Already there is evidence of issues arising from growth at some ports, for example truck queues at metropolitan ports and ship queues at some commodity export ports.

There are some differences in aspects of the growth challenge across the different types of ports. For example, protection of port and land transport functionality in the context of surrounding urban development is relevant in cities. Ensuring adequate capacity and reconciling various parties' interests is important for some regional bulk export ports.

However, there is a strong common thread across all ports - the need for investor confidence, and hence the importance of long term planning. Why a nationally coordinated approach to ports?

Ports are currently planned by state and territory jurisdictions with involvement by the other tiers of government (Commonwealth and local).

The nation as a whole faces new challenges moving forward; with the bulk commodity export task and the metropolitan container import task doubling in size every ten years.

There are major efficiency implications for Australia if changes are not made to our ports and related landside road and rail systems over the coming decades.

Given this and that port infrastructure has useful economic lives of up to 50 years or more (in the case of maritime access shipping channels), there is a clear need for a coordinated approach to the future development and planning of Australia's major ports and freight infrastructure.

How was the draft Strategy developed?

The draft Strategy presented in this paper was developed using a process involving initial identification of possible issues, supporting research, and a series of consultations with stakeholders to obtain responses to issues, which then allowed for consolidation into a strategic framework.

What is the vision?

The overarching purpose of the draft Strategy is to drive the development of efficient sustainable ports and related freight logistics that together balance the need of a growing Australian community and economy with the quality of life aspirations of the Australian people.

What are the objectives?

The objectives of the draft Strategy are to improve the efficiency of port related freight movements across infrastructure networks, minimise externalities associated with such freight movements and influence policy making in areas relevant to freight.

These objectives need to be seen in the context of likely substantial increases in freight volumes and demand. Freight demand is not static in terms of volume or distance / location.

What priorities for action have been identified?

As a result of analysing issues and the stakeholder consultation process to date, four specific priorities have been identified as being central to the draft Strategy. Addressing these priorities will provide a solid foundation for working towards resolution of matters such as truck congestion and ship queues. The priorities are:

1. Planning for relevant ports;
2. Protection of the ability to execute plans;
3. Improving landside efficiency and reliability, and
4. Clarity, transparency and responsibilities in ports.

What are the recommended actions?

The recommended actions regarding planning include:

- Three integrated levels of planning around relevant ports; jurisdiction, region and port;
- Updates and reviews of the plans; and
- Assistance with planning and forecasting.

The recommended actions regarding protection of the ability to execute plans include:

- A nationally consistent environmental management regime;

- Use of strategic and streamlined assessment processes;
- Use of a lead agency framework in each jurisdiction;
- Introduction of “buffer” strategies in policies and plans; and
- Assessment of the effectiveness of the above.

The following recommended actions aim at reducing economic costs of landside aspects of port freight by increasing the efficiency and reliability of cargo flows:

- Research to provide a better understanding of the issues, and of the success of various approaches;
- Some oversight of coordination within the container supply chain;
- Where possible and appropriate, introduction of incentives into the supply chain;
- Using some port roads as a test case for the road reform program;
- Use of information technology;
- Greater understanding of regulatory constraints on sharing of information; and
- Greater supply chain coordination.

The recommended actions regarding clarity, transparency and responsibilities relating to governance matters include:

- Principles for the role and functions of authorities in control of relevant ports;
- Principles in relation to Freight Corridors and roads for these ports; and
- Achieving consistency in legislation and regulation.

Responsibilities and timings for each of the recommended actions have also been proposed. Each of the priorities and groups of recommended actions is supported by discussion and observations documented in the paper.

What is proposed to be recommended to the Council of Australian Governments?

The draft Strategy includes proposed recommendations to the Council of Australian Governments from Infrastructure Australia and the National Transport Commission dealing with the above matters.

In detail these are that the Council:

- Recognise the critical importance of trade to Australia’s ability to develop a more productive and fairer society more able to meet the challenges of the future.
- Recognise the central role of ports and related freight supply chains to the trade task and thus to Australia’s future.
- Agree that Australia adopt a National Ports Strategy as part of a nationally coordinated approach to the future development and planning of Australia’s economic port and freight infrastructure.

- iv. That the Strategy be set out in a public document including:

A vision;

“The overarching purpose of the draft Strategy is to drive the development of efficient sustainable ports and related freight logistics that together balance the need of a growing Australian community and economy with the quality of life aspirations of the Australian people”.

Objectives;

“to improve the efficiency of port related freight movements across infrastructure networks, minimise externalities associated with such freight movements and influence policy making in areas relevant to freight.”

Priorities, at this time being;

1. *Planning for relevant ports*
2. *Protection of the ability to execute plans*
3. *Improving landside efficiency and reliability, and*
4. *Clarity, transparency and responsibilities in ports.*

And

actions on these priorities as described in the draft Strategy document.

- v. Agree to establish an independent panel comprising up to 4 people with significant prior private sector leadership experience in port and freight logistics, including in the major sectors such as bulk commodities and general freight, but without current responsibilities in commercial or representational matters associated with ports and freight.
- vi. Agree that the independent panel and the National Transport Commission oversee implementation of the Strategy.
- vii. Agree that the Council of Australian Governments Reform Council, assisted by the independent panel and the National Transport Commission, make regular reports to jurisdictions, including the Commonwealth, on progress with implementation.
- viii. Agree to review the National Ports Strategy with a view to making any necessary changes within three years.
- ix. Agree that there be development of further strands of a national freight policy being:
- *a National Freight Network Plan* to be drafted by Infrastructure Australia and the National Transport Commission;
 - *jurisdictional freight network plans* to be drafted by jurisdictions; and
 - an overarching *national freight strategy* to be drafted by Infrastructure Australia and the National Transport Commission in consultation with the jurisdictions.
- x. Governments note the economic focus of the Strategy.

- xi. Governments note the importance of continued attention to critical national interest matters including defence and national security, customs, biosecurity and tourism. The proposed port planning regime will address these important areas.

DRAFT ONLY*

Response to terms of reference

The following provides a response to the terms of reference for the development of the National Ports Strategy (note – text in *italics* are specific quotes from the terms of reference).

“Australia needs a nationally coordinated approach to the future development and planning of Australia’s port and freight infrastructure”.

Australia as an island is a maritime nation. Its economic development and its ability to achieve national ambitions of a productive and fair society more able to meet the challenges of the future will largely be shaped by its trading activities. The major ports and related freight infrastructure are the pivotal locations in Australia for these activities. The ports and freight infrastructure are of the utmost economic and social importance to Australia.

However, constraints are now being felt in some ports and related land transport infrastructure as evidenced by truck or ship queues. Left unaddressed, these constraints could undermine Australia’s pursuit of national goals.

Australia is a federation with three levels of government. Each of these levels has vital interests and roles to play in relation to the ports and associated freight infrastructure. The ports are controlled by state and territory jurisdictions, which also control adjacent land uses. The Commonwealth has key functions involving the ports including defence, security, environment, biosecurity, competition policy and border control. In addition the Commonwealth also finances and owns specific freight infrastructure assets including certain railways and roads. Local government makes decisions that affect ports including on matters such as land developments and road uses.

The ports and related supply chains are variously networked across Australia. In some cases this involves the physical interoperability required by ships that visit several ports. In other cases private parties have interests in several ports including in different state jurisdictions. Further, there is strong economic networking among ports via competing or cooperating supply chains, or macro-level allocations and calls on national economic resources.

The private sector will undertake much of the investment and operation of the ports and related infrastructure that is needed to deal with supply chain constraints. The ports and freight supply chains involve long life assets, and optimal private investment and use of these depends on all levels of government providing certainty of their intentions for example about the provision and use of port lands, and about road and rail systems.

These factors point to a need for a nationally coordinated approach to the future development and planning of Australia’s port and freight infrastructure.

The draft Strategy recommends that this nationally coordinated approach be affected through formal long term plans at the jurisdiction, regional and port precinct level. The plans should be developed in consultation with stakeholders and the community, be approved by relevant decision makers and be published.

Such planning is a major, difficult but vitally important exercise. The largest gains are likely to attach to the ports with the largest task. The draft Strategy suggests a focus on these.

To the extent relevant, the plans should fit in with the Council of Australian Governments directions for city planning.

A baseline for any plan is the meeting of national interest requirements such as defence, security and borders.

With this in place, and given visibility and opportunity for input, a more formal mechanism for coordination is not envisaged.

“It will cover both bulk commodity ports and container ports”

There is a variety of ports in Australia, which largely reflect their principal tasks such as the handling of bulk commodities for export, or containers for exports and imports.

There are significant differences between the operating and institutional environments for the bulk and container ports. These include location, the extent of integration of organisations in the supply chain, land transport arrangements, the markets they serve and growth prospects. There are also historical factors. There are further differences within these sub sectors, for example between grain ports and coal ports.

Challenges facing bulk commodity ports include facilitation of expansion of capacity to meet rapidly growing demand. Challenges facing metropolitan ports include protection of the port and freight functions in the context of surrounding urban development.

Given this diversity, Australia’s national ports strategy **should not be based on a mandated “one size fits all”** approach. Actual plans and practical on-the-ground outcomes need to be tailored around what is most suitable for the particular region and port. These plans and outcomes would deal with the largest trade tasks and other important tasks for particular ports.

However, Australia’s ports share many common features. Among the most important is their largely immobile but pivotal position. Also relevant are the interaction of various organisations and policy fields at the port, and the private sector’s need for long term certainty and stability in arrangements. This means that it is desirable to have national coordination around key principles that address these common features for port development, such as long term planning in the context of the region and jurisdiction, coordination among tiers of government decision making, and provision of certainty for private investors and the community.

“the most effective regulatory and governance frameworks”

The three most important regulatory fields are planning approvals, environmental approvals and competition policy. The most important governance issues relate to the commercial nature of the supply chains. The Strategy proposes to strengthen the effectiveness of the framework within which commercial decisions are made.

The most effective regulatory and governance frameworks for ports and freight are those that provide the greatest certainty and predictability for commercial decision making. For the ports sector, long term plans visible to those who need to make commercial decisions, to regulators and to the community are recommended as the cornerstone. It is considered that this is largely achievable within the existing jurisdictional frameworks.

“ways to improve land planning and corridor preservation”

The starting point to improve land and corridor planning is identification of requirements within the plans. Given the centrality of ports to freight flows, and the fixed nature of port and large freight corridors, this is an achievable task.

Land planning and corridor preservation needs to balance the freight requirement against community and traffic amenity.

Encroachment is seen by the freight community as among the most important issues the sector faces.

This may mean it is necessary or desirable to implement measures to mitigate adverse impacts of freight, including development of high productivity corridors and buffering.

Infrastructure Australia is considering separately particular mechanisms to effect the reservation of corridors and relevant lands.

“the future infrastructure requirements of Australia’s ports including road and rail links.”

Simple extrapolation of recent trends suggests requirements for major port related infrastructure additions. However, this should be more rigorously tested where public sector funds or decisions are involved.

Future infrastructure requirements should be identified from an analysis of a combination of forecast demand and expected levels of productivity. This needs to be mapped into supply chains, taking into account other use of infrastructure, for example car use of roads.

Drivers of demand vary among the types of ports. For example, prospects for bulk minerals ports depend on demand for Australia’s resource exports and the location of relevant mines. Port handling of agricultural produce depends on factors affecting patterns of production including climate. The outlook for container ports is more associated with domestic demand and the location and level of population growth. Demands for general purpose ports can be affected by requirements for import of machinery and fuels. Some ports also need to deal with passenger tasks such as cruise shipping.

Improvements in assessing the impact of demand should come from a more coordinated approach to forecasting, based on local variations to national themes. In this, the Commonwealth agencies such as the Bureau of Infrastructure Transport and Regional Economics and the Australian Bureau of Agricultural and Resource Economics should play a key role.

Expected productivity levels may depend on the quality and coordination of infrastructure and the degree to which freight is accorded unrestricted priority. Productivity performance could be enhanced by more intense use of assets, including at more consistent and reliable levels. In the case of shipping, channel depths are important.

Road and rail infrastructure requirements depend on port and other users. In some cases, other users dominate, for example passenger vehicles dominate on some roads and railway lines. At certain levels of demand it may be worth considering infrastructure which is dedicated to freight.

This may be consistent with and extend the Council of Australian Governments road reform agenda, with a trial of freight infrastructure pricing and freight priority on the most heavily trucked major roads that potentially compete with rail lines. Freight infrastructure pricing should be accompanied with freight priority. Corridor reservation is important to this.

DRAFT ONLY*

1. Introduction

1.1 Purpose

The purpose of this paper is to develop a response to the Prime Minister's request for a National Ports Strategy.

The Prime Minister asked Infrastructure Australia and the National Transport Commission to develop, for consideration by the Council of Australian Governments, a draft National Ports Strategy for Australia:

"... Infrastructure Australia, will work with the National Transport Commission to develop a National Ports Strategy during 2010 for consideration by the Council of Australian Governments.

Australia needs a nationally coordinated approach to the future development and planning of Australia's port and freight infrastructure.

It will cover both bulk commodity ports and container ports and identify:

- *the most effective regulatory and governance frameworks*
- *ways to improve land planning and corridor preservation*
- *the future infrastructure requirements of Australia's ports including road and rail links."*

Prior to providing the draft Strategy to the Council for Australian Governments, Infrastructure Australia and the National Transport Commission are seeking public comments on this draft.

Comments may be made to:

The Infrastructure Coordinator
Infrastructure Australia
GPO Box 594
CANBERRA 2601

1.2 Origins

In addition to the Prime Minister's request, there have been a number of calls for a National Ports Strategy for Australia. These include in the Parliamentary Inquiry into Coastal Shipping in 2008, and submissions to Infrastructure Australia in the context of it developing an infrastructure priorities list.

Other reviews have pointed to port and related infrastructure as acting as a constraint on Australia's economic growth, including on exports. For example, the Mortimer Review of Export Policies and Programs commented that *"critical parts of Australia's infrastructure have failed to cope with current demands and this has substantially limited export volumes and competitiveness"*. Some constraints have been longstanding, and others are now emerging in the light of sustained strong economic and export growth. Infrastructure Australia's reports to the Council of Australian Governments in 2008 and 2009 proposed development of a national infrastructure theme: "International Gateways". A key element of such a theme is a National Ports Strategy.

These suggestions for a National Ports Strategy have generally been at a high level. Most stakeholders agree that the strategic direction should relate to economic development through trade. A challenge for this current work is to develop a concrete agenda to support the strategic direction.

1.3 Importance of ports to Australia

Australia is an island, whose place in the international economy and whose productivity, living standards and quality of life depends on trade performance. As such, it has long been recognised that Australia is a maritime nation with a high dependence of shipping and ports.

The ports are the most important international gateways for goods. The major domestic trade flows are largely shaped by and accommodated through these gateways. Consequently ports and freight infrastructure are of the utmost economic and social importance to Australia.

Ports are an extremely important part of national freight flows, being the start or end points of domestic trade movements.

In 2006-07 around 25% of all freight moved domestically was handled by Australia's ports, and the domestic coastal shipping volume of 56.4 million tonnes compares with international sea freight of 733.4 million tonnes. Further there is around 1,500 million tonne kilometres of containerised port freight movements through Australia.

Australia has national ambitions of a productive and fair society more able to meet the challenges of the future. The extent to which it can achieve these ambitions will be determined by international and domestic trade, and its conduct of the freight task.

There is evidence that Australia's trade performance in recent years has been constrained by blockages in the supply chain including at ports. The evidence includes ship queues at some major export ports, and truck queues at other ports. Addressing the underlying and long term causes of these blockages offers the opportunity to improve trade performance and allow better achievement of Australia's national goals.

1.4 Importance of a nationally coordinated approach to ports

As is the case worldwide, investments and operations at ports largely depend on private companies. Governments set the framework for private investment and operation. In Australia all three levels of government are involved in setting the framework, and each has a vital interest in port and freight outcomes.

The States and Territories control the ports, adjacent land uses and connecting transport systems. They can own and finance the relevant assets and have environmental responsibilities. The States and Territories also have responsibilities for cities and regions in which the ports are located and for the trade internal to their jurisdictions.

The Commonwealth has key port related functions including navigation, defence, security, environment, biosecurity, competition policy and border control. It finances and owns specific freight infrastructure assets including certain railways and roads, as well as lands suitable for freight activities. The Commonwealth has interests in national economic performance, international trade and interstate trade and commerce. It conducts foreign affairs, international investment controls, and national level economic and production forecasting.

Local government makes decisions that affect ports including on matters such as land developments and road uses. These decisions impact on local communities and on the ports and land transport systems.

The effects of these different responsibilities overlap at the major ports and their supply chains. Coordination of the interests and activities of various levels of government would provide the most certain and stable base for private investment in these areas.

Ports freight supply chains are part of Australia-wide physical and economic networks. In many cases physical and technological interoperability is needed for shipping that serves several ports. Private parties also have port related investments and operations in several states. There is strong economic networking among some ports via competing or cooperating supply chains, for example to attract export trade generated in hinterlands. Moreover, ports generate and rely on macro-level networking effects including allocations and calls on national economic resources such as skills, equipment and financial capital.

Coordination of activities also would add to national productivity. So would coordination between the port precincts and key supporting land transport infrastructure.

The ports and freight supply chains involve long life assets. Optimal government involvement in setting the framework for these assets, and optimal private investment and use of these assets, depends on all levels of government providing nationwide certainty of their functional intentions.

These factors point to a strong need for a nationally coordinated approach to major ports in which governments set the framework for the future development and planning of Australia's port and freight infrastructure. A National Port Strategy should not be solely a Commonwealth policy or initiative. Rather it needs cooperation and commitment from all tiers of government, the private sector and the community.

There are substantial differences between Australia's major ports. Given this, a "one size fits all" approach in which local outcomes are centrally determined would not be appropriate as an Australian National Ports Strategy. National coordination should focus on an aligned framework in which solutions to issues such as future growth can be appropriately tailored to regional circumstances. Such alignments should focus on key nationwide issues such as the need for long term planning.

Finally, various parties have called for a national freight network plan or a national freight strategy. In Australia in the past, the Commonwealth interest in transport infrastructure focussed largely on its direct constitutional mandate, for example interstate trade and commerce, aviation and shipping. Community calls for a national freight strategy are essentially calls for greater coordinated action beyond the constitutional focus, involving governments, the private sector and the community to place urban and intra regional freight in a policy context appropriate to the importance of the tasks.

A natural starting point for developing such an approach is with Australia's major freight nodes – the large ports. It would not seem possible for a country like Australia to have an effective and credible national strategy for freight without a ports strategy. Consequently, a nationally coordinated approach of governments and private sector to ports is a precondition for a national freight strategy, and a national freight network plan.

1.5 Methodology

The methodology used to develop this draft Strategy was:

- Initial identification of possible issues;
- Refinement of these issues, and potential responses;
- Supporting research;
- Consultation on the proposed issues and responses; and
- Consolidation into a Strategy framework.

Initial identification of issues drew on published research in Australia and overseas, and consultation with a limited number of key stakeholders. The issues raised primarily related to economic impacts, and the responsiveness of ports to expectations of substantial growth in trade and population, particularly over the long term. Stability and certainty in policy that affects private investment was seen as particularly important. The wide variety of policies and reviews that affect ports, and their ongoing nature, was noted. Also arising was an issue regarding the compatibility of sensitive land uses with the needs of growing ports and supply chains.

These issues were refined into a number of themes around which potential responses were identified. These themes included stability and transparency for port related investment, efficient operation of landside access, infrastructure requirements and governance. Potential responses identified were long term planning, securing these plans, supply chain coordination and some governance matters.

