

**FREIGHT RAIL PRODUCTIVITY
REVIEW**

FINAL POSITION PAPER

August 2009



National Transport Commission

**Prepared by
National Transport Commission**

National Transport Commission

Freight Rail Productivity Review: Final Position Paper

Report Prepared by: National Transport Commission

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| Abstract: | <p>Consultation with the rail industry identified poor productivity as a key concern for the sector, with issues such as infrastructure and asset deficiencies, intermodal terminal access and passenger/freight interactions raised as key impediments. A number of existing reforms exist which are likely to impact on productivity within the rail industry and across the transport sector as a whole. This paper investigates how rail currently operates as part of the transport sector and identifies the key barriers to improved productivity taking into account feedback to the draft position paper released in March 2009. This includes a discussion of the possible gains from continuing the current transport reform agenda and further recommended reforms.</p> |
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FOREWORD

The National Transport Commission (NTC) is an independent body tasked by the Australian Transport Council to provide independent advice to the Transport Ministers on transport regulatory and operational reforms. The NTC undertakes these reforms across road, rail and intermodal transport to improve the safety, productivity and environmental outcomes for the transport sector.

Transport is vital to the Australian economy. Improved transport productivity can significantly reduce the cost of freight and, ultimately, help reduce the cost to consumers for goods and services. The NTC is currently progressing a number of reforms that are expected to improve road transport productivity. This review has been undertaken with a view to identifying reform opportunities to improve productivity within the rail sector.

Improving rail productivity will assist in meeting the transport vision set out in the National Transport Policy Framework, endorsed by ATC in February 2008. This vision involves achieving a safe, secure, efficient, reliable and integrated national transport system. The outcomes of this review represent a meaningful step towards achieving this vision and further improving the efficiency of rail transport and improving the integration between road, rail and intermodal transport in Australia.

This paper follows on from the Freight Rail Productivity Review Draft Position Paper released in March 2009 and the Rail Productivity Issues Paper that was released in August 2008. The NTC received a number of submissions in response to the draft position paper, which have helped to further refine the issues and recommendations put forward. The NTC has also undertaken consultation with the rail industry, government agencies and freight customers through the course of the review.

In addition, the review has been conducted in parallel with the Supply Chain Pilot Studies. These studies have investigated the coal, grain, intermodal and livestock supply chains and provided valuable insights into the use of rail within these supply chains. The NTC released a summary paper, detailing the recommendations from the studies as well as the final consultant reports for the pilots in March 2009. The findings from these studies are strongly aligned with the findings from the freight rail productivity review, highlighting the need for improved coordination and planning across modes and along the supply chain.

Recommendations from this paper and the supply chains studies are expected to be progressed as part of the NTC's future work programme.

The NTC acknowledges the work of Meena Naidu, Matthew Clarke, Ian Hunter, Annabelle Ong, Karen Dowling and Emily Porter in preparing this report.



Greg Martin

Chairman

SUMMARY

Background of the rail productivity review

As part of the 2007 NTC strategic planning process, low productivity was indentified as impacting the performance of rail within the transport sector. Consultation with the rail industry highlighted the concern that productivity growth within the sector has slowed. As a result, NTC outlined that it would be undertaking an investigation into the barriers to improved freight rail productivity, with a view to identifying priority reform areas as part of its work programme for 2008/09.

The NTC-commissioned Rail Productivity Information Paper (Hearsch, 2008) was released in March 2008, highlighting the need for further analysis of productivity within the rail sector. NTC then released the Rail Productivity Issues Paper (NTC, 2008a) in August 2008 to raise a number of key issues and facilitate submissions to the review. Following this, NTC released the Freight Rail Productivity Review Draft Position Paper (NTC, 2009a) in March 2009.

Objectives of this review

The review aims to identify how freight rail can operate more productively to improve the operation of the broader transport sector. For the purposes of the review, productivity is defined as:

“...a measure of the rate at which outputs of goods and services are produced per unit of input (labour, capital, raw materials, etc). It is calculated as the ratio of the quantity of outputs produced to some measure of the quantity of inputs used.” (Productivity Commission, 2008a)

More specifically, the review is aimed at:

- understanding the role of rail within Australia’s transport system;
- identifying productivity impediments within the freight rail sector; and
- developing recommendations for government to effectively intervene in the rail sector to improve outcomes for the transport system as a whole.

The review has therefore focused on the investment and regulatory frameworks that underpin the rail freight industry to determine where these create a barrier to rail businesses investing in more productive technology, assets and business practices. The review has taken into account the current road and rail reforms as agreed by the Council of Australian Governments and the Australian Transport Council.

The review has drawn on research undertaken by a range of public and private bodies as well as consultation with a wide range of rail stakeholders, which has allowed a strong understanding of the issues to be developed. This approach has been taken because of the limited data available on the productivity of freight rail operations in Australia. The issues arising from a lack of quality rail freight performance data have also been investigated as part of the review. The focus of this review is on rail freight, with passenger rail considered only where it interacts with freight services.

Current freight rail environment

There are two key characteristics that need to be taken into account when assessing rail productivity impediments. Firstly, rail freight transport is part of a supply chain that generally involves intermodal transfers at terminals or ports. As a result, productivity impediments in the rail sector need to be considered in the context of the broader supply chain. Secondly, rail is currently predominantly used for intrastate bulk freight transport and long haul (east-west) intermodal freight transport as it provides the lowest cost transport option in these markets.

The market structure of rail operations varies across Australia. Above rail services (the operation of locomotives and rolling stock for freight customers or in-house operations) and below rail services (the provision and maintenance of rail track and track side infrastructure, signalling and scheduling and providing access to rail track) can be provided in a number of ways through a variety of entities. For example, rail services in Australia can be provided through:

- Vertical integration – this exists where above and below rail services are provided by the same organisation, for example, this occurs on the Queensland freight network, the private mineral railways in the Pilbara and the regional rail lines in South Australia.
- Vertical separation – this occurs when above and below rail services are provided by separate entities, for example, on the interstate freight network, the New South Wales regional freight networks and the grain networks in Victoria and Western Australia.
- Horizontal integration – this occurs where a single transport company provides several transport services within a supply chain, for example, Asciano is a train operator, intermodal terminal operator, stevedore and owns rolling stock.
- Horizontal separation – this exists where specialised firms provide one function along a supply chain, for example, El Zorro only operates trains.
- Public or private ownership – above and below rail services are provided by a mixture of private and government owned corporations around Australia. For example, Queensland Rail (the track manager in Queensland and above rail service provider) is a government owned corporation, while WestNet Rail (the track manager in Western Australia) is a privately owned company.

A more detailed explanation of the market structures and commercial arrangements present in the rail industry is included in Appendix 7).

Consultation outcomes

During the consultation with rail customers, below and above rail operators and government, a large number of issues were raised. A number of key rail customers have indicated the desire to use more rail for intermodal freight movements. This was due to customers wishing to retain a non-road transport option due to the perception of reduced road competition due to industry consolidation as well as wanting to improve the environmental performance of their supply chains where it is cost effective. However, it is often not economical to use rail due to inferior service, transit times and reliability compared to road transport (and sea transport for east-west movements).

Below rail operators highlighted a lack of planning and policy direction from government for rail infrastructure and intermodal terminals as one of the major productivity impediments. Resulting infrastructure deficiencies and bottlenecks in urban areas were also mentioned as one of the impediments to improved freight rail productivity.

Above-rail operators raised the same issues put forward by below-rail operators, demonstrating the interdependency between above and below rail service providers. Additionally, above-rail operators mentioned a lack of certainty around future track investments and demand for rail freight movements as one of the factors preventing efficient investment in rolling stock and therefore reducing rail productivity.

Productivity impediments and solutions

A range of issues have been raised that impact on the productivity of the rail industry. As a result, it is important to distinguish between problems with the underlying investment and regulatory frameworks and those issues that are symptoms of these frameworks.

Overall, five areas of productivity impediments can be identified:

1. Policy, planning and investment
2. Economic regulation and market structure
3. Environmental, safety and technical regulation and standards
4. Human capital
5. Productivity measurement

Table ES1 provides an overview of the identified productivity barriers for each area and the recommendations.

Table ES1: Productivity impediments and solutions

| Productivity barriers | Priority | Recommendations and Implementation |
|---|----------|---|
| Policy, planning and investment | | |
| Lack of clarity regarding the roles and objectives of governments and government owned corporations | Medium | <p>NTC should work with state and federal governments, Infrastructure Australia and the Productivity Standing Sub-Committee to develop an improved national framework to overcome existing rail planning and investment deficiencies across Australia. This will build on existing work already undertaken through the National Transport Policy Framework agreed to by ATC, the AusLink Corridor strategies and by state and territory governments.</p> <p>This would be carried out at a national level where benefits can be gained from taking a national focus. However, this process will aim to build on rather than replace existing planning work undertaken by the states.</p> <p>This would encompass:</p> |
| There may be gains from a long term and holistic approach to planning | High | <ol style="list-style-type: none"> 1. Coordinated and prioritised transport objectives across all levels of governments and government owned corporations to ensure that the transport policy objectives agreed to by ATC are implemented consistently and cohesively across governments. 2. A long term ports and freight strategy to undertake coordinated planning and investment across governments and encourage private investment in transport infrastructure. This strategy should address the interaction between rail planning and planning for other interests including land use planning, supply chain interfaces, passenger and freight conflicts, existing transport market distortions and social objectives and take a national focus where necessary. This should build upon the work undertaken through the AusLink Corridor Strategies and Supply Chain Pilots. 3. Identifying existing strategic intermodal terminals, for example, terminals that are located in key urban areas and cannot be easily duplicated, and planning for future strategic terminal needs (to be conducted in conjunction with the development of an appropriate national model for terminal access). 4. Industry-led coordination along the supply chain where advantages can be gained. Governments may have a role in providing appropriate support to industry-led outcomes through: <ul style="list-style-type: none"> ▪ communicating the requirements for supply chain coordination to comply with national competition policy and other government objectives; and ▪ as a last resort, arbitrating/facilitating an industry-led solution where significant supply chain failure exists and industry is unable to develop a workable solution. |
| Government subsidies are not provided as part of a transparent or consistent framework | High | <ol style="list-style-type: none"> 5. Developing a consistent and transparent national framework for assessing and providing government subsidies and other funding to government owned rail corporations and private rail operators. This will result in subsidies being directed to the areas where the most value can be generated, and greater long term funding certainty for rail. Rail businesses receiving |

| Productivity barriers | Priority | Recommendations and Implementation |
|--|---------------|---|
| | | government funding should be subject to reciprocal reporting and monitoring obligations to properly evaluate whether the objectives of the funding allocations are being met. This will be in addition to the monitoring and reporting obligations that already exist. |
| Economic regulation and market structure | | |
| Regulated vertical separation of low volume rail lines is not necessarily optimal | Low to Medium | Relevant state governments should consider investigating whether there are more optimal market structures available for low volume intrastate grain lines (including vertical reintegration and privatisation) and develop a plan to implement the structure. This should be undertaken in line with improved long term funding arrangements for rail that will allow users to make efficient commercial decisions regarding the future expected benefits from a branch line or regional rail network and its future commercial viability. |
| Varying rail access and pricing regulation across states increases the regulatory burden | Low to Medium | <p>In the medium term, NTC should investigate, in conjunction with regulators, the costs and benefits of a nationally consistent rail access and pricing framework for the interstate and intrastate lines. This should include determining the appropriate institutional structure for managing the economic regulation of rail, including the benefits of a national economic rail regulator and potential benefits of a broader national transport (multi-modal) economic regulator. This should be undertaken with reference to the proposed review of the current Competition and Infrastructure Reform Agreement to be conducted in 2011 and consider the heavy vehicle access pricing reforms.</p> <p>This is not seen as an immediate priority for improving productivity in the freight rail sector.</p> |
| Inconsistent access to strategic intermodal terminals can be an impediment to rail competition | High | <p>The NTC should develop a nationally consistent regulatory model to ensure that strategically important terminals are regulated on a case by case basis to ensure open access. This should be conducted in line with a comprehensive planning process to identify strategic terminals (as discussed above) and ensure that open access regulation is applied where necessary.</p> <p>This needs to be carried out with strong input from industry to ensure private incentives to invest in terminal infrastructure are not compromised.</p> |

| Productivity barriers | Priority | Recommendations and Implementation |
|--|----------|--|
| Pricing across transport modes creates distortions | High | <p>All governments should continue to reduce distortions between road and rail pricing and improve the efficiency of pricing in both modes through:</p> <ul style="list-style-type: none"> ▪ working towards the consistent implementation of the Council of Australian Government's (COAG) road reform agenda to improve efficiency of road charges and infrastructure spending; and ▪ the federal government ensuring that the Carbon Pollution Reduction Scheme is applied consistently across road and rail freight transport once the initial transitional measures have expired. <p>The NTC, in conjunction with state and federal governments, should develop a consistent framework for assessing and providing funding to address price distortions between road and rail transport markets in the short term. This would aim to neutralise the impact of price distortions in regional areas. This occurs due to heavy vehicles being charged an average price for all roads under the current charging system, despite heavy vehicles imposing higher costs on some rural roads. This results in heavy vehicle costs on some regional roads not being fully recovered.</p> <p>This should be implemented in line with improved funding arrangements for regional rail provision. This measure would be transitional to ensure competitive neutrality prior to implementation of the road reform plan and should not be considered an alternative to further progressing the road reform plan.</p> |
| Rail access prices may not always lead to the most efficient outcome | Medium | <p>Governments and regulators, where necessary, should consider whether current economic regulation for rail promotes the most efficient pricing outcomes (including the need for pricing regulation where strong competition across modes exists). Regulators should be encouraged to be proactive in facilitating the development of access prices that better reflect customer demand (i.e. pricing for time of day, particular train paths and temporary capacity constraints).</p> |
| Environmental, safety and technical regulation and standards | | |
| Regulation of safety and environmental standards is inconsistent across states | High | <p>All state and territory governments should continue to work towards implementation of a single national rail safety regulator and investigator to deliver a nationally consistent rail safety regulatory framework. This should be done with reference to the current development of national occupational health and safety legislation to ensure any implications from the development of this legislation are taken into account.</p> |
| | Medium | <p>Industry should work with environmental ministers to improve the environmental regulation of rail where industry considers it imposes an undue cost. NTC will support the industry in engaging with environmental regulators and ministers.</p> |

| Productivity barriers | Priority | Recommendations and Implementation |
|--|----------------|---|
| Technical standards are not harmonised | Medium to High | <p>Industry bodies such as the Rail Industry Safety and Standards Board should continue to develop technical and infrastructure standards to improve harmonisation and compatibility of rail assets across the rail industry and rail networks. These standards and guidelines should focus on improving the interoperability of existing and future rail industry assets. The federal government should give strong consideration to the continued funding arrangements for the Rail Industry Safety and Standards Board to ensure continued development of rail infrastructure and technical standards. Consideration should also be given to the availability of standards developed by the Rail Industry Safety and Standards Board across the rail industry.</p> <p>Rail businesses, including government owned corporations should consider these standards when investing in new assets and technologies to ensure mutually compatible investment decisions across the all sectors of the rail industry.</p> <p>In addition, the integrated planning process identified above should aim to identify areas where further technical harmonisation in the rail industry may provide a net benefit for Australia’s rail networks.</p> |
| Human capital | | |
| Recruitment, training and utilisation of labour | Low | <p>Rail businesses and industry groups should to work with the responsible Standing Committee on Transport Sub-Committee for addressing workforce planning and skills issues to achieve better recruitment, training and work practices. The rail industry should also continue to use and develop recruitment and training programs developed by the Australasian Railway Association, Cooperative Research Centres for Rail Innovation and the Transport and Logistics Industry Skills Council.</p> |
| Measuring productivity | | |
| Lack of available freight rail productivity data | Medium to high | <p>Comprehensive productivity indicators should be developed by the Bureau of Infrastructure, Transport and Regional Economics or another appropriate national body and made available across governments and industry. The Bureau of Infrastructure, Transport and Regional Economics would be well placed to undertake this work as it already publishes a number of rail performance indicators in conjunction with the Australasian Railway Association.</p> <p>This should be done in conjunction with the Standing Committee on Transport Standing Sub-Committee responsible for transport data collection and research. Governments should investigate mandating the provision of data from rail businesses where necessary to ensure adequate industry data is available for undertaking meaningful analysis.</p> <p>The collection of rail productivity data should also be undertaken with a supply chain focus to enable policy and planning to occur across all modes.</p> |

| Productivity barriers | Priority | Recommendations and Implementation |
|--|----------|---|
| Passenger productivity | | |
| Industry concern regarding passenger rail productivity | Medium | The NTC review has not focused on passenger rail productivity. A review of passenger rail productivity may be useful but would need to be conducted in the context of a broader review into the movement of people across all modes around Australia (including public transport), taking into account existing state government policies for people movement and contractual arrangements. This broader review could also focus on passenger and freight rail interactions where these have not been thoroughly investigated in this report. |

Conclusion

The analysis of the key productivity impediments across the freight rail industry has shown that further work is necessary and that there is a role for government in addressing productivity impediments in the rail sector. Most importantly, as a high priority, governments should:

- develop more coordinated and transparent frameworks to facilitate planning and investment within the rail industry and build on the planning and investment already undertaken by governments individually;
- work with industry to ensure that policy objectives for funding being provided are being met. This will require reciprocal obligations from industry in terms of ensuring government subsidies are used efficiently and providing adequate information to governments regarding funding outcomes and expected future investment requirements;
- improve efficiency across the transport sector through the progression of the COAG Road Reform Plan and development of a nationally consistent regulatory model for access to strategically important terminals;
- continue to work towards implementation of a single national rail safety regulator and investigator to deliver a nationally consistent rail safety regulatory framework; and
- develop comprehensive productivity indicators for the rail sector.

Industry can also play a strong role in improving productivity through developing and adhering to technical, operational and environmental industry standards and guidelines; and working to improve coordination along the supply chain.

CONTENTS

| | |
|---|-----------|
| 1. INTRODUCTION | 1 |
| 1.1 Background..... | 1 |
| 1.2 Objectives of review..... | 2 |
| 1.3 Current productivity reforms within the transport market | 2 |
| 1.3.1 COAG reform agenda..... | 2 |
| 1.3.2 National Transport Policy Framework – a new approach..... | 6 |
| 1.4 Structure of this paper | 7 |
| 2. CURRENT RAIL ENVIRONMENT | 8 |
| 2.1 Current rail market..... | 8 |
| 2.2 Rail as part of the supply chain..... | 10 |
| 2.3 Regulation and government policy | 11 |
| 2.3.1 Economic regulation | 11 |
| 2.3.2 Environmental and safety regulation | 15 |
| 2.4 Government rail policy | 16 |
| 3. ASSESSING PRODUCTIVITY WITHIN THE RAIL SECTOR | 17 |
| 3.1 What is productivity?..... | 17 |
| 3.2 Productivity barriers identified through consultation | 18 |
| 3.2.1 Industry perspectives..... | 18 |
| 3.2.2 Government perspectives..... | 19 |
| 3.3 Assessment framework | 19 |
| 3.4 Key productivity impediments | 20 |
| 4. POLICY, PLANNING AND INVESTMENT | 21 |
| 4.1 Issue a: government objectives | 21 |
| 4.2 Issue b: coordination of planning | 23 |
| 4.3 Issue c: government subsidies | 26 |
| 4.4 Recommendations..... | 30 |
| 5. ECONOMIC REGULATION AND MARKET STRUCTURE..... | 33 |
| 5.1 Issue a: vertical separation of low volume rail lines is not necessarily optimal | 34 |
| 5.2 Issue b: economic regulation of rail is inconsistent across different states and networks | 36 |
| 5.3 Issue c: competition implications of intermodal terminal access..... | 38 |
| 5.4 Issue d: pricing across transport modes | 39 |
| 5.5 Issue e: efficient use of rail access arrangements..... | 40 |
| 5.6 Recommendations..... | 43 |
| 6. SAFETY, ENVIRONMENTAL AND TECHNICAL STANDARDS AND REGULATIONS..... | 46 |
| 6.1 Issue a: inconsistent safety and environmental regulations..... | 46 |
| 6.2 Issue b: harmonisation of technical standards..... | 47 |
| 6.3 Recommendations..... | 48 |
| 7. HUMAN CAPITAL | 51 |
| 7.1 Issue a: recruitment, training and utilisation of labour | 51 |
| 7.2 Recommendations..... | 51 |
| 8. PRODUCTIVITY MEASUREMENT | 52 |
| 8.1 Issue a: lack of available freight rail productivity data..... | 52 |
| 8.2 Recommendations..... | 53 |
| 9. CONCLUSION..... | 54 |

| | |
|---|-----------|
| APPENDIX 1: SUBMISSIONS TO THE FREIGHT RAIL PRODUCTIVITY REVIEW | 55 |
| APPENDIX 2: OVERVIEW OF THE COMPETITION AND INFRASTRUCTURE REFORM AGREEMENT (CIRA)..... | 57 |
| APPENDIX 3: KEY FINDINGS FROM THE PRODUCTIVITY COMMISSION REPORT INTO ROAD AND RAIL INFRASTRUCTURE PRICING | 61 |
| APPENDIX 4: NATIONAL TRANSPORT POLICY FRAMEWORK | 65 |
| APPENDIX 5: OVERVIEW OF RAIL REGULATORS | 67 |
| APPENDIX 6: OBJECTIVES AND PLANNING FUNCTIONS OF VARIOUS GOVERNMENT AND GOVERNMENT OWNED CORPORATIONS | 69 |
| APPENDIX 7: MARKET STRUCTURE ARRANGEMENTS WITHIN THE RAIL INDUSTRY..... | 73 |
| REFERENCES | 75 |

LIST OF TABLES

| | |
|--|-----------|
| Table 1. Regulatory and contractual arrangements | 13 |
| Table 2. Overview of rail economic and safety regulators..... | 67 |
| Table 3. Government and government owned corporation objectives..... | 69 |
| Table 4. Transport planning and funding roles across governments..... | 72 |

LIST OF FIGURES

| | |
|--|-----------|
| Figure 1. Freight rail transport markets in Australia – net tonne kilometres .. | 8 |
| Figure 2. Schematic supply chain examples | 11 |
| Figure 3. Overview of rail tracks and managers across Australia | 15 |
| Figure 4. Rail issues framework..... | 20 |

1. INTRODUCTION

This section will:

- Provide the background and objectives of the rail productivity review
- Outline the current reforms occurring within the transport sector and their potential impact on rail productivity
- Outline the structure of this report

1.1 Background

In 2007, as part of the NTC strategic planning process, low freight rail productivity was highlighted as a key impediment to the improved use of rail within the transport sector. Consultation highlighted the concern that productivity gains within the sector have not been occurring at the same level as that experienced within the road industry. As a result, the NTC initiated an investigation into the barriers to improved rail productivity as part of the NTC work programme approved by the Australian Transport Council (ATC).

