

**IMPROVING THE REGULATORY
FRAMEWORK FOR TRANSPORT
PRODUCTIVITY IN AUSTRALIA**

POSITION PAPER

February 2006



National Transport Commission

**Prepared by
National Transport Commission**

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Improving the Regulatory Framework for Transport Productivity in Australia

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Abstract: This paper identifies a proposed way forward for the National Transport Commission in order to address the impediments to productivity which will result from a rapidly increasing freight task.

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FOREWORD

The projected increase in the land transport task to 2020 is a significant challenge for Australia. Without action to manage the impact of freight, our economic growth, safety and environmental performance will be seriously jeopardised.

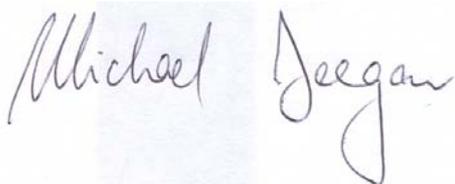
The National Transport Commission (NTC) has a key role in ensuring that the regulatory and operational environment for road, rail and intermodal transport meets this challenge, now and into the future. The NTC, therefore, commissioned a major study into methods of managing the land transport task. *Twice the Task* (available at www.ntc.gov.au), titled to reflect the oft quoted forecast of land freight task doubling by 2020 from 2000 levels, provides the industry with guidance across the range of policy arenas of how to manage the increased freight task. Some of this guidance is best championed by the NTC whilst other priorities fall under the mandate of other groups.

In response to *Twice the Task*, the NTC has considered how best to pursue regulatory and operational land freight development to complement other freight strategies. Are the tools and methods we have relied upon until today the most effective for the future? What does the development of the freight transport industry mean in terms of methods of regulation and our relationship with our stakeholders?

Improving the Regulatory Framework for Transport Productivity in Australia is the NTC's response to *Twice the Task*. It provides a way forward which the Commission believes will produce the optimal regulatory and operational outcomes in the long term. It is planned that this position paper will shape the development of the NTC's Strategic Plan.

The NTC is excited about the future that this position paper poses. The nature of this revised approach to regulation and in turn productivity, in particular changes to pricing and the land transport agenda will have impacts that extend beyond the remit of the NTC and transport agencies. The positions, therefore, need to be considered by Australian Transport Council (ATC) in the context of the present Council of Australian Governments (COAG) reform agenda. As such, comment on the positions put forward in this paper is welcome.

The Commission acknowledges the contributions made by Steve Manders and Paul Sciberras of Sinclair Knight Merz, Steve Meyrick, Neil Aplin and Anya Richards of Meyrick and Associates and Derek Scrafton of the Transport System Centre at University of South Australia in the *Twice the Task* process. I also acknowledge the work of the following NTC officers: Phillip Giltinan, David Rolland, Fiona Calvert, Barry Moore and Paul Sullivan. Finally, I am grateful to all the representatives of transport agencies, shippers, freight service providers, and peak industry bodies that have participated in discussions and put forward their views.



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EXECUTIVE SUMMARY

Will Australia's freight task double by 2020? And if it does, will the NTC be able to say that it prepared as best it could? To help answer these questions the NTC carried out a large study called Twice the Task. This paper presents the findings of that study. It suggests ways the NTC might bring the findings into their forward work.

It identifies where regulatory changes may need to be made.

The NTC recognises that Australia's freight transport system is deficient. The Productivity Commission states this well:

... Australia still has a long way to go to achieve a transport system that encourages an efficient distribution of the overall freight task between road, rail, water and air; allows for the efficient and seamless movement of freight along the entire logistics chain; and meets the needs of commuters in a cost-effective and sustainable fashion.
(Productivity Commission, 2005, p. xxv)

The NTC recognises the important role it plays in the national journey towards a better freight transport system. It is the purpose of this paper to propose a way forward for the NTC that will best assist in meeting future freight transport productivity needs without compromising other aims of the NTC to improve safety, environmental and social outcomes.

CONTEXT

In establishing the NRTC/NTC, the Council of Australian Governments (COAG) recognised that consistency of regulation of freight transport is a national issue. Freight does not recognise State boundaries. Wagon manufacturers and truck designers don't build for one State—their product needs to transcend borders. So do regulations and standards.