Supporting research on five topics was undertaken and summarised in a series of internal background papers developed by GHD.

Consultation was undertaken through several processes. This included:

- One-on-one discussions with key private and government stakeholders to identify and refine issues;
- A forum to further explore issues and potential responses;
- Further one on one discussions with targeted stakeholders;
- A wider forum to consider an “Exposure Draft”, in effect a road test of ideas but not of a fully developed document; and
- Further one-on-one discussions with stakeholders to explore more deeply matters raised at the Exposure Draft forum.

Throughout, valuable submissions were received and used to further test and develop the proposals for the draft Strategy.

In consultations many issues were raised regarding ports and related logistics chains. Not all of the issues are agreed among stakeholders. Further, some issues are longstanding and there is little agreement as to how they might be resolved.

The development of the draft Strategy took the view that it should concentrate on a few themes which stakeholders considered as critically important for governments to jointly address at this time. The draft provides recommendations for how these might be addressed.

This consultation process differs from that typically undertaken for reviews by governments or agencies such as the National Transport Commission. Usually consultation includes formalised elements such as the seeking of public comments on a draft report. Such draft reports also sometimes include deep discussion of all issues raised.

At this time stakeholders and the community have not had the opportunity to comment on the complete draft Strategy. Consequently, the National Transport Commission and Infrastructure Australia have decided to seek public comments on this draft Strategy document prior to submission of a final draft National Ports Strategy to the Council of Australian Governments.

Consolidation of the information collected from the process to date was undertaken jointly by GHD and the Office of the Infrastructure Coordinator. It includes formatting into a “Strategy” style document.

1.6 Other comments

Increasingly, countries are considering developing national level ports strategies or plans. More recent examples include the United Kingdom and the Netherlands. There have been calls for national level plans in the United States.

In Australia, it is said that the ports are the responsibility of the State governments, and this is given as an explanation as to why there has never been a National Ports Strategy. Nonetheless, over the years there have been a number of formal national level reviews of aspects of the Australian port and related freight sectors.

Most recently there were reviews for the Council of Australian Governments of regulatory arrangements of certain ports under the Competition and Infrastructure Reform Agreement (CIRA). The draft Strategy differs from that approach in three significant respects. First, the draft Strategy is intended to apply more widely than the ports covered by CIRA reviews. Second, the draft Strategy covers aspects of the logistics chain that are well distant from the port. It extends beyond port authorities and port precincts on both land and sea side and includes matters beyond State jurisdiction control. Third, the draft Strategy is concerned with matters much more broad than the promotion of economic welfare by the application of competition policy and economic regulation.

In consultations comments were made regarding specific jurisdictional matters. The draft Strategy does not take the view that ports and related supply chains are or should be solely a State responsibility. It does not offer a critique of State government performance, nor does it recommend Commonwealth "intrusion". Rather it aims to provide some guidance for the future of Australia's major commercial ports.

Apart from Governments, there are many parties with interests in ports. These interests include commercial and economic matters, environment and social amenity. Any decisions regarding ports needs to balance these interests. A strategy provides a good opportunity to do so in a thoughtful way.

A key theme of the draft Strategy is that the economic significance of certain ports needs to be more clearly recognised by the community. The performance of these ports in handling shipping and land transport substantially affects national level productivity, and both Infrastructure Australia and the National Transport Commission take the view that a productivity agenda is most important to Australia. The most significant ports (nationally significant ports) are the focus of the draft Strategy. It is these nationally significant ports for which the challenges of growth loom largest.

The relevant ports include those in or serving metropolitan areas and the larger bulk commodity ports. For the metropolitan ports, the growth challenges are greatest on the land side as evidenced by congestion including on infrastructure which is not under the control of the port.

It needs to be recognised that major ports may emerge in the future either at new locations or as relatively minor ports substantially increase their scale of operation.

The draft Strategy takes the view that the clearer recognition of economic significance needs to be balanced by greater transparency and responsibility. The durability and acceptability of any ports strategy will be affected by this balance. Part of this transparency is that the port authorities operate under true commercial principles.

Governments have agreed to a number of policies which will have implications for ports. Among these are competition policy, skills development and city planning. Other policy directions are in development, for example infrastructure pricing. A key direction of this draft Strategy is that these policies alone will not be enough to optimise the productivity contribution of Australia's ports. Further measures are needed.

1.7 Structure of the draft strategy document

The remainder of the draft document is structured as follows:

Section 2 presents an overview of the draft Strategy. This provides the policy context and sets out the draft Strategy.

Section 3 provides the detail of recommended actions against the priorities.

The subsequent sections provide supporting material for this, including a discussion of the recommended priorities.

Section 4 provides some background to Australia's ports particularly relevant to the draft Strategy.

Section 5 discusses some governance matters important to the Strategy because they underline issues regarding the relationship of government to the ports supply chains and their private sector participants.

Section 6 looks at how national coordination could create a stable environment conducive to necessary private investment in ports and related supply chains. It focuses on publication of long term plans for Australia's most economically important ports.

Section 7 comments on some issues regarding landside costs of container transport.

Section 8 outlines issues associated with understanding future infrastructure requirements of ports.

2. Draft Strategy overview

2.1 Purpose

This section provides a policy context and outline of the draft Strategy. The purpose of the draft Strategy is to seek views from the public on what the National Transport Commission and Infrastructure Australia propose should be considered by the Council of Australian Governments.

The section provides some background on the role of a strategy, the vision within the strategy, objectives, priorities and ongoing mechanisms.

It also provides recommendations regarding the priorities and other matters.

2.2 Policy context

The Australian Transport Council has agreed to a National Transport Policy framework that encompasses a vision statement, policy objectives and guiding principles around which national transport policies are to be developed. However, details of these policies for the major transport sectors such as for freight, personal transport or public transport have not been laid out. Current transport policy in Australia needs more national level detail.

The Council of Australian Governments has indicated that freight is to be a transport priority for 2010. The Prime Minister requested Infrastructure Australia and the National Transport Commission to develop a National Ports Strategy for the Council's consideration in 2010.

As a maritime nation, Australia's major ports are the most important nodes of the freight systems. Freight is largely configured around the ports, and decisions regarding ports will have far reaching consequences along logistics and wider transport chains.

A National Ports Strategy is the logical starting point for the development of national transport policies that fill out the Australian Transport Council's policy framework. It is important that this start be made quickly to support the Council of Australian Government's current focus on freight.

Significantly, major ports are located within or serve Australia's largest cities. Any national agenda for cities which considers freight must deal with these ports and their land transport requirements.

2.3 Strategy outline

Government Strategy documents typically set out a "vision", specify "goals" or "objectives" and detail "priorities". The practice is that responsibilities for implementation, oversight and monitoring are also specified. Review arrangements are set out.

For the draft National Ports Strategy the following are proposed for consideration:

2.3.1 Vision:

The proposed vision is:

“The overarching purpose of the draft Strategy is to drive the development of efficient sustainable ports and related freight logistics that together balance the need of a growing Australian community and economy with the quality of life aspirations of the Australian people”.

This vision sets out the centrality of ports to most of Australia’s freight flows.

It is recognised that there are freight tasks beyond those relating to ports and that further formal Strategies may be warranted for freight that is not just port related. Among these Strategies would be a National Freight Network Plan, work on which has been identified as a priority by Infrastructure Australia.

The vision also recognises that the economic importance of freight needs to be balanced with quality of life matters. Any Strategy for ports, or for freight more generally, needs to strike a balance between economic and productivity imperatives and potential community impacts. The draft Strategy contends that the planning needs arising from this are most important for the ports with the greatest economic significance and with the largest freight tasks.

The vision contributes to that agreed by the Australian Transport Council’s framework. It also embraces the vision articulated by Victoria in its Freight Futures and Ports Futures documents. Consequently it may be a useful statement of vision to guide the jurisdictional freight strategies which are understood to be under development.

2.3.2 Objectives:

The objectives of the Strategy are:

“to improve the efficiency of port related freight movements across infrastructure networks, minimise externalities associated with such freight movements and influence policy making in areas relevant to freight.”

These objectives need to be seen in the context of likely substantial increases in freight volumes and demand. Freight demand is not static in terms of volume or distance / location.

In an environment of rapid demand growth, improvements in efficiency and capacity are required just to sustain today’s levels of productivity. This also is the case for externalities. Investment in the most modern hard and soft technologies is needed in the freight sector and in ports. The private sector will need to provide the bulk of this investment, and in most cases undertake the freight operations which determine productivity levels.

The draft Strategy makes clear that there are a number of policy areas with a major and direct impact on freight. Among these are transport, land use and environment policies.

The objectives of the Strategy include that the freight community is able to position itself to more usefully influence policy making in these areas.

2.3.3 Priorities:

Priorities are the things which are most important to do in the immediate future. These may change over time, and new priorities might emerge as current challenges are addressed.

In the present case there are very many issues of considerable interest to particular parties.

However, the prior absence of a national strategy for ports makes it difficult to assess the priority of most of these, let alone immediately address them other than in an ad hoc way.

For this reason the highest national priorities at this time are assessed to relate to the need for a new structured, consistent and practical engagement between ports, the related logistics chains and policy makers.

A strong, clear and tight directional focus is needed as a basis to immediately begin to address a very limited number of critical issues. Addressing these issues will provide a firm basis for resolving important matters such as truck and ship queues.

Such a focus implies four specific priorities for Australia's major ports. These are:

1. *Planning for relevant ports and infrastructure*
2. *Protection of the ability to execute plans*
3. *Improving landside efficiency and reliability, and*
4. *Clarity, transparency and responsibilities in ports.*

Recommendations for action on each of these four priorities are also proposed (in section 3 of this document).

Of these priorities the key is formal, published plans. Fortunately, some experience is available at a national level from plans for major airports. Further experience of development and implementation of published ports and related freight logistics plans is available from Victoria. Most jurisdictions and many ports are undertaking relevant planning activities and developing Strategies. Given the differences among ports, each of these plans needs to address key issues but the outcomes should be tailored for local and regional conditions.

Particular jurisdictions may have slightly different priorities for ports and freight, reflecting their individual situations and progress with implementing their Strategies at this time. The national level priorities provide some guidance as to directions that move towards the desirable national coordination of ports.

A further priority extending beyond ports is identified in the draft Strategy. This is the development of further strands of a national freight policy being: a National Freight Network Plan, jurisdictional freight network plans and an overarching national freight strategy.

In addressing the priority areas, attention still needs to be paid to critical national interest matters such as defence, biosecurity, customs and security. These matters go beyond the economic functions of the major ports and may need to be conducted in other ports as well.

The priority areas are set out as recommendation groupings in Section 3 of this document.

2.3.4 Implementation and oversight:

Responsibilities for specific actions under the priorities should be assigned to various parties. These parties may include jurisdictions, the National Transport Commission, Commonwealth agencies and participants in the port supply chains.

Achievement of the objectives, and implementation of the priorities, requires cross jurisdictional cooperation, and within each jurisdiction cooperation between a number of portfolio areas. The priorities are not simply a matter for ports or for transport portfolios.

The draft Strategy is not just about or even mainly about Commonwealth Government policy, rather it concerns how governments can work in partnership with the private sector to ensure the ports operate and are developed as efficiently as possible. Oversight of implementation, therefore, should be aided by a small group with strong insights into such partnerships and with a cross-jurisdictional focus. For this reason a small independent panel is proposed, with say 3 or 4 members, being people with significant prior private sector leadership experience in port and freight logistics, including in the major sectors such as bulk commodities and general freight. The panel should be independent in the sense that it should not represent particular parties or stakeholder groups. The National Transport Commission would jointly oversee implementation.

There is a need for reporting of progress on implementation of the Strategy. This should be by through Council of Australian Governments Reform Council, on advice from the independent panel and the National Transport Commission. The Reform Council should make regular reports to jurisdictions, including the Commonwealth, on progress.

2.3.5 Review:

The draft Strategy sets a relatively simple nationally coordinated approach for the programming of the development of ports and related freight systems. There is no need for this programming to take a long time, especially given the activities currently underway in most jurisdictions and ports.

As the draft Strategy is implemented new national priorities will emerge for ports. Also important contextual matters will be clarified in a comparatively short time frame.

In this context a review of the National Ports Strategy should be conducted with a view to making any necessary changes within three years.

3. Actions on the priorities

3.1 Purpose

The purpose of this section is to set out the recommended actions against the four specific priorities of the draft Strategy:

1. *Planning for relevant ports and infrastructure*
2. *Protection of the ability to execute plans*
3. *Improving landside efficiency and reliability, and*
4. *Clarity, transparency and responsibilities in ports.*

It sets out and discusses the recommended actions for each of the specific priorities in terms of:

- Issues
- Summary of recommended actions
- Discussion
- Detail of recommended actions (in tabular form).

3.2 Priority area 1: Planning for relevant ports and infrastructure

3.2.1 Issues

Planning is important for long term infrastructure, such as ports, related transport corridors and sea channels.

Published plans provide a basis for confident private investment. They smooth the way for investment, allow more accurate matching of capacity to demand, and can assist in ensuring approvals do not act as a brake on productivity.

Most jurisdictions and many ports are now engaging in relevant strategy development and planning activities. Few plans are publicly available.

Moreover, the planning efforts are not nationally coordinated and there may be significant gaps and inconsistencies. Ensuring that planning efforts address all relevant ports is a first step towards understanding any issues here.

3.2.2 Summary of recommended actions

The recommended actions regarding identification of relevant ports and planning include:

- Three integrated levels of planning around relevant ports - jurisdiction, region and port
- Updates and reviews of the plans
- Assistance with planning and forecasting.

3.2.3 Discussion

The draft Strategy argues for special responsibilities and rights of those ports with especial national economic significance, the cornerstone of which would be published plans. To effect this it is necessary to identify the ports for which such plans are to be made. This is best done by responsible jurisdictions with the Council of Australian Governments approving a list prepared by the National Transport Commission. As a guide at present some twenty of Australia's seaports conduct around 95 percent of the volume of shipping trade.

It should be recognised that in the future more ports could make and be subject to such plans as new ports are developed or as existing minor ports become more economically important.

The draft Strategy invites identification of the few critical transport corridors (Freight Corridors) that should be treated as if they were part of the relevant port. This reflects the reality of the importance of a very few access roads and railway lines to the relevant ports. It is assumed that relevant sea channels would be considered part of each relevant port.

The aim of planning is to provide the community and investors with confidence about future intentions for the operation and development of Australia's most significant ports, corridors etc.

This is expected to maximise investment, reduce the time taken for approvals etc, and minimise any adverse impacts or views of the community. Improving the investment climate would have a positive impact on capacity constraints and matters such as truck queues and ship queues.

To achieve this aim, it is necessary to have public documentation demonstrating the intention of using the relevant ports to deal with Australia's trade tasks, and to facilitate that trade in an unsubsidised manner.

Planning documentation is the central thrust of the draft National Ports Strategy. Publication of this documentation is considered essential to begin to address the very substantial port and freight challenges facing Australia.

The planning documentation needs to show how future capacity matches future trade demand. The horizon for this is necessarily long to reflect the long life of the investments in relevant ports and related corridors and facilities.

Australia's ports have substantial differences and reflecting this there should be differences in the plans and approaches of how capacity might meet future demand. The plans need to take into account local conditions, and it is clear that a "one size fits all" approach is not appropriate. Hence the intention is not to centrally direct how capacity should meet demand, but to allow relevant parties to view the intentions of the jurisdictions and experts in this field. Actual addition of capacity would be on a commercial basis as market demand conditions dictate.

Jurisdictions already have made progress on this type of planning, and indeed Victoria already has published its plans: entitled "Freight Futures" and "Port Futures".

There are three "levels" at which matching capacity to demand is important, and hence for which planning is important. If relevant planning is done and published it is not considered necessary for the Commonwealth to make or draft a national ports plan. Rather, jurisdictions should continue to be in charge of the planning efforts.

The first level is jurisdiction wide. This involves broadly identifying port locations and tasks to show how forecast trade will be accommodated. An implication is that there would need to be a forecast of trade passing through each jurisdiction, and such forecast would need to deal with major commodity flows, for example mineral types, agricultural products and consumer and industrial products, and also passenger flows. The sum of the trade passing through each jurisdiction should relate to a national total.

The second level concerns the integration of the port with the regions it serves. An important aspect of this is synchronising the capacity of the relevant port with the capacity of channels. Another important aspect is the capacity available to freight on roads and railway lines including port Freight Corridors. In this respect the plans regarding metropolitan (serving) ports should be included in capital city plans agreed by Council of Australian Governments.

The third level concerns the planning of land use at the port precinct. This would include the availability of use of assets such as berths for various users.

It also would include availability of land and facilities for purposes such as defence or customs. The content of this level of plan is analogous to that for major airports. Restrictions or conditionality on proposed developments need to be recognised.

The proposed port planning regime will address trade matters as well as the important areas of defence and national security, customs, biosecurity and tourism.

All of the three levels of plans need to be aligned.

The draft Strategy recommends that the plans be assessed for the Council of Australian Governments as to how well they achieve the aim of planning which, to reiterate, is: to provide the community and investors with confidence about future intentions for the operation and development of Australia's most significant ports, corridors etc. The proposed assessment by the Council differs from that for the airport plans which are assessed by the Australian Government's Minister for Infrastructure, Transport Regional Development and Local Government.

They plans should be updated as needed and each five years in any case.

There are precedents for the levels of port planning. These include Victoria's Ports Futures and published plans for a number of major ports such as Gladstone.

Some guidance might be required, and if so, consistency is desirable to advance the idea of a National Ports Strategy.

Part of any planning is the forecasting of future demand. The draft Strategy recommends that Commonwealth research agencies such as the Bureau of Infrastructure Transport and Regional Economics provide a basis and expertise on which jurisdictions can develop their forecasts. Again this promotes the concept of a single national economy.

3.2.4 Details of recommended actions

	Recommended action	Responsibility	Timing
1.	Agreeing the relevant ports		
1.1	Criteria for the relevant ports is: <i>economic and productivity significance</i> .		Immediate.
1.2	Identify the relevant ports.	Jurisdiction in which relevant ports are located. National Transport Commission to recommend to Council of Australian Governments.	Immediate.
1.3	Identify potential future (relevant) ports.	Jurisdictions to nominate.	Immediate, with an update each year.

1.4	Identify and list the relevant maritime spaces (including sea channels) and landside spaces that are to be treated as part of the relevant ports.	Jurisdiction in which relevant ports are to be located.	Immediate.
1.5	Identify the landside access routes of strategic importance to the efficient function of the system of the relevant port and designate these as National Port Freight Corridors.	Jurisdiction in which relevant ports are to be located.	Immediate with an update each year.
1.6	Identify for each metropolitan area the inland intermodal terminals, industrial / warehousing lands or other nodes that generate substantial amounts of port related freight traffic.	Jurisdiction in which relevant ports are to be located.	Immediate with an update each year.
1.7	Note that certain national interests may arise regarding other ports including for defence or national security purposes.	Commonwealth.	Immediate with an update as relevant.