In January 2008, the NTC commissioned John Hearsch to investigate productivity issues within the rail industry. The Rail Productivity Review Information Paper (Hearsch, 2008) was completed in March 2008 and highlighted a number of areas for further investigation, including:

- lack of clear government policy for rail;
- less than satisfactory asset utilisation;
- unsatisfactory labour utilisation in some areas;
- inadequate business and operational systems;
- sub-optimal intermodal interfaces; and
- poor information regarding the performance of rail.

This paper highlighted the need for more robust analysis of productivity barriers within the rail industry.

Following the Rail Productivity Review Information Paper, NTC released the Rail Productivity Review Issues Paper (NTC, 2008a) in August 2008. The objective of this paper was to raise key issues impacting on the productivity of rail and to facilitate submissions to the review from interested parties. Twenty-one submissions were received in response to this paper from a range of public and private organisations (refer to Appendix 1 for a list of submissions).

Initially, NTC's rail productivity review intended to address both passenger and freight rail productivity issues. However, the review proceeded to focus on freight rail productivity issues. A key reason for this was that it became apparent that, if passenger issues were to be investigated, this should ideally be undertaken as part of a broader review of the movement of people across all modes (including public transport).

The NTC then released the Rail Productivity Review Draft Position Paper (NTC, 2009a) for comment in March 2009. This put forward the NTC's findings regarding the key impediments to improved productivity and recommendations for addressing these concerns. A number of submissions were received in response to the paper (see Appendix 1 for a list of submissions) as well as informal feedback being provided by a number of government and industry representatives. This input has been taken into account in the preparation of the final position paper. All submissions received as part of the review, as well as the rail productivity review information paper, issues paper and draft position paper are available on the NTC website.

1.2 Objectives of review

The review aims to identify how rail can operate more productively within the broader transport sector. More specifically, the review is aimed at:

- understanding the role of freight rail within Australia's transport system;
- identifying productivity impediments within the freight rail sector; and
- developing recommendations for government to effectively intervene in the freight rail sector to improve outcomes for the transport system as a whole.

The focus of this review is on rail freight. Passenger rail is considered where it interacts with freight services. Outcomes of this review will provide the basis for NTC's future approaches to freight rail productivity issues.

1.3 Current productivity reforms within the transport market

This review has been conducted in parallel with a number of existing transport reform projects aimed at increasing the efficiency of the transport sector. This includes reforms being undertaken as part of the Council of Australian Governments (COAG) national reform agenda and those being progressed under the National Transport Policy Framework.

These reforms are expected to deliver productivity benefits for both road and rail transport. However, the current reform agenda that affects rail is more focused on improving rail safety than addressing productivity impediments more broadly. Additionally, a number of rail reforms identified by COAG through the Competition and Infrastructure Reform Agreement (see section 1.3.1) have not been progressed by COAG according to timelines. As a result, there is a need to take a comprehensive approach to identifying rail productivity reform needs.

1.3.1 COAG reform agenda

A number of transport reforms have been agreed to by COAG as part of the national reform agenda. These include:

- the Competition and Infrastructure Reform Agreement (CIRA);
- transparency in enunciating the objectives for funding of Community Service Obligations (CSOs);
- COAG Road Reform Plan; and
- implementation of national rail safety reforms.

These reforms are aimed at removing inconsistencies in the pricing and regulation of transport infrastructure and services, creating a more efficient transport sector and reducing distortions between transport modes.

The Competition and Infrastructure Reform Agreement

Rail track in Australia is subject to pricing and access economic regulation to ensure that train operators are able to gain access to the track at fair prices and conditions. Currently, rail track access is regulated at either a state or federal level depending on the location and ownership of the rail infrastructure being regulated. This has led to some inconsistencies regarding the economic regulation around Australia.

The Competition and Infrastructure Reform Agreement aims to create a simpler and more consistent regulatory model for rail infrastructure access and pricing. This would be achieved through the application of an access and pricing model based on the Australian Rail Track Corporation undertaking¹, which would apply to all agreed nationally significant railways, which includes the interstate track (see section 3.1 of the Competition and Infrastructure Reform Agreement in Appendix 2). Economic regulation of rail infrastructure would also only be applied where the benefits outweighed the costs (COAG, 2006b). More information on the Competition and Infrastructure Reform Agreement is contained in Appendix 2.

The Competition and Infrastructure Reform Agreement was signed by COAG in February 2006. Further endorsement was given to the reform in April 2007, when COAG highlighted the reform as addressing a number of recommendations arising from the 2006 Productivity Commission Review into Road and Rail Freight Infrastructure Pricing (key findings from this inquiry are included in Appendix 3).

Work on enhancing the existing national system of rail access has stalled. This has been due to concerns from a number of states regarding suitability of the national access model put forward in the agreement. In addition, a number of commercial agreements between track managers, governments and rail operators exist which has increased the expected costs from implementing the Competition and Infrastructure Reform Agreement at a national level. This suggests that a number of issues identified by COAG and the Productivity Commission may not be adequately resolved through the Competition and Infrastructure Reform Agreement in its current form, with further investigation of rail access arrangements needed.

This was recognised by the COAG Business Regulation and Competition Working Group who in 2009 recommended the following steps be taken to continue progressing the reform (COAG Reform Council, 2009):

- for track between the New South Wales border and Brisbane, the Australian Rail Track Corporation access undertaking model will apply, but the ultimate approach may need to vary from the Australian Rail Track Corporation undertaking in some limited areas, where this is necessary to meet contractual obligations;
- for track between Perth and Kalgoorlie, it is not considered worthwhile to pursue an Australian Rail Track Corporation-based approach at this time, and not unless and until it is clear that the benefits of the change exceed the costs;

¹ The Australian Rail Track Corporation undertaking refers to the pricing and access conditions for Australian Rail Track Corporation track that are submitted to the Australian Competition and Consumer Commission for approval.

- in relation to major intrastate rail networks, governments should continue to apply their own rail access regimes where they exist and seek certification of those regimes under the Part IIIA National Access Regime (COAG, 2006a); and
- a review of the Competition and Infrastructure Reform Agreement is intended to be undertaken in 2011. This will provide a further opportunity to consider whether the issue of a national rail access regime has been appropriately dealt with (COAG Reform Council, 2009).

In addition to establishing a national rail access regime, the Competition and Infrastructure Reform Agreement includes binding time limits and a limited merits review process for access determinations. These are aimed at ensuring access applications and determinations are resolved within a reasonable timeframe (COAG, 2006a). However, these have generally not been implemented as part of the national access framework set out in the *Trade Practices Act (1974) Cth*.

In April 2009, the Minister for Competition Policy and Consumer Affairs commenced consultation on a package of reforms designed to improve the efficiency and operation of the national access regulations (Minister for Competition Policy and Consumer Affairs, 2009).

The proposed reforms will fulfil federal obligations to implement the binding time and review limits set out in the Competition and Infrastructure Reform Agreement (see section 2.4 and 2.5 in Appendix 2). These reforms are aimed at reducing the time and costs involved in applying for access to significant infrastructure and increase certainty for participants.

Transparent objectives for funding Community Service Obligations

In April 2007, COAG agreed that governments will ensure transparency in clarifying the objectives for Community Service Obligation² funding for rail infrastructure and that research be undertaken to identify road spending to meet Community Service Obligations (COAG, 2007a). However, while research has been undertaken to better identify Community Service Obligation spending on roads, governments have not adopted measures to better clarify objectives for Community Service Obligation payments for rail.

COAG Road Reform Plan

COAG has agreed to implement a road reform plan, which is aimed at more efficiently pricing road transport to better reflect the actual costs of road usage. Better road pricing will provide customers with better pricing signals, so that their decisions regarding modal choice (e.g. between road and rail transport) more accurately reflect the true costs of providing the services. This will improve outcomes across all transport modes by helping to optimise the mix of road and rail within the transport sector and allow more efficient usage and investment in transport infrastructure.

² The Productivity Commission describes Community Service Obligations as follows: “Non-commercial activities performed by government trading enterprises (GTEs) in the pursuit of community benefits, at the behest of government, are termed community service obligations (CSOs) – typically the activities would not be undertaken by a business operating under commercial imperatives.” (Productivity Commission, 2008b). In addition to this definition, it is possible that government may also choose to purchase community services from private businesses to undertake activities to improve social or environmental outcomes.

The reform plan aims to provide better signals to users and providers of road infrastructure about demand for heavy vehicle road infrastructure through a number of key reform:

- new heavy vehicle charging determination – this was approved by ATC in 2008 and removes cross subsidisations between vehicle classes;
- incremental pricing – under this scheme, approved vehicles would be able to carry additional mass and pay a charge to offset the additional road wear costs. Future work on this reform will be undertaken as part of an investigation into mass-distance-location pricing; and
- mass-distance-location pricing – under this scheme, should it prove feasible, all heavy vehicles would be charged based on their actual mass, distance travelled and location. Road spending would also be better linked to revenue from charges so that road spending could be better directed to the roads used by heavy vehicles. This would create more cost reflective prices for road transport, which would improve the competitive neutrality between road and rail transport prices (particularly in rural areas).

National rail safety reforms

In line with the COAG reform agenda, the NTC developed a national model Rail Safety Bill in 2006. This bill has been implemented by Victoria, South Australia and New South Wales. In addition to this bill, a number of other rail safety reforms were also agreed to by COAG, some of which have been delayed due to a number of jurisdictions not implementing the model legislation. These include (COAG, 2007b):

- the passage of the model Rail Safety Bill by jurisdictions;
- identification of ‘local variations’ through a variations register;
- the establishment of national rail operator accreditation;
- the development of a framework to support nationally consistent training for rail safety regulators;
- the standardisation of rail safety data collections;
- increased coordination between regulatory agencies;
- the development of a national train driver licensing framework; and
- a review of rail safety regulatory arrangements.

In 2008 COAG asked ATC to prepare regulatory impact statements for a single national system for each of rail safety regulation and investigation, maritime safety regulation and heavy vehicle regulation (ATC, 2008a). ATC directed NTC to prepare the regulatory impact statement for rail safety (NTC, 2008b). A single, national rail safety regulatory and investigation framework is expected to reduce the regulatory burden for rail operators that currently have to comply with different regulations in different jurisdictions.

ATC endorsed the regulatory impact statement for a single national rail safety regulator and investigator in May 2009 (ATC communique, May 2009). In July 2009, COAG then agreed to develop a national rail safety regulatory system, with the scope and form of the regulator to be considered following advice to COAG from the Standing Committee on Transport, which will be provided at the end of 2009 (COAG, 2009).

1.3.2 National Transport Policy Framework – a new approach

In February 2008, ATC agreed that there is a need for a national approach to transport policy and endorsed the National Transport Policy Framework (ATC, 2008b). The National Transport Policy Framework includes the following vision:

“[...] 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.”

This will be achieved through the development of transport policy that supports integrated planning and investment of transport infrastructure and services across all modes. This will require significant reform across all transport modes to create a level playing field to ensure transport users can make choices regarding the best transport mode, which includes efficiency, social and environmental considerations.

The National Transport Policy Framework put forward objectives and principles intended to guide future transport policy development. These are included in Appendix 4 and will provide strong direction for the recommendations developed as part of the freight rail productivity review.

Supply Chain Pilot Studies

The NTC released the Supply Chain Pilot Studies Draft Position Paper (NTC, 2009b) outlining the findings and recommendations and final consultant reports from the four supply chain pilot studies (livestock, coal, grain, and inter-modal) in March 2009. These studies were undertaken in response to an ATC directive given to the Capacity Constraints and Supply Chain Performance Working Group (through the National Transport Policy Framework), which was led by the South Australian Transport Minister. Recommendations for each individual supply chain were put forward as well as the following five key generic recommendations:

1. Develop a national transport policy, planning and investment framework.
2. NTC to continue road and rail pricing reform (to remove distortions) in conjunction with COAG policy reform.
3. NTC to work in conjunction with governments and other agencies (such as the Australian Competition and Consumer Commission and government owned corporations) to specify requirements for coordination, cooperation, accountability and encourage information sharing.
4. Governments commit to step in to facilitate change to address market failures if industry fails to do so.
5. NTC to work in conjunction with governments and industry to reduce regulatory burdens.

These studies have helped to inform the freight rail productivity review due to the extensive use of rail within some supply chains and the interface issues explored through these studies. As such, many of the findings and recommendations made as part of the freight rail productivity review are very similar to the findings made in the pilot studies. While these studies have focussed on the efficiency of individual supply chains, the rail review will look more broadly at the performance of rail within the transport sector as a whole.

1.4 Structure of this paper

The report is structured as follows:

Current rail environment (section 2)

- How the current markets operate
- How rail operates within the supply chain
- Current approaches used by government to intervene in the rail system

Assessing productivity within the rail sector (section 3)

- How to define productivity
- Productivity barriers identified by industry and government through the consultation process
- How this review assesses productivity impediments in the rail sector
- Key impediments to improved productivity

Key productivity impediments (section 4 to 8)

- Impediments and their impact on productivity
- How government intervenes to address impediments

Conclusion (section 9)

- Key findings from the freight rail productivity review
- Next steps

2. CURRENT RAIL ENVIRONMENT

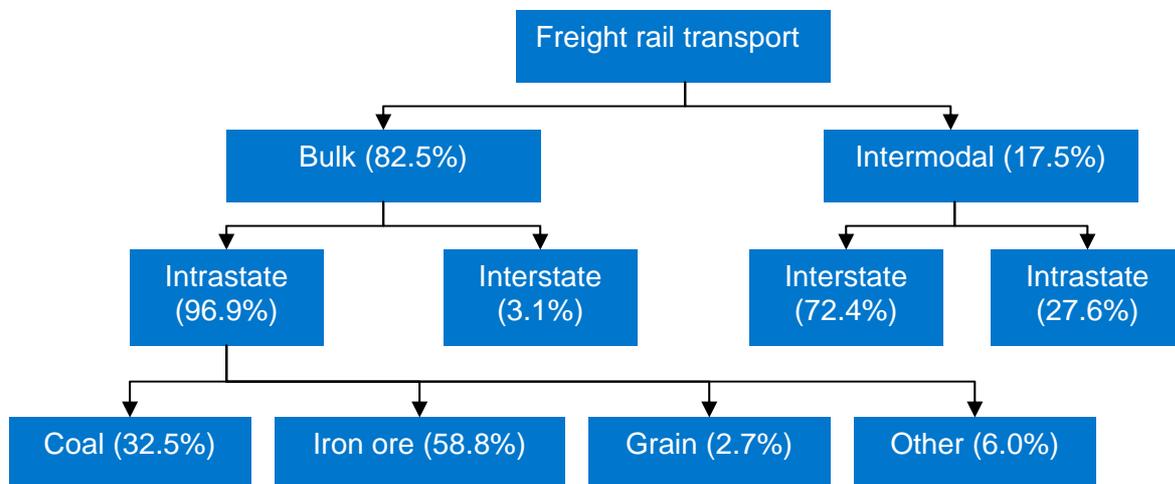
This section will:

- Explain the operation of rail as part of the supply chain
- Identify how the key rail market segments operate
- Outline existing government interventions within the rail industry, including regulation and policy interventions

2.1 Current rail market

In Australia, the existing rail freight market is highly diverse and can be divided into a number of distinct markets. Figure 1 provides an overview of the key distinctions that can be made with respect to the rail transport markets in Australia. The current distribution of the rail freight task indicates that rail movements are predominantly used for two types of movements: intrastate bulk freight (largely coal, iron ore and grain) and long haul intermodal freight. Rail freight is generally more viable for either bulk freight or on long-distance intermodal freight, as the handling costs represent a lower proportion of the total freight costs. While grain represents a relatively low percentage of total net tonne kilometres, the average tonne of grain is transported around 280km by rail, which is significantly higher than the average kilometres travelled by a tonne of coal (190km).

Figure 1. Freight rail transport markets in Australia – net tonne kilometres



Note: Percentages calculated using 2005/06 net tonne kilometre data from the Rail Industry Report 2007 (ARA, 2008), includes ancillary and hire and reward services.

Most bulk movements originate in Queensland (52.5%), New South Wales (24.8%) and Western Australia (15.3%) (BITRE, 2008a). For intermodal freight, the top three origin and destination pairs in 2006/07 (by total tonnes carried) were Victoria and Western Australia both ways (22.3%); intrastate movements in Queensland (17.9%); and movements between New South Wales and Western Australia both ways (13.9%).

BITRE (2008a) indicates that between 1971/72 and 2005/06 the market share (measured by the percentage of tonnes carried of total land and sea freight) of rail rose in a number of markets including:

- New South Wales to Western Australia from 34% to 53%;
- Victoria to Western Australia from 42% to 68%; and
- Queensland to Western Australia from 12% to 47%.

The four key Australian market segments that rail transport serves are described below.

Coal

Coal fields are located in Queensland and New South Wales. Queensland Rail owns and manages the existing coal rail infrastructure³ whereas the New South Wales rail track is leased and managed by the Australian Rail Track Corporation and RailCorp⁴. Rail haulage services are provided by both Queensland Rail and Pacific National⁵. Most of the transport infrastructure for coal is dedicated to servicing coal, with the rail link essentially acting as a conveyor belt to the port facilities. Some port facilities, such as Port of Brisbane and Port Kembla, are not dedicated coal ports and share rail infrastructure with other commodities and passenger services, complicating the operation of the rail leg in these supply chains.

Iron Ore

Australia's major iron ore deposits are located in the Pilbara, in north-western Western Australia. Three private railways exist in the Pilbara region, with iron ore transported from mines to Port Hedland via rail links which have been developed and are operated by BHP Billiton, Rio Tinto and Fortescue Metals Group⁶. These railways employ world class technology and are often cited as an example of the possible gains that could be made on the east coast coal railways and the interstate intermodal lines.

Grain

Grain rail freight volumes are highly variable from year to year with 14.8 million tonnes of grain transport by rail in 2005/06, while only 9.79 million tonnes were transported by rail in 2006/07 (ARA, 2007). Western Australia is the largest producer of grain, with New South Wales, Victoria, and South Australia also producing large grain crops. There are a number of different track owners and above rail operators involved in grain rail transport across different states.

Private rail operators have generally been unable to achieve commercial returns and rail track infrastructure has deteriorated substantially despite some subsidies being provided by government (Victorian Department of Infrastructure, 2007). This has resulted in rolling

³ The Queensland government have recently announced plans to sell its above and below rail coal business. The government also intends to investigate options for the sale of Queensland Rail's non-coal bulk freight, intermodal, retail and regional freight services. Details of how the coal and other rail businesses would be sold is still to be determined, with the sale likely to occur in the next three to five years.

⁴ The NSW government announced in late 2008 that RailCorp would be de-corporatised and brought under direct control of the NSW government. This is likely to significantly impact how RailCorp operates.

⁵ Pacific National has recently signed coal haulage contracts in Queensland for a period of 10 years starting in 2010 (Synergies, 2009)

⁶ BHP Billiton's and Rio Tinto's rail networks in the Pilbara have recently been the subject of an ongoing access dispute with Fortescue Metals Group seeking access to the rail lines

stock being moved away from grain haulage into the more profitable coal sector. These problems have been exacerbated by a number of years of drought, which has substantially reduced crop volumes available for transport and subsequently reduced the attractiveness of investment in rail transport.