The NTC, therefore, has an obligation to provide national leadership through regulatory reform in delivering freight transport outcomes.

Consider if we had asked in 1990 what the freight task might look like in 2005. Who might have visualised a privatised national rail system? The rapid rise of third party logistics? Contract labour on the waterfront? Urban toll roads? The substantial decline in Australian owned shipping? At the same time, who might have predicted that Australia's port traffic would treble?

Who might have foreseen national heavy vehicle charges? Harmonisation of national heavy vehicle standards? Higher Mass Limits? The establishment of outcomes-based approaches to truck and bus regulation?

In the space of fifteen years two major trends have occurred. The freight transport industry has reformed, reshaped and grown in sophistication. The regulation reform agenda has provided improved levels of national compliance and consistency, particularly for standard vehicles within a general access framework. However, increasingly, it is vehicles outside this framework that dominate the road freight task and must interface efficiently with the rail network. In tandem these have maintained public confidence in the freight transportation system and managed the potential negative impacts of freight transport.

The regulatory reform agenda is now at a midpoint between the birth of the NRTC and 2020; the ability to foresee fifteen years is even more difficult. The exponential rate of change in the industry makes it difficult. However, it is recognised that the initial regulatory tools developed by the NRTC/NTC are now mature. It is timely that new regulatory tools are examined, developed, and some old ones discarded.

Regulation reform is but one element in managing an increased freight task. Complementarity of regulation with other key strategies such as planning, funding and collaboration will lead to a more sustainable freight transport system.

IS THERE A CRISIS?

Although there are pockets of infrastructure currently under significant stress within the national network, research and investigations over the past eighteen months have led to diminished assertions of a current transport infrastructure 'crisis'.

Past freight growth was not handled by regulation standing still. Instead, significant productivity improvements were provided for within the system. Regulatory changes enabled productivity growth, for instance, by increasing mass limits for road, and double stacking for rail.

A 'business as usual' approach was not enough over the past fifteen years and is unlikely to be enough in the next fifteen years. Without measures to improve the productivity of land transport the number of freight vehicles on road and the mismatch of mass limits between modes will constrain the transport system. Under such a 'business as usual' approach the Truck Industry Council and the Commercial Vehicle Industry Association of Queensland predict that the total number of freight vehicles on the Australian transport system will increase by at least 50,000 by 2020 and over half of the increase will be in articulated vehicles (2004, p. 18). Non-urban growth from 1985 to 2003 averages 5.2 per cent a year, while urban averages 3.9 per cent. Going forward to 2020, the respective rates are 3.9 per cent and 3.5 per cent. Also in tonne-kilometre terms urban freight in 2003 was an estimated 28 per cent only of total national road freight.

In the light of strong forecast freight growth, limited opportunities for infrastructure development and the growing passenger transport task it will be in urban areas where the impact of freight will be the most evident. BTRE forecasts imply that one in four vehicles on metropolitan roads will be a light commercial vehicle or truck by 2020 (BTRE, 2003). Operating under a 'business as usual' paradigm will see the impact of congestion growing at an exponential rate. These impacts are forecast to include:

- *Road traffic predicted to increase by 40% during 2002-2020...*
- *Estimated cost of road delays to increase from \$12.8b in 1995 to \$29.7b in 2015 (Chair SCOT Urban Congestion Management Working Group, 2005)*

The question is not whether regulatory changes can avert a potential crisis but whether Australia can afford not to improve its freight system. Even if there is no crisis, the costs of doing no more than 'business as usual' may be too high.

CONCERNS WITH THE CURRENT REGULATORY APPROACH

The present regulatory approach to vehicles and vehicle use across Australia uses direct government regulation through prescriptive tools in the road freight sector and a co-regulatory approach in the rail sector. Rules apply to vehicles and their operation and they have a number of aims, mainly, safety, environment and asset protection. The NTC has used three main methods of regulation to protect public road infrastructure: road pricing, compliance and enforcement, and prescriptive standards for vehicle dimensions and masses. Co-regulatory rail safety systems, although in the process of being harmonised, differ between jurisdictions. Rail infrastructure is managed through self regulation.