	Recommended action	Responsibility	Timing
1.	Planning		
1.8	Documentation regarding three levels of planning for the relevant ports should be published. These levels are a jurisdictional level covering all relevant ports, and for each relevant port a regional level plan and a port precinct level. The purpose of the documentation is <i>demonstration of intentions for the development of the port(s) to facilitate trade in an unsubsidised manner.</i>		Immediate.
1.9	The Bureau of Infrastructure, Transport and Regional Economics, the Australian Bureau of Agriculture and Resource Economics should publish forecasts of trade including by commodity, activity and corridor usage that are usable for the purposes of planning.	Commonwealth.	End 2010
1.10	The documentation should demonstrate how the capacity to match forecast trade task will be provided, with an outlook horizon of a minimum of 20 years. The documentation should: <ul style="list-style-type: none"> • specify capacity utilisation assumptions and indicators used for determining capacity requirements and for the indicative timing of capacity expansion • specify assumptions about the sizes of vessels and vehicles that service the port • refer to forecasts of trade, activity and land transport corridor usage prepared by Commonwealth agencies such as the Bureau of Infrastructure, Transport and Regional Economics, the Australian Bureau of Agriculture and Resource Economics and the Australian Bureau of Statistics • identify any modifications or adjustments made to these forecasts • specify any assumptions or forecasts regarding trade that is to be expected to be diverted or gained from another relevant port, and show the impact of that diversion on all relevant land transport corridors including impacts on corridor usage, congestion and 	Jurisdiction in which relevant ports are to be located.	Mid 2011

	expected timing of capacity requirements.		
1.11	The plan documentation at the jurisdictional level should: <ul style="list-style-type: none"> • be consistent with a jurisdictional level transport strategy • refer to all relevant ports that are proposed to be created or developed in the jurisdiction within the outlook timeframe • identify forecasts by commodity and cargo type for each of the relevant ports • identify and assign responsibilities for execution of aspects of this level of the plan. 	Jurisdiction.	Mid 2011
1.12	The plan documentation at the regional level should: <ul style="list-style-type: none"> • be consistent with the jurisdictional level of the plan • provide clear guidance at a strategic level on how the development and operation of the port and the freight corridors serving it will be integrated into the future development of the region or city in which the port is located • in the case of ports serving or within metropolitan areas be placed within the city plan sought by the Council of Australian Governments. 	Jurisdiction	Mid 2011
1.13	The plan documentation at the precinct level should: <ul style="list-style-type: none"> • be consistent with the regional level of the plan • incorporate a clear program for the future physical development of the port, including where relevant trigger points for additional capacity • identify and assign responsibilities for execution of aspects of this level of the plan • in the case of any approvals, and conditions that need to be satisfied prior to the execution of aspects of this level of the plan, identify the responsibilities, criteria and timeframes for such approvals. 	Jurisdiction	Mid 2011
1.14	Following community consultation, the planning documentation should be approved by the relevant jurisdiction.	Jurisdiction	Mid 2011
1.15	The planning documentation approved by the jurisdiction should be assessed by the Council of Australian Governments. Assessment criteria should include: <ul style="list-style-type: none"> • conformance with the above recommendations • sustainability of plans • the degree to which the plan presents information at a sufficient level of information to enable stakeholders to determine, understand, and make financial investments against the future plans for each relevant port. 	Council of Australian Governments Reform Council	End 2011
1.16	The planning documentation should be updated within a 5 year period and, in the interim, significant amendments to a plan or its treatment will be presented for the assessment of the Council of Australian Governments by the relevant jurisdiction when such amendment or treatment is made.	Jurisdiction / Council of Australian Governments Reform Council	End 2011
1.17	Independent monitoring and reporting of the execution of each plan and level, and of freight and cargo volumes in comparison with forecasts for each plan, should be	Council of Australian Governments	End 2011

	reported to the Council of Australian Governments, and be published annually.	Reform Council	
1.18	The Council of Australian Governments should appoint advisers to provide guidance to assist jurisdictions in conforming with these recommendations.	Council of Australian Governments	Immediate

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3.3 Priority area 2: Protection of the ability to execute plans

3.3.1 Issues

There would be little point in making a plan that cannot be implemented.

Approvals are needed to implement some critical activities that would be identified in the plans for relevant ports.

Stakeholders and private participants in ports and logistics chains argued that approval processes are lengthy, uncertain and untimely. One expression of the role of a National Ports Strategy in this was expressed as: *“to enable the ports to plan with certainty to introduce additional capacity to meet trade forecasts, unimpeded by unnecessary and capricious regulation and process”*.

Stakeholders also noted that some sensitive community land uses and activities can be incompatible with freight. Approvals for these activities can effectively constrain or “encroach” on the ability of a relevant port to undertake its forecast tasks. Such encroachment could occur near the port, or near identified Freight Corridors.

3.3.2 Recommended actions

The recommended actions regarding protection of the ability to execute plans include:

- A nationally consistent environmental management regime;
- Use of strategic and streamlined assessment processes;
- Use of a lead agency framework in each jurisdiction;
- Introduction of “buffer” strategies in policies and plans; and
- Assessment of the effectiveness of the above.

3.3.3 Discussion

The argument for this group of recommendations relates to the long term national economic importance of the relevant ports. This goes substantially beyond arguments made for facilitation of “major projects” or of projects greater than a certain cost. Each project associated with a relevant port meeting the forecast trade growth would be expected to have noticeable impacts on national level productivity.

All of the likely ports, sea channels and major freight carrying corridors have been near their present sites for a very considerable period of time, in many cases well before more recent regulatory or development condition overlays. Moreover, these ports cannot practicably be moved, and even if they could there would be widespread disruption to industry and localities with attendant environmental and community impacts.

The interests of the Australian community are best served by application of necessary safeguards to future projects and forecast trade activities at the relevant ports rather than debate about the appropriateness of locations or their trade facilitating activities.

The time for making decisions regarding make-or-break issues about relevant ports and Freight Corridors should be many years in advance of the need for a particular project or increase in trade activity. If it is believed that activities to support forecast trade levels should not be conducted at a particular port then there would be a real question as to whether the forecast trade should be facilitated at some other place in the jurisdiction. As is a basic theme of this draft Strategy, the earlier any concern of this nature is identified the better for all stakeholders.

In this context, the draft Strategy recommends that there be a consistent environmental management regime for the relevant ports.

A nationally consistent environmental management regime would see predictable processes and timeframes suitable for decision making about long term investments. As is the case of other approvals a key issue to be addressed is the timeliness of decision making in relation to when capacity is required. Port plans, effectively giving decision makers very early advice of intentions, have a role to play as does the speed of approvals. The actual environmental requirements may vary from place to place due to different environmental circumstances of the different ports. However, the regime would need to recognise the primary of economic functions of these ports including the fact that Australia competes with other countries through these ports, their immobile and hub nature, and the requirements of investors in long life assets.

The draft Strategy suggests the Commonwealth lead the development and application of this regime to the relevant ports.

Any National Ports Strategy needs to deal with stakeholder concerns that approval processes are lengthy, uncertain and untimely.

Some strategic assessment type processes offer the opportunity to expedite and simplify approvals for major projects and programs. The draft Strategy recommends that, as a matter of course, major projects related to relevant ports and Freight Corridors be nominated for expedited and simplified assessment processes which recognise economic criticalities. This is because such projects are of true national economic significance. The jurisdiction, region and port plans at a minimum would provide a timetable for triggering assessment processes. Assessment and regulatory agencies therefore ought to welcome the idea of plans not least because it allows them to properly prepare and resource their own needs.

Similarly, a "Lead Agency" framework has been successfully applied in several jurisdictions to facilitate the approvals process. This also is recommended.

The duration of approvals also was noted as a concern by some. Approvals given for less than the life of an investment or plan create uncertainty about whether the plan can be executed. Even if there is an expectation that approvals will be renewed etc. any uncertainty is likely to needlessly inhibit investment. The draft Strategy recommends that approvals be referenced to the outlook horizon for plans.

Encroachment potential for relevant ports includes residential developments along nearby waterfronts, near major freight routes and near potential intermodal terminal sites. These may lead to community disputes over freight activities and ultimately restrictions on those activities.

Buffer strategies involve some separation of households and other sensitive locations and activities from freight. The case for buffer strategies recognises the adverse impact of freight on community sentiment, and the challenge this poses in the context of inevitable and economically desirable substantial increases in freight activities in particular locations.

Separation of communities from high density freight activities is desirable for both the community and for the freight industry. Relevant ports and their Freight Corridors have among the highest freight densities, which are very likely to substantially increase in the future in terms of volumes each hour and in terms of hours of operation. Dedicated freight corridors, and early identification and land use reservation of lands for major freight corridors, may provide some unique opportunities for buffer strategies.

Again it is critically important that plans outline where increased port related freight flows are expected to occur, and if possible provide some guidance, direction or channelling to these flows so as to identify those places that need to be buffered.

Similarly it is vital that city plans being developed for the Council of Australian Governments clearly identify these major freight flows and how they will be accommodated. In this respect, the draft Strategy notes the almost universal view of stakeholders that up to this time freight is considered to have been treated as a “poor cousin” in the urban planning context.

Buffer strategies need to be implemented at the local level. The three tiers of government all have a stake in this. Already some jurisdictions are actively implementing buffer strategies.

Given the centrality of these matters to Australia’s trade and economic performance it is essential that they are kept under watch. This is a further recommendation of the draft Strategy.

3.3.4 Details of recommended actions

	Recommended action	Responsibility	Timing
2.	Protection of the ability to execute plans		
2.1	The Commonwealth should lead the development and application of a nationally consistent environmental management regime for relevant ports that: <ul style="list-style-type: none"> • differentiates between the places covered by these ports and other coastal, maritime and landside places • reflects the primacy of the economic and productivity function of the relevant ports • reflects the hub nature of relevant ports and their influence on land based freight systems • reflects the immobile nature of the relevant ports • reflects the requirements for the long life of assets and transport systems associated with the relevant ports. 	Commonwealth	End 2011
2.2	Major projects in or related to the relevant ports or Freight Corridors should be nominated for economic strategic assessment type processes in jurisdictions to e.g. facilitate streamlined environmental impact approvals processes for	Jurisdictions	Mid 2011

	individual development projects, giving due weight to economic significance.		
2.3	Jurisdictions should apply a "Lead Agency Framework" to assist the planning approvals and environmental impact assessment processes for all relevant ports and Freight Corridors.	Jurisdictions	Sept 2010
2.4	Policies and planning schemes (and controls) at all relevant levels of government should include "buffer" strategies for the relevant ports and Freight Corridors and other related places to: <ul style="list-style-type: none"> ensure the continued ability to conduct the freight and related activities identified in the plans minimise impacts on communities of these activities. 	Jurisdictions	From Sept 2010
2.5	Approvals that are related to relevant ports or Freight Corridors should extend to at least the outlook horizon for the plan of the relevant port.	Jurisdictions	Mid 2011
2.6	A report should be made each year to the Council of Australian Governments Reform Council on those matters for which further approvals are required during the time horizon of the plan of each relevant port, including matters that may not be within the control of the relevant port authority eg. roads.	Relevant ports	From end 2011
2.7	Each year there should be an independent assessment and public report on the implementation and effectiveness of the above matters (in 3) in terms of protection of land and activities identified in relevant plans.	Council of Australian Governments Reform Council	From end 2011

3.4 Priority area 3: Improving landside efficiency and reliability

3.4.1 Issues

This priority area concerns the ports serving metropolitan areas, in particular, the container ports.

The efficiency of ports and logistics has a direct bearing on the land and other resources used for freight.

In the last decade increases in container costs are reported to be attributable to landside factors.

Potential causes include supply chain disconnects and urban growth. Symptoms include truck congestion.

3.4.2 Recommended actions

The recommended actions aim at reducing economic costs of landside aspects of port freight by increasing the efficiency and reliability of cargo flows. They include:

- Research to provide a better understanding of the issues, and of the success of various approaches
- Some oversight of coordination within the container supply chain
- Where possible and appropriate, introduction of incentives into the supply chain
- Using some port roads as a test case for the road reform program
- Use of information technology
- Greater understanding of regulatory constraints on sharing of information
- Greater supply chain coordination.

3.4.3 Discussion

Recent research by Bureau of Infrastructure, Transport and Regional Economics indicates that Australian container ports perform relatively well on some ship-shore indicators such as crane rates and vessel turnaround times. They also appear to generally have relatively moderate land capacity utilisation factors such as TEU per berth metre and TEU per yard hectare.

Other research indicates that costs are increasing relatively quickly on the land side of container ports, such as road transport costs. Significant research has been undertaken into various aspects of landside container costs. However, not all of this is public domain.

Ongoing research to build on this should be published. Topics should include best practice high level arrangements for port and related logistics and on conditions for the introduction of dedicated freight infrastructure for container port logistics chains.

Monitoring of performance should extend the current Waterline Port Interface Cost series to include physical performance indicators for truck segments, for rail and for outside of the port gate including container parks. There also is a case for publishing physical performance indicators of the flow of goods across container ports.

Oversight of the coordination of the container supply chain may be useful to identify particular impediments to efficiency and the strategies that may overcome these. This could be included in the regional aspect of the port planning matters.

It may be possible to introduce incentives into the supply chain that more directly focus on maximising the efficiency and reliability of cargo flows. These might include incentives to spread peaks, increase truck loads, encourage rail, or encourage correct and advanced documentation of freight. They might also include leases of port or related lands although current contractual arrangements should run their course.

The Council of Australian Governments Road Reform agenda concerns infrastructure pricing, particularly for truck use of roads. Given the high truck use of to-port roads, and the relatively limited number of such roads, port Freight Corridors may provide a good test bed for road freight pricing.

Information technology should be part of any approach to improve performance. Solutions should encourage interoperability among ports. This is a matter the Australian Transport Council should decide on, taking advice from the National Transport Commission.

The point about the use of information technology is that it may contribute to greater supply chain coordination. There may be regulatory issues arising in some such coordination and a process is needed to ensure there is a common and widespread understanding of any limitations.

3.4.4 Details of recommended actions

	Recommendation	Responsibility	Timing
3.	Improving landside efficiency and reliability		
3.1	The Bureau of Infrastructure Transport and Regional Economics Transport should conduct and regularly publish research into best practice arrangements for the landside efficiency of ports.	Commonwealth.	From end 2010
3.2	For each metropolitan area a person should be nominated with responsibility to examine, advise on and improve the efficiency and reliability of port related container and other freight, consistent with the meeting of pre-existing commercial arrangements, with a focus on identified Freight Corridors.	Jurisdictions.	From end 2010
3.3	Policies and incentives should be introduced to encourage the greater spreading of urban National Port related freight traffic into off-peak and weekend periods, induce higher levels of truck (and train) loading, and secure the shift in modal shares that is advocated in government announcements.	Jurisdictions.	From end 2010
3.4	Relevant ports should consider including in any new leases incentives that would improve performance of relevant land transport system, including for cargo movement and for information sharing and provision.	Relevant port authorities.	Immediate
3.5	The Bureau of Infrastructure Transport and Regional Economics Transport should revise the Waterline Port	Commonwealth.	From end 2010

	<p>Interface Cost indicator for (container) ports servicing metropolitan areas to:</p> <ul style="list-style-type: none"> • provide segmentation of road transport costs • introduce rail transport costs • introduce indicators of physical performance of the road transport and rail transport systems including matters such as transit times, delays and queue lengths. 		
3.6	The Bureau of Infrastructure Transport and Regional Economics Transport should develop and publish performance indicators relating to the efficiency and reliability of the flow of goods across relevant container ports.	Commonwealth.	From end 2010
3.7	The Bureau of Infrastructure Transport and Regional Economics Transport should assess the conditions under which the introduction of dedicated freight land transport infrastructure segments related to relevant container ports would be justified.	Commonwealth.	Report mid 2011
3.8	<p>The Council of Australian Governments Road Reform Program should:</p> <ul style="list-style-type: none"> • include a focus on implementation of a market based system for roads involving port freight priority in exchange for freight access pricing for port Freight Corridors • identify and agree with jurisdictions which of the port Freight Corridors should be used as a trial for this market based system. 	Road Reform Project, Jurisdictions.	Immediate
3.9	<p>The National Transport Commission should advise the Australian Transport Council, and the Council should decide on, the adoption of technological opportunities to improve real time information systems for container ports and associated land transport. These are to:</p> <ul style="list-style-type: none"> • allow more reliable movement of freight within ports, among ports and on land transport systems • include port community systems that increase the scope of information exchange across a wider variety of transactions • allow compatibility with international trading partners • incorporate empty-container parks and intermodal terminals into the systems • achieve inter-operability across Australian container ports • conform with relevant regulatory provisions. 	National Transport Commission / Australian Transport Council.	Report end 2010
3.10	Commonwealth regulatory agencies should provide priority / incentives to the regulatory processing of cargo and shipping that is "on-time" and for which accurate relevant information has been provided in advance.	Commonwealth.	Commencing end 2010
3.11	More information should be provided to the port and related logistics community on information sharing and logistics cooperation practices relevant to relevant ports and port Freight Corridors in ways that seek to avoid competition issues. In some cases where industry based arrangements cannot be structured in a way that alleviates trade practices concerns, public benefits associated with the arrangement may outweigh competition concerns, and	Commonwealth.	End 2010

	seeking authorisation under the Trade Practices Act may be appropriate.		
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3.5 Priority area 4: Clarity, transparency and responsibilities in ports

3.5.1 Issues

Clarity, transparency and responsibilities relate to governance matters.

Governance concerns the control of organisations, through relationships such as ownership and regulation.

Many of the issues are contentious and there are long standing debates. There also are well established policy principles adopted by Australian governments.

3.5.2 Recommended actions

The recommended actions regarding governance include:

- Principles for the role and functions of authorities in control of relevant ports
- Principles in relation to identified port Freight Corridors and roads
- Achieving consistency in legislation and regulation.

3.5.3 Discussion

There is a considerable debate about aspects of the governance of ports. The debate touches on many issues including privatisation, the role of port authorities, access regimes, the role of the Commonwealth, competition policy, economic regulation, and Community Service Obligations.

Many of these issues have implications extending beyond ports and related logistics chains. Many of the issues are being raised in other processes. A particular challenge is to maintain the coherence of policy and build any strategy on already agreed national directions.

The draft Strategy recommends more thematic application of the Government Trading Enterprise reform agenda to the ports in which port the authorities would be run as businesses. Already many are, including some of the ports which are most successful in facilitating trade development. Such an approach allows a consistent treatment of port authorities whether or not owned by government.

Among the implications is that any government financial investments in Australia's most economically significant ports should be on a commercial basis.

For this direction to be successful it is necessary for there to be adequate planning as outlined in the planning part of this draft Strategy. This is because of the potential for the creation of supply chain disconnects.

An important extension is that of potential integration of off-port facilities and possibly port related dedicated freight infrastructure. Any move in this direction would need to be subject to competition principles already agreed.

Current governance for roads differs markedly from that for other infrastructure in supply chains, including the ports. In priority area 3 it was suggested that the Council of Australian Road Reform agenda be advanced by use of some identified port Freight Corridors as a test bed. If so, then freight priority principles should be applied at the same time / trial.

The terms of reference for this draft Strategy referred to a nationally coordinated approach. While not all agree, it seems logical that there be some review of the consistency of legislation and regulation of the ability of port authorities regarding the above matters to provide an understanding of whether coordination is adequate. Such review would differ from the recent reviews conducted under the Competition Infrastructure Reform Agreement which focussed on economic regulation and market structure.

The draft Strategy also recommends that the Council of Australian Governments notes a variety of issues raised by stakeholders including in relation to access. This would be in the context of matters such as the recent Senate Economics Legislation Committee Report regarding relevant matters in the Trade Practices Amendment (Infrastructure Access) Bill 2009 [Provisions].