Intermodal

Intermodal freight faces strong competition from the road sector on the east coast routes, while sea freight is becoming a significant competitor with intermodal freight traffic for east-west movements. The majority of this freight is carried on the standard gauge interstate track.

The majority of the interstate track (from the New South Wales/Queensland border to Kalgoorlie) is managed by the Australian Rail Track Corporation and regulated by the Australian Competition and Consumer Commission.

Track from Kalgoorlie to Perth is managed by WestNet Rail and regulated by the Economic Regulation Authority of Western Australia, while Queensland Rail manages the track in Queensland, which is regulated by the Queensland Competition Authority.

Pacific National, SCT Logistics and Queensland Rail all operate intermodal train services on the interstate track, although SCT logistics only operate on the east-west segment.

Geographically, intermodal rail transport is used to a greater extent on east-west movements due to its advantages in terms of travel time and price. On north-south routes the reliability of rail is relatively lower than road (Booz & Co, 2009).

Interrelationships with passenger rail

Most rail track in urban areas is shared by passenger and freight services. The performance of the passenger sector can therefore influence rail freight efficiency. Passenger trains, generally speaking, have priority over freight trains. Where rail network capacity is constrained, freight operators have reduced access to rail paths and freight rail performance is impacted; for example, in Sydney there is a curfew on freight trains during peak hours (Asciano, 2008 and Queensland Rail, 2008a).

In general, these issues are being addressed through the development of dedicated freight rail track (e.g. South Sydney Freight Line in Sydney and Southern Missing Link in Queensland to allow coal to move through Gladstone rather than Brisbane). However, where dedicated infrastructure is not viable, the conflicts between passenger and freight are likely to remain, especially as pricing and planning for these services are not undertaken jointly. This issue is discussed further in section 4.2.

2.2 Rail as part of the supply chain

As the origins and destinations of goods rarely coincide with the start and end points of the railway line, rail transport is one of the links in the supply chain with most freight travelling on another mode at some point (as shown in Figure 2). Freight customers make transport decisions based on the relative value, cost, travel time, reliability and service quality of different transport modes. Supply chains will then be formed based on the transport services that provide the best mix of cost and service characteristics to the freight customer.

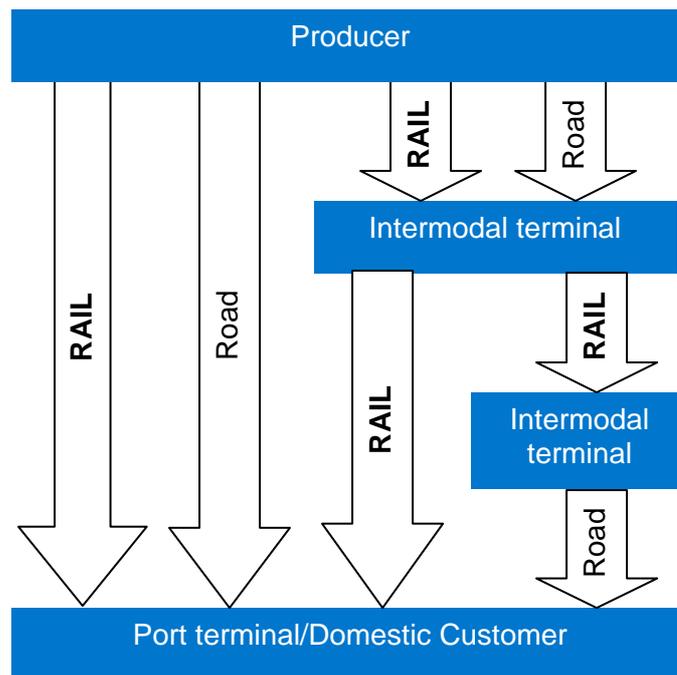
Figure 2. Schematic supply chain examples

Figure 2 highlights that rail transport is part of a supply chain. As a result, productivity of rail transport is closely linked to the productivity of the whole supply chain, particularly the intermodal terminals. The figure also highlights that road and rail transport can be both substitutes and complements. On some routes, road and rail transport compete and freight customers will choose between modes. On other routes, road and rail can be considered complements, as road provides the transport from the rail destination to more dispersed destinations within urban areas.

2.3 Regulation and government policy

2.3.1 Economic regulation

The rail sector is subject to economies of scale and economies of scope. This means, in an unregulated environment where rail faced no competition from other modes, rail businesses could act as natural monopolies and be able to charge monopoly rents and restrict new entrants to the market⁷. As a result, governments regulate rail business to improve competition outcomes and ensure track managers cannot charge monopoly rents for rail access.

This regulation, in effect, controls most of the interactions between above and below rail providers, including setting the terms and conditions for access, determining or approving access prices or revenue ceilings and approving the rate of return at which a rail business can recover costs. There is currently no single national economic regulator for all track, with rail access regulation undertaken by different regulators with different underlying access regimes, depending on the location and market structure of the rail line. These are described in more detail in Appendix 5.

⁷ Rail infrastructure provision is an industry with natural monopoly characteristics since one rail infrastructure provider can always produce track services more cheaply than two or more providers competing with one another.

The current regulatory environment and market structure stems from the differing application by state and federal governments of the National Competition Policy Reforms enacted in the mid 1990s (Productivity Commission, 1999). These reforms were mainly aimed at increasing competition within industries that use monopoly infrastructure and generally involved changing the ownership and structure of rail business and imposing economic regulation.

As a result, the market structure of rail operations varies across Australia. Above rail services⁸ and below rail services⁹ are currently provided through a number of different market structures, including:

- Vertical integration – this exists where above and below rail services are provided by the same organisation, for example, this occurs on the Queensland freight network, the private mineral railways in the Pilbara and the regional rail lines in South Australia.
- Vertical separation – this occurs when above and below rail services are provided by separate entities, for example, on the interstate freight network, the New South Wales regional freight networks and the grain networks in Victoria and Western Australia.
- Horizontal integration – this occurs where a single transport company provides several transport services within a supply chain, for example, Asciano is a train operator, intermodal terminal operator, stevedore and owns rolling stock.
- Horizontal separation – this exists where specialised firms only provide one function along a supply chain, for example, El Zorro only operates trains.
- Public or private ownership – above and below rail services are provided by a mixture of private and government owned corporations around Australia. For example, Queensland Rail (the track manager in Queensland and above rail service provider) is a government owned corporation, while WestNet Rail (the track manager in Western Australia) is a privately owned company.

A more detailed explanation of the market structures and commercial arrangements present in the rail industry is included in Appendix 7.

⁸ Above rail services refers to the operation of locomotives and rolling stock for freight customers or in house operations.

⁹ Below rail services refers to the provision and maintenance of rail track and track side infrastructure, signalling and scheduling, and selling access to rail track.

Table 1. Regulatory and contractual arrangements

| Agreement | Parties involved | Characteristics |
|----------------------------|---|---|
| Lease agreement | Track owner, track manager (lessee) | <ul style="list-style-type: none"> • Determines the relationship between the track owner and manager (lessee), including any financial obligations on either party and the maintenance or service obligations of the track manager • Varying terms (e.g. 60 years for the Australian Rail Track Corporation, 45 years for V/Line, 49 years for WestNet Rail) |
| Access regimes | State and federal governments, economic regulator, track manager | <ul style="list-style-type: none"> • Legislative tool enacted by state or federal governments • Remains in place unless modified or revoked through parliament • Sets the general conditions for track access and underlying pricing methodologies to secure the rights of access seekers • Specifies the obligations of the track manager and economic regulator • Examples include, Part IIIA Trade Practices Act (Federal), Rail Corporations Act 1996 (Victoria), Railways Access Act 1998 and Railways (Access) Code 2000 (Western Australia). |
| Access undertakings | Track manager or intermodal terminal operator, economic regulator | <ul style="list-style-type: none"> • Access undertakings are generally submitted as part of a state or federal access regime • An undertaking is put forward by the track manager on a voluntary basis or to comply with a compulsory access regime • Access undertakings are valid for a specified period of time as set out in the access regime before a new undertaking will need to be submitted to the regulator for review • Generally includes specific terms and conditions for access to train paths, revenue or price floor and ceilings for track access and the maximum allowable return that a track manager can earn from its assets • Some intermodal terminals are also subject to an access regime and will submit access undertakings to the relevant regulator |
| Port contracts | Stevedore, train operator | <ul style="list-style-type: none"> • Monitoring report by Australian Competition and Consumer Commission on an annual basis • Inquiries into stevedore pricing by state regulators |
| Access contracts | Track manager or intermodal terminal operator, train operator | <ul style="list-style-type: none"> • Negotiated privately between track manager/ terminal operator and train operator but guided by the prices and conditions set out in the access undertaking |

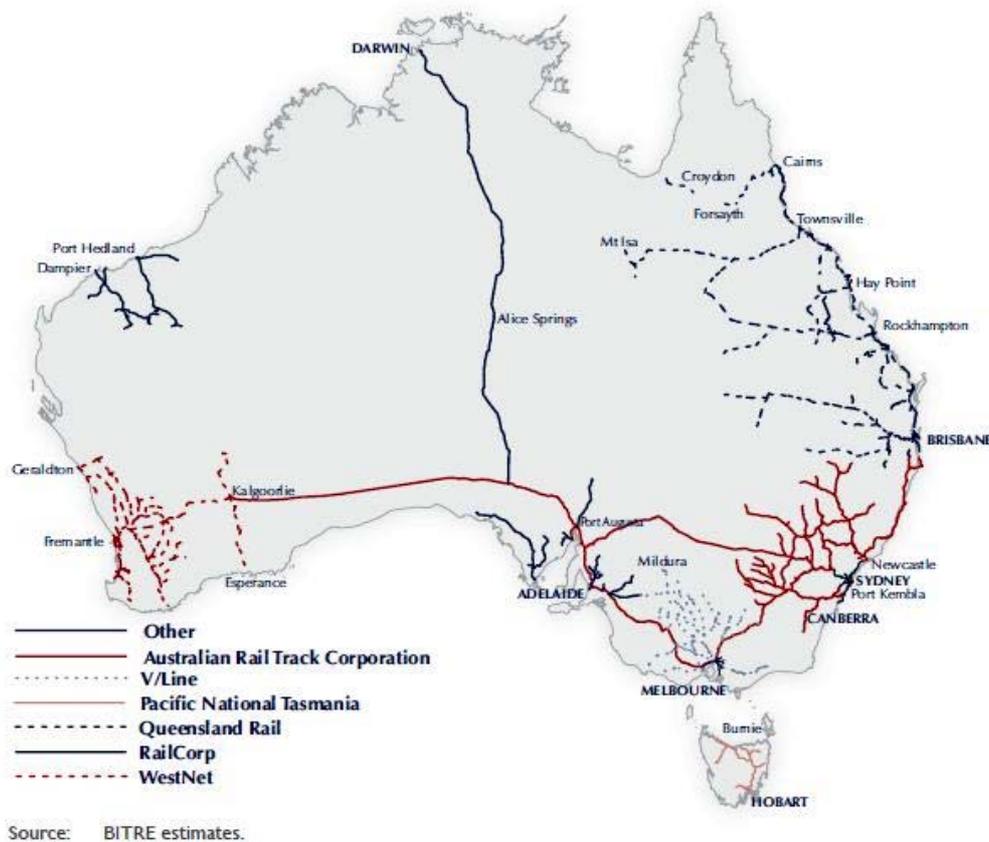
In a review of rail industry reform, the 1999 Productivity Commission report titled *Progress in Rail Reform* recommended the following changes to the structure of the industry for different rail market segments (Productivity Commission, 1999):

- interstate network: entire network to be managed by a single entity. Vertically separated network subject to access regime approved by the Australian Competition and Consumer Commission;
- intrastate low volume network (e.g. grain): entire network horizontally separated from passenger and other freight operations. Vertically integrated network subject to ‘light handed’ access regime, with possible privatisation of vertically integrated railway operations and track (either as entire network or separate track segments); and
- intrastate high volume network (e.g. coal, iron ore): entire network horizontally separated from passenger and other freight operations. Vertical integration of whole network with franchising of vertically integrated operations using competitive bidding for lowest freight rates. This would involve franchise agreements for either the entire network or separate track segments. These would be re-tendered regularly to promote competition, with track and rolling stock leased to franchisee to promote new entrants and access arrangements incorporated into franchise agreements.

These changes to the rail networks recommended by the Productivity Commission in 1999 do not reflect the current rail environment across Australia. For example, the interstate track is essentially managed as a vertically separated network¹⁰ as recommended by the Productivity Commission. However, the network is currently managed by three entities¹¹. Equally, the coal and grain networks in most states operate as vertically separate networks with privatisation of the entire grain network trialled with poor outcomes in Victoria. Figure 3 provides an overview of the location and ownership of freight rail tracks in Australia.

¹⁰ The interstate track in Queensland is managed by Queensland Rail, which is a vertically integrated business. However, for practical purposes the above and below rail functions of the business are separated by regulation which limits the information flow between these business areas. This is known as ‘ring fencing’.

¹¹ The standard gauge interstate track is currently managed by the Australian Rail Track Corporation and regulated by the Australian Competition and Consumer Commission on the segment from the New South Wales/Queensland border to Kalgoorlie in Western Australia. From Kalgoorlie to Perth, the line is managed by WestNet Rail and regulated by the Economic Regulation Authority of Western Australia, while Queensland Rail manages the track from the Queensland/New South Wales border to Brisbane, which is regulated by the Queensland Competition Authority.

Figure 3. Overview of rail tracks and managers across Australia

Source: BITRE, 2008b

2.3.2 Environmental and safety regulation

There are a range of environmental regulations that apply to all industries including the rail sector. These standards place controls on air quality, noise and vibration resulting from rail operations and are administered by state and local governments. These standards are not specific to rail operations and apply across all industries.

In Western Australia, two state planning policies are currently being developed; metropolitan freight network policy and road and rail transport noise policy that will apply to new or upgraded rail operations or noise sensitive development adjacent to key freight routes (DPI WA, 2009). These policies aim to balance the need for efficient freight movement with other land use planning and environmental objectives.

This model of environmental regulation is distinct from that applied to road, where strict Australian Design Rules, administered by transport ministers, regulate the noise and emissions produced by heavy vehicles. In contrast, transport ministers do not impose environmental standards on rail in addition to the standard environmental regulations administered by environment and planning ministers. Furthermore, there is an example in Victoria where passenger train services are exempt from the environmental requirements in the state's Environment Protection Act.

Rail industry participants need to obtain safety accreditation from rail safety regulators to attest that they have the competence and capacity to manage the risks to safety associated

with the rail operations for which accreditation is granted. Each state has its own rail safety regulator (for a list refer to Appendix 5). In 2006, NTC developed model rail safety regulation. To date, Victoria, New South Wales and South Australia have implemented the model rail safety legislation. At the time of writing, legislation is before the Queensland Parliament.

2.4 Government rail policy

State and federal governments are heavily involved in the freight rail sector through their roles as policy maker and planner, shareholder, investor and regulator. Passenger transport continues to be heavily funded and directed by state governments. This also impacts on the operations of freight rail in Australia due to the shared freight and passenger infrastructure that exists. These roles and the potential issues that arise from them are discussed in chapters 4 to 8.

Given this multitude of roles, it is important to clarify the meaning and roles of government and industry as they are discussed in this report:

- ‘Government’ is intended to refer to state and federal departments that are responsible for planning and policy development relating to rail.
- ‘Industry’ in this report, includes all private and publicly owned rail businesses that provide above or below rail services in Australia.
- ‘Regulators’ refers to the independent state and federal regulators charged with regulating rail pricing and access (unless otherwise specified).
- ‘Government owned corporations’ refers to rail businesses that are wholly or partly owned by state or federal governments. These types of businesses are considered a subset of ‘industry’.

3. ASSESSING PRODUCTIVITY WITHIN THE RAIL SECTOR

This section will:

- Define the concept of productivity for the purposes of this review
- Provide an overview of the issues raised by industry and government during the consultation process
- Outline the assessment framework used to investigate productivity impediments in the rail sector
- Identify the key areas impacting on productivity within the rail sector

3.1 What is productivity?

The Productivity Commission defines productivity as:

“...a measure of the rate at which outputs of goods and services are produced per unit of input (labour, capital, raw materials, etc). It is calculated as the ratio of the quantity of outputs produced to some measure of the quantity of inputs used.”
(Productivity Commission, 2008a)

Productivity is a measure of how well firms or industries use inputs to produce the outputs that provide the most value to the economy. Improving productivity requires moving towards:

- least cost production processes;
- efficient allocation of resources within a firm and across the economy; and
- continual improvement of service levels and development of new products and technologies.

This review therefore takes a broad view of freight rail productivity in the context of the transport market as a whole and aims to identify the impediments to greater productivity in the sector and how government can intervene to overcome these barriers. As such, the scope of the review aims to identify barriers within the investment and regulatory frameworks that underpin the rail freight industry.

Some submissions to this review have outlined specific technologies or investment opportunities. Evaluation of rail technologies or specific infrastructure investments that can be used to enhance productivity is beyond the scope of this review. Rather, what is in scope is to evaluate the regulatory and investment frameworks underpinning the rail industry to ensure that both private and government owned rail businesses are able to make the most efficient decisions regarding technologies and business practices.

The review has drawn on research undertaken by a range of public and private bodies as well as consultation with a wide range of rail stakeholders, which has allowed a strong understanding of the issues to be developed. This approach has been taken given the limited data available on the productivity of freight rail operations in Australia. The issues arising from a lack of quality rail freight performance data have also been investigated as part of the review.

3.2 Productivity barriers identified through consultation

As part of this review, extensive research and consultation was undertaken, including:

- six submissions to the NTC Freight Rail Productivity Review Draft Position Paper (for a full list refer to Appendix 1);
- 21 submissions to the NTC Rail Productivity Review Issues Paper from the rail industry, government and other industry organisations (for a full list refer to Appendix 1);
- industry and government workshops;
- targeted consultation and informal discussions with key government agencies and regulators, rail industry representative and rail customers; and
- consultation undertaken as part of the Supply Chain Pilot Studies

In addition, the review has been informed by Australian and international literature on rail market operations, investment and regulatory arrangements.

3.2.1 Industry perspectives

Rail Customers

A number of key rail customers have indicated the desire to use more rail for intermodal freight movements on Australia's intra- and interstate rail networks. Customers generally cited environmental concerns and the desire to have a non-road option due to the perceived lack of competition in the road freight sector due to industry consolidation.

The creation of a level playing field for both road and rail safety regulation due to the new national fatigue and chain of responsibility laws for road transport has also impacted modal choice. These comments highlight the opportunities available for the rail sector. However, freight customers have generally had difficulties in making rail work for their businesses, with the following productivity concerns identified:

- service, transit times and reliability (particularly for east coast freight movements to and from Sydney); and
- strong competition from sea transport on east coast to Perth routes.

Freight customers have also highlighted that, at present, rail is generally cheaper relative to road on many line haul routes (especially east-west movements). However, these cost savings can be eroded by handling costs at either end and the longer transit times for rail (especially for east-coast movements). For rail to increase market share relative to road, rail service performance would have to increase while still maintaining a cost advantage relative to road transport. This is due to the increased transit times resulting from intermodal transfers necessary when using rail transport.

Below rail operators

Below rail operators (see Appendix 7 for an explanation of above and below rail operators) highlighted the following issues impacting on productivity:

- lack of planning and policy direction from government for rail infrastructure, intermodal terminals and across the supply chain;

- infrastructure deficiencies and bottlenecks;
- outdated technology;
- development and access to intermodal terminals and ports;
- passenger and freight interactions in urban areas; and
- regulatory differences across state borders.

Above rail operators

Above rail operators (see Appendix 7 for an explanation of above and below rail operators) also raised the issues put forward by below rail operators, demonstrating the interdependency between above and below rail service providers. A number of other issues were also raised including:

- the lack of certainty around future track investments and demand for rail freight movements prevents some efficient investment in rolling stock;
- there is an inability to buy off-the-shelf locomotives due to varying technical and infrastructure standards across Australia which leads to long lead times, higher costs, uncertainty and reduced interoperability;
- the regulatory burden is too high (i.e. environmental, safety and economic); and
- in some cases access to intermodal terminals is seen to be a significant issue.

3.2.2 Government perspectives

Government plays a number of roles within the rail market including policy maker, regulator, planner and shareholder. Given the diversity of these roles and the organisations that provided input to the review; a variety of issues were raised by government agencies, including:

- multi-modal and passenger interactions, including multi-modal planning and terminal access;
- appropriateness of a national pricing and access framework;
- use of rail to achieve sustainability or transport policy objectives;
- viability of regional rail lines;
- provision of government funding; and
- lack of robust railway data.

3.3 Assessment framework

As shown in section 3.2, a range of issues have been raised that impact on rail industry productivity. As such, it is important to distinguish between problems with the underlying investment and regulatory frameworks and those that are symptoms of these frameworks.