3.5.4 Details of recommended actions

4.	Clarity, transparency and responsibilities in ports Recommendation	Responsibility	Timing
4.1	Principles regarding the role and functions of relevant ports should be applied irrespective of ownership of the port or those authorities. The guiding principles are that: <ul style="list-style-type: none"> • a port system should facilitate the efficient conduct of (Australia's) domestic and international maritime trade • a jurisdiction should treat an authority for a relevant port as if it was a privately owned organisation • a jurisdiction should expect an authority for a relevant port to take a leadership role in the facilitation of trade. 	Jurisdictions	End 2011
4.2	Other principles for an authorities in control of a relevant port or a Freight Facility include that they should: <ul style="list-style-type: none"> • behave in a commercially sustainable manner including recovering from port users and tenants sufficient revenues to cover operating costs and provide an appropriate return on the capital invested in the port • undertake commercially prudent investments to improve the efficient conduct of trade and to avoid a gap between forecast trade and capacity • be able to undertake investments outside of the port precinct, provided they are consistent with competition policy principles • seek to recover government financial investments • act in a transparent and even handed manner in dealings with stakeholders. 	Jurisdictions	End 2011
4.3	For identified port Freight Corridors	Commonwealth,	From

	<ul style="list-style-type: none"> any direct infrastructure freight pricing arrangements should include ensuring the adequacy of capacity for (port) freight priority, and the use of generated funds for the benefit of freight / freight operators or for preservation of community amenity. any introduction of competitively neutral road freight infrastructure pricing should include applying the principles in 4.1 and 4.2 to authorities in control of identified port Freight Corridors. 	Jurisdictions	immediate
4.4	<p>There should be review of legislation / regulation regarding government owned organisations that control by ownership or lease a relevant port. The review should cover the:</p> <ul style="list-style-type: none"> the objects, functions of the organisation responsibility of the Board and management ability of the organisation to take actions necessary to discharge safety and environmental obligations, especially with regard to facilities under the management of third parties responsibility and authority of the organisation for a leadership role in the coordination and integration of maritime-related supply chains ability of the organisation to make investments in off-precinct infrastructure where this is appropriate ability of the organisation to collaborate with other organisations including other ports and road and rail infrastructure organisations ability of the organisation to fulfil appropriate recommendations of this Strategy, including in relation to information exchange and provision ability of the organisation to undertake masterplanning and act as a consent or approvals authority for developments made on land it controls constraints on the ability of the organisation to conduct its own affairs. 	Commonwealth	End 2011

4. Some background to Australian ports

4.1 Purpose

There is a substantial and growing literature on Australia's ports, including documentation for specific ports, general reviews and policy studies.

Rather than recite this work, this section provides some background on:

- The function and scope of activity of ports
- Their relative importance in terms of national freight flows, and an overview of national throughput
- Some illustrative facts about some of the major Australian ports.

The section:

- Highlights the critical significance of ports to Australia's major freight flows
- Shows the economic dominance of a relatively small number of ports
- Illustrates the complex and varied nature of the major ports.

4.2 The function and scope of activity of ports

Ports are interfaces (transport network nodes) between the sea and land where goods (and in some cases passengers) are transferred to and from ships with the outgoing and incoming goods carried overland to/from the port by trucks and trains (and in the case of passengers by car and bus).

Ports in Australia generally fall into three categories reflecting the type goods handled (sometimes termed freight or cargoes) and the geographic locations of the ports themselves, namely:

- Bulk (mainly single commodity) export ports
- Capital-city metropolitan (mainly container) ports
- Mixed cargo sector ports (can be regional or capital cities).

The types of goods (cargoes) typically shipped through Australian ports fall into six broad categories, namely:

- Iron ore exports (a bulk cargo)
- Coal exports (a bulk cargo)
- High-value mineral and agricultural exports (mostly also bulk cargoes but also including live animal exports)
- Containers - exports and imports
- Liquid goods – in particular crude oil, petroleum products and LNG (all bulk cargoes), and
- High-value specialised goods – in particular rolling cargoes (vehicles), project cargoes, and cruising.

In order to perform the function of transferring goods between ships and land transportation, a port needs to have a series of physical assets, differing technologies, people, processes and supporting activities – some of which are managed by the port itself, others being provided on a contract basis.

Often these assets etc. are operated by different parties. A result is that the efficient performance of the port relies on cooperation among these parties, much of which is based on commercial contracts.

On the seaside, the port has to continuously provide ships with often kilometres long safe marine access channels, sea anchorage areas outside of the port, pilots and tugs to safely navigate the ships to and from quayside, and procedures to make sure the ships minimise any possible damage to the marine environment. Once the ships are moored alongside the quay, formal arrival procedures are carried out by customs, quarantine and ship-safety authorities to ensure that both the crew and goods comply with all protective regulations.

Shoreside equipment is then used to transfer goods to/from the ships where it is or has been temporarily stored. The loading and/or unloading of ships, depending upon the size and type of goods, can take anywhere from several hours to several days. Whilst in port, the ships often have to be serviced with fuel, victuals for the crew, waste disposal, and possible light maintenance and crew changes.

For incoming and/or outgoing goods using rail and truck, the port needs to be serviced by train and truck handling facilities which connect at the port precinct gate to the inland rail and road network operated by other parties (some commercial, some governmental).

Depending on the type of goods handled and geographical location, the goods supply chains from start to finish, of which ports are a fixed part, are of differing complexities – from relatively simple single bulk commodity export supply chains to complex metropolitan container import supply chains. Figures 1 and 2 illustrate this.

At present port supply chain participants generally need to share the use of off-port infrastructure such as roads and railways with other parties including car owners and urban passenger railways. In some of these cases the port supply chain participants use a relatively small amount of this infrastructure capacity, particularly further away from the port; some metropolitan roads show this. However, in some supply chains, infrastructure is effectively dedicated to port related tasks; the iron ore export chains are an example of this.

Figure 1: Typical bulk commodity port export supply chain

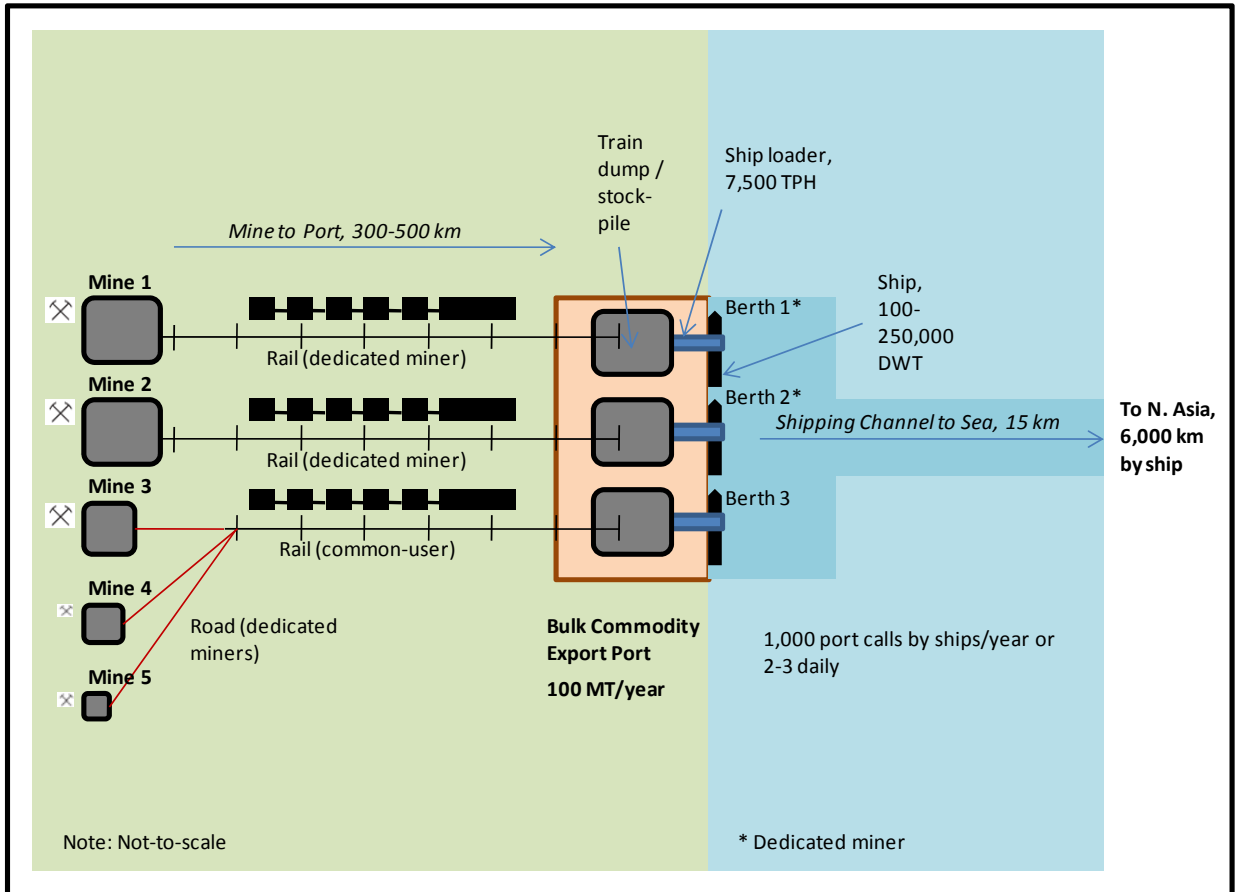
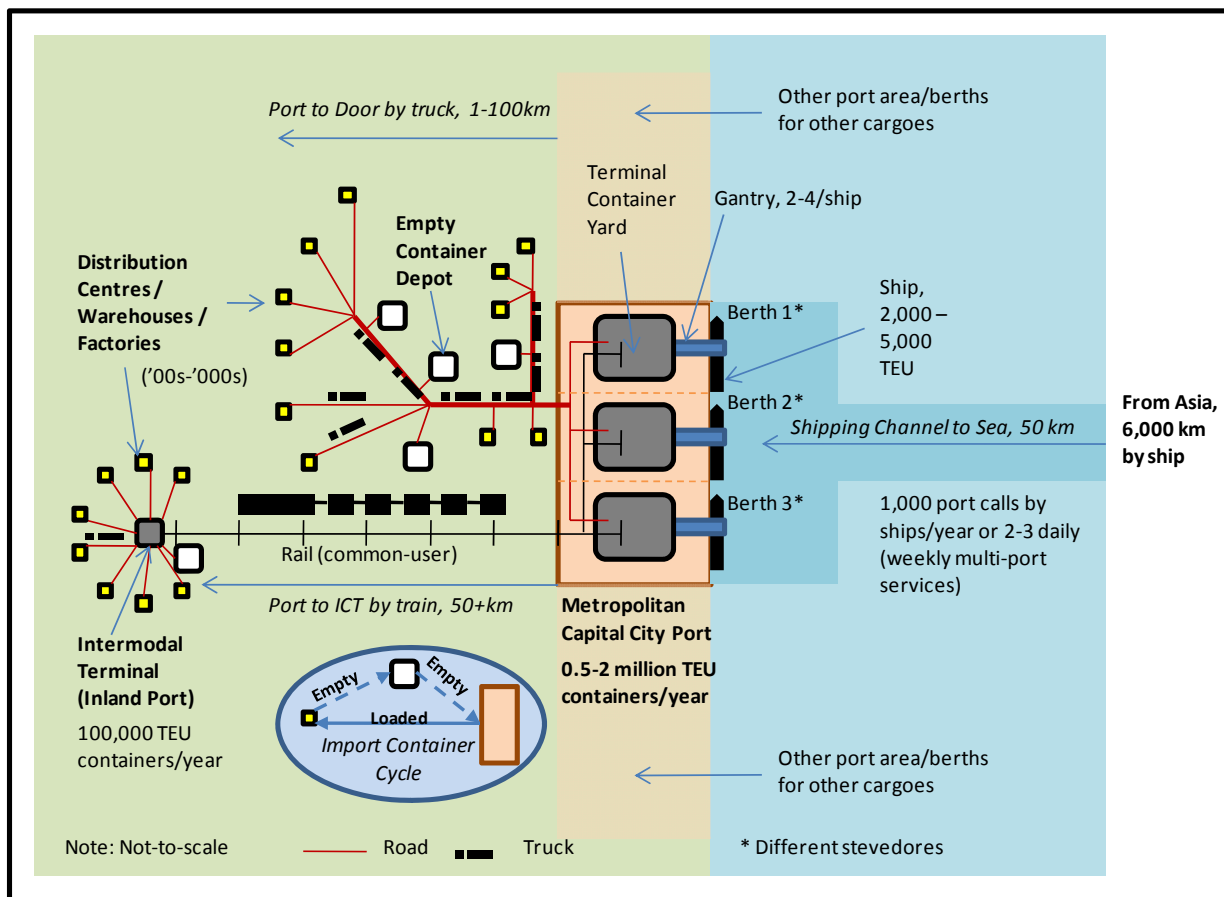


Figure 2: Typical metropolitan port container import supply chain



The port activities, providers of transportation, supporting services, authorities, and owners of the goods all rely upon operational planning and pre-planning using both internal and shared communication and information systems. The effectiveness of how well the planning and information systems work - the accuracy, speed and degree of sharing - all have an impact on the productivity and efficiency of ports both here and overseas. Hence ports are a pivotal part of international trade networks or so-called supply chains.

The level of maritime activity of Australian ports can be gauged by the fact that, in 2006-07, there were just over 26,000 port calls made involving around 3,800 different ships.¹

Ports have wider roles than just transferring goods to/from ships. They are international and national trade facilitators. In remote areas of Australia, they may also have community roles in being the only means of transporting goods and passengers around the country or to/from islands. They can also be strategically positioned for defence and emergency response purposes. Ports also play important roles in the regional economies surrounding them.

¹ BITRE Australian Transport Statistics Yearbook, 2009

4.3 Relative importance of ports in national freight flows

According to the most recently available national transport statistics², in 2006-07, the total amount of goods (freight) moved domestically was 2,868 million tonnes (MT) of which 2,146 MT by road, 666 MT by rail and 56 MT by coastal shipping. In terms of the total domestic freight task, this amounted to 507 billion tonne kilometres (BTK), of which 199 BTK by rail, 183 BTK by road, and 126 BTK by coastal shipping. It is also worth noting that, in the same period, total metropolitan passenger kilometres travelled amounted to 174 billion, of which 147 billion were by car.

Ports are an extremely important part of national freight flows, being the starting or end points of domestic movements. In 2006-07, a total of 734 MT of international sea-freight moved through Australian ports, of which 702 MT was bulk goods. If this is combined with domestic freight moved by coastal shipping, then around 30% of all freight moved domestically is handled by Australia's ports as exit and/or entry points.

The relative importance of the ports, in particular the capital city metropolitan ports, can be further illustrated by comparing the amount of interstate non-bulk freight task moved by rail versus container freight handled by Australian ports³ and the associated landside task. In 2006-07, the interstate non-bulk rail freight task was 21 billion tonne kilometres. Australian ports exchanged a total of 5.3 million TEU⁴ of containers or an estimated 30 million tonnes of containerised goods with an estimated landside transport task (over 90% by road) of around 1,500 million tonne kilometres.

4.4 Overview of current national port throughput

Australia's port throughput in the financial year 2008/2009 was around 875 million tonnes of goods⁵. Around 87% of this total throughput comprised exports. The current financial year (2009-10), even with the impacts of the Global Financial Crisis, is expected to see the total throughput increase to levels exceeding 900 million tonnes.

In terms of types of cargoes (sectors) for 2008-09, and using unadjusted Ports Australia statistics, the bulks accounted for 733 MT (90%), containerised general cargo for 53 MT (6.5%), and other non-containerised general cargo for 29 MT (3.5%).

Within the bulks sector, for 2008-09, iron ore exports accounted for 284 MT (39% of all bulks), coal exports for 264 MT (36% of all bulks), bulk liquids for 72 MT (10% of all bulks), and grain exports for 19 MT (3% of all bulks).

The 53 MT of containerised general cargo for 2008-09 represented a container throughput (volume) of 6.1 million TEU (of which 4.6 million TEU were loaded and 1.5 million TEU were empties). In terms of trade direction, 59% of the loaded containers were imports, and 41% exports.

² BITRE Australian Transport Statistics Yearbook, 2009

³ BITRE Australian Transport Statistics Yearbook, 2009

⁴ TEU is an abbreviation of twenty foot equivalent unit

⁵ Estimate based on Ports Australia statistics adjusted with ports not reported upon by Ports Australia

Table 1: Overview of major Australian ports (2008-09)

Port	Major task	Share of that trade
Port Hedland, WA	Iron ore export (159 MT)	44%
Dampier, WA	Iron ore export (141 MT)	39%
Port Walcott, WA	Iron ore export (55 MT)	15%
Fremantle, WA	Containers (0.6 mln. TEU)	9%
Hay Point, Qld.	Coal export (82 MT)	31%
Gladstone, Qld.	Coal export (56 MT)	21%
Abbot Point, Qld.	Coal export (14 MT)	5%
Brisbane, Qld.	Containers (0.9 mln. TEU)	15%
Newcastle, NSW	Coal export (91 MT)	34%
Port Kembla, NSW	Coal exports (13 MT)	5%
Sydney, NSW	Containers (1.8 mln. TEU)	29%
Melbourne, Vic.	Containers (2.2 mln. TEU)	35%
Nationally:	All major tasks doubled in the last ten years	

The converse of ports being within supply chains is that these supply chains would not exist without the ports. Many of Australia's major ports service several supply chains.

For example, out of the above table, substantial agricultural exports are handled through Fremantle, Brisbane, Newcastle, Port Kembla and Melbourne, meaning that its performance and the livelihood of producers depends on "access" it shares with other tasks through the land transport systems and through the ports. Similarly, the agricultural sector relies on other Australian ports in regional Australia.

4.5 Illustrative facts

Some specifics Australia's ports help to further set the scene on the challenges facing ports and their supply chains:

- There are over 60 ports in Australia, but more than 95 per cent of volume is handled in 20 ports
- By the year 2035, the port of Melbourne has forecast in its long-term plans to be handling almost 8 million TEU of containers (an almost fourfold increase on 2008-09 levels)
- Most of Tasmania's "interstate trade" is handled through several ports
- Port Botany has a rail transport mode share of 20-25% for the inland transportation of containers to/from the marine terminals, facilitated by some length of dedicated freight lines and location of intermodal terminals in the metropolitan area
- Port Botany and Kingsford Smith airport in Sydney essentially form an economic precinct with land transport assets such as roads in effect servicing both shipping and aviation
- Townsville and Darwin are critically important to defence interests
- Some trades are networked through several Australian ports, notable examples are containers across metropolitan ports, and agriculture across groups of regional ports
- The Brisbane shipping channel which provides maritime access has a length of 90 kilometres
- Of the ten commercial ports in South Australia, seven are controlled by a privately owned company Flinders Ports Corporation

- Port Hedland is expected to grow to 490 million tonnes per annum in the next 5 years, and plans are being developed for port facilities capable of handling an additional 400 million tonnes per annum
- Ship queues at several coal export ports have attracted significant international and media attention, which include claims of major costs being incurred by Australian exporters, and capacity responses including plans for port and terminal expansions
- Newcastle is the world's largest coal export port and forecasts show in excess of 300 million tonnes per annum in the next decade
- LNG and gas exports are an increasingly important port task. There are major developments planned for several ports and in 2008-09 Dampier exported around 957 thousand tonnes of gas
- The Commonwealth has decided to provide an equity injection into a new port in Western Australia – Oakajee - subject to advice from Infrastructure Australia. The port will handle substantial minerals exports
- The port of Gladstone has a published port plan going out 30 years, including connections with regional industrial development.

These illustrate the range of differences and issues in Australia's port related supply chains. A consequence is that any national strategy for coordination across the ports sector needs to be broad and a "one size fits all" approach would be inappropriate.

Several substantial port related projects have been proposed to Infrastructure Australia. These include projects in each State, port developments, road and rail infrastructure and intermodal terminals. A challenge is to connect the broad national strategy with specific outcomes so that the strategy provides guidance as to how long term infrastructure challenges should be identified and met.

Above all, these specifics point to the importance of the private sector in investment and actually delivering port, transport and trade outcomes.

5. Governance of ports and related infrastructure

5.1 Purpose

This section briefly discusses some issues relating to external governance of ports and related infrastructure. It is intended to provide more background to and assist in the understanding of the draft National Ports Strategy.

It is not intended to be an exhaustive review, but to illustrate how governance issues are interwoven with many facets of supply chain performance.

It is set out as follows:

- Main points
- Themes
- Government and port owners
- Government Trading Enterprises (GTEs) interfaces
- Port regulation.

5.2 Main points

External governance concerns interfaces and control of organisations through mechanisms such as ownership, contracts and regulation. For the draft National Ports Strategy, governance issues arise from government use of these instruments - the relationship of governments to the ports and related logistics sector. An especial focus is the role of government organisations including Government Trading Enterprises (GTEs) such as port authorities and railway track owners. Important principles in good governance include specification and measurement of objectives, and transparency.

There has been considerable attention paid to the application of ownership and regulatory principles in the governance of port authorities. However, governance extends beyond these in terms of instruments and in terms of coverage.

5.3 Themes

Three governance themes were identified in the development of the draft Strategy

- The relationship between governments and port owners
- Interfaces among organisations in the logistics chain
- Regulation of ports.

Stakeholders also noted that in any National Ports Strategy the relationship between levels of government, especially the role of the Commonwealth, would be an issue.

Principles of good governance include specification of objectives, measurement of progress towards those objectives, and incentives to encourage this progress. Implied in this is the matching of responsibility for an outcome with the authority over the actions necessary to achieve that outcome.

For public sector governance, transparency is seen as especially important to maintain confidence in the integrity of government. A further reason for transparency is the doubt as to the efficacy of 'normal' financial rewards as incentives for public sector organisational behaviour. The importance of transparency is heightened further when publicly owned organisations make decisions or announcements that have long term or major consequences for markets. This is the case for ports.

5.4 First theme: Government and port owners

5.4.1 Background

There has been extensive institutional reform in the port sector over the last three decades. The focus has largely been on the port precinct, on government owned port authorities and on government owned railways. Some port authorities have been privatised and others have been retained in jurisdictional ownership.

Although the details of the models adopted in each state vary, the general thrust of reform has been to establish port authorities as commercial enterprises with financial objectives. In general, the reforms that have been undertaken are consistent with national competition policy and with the direction of port ownership reform across the world. They have led to significant improvements in port authority performance.

In turn the direction for port authorities mirrors that of much of the public sector since at least the late 1980s. This general direction is of corporatisation and privatisation.

5.4.2 Corporatisation and privatisation

Since the 1980s there has been a trend towards privatisation of railways and ports. In Australia, privatisations include nearly all state government freight rail operations, substantial track segments, and the port of Adelaide. Queensland currently is privatising its freight rail interests and the port of Brisbane.

Simplistically, corporatisation is a step short of privatisation. It envisages that public sector organisations which participate in markets (GTEs) would be treated and act as if they were privately owned. For example, GTEs are subject to normal business laws, such as the Trade Practices Act. There is a considerable body of doctrine published on this matter. Port authorities, like the remaining government rail track owners, are GTEs.

Among the implications of corporatisation doctrine is that government owners should behave towards a port authority as if they were private shareholders. At law the roles and responsibility of shareholders differ from that of a corporation's board and management. Hence, it is expected that government owners do not 'manage' the port authority.

Another implication is that the port authority should deal with private participants at the port, such as stevedores, on a commercial basis. It should enter contracts and seek to cover costs and make a return on the capital investments it makes and the assets it controls. It should treat all private participants fairly and equally. If this is done, financial monitoring could provide a good guide as to the performance of the port authority and its micro-economic productivity impacts for the economy.

The doctrine recognises that government ownership does give rise to some issues that do not occur in the private sector.

This is among the reasons for placing great emphasis on ensuring transparency of the dealings between the government and the GTEs, and the transparency of dealings between the GTE and the private sector.

During the 1990s and 2000s, the Productivity Commission undertook financial performance monitoring of GTEs. It found that in some cases port authorities were not making adequate returns on capital employed.

In further cases, the port authority was undertaking activities that were not considered part of the marine port function – they were operating outside of the scope expected of a ‘normal’ port authority. The potential scope of a port authority, the functional responsibilities of the port authority, may be a most important issue.

5.4.3 Port functions

Typical port owner roles include leasing of land to private parties such as stevedores, and the management for environmental and security purposes of the relevant precinct. There can also be some relationship with the arrangement of necessary maritime functions such as pilotage, towage and linage. In addition some port authorities provide ‘common user’ infrastructure such as berths and adjacent hardstand and facilities.

While a number of organisations undertake activities at the port, typically government expects the port authority to take responsibility for ensuring that the activities are undertaken and are coordinated.

5.4.4 Issues

Notwithstanding the changes made to formal governance mechanisms, it has been claimed that there is a lack of transparency and clarity in assignment of responsibilities from government to port authorities. That is, that the GTE model has not been fully implemented. A comment made in the context of development of the draft Strategy referred to “*meddling*” by government that “*essentially led to an investment strike in some ports over the period to about 2008-09*”.

The draft Strategy takes on board the view that there are some problems with the application of the GTE model to the port sector. However, no convincing alternative to the model has been identified.

Consequently, the draft Strategy presents recommendations that are based on reinforcing the GTE model, but in a somewhat modified form to that currently implemented. The modifications are intended to allow the port authority to ultimately take a more active commercial role in the relevant supply chains. In the interim, and especially when publicly owned, the port authority needs to take a lead role in planning for not only the port precinct but also for the land and seaside approaches to the port.

In order to do so, it is essential that the port authority has power to execute the port precinct plans which are published. Investors would need to understand whether there are conditions precedent to this, for example the need to gain further government approvals for the use of land, or environmental approvals.

5.5 Second theme: Interfaces among GTEs

5.5.1 The interface

The scope of the draft National Ports Strategy relates to the major elements of the supply chain rather than just the port precinct or to the port authority. Because a number of organisations are involved, effective governance needs to address interfaces. An interface occurs where two different organisations rely on each other to undertake an activity. Two principal infrastructure interfaces in the ports sector are:

- Between a port and its hinterland land transport chain
- Among ports which undertake similar tasks for similar customers.

The fact of an interface means that there is some difference between the objectives and procedures of the relevant organisations. This may increase the cost of joint activities necessary to perform a function, but equally creation of an interface may be desirable to enhance competitive forces in some markets. It would depend on the circumstances of the particular case.

The interface matter is very closely related to the question of supply chain coordination which is addressed in relation to container supply chains in a separate section. That section looks at information provision and incentives to address interface costs.

However, there are more fundamental market-based solutions to interfacing costs – including the potential for organisations to merge so that a function is conducted by a single organisation or the potential for appointment of an independent coordinator. Of course there may be competition concerns regarding mergers, and there also could be competition concerns about a monopoly operating in an upstream/downstream market where it faces competition and addressing these concerns may lead to a model of intrusive access regulation.

5.5.2 Government ownership and interfaces

Where governments own certain industry participants, there may be no market based possibility of merger even if there were no competition concerns about such a merger. One example would be a government owned port authority and a government owner of dedicated rail track that leads to the port or a rail yard solely used by port trains. Another example would be several port authorities owned by a single government.

5.5.3 Vertical integration, separation and common user infrastructure

The organisational interface comes up in debates about vertical integration, separation and access. This has been particularly controversial in the case of railways.

Australia's competition policy envisages third party access to essential infrastructure facilities of national significance in certain circumstances. Access can be granted for the use of infrastructure that is under the control of a vertically integrated organisation or for infrastructure which is vertically separated.

Submissions to Infrastructure Australia for some port precinct infrastructure projects refer to new "common user" infrastructure, which in most cases would be vertically separated. In this context the term "common user" refers to the potential for several transport operators to use a facility, or for several end-customers being serviced by a single operator.

In some cases it is argued that the private sector cannot efficiently fully finance the construction of new common user infrastructure, and that government investment is needed, at least in the first instance. It also is generally recognised that such investment should be recoverable from users, via access charges.

5.5.4 Minerals issues

There is a view that government ownership and mandated separation means that the logistics chain cannot truly and commercially reflect the markets it serves. The issue was raised by some stakeholders in the bulk minerals chains.

Submissions to the draft Strategy pointed to the differences between the minerals logistics chains on the east coast and west coast of Australia. One view was that the west coast supply chains were more responsive than those on the east coast to recent surges in minerals demand because they were more integrated ie. because they had fewer interfaces and / or because there were few government participants in the supply chain. Where it has been necessary to deal with greater supply chain segmentation due to historical or government policy factors, there have been progressive attempts at formal and informal coordination, for example in the Hunter Valley Coal Chain.

Comparisons of these different approaches, of public sector separation on the east coast and of private sector integration on the west coast, have been subject of much commentary. Included in the discussion are ship queues off some east coast ports notably Newcastle and Dalrymple Bay, but not off the west coast or at least to the same degree and duration. Ship queues are now a long standing feature off some Australian ports and have persisted over many years notwithstanding some increases in capacity.

Most commentary has assumed that the queues represent a net loss to national productivity and that losses are borne by Australian exporters, for example that recent queues at Dalrymple Bay were costing in the order of \$500m pa. It is argued that Australia has some of the most congested bulk ports in the world, for example that in early April 2010 there were some 380 bulk carriers at anchor at ports around the world including 215 in Australia, and that port congestion in Australia was three times higher than in China. Commentary also suggests that the causes and potential options to resolve such queues are complex.

5.5.5 Privatisation

A focal point for the debate in relation to the ports is privatisation and this too relates to interfaces. Submissions made in the context of the draft Strategy made arguments about inclusion or exclusion of assets in, and conditions that should attach to, privatisations relating to ports. The privatisation agenda does not relate to the entire logistics chain since much is in private hands already.

Arguments here include claims that government ownership may affect the level and timing of investment at ports. There are conflicting views on this point with some arguing that governments are more able to invest in advance of demand and head off any capacity constraint, while others might argue that governments may be reluctant to allow GTE investments that would "add to the government balance sheet".

5.5.6 Roads

The interface matter could be especially important where public sector owned organisations have greatly different objectives or modes of operation. An example is port authorities and road authorities. Port authorities have a commercial charter, are funded by user charges and deal with the port precinct.

Road authorities do not have a commercial charter, are not funded by user charges, and typically have objectives to optimise or operate the entire road network for all users, not just those roads that go to the ports and on which freight predominates.

The road questions may be of the highest significance in Australia's metropolitan areas and the ports that serve them. This is because of the likely demand placed on the already constrained land transport networks from the trade growth that is forecast for container ports. Landside congestion is set to worsen and increase costs as a result.

5.5.7 Interfaces among ports

A further potential interface may be among ports that do/wish to undertake similar activities for similar customers. An example would be ports that wish to expand the potential for container facilities to attract trade from another container port.

5.5.8 A further role for Commonwealth?

An issue raised in consultation relates to interfaces among ports in different jurisdictions. It was suggested that the Commonwealth, not being an owner of ports, may be in a position to deal with this. Examples include systems that aim at interoperability such as IT. This is thematically related to a national freight network.

5.5.9 Interface issues

The above illustrates the complexities of interface and supply chain coordination issues. The position adopted in the draft Strategy on some of the more important elements is explained below.

Submissions put strong cases for and against vertical integration of ports and of railways, and of supply chains more generally. The draft Strategy takes the view that it is not able to resolve this debate, and there are many other forums and processes in which similar issues are raised; for example in the context of the recent Senate Review of proposed amendments to the Trade Practices Act, and forthcoming decisions on rail access in the Pilbara. However, this clearly is a matter which industry wishes government to take note of a range of views.

The matter of ship queues appears to be extremely complex. A wide variety of suggestions have been raised as to how this might be addressed, including infrastructure solutions, changes to organisations, and new types of shipping contracts. Reports indicate that queues reduce as capacity is added. More accurate matching of capacity to forecast demand would positively impact on ship queues. Improved planning of ports and related landside logistics, as proposed in the draft Strategy, therefore would be expected to improve Australia's performance regarding ship queues. Other initiatives may also be important, however they are too detailed to address in the current stage of the draft National Ports Strategy.

The draft Strategy does not take a view on the merits of privatisation. However, it does recognise the international trend towards privatisation of GTEs over the last decades. It also recognises that in some other transport fields, for example public transport, it has been claimed that privatisations did not pay sufficient attention to developing processes for planning of future capacity requirements. The draft Strategy's proposals for planning would overcome this concern.

Interfaces among government participants in the supply chain also could largely be addressed through planning; for example integration of port authority plans with the regional plans that would show proposed road, rail and intermodal terminal capacity and investments.

The draft Strategy also is consistent with the Australian Transport Council's desire for introduction of market principles into transport, and this would reduce interface problems. One option is to allow port authorities to act more like private sector firms. This could involve opportunity for port authorities to commercially invest in the development of assets beyond the traditional landlord-at-precinct role again reducing interfaces. Of course any such investment should be subject to competition laws. Already, there are examples of such investments in Australia and overseas. These examples include the Enfield site in NSW, and the Alameda Rail Corridor in Southern California, USA.

The case for such investment would be strongest for assets used predominately or exclusively for port related tasks. This raises the issue of freight priority or dedicated infrastructure.

Priority in this sense may include asset configuration, scheduling, as well as day to day running, and would be purchased via pricing. The Road Reform agenda may provide an early opportunity to test the feasibility of this.

Resolution of interfaces among ports may need to be done at a level 'higher' than port authorities, and in advance of port precinct plans. The logical place for this is with the state governments, and this forms the basis of the draft Strategy recommendation that there be state level plans for port systems and how ports within the jurisdiction are to interact with each other. The draft National Ports Strategy agrees with the concept of coordination of port planning but does not envisage direct Commonwealth control of ports. A cooperative approach is considered to be the best chance of improvement at this time.

Arguments have been made for a limited Commonwealth involvement, such as provision of funding when there is a "first starter" problem in relation to common user facilities. The draft Strategy agrees with most stakeholders that any government financial contributions to ports should be made on commercial type principles including following normal commercial due diligence principles.

5.6 Third theme: Regulation of ports

5.6.1 Regulation

Regulation generally restricts some type of activity. It can be categorised into laws generally applicable to all, and sector or activity specific rules. The latter includes economic regulation aimed at curbing monopoly behaviour.

5.6.2 CIRA reviews

Some questions regarding the economic regulation of some ports were covered in the Competition and Infrastructure Reform Agreement (CIRA) reviews. These reviews examined the organisational structure of functions at port precincts, and the economic regulation that applied to the organisations undertaking these functions. As is the case of other governance elements there are differences among the jurisdictions on these matters, and therefore among the nationally significant ports.

The CIRA reviews were conducted on behalf of the states which owned the port authorities. Not all of Australia's most significant ports were included in the reviews.

The reviews generally found existing arrangements to be satisfactory from a competition policy perspective. At the request of the Council of Australian Governments Reform Council there was a further review of the reviews.

5.6.3 Regulation as an incentive

Some submissions and consultations for the draft Strategy suggested that regulation regarding access to essential facilities is more effective at allocating existing capacity than it is in stimulating new capacity.

At law, regulation attaches to a legal entity rather than to an activity. As such regulation generally is relatively ineffective in addressing coordination or interface issues unless it assigns responsibility to one party.

5.6.4 Competition regulation

A significant amount of comment was passed regarding application of the Trade Practice Act to the ports and related logistics sectors. Two main issues were raised; the impact of authorisations and access regimes.

In consultations, some private stakeholders expressed a view that the current application of the Trade Practices Act has a dampening effect on supply chain coordination. In their view, authorisation was required for cooperation and also for the sharing of information. The stakeholders felt that this supposed requirement inhibited coordination in the supply chain, and the resolution of interface issues within the private sector.

The second aspect of the Trade Practices Act generating comment was the “access” provisions. Primarily this was raised by participants in the bulk commodity export chains. It relates to matters noted in the earlier subsection on minerals issues.

5.6.5 Non-economic regulation

Stakeholders also referred to non-economic regulation such as environmental laws and planning approval laws. Comment was made about the certainty and length of processes for these types of approvals, and also about overlaps of jurisdictions. Application (or lack thereof) of such regulation on other sectors can impact on ports and related supply chains. Examples were provided indicating that local government decisions to permit sensitive uses of land have effectively encroached on major ports and nationally significant freight corridors.

5.6.6 Issues

The regulatory issues raised by stakeholders were extremely broad.

Regarding competition regulation some stakeholders noted continued references to “competition” policy seemingly over and above other aspects of policy.

The matter of authorisations was raised with the Australian Competition and Consumers Commission (ACCC) which is responsible for enforcing the relevant elements of the Act. The ACCC is currently working with the ports and related industries to better understand what the industry’s concerns are and to further educate businesses about the Act. Beyond this, the ACCC made several points.

First, in many cases, industry proposals to exchange information would not raise concerns under the Act.

Second, in some cases potential trade practices issues can be avoided by restructuring proposed arrangements where parties identify them at an early stage and prior to implementation. As an example it may be possible in some cases to address potential competition issues through the creation of an independent logistics co-ordinator for a supply chain, with requirements on industry participants to provide necessary information to that co-ordinator and to take account of operational directions by that co-ordinator.

Third, in some cases, where industry-based arrangements cannot be structured in a way that alleviates trade practices concerns, the public benefits associated with the arrangement may outweigh any impact on competition and seeking ACCC authorisation under the Act may be appropriate. This public benefit analysis can consider effects on upstream or downstream markets.

On the question of regulation for or of access stakeholder put strong views and a variety of arguments including some that suggested different positions on whether assets were /were not generated with government funds. There also was an argument that while there is uncertainty about the precise application of regulation, such as for “light handed” negotiate and arbitrate access, there is a dampening effect on private investment in infrastructure facilities. As against this, the objects of access regulation under the Trade Practices Act include promoting the efficient operation of, use of and investment in Australia’s key infrastructure, and it can be argued that lack of access to infrastructure may result in under investment in services and markets that use this infrastructure. As noted in an earlier sub section the draft Strategy takes the view that it is not able to resolve this debate.

On non-economic regulation, the draft Strategy proposes that more prominence be given to the economic role of the relevant ports. This may have implications for various processes and outcomes within the supply chains. This is discussed more in section 6 of this draft.

6. Stable and transparent environment for port-related investment

6.1 Purpose

The purpose of this section is to outline some planning issues and their relevance for the draft National Ports Strategy.

These planning issues include forms of non-economic regulation.

The section is structured as follows:

- Introduction
- Government planning
- Planning and the private sector
- Principles in planning
- Current Australian planning
- Progressive practice in planning
- Potential concerns about planning
- Planning for the relevant ports.

A separate background paper on planning has been prepared by GHD.

6.2 Introduction

Stakeholders identified, correctly, that very considerable investment will be needed in the ports and supply chains over the next decades.

It was noted that the investment task *“is overwhelmingly one for the private sector. Policy, then must be geared to giving the private sector confidence in that investment”*.

Governments play an important role regarding ports in Australia. While it is generally accepted that investment in ports and related infrastructure should be on a commercial basis, involving private decisions, the framework in which those decisions are made is set by governments. Important aspects of that framework include planning and regulation.