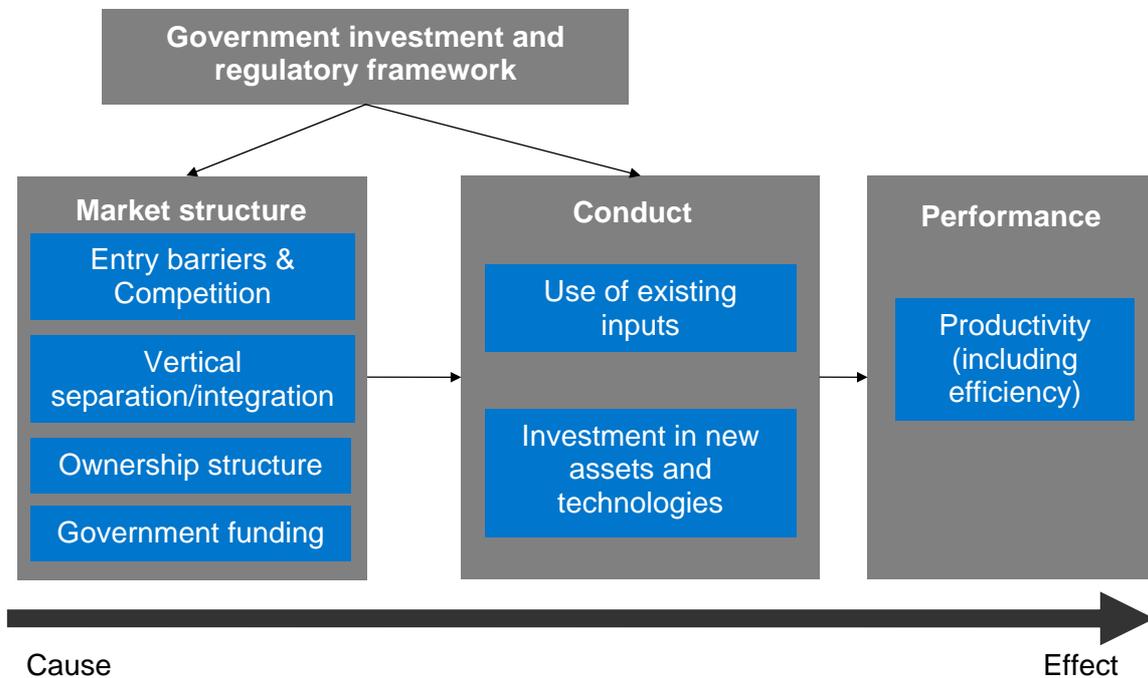
For example, a number of infrastructure bottlenecks have been identified as reducing the ability of rail to provide reliable services and utilise more productive trains. These infrastructure bottlenecks could be considered symptoms of the current structure of rail in

Australia. They may be caused by a range of underlying factors such as industry lacking the incentives and/or certainty to undertake investments. As such, addressing these underlying causes will help to improve efficiency in the rail industry over the longer term.

In order to identify symptoms and underlying causes of productivity impediments in the rail sector, NTC has used a structure-conduct-performance framework. This means the investment and regulatory structures that underpin the rail industry influence the conduct of participants within the market. This then influences the performance of the industry.

This review evaluates evidence from existing research and industry consultation to determine how the existing rail industry structures influence their actions and subsequently their performance. Within this framework, the review identifies whether there are market failures that are currently not addressed by government; and/or that are caused by inefficient government intervention. Figure 4 illustrates this assessment framework.

Figure 4. Rail issues framework



(Based on Papatheodorou, 2006)

3.4 Key productivity impediments

Using this methodology, the current investment and regulatory structures have been analysed to understand their impact on rail industry's ability to effectively plan and invest in their businesses to provide more productive rail services and compete with other modes. This assessment model was applied to the five key areas where freight rail productivity impediments were seen to exist:

1. Policy, planning and investment
2. Economic regulation and market structure
3. Environmental, safety and technical regulation and standards
4. Human capital
5. Productivity measurement

A detailed discussion of each of these areas is provided in the following sections.

4. POLICY, PLANNING AND INVESTMENT

This section will provide an analysis of the key issues associated with policy, planning and investment within the rail industry. These issues include:

- Government objectives are not always aligned or prioritised
- Further coordination of planning and investment by industry and government may be necessary
- Government subsidies are not always provided under a clear and transparent framework

Recommendations to address these issues have also been outlined in this section.

Ensuring efficient investment in necessary rail infrastructure, assets and technologies is vital to driving improvements in freight rail productivity. There are a number of barriers to this occurring, given the current planning and investment framework supporting the rail industry. These barriers are discussed in the following section.

4.1 Issue a: government objectives

Transport policy objectives are currently set at state, federal, Australian Transport Council and government owned corporation levels. These bodies also undertake a variety of transport policy and planning roles. Policy objectives aim to guide the development of transport policy and planning and provide direction as to the actions of government owned corporations. However, there is some overlap between objectives across governments and government owned corporations and confusion as to the actual outcomes sought by governments can exist. This issue can be heightened where the responsibilities for transport policy development and planning are not clearly articulated across the various levels of government and industry bodies. Objectives of the various levels of government and government owned corporations and their planning roles are described in Appendix 6.

At a high level, policy objectives across government generally display similar themes. For example, most governments develop objectives relating to the efficiency, environmental performance and social outcomes of Australia's transport network (see Appendix 6).

At a practical level, objectives across governments can be interpreted and prioritised to achieve very different outcomes. This makes it difficult to understand how objectives across different levels of government fit together as there is no clear framework for coordinating and prioritising objectives and the roles of the various institutions that set them. As a result, a variety of government bodies may be working towards achieving distinct objectives, creating uncertainty and making effective planning and investment more difficult to achieve. This in turn leads to further uncertainty regarding the future involvement from government, which reduces efficient investment outcomes.

For example, rail policy in Victoria must be developed to fulfil Victorian transport policy objectives. This also needs to align with AusLink policy objectives where strategic national infrastructure is involved, and the objectives of government infrastructure managers for transport policy that relates to government owned ports or rail track. In addition, all transport policy development should ideally be aligned with the Australian Transport Council objectives. At a high level, these objectives are aimed at achieving similar goals. However, each level of objectives may focus on achieving different priorities within these objectives.

This illustrates the complex interactions between levels of government transport objectives. As a result, the actual outcomes being sought by all participants is unclear and the funding and planning obligations for each party may be ambiguous.

This impacts on the ability of governments to undertake investment decisions with a clear purpose, which can lead to a planning and investment vacuum or inefficient investment decisions.

The NSW Farmers' Association highlights the impact of overlapping objectives on Australia's rail network and recommends a national approach for coordination:

“Differences in the various states’ application of transport/infrastructure policy have led to significant inefficiencies in the interstate movement of commodities. This is immediately seen in the differences in gauge sizes, however, it also affects quality of lines and general support maintenance, which results in considerable inefficiencies for interstate rail movement. [...] Government should provide policy certainty and strategic direction to enable confident private sector investment.” (NSW Farmers' Association, 2008)

The lack of clarity and prioritisation can also have significant impacts on the operation of government owned corporations. Government owned corporations are usually established to improve service provision, reduce costs or achieve other government policy objectives in industries with traditionally strong government involvement where government still wishes to play a role. As such, government owned corporations are usually established with multiple corporate objectives which they are expected to achieve (see Appendix 6 for examples of objectives for government owned corporations).

The objectives are important in defining the role of government owned corporations. Unlike private corporations whose primary purpose is to ensure a shareholder return, government shareholders may expect businesses to work toward a variety of outcomes. In some circumstances these objectives may not be easily aligned, making it difficult to achieve multiple objectives without some level of prioritisation. In 2006, the Productivity Commission noted that:

“governments still subject their rail operators to multiple, and often conflicting, objectives, including some relating to social welfare, without guidance on prioritisation.” (Productivity Commission, 2006, pg 332)

Where this occurs, the shareholding government should ensure that objectives are clearly prioritised so that rail businesses can more effectively align their actions to meet government objectives. In doing so, this will allow rail businesses to be a more effective tool for implementing government policy. For example, rail businesses may be required through their corporate objectives to achieve positive environmental outcomes as well as an adequate economic return. Where a business is required to undertake actions that require a trade off between these outcomes, prioritisation of objectives would be useful to ensure business outcomes are aligned with the outcomes sought by stakeholders.

This is especially important where rail businesses receive significant government subsidies either through direct grants or shareholder tolerance of low rates of return for extended periods. The Productivity Commission (2006) found that *“Rates of return on rail infrastructure have generally been low. If sustained, at some point tolerance by government of low returns amounts to implicit subsidisation. [...] it is difficult not to conclude that subsidisation through this means is already occurring.”* (Productivity Commission, 2006). Given this subsidisation has been occurring, it is therefore important that governments make corporate objectives clear to improve funding transparency.

Clearly, outlining and prioritising the objectives of government owned corporations will also ensure that the objectives that government owned corporations are working towards are clearly understood. This will benefit other industry participants through increasing certainty regarding the actions of government owned corporations.

The issue is of medium significance due to its impact on rail planning and investment. A clearly articulated framework for interpreting the objectives and responsibilities of governments and government owned corporations in planning and investing for rail is considered the first step towards good planning and efficient investment.

4.2 Issue b: coordination of planning

Industry identified the lack of coordinated long term planning for rail as one of the key productivity impediments. A poor planning and investment framework can lead to insufficient or uncoordinated transport and land use planning. This can lead to inefficient investment decisions due to inadequate or incomplete information e.g. poorly located urban intermodal terminals being developed by individual industry participants due to land use and transport planning not being sufficiently integrated.

Coordination of planning and investment is particularly important within the rail industry due to the number of interfaces and characteristics that exist in the sector. These include:

- long term planning;
- passenger and freight interactions;
- land use and transport planning impacts;
- supply chain interfaces; and
- multi-modal impacts (i.e. road, sea).

Significant planning is already undertaken across these areas, with many governments coordinating planning and investment across agencies or levels of government (see Appendix 6 for an overview of planning roles across government). For example, the Victorian government has prepared an integrated freight strategy. Similarly, the AusLink policy initiated a move away from mode-specific planning towards a multi-modal approach.

A number of key infrastructure projects are also planned and funded jointly across government and government corporations. For example, the current Dynon Port Rail Link was funded jointly by the Federal and Victorian Governments and the Port of Melbourne Corporation. This project is being undertaken in conjunction with an upgrade of rail track to the port, which is being funded by the Australian Rail Track Corporation and the Federal Government through AusLink.

While coordinated planning and funding of rail infrastructure occurs, at present there is no long term framework for facilitating planning and investment across all the various interfaces and levels of government. This sometimes results in an ad hoc approach to coordination of planning across governments, which can result in gaps in planning coordination across the network. This is further impeded by a lack of quality data on the performance of freight rail. The impact of poor coordination across the necessary interfaces is discussed in the following:

- **long term planning**

Long term planning for rail capacity extensions is being undertaken in some market segments. For example, the Australian Rail Track Corporation provides detailed long term planning and capacity information for the interstate network. In contrast, planning for the regional grain networks has been undertaken on a short term ad hoc basis due to factors including the drought, short term infrastructure deficiencies and ownership structure. For example the recent \$30 million Eyre Peninsula rail support package in South Australia in 2006 and the New South Wales government \$45 million grain rescue package to Pacific National in 2008 were both undertaken in response to a short term threat of grain service cessation. Ideally, planning for rail networks should adopt a long term view.

- **passenger and freight rail**

Passenger and freight rail share infrastructure in many areas. Increasing demand for urban passenger services will further reduce available capacity for freight traffic. For example, the RailCorp owned track to Port Kembla faces increasing demand from both passenger and freight services. However, at present passenger services take precedence above freight rail in terms of scheduling and capacity allocation, with the number of passenger services usually determined by a state transport department and passenger rail service provider. This makes it difficult for supply chain users, as well as the track owner, to adequately plan for investment in above and below rail assets as the number of train paths available to freight going forward may be unclear. Appropriate information flows between freight and passenger services and coordinated planning across segments is therefore needed to ensure both passenger and freight services are not impeded.

- **land use and transport planning**

Further integration of land use and transport planning is required to minimise the external impacts of future freight movements and ensure availability of land for future capacity extensions. This is particularly important for urban intermodal terminals (see section 5.2).

The Sydney Ports Corporation highlights the complexity of the coordination task for transport planning in their submission:

“An integrated approach to land use planning and land banking is necessary. At present integration is limited and occurs in an ad hoc fashion. Pursuing a more integrated approach will require the involvement not only of transport and planning agencies through corridor preservation and minimising sensitive land uses near the port and associated infrastructure, but also the support of Treasury to ensure that sufficient funding is made available for this work to be undertaken on an ongoing basis.” (Sydney Ports Corporation, 2008)

Progress has already been made through the endorsement by Transport and Planning Ministers of the *Integrated Land Use and Transport Planning Charter* in 2003 and subsequent *Intergovernmental Agreement Establishing Principles Guiding Intergovernmental Relations on Local Government Matters* in April 2006. However, it is unclear what impact these high level agreements have had on the integration of transport and land use planning in practice.

- **supply chain interfaces**

Rail acts as one component of a supply chain. Therefore, a lack of coordination along the supply chain can cause inefficiencies as the capacity of the supply chain is reduced to the capacity of the smallest link. For example, a lack of certainty regarding the final port capacity in the Goonyella coal supply chain led to insufficient investment in above rail capacity at the time (O'Donnell, 2007). It was observed that:

“A coordinated approach to master planning of infrastructure is essential. The situation where investments are being made without concurrent investment in other parts of the supply chain [...] should never be allowed to happen again.” (O'Donnell, 2007).

Coordination along the supply chain is primarily a matter for industry. A number of industry-led coordination models have begun to be developed through the introduction of logistics teams (e.g. Hunter Valley Coal Chain Logistics Team and Port Botany Rail Logistics Team). Industry has also taken a coordinated planning approach with the recent terminal expansion at Enfield in Sydney, which is being developed in line with improved rail infrastructure to the terminal. As such, there is likely to be a limited role for government in improving coordination across industry.

However, in some circumstances, industry experiences difficulties in working together to effectively address supply chain problems. This can be due to problems with ensuring information flows along the chain or as a result of companies seeking to gain a competitive advantage (gaming) within the supply chain. There is also concern from some participants in the transport industry that greater coordination across the supply chain may result in Australian Competition and Consumer Commission intervention (IPART, 2008 and Booz & Co, 2008). Governments may therefore have a role in effectively communicating to industry their requirements for undertaking greater coordination, so that the risk of Australian Competition and Consumer Commission intervention is reduced. Equally, where industry is unable to develop an effective solution in the case of supply chain failure, there may be a role for government to intervene and arbitrate an effective solution.

Where supply chain failure exists, governments should intervene in a nationally consistent manner to ensure that cross-border supply chains are not constrained. However, governments' role should primarily be aimed at facilitating an industry-led solution.

- **multi-modal impacts**

More coordinated planning across transport modes can improve outcomes for the transport sector as a whole and ensure transport users are able to make accurate decisions regarding the most efficient transport mode.

There are currently a number of distortions that exist between road and rail pricing. For example, road infrastructure charging for heavy vehicles does not reflect the actual cost of maintaining and upgrading different parts of the road network (e.g. local vs. arterial roads) or the nature of the road use (e.g. mass of the vehicle). As a result, some truck movements on regional roads are cross-subsidised by trucks operating on urban or arterial roads.

This occurs as heavy vehicle costs are recovered through vehicle charges that are calculated based on total heavy vehicle costs averaged across the vehicle fleet. In contrast, the actual costs imposed by heavy vehicles are likely to be lower on arterial or urban roads compared to regional roads, especially at higher mass levels. Clearly, this impacts on the ability of customers to choose the optimal transport mode and may have contributed, in some areas, to the shift from rail to road transport, particularly for grain.

As such, these distortions are contributing to inefficient transport decisions being made resulting in greater wear on rural roads and shifting infrastructure costs from rail track managers to local road providers (Victorian Department of Infrastructure, 2007).

Undertaking planning and investment decisions across modes can reduce this disjunct by considering the full economic and social costs of each modal choice and allowing investment to occur where the most benefits can be gained.

This is necessary where distortions exist across modes such as in the case of regional grain traffic. This has begun to occur in a number of areas, for example, the Eyre Peninsula grain package provided funding for regional road and rail infrastructure to improve the function of the grain network as a whole. In Western Australia, the future mix of road and rail transport to manage the grain freight task is currently being determined. AusLink planning decisions also take into account road and rail impacts. Governments should therefore continue to build on this multi-modal approach to planning and investment.

There may be benefits from further coordination across a range of areas, which would require a more structured long term approach to coordination than the current ad hoc approach. Developing an adequate framework for coordinating across government bodies is complex due to the multiple levels of government involved in transport and infrastructure planning. A more holistic long term national approach may help to overcome these impediments and improve information flows across the various interfaces discussed above.

This issue is of medium significance as it has a direct impact on investment and therefore productivity. During the consultation for this review, the lack of an integrated long term transport plan was the most prominent productivity impediment identified.

4.3 Issue c: government subsidies

The Productivity Commission (2006) identified three main ways in which rail transport could be effectively subsidised, namely:

- tolerance of low rates of return;
- direct government subsidies (this includes any funding, including grants, provided to rail that is not expected to earn government as a shareholder a return); and

- Community Service Obligations (Payments to achieve social or other non-economic outcomes).

This section discusses the objectives and mechanisms for providing subsidies to rail and the impact on productivity. At present, there is generally a lack of transparency and consistency in the provision of government funds to rail businesses. This can create a number of impediments to productivity.

Extensive subsidies provided to the rail industry are likely to have implications for competitive neutrality and may create ‘gaming’ incentives for rail businesses (Productivity Commission, 2006, p.157). Rail businesses may be encouraged to seek government contributions to fund infrastructure projects rather than risking their own capital, reducing incentives to improve efficiency and reduce costs.

Where funding is provided by government for infrastructure projects, the risk to businesses is reduced. This may lead to inadequate assessment of the costs and benefits of a project increasing the likelihood of inefficient investment (i.e. over or under investment, poor investment choices). However, subsidies can also be beneficial where they are provided to compensate for distortions within the transport market i.e. road pricing.

Governments currently provide significant funding to the rail industry at both a state and federal level. In its report on performance monitoring of Government Trading Enterprises in 2004/05 to 2006/07, the Productivity Commission found that:

“Government grants also form a significant portion of income in the rail sector. Three of the six monitored rail GTEs received over 65 per cent of their total income in 2006-07 from a combination of CSO payments and government grants..” (Productivity Commission, 2008b)

Despite the significant revenues provided to the rail industry, these are generally provided on an ad hoc basis rather than through a consistent or transparent framework. This is especially pervasive in regional rail services where rail track is unable to operate commercially and relies on government assistance. The following significant one-off payments were made to regional rail services across Australia, to ensure continued provision of services over the short to medium term:

- In 2005, a \$30 million rescue package was provided to the Eyre Peninsula grain network (\$17 million government funding), (Victorian Department of Infrastructure, 2008).
- The Victorian Government has provided numerous funding support packages to regional freight lines including \$73 million to upgrade the Mildura freight lines, \$43 million for five regional freight lines and \$20 million freight support package (Victorian Minister of Transport Media Release, May 2008).
- In mid 2008, the New South Wales Government provided \$45 million to ensure grain services could be continued. This consisted of additional funding of \$30 million for the unrestricted network from 2008/09, which is on top of an additional \$15 million that was announced in 2006 for the grain rail network (this additional funding ceases in 2009) (Ministry of Transport, 2008).
- In Western Australia, the Grain Infrastructure Group recommended implementation of a \$400 million grain rescue package for the Western Australian grain freight network using joint federal, state and industry funding. The federal government

has agreed to provide \$135 million to the package, subject to commitment by the state government who are reviewing the proposal (DPI WA, 2008). However, no grain infrastructure funding was allocated as part of the 2009/10 budget, creating uncertainty as to the government's plans for the grain network (ABC Rural, 2009).

- In 2006/07, the Federal Government committed \$78 million over 10 years to the Tasmanian Government to upgrade the rail track. The Tasmanian Government reclaimed ownership of the track from Pacific National. Pacific National have since announced plans to sell the Tasmanian above rail business, however as yet no buyer has been found (Department of Infrastructure, Energy and Resources website, January 2009).

These payments were all made to ensure continuation of service provision over the short term, with additional funding likely to be necessary once the funds provided have been exhausted. Despite this, these funds have not been provided as part of a long term plan for the sector.

Additionally, funding decisions that are not transparent may be inconsistent, as decisions may be made on political rather than objective grounds. For example, without a framework for assessing the size and grounds for community service obligations or payments to address market distortions, it is difficult to ensure that payments are distributed in a consistent manner. This can be seen from the differing payments to the grain sector outlined above.

Therefore, ensuring consistent application of an appropriate funding model will enable transport users to make informed and long term decisions regarding the economic viability of rail networks, such as those in regional areas. This model would also enable governments to address any transport, social or environmental objectives transparently and consistently across the rail network.

Queensland is currently the only state that has explicit contracts¹² for community service obligation payments for its passenger service and network maintenance requirements¹³. These payments are primarily directed at providing passenger services, although there are some flow on benefits to freight traffic through the obligations to maintain the network.

The rationale for government funding of rail is also sometimes unclear. Government special grant funding is often provided without any requirements as to how the money is spent, with sometimes limited monitoring of funding outcomes to ensure transport objectives are being achieved.