Planning involves identification of a future desired design and of the steps to be undertaken to progressively move towards this. Necessarily this calls up issues relating to the evolution of the port to date, its relationship with land transport systems and the local regions, and constraints.

Some ports are more constrained than others, and the range of options for growth of some port systems are much more limited than some others. It would neither be feasible nor desirable for a National Port Strategy to set out a template plan for all ports or for each port. Local differences abound.

However, at the very least it is desirable that there be clear directions for the future of each of Australia's nationally significant ports to provide guidance as to where and when private investment opportunities might arise. This would assist in generating a “pipeline” of infrastructure investments available for private participation, and unlock significant capital.

It also is desirable that consistent and understood processes be used across Australia. For this reason the draft National Ports Strategy focuses on planning processes rather than prescribing the layout of each port and related logistics chain.

However, it will be important for the private sector, governments and the community to be able to view such layouts. This extends beyond the major commercial tenants or customers of particular ports to other parties including those with special or limited requirements.

Stakeholders identified some such parties with very strong interests in specific ports, although they would not represent the largest trades. Examples included defence interests, agriculture and cruise shipping. Each of these also would have interests in the operation of some of the smaller scale or specialised ports. For example defence at Darwin and Townsville, agriculture at some of the southern Australian ports, and cruise shipping with its berthing requirements near the centre of capital cities. These parties would need to see the proposed layout and arrangements for relevant ports into the future to determine their own strategies and strategic business and operational requirements.

6.3 Government planning

Apart from generally applicable laws, such as for business practices, borders and security, ports are affected by government involvement in planning. This government planning occurs at three levels at present.

At the highest current level is planning for the entire jurisdiction. This type of planning sets out the roles for the various ports in the jurisdiction, roles which are then implemented through government policies. Input by Commonwealth agencies such as customs, quarantine and defence also is significant at this level, for example the location of naval facilities.

At a second level is planning within the region or area that the port is located or serves. This includes metropolitan planning. Relevant aspects include the capacity of landside transport and communications systems which are not within the control of the port authority.

At the most specific level, port planning covers matters such as internal layout and design, common user or lease areas and berths, channels, navigation and lease conditions and lengths. This can involve precinct master-planning and the control of uses within the port environs. It can also include master-planning of facilities or lands acquired for the port but which are not within the traditional port boundaries, an example may be an intermodal terminal. The ability of the port authority to do this is determined by the state government.

At this more specific level there is experience in Australia with the masterplans for each of the major airports. It is significant that these master plans are developed while the airports are under private control. However, these plans do not fully deal with regional or metropolitan access-to-airport issues.

6.4 Planning and the private sector

Government planning is one facet of external governance that affects the sector. Other facets of governance include regulation, contracts, and financing and funding.

Significantly, governments own organisations which are involved in the commercial aspects of ports and related logistics chains. These include port authorities, railway companies and road authorities. This matter is discussed in more detail in the governance part of this draft Strategy.

Private sector parties use these plans to determine how they might participate in the port and logistics functions through, for example investment in equipment or the taking of leases. Frequently the context for their investment includes comparison with opportunities in similar activities elsewhere in Australia and overseas.

Various parties participate in the drafting of these plans. For example, port authority staff generally draft the most specific level of plans for the precinct, and this is overseen and 'approved' by the authority's board. However, in most cases government has the final say in what is approved. As government is the ultimate decision maker, the plans need to be considered government plans.

Once plans are approved, government allocates responsibilities for execution.

6.5 Principles for planning

Ideally, the three levels of planning should cross reference each other and also be consistent with other significant government plans. For example, the planning for a metropolitan port should be able to be cross referenced to the type of metropolitan plan that the Council of Australian Governments has called for.

The terms of reference for this draft Strategy referred to national coordination of planning, and this implies some cross referencing of port plans. Equally there should be some cross reference to any national freight network plan.

Significantly, given the nodal nature of ports and the large but concentrated freight flows along land corridors, the port aspects should be the among most important yet the simplest and clearest aspects of any city plan or any freight plan. One implication is that a city plan (apart from that for Canberra) or freight plan would be inadequate if it did not reference relevant ports and the key landside infrastructure that is used to service them. Another implication is that if an adequate ports plan cannot be done, there is little prospect of planning for other much more complex activities. The draft Strategy therefore takes the view that plans for relevant ports are among the highest priorities for Australia's urban agenda.

Given government involvement, the principles for sound public sector governance should attach to these levels of planning. These principles include transparency, certainty and timeliness in decision making, adequate consultation and appropriate levels of detail and stability.

6.6 Current Australian planning

In comparison to these ideals, performance in published port planning (planning and execution, including landside connections) across Australia is currently patchy. For Australia as a whole it is poor. For some ports there are clearly communicated and detailed plans for future development which allows confident private investment. For these ports, port authorities are then empowered to execute the plan without further guidance or direction from government. However, most do not have such published plans.

For those ports for which there are plans, very few can be placed in context of either jurisdiction or local areas. This is because there are no State level freight plans or metropolitan plans that are published except for Victoria.

In some cases the status of the port plan is unclear. It is not known whether those with the power to accept or modify a port plan, e.g. government, have in fact approved it.

In other cases, the planning horizon is far too short; shorter than the private investment perspective or equipment cycle or in extreme cases shorter than the time taken to achieve relevant approvals or construction. Apart from the obvious issues this creates about lack of certainty for private investment, where capacity constraints are foreseeable but outside of the formal planning horizon, these may generate a false sense of comfort about the challenges of growth to the efficiency of the transport system and the welfare of the community.

As against this, stakeholders pointed to considerable efforts now being made by jurisdictions to develop ports and freight plans, particularly after the Prime Minister's announcements regarding the cities agenda and a national ports strategy. Most jurisdictions have these types of planning efforts underway, and they are able to rely on strong work undertaken for some of Australia's ports. Leading examples include Gladstone in Queensland and Melbourne in Victoria.

The Victorian Government has gone further and in 2009 published its ports and freight plans – Freight Futures and Port Futures. Some stakeholders commented that other jurisdictions intend to follow this lead.

Subsequently, Victoria has progressed further with its efforts and is now considering the matter of planning controls over sensitive land uses near some of its ports, and not just over port activities. An advisory committee is considering whether current controls *“are adequate to ensure the protection of the ports against the encroachment of sensitive uses”*.

A matter of great importance to other jurisdictions has been highlighted by Victoria's Port Futures. This relates to the forecast for growth of Melbourne's container trade to 8 million TEU by around 2035, which has been broadly confirmed by recent BITRE forecasts. At similar rates of growth for Australia's other container ports, some would appear to face shortfalls in actual or permitted capacity in the medium to long term. This could potentially raise some fundamental questions about ports, freight and corridors in several places. In this regard, the benefit of Victoria's planning is to place that jurisdiction in a relatively good position to deal with the difficult challenges of the future.

6.7 Progressive practice in planning

The current Australian situation for seaports might be contrasted with more progressive examples such as publication of airport plans. Importantly, planning forms the basis of new national plans or strategies for ports and transport systems such as for the UK (2007-2009), Canada (2006), South Africa (2007) and the Netherlands (2009). In the United States there are calls for a national ports strategy.

The more progressive approach also covers international gateways that are privately owned or operated. For example, in Australia it covers privatised airports and the port of Geelong. It is accepted that such plans are a positive influence for all stakeholders – indeed stakeholders advise that the main argument is that some of these plans could do more to address regional or jurisdictional issues.

6.8 Potential concerns about planning

It is appreciated that governments may feel constrained in relation to publishing plans. However, the airport masterplans and Victoria's Port Futures provide counterfactuals to this.

It may be thought that a plan reduces government flexibility. However, the fixed location and long life infrastructure of ports means there is little flexibility with or without a plan.

A plan in this context simply provides an opportunity to reduce economic, financial and social costs associated with very strong pressures for port and industrial development. Victoria's example is a case in point.

A further factor in some cases is the assumption that privatisation allows government to avoid responsibilities regarding plans. Privatisation might change who drafts a plan but does not replace governments' responsibility for ensuring that plans are made. Again Australia's airport plans provide a counterfactual.

The current lack of clarity with planning begins with an absence of policy certainty. The relationship of specific port plans to the broader objectives and strategies of government, via the higher level regional and jurisdictional plans, is often unclear. There have been periodic reversals of the planning context for major ports and related developments. In some cases there is speculation within industry as to the intentions of governments in relation to how projected freight tasks might be dealt with by ports. In yet other cases, government decision making has not been timely and this has created doubts about intentions.

In all of these cases, private investors may look to place their scarce investment dollars elsewhere, at least until the uncertainty is resolved. In the interim, equipment, technology and skills used at the port become outdated, less competitive internationally, and with prospects of higher risks of adverse community and environmental outcomes. This is not to take a position on particular options for port development, but rather to point to the issues that government uncertainty and a lack of a published plan may lead to.

6.9 Planning for relevant ports

Ports differ greatly in their scale, geography and complexity. Overly prescriptive planning requirements would be counter-productive.

However, without some guidance, there is a risk that the relevant levels of plans will not provide the certainty necessary to ensure the integrated development of the port system, provide comfort for potential investors in port and related facilities, and deal adequately and proactively with community concerns.

It is recommended that a sea change in port planning efforts be the foundation for a National Ports Strategy. This would especially focus on those ports which have a significant effect on national productivity.

A key responsibility for jurisdictions in relation to these ports is to ensure that planning is adequate. To the extent this responsibility is met, benefits would be available to the relevant port as outlined in the following section.

6.10 Forecasting

Planning includes demonstrating how capacity will match demand continuously into the future. Hence part of any planning is the forecasting of future demand.

GHDs background papers for the draft Strategy demonstrate some of the issues involved in forecasting of specific trades. These include the need for assumptions about drivers of growth, vehicle and vessel size and productivity levels.

Many Australian ports currently undertake their own forecasts for well into the future, but as with plans generally, few are publicly available. The extent to which these forecasts are used by or are compatible with the assumption of other supply chain infrastructure owners, such as the Australian Rail Track Corporation, or RailCorp, is unclear.

The Bureau of Infrastructure Transport and Regional Economics and the Australian Bureau of Agricultural and Resource Economics undertake forecasts including at national and some regional levels for their current spheres of interest. Similarly the Australian Bureau of Statistics publishes population projections.

It is not clear how these national level forecasts are mapped into port or supply chain forecasts (and vice versa). Given the possibility of long term economic structural shifts due to for example climate change and energy scenarios, or demographic change, it would seem sensible for some national coordination of the forecasting efforts of these Commonwealth agencies and the relevant ports. For example, it is possible that agricultural production patterns may change, and if so there is a question about whether ports near potential growth areas are aware of the implications of such a national trend.

Hence the draft Strategy recommends that Commonwealth research agencies such as the Bureau of Infrastructure Transport and Regional Economics provide a basis and expertise on which jurisdictions can develop their forecasts.

7. Efficient operation of the landside access to the port

7.1 Purpose

The purpose of this section is to outline some of the issues associated with landside access to metropolitan ports. This was a key issue that gave rise to calls for a National Port Strategy.

The section is structured as follows:

- Introduction
- Costs in container transport chains
- BITRE cost indicator details
- National Transport Commission supply chain study
- Efficiency and reliability of cargo flow
- Infrastructure, information and incentive solutions.

GHD has prepared a background paper dealing with the BITRE indicator matters.

7.2 Introduction

Part of the terms of reference for the National Ports Strategy was an analysis of the landside (shorebased) costs of container transport.

The reason for this interest is twofold. First, the largest and most rapidly increasing cost elements of the container transport chain in Australia appear to be on the landside rather than on the seaside of ports. Second, the forecast rate of growth of container traffic combined with the growth pressures of Australia's cities suggests that these costs will increase even more rapidly in the future.

Arising from this is a need to understand the current situation of shore-based shipping costs for containers. This would include ascertain the factors giving rise to these costs so as to identify opportunities for future minimisation. There is a further need in the future to monitor the relevant factors to understand the effectiveness of policy measures.

7.3 Costs in container transport chains

Current public information regarding costs of container handling is in the Bureau of Infrastructure Transport and Regional Economics (BITRE) Waterline Port Interface Cost series. This covers the five mainland major container ports. The series shows that landside costs (road transport costs) can exceed the total of all other port container supply chain costs – they do exceed all other costs in Sydney and Melbourne which handle the majority of Australia's international container trade.

Figure 3: Five main Australian container ports – port interface costs (1)

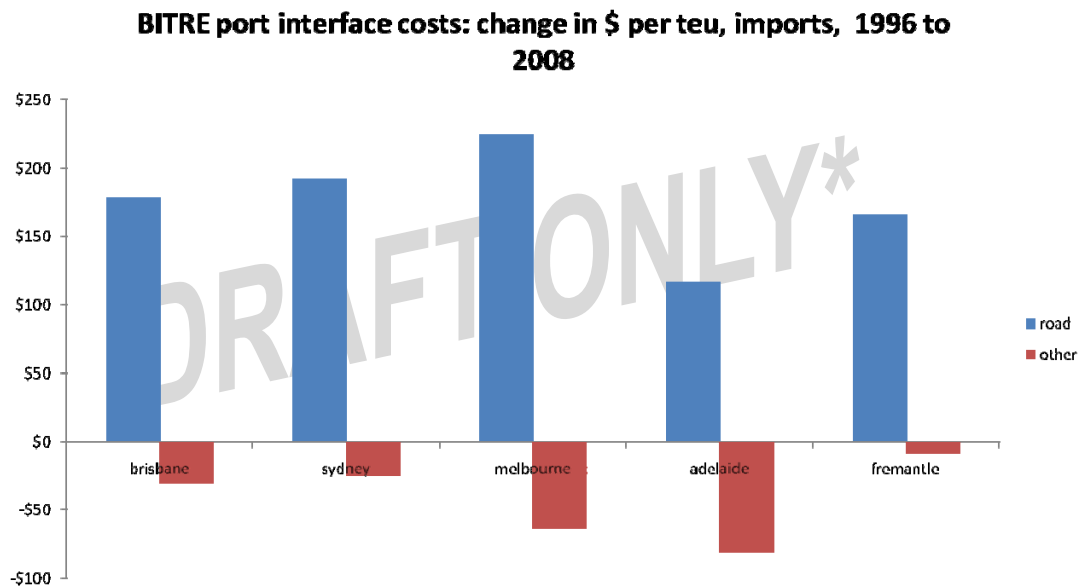
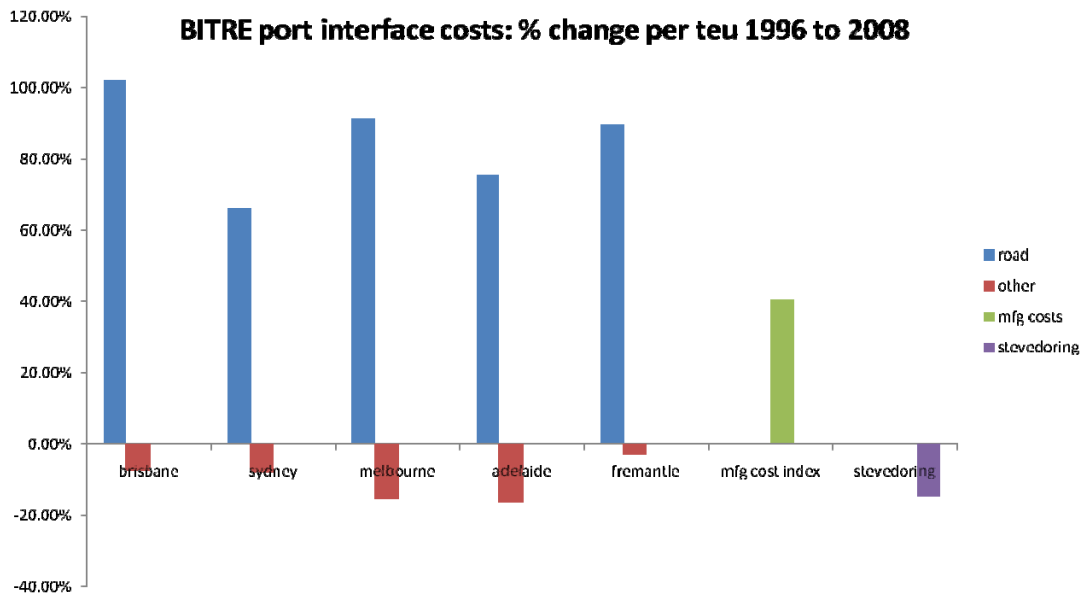


Figure 4: Five main Australian container ports – port interface costs (2)



These graphs demonstrate:

- All of the growth in the reported Interface Costs over the last decade or so is attributable to landside costs
- The rate of growth of landside costs over the last decade or so has been substantially faster than inflation.

These results are consistent with the observation that containers are now moved for longer distances in more congested traffic conditions in Australia's cities.

The economies of scale that stevedoring and other activities can take advantage of have not been of benefit to landside access; containers moved per truck movement have remained stubbornly low. There remains little use of rail for moving containers in the cities.

This suggests that a focus for reform and infrastructure efforts ought to be on the landside, including on increasing truck and train utilisation. Beyond increasing utilisation, there may be issues about the adequacy of capacity and future plans for infrastructure investment.

7.4 BITRE cost indicator details

Prior to discussing the potential for these matters, several points about the BITRE indicator are worth noting.

7.4.1 Components

The cost indicator effectively includes thirteen components for each major container port. Of these the landside aspects are captured in only one – "Road Transport Charges".

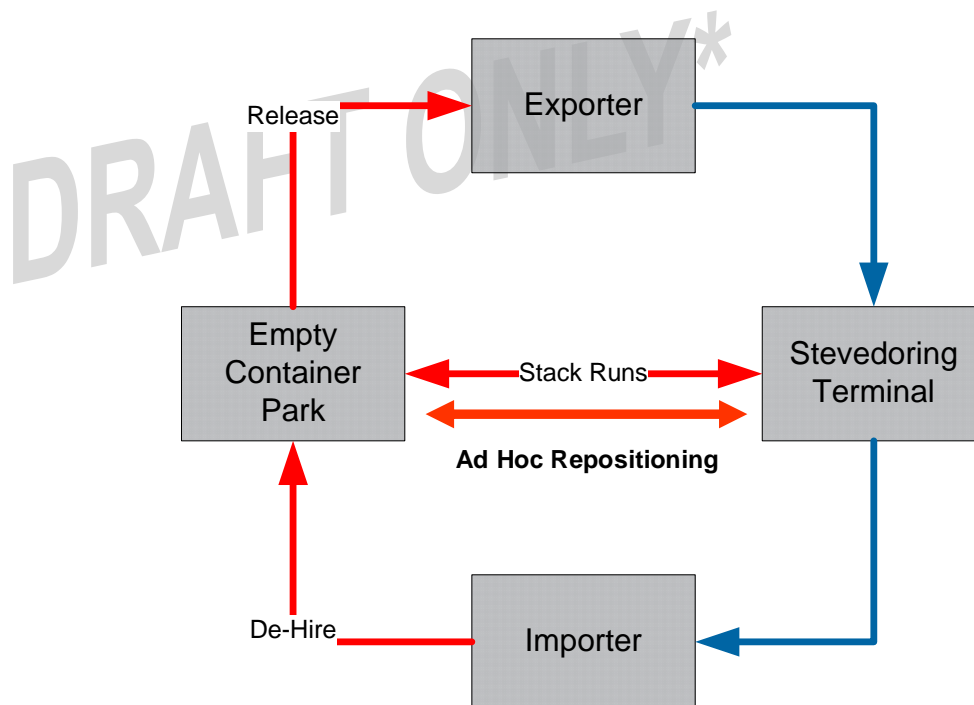
The detailed and segmented monitoring of only seaside costs is suggestive of policy not being focussed on landside costs.