Government funding for rail infrastructure should be provided under a clear and transparent framework, with funding only provided where projects cannot be sourced commercially. Alternatively governments may wish to fund rail services to ensure, transport, social or environmental objectives are met, such as reducing distortions resulting

¹² The payments received by Queensland Rail are tied to explicit service measures which are audited against actual performance to determine whether payment is warranted. Therefore the Queensland Government essentially uses the community service obligation contracts as a means to purchase socially desirable services that would not be provided by the market.

¹³ Other states provide implicit community service obligation payments by means of subsidies for public transport. These payments are either covered by franchise agreements (in Victoria) or allocated through state budgets.

from other modes or accounting for externalities. For example, in the case of Australian Rail Track Corporation managed infrastructure:

- Hunter Valley coal network and the east-west interstate track are commercially viable, and therefore do not provide a strong case for direct government funding. However, government could provide assistance to underwrite borrowings where necessary; and
- north-south interstate track currently does not attract a commercially viable market share of freight, with above rail operators struggling to make these routes profitable (Productivity Commission, 2006). Government may therefore have a role in providing subsidies to achieve transport objectives. However, these should be provided under a clear framework. Clarity should also be provided as to whether infrastructure upgrades provided from government subsidies are included in the asset base for regulatory purposes.

Subsidies can have a distorting impact on the operation of rail businesses. For example, provision of subsidies where there is a lack of clear rationale or service being sought by government can result in the price of rail services to customers being above or below the full social and economic costs of providing a service. This can result in over or under-use of rail services on an economic basis compared to alternative options, such as road transport. Similarly, this can result in the private sector making investments that are reliant on a certain level of subsidy continuing. Alternatively, if a subsidy is a one-off payment this can create market uncertainty as to whether the payment will re-appear some time in the future.

This lack of certainty can have a large impact on investment incentives due to the long term nature of rail assets. As rail assets can have a useful life of over 50 years, it is difficult for rail businesses to make investment decisions (that may address social or transport objectives) without some certainty regarding future government funding commitments.

Consideration should also be given to the appropriate recipients of government funding. Where funding is being provided to ensure continued rail services, governments should consider directly subsidising above rail operators. Governments should also assess whether sufficient demand for services exists to keep rail lines operating and that above rail providers will be willing to provide services to meet demand given the expected access charges.

For example, many branch lines on the regional grain networks have limited traffic, with some areas expected to face reduced grain yields and/or increased volatility of grain yields in the future. As such, future demand for some of these lines is likely to be limited. In these cases, there may be limited gains from continued funding of these lines. Maintaining these branch lines to a working standard is therefore likely to divert funding from more productive uses, such as maintaining the main line track, and weaken the network as a whole.

This issue is of high significance as it deals with one of the fundamental components of the rail market structure. Unless government financing of rail infrastructure is provided as part of a consistent transparent framework, government owned corporations will not act like commercial entities and all rail market participants will face incentives to seek government subsidies rather than improve productivity. Similarly, there is a high risk that some investment that is inefficient will continue to receive funding.

4.4 Recommendations

NTC should work with state and federal governments to develop a national framework to overcome coordination failures for rail transport planning, policy development and investment across Australia. This will build on work already done at a national level such as the National Transport Policy Framework agreed to by ATC and the AusLink Corridor strategies as well as transport planning undertaken at a state level.

This would be carried out at a national level where benefits can be gained from taking a national focus. However, this process should aim to build on rather than replace existing planning work undertaken by the states. An improved coordination model for transport policy, planning and investment would encompass the following key features.

(a) Coordinated and prioritised transport objectives across all levels of government

A coordinated framework for prioritising and implementing transport policy objectives should be developed at the national level. This will ensure government transport objectives are clear and reduce government overlaps in undertaking transport policy planning.

Governments should also clearly articulate the objectives and priorities of government owned corporations.

(b) A national ports and freight planning strategy to undertake coordinated planning and investment across governments

Given that some aspects of the transport task require a national focus and there are overlapping policy and planning roles, a long term national rail port and freight strategy for ensuring coordinated planning and investment should be established. This strategy should be developed to apply where a national focus is needed to bring together the planning and policy development carried out at a state level. Planning issues across governments, as well as the various rail interfaces such as passenger conflicts, land use planning and supply chain interactions should also be addressed as part of a comprehensive ports and freight strategy. A comprehensive strategy should also take into account existing road and rail pricing distortions within the transport market and social objectives.

Development of a national rail plan should take a long term focus due to the necessary investment in long term capital assets, and to reduce the risk of legacy impacts in the future¹⁴. This framework should aim to bring together and build on the existing work undertaken at a state and federal level rather than creating a new and overlapping role for governments.

(c) Identify existing strategic intermodal terminals and ensure adequate planning and land banking is undertaken to meet future terminal needs

Rail requires adequate access to strategic terminal infrastructure. A long term national planning strategy should therefore identify where key strategic terminals exist and where a lack of strategic terminals may be an impediment to supply chain productivity in the future. This should be conducted in conjunction with the development of an appropriate

¹⁴ Previous investment decisions in the rail network have created legacy effects, which impact on the future development of rail. This is evidenced by the rolling stock adjustments needed to accommodate 150 year old track infrastructure.

and nationally consistent model for terminal access, to further ensure that terminal availability does not constrain rail competition or productivity (see section 5.6).

(d) Industry should lead coordination of planning along the supply chain with appropriate support from government

Industry should be primarily responsible for coordinating planning along the supply chain. However, government can support this process through provision of information and as an arbitrator, should industry be unable to coordinate effectively where significant supply chain failure exists.

Government should provide certainty to industry regarding the coordination requirement on industry necessary to reduce impacts on competition and the risk of Australian Competition and Consumer Commission intervention. Where industry has chosen to collaborate (e.g. Port Botany, Hunter Valley), and effective coordination models have not been able to be sustained by industry, government may have a role in facilitating coordination.

For example, as a last resort, where significant supply chain failure exists, government should play a role in arbitrating disputes, and where appropriate, impose a solution to improve supply chain coordination. This should only occur where industry participants are unable to reach a workable solution. Governments should therefore work towards communicating the requirements on industry for greater coordination along the supply chain to comply with competition law concerns. In addition, governments should consider establishing a facility for arbitrating coordination failures within key supply chains where there is industry support for such a role.

Government owned port and rail track infrastructure providers should also be encouraged to work closely together when undertaking investment.

(e) NTC to develop a consistent framework for assessing and providing government funding to private and publicly owned rail businesses, and improved monitoring of rail businesses receiving government funding

NTC should develop a rail investment framework to ensure government subsidy payments to rail businesses are made under a consistent and transparent national framework. This framework will aim to set out the requirements and assessment methods for providing government funding, and the reciprocal obligations on rail businesses receiving this funding. Reciprocal obligations could include increased reporting to demonstrate that funding objectives are being achieved. This will help to ensure that the economic objectives underpinning the funding allocations are achieved. The development of an investment framework for government funding of rail infrastructure will need to align with the development of a national ports and freight strategy and other transport planning processes. This should ensure that pricing distortions across modes are adequately taken into consideration and good planning processes underpin funding decisions.

As a minimum, government funding should be subject to the following:

- Government funding should be provided only where there is clear rationale for the payment to be made. For example, to address market failures such as noise or pollution impacts, distortions across modes, or to fulfil specific social or transport objectives. Where funding is provided to address a market failure or distortion, this should occur only where it is more cost effective than addressing the market distortion directly or as a short term bridging measure; and
- Governments should continue to closely monitor outcomes where funding is provided to rail businesses, including government owned and private rail operators. Provision of funding should be subject to rigorous and transparent reporting requirements, to ensure that the mutual obligations of both government and industry are recognised. For example, funding could be tied to the achievement of specific performance indicators for government owned corporations or private rail businesses. Performance against these indicators should also be made publicly available and be in addition to the existing monitoring requirements imposed on government corporations.

Governments also should ensure funding is provided in the most efficient means. This should include an assessment of the appropriate recipient of government funding (i.e. above or below rail operators) and whether the funding should be tied to specific projects.

As a result of these improved funding arrangements, it is expected that some rail track (particularly in regional areas) may receive more government funding, while other track segments are likely to receive less depending on the circumstances of each line segment. This may put pressure on the continuation of rail services offered on some poorly trafficked lines where a limited economic case exists for continued rail service, even once externalities and transport pricing distortions are taken into account. This may result in some branch lines becoming unviable unless there are substantial social factors to consider. On other lines where there is a valid economic case for increased funding due to externalities and cross-modal impacts, service provision may become more sustainable.

This would be intended to apply to both government owned and private rail businesses, help governments determine where value for money can be gain from investment and improve the certainty surrounding government funding for these businesses over the long run. An improved monitoring process will also ensure government and industry are directing funding to the highest value projects, both in terms of the actual commercial returns available and any non-financial benefits that may be available from an investment.

5. ECONOMIC REGULATION AND MARKET STRUCTURE

This section provides an analysis of the key issues associated with the economic regulation that applies to the industry and the current market structure of rail. These issues include:

- Vertical separation of low volume rail lines is not necessarily optimal
- Economic regulation of rail is not entirely consistent across different states and networks
- Access to intermodal terminals is not provided consistently and may impact competition
- Rail track access is not always priced efficiently due to regulatory and informational restrictions and the impact of other modes and externalities

Recommendations to address these concerns have also been outlined in this section.

The regulatory framework includes the following components:

- market structure – extent of vertical and horizontal integration or separation (See Appendix 7 for a full explanation of the possible market structures available for railways); and
- access regulation – the way rail track managers provide access to above rail operators, which includes regulation of access prices and other conditions around access.

Both the optimal market structure and the optimal access regulation depend on a number of factors, particularly the expected level of monopoly power the rail track manager is able to exert and the level of above rail competition likely to be present. The assessment of market structure and access regulation of the current rail market has identified the following four issues that have a negative impact on productivity:

- A. Vertical separation of low volume rail lines is not necessarily optimal.
- B. Economic regulation, including the development of access prices for rail, is inconsistent across different states and networks.
- C. Access to intermodal terminals is not provided consistently and may impact competition.
- D. Pricing across transport modes creates distortions.
- E. Rail track access and pricing arrangements may not always lead to the most efficient outcomes.

5.1 Issue a: vertical separation of low volume rail lines is not necessarily optimal

As a result of rail industry reforms in the 1990s, most rail in Australia operates under vertical separation (see Appendix 7 for a further explanation of vertical separation). The Productivity Commission describes the rationale for vertical separation as follows:

“The economic efficiency of railways is enhanced by introducing competition through vertical separation when:

- *rail networks possess natural monopoly characteristics such as economies of scale and have effective market power (the network can earn monopoly profit);*
- *train operators are able to compete on a commercially sustainable basis; and*
- *track infrastructure and train operations are relatively independent so that the costs of separation are small in relation to the gains from competition and efficient economic regulation.”* (Productivity Commission, 1999)

When these conditions are fulfilled, the benefits of vertical separation are likely to outweigh the costs. This has been the case on the east-west segment of the vertically separated interstate track, where three operators now provide services, and freight costs have reduced (Productivity Commission, 1999). Competition on this segment has encouraged rail operators to develop more efficient business practices, invest in new technology and reduce costs. In addition to the competition benefits present, this line also benefits from relatively good infrastructure condition, low competition with road and a long line haul, which also help to increase returns on this track segment.

However, when the conditions described above are not met, vertical separation can increase the costs of operating rail services through increased transaction costs, higher maintenance costs, information problems and additional operational costs (Productivity Commission, 1999). Rail may therefore be made worse off from applying this market structure. For example, many low volume lines may not be able to earn a monopoly profit due to low demand for services and strong competition from road. An example of this is the intrastate grain networks, in particular the lightly trafficked branch lines, in Western Australia, New South Wales and Victoria which are vertically separated and therefore may not fulfil the conditions set out above.

Rail transport of grain on branch lines is facing strong competition from road (Victorian Department of Infrastructure, 2007). As rail track prices are becoming limited by competition from road transport, rail track owners are unable to recover costs. This problem is heightened by the low demand for grain services on the regional branch lines and the increasing variability of grain yields from year to year. As such, the prospect of above rail competition on some of these lines is limited given that some lines have trouble securing above rail services from one business. This reduces concerns regarding monopoly owners charging monopoly rents on these regional grain lines, given that prices would be effectively capped at the prices of road transport.

Given these factors, there is limited scope for competition in above rail grain haulage as it is generally not commercially viable in many parts of the regional networks (Victorian Department of Infrastructure, 2007). Sd+D (2008) notes that:

- *“In Western Australia, the extreme variation in annual task plus poor commercial returns led to a situation where the above rail operator was diverting train resources to the growing minerals sector at the expense of grain traffic.”*

- *“In the absence of any form of operational support by government (in South Australia), rail services will continue to contract, leaving road transport to take an increased share of the export task.”*
- *“In Victoria, competition in the rail freight industry for grain is not healthy.”*
- *“In New South Wales, Asciano has wound back its commitment to the grain sector after many years of losses.”*
- *“In Queensland, Queensland Rail, a state-owned corporation, is the provider of both track and above rail operations. Although, there is an open access regime in place, there are no above rail competitors in the grain sector.” (Sd+D, 2008)*

The poor performance of grain rail freight has been further impacted by the disconnect between above and below rail providers, as the decisions made on the maintenance of track infrastructure cannot be separated from decisions on above rail operations. For example, a track owner who decides to upgrade a section of track can only assume that there will be an above rail operator who will use this section of track. Sd+D (2008) observed:

“Even if a branch line is the subject of a major maintenance event, there is no guarantee of future use, or of competitive rail pricing.”

It is essential, for some branch lines, to integrate the decisions made on track maintenance and investment with the economic viability of the above rail market for grain transport. This could be achieved through vertical integration and may bring additional benefits due to the reduction in transaction costs between above and below rail services.

Vertically integrated rail lines can also be subject to access regimes that allow third party entry to track where demand exists. This reduces the potential negative effects of reintegration on competition outcomes by retaining the threat of competition.

Overall, given the lack of monopoly power of track managers, the absence of commercially viable above rail competition and the need to integrate rail track and above rail investment decisions, the continued vertical separation of some branch lines in the regional intrastate networks may be an impediment to productivity. As noted by BTRE:

“Separation brings with it greater ongoing transaction and coordination costs than under integration. [...] Thus, if the likely on-track competition will be modest (due to small freight movements), the relatively low resulting benefits may not warrant the costs of vertical separation.” (BTRE, 2003)

Similarly, the Productivity Commission recommended:

“Given the mixed success of vertical separation in encouraging above-rail competition, whether allowing vertical reintegration of particular rail lines or networks would promote their commercial viability and deliver net benefits should be the subject of detailed independent examination on a case-by-case basis, commissioned by relevant governments.” (Productivity Commission, 2006)

While reintegration can potentially reduce costs and improve the efficiency of capital and maintenance spending, many regional lines still may not be commercially viable. Reintegration of rail would need to be undertaken as one of a number of measures to improve the performance of regional rail including improved funding certainty, more contractual certainty between customers and rail providers and closure of unviable rail lines.

Privatisation of some branch lines may also improve usage outcomes for some segments of the rail network and allow some low volume lines to be owned by the grain storage company that uses the line or other user groups. This would allow integrated decisions on future investment in rail track, rolling stock and strong and loading facilities.

Privatised services would need to be financially supported by governments under a clear framework that provides long term certainty of government funding and takes into account social, environmental and road and rail pricing distortions.

It is interesting to note that in the Saskatchewan province of Canada (House of Representatives, Standing Committee on Transport and Regional Services, 2007), many low volume branch lines have been sold to user or community groups, which has helped to provide a signal to government as to where continued demand for rail services exists. These groups generally receive some form of government support, such as provision of rolling stock or capital support. Where governments choose to maintain ownership of rail track, franchising grain branch lines may also improve productivity and create competition for franchise operations.

Previous attempts to vertically integrate and privatise regional rail track and services in Victoria and Tasmania have resulted in poor outcomes, with declining provision of rail services and quality of rail infrastructure and increasing freight prices. In both cases, governments eventually bought back the infrastructure. This highlights the lack of commercial viability of many regional grain lines. In addition, it suggests that any future reintegration and privatisation of these lines would need to be undertaken with clear objectives and to be supported by transparent long term funding arrangements to ensure the possible benefits available from a change in market structure can be realised.

The issue is of low to medium significance for the intrastate grain networks. While it can be argued that vertical reintegration is only one of the mechanisms to ensure a sustainable grain rail network, it is important that potential reintegration is considered as part of the solution to sustainable grain networks.

5.2 Issue b: economic regulation of rail is inconsistent across different states and networks

Access regimes determine:

- the terms and conditions for gaining access to rail track;
- the revenue cap and pricing structure for train paths; and
- the relationship between above and below rail providers.

Currently, inconsistencies between access regimes arise:

- along the interstate network;
- between intrastate networks; and
- between intrastate and interstate networks

In addition, the underlying rationale for the regulation may vary, as most intrastate rail is regulated through compulsory state access regimes, while the Australian Rail Track Corporation submits a voluntary undertaking under Section IIIA of the Trade Practices Act for the interstate track from New South Wales to Kalgoorlie.

Currently, there are three different access regimes on the interstate track that are managed by three regulators¹⁵ (see Appendix 5 for an overview of regulators). The key inconsistencies with respect to access and pricing regulation across the different states include different pricing principles, depreciation methods, asset base valuations and attribution of common costs (BITRE, 2006, Productivity Commission, 2006 and DPI WA, 2008).

Inconsistent economic regulation of rail increases the cost of access for above rail operators as rail providers operating in multiple states have to negotiate a separate agreement for each network¹⁶. For example, Asciano points out that a national rail operator has to deal with six access regulators (Asciano, 2008).

Inconsistencies in the economic regulation between inter- and intrastate lines also exist, which may lead to higher access costs for above rail operators. Even though only a relatively small proportion of total rail freight moves between different networks, most above rail operators provide services in multiple states. In addition, ensuring consistency between access arrangements improves certainty for operators. For example, if operators know that a behaviour or practice is acceptable under an access regime in one state or network, they can be certain that they can adopt this behaviour across all networks. El Zorro, a relatively new entrant comments in its submission:

“The various track managers across the country have similar, but certainly different, access agreement terms and conditions, protocols and rules that need to be addressed. Eliminating this nuisance for above-rail operators would be a boon to productivity” (El Zorro, 2008).

To address this issue, the Competition and Infrastructure Reform Agreement (COAG, 2006a) aimed to adopt a simpler and more consistent national access model (see section 1.3.1), which would apply to agreed nationally significant rail infrastructure, such as the defined interstate rail network. This was modelled on the Australian Rail Track Corporation access undertaking (COAG, 2007a). However, implementation of the Competition and Infrastructure Reform Agreement has stalled, with COAG recently agreeing to adopt a modified approach to the implementation of the reform (COAG Reform Council, 2009). A number of existing access and contractual arrangements have also increased the costs and time needed for implementing a national system of access.

The importance of this issue was tested through consultation for the review. In general, above rail operators indicated that moving to a nationally consistent model for economic regulation is generally not as high a priority as addressing infrastructure issues and improving planning along the supply chain. In addition, the Department for Planning and Infrastructure in Western Australia points out that:

“Indications from industry to date are that no operator is being prevented from gaining access to the interstate track under the current arrangements [...]. Information indications

¹⁵ There are currently three track managers across the interstate track, namely Queensland Rail (track from Brisbane to Queensland/New South Wales border), Australian Rail Track Corporation (track from Queensland/New South Wales border to Kalgoorlie) and WestNet Rail (track from Kalgoorlie to Perth). These are regulated by the Queensland Competition Authority (QCA), the Australian Competition and Consumer Commission (ACCC) and the Economic Regulation Authority of Western Australia (ERA) respectively.

¹⁶ Note that there is an agreement in place for the Australian Rail Track Corporation to provide access to the Western Australian part of the network but most above rail operators negotiate directly with WestNet Rail.

from industry to date are that there is no appetite for a National Rail Access Regime as players can see little value in the proposal.” (DPI WA, 2008)

As such, it is not clear that the benefits of moving to a more consistent approach to economic regulation of rail strongly outweigh the costs. The relative costs and benefits of implementing an economic regulatory framework that is more nationally consistent for all rail track needs to be evaluated. This includes establishing whether a single national rail (economic) or multi-modal transport (economic) regulator would provide net benefits.

This issue is currently of low to medium significance. While inconsistent access regimes can be identified as one of the issues that constrain freight rail productivity, its impacts are relatively unknown, with industry generally more concerned with addressing planning and investment issues in the short term. There are also a number of factors which would increase the costs and time needed to implement such a reform, such as the existing long term contracts in place and the different underlying basis for requiring access regulation.

5.3 Issue c: competition implications of intermodal terminal access

With the exception of the Pilbara¹⁷, all rail track is subject to open access regimes. In contrast, access to intermodal terminals is provided on the basis of a number of co-existing models. Most terminals are privately owned, with some operating as common user or open access terminals while others restrict access to owners. Governments also own or regulate access to a number of intermodal terminals, such as South Dynon in Victoria.

While allowing private ownership and access to terminals promotes incentives to invest in terminal infrastructure and reduces costs for terminal owners, restricting access to strategically significant terminals can reduce productivity by restricting competition in the above rail intermodal market. Sydney Ports commented in their submission:

“A key barrier to rail access to intermodal hubs is the existence of commercial arrangements that make it prohibitive for multiple users to access the terminal. This is placing greater competitive pressures on industry in accessing existing facilities within metropolitan Sydney. The intermodal terminal being developed by Sydney Ports at Enfield will provide multi user rail access to the site. It is important that government frameworks support this approach to encourage the use of rail for the movement of freight within metropolitan areas.” (Sydney Ports Corporation, 2008).

Terminal owners that restrict access for commercial advantage can lead to lower competition in the rail services market, which can have a negative impact on productivity through increased freight prices for customers and less innovation and service improvements. While this suggests there is abuse of market power, the implicit view adopted by the National Competition Council is that ownership of terminals does not lead to significant market power as intermodal terminals can be duplicated¹⁸.

¹⁷ The National Competition Council (NCC) declared the Pilbara as nationally significant infrastructure in June 2008 with subsequent endorsement by the Federal Government, requiring the owners to provide access to third party entrants. BHP and Rio Tinto are currently appealing the decision. The Western Australian government has also been developing an access regime for iron ore haulage services to third parties in the Pilbara, which is intended to expedite the access disputes currently being sought under Part IIIA of the Trade Practices Act and provide a safety net for access seekers to the railway.

¹⁸ To date intermodal terminals have not been declared as nationally significant infrastructure on the basis that terminals can be easily duplicated. As a result, few intermodal terminals are regulated. Under current arrangements, operators can lodge a complaint with the National Competition Council to have access

In 2006 Meyrick and Arup estimated future demand and capacity of intermodal terminals and concluded that there will be a significant shortfall in terminal capacity in Melbourne, Sydney and Brisbane by 2020. They further concluded that duplication of urban terminal infrastructure may not be desirable as it can create inefficiencies. Additionally, there are increasing difficulties associated with development of intermodal terminals, including environmental restrictions, availability of appropriately zoned land and community concerns regarding freight transport infrastructure. While governments have generally realised the need for proactive planning for intermodal terminals, the need for open access regulation is less well recognised.

As a result, there is a case for terminals that are located in strategically important areas, particularly urban areas, to be open access terminals (Meyrick and Arup, 2006). This is due to the difficulty involved in acquiring land to duplicate significant terminal infrastructure and the possible inefficiencies that may result from terminal duplication. Similarly, Booz and Co (2008) recommend that large common-user intermodal terminals be developed in urban freight systems to create economies of scale and scope, and facilitate greater line haul competition. Some governments have already recognised the problem of access to urban intermodal terminals. For example, the Victorian Freight Futures strategy includes:

“Direction 18: Establish governance arrangements for the Metropolitan Freight Terminals Network” (Victorian Department of Transport, 2008).

As part of this directive, the current organisational and regulatory frameworks that underpin the development and planning for key terminal infrastructure will be reviewed. This will ensure that the appropriate structures are in place so that key terminal infrastructure can be planned, developed and used most effectively for the whole freight network.

This issue is of high significance considering the strong projected increases in the intermodal rail market segment and the importance of improving rail performance as part of the supply chain. Given the significant existing investment in terminals from the private sector, governments need to work with industry in planning and regulating terminal infrastructure. This will be necessary to ensure that only terminals that are strategically important are identified for open access so that incentives for industry to invest remain and the cost of developing new terminals is not simply passed to governments.

5.4 Issue d: pricing across transport modes

Rail track access prices are influenced by competition of road transport, with road prices providing an effective ceiling for rail prices where competition between modes is strong. However, road freight prices do not currently reflect social marginal costs in a way that accurately reflects road use (vehicle mass/distance/location) and do not include

declared. In 1997, Specialised Container Transport (SCT) sought declaration of rail and freight support services in Western Australia (WA). Subsequently, the NCC recommended declaration of the rail line service but not the various freight support services to the WA Premier. The WA Government decided not to declare any of the services recommended by the National Competition Council. This decision was appealed and subsequently withdrawn (Marshall and Mulheron, 2003). This illustrates the high transaction costs associated with the declaration process and high risks regarding the final outcome.

externalities¹⁹. This is likely to lead to a distortion between the relative price of road and rail.

In 2006, the Productivity Commission assessed whether competitive neutrality between road and rail freight pricing was an issue and found:

“In sum, the Commission has not found a compelling case that heavy vehicles competing with rail freight on major north–south corridors are relatively subsidised. [...] The flipside of this, though, is that the cost of heavy trucks using many rural local roads and lightly-used arterials is likely to be well above the network average charge. But many regional rail networks which compete with road for some bulk tasks (the haulage of grain, for example) are themselves subsidised, making it difficult to assess the relative distortion.” (Productivity Commission, 2006, pg XXXVI)

This highlights the problems caused by the current heavy vehicle charging system, under which vehicles pay the same charges regardless of the mass carried, distance travelled or location of the vehicle. This means that travelling fully laden or on a local or rural road does not incur a different cost than travelling less than fully laden or on a highly trafficked major highway. As noted by the Productivity Commission, this can lead to distortions between road and rail pricing on some regional roads. However, given the extensive subsidies given to regional rail, the actual distortion is unclear.

In 2007, COAG agreed to a road reform plan to investigate whether it is feasible to increase the efficiency of road pricing through developing more reflective road prices based on the mass carried, distance travelled or location of a vehicle. The agenda also aims to better understand and address externalities within the road transport sector.

Externalities such as noise and greenhouse gas emissions exist for both road and rail transport. With respect to emissions externalities, the introduction of the proposed Carbon Pollution Reduction Scheme would largely lead to an internalisation of both road and rail greenhouse gas externalities if the scheme is applied consistently across road and rail transport.

For heavy vehicles, fuel taxes will be cut on a cent for cent basis to offset the costs for the first year of the scheme. The fuel tax cut will then be reviewed (Department of Climate Change, 2008). It is important that these transitional arrangements cease after one year, since a continuation of the offset would adversely advantage road compared to rail transport.

This issue is of high importance as it has a large impact on the competitive neutrality between modes and the efficiency of road infrastructure spending.

5.5 Issue e: efficient use of rail access arrangements

With respect to access arrangements two key issues arise:

- whether current regulatory arrangements promote efficient pricing; and
- whether the access regulation is applied to achieve efficient outcomes.

¹⁹ The COAG road reform agenda is aimed at developing mass-distance-location based charging for heavy vehicles in order to improve efficiency of road freight prices (see section 1.3.1).

Efficient pricing of rail track access, theoretically involves prices reflecting marginal social costs, with full cost recovery achieved in the least distortive way (Productivity Commission, 2006). In practice, rail track access prices are determined by negotiation and are set to ensure total track revenue is between a regulated floor and ceiling. Price negotiation is generally guided by access undertakings, which can include indicative prices for standard rail services. Due to the difficulties involved in setting these prices, it is possible that freight rail productivity could be impeded by the structure of access prices and a lack of pricing flexibility possible within the existing regulatory structure.

Access regimes currently vary by state and applicable rail network, and in terms of the flexibility available to track managers and access seekers in setting access prices. For example, the Western Australian regulator sets a revenue cap and floor, with track managers and rail operators able to negotiate prices within those bounds. Reference prices, in addition to revenue caps or limits, are also generally developed and approved as part of the access undertaking for the national interstate track as well as under most state based access regimes (including South Australia, Victoria and Queensland). These prices set an effective price cap for standard services and are aimed at guiding price negotiations between rail track managers and train operators. As such, these may limit the flexibility for commercial negotiations to influence prices, particularly for reference services.

In the interstate (intermodal) market, prices have two components: a flag fall (per train km) and a variable charge (per gross tonne kilometre). During the consultation for this review, some rail operators identified the flag fall as a barrier to entry as it makes short haul operations unviable. Other rail operators argue that the flag fall should be increased to encourage more efficient operations and that the flag fall is geared towards an indicative train type to increase the efficiency of operations.

BITRE (2003) concluded that the two part tariff is an effective structure to achieve high cost recovery but the relative size of the variable and fixed component has a significant impact on efficiency, competition and provision of train services. NTC has not undertaken analysis of the impact of the fixed and variable components of a two part tariff pricing structure. Therefore, it is not clear whether the current rail pricing structure results in optimal outcomes being achieved in terms of efficiency, competition outcomes and provision of services. However, from the evidence available it is clear that track managers generally face incentives to set prices efficiently, either through their obligations to comply with access regulation or through commercial negotiations with rail operators.

The use of price discrimination in developing access charges is currently practised in a number of areas such as differential pricing for coal and intermodal traffic by Queensland Rail and the Australian Rail Track Corporation (Pacific National, 2006). A lack of pricing flexibility can lead to inefficiencies as the value of train paths can be time dependent, particularly in the intermodal rail market. For example, feedback received during consultation suggested that a train path that allows a train to leave the east coast on Friday night and arrive in Western Australia on Monday morning has a relatively high value due to customers' preferences.

Currently, the pricing of rail access does not seem to reflect the differential value of train paths. The Australian Rail Track Corporation access undertaking requires pricing of 'like for like' services. Prices can be varied according to factors such as time or capacity. However, for these to be accepted by the regulator, the Australian Rail Track Corporation would have to prove that the demand profile for these services is different. This is hard to achieve in practice, particularly as the Australian Rail Track Corporation's track is

vertically separated and has little access to end rail customer demand information. As such, price discrimination is generally not practised.

Rail transport is an ‘excludable’ service, with scarcity of capacity implying that only one train can travel along the most preferred path. In a capacity constrained environment, efficiency can be impacted in two ways:

- existing train operators are not faced with the scarcity value of train paths and therefore may allocate resources inefficiently; and
- new market entrants are disadvantaged as the price of less desirable train paths is not lower than the price of desirable train paths.

It is difficult to establish to what extent capacity is constrained in the intermodal rail market. As the Australian Rail Track Corporation (Productivity Commission, 2006) is generating revenue that is below the regulatory ceiling, it is clear that there is not an overall capacity problem.

Correctly estimating demand elasticities is also very difficult and increases the risk of track managers charging excessive prices where there is a lack of competition (ACCC, 2006). Nonetheless, the Productivity Commission recommended that:

“Greater flexibility in the allocation of train paths would have potentially significant efficiency benefits. However, auctioning may not be cost effective. Development of cost-effective mechanisms designed to reveal valuations placed on train paths by users is to be encouraged.” (Productivity Commission, 2006)

Overall, there are a number of difficulties associated with differentiating prices. Firstly, in order to differentiate prices on the intermodal network according to time, capacity constraints would need to be ascertained. Secondly, it is difficult to establish that using a train path at particular times constitutes a different service compared to using it at other times. Thirdly, developing a charging model based on the demand elasticities of the service would be difficult given information problems and the information demands for such pricing required by the Australian Competition and Consumer Commission. There also remains a risk of encouraging inefficient above rail operations.

It may therefore be worth investigating whether more active intervention from regulators could improve the efficiency of rail access prices. This would involve regulators and track managers working together to develop prices which more accurately reflect the marginal cost of a train path and more efficiently allocate common costs.

Rail track access prices are also likely to be inefficient due to passenger priority distortions where track infrastructure is shared with passenger services. This distortion occurs as rail track access prices for passenger and freight services operating on shared rail track are often determined separately (sometimes by different bodies). Passenger trains are generally given priority over freight services on all shared infrastructure²⁰. This severely

²⁰ Passenger trains are generally given priority over freight traffic on all shared rail across Australia. However as the Department for Planning and Infrastructure in Western Australia noted *“What has complicated the priority order of train management is that increasingly interstate freight companies are operating trains that are longer than what can be safely accommodated in existing passing loops which means that it is now the passenger trains that have to wait in passing loops to allow oncoming longer freight trains to pass, rather than the other way around. This is an infrastructure capacity issue, not a policy issue.”* (DPI WA, 2009)

reduces the train paths available for freight services and effectively requires rail freight to bear the cost of the capacity constraint.

Currently, all open access rail track in Australia is subject to pricing regulation administered by the relevant regulator. The purpose of this regulation is to ensure that track managers, as providers of natural monopoly infrastructure, do not charge monopoly rents. In addition, they set the terms and conditions for track access and guide the relationship between above and below rail operators.

Not all track operators in Australia would be able to charge monopoly rents for all parts of the network due to strong competition from road transport. For example, there is strong competition between road and rail on the north-south interstate corridor. As such, regulating prices and access arrangements where the track owner faces strong competition from road may increase costs for rail businesses and regulators, while having a limited impact on price efficiency. This is due to strong competition from road being likely to drive pricing efficiency without regulatory intervention.

Applying pricing and access regulation on the basis of competitive influences may be difficult to achieve in practice. Road and rail competition can vary strongly across a network or over time, particularly in regional areas, making it difficult for regulators to determine where track owners have market power in setting prices. This is especially true for the grain lines where demand for rail services and the competition with road transport can vary substantially depending on track segments or grain yields year to year. Equally, regulation may assist governments in gaining information about a track manager's costs and revenues so that there is transparency around how government contributions to the rail network are being used and to ensure track managers are not making excessive profits through subsidies.

In certain circumstances, reducing the regulatory scrutiny of track access prices and allowing track managers to develop prices through negotiation may allow more efficient prices to be developed and reduce the regulatory costs of rail transport. Regulators would need to have a strong understanding of the competition between modes and how this may vary over time to ensure that track managers cannot exercise market power in pricing negotiations. In addition, governments would need to find a way of understanding whether government subsidies are achieving their objectives other than through price regulation.

This issue is of medium importance. A lack of price differentiation is likely to be a constraint on efficiency. However, the extent to which differentiated prices would increase efficiency is unknown as administrative charges and transaction costs may outweigh efficiency gains. Similarly, it is unclear whether the relative size of the variable and fixed component of track access prices is impeding efficiency. Governments should also investigate taking a more light-handed approach to regulating rail access prices in certain circumstances.

5.6 Recommendations

- (a) Relevant state governments should consider investigating whether there are more optimal market structures available for low volume intrastate grain lines (including vertical reintegration and privatisation) and develop a plan to implement the structure**

In developing a long term, coordinated, national plan for the role of rail within transport, any consideration for the future of intrastate grain networks should include an assessment

of the optimal market structure. Where state governments own, manage or provide funding for low volume regional rail lines, they should investigate the benefits of vertical reintegration and in some cases privatisation. In some cases this would require the renegotiation of existing management contracts in place for these lines.

Vertical reintegration of lines may help to improve the performance of marginal branch lines. In doing so governments would need to take into account that many regional branch lines are close to being commercially unviable and the variability of grain harvests creates uncertainty as to the demand for rail services on a year to year basis. Governments wishing to investigate vertical integration and privatisation of branch lines should only consider implementing such a model in line with a transparent long term funding arrangement, which would focus on correcting for road and rail pricing distortions as well as achieving government transport or social objectives. This is necessary to ensure a private operator has sufficient certainty to make investment decisions regarding a potentially commercially unviable asset that faces fluctuating demand.

Reintegration and privatisation could be considered as one of a range of interventions that may improve the productivity of part or all of the regional rail network rather than a whole solution to overcoming poorly performing grain lines.

(b) In the medium term, the NTC should determine the costs and benefits of a national rail access and pricing framework, including the potential benefits of a national economic rail regulator and broader transport economic regulator

In the medium term, the NTC should determine the relative costs and benefits of implementing a nationally consistent rail access regime. This should include consideration of the appropriate institutional framework including whether a national rail economic regulator or a broader (multi-modal) transport regulator would provide the optimal outcome for the economic regulation of rail.

Any future evaluation of the existing rail access frameworks across Australia should consider the Competition and Infrastructure Reform Agreement and whether application of a more comprehensive and integrated national access model would be beneficial. This should be conducted in line with the review of the Competition and Infrastructure Reform Agreement, which is expected to occur in 2011. It may also be appropriate to consider this in line with the reform of heavy vehicle access prices.

This is not seen as an immediate priority for improving productivity in the freight rail sector.

(c) The NTC should develop a nationally consistent regulatory model to ensure strategically significant terminals can be regulated as open access on a case by case basis

Governments should identify key strategic terminals as part of an integrated planning process (see section 4.4) and ensure there is a consistent framework for regulating access to terminals where they have been identified as strategic. As a result, the application of access regulation should be considered on a case by case basis for all terminals that are identified as strategic national terminals. However, this would need to be progressed with strong input and support from industry so that incentives for private investment in terminal infrastructure are not removed.

It is also important to consider whether common user marshalling areas should also be subject to a regulatory framework for access as they can be a similar entry barrier to intermodal terminals.

(d) All governments should work with the NTC in reducing the distortions between road and rail pricing and improving the efficiency of pricing frameworks across both modes

Road and rail pricing are highly interdependent. It is imperative that the current road reform agenda be progressed by all governments to help remove existing distortions between modes. This will allow continued productivity gains across the transport sector. Moving towards mass-distance-location-based road charging will remove the road pricing distortion currently faced by the rail market. However, while the NTC is currently working towards implementation of a mass-distance-location charging regime, this is likely to take a number of years to implement.

As a second best solution to addressing this concern, a short term measure of providing subsidies to the rail sector may be necessary to offset the impact of road price distortions, particularly for regional areas²¹. Payments from governments may be necessary to remove distortions between modes until mass-distance-location pricing is available. This is already occurring in an ad hoc manner. As discussed in section 4.4, these should be paid under a clear and transparent framework, with payments calculated on a sound economic basis. Payments of subsidies to correct for road pricing distortions should also be seen as a transitional measure rather than an alternative to implementing mass-distance-location pricing.

The Federal Government should ensure that the Carbon Pollution Reduction Scheme be applied to road and rail transport in a consistent manner to ensure distortions across the transport sector are addressed. The NTC recommends that greenhouse emissions from both rail transport and heavy vehicles are treated consistently under a scheme once the announced transitional measures applying to heavy vehicles have expired. A continuation of the transitional arrangements beyond the initial period will result in continuing distortions across modes.

Governments and regulators, where necessary, should also consider whether the current economic regulation of rail promotes the most efficient pricing outcomes (including the need for pricing regulation where strong competition across modes exists). Regulators should also be encouraged to be proactive in facilitating the development of access prices to better reflect factors such as time of day, demand for particular train paths and temporary capacity constraints. This will help improve the efficiency of rail prices prior to the NTC investigating a national model for rail access and inform the development of a national access model in the medium term.

²¹ The Productivity Commission found truck movements on regional local roads were relatively subsidised as a result of road pricing imperfections. However, rail in regional areas also receives significant CSO funding making it difficult to determine whether there are competitive neutrality concerns in these areas.

6. SAFETY, ENVIRONMENTAL AND TECHNICAL STANDARDS AND REGULATIONS

This section provides an analysis of the key issues associated with harmonisation of safety, environmental and technical standards and regulations. These issues include:

- Safety and environmental regulations vary across state borders and can impose excessive costs on the rail industry
- Inconsistent technical and infrastructure standards reduce the interoperability of rail assets and are costly to address

Recommendations to address these concerns have also been outlined in this section.

6.1 Issue a: inconsistent safety and environmental regulations

Differences in rail safety and environmental regulations can increase the transaction costs and reduce the returns available from providing rail services. In a speech to The Bureau of Transport and Regional Economics in 2005, the then managing director of Patrick Corporation stated:

“There are seven different track owners with whom the three above rail operators would need to negotiate access if they wished to operate nationally. There are 9 Acts covering rail safety and 3 different rail safety investigators, NSW, Victoria and ATSB covering the rest of the country. There are 15 Acts with powers over Occupational Health and Safety nationwide affecting rail operations and there are 76 Acts with powers over environmental management with which a national freight operator must comply.” (Productivity Commission 2006, p. 320)

The direct cost of rail safety regulation is estimated to total \$42 million per annum (Synergies, 2008), not including the \$11 million spent annually by industry on accreditation fees. The NTC recently released a regulatory impact statement into the benefits of a single national rail safety regulator. This found that there are improved safety outcomes from moving to a single national regulatory system for rail safety (NTC, 2009). The federal government has also commenced a national review of occupational health and safety legislation with the aim of developing consistent model legislation across all states and territories. This has the potential to further improve consistency in the regulation of rail safety. However, there is potential for jurisdictions to implement varied legislation. It is therefore important that this is monitored to ensure consistency.

In May 2009, ATC voted to endorse the implementation of a single national rail safety regulator and investigator. This is a significant step towards improving the consistency of rail safety regulations across Australia.

This issue is of high significance. Varying operational regulations across state borders can have large impacts on the costs of providing rail services and reduce the ability to move rail assets to the most productive location.

Cooperative Research Centres (CRC) for Rail Innovation highlighted a number of inconsistencies in the environmental regulations of externalities such as noise and air quality (CRC for Rail Innovation, 2008). The impact of these variances is unclear. These regulations pertain to a wide range of industries and activities and are not specific to rail. They are generally managed by state and federal environmental ministers and regulatory

agencies. Governments have taken a range of responses to rail externalities, for example, in Victoria urban passenger rail is exempt from the Environment Protection Act 1970. There are also instances where rail specific regulatory instruments have been developed. Western Australia is currently developing noise and land use planning policies for rail. This indicates that governments' preferred approach to managing rail externalities is to use environmental and planning regulatory instruments.