The monitoring also suggests that little attention has been paid at a national level to rail transport of port containers.

The Road Transport Charges costs reflect several activities. These relate to delivery of containers to and from the terminals at ports, to and from freight customers, and to and from empty-container stacks. This movement is shown in Figure 5.

Figure 5: Movement of port containers by road in metropolitan areas

- Measured by BITRE
- Not measured by BITRE



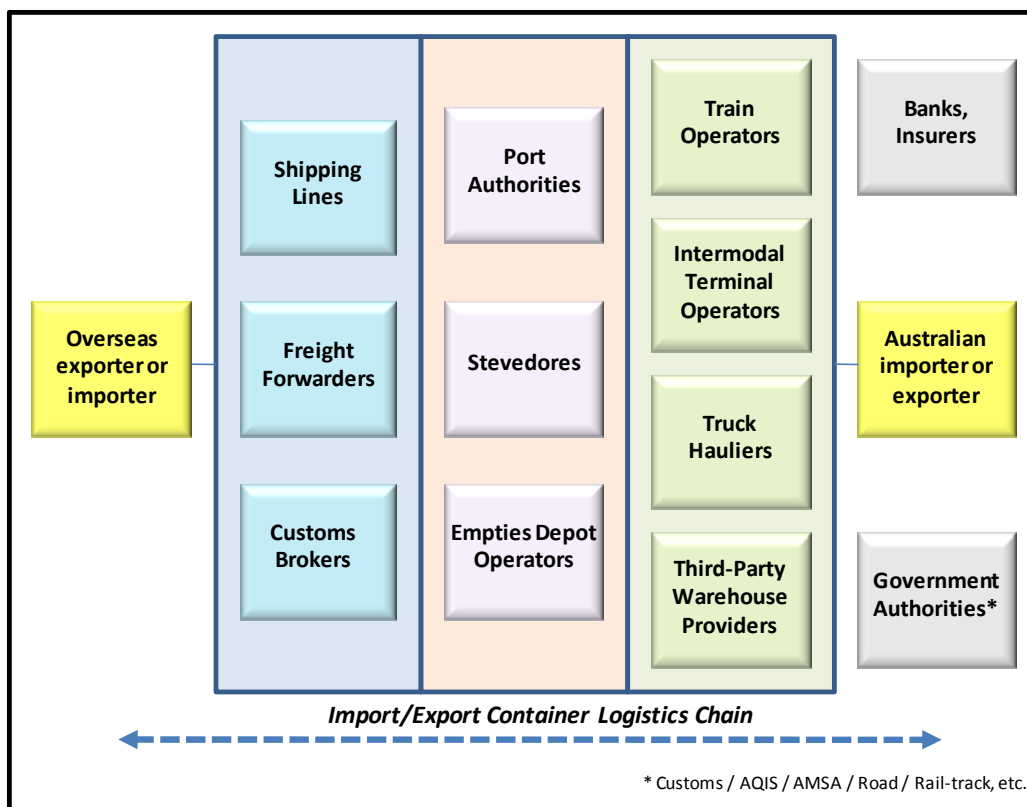
The implication of Figure 5 is that the location and accessibility of the empty-container stack is a significant issue for landside costs.

Empty-container stacks are important in Australia because most of its container ports have a import-export imbalance; more full containers are imported than exported. Consequently empty containers are exported, and this provides an opportunity for a “stack run” or the movement of a large number of containers from the empty-container park to the port. In principle this stack run can involve a relatively large and concentrated flow of containers.

7.4.2 Financial measure

The BITRE Port Interface Cost indicator is a financial measure. It seeks to report the costs paid by freight customers which are attributable to various components of the logistics chain. There are multiple parties involved in the container logistics chain as shown in Figure 6.

Figure 6: Overview of parties involved in the container logistics chain



The actual cost faced by a customer at the end of the chain will be a function of both physical costs of segments of the chain and of the commercial margins of participants in the chain. Hence it is possible that a reduction in the physical costs of the chain might not result in an equal reduction in the cost faced by a customer, or of the Port Interface Cost indicator.

The commercial margins of participants in the chain may be influenced by competition and regulatory oversight by relevant authorities.

Reductions in margins could discourage investment in modern equipment. Consequently the issues about appropriate levels of margins, and of competition in the supply chain, may best be addressed by regulatory authorities with expertise in this field. The authorities would need to look at competition as it potentially influences economic efficiency.

The issue about commercial margins suggests that the current indicator is not adequate for policy makers.

In the context of pre-existing appropriate economic-competition safeguards, the additional function of a port strategy should be to focus on reducing the dimensions of physical costs of container movement. A National Port Strategy would focus on common national opportunities for reducing these costs. This would complement rather than confuse pre-existing policy directions.

7.4.3 Costs

The Independent Pricing and Regulatory Tribunal (IPART) undertook a review of the Port Botany Landside task in 2007-08. This pointed to a large number of issues regarding the container supply chain.

Some key elements of these issues relate to the broad times taken for movement of containers through various segments of the logistics chain. This suggests potential reductions in physical costs might be achievable by reducing truck turnaround time at empty-container parks, or by reducing truck transit time.

In addition to these, other studies have identified substantial costs arising from low truck utilisation and truck queues at port gates. As discussed in subsection 7.7 below, the causes of truck queues are unclear with possible contributing factors including information or incentive problems, within the port or outside of the port.

Truck utilisation is shown in the BITRE Waterline publication as Containers or TEU per truck. In 2006, the five main container port average was 2.1 TEU per truck turnaround at terminals with this slightly increasing to 2.3-2.4 TEU per truck in 2007-08 reported period. Notably, both Adelaide and Sydney have lower truck utilisations than those of Brisbane, Melbourne and Fremantle.

7.4.4 Alternative approaches

The above discussion illustrates some gaps in information currently available to policy makers.

At present there is little segmented nation-wide information available on road transport costs of container port traffic. There is no information available on rail transport costs. This contrasts with aggregate information available for within the port gate.

The use of a financial cost indicator for road transport does not reveal issues associated with physical productivity. For example it does not identify the cost of empty container stack runs or truck congestion outside of the port gate.

Consequently, the draft National Ports Strategy recommends some changes to the BITRE indicator series. These changes are to:

- Focus more on physical movements rather than estimated dollar costs
- Include segmentation of physical movements, and off-port storage
- Include rail indicators
- Consider the influence of within port or information issues.

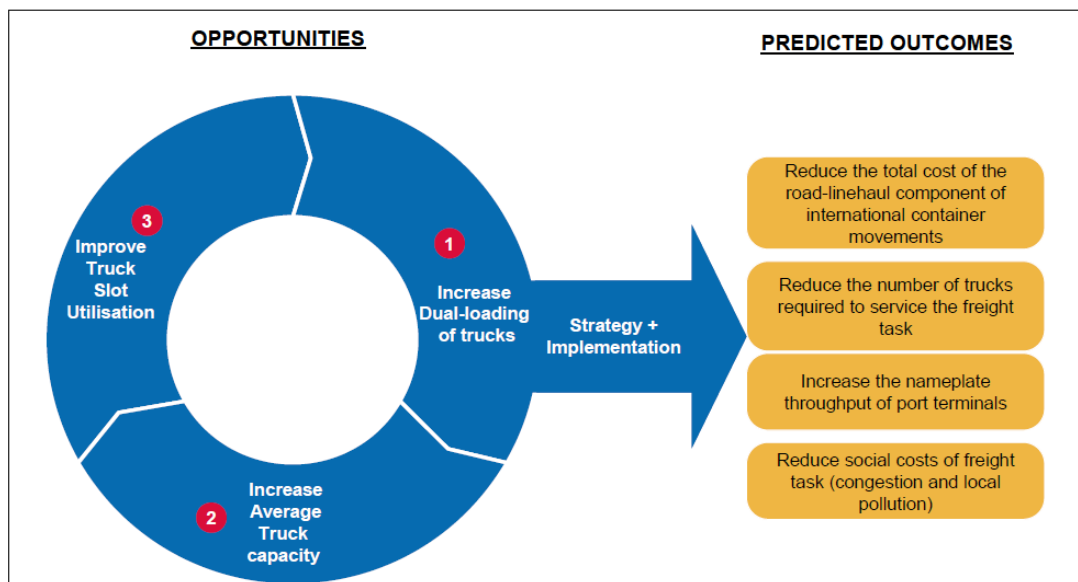
7.5 National Transport Commission pilot study

7.5.1 Overview

A pilot study undertaken for the National Transport Commission identified the potential for increasing landside transport productivity at Australia's container ports. It argued that current physical costs arise from elements of under use of the truck fleet.

The relevance of these three elements is shown in Figure 7.

Figure 7: Opportunities to improve efficiency of the trucking task at port terminals



Source: NTC/Booz & Co – *Intermodal Supply Chain, Towards Co-modalism* (Jan. 2009), p49.

7.5.2 Intermodal organisation

The pilot study recommended that the Council of Australian Governments consider an intermodal organisation to oversee relevant changes.

The draft Strategy takes a different view - that national coordination might best be effected by an expert advisor in each city, rather than a centralised approach. It takes this view because detailed local understanding of operating conditions and parameters is likely to be necessary – for example some knowledge of local train scheduling and window principles is needed to determine the opportunities for large scale movement of containers by rail.

In this regard, it is notable that most states do have well developed freight and logistics councils, which complement and support the Australian Logistics Council, and also could be of considerable assistance in the development of freight policies and freight plans.

7.5.3 Rail

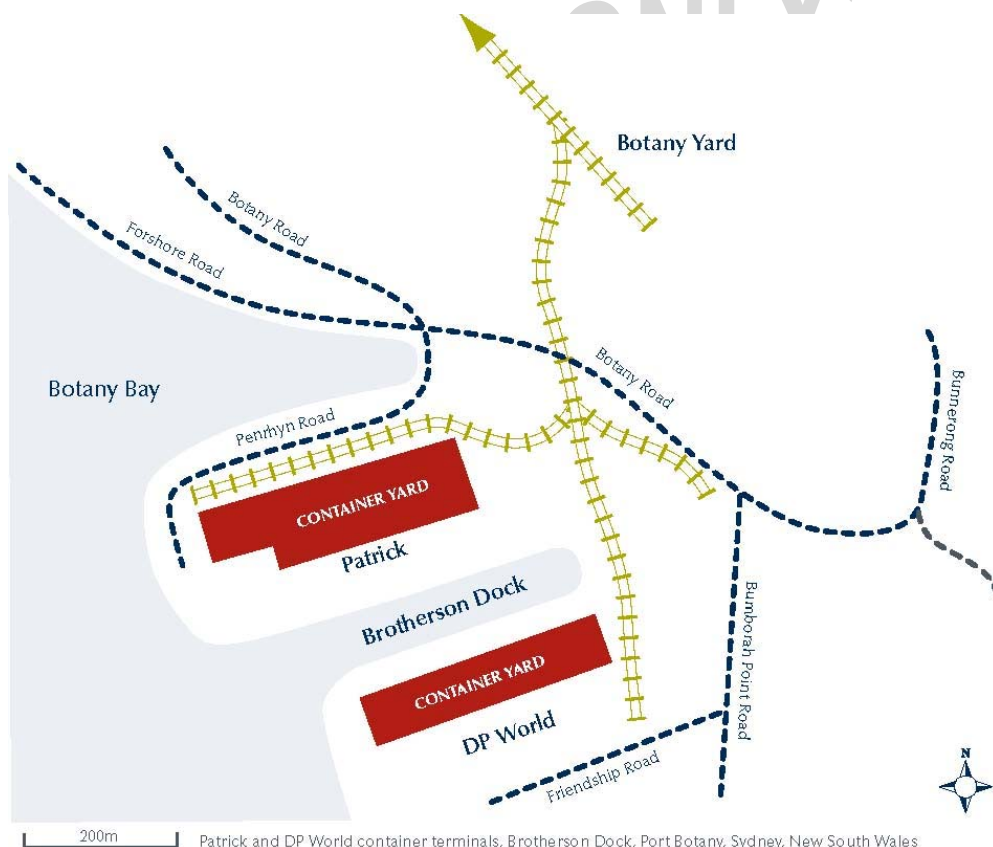
This pilot study also identified a potential for rail to reduce land transport costs at ports. Several further issues arise regarding rail. The more important strategic ones relate to rail access, which is the ability of freight trains to use the metropolitan systems to the ports.

At present only in Sydney does rail undertake a sustained and significant proportion of the port task. However, there appears to be an ambition for other cities to increase the use of rail, and indeed in Sydney to also increase rail's share of the port task. Sydney rail provides some important pointers to those other cities which intend to increase the rail share of the port container task.

One of the issues in Sydney involves coordination in rail logistics. At present there are multiple train operators in Sydney and a large number of interfaces in the rail based supply chain.

At its simplest, performance of the train operator through the heavily congested Sydney rail network depends on coordination arrangements at the port and adjacent Botany yard. The layout at port Botany is shown in Figure 8. The relevance of Figure 8 is that it shows that at relatively low levels of rail traffic, efficiency of rail operations depend on both rail spurs near the container yards at Brotherson Dock; on the synchronisation of train movements.

Figure 8: Botany Yard rail linkages to container terminals



Source: BITRE, Waterline.

At present no part of the Sydney rail network is optimised for port traffic.

As is the case with other metropolitan rail networks, most of the track is used by both passenger and freight trains with priority accorded to the former. Sydney is fortunate in having a dedicated freight network in which freight train can operate somewhat independently of the suburban timetable, although this is limited from Botany to Lidcombe and Sefton.

While this is currently under the control of RailCorp, the NSW and Commonwealth Governments have agreed to this being taken over by the Australian Rail Track Corporation (ARTC). However, such takeover may not guarantee priority for port related freight given the ARTC's focus on interstate and line haul.

The suburban timetable governs port freight outside of the dedicated freight segments.

Given the different characteristics of freight and passenger trains, there is some question as to the realism of a long term strategy of slotting freight trains around an increasingly busy passenger timetable. Infrastructure Australia is currently seeking expert advice on this issue in relation to Sydney.

7.6 Efficiency and reliability of cargo flow

7.6.1 Introduction

During consultations, it was put to stakeholders that indicators and policy initiatives might focus on the speed and reliability of cargo flows. Speed, reliability and volume are the standard indicators in any transport system. An increase in any of these represents increase in efficiency.

Some stakeholders expressed concern about this proposal. Some parties felt it was undue intrusion into the commercial elements of the supply chain. Some parties also felt that the thrust of this proposal was to increase a focus on stevedoring rather than on other elements of supply chains. It was claimed that there were uncertainties about the forecast of container growth, and that by modern international terminal standards, there remained substantial unused capacity in existing container port configurations.

7.6.2 New indicators

The draft Strategy recognises the sensitivities. The purpose of the proposal was to avoid the issues arising from sole reliance on the current BITRE cost indicator. These issues include a lack of appreciation of the importance of the landside to port productivity.

It would be useful to focus on efficiency and reliability of flow, indicators for which have long been accepted in international seaside port analyses, for example flow measures such as TEU per berth metre, and elapsed crane rates. Truck turnaround time within the port precinct also is reported as is TEU per truck, and Vehicle Booking System (VBS) slot utilisation.

The draft Strategy takes the view that similar indicators should be developed for the land side, extending beyond truck turnaround time or truck queuing time and into matters such as truck distances, and truck transit and delay times. For rail, measures might include number of utilisable train paths, and delays. Possibly these could be included in the BITRE indicators.

This is because the fundamental point is that other things being equal, the transactions that are signalled accurately and earlier, or more reliably, need fewer physical resources. Similarly constant flows require less resources and thus are more productive than peak flows.

7.6.3 Truck efficiency

The National Transport Commission supply chain study commented on optimisation of the trucking task at container port terminals in Australia. It estimated that optimisation would result in a significant reduction in truck numbers – a reduction in truck trips of over 50%. The full significance of this is appreciated in the context of an expected substantial increase in container movements.

Three opportunities were identified:

- Increase the dual loading of trucks
- Improve slot utilisation on trucks
- Increase truck capacity.

The opportunity for the dual loading of trucks refers to a situation where a substantial number of unloaded trucks enters or leaves a port terminal. It was recommended that the various VBSs be amalgamated into a central platform and standardised across jurisdictions. It also recommended that there be some change to the VBS architecture.

The opportunity to increase slot utilisation refers to the current situation of trucks being only partially loaded. It was reported that average utilisation of slots on trucks in Melbourne was around 53%, but the consultants were unaware of other recent publicly available studies of utilisation. Proposed methods to improve this included amendments to the VBS.

The opportunity to increase truck capacity relates to “High Performance Freight Vehicles” on specific freight routes between port and inland terminals. Issues in this include regulatory and physical (network) impediments to the introduction of such vehicles.

The Australian Transport Council has established a productivity sub-committee of the Standing Group on Transport officials to oversee development of these ideas.

7.7 Infrastructure, information and incentive solutions

7.7.1 Introduction

Reducing the physical cost of container movements in metropolitan port supply chains could involve infrastructure, information or incentive solutions, or a combination thereof.

This is illustrated by considering truck queues. A queue occurs when there is a mismatch in timing eg. of container availability at the port and of truck availability. This is an example of an interface problem. Simplistically, the reasons for this might include:

- Road congestion; trucks arrive at the port “too early” in an effort to avoid general traffic peak hours. Solutions here might be related to the road infrastructure capacity allocated to trucks
- Information problems; trucks are not certain when containers need to be picked up, so they arrive at the port earlier than needed. Solutions here might include better information about the timing of the availability of containers at the port
- Incentive problems; it may be cheaper for the truck to queue than to be elsewhere because commercial arrangements do not pass on queue costs. In this case, extension of commercial arrangements might reduce the queue.

7.7.2 Future infrastructure requirements

Roads and rail lines to several of Australia’s container ports are congested. Proposals have been put to Infrastructure Australia for projects to increase road capacity in a number of cities.

Port related traffic comprises a relatively low percentage of total vehicle volumes on these roads, and thus it is claimed does not contribute substantially to congestion. Rather, it is held that congestion is largely a result of car use. Nonetheless it generally is accepted that congestion is non-linear and a small increase in vehicle use can have a disproportionate effect on congestion. Conversely a small decrease in total vehicle volumes could substantially reduce visible congestion in the absence of induced traffic.

Future projections for ports show substantial increases in container volumes. If it is assumed that other vehicle usage does not diminish, this points to an increase in congestion and other adverse consequences of truck movements.

Future infrastructure requirements for this road task depend on forecasts of traffic. A difficulty in analysing this is the mixing of traffic. Infrastructure requirements for general access roads are not at present driven by port freight.

As discussed above, there is a need for a nationally coordinated approach to port and related logistics forecasts. The draft Strategy recommends that forecasts at the port level be referenced to BITRE national level forecasts.

A theme of the draft Strategy is the need for a long term outlook. One of the directions that might begin to occur during such a horizon is freight infrastructure priority and pricing. The Road Reform agenda of the Council of Australian Governments may be relevant here.

The design of major port related roads should reflect port traffic. At some freight volume, the dominant economic purpose of some current roads would be freight. The reform agenda relates to providing infrastructure owners with an incentive to match capacity to freight demand. It would appear logical that major freight roads to container ports could be used as a test bed for this reform agenda. This suggestion is included in the draft Strategy.

At higher traffic levels there may be a case for dedicated freight infrastructure for at least some route length. This is the case in the US and France. The draft Strategy recommends a study by BITRE on this issue.