This issue is of medium significance. Improvements to productivity from increased harmonisation of environmental regulations may also be possible, however, limited information regarding the proposed benefits is available.

6.2 Issue b: harmonisation of technical standards

Technical standards in the railway industry apply to a number of parameters including new technologies, track gauge, train height and width clearances, rolling stock, track capacity and communication systems and propulsion power sources (BITRE, 2006). These systems are not harmonised due to different infrastructure and assets having been adopted across the network and different standards that have been developed and applied by rail businesses over time. Given the strong role that new technologies can play in improving productivity, ensuring consistency of standards can promote the take up of new assets and reduce the costs and increase the benefits from new technology purchases, leading to large productivity gains.

Harmonisation of technical standards may deliver benefits such as lower input costs, improvements in operational efficiency, higher inherent safety and lower training costs. It can also widen rail's freight market through improved interoperability of assets across the network (BITRE, 2006). For example, rail operators in Australia are currently unable to purchase off-the-shelf rolling stock from international suppliers due to Australia's below rail infrastructure requiring smaller and lighter locomotives²². These standards also vary across Australia's rail networks, requiring operators to purchase freight task specific assets. As a result, harmonisation of technical standards could improve interoperability of rail assets across Australia's networks. This could also reduce the costs of purchasing assets for above and below rail operators and improve availability of rolling stock.

BITRE (2006) supports this view of harmonisation, concluding that there is merit in applying improved standards to new asset purchases, as this represents the most cost-effective way of achieving improved standards across the network. As most rail assets have a long useful life, the benefits from this strategy may not be realised for a long time. However, there may be an economic case for harmonising some technical standards, particularly those that produce large productivity gains across the network.

Double stacking on the interstate track provides a key example of these issues. Double stacking of containers is not available from Parkes to Sydney, reducing the capacity of the interstate track as a whole. The Australian Rail Track Corporation has developed standards requiring any bridge upgrades along this route to be upgraded to a higher standard to allow for double stacking in the future. The Australian Rail Track Corporation has also already improved the capacity of the interstate network using this approach,

²² In the US, the standard locomotive measures 4.7 m high and 3.25 m wide, with an axle load of 32 tonnes. China's standard mainline diesel locomotive is 4.7 m high and 3.31 m wide, with a 25 tonne axle load. Australian locomotives, by contrast, can be no wider than 3.2 m, and operate to a maximum axle load of 23 tonnes on interstate network (Queensland Rail, 2008c).

resulting in improvements to network capacity since 1998 through increased train weights and track speeds (BITRE, 2006).

More broadly, the Rail Industry Safety and Standards Board have developed a Code of Practice for infrastructure, with national standards and an ‘industry rulebook’ also being developed (RISSB Website, 2009). These are aimed at achieving similar gains through improved harmonisation for above rail operators and the broader network as a whole. The Rail Industry Safety and Standards Board is wholly owned by the Australasian Railway Association, funded jointly by industry and government and tasked with developing standards for the rail industry. These standards are currently available only to Australasian Railway Association members, which includes all of the major rail businesses and around 60% of businesses in or servicing the rail industry. The continuation of government funding for the Rail Industry Safety and Standards Board is currently being reviewed.

These examples demonstrate the strong role industry can take in developing standards, relating to new rail assets and technologies to ensure improved interoperability over time. Improved interoperability can increase the value of new assets to a business and potentially result in costs savings for new technology purchases over time, as economies of scale in production can be gained. As these standards are currently not available commercially to rail providers that are not members of the Australasian Railway Association, this could limit their application across the industry.

However, these benefits may be diminished if standards that are overly prescriptive, rather than focusing on interoperability, are developed across the industry. As the Australian Rail Track Corporation noted in its submission *“The key to harmonisation [...] is in establishing the principles for interoperability (between technologies), not producing a prescriptive standard that may well limit choice”* (ARTC, 2009). Overly prescriptive standards can also limit the ability of businesses to investigate new technologies, potentially limiting innovation in the industry.

This issue is of medium importance. Harmonisation of technical standards can reduce costs and improve asset utilisation and interoperability. A coordinated national planning framework can help to identify opportunities to ensure greater harmonisation of technical standards across the industry in line with the development of industry standards to improve asset interoperability.

6.3 Recommendations

(a) All state and territory governments should continue to work towards implementation of a Single National Rail Safety Regulator and Investigator

In May 2009, ATC endorsed the regulatory impact statement for the development of a single national rail safety regulator and investigator, which was prepared by the NTC. COAG subsequently agreed to develop a national rail safety regulatory system at its July 2009 meeting, with the scope and form of the regulator to be considered following advice to be provided COAG from the Standing Committee on Transport at the end of 2009 (COAG, 2009). Therefore, NTC recommends that governments continue to build on the existing work towards implementing a national rail safety and investigation framework. This should be done with reference to the current development of national occupational health and safety legislation to ensure any implications from the development of this legislation are taken into account.

(b) The rail industry should work with environmental ministers to reform environmental regulation where industry views it as a barrier to improved productivity

The Cooperative Research Centre for Rail Innovation completed an inventory of environmental regulations relating to the rail industry. This suggested that some inconsistencies existed across states. These regulations are administered by the relevant federal and state environmental ministers and regulators and are not specific to rail. Given these institutional arrangements, NTC has a limited role in progressing reform of the environmental regulations pertaining to rail.

The NTC recommends that rail industry representatives should engage with environmental ministers and regulators to work towards an improved regulatory model for limiting the environmental impacts of rail transport. The NTC will support the rail industry in this process where possible.

(c) Industry bodies such as the Rail Industry Safety and Standards Board should continue to develop technical and asset standards that focus on improving the interoperability of rail assets to improve harmonisation. Governments should also aim to identify opportunities for economically viable harmonisation through their planning processes

Varying asset and technical standards across Australia's rail network impose large costs on rail operations and restrict the technical innovations that can be easily implemented by rail businesses. Addressing variances relating to axle loading ability, gauge widths, communications and train height and width clearances would be costly to achieve and require coordination across the industry. Greater coordination of rail technologies and assets can greatly increase productivity across the industry as has been seen from the standardisation of the interstate network.

Industry bodies such as the Rail Industry Safety and Standards Board should continue to develop standards for assets, infrastructure and rail technologies to improve harmonisation and interoperability within the industry. The development of these standards should focus on improving the interoperability of rail assets and technologies to ensure improved use of assets across the network while enabling rail business optimal choice for new investments. Consideration should also be given to the commercial availability of these standards to ensure maximum take up across the industry. This should be done on a commercial basis.

The Rail Industry Safety and Standards Board is government funded, with these funding arrangements currently under review. The federal government should give strong consideration to the continued funding arrangements for the Rail Industry Safety and Standards Board to ensure continued development of rail infrastructure and technical standards.

Government should also be proactive in determining where opportunities for cost effective harmonisation exist through planning for rail's future (as discussed in section 4.2). Adequate forward planning for rail infrastructure will identify where harmonisation can produce net gains and ensure that future investments are made with the goal of creating a more harmonised and productive rail network. This should be done in coordination with existing work being progressed by industry.

(d) Rail businesses and governments involved in purchases regarding rail technologies and assets should adhere to industry standards developed through organisations such as the Australasian Railway Association and Rail Industry Safety and Standards Board

The Rail Industry Safety and Standards Board is an industry body tasked with developing voluntary national standards for infrastructure, rolling stock, communications and safety, with funding support from the federal government. This highlights the strong role for industry in improving the interoperability of technical standards, given the need for new standards to have industry support. Development of these standards should focus on improving interoperability in the rail industry to reduce costs and reduce the risk of future ‘break of gauge’ issues. The Rail Industry Safety and Standards Board should also give consideration to the availability of standards across the industry to encourage take-up. This should be investigated on a commercial basis.

The NTC encourages all rail businesses to adopt these standards to improve productivity and interoperability within the industry. Governments, where they are involved in purchasing rail assets and technologies, should also adhere to standards developed.

7. HUMAN CAPITAL

This section provides an analysis of problems in recruiting, training and utilising labour effectively within the rail industry and provides recommendations to address these concerns.

7.1 Issue a: recruitment, training and utilisation of labour

The rail industry tends to be a traditional and technically focussed industry. This is evidenced in many businesses' approaches to employment and training. The Rail Productivity Review Information Paper found that:

“There is a significant cultural problem within the industry regarding education and training. Much of the learning in the industry is ‘on the job’ and is thus passed on from one generation to the next. With constant changes in the industry, it is slipping behind other sectors in the economy with respect to innovative thinking and problem solving. More effort is needed to better educate and train a workforce beyond the traditional internal learning processes.” (Hearsch, 2008)

A number of industry initiatives are currently being developed to try and improve work practices in the rail industry. These include the current review and repackaging of the existing Transport and Distribution Training Package for the rail industry, which to date has been under-utilised (Transport & Logistics Industry Skills Council, 2008). This package aims to increase recognition of skills across the industry to reduce the reliance on in-house training and on-the-job experience which is currently common in the rail industry. This reliance on in-house training and experience can make it difficult for employees to move within the rail industry and increases the training and recruitments costs for businesses.

A number of other programs to attract new staff and improve the industry image are also being conducted by the Australasian Railway Association and Cooperative Research Centre for Rail Innovation, suggesting that improvements in this area are being made.

This issue is of low significance, given the limited role for government intervention. Consultation on this issue with industry participants supported this view. Difficulty attracting and retaining skilled labour and ageing workforces are issues that are faced by many businesses across Australia, with a number of businesses expressing that this can be addressed by industry. For example, El Zorro stated in their submission that *“...good businesses have no problems attracting and maintaining staff”* (El Zorro, 2008).

7.2 Recommendations

- (a) Industry should work with the Standing Committee on Transport Sub-Committee responsible for addressing workforce planning and skills issues to achieve better recruitment, training and labour utilisation practices in the rail industry**

The human capital productivity impediments should primarily be addressed by industry, with support from the Standing Committee on Transport Sub-Committee responsible for addressing workforce planning and skills issues. The rail industry should also continue to use and develop recruitment and training programs developed by the Australasian Railway Association, Cooperative Research Centres for Rail Innovation and the Transport and Logistics Industry Skills Council.

8. PRODUCTIVITY MEASUREMENT

This section provides an analysis of the issues relating to inadequate collection and dissemination of rail performance data. Recommendations to address these concerns have also been outlined in this section.

8.1 Issue a: lack of available freight rail productivity data

There is currently no agreed measure of freight rail productivity for different rail market segments in Australia. As a result, it is difficult to measure the impact of current regulatory arrangements, market changes, technical innovations and investment choices. In addition, measures of rail freight volumes, locations and tasks are not always widely available and there is no certainty as to whether this data will continue to be produced and disseminated.

Measurement of productivity in the rail industry provides an important feedback loop to evaluate government intervention at different points in time. Maintaining quality data on the performance of rail is also necessary for adequate investment planning. Moreover, it is also important to take a supply chain approach in collecting data, so that adequate planning across the supply chain can be undertaken. The Department of Planning and Infrastructure in Western Australia highlighted the importance of collecting sufficient information regarding the performance of rail to developing future rail policy and plans:

“For freight transport in both rural and urban areas, information is far less sufficient to establish a decent transport model for future road and rail demand forecasting. It is agreed that more emphasis should be put on the collection of freight information.” (DPI WA, 2008)

While there are a number of performance indicators reported by the Australian Rail Track Corporation and other rail businesses, these cannot be used to adequately evaluate the results of government policy and intervention. The Strategic Research and Technology Working Group, which is no longer operational, highlighted this concern, identifying a number of gaps in rail data collection and availability to meet future strategic transport data needs (Strategic Research and Technology Working Group, 2009).

The Australasian Railway Association and Cooperative Research Centre for Rail Innovation currently undertake some research with individual rail companies and across the industry. The Australasian Railway Association has also worked with Department of Infrastructure, Transport, Regional Development and Local Government in providing data to assist with the AusLink planning process (BITRE, 2008a). Since 2005/06 the Bureau of Infrastructure, Transport and Regional Economics has also published data on rail industry performance in conjunction with the Australasian Railway Association, namely the Rail Freight Performance Indicators. It is unclear whether this will continue to be produced regularly. The data available is also produced at a very high level and relates mainly to the interstate intermodal network.

Wills-Johnson has developed a data set of productivity indicators for the rail industry over the period 1900 to 1991. Due to the privatisation of rail that occurred in the 1990s and beyond, rail data is generally not publicly available. In the United States, data is to some degree mandated by the government (Wills-Johnson, 2007b).

This issue is of medium to high significance. It is important for governments to make well informed decisions on transport policy and planning and have the necessary tools to evaluate the success of these decisions. This will be particularly useful for government in developing long term integrated transport policy as discussed in section 4.3.

8.2 Recommendations

(a) National freight rail productivity indicators should be developed by the Bureau of Infrastructure, Transport and Regional Economics or an appropriate national body to ensure that adequate information is available for policy and planning

Information on the performance and costs of rail operations across Australia will be needed to complement effective long term transport planning. The substantial community service obligations and grants made by governments to the rail industry make it imperative that rail performance data is made available so that public evaluation of spending decisions can be undertaken.

Freight rail productivity measures should therefore be developed by Bureau of Infrastructure, Transport and Regional Economics or another national body who is able to undertake this task. The Bureau of Infrastructure, Transport and Regional Economics would be well placed to undertake this role as it already publishes a number of rail performance indicators in conjunction with the Australasian Railway Association and has the ability to look at transport data collection and reporting across modes. In developing these indicators, the relevant body should also work closely with the Standing Committee on Transport Sub-Committee responsible for addressing transport data collection and research issues.

Governments should investigate mandating the provision of data from rail businesses where necessary to ensure adequate measures are produced and available for the rail industry and government. Confidentiality concerns would need to be addressed so that private rail business are not disadvantaged, while allowing sufficient data to be made available to undertake meaningful analysis. Limits may also need to be placed on the public dissemination of rail data as the limited number of above and below rail operators may make aggregating confidential data difficult in practice. However, given the importance of properly evaluating the impact of investment, planning and regulatory initiatives on rail performance, sufficient data needs to be made available to the relevant government and industry representatives.

9. CONCLUSION

Productivity improvements within the rail sector can provide strong benefits for the transport sector as a whole. Increased productivity in the rail sector would allow better use of rail within Australia's transport system and allow for improvements to the rail network and rail operations over time. The proposed recommendations from this review have been developed to assist in driving productivity within the rail sector by creating a more coordinated, transparent and long term role for government planning and investing in Australia's rail network. This will provide greater certainty for industry and ensure that investment and improvements in rail services continue to be delivered.

These recommendations will also allow existing market distortions across road and rail to be addressed, giving users a better understanding of the actual costs of their transport choices. This will provide significant benefits not only for rail users, but for the transport industry as a whole.

In developing these recommendations, the review has assessed the current rail environment including government intervention. The likely impact of the current national transport reform agenda set by COAG and ATC has also been taken into account.

This analysis has highlighted that further work is necessary and that there is a meaningful role for government in addressing productivity impediments in the rail sector. Most importantly, as a high priority, governments should:

- develop more coordinated and transparent frameworks to facilitate planning and investment;
- work with industry to ensure that policy objectives for funding being provided are being met;
- improve efficiency across the transport sector through the progression of the COAG Road Reform Plan;
- continue to work towards implementation of a single national rail safety regulator and investigator; and
- develop comprehensive productivity indicators for the rail sector.

Industry can also play a strong role in improving productivity through developing and adhering to technical, operational and environmental industry standards and guidelines. Industry could also contribute by working together to improve coordination along the supply chain.

Finally, a review of passenger productivity may be useful, but would need to be conducted in the context of a broader review of the movement of people across all modes around Australia (including public transport), taking into account existing government state people movement policies and contractual arrangements. This broader review could also focus on passenger and freight rail interactions where these have not been thoroughly investigated in this report.

APPENDIX 1: SUBMISSIONS TO THE FREIGHT RAIL PRODUCTIVITY REVIEW

Submissions to the Freight Rail Productivity Review Draft Position Paper

1. Australasian Railway Association (ARA)
2. Australian Rail Track Corporation (ARTC)
3. Rail, Tram and Bus Industry Union (RTBU)
4. Queensland Rail (QR) Limited
5. Department for Planning and Infrastructure – Western Australia
6. Australian Trucking Association (ATA)

Submissions to the Rail Productivity Issues Paper

1. 10,000 Friends of Greater Sydney (FROGS)
2. People for Ecologically Sustainable Transport (PEST)
3. Sydney Ports Corporation
4. Transport and Logistics Industry Skills Council Ltd
5. TTG Transportation Technology Pty Ltd
6. Association of Tourist and Heritage Rail Australia
7. Cooperative Research Centre for Rail Innovation
8. Hardface Technologies Pty Ltd
9. Ministry of Transport – New South Wales
10. Australian Medical Association (South Australia) Inc. – Road Safety Committee
11. Phillip Laird – University of Wollongong
12. Australian Rail Track Corporation (ARTC)
13. Australasian Railway Association (ARA)
14. Queensland Rail (QR) Limited
15. Asciano
16. Blue Mountains Commuter and Transport Users Association
17. Rail, Tram and Bus Industry Union (RTBU)
18. El Zorro Transport Pty Ltd
19. Department for Planning and Infrastructure – Western Australia

20. New South Wales Farmers' Association

21. Independent Transport Safety and Reliability Regulator (ITSRR)

APPENDIX 2: OVERVIEW OF THE COMPETITION AND INFRASTRUCTURE REFORM AGREEMENT (CIRA)

The Competition and Infrastructure Reform Agreement was agreed by COAG in February 2006, prior to the Productivity Commission Inquiry into Road and Rail Infrastructure Pricing (COAG, 2006b).

The agreement aims to provide a simpler and nationally consistent approach to the economic regulation of nationally significant infrastructure. A target date of December 2008 was set for implementing a simpler and nationally consistent system of rail regulation for agreed interstate rail track and major intrastate corridors.

The key sections of the CIRA relevant to the operation of rail are set out below (COAG, 2006a):

Simpler and consistent regulation of significant infrastructure

- 2.1 The Parties agree to establish a simpler and consistent national approach to economic regulation of significant infrastructure.
- 2.2 The Parties agree that, in the first instance, terms and conditions for third party access to services provided by means of significant infrastructure facilities should be on the basis of terms and conditions commercially agreed between the access seeker and the operator of the infrastructure.
- 2.3 The introduction of price monitoring for services provided by means of significant infrastructure facilities should be considered, where this would improve the level of price transparency, as a first step where price regulation may be required, or when scaling back from more intrusive regulation.
- 2.4 All third party access regimes for services provided by means of significant infrastructure facilities will include the following consistent regulatory principles.
 - a. Objects clauses that promote the economically efficient use of, operation and investment in, significant infrastructure thereby promoting effective competition in upstream or downstream markets.
 - b. Regulated access prices should be set so as to:
 - i. generate expected revenue for a regulated service or services that is at least sufficient to meet the efficient costs of providing access to the regulated service or services and include a return on investment commensurate with the regulatory and commercial risks involved;
 - ii. allow multi-part pricing and price discrimination when it aids efficiency;
 - iii. not allow a vertically integrated access provider to set terms and conditions that discriminate in favour of its downstream operations, except to the extent that the cost of providing access to other operators is higher; and
 - iv. provide incentives to reduce costs or otherwise improve productivity.
 - c. Where merits review of regulatory decisions is provided, the review will be limited to the information submitted to the regulator.
- 2.5 The Parties agree to amend clause 6 of the Competition Principles Agreement to include subclause 2.4 above.

- 2.6 The Parties agree to introduce requirements that regulators will be bound to make regulatory decisions under an access regime within six months, provided that the regulator has been given sufficient information.
- a. Regulators will have the discretion to determine when the six month time limit is suspended:
 - i. Grounds for commencing time limits include when the regulator considers that sufficient information has been provided to enable the regulatory process to commence; and
 - ii. Grounds for suspending time limits include requests for further information from significant infrastructure facility service providers, provided these are on reasonable grounds, and consultation periods during which the regulator seeks submissions from third parties or the community.
 - b. Where the service provider of a significant infrastructure facility has not provided the requested information, a regulator will be permitted to make a determination on the information before it in order to satisfy six month time limits.
- 2.7 The principles in clause 2.4 and 2.6 will be incorporated in existing access regimes for services provided by means of significant infrastructure facilities and Part IIIA of the *Trade Practices Act 1974* as soon as practicable or as they are reviewed, provided that they are included in such regimes no later than the end of 2010.
- 2.8 Commonwealth and State officials will oversight the implementation of the principles in clauses 2.4 and 2.6, including developing a streamlined process and appropriate administrative arrangements for the certification of access regimes, and may develop further proposals for consideration by COAG for the adoption of appropriate additional regulatory principles that may contribute to a simpler and consistent national approach to regulation.
- 2.9 The Parties agree that, to advance the objective of a simpler and consistent national approach to regulation, all state and territory access regimes for services provided by means of significant infrastructure facilities will be submitted for certification in accordance with the *Trade Practices Act 1974* and the Competition Principles Agreement.
- a. All new third party access regimes will be submitted for certification as soon as practicable.
 - b. Third party access regimes existing at the time this agreement commences will be submitted for certification as soon as practicable, or as they are reviewed, provided they are submitted for certification no later than the end of 2010.
 - c. The certification of access regimes under this clause is subject to Parties agreeing a streamlined certification process and appropriate administrative arrangements to be developed as part of the mechanism established under clause 2.8.

Rail freight infrastructure

- 3.1. The Parties agree to implement a simpler and consistent national system of rail access regulation, using the Australian Rail Track Corporation access undertaking to the Australian Competition and Consumer Commission as a model, to apply to the following agreed nationally significant railways:
- a. Interstate rail track from Perth to Brisbane, currently managed by the Australian Rail Track Corporation and other parties, subject to the outcome of commercial negotiations; and

- b. Major intra-state freight corridors on an agreed case by case basis depending on the costs and benefits of inclusion under a national regime.
- 3.2. The Parties agree to develop an agreed approach to the application of the Australian Rail Track Corporation access undertaking model including pricing and access mechanisms that will be appropriate if vertically integrated operators retain control of relevant sections of track.
- 3.3. The Parties agree that state based rail access regimes governing other significant export related rail infrastructure facilities will be submitted for certification as required by clause 2.9.
- 3.4. This agreement does not require any change to passenger priority policies.

Promotion of competitive infrastructure arrangements through competitive tendering

- 5.1. In some circumstances competitive infrastructure market structures are not feasible because the infrastructure exhibits natural monopoly characteristics. Where governments are considering the development of such monopoly infrastructure, they can initiate competition for the market through competitive tendering that promotes efficient service delivery. This allows the market to establish the terms and conditions for the supply of infrastructure services, reducing the need for subsequent regulation.
- 5.2. The Parties agree to consider the use of competitive tendering to establish the terms and conditions for the supply of significant new services provided by government owned monopoly infrastructure.
- 5.3. The Commonwealth has introduced amendments to Part IIIA of the *Trade Practices Act 1974* to provide that declaration will not apply to government owned infrastructure developed by way of a competitive tender approved by the Australian Competition and Consumer Commission.
- 5.4. For the purposes of clause 5.3, the Parties agree to work together to develop a consistent set of criteria for access related elements of tenders for the provision of nationally significant infrastructure facility services.

Competitive neutrality of government business enterprises

- 6.1 The Parties agree to enhance the application of competitive neutrality principles to government business enterprises engaged in significant business activities in competition with the private sector:

Objectives

- a. That the enterprise has clear commercial objectives.
- b. That any non commercial objectives or obligations established for the enterprise are clearly specified and publicly reported.
- c. That enterprises do not exercise regulatory or planning approval functions in circumstances in which they compete with private sector enterprises.

Governance

- d. That the responsibilities of the governing board of the enterprise and the performance measures against which the board will be held accountable are published.
- e. That the governing board is appointed on the basis of particular skills needed by the board.

- f. That having received strategic guidance from the government about the achievement of its objectives, the enterprise has operational autonomy in the day to day management of its affairs.
- g. That the dividend policy applicable to the enterprise should be clearly and publicly specified.
- h. That any payments to the government as shareholder or for the purposes of competitive neutrality, such as taxes, tax equivalent payments, special dividends, capital repayments, are identified in a transparent manner.

Reporting

- i. That at least annually the enterprise will report publicly on its commercial performance and on its performance of any non commercial activities.
- j. That any directions given to the enterprise by the government are published.
- k. That where the legislation establishing an enterprise derogates from competitive neutrality the derogation has been published.

APPENDIX 3: KEY FINDINGS FROM THE PRODUCTIVITY COMMISSION REPORT INTO ROAD AND RAIL INFRASTRUCTURE PRICING

In 2006, the Productivity Commission (PC) completed an inquiry into road and rail freight infrastructure pricing. The relevant findings from the PC report are as follows:

- **Competitive neutrality.** *‘The available evidence, while not conclusive, does not support the contention that road freight is subsidised relative to rail on either the inter-capital corridors or in regional areas.’* (Finding 8.2, PC 2006, pg LIII)
- **Price discrimination.** *‘While access regimes do not explicitly preclude rail infrastructure providers from allocating proportionately more common costs to less price-sensitive users, it is not clear that the benefits of such pricing are adequately reflected in the approach of regulators. Concern that price discrimination could distort downstream markets in some instances should not be a reason for precluding or discouraging it where it has the potential to lead to more efficient outcomes (and, importantly, enable additional revenue to be obtained to allow the ongoing provision of a service).’* (Finding 6.3, PC 2006, pg 144)
- **Community service obligations.** *‘Community service obligation payments to rail are substantial, but their incidence and subsidisation effects are unclear. There would be benefits in making the objectives and extent of CSO payments more transparent and requiring them to be explicitly funded on-budget. Greater transparency of CSO payments would provide greater assurance that they do not raise competitive neutrality issues, while consistent use of on-budget funding would help ensure ongoing scrutiny of their appropriateness.’* (Finding 6.7, PC 2006, pg 156)
- **Economic cost recovery.** *‘Rail infrastructure operators generally are unable to fully cover economic costs and often are reliant on government subsidies of various forms to maintain viability. These subsidies are potentially significant in affecting competition between road and rail freight.’* (Finding 6.8, PC 2006, pg 222)
- **Rail safety.** *‘There are efficiency gains to be obtained from a single institutional framework for safety regulation of rail. The adoption of nationally consistent rail safety regulation legislation by July 2007 is, therefore, a priority. Gains from harmonisation would be compromised if jurisdictions legislate based on differing interpretations of the nationally agreed draft bill.’* (Finding 11.6, PC 2006, pg 322)
- **Access regulation.** *‘There are significant potential economic benefits from achieving a nationally consistent approach to access regulation of the rail sector. The reform measures agreed by COAG in February 2006 represent a way forward to achieving such consistency. Progress of the current agreed COAG reforms should be monitored to determine whether there are likely to be additional net benefits from moving to a single national regulator or regulatory regime.’* (Finding 11.7, PC 2006, pg 326)

Recommendations from this inquiry were put to COAG in 2007 with the purpose of assisting COAG to implement more efficient pricing of road and rail freight infrastructure through consistent and competitively neutral pricing regimes. The key findings and recommendations with respect to improved productivity within the rail sector and COAG’s responses are reproduced below:

- **Government corporations:** *‘Relevant governments should take steps to more strictly apply the corporatisation model to government-owned railways in order to improve industry performance. Priorities include greater clarity of objectives, improved transparency of the external governance role of ministers, and a general strengthening of accountability.’* (Recommendation 12.2, PC 2006, pg 343)

COAG agreed in principle, noting that actions to address this issue were included in the Competition and Infrastructure Reform Agreement (CIRA) signed by COAG in 2006.

- **Community service obligations:** *‘Greater transparency in funding decisions for Community Service Obligations – including enunciation of objectives, and demonstration of how contributions will achieve stated objectives at least cost – should be introduced by all governments as soon as possible. Among other things, this is needed to facilitate fully commercial provision of rail freight operations.’* (Recommendation 12.2, PC 2006, pg 343)

COAG agreed that governments should ensure transparency of Community Service Obligation funding and that this should be done under the existing National Competition Policy commitments.

- **Rail safety:** *‘National consistency and coordination in rail regulatory frameworks including of safety, operational and technical standards – should be expedited by all governments, monitored by the National Transport Commission on behalf of the Australian Transport Council.’* (Recommendation 12.3, PC 2006, pg 344)

COAG noted that harmonisation of rail safety regulations is being carried out by the NTC and asked the Australian Transport Council to report on implementation.

- **Access regulation and pricing:** *‘Progress in implementing the February 2006 COAG agreement to adopt a nationally-consistent approach to regulation of all nationally significant infrastructure should be monitored by the NTC in relation to rail to determine whether there are likely to be additional benefits in moving to a single national regulatory regime and regulator.’*

The objects clause, declaration thresholds and pricing principles now embodied in Part IIIA of the Trade Practices Act (which, among other things, allow for multi-part pricing and price discrimination when they aid efficiency) should be incorporated into all State and Territory rail access regimes.’ (Recommendation 12.4, PC 2006, pg 345)

COAG expressed that these issues would be addressed under the implementation of the CIRA, with consistency of regulatory principles expected to be achieved by 2010.

- **Access regulation and pricing:** *‘There appears to be scope to moderate or even revoke, access regulation where pricing by vertically-separated below-rail operators is significantly constrained by competition from road or sea freight transport operators. Building on COAG’s agreement to promote nationally-consistent access regulation of major infrastructure, a process should be established by COAG for reviewing the need for access regulation of vertically-separated rail networks.’* (Recommendation 12.5, PC 2006, pg 345)

According to COAG, this issue will be addressed through implementation of the CIRA agreement, as this allows for case by case application of access regulation.

- **Market structure:** *‘Given the mixed success of vertical separation in encouraging above-rail competition, whether allowing vertical reintegration of particular rail lines or networks would promote their commercial viability and deliver net benefits should be the subject of detailed independent examination on a case-by-case basis, commissioned by relevant governments.’* (Recommendation 12.6, PC 2006, pg 346)

COAG commented that the appropriateness and viability of vertical integration of particular rail lines or networks is a matter for each jurisdiction to determine on a case by case basis.

As such, the majority of rail reforms proposed by the Productivity Commission were intended to be addressed through the adoption of the Competition and Infrastructure Reform Agreement. The Council of Australian Government Rail Reform Agenda, which incorporates the Competition and Infrastructure Reform Agreement. Aspects of this reform have stalled (See section 1.3.1), in particular with respect to development of a national rail access model regulation. No progress has been made also on the Productivity Recommendation regarding vertical reintegration.

APPENDIX 4: NATIONAL TRANSPORT POLICY FRAMEWORK

National Transport Policy Framework vision, policy objectives and policy principles

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.

Transport Policy Principles

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; and
- **Customer:** Customer – focussed. Equitable access for all users.

APPENDIX 5: OVERVIEW OF RAIL REGULATORS

Table 2. Overview of rail economic and safety regulators

| State | Economic Regulator | Safety Regulator | Safety Investigator |
|---------------------------|---|--|--|
| Victoria | <i>Essential Services Commission (ESC)</i> | Public Transport Safety Victoria | Office of the Chief Investigator |
| | ESC regulates the access arrangements for the urban (Connex), regional (V/Line) and South Dynon port terminal networks | | |
| New South Wales | <i>Independent Pricing and Regulatory Tribunal (IPART)</i> | Independent Transport Safety and Reliability Regulator | Office of the Transport Safety Investigator |
| | IPART regulates the access arrangements for the RailCorp managed network | | |
| Queensland | <i>Queensland Competition Authority (QCA)</i> | Queensland Transport | Queensland Transport |
| | QCA regulates the access arrangements for the Queensland Rail network | | |
| Western Australia | <i>Economic Regulation Authority (ERA)</i> | Office of Rail Safety WA (DPI) | Office of Rail Safety WA (DPI) |
| | ERA regulates the access regime for rail track operated by WestNet rail in the state's south-west and the interstate track from Perth to Kalgoorlie | | |
| South Australia | <i>Essential Services Commission of South Australia (ESCOSA)</i> | Department of Transport, Energy and Infrastructure | Department of Transport, Energy and Infrastructure |
| | ESCOSA regulate the SA access regime which covers the TransAdelaide urban network, Genesee and Wyoming regional lines and the Great Southern Railway passenger terminal | | |
| Tasmania | <i>Economic regulation is being developed</i> | Department of Infrastructure, Energy and Resources | Department of Infrastructure, Energy and Resources |
| Northern Territory | <i>No economic regulator</i> | Department of Planning and Infrastructure | Department of Planning and Infrastructure |
| Federal | <i>Australian Competition and Consumer Commission (ACCC)</i> | No national safety regulator | Australian Transport Safety Bureau |
| | <i>National Competition Council (NCC)</i> Australian Competition and Consumer Commission regulates access for the Australian Rail Track Corporation managed interstate track network and the Hunter Valley coal network in New South Wales NCC certify state access regimes and are responsible for declaring infrastructure as 'essential' | | |

Source: Various jurisdiction and regulator websites, July 2008

APPENDIX 6: OBJECTIVES AND PLANNING FUNCTIONS OF VARIOUS GOVERNMENT AND GOVERNMENT OWNED CORPORATIONS

Table 3. Government and government owned corporation objectives

| Government body | Objectives |
|---|--|
| Federal Department of Infrastructure, Transport, Regional Development and Local Government | <p>AusLink will promote sustainable national and regional economic growth, development and connectivity by contributing to the development of an integrated National Network which:</p> <ul style="list-style-type: none"> ▪ improves national and interregional connectivity for people, communities, regions and industry ▪ improves national, interregional and international logistics ▪ enhances national, interregional and international trade ▪ enhances health, safety and security ▪ is consistent with the obligation to current and future generations to sustain the environment ▪ is consistent with viable, long term economic and social outcomes ▪ is linked effectively to the broader transport network. (DOTARS, 2004) |
| Australian Transport Council (ATC) | <p>Australian governments have the following transport policy objectives:</p> <ul style="list-style-type: none"> ▪ 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 without killing or maiming its users ▪ Social: To promote social inclusion by connecting remote and disadvantaged communities and increasing accessibility to the transport network to allow equitable access to community resources ▪ Environmental: Protect our environment and improve health by building and investing in the efficient movement of goods and people which minimises emission 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 (ATC, 2008) |
| Infrastructure Australia (IA) | <p>Infrastructure Australia's goals are to:</p> <ul style="list-style-type: none"> ▪ increase the economic standard of living for Australians; ▪ achieve environmental sustainability and reduced greenhouse gas emissions; and ▪ improve social outcomes, quality of life and reduced social disadvantage in our cities and regions. (IA, 2008) |

| | |
|--|--|
| <p>State government transport departments (no transport policy objectives were identified for New South Wales, Tasmania, South Australia, Northern Territory or Australian Capital Territory)</p> | <p>Victoria: <i>Freight Futures</i> adopts the following objectives:</p> <ul style="list-style-type: none"> ▪ Facilitate the efficient movement of freight in Victoria ▪ Reduce the cost and improve the reliability of supply chains ▪ Manage and mitigate any adverse impacts of freight planning and operations on communities and the environment ▪ Optimise the use of existing network infrastructure ▪ Provide appropriate priority for freight on the network in the context of competing demands ▪ Plan and deliver new network infrastructure in a timely manner ▪ Identify and protect freight network options where necessary to ensure future capacity, flexibility and certainty ▪ Provide a policy environment that encourages private sector investment (Victorian Government, 2008) <p>Western Australia, Freight Network Review, 2002 put forward the following objectives:</p> <ul style="list-style-type: none"> ▪ reduce greenhouse gases, air emissions, and in particular toxic chemical emissions; ▪ assist in the transition to alternatives to oil as a fuel for transport; ▪ reduce the impact of noise and vibration on communities; ▪ lessen or overcome severance of communities; ▪ contribute to the maintenance and improvement of natural ecosystems, including biodiversity; ▪ enable communities to satisfy their goods and service needs; ▪ improve the economic, social and environmental returns from freight to government agencies, private sector operators and the community; ▪ efficiently allocate land to service the freight industry; ▪ fulfil the best international standards for health, safety and well being for those employed in the freight sector; and ▪ seek to create robust and flexible systems (Working Paper No. 1, April 2002). <p>Queensland Transport, Integrated Transport Planning Framework (Queensland Transport, 2003)</p> <ul style="list-style-type: none"> ▪ Economic growth, efficiency and effectiveness ▪ Health, safety and security ▪ Accessibility and mobility ▪ Environmental Responsibility <p>Queensland Transport's Rail Network Strategy's objectives aim to Queensland Transport (2001):</p> <ul style="list-style-type: none"> ▪ Enhance the role of the rail network in implementing the Government's objectives and priorities. ▪ Develop a reference framework for the investments made by the state in its rail network. ▪ Encourage innovative private sector investment in the railway network in Queensland. ▪ Obtain the maximum benefit from National Competition Policy (NCP) for the State's rail network. ▪ Gain acceptance of, and encourage joint Commonwealth-state partnerships in developing Queensland's nationally significant rail corridors. ▪ Develop strategic, rail-based linkages between individual regional transport plans. ▪ Control and manage rail corridor land effectively. |
|--|--|

| | |
|---|---|
| | <ul style="list-style-type: none"> ▪ Promote the concurrent use of rail corridors for both rail and non-rail purposes. |
| <p>Government owned corporations (This list is not exhaustive, but provides an overview of the types of objectives to which government owned corporations are subject)</p> | <p>Australian Rail Track Corporation (ARTC) Company Profile (from ARTC Charter), 2008</p> <ul style="list-style-type: none"> ▪ Improve performance and efficiency of interstate rail infrastructure ▪ Increase capacity utilisation ▪ Listen, understand and respond to the market ▪ Operate on sound commercial principles ▪ Provide our shareholders with a sustainable return on capital invested <p>Queensland Rail, Our Mission (Queensland Rail website, accessed December 2008)</p> <p>QR’s goals are the key strategic outcomes that we will achieve over the next five years.</p> <ul style="list-style-type: none"> ▪ Our shareholders value QR as a sound commercial investment. ▪ QR is recognised as a national leader in transport solutions with global reach. ▪ QR’s people are recognised for service excellence. ▪ Customers are able to achieve their sustainability outcomes (social, safety and environment) through the use of QR’s services and products. |

Table 4. Transport planning and funding roles across governments

| Government body | Involvement in transport planning | Transport funding responsibilities |
|---|--|---|
| Federal Department of Infrastructure, Transport, Regional Development and Local Government | <ul style="list-style-type: none"> • Undertaking planning for Australia’s strategic transport links (road and rail) | <ul style="list-style-type: none"> • Provides funding (road and rail) for: <ul style="list-style-type: none"> • National network (for rail through Australian Rail Track Corporation) • Nationally strategic transport links • Local and regional transport infrastructure together with state and local governments |
| Australian Transport Council (ATC) | <ul style="list-style-type: none"> • ATC is responsible for driving and implementing national transport policy reforms | <ul style="list-style-type: none"> • None |
| Infrastructure Australia (IA) | <ul style="list-style-type: none"> • IA provides advice government on infrastructure priorities and other infrastructure policy | <ul style="list-style-type: none"> • None (Provides recommendations to government on funding priorities) |
| State government transport departments | <ul style="list-style-type: none"> • State transport planning (rail – passenger and freight, road and ports) • State land use planning | <ul style="list-style-type: none"> • Funding for state transport projects directly and through government owned corporations • Funding for local government transport infrastructure |
| Government owned corporations | <ul style="list-style-type: none"> • Planning undertaken for individual corporations (i.e. rail network, port infrastructure) | <ul style="list-style-type: none"> • Receive government funding • Some projects may be funded through government owned corporations revenue |

APPENDIX 7: MARKET STRUCTURE ARRANGEMENTS WITHIN THE RAIL INDUSTRY

The following definitions relate to a number of terms used throughout this document that relate to market structure arrangements within the rail industry:

Above rail/rail operator

This refers to a rail business (or part of a rail business) that operates locomotives or rolling stock either on behalf of freight customers or as in-house transport services.

The National Competition Council defines above rail service as:

“A service provided using above rail assets and equipment usually for the purpose of hauling or moving freight and/or passengers by rail.” (NCC, 2008)

Below rail/track manager

The below rail operator is responsible for maintaining and upgrading the rail track and track side infrastructure, providing signalling and scheduling services and providing track access to above rail operators.

The National Competition Council defines below rail service as:

“A service which constitutes the use of the below rail infrastructure necessary for running trains, but does not include the use of trains and other above rail assets.” (NCC, 2008)

Vertical separation

Under vertical separation, the above and below rail tasks are carried out by separate entities. The track manager operates as a natural monopoly and sells access to train paths to one or multiple above rail operators. Access to the rail track is generally controlled by regulation.

The Independent Transport Safety and Reliability Regulator define vertical separation as:

“The control of network and train operations by different organisations.” (ITSRR, 2007)

Ring fencing

The Economic Regulation Authority defines ring fencing as:

“Ring fencing means separating an infrastructure owner/operator’s functions and business of providing access to the infrastructure from its other functions and businesses.” (ERA, 2007)

Vertical integration

In vertically integrated railways, the above and below rail providers operate as a single entity, with the one entity providing track management services and above rail operations.

Vertically integrated railways can operate as a monopoly or with an access regime to ensure above rail competitors can access the rail track at a price.

Horizontal separation

The Productivity Commission defines horizontal separation as:

“The separation of an organisation by product (freight and passenger services) or by geography (regional railways).” (Productivity Commission, 1999)

Some rail infrastructure or operations are separated from other rail services serving distinct rail markets. For example, in Western Australia, the Public Transport Authority is responsible for providing passenger services, while freight services are horizontally separated and provided by Australian Railroad Group (ARG), a subsidiary of Queensland Rail.

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