7.7.3 Information solutions

The NTC supply chain work noted that the movement of cargo is in parallel with information exchange. The inference is that slow or inadequate exchange of information can inhibit the reliability and speed of cargo flow. An example might be that inadequate or late documentation for customs might delay customs clearance and therefore increase the amount of time the cargo is held at the port – storage costs, and possibly increase the number of physical movements the container is subject to – movement costs.

One way of increasing the efficiency of physical flows is the use of information to minimise movements. In turn this requires information to be made available to relevant parties in advance of when they need to deal with cargo. The further in advance this information is provided, the lower the physical cost of dealing with the task.

Ports Australia and the Victorian Government submitted a proposal to Infrastructure Australia regarding port information community systems. The matter was raised by a number of stakeholders. Tradegate notes that the origins of the matter were in an inquiry into shore-based shipping costs. Tradegate was established pursuant to this. Tradegate also referred to the array of information exchanges in Australian ports using Melbourne as an example. It pointed out that this system has evolved and the current position would not be the product of a design.

Ports Australia notes that port community information systems are currently in place in a number of ports around the world and are being progressively introduced in others. It is understood the information in question relates to the physical movement of cargo and describes what otherwise is directly observable.

Ports Australia also noted the potential productivity gains for similar information exchanges in all Australian container ports. This is because international container ships generally visit several of these ports, and certain stevedoring companies hold tenure at several ports. Consistent information systems across these ports would support the “one nation one set of rules” agenda.

There appear to be two primary challenges in advancing the ports information community concept.

The first is its purpose viewed in the eyes of the port and freight community. This purpose would be associated with the willingness of parties to provide information to others. An opt-in arrangement may deal with many issues. The corollary is that opt-out approaches may cause difficulties.

The second is its control or management. At present there is no agreed best owner or manager. This reflects the many participants in the port logistics sector. Ownership outside of the ports community, for example by a government, may not result in it being most conducive to port productivity.

Nonetheless there is strong support for creation of a port community information system.

It has been reported that some port community participants take the view that there are potential trade practices concerns regarding information sharing. The view is within a wider issue that there are trade practices constraints to supply chain coordination discussed in the governance section of this document.

The draft Strategy recommends further investigation of the ports information community proposal along parameters such as interoperability among relevant ports. The National Transport Commission, reporting to the Australian Transport Council would be in a relatively good position to achieve this.

7.7.4 Incentive solutions

Incentive type solutions to improve physical costs of moving containers would depend on satisfying three conditions.

The first is that the incentive would relate to some physical attribute of performance, for example that a container was made available on time, or that a truck arrived at a certain point on time. This implies that an incentives regime would need to be accompanied by performance indicators and monitoring to an acceptable level of detail and proof.

The second is that the organisations facing the incentive would be able to adjust their behaviour to take advantage of the incentive. For example the organisation could influence whether the truck arrived at a certain point on time. A corollary is that the organisation would need to know in advance whether it would be possible to do this. This means advance information to the organisations about the physical state of the supply chain would be necessary for such incentives to function.

The third is that current incentives are inadequate. Most transactions along container supply chains are between private parties who could be expected to seek out profits. The approach of the draft Strategy is to provide a stable basis for decision making and this suggests that the source inadequate incentives might be in the transactions between government organisations and the private sector. These transactions include regulatory processing of containers, leases and other arrangements with port authorities and rail transport (given that roads currently are not priced). The draft Strategy suggests that options in these areas should be explored at an appropriate time.

8. The future infrastructure requirements of ports

8.1 Purpose

This section provides some detail on assessments of future land and sea infrastructure requirements of relevant ports.

It is structured as follows:

- Proposals put to Infrastructure Australia
- Forecasts and capacity
- Understanding future infrastructure requirements.

8.2 Proposals put to Infrastructure Australia

8.2.1 Proposals and results

In 2008-09 Infrastructure Australia invited proposals for inclusion on a national infrastructure priorities list.

A substantial number of submissions were received and of these some were included in Infrastructure Australia's assessment. A list is at Appendix 4.

The proposals generally related to individual projects, expected to be undertaken in the short to medium term - in the next few years. They included projects proposed by private proponents, in some cases without statements of priority support by the relevant jurisdiction. In most cases funding from government was sought, and only a few cases canvassed the potential of recovery of costs of investment from user charges.

Only one jurisdiction, Victoria, put forward a fully integrated plan for ports and freight, seeking Infrastructure Australia's support for a case for some Commonwealth funding of particular initiatives. It was evident that this is a long term plan.

Proposals from Queensland and Western Australia suggested adjacent industrial development to port related land. This was to capture the synergies of development and also provided some opportunity to buffer port expansions.

No proposal referred to national level forecasts.

Infrastructure Australia assessed the proposals against its template of national significance, economic merit and deliverability. This is done through processes of profiling, assessment and deliverability.

In 2009 the Commonwealth decided to provide an equity injection into two ports subject to advice from Infrastructure Australia. These were for Oakajee in Western Australia, and Darwin in the Northern Territory. Both these proposals concerns "common user" infrastructure within or near an iron ore supply chain.

8.2.2 Observations

The primary issue for the draft National Ports Strategy arising from the Infrastructure Australia process is: how did the 2008-09 process contribute to a nationally coordinated approach to ports? In this regard there are three main questions:

- Whether proposals were integrated
- Whether the full national significance of infrastructure requirements was identified
- The linkages of the proposals with forecasts and productivity estimates.

The question regarding integration concerns whether all land and sea requirements of the port proposal are identified and whether the proposal would draw (potential) trade from another port. In most cases both of the matters were difficult to ascertain.

The question regarding the full national significance of infrastructure requirements has wider dimensions than those of particular projects. The full national significance relates to all of Australia's trade and other calls on port resources, and a long term horizon. The totality of the proposals did neither.

It is evident that some major proposed port developments were not submitted to Infrastructure Australia. It also is clear that a long term horizon was not presented for some other proposals. The reason for this may have been an expectation that Infrastructure Australia's role and function is to recommend government funding. Government funding is provided in budget contexts, and government budgets generally are much shorter term than port and supply chain investment needs.

Similarly, some proposals put to Infrastructure Australia about ports and associated supply chains arguably included other purposes. Examples included some roads in urban areas, the predominant economic benefits of some of which were claimed by proponents to relate to commuter car travel. No proposals were put for road or rail port dedicated infrastructure. Some proposals were made for intermodal terminals closely related to ports – for example in Melbourne and in Sydney, Moorebank. In some cases, an argument was raised that existing roads to ports are not adequately designed for relevant trucks. Hence, the totality of landside infrastructure port priorities put to Infrastructure Australia was incomplete.

Irrespective of the reason, no official process to the present day, including that by Infrastructure Australia, has identified the future infrastructure requirements of Australia's ports. It is important to understand and address these future infrastructure requirements at more than the government funding level. Previous sections have noted some stakeholder concerns regarding encroachment of ports and slowness of approval processes. If decision makers are unaware of future infrastructure requirements, and the importance of ports, it may be difficult to resolve such concerns.

The draft Strategy takes the view that it is critically important to identify future infrastructure requirements regarding channels, ports and landside connections for well into the long term at local and national levels. This identification ought be done through the plans at jurisdictional, regional and port precinct level.

The question regarding linkages with forecasts concerns the relationship between proponent forecasts and those at a national level, via regional and jurisdictional forecasts. This is addressed in sub section 8.3 below. For the purposes of the Infrastructure Australia Infrastructure Priority list it was notable that forecasts were not referenced to national aggregates. Consequently there remained a potential mismatch – overestimation or underestimation – of national infrastructure requirements.

In summary, the 2008-09 Infrastructure Australia Infrastructure Audit and priority list did not allow governments to develop a deep understanding of the infrastructure requirements of Australia's ports.

8.3 Forecasts and capacity

8.3.1 Forecasts

In the context of this document the term "forecasts" means estimated future volumes of particular trades.

At present forecasts for ports and related supply chains occur at two levels. BITRE and ABARE do produce certain forecasts of production or maritime traffic for the medium term.

BITRE recently published forecasts for container ports which is summarised in the following Table.

Table 2: Total container throughput

Port	000 TEU 2007-08 (000)	000 TEU 2029-2030	Average annual growth rate 2007-08 to 2029-30
Adelaide	302	536	2.65%
Brisbane	900	1958	3.60%
Fremantle	583	1640	4.81%
Melbourne	2257	6654	5.04%
Sydney	1778	3579	3.23%
Australia total	6300	15452	4.16%

Source: BITRE 2010

BITRE also has produced medium term forecasts for vessel calls; these show an increase in bulk carrier calls from 14439 in 2007-08 to 23122 in 2029-30. Project proponents and individual ports also develop their forecasts, although the relationships with national level forecasts are unclear. In many cases the individual forecasts are not published.

GHD has prepared a background paper on forecasts discussing the implications for ports were existing trends in trade to continue. The background paper also notes that over the very long term there are some questions as to how or why the import trades would continue to run well in excess of growth in population and GDP.

8.3.2 Capacity

Capacity refers to the ability to handle a trade volume. It is particularly complex, and different configurations of land, equipment and skills can produce the same capacity outcome. Similarly, different vehicle and ship sizes and types can have major implications for the type of necessary capacity. For example, some stakeholders noted that the current trend towards larger iron ore ships in some countries has implications for competitive Australian channel depths. Another stakeholder suggested that the use of larger ships in container trades may have implications for berths, crane and wharf strength.

For the purposes of the National Ports Strategy, capacity estimation is important because when placed against forecast demand it indicates when or under what circumstances investment might be required to meet a trade task.

Capacity and its usage can be represented by performance indicators. As capacity utilisation moves towards 100 per cent, delays and queues increase. Hence, main capacity performance indicators include reference to capacity utilisation, or proxies such as reliability and availability of infrastructure.

Previous sections have referred to the BITRE Waterline report series in which a number of capacity indicators are reported for Australia's major container ports, largely on the waterfront side.

Some stakeholders indicated that current performance against some key measures of capacity utilisation at these ports are relatively modest by modern international standards. An example cited was TEU per berth metre; the intensiveness of use quay line available for container shipping. There may be various explanations for this including the nature of trades and shipping patterns. BITRE is soon to publish some international comparisons of such matters, which broadly confirms the observation.

On the landside some capacity utilisation statistics are reported for road and rail infrastructure but this generally tends to be at a network wide level and relatively infrequently. There is no comprehensive national overview. However, the work undertaken on urban road congestion, and stakeholder comments about rail delays, suggests that there currently are landside capacity constraints at least for the ports serving metropolitan areas. Understanding the extent of these constraints and their solution may require operation modelling, particularly in the case of railways.

Previous sections also have noted the potential role of information technology in increasing the efficiency and reliability of flow of goods. Such soft infrastructure solutions may have the potential to significantly increase capacity of any given hard infrastructure configuration.

Capacity utilisation studies for the bulk ports tend to be more specific to particular ports and supply chains. Various studies have been undertaken but relatively few are published – an example is that by Mr O'Donnell for the Goonyella supply chain, and some limited reporting in relation to the Hunter Valley coal chain.

8.3.3 Observations

There is a case for national coordination of forecasting in the ports and related supply chains so that national level and local level forecasts can be related.

A previous section noted the potential major implications for metropolitan areas, and their ports, were the container trade forecasts to be realised. This demonstrates the importance of visibility of forecasting to all relevant parties.

This case for national coordination is particularly strong when ports are networked by trade flows or ship visits, such as is the case for container ports. Coordination also would allow proponents and ports to understand whether their assumed future tasks deviated substantially from national averages. The draft Strategy does not envisage centralisation of forecasting, rather the relevant ports could use the relevant national forecasts as a base case from which to refine their own work.

One of the points of this is that a national level expertise in this field could be used for scenario testing of matters such as impacts on trade of changing patterns of world economic growth, industrial specialisation or demography, energy prices and climate change. National level expertise would be less costly and arguably better informed than attempts to deal with these matters separately by each individual port. The draft Strategy seeks to address this through the requirements for plans. For example the plans are expected to show how capacity would meet forecast demand, and it would be relevant to include capacity utilisation forecasts in this.

The draft Strategy envisages that the capacity estimation and utilisation matters also be addressed primarily through the plans.

Most jurisdictions are advantaged by the work of relevant freight and logistics councils which, through informed stakeholder representation, can pinpoint particular constraints within various supply chains, particularly in urban areas.

The draft Strategy proposes several initiatives for BITRE regarding capacity and supply chain issues including changes to the Waterline series.

Previous sections noted the substantial differences among the supply chains of the bulk ports including the degree of integration of supply chains, and the nature of operations. These differences suggest that any detailed studies need to be focussed on individual ports.

8.4 Understanding future infrastructure requirements

One of the terms of reference for the draft National Port Strategy was the understanding future infrastructure requirements, including on the landside.

The GHD background paper on the matter demonstrates some important issues, particularly arising from any long term assumptions that trade grows in excess of GDP.

There is more than an economic or commercial need to understand of future infrastructure requirements. Stakeholders have suggested that levels of trade and capacity utilisation are relevant to regulation and to the community. For example, levels of capacity utilisation are important for ascertaining access matters. Future capacity requirements also would relate to the land needed for port precincts and transport corridors. The understanding of such requirements therefore is critical for determining buffer strategies and corridor identification and preservations.

Under current policies of shared use of roads and most railways, future requirements for the infrastructure used by port related supply chains may depend largely on other traffic, for example car use of roads. Operational modelling, and assumptions about pricing, are necessary to understand current constraints and future requirements.

At present future infrastructure requirements for port supply chains are not known on a national basis. Requirements tend to be best known at the port precinct level where planning efforts to date have generally been most intensive. However, progress has been made in most jurisdictions towards understanding future requirements as they impact on the jurisdiction. Victoria, through Freight Futures and Port Futures, is the most advanced.

Future infrastructure requirements are likely to change over time due to changes in forecasts and introduction of new technologies, including wider use of information technology to track and analyse freight and freight vehicle flows. In this respect intelligent transport systems may play a significant future role in assisting in the modelling task. Pricing of land transport infrastructure may also alter future infrastructure requirements, as might fully commercial pricing arrangements for all port related activities.

In these circumstances the draft Strategy effectively proposes continuous understanding future infrastructure requirements with reconciliation to national level forecasts. The need to continuously understand issues means that a process is needed. This process needs to go beyond that of applications for government funding.

National level scenario testing into forecasts also is suggested.

At least on the landside there is a relationship between this work and that for a National Freight Network Plan and national freight strategy. This is because the Plan and strategy would also need to look at future requirements for land infrastructure that supports both port freight and other logistics chains.

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Appendix 1 – ATC National Transport Policy Framework

The following is the Australian Transport Council's (ATC's) currently defined National Transport Policy Framework.

ATC's Vision for Australia's Transport Future

"Australia requires a safe, secure, efficient, reliable and integrated national transport system that supports and enhances our nation's economic development and social and environmental well-being."

Transport Policy Objectives

To achieve this vision, Australia's Transport Ministers commit to the following policy objectives:

- *Economic* - To promote the efficient movement of people and goods in order to support sustainable economic development and prosperity
- *Safety* - To provide a safe transport system that meets Australia's mobility, social and economic objectives with maximum safety for its user
- *Social* - To promote social inclusion by connecting remote and disadvantaged communities and increasing accessibility to the transport network for all Australians
- *Environmental* - Protect our environment and improve health by building and investing transport systems that minimise emissions and consumption of resources and energy
- *Integration* - Promote effective and efficient integration and linkage of Australia's transport system with urban and regional planning at every level of government and with international transport systems
- *Transparency* - Transparency in funding and charging to provide equitable access to the transport system, through clearly identified means where full cost recovery is not applied.

Australia's transport policy framework is underpinned by the following guiding principles:

- *Infrastructure Pricing* - Sending the appropriate signals to influence supply and demand for infrastructure
- *Competitive Markets* - Establishing competitive markets wherever possible to minimise the need for regulation
- *Private Sector* - Involve the private sector, where it is efficient to do so, in delivering outcomes
- *National Regulation* - A national perspective should be adopted where regulation is required
- *National Markets* - Encourage national markets where possible
- *Customer* - Customer focussed. Equitable access for all users.

Appendix 2 – Proposed Architecture of National Freight Policy

The proposed architecture of national freight policy can be represented schematically as follows:



Appendix 3 – List of submissions

DATE	SUBMITTED BY
19/4/2010	Department of Resources Energy and Tourism
6/4/2010	Ports Australia (supplementary submission)
22/3/2010	ASCIANO
17/3/2010	NSW Transport & Infrastructure
10/3/2010	WESTERN AUSTRALIAN MINISTER FOR TRANSPORT & DISABILITY SERVICES
7/3/2010	NORTHERN TERRITORY GOVERNMENT
4/3/2010	Australian Transport Unions Federation (supplementary submission)
4/3/2010	Confidential
4/3/2010	Confidential
3/3/2010	Victorian Department of Transport
2/3/2010	Jillian W (no further details)
1/3/2010	QLD DEPARTMENT OF TRANSPORT & MAIN ROADS
25/2/2010	Treasury
11/2/2010	WA Department of Transport
10/2/2010	Shipping Australia Limited
1/2/2010	Department of Innovation, Industry, Science & Research (a)
Jan 2010	Ports Australia
18/1/2010	WA Freight & Logistics Council
18/1/2010	Department of Defence
23/12/2009	Australian Transport Unions Federation
23/12/2009	Australian Competition and Consumers Commission
10/12/2009	Department of Foreign Affairs and Trade
Dec 2009	Infrastructure Partnerships Australia

20/11/2009	South Australian Freight Council
19/11/2009	National Farmers Federation (a)
13/11/2009	ICHCA Australia Ltd
28/10/2009	Department of Innovation, Industry, Science & Research
27/10/2009	SA Department of Transport Energy and Infrastructure
27/10/2009	Australian Customs & Border Protection Service
22/10/2008	Ports Australia
20/8/2009	Shipping Australia Limited (a)

(a) Update subsequently provided

Appendix 4 - List of ports and related project proposals Infrastructure Australia 2008-09

Port Projects identified in Infrastructure Australia's Report to the Council of Australian Governments December 2008

INITIATIVE	LOCALITY	SUBMITTER	APPROXIMATE CAPITAL COST BY PROPONENT
Port of Hastings	Hastings	VIC	\$58.8M
Abbot Point multi-purpose harbour	Abbot Point	QLD	\$1.75B
Darwin Port	Darwin	NT	\$292-\$363M
Bell Bay	Bell Bay	TAS	\$150M
Oakajee Port & Rail	Geraldton	WA	\$3.5 B

Port Projects identified in Infrastructure Australia's National Infrastructure Priorities to May 2009

INITIATIVE	PROPONENT	LOCATION	COST ESTIMATE (\$2008)
Abbot Point Multi-Cargo Facility	QLD	Bowen	\$1,750M
Bell Bay Port Expansion	TAS	Bell Bay	\$150M
Bonython Port	SA	Whyalla	\$500M
Darwin Port Expansion	NT	Darwin	\$325M
Donnybrook Intermodal Terminal	VIC	Melbourne	\$390M
Hastings Port	VIC	Hastings	\$60M
Moorebank Intermodal	NSW	Sydney	\$300M
Oakajee Port Common-user Services	WA	Geraldton	TBA
Port of Brisbane Motorway upgrade	QLD	Brisbane	\$730M
Port of Melbourne Freight Terminal	VIC	Melbourne	\$200M
Bruce Highway – Abbot Point State Development Area bypass	QLD	Bowen	\$400M

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