In effect, regulation has helped embed a focus on infrastructure asset protection by transport agencies rather than the productive use of the asset. There remains a very indirect relationship between road usage charges and road investments. Charges in all but one jurisdiction are being paid to consolidated funds managed by central agencies. No charges flow directly to local governments. Thus, no direct revenue flows to road agencies and there is little linkage between vehicle use and expenditure. By comparison, in the rail sector there is a relationship, albeit impacted by other factors, between access charges and infrastructure management.

Finally, the process of achieving nationally consistent regulatory improvement is exacerbated as a result of process issues such as slow decision making and inconsistent implementation across jurisdictions.

Freight transportation now operates in a different contextual environment, which requires a different regulatory response. What are some of the pressures facing today's regulatory environment?

- The rate of technological advancement exceeds the capacity of the prescriptive regulatory environment to respond in a timely manner; this delays potential productivity gains.
- Industry focuses on outcomes for customers. It is stymied by the prescriptive approach to regulation.
- Relevant data is not available.

A number of emerging or 'beyond the horizon' regulatory issues also require further consideration. These include the impacts of:

- more complex concerns regarding safety and environmental impact of freight;
- increasing congestion in urban areas;
- cross-portfolio responses for freight transport management such as in areas of occupational health and safety;
- technology and automation advances in areas such as vehicle design;
- environmental concerns which can affect productivity outcomes;
- community attitudes towards freight movement; and
- the unknown effects of security concerns.

How will the current regulatory, planning and investment approaches deal with these and other previously unforeseen issues?

A NEW REFORM AGENDA

The NTC considers that, given the increasing freight task and the consequential impacts of this growth, there is a need to reinvigorate land transport regulation. A new generation of initiatives is required, that are based on:

- the application of a consistent approach to all modes of freight transport, which applies to both the demand for transport and the supply of infrastructure; and
- providing a regulatory framework that facilitates meaningful productivity increases, while maintaining and improving environmental and social outcomes.

The NTC believes that the new approach should encompass the following elements.

1. A move from direct, prescriptive rules to more cooperative forms of regulation that give transport operators more discretion about how they comply with public obligations and reflect advances in the sophistication and technology in the freight industry and the growing focus on collaboration between participants.
2. A change in the overarching aim of regulation, from asset protection to improved economic, social and environmental outcomes from the transport sector. This will shift the focus of regulation from constraining the use of assets to optimising asset use and pursuing consistency between modes.
3. The development of transport pricing that will directly relate the price paid for use of transport networks to infrastructure investment. Ideally, this will be as a result of a direct fee for service relationship between infrastructure user and suppliers.
4. Standards and compliance and enforcement tools based on outcomes and focussed on the productive capacity of both the vehicle and infrastructure. This means that vehicle standards are no longer set to match minimum capacity across the network, but can vary so that both vehicles and infrastructure have matched requirements, but differing at different parts of the network. This change would be signified by a greater focus on performance based standards and the Intelligent Access Program.
5. The alignment and harmonisation of safety regulation for rail transport across jurisdictions.
6. A more proactive and flexible approach to implementation of reform across jurisdictions.

This agenda signifies much work for the NTC. As well, complementary measures are required to achieve a transport infrastructure system that will meet the needs of the country for the next fifteen to twenty years and beyond, while also allowing the most to be achieved out of a new regulatory system. The elements of this broader land transport reform agenda are reflected in Table 1. Table 1 lists elements of the freight transport agenda now and a vision for a new agenda.

The nature of this revised regulation paradigm, in particular changes to pricing and the land transport agenda, will have impacts that extend beyond the remit of the NTC and transport agencies. The positions, therefore, need to be considered by the Australian Transport Council (ATC) in the context of the present Council of Australian Governments (COAG) reform agenda.

Table 1. Reform Paradigms

Element	Current Paradigm	Future Paradigm
Regulation Model	Direct government regulation	Cooperative forms of regulation which give industry a greater responsibility and discretion in the process
Aim of regulation	To manage the negative impacts of freight	To improve economic, social and environmental outcomes
Focus of regulation	Asset protection	Optimal asset use and consistency between modes
Relationship between safety, environment and productivity outcomes	Seen as conflicting	Productivity outcomes that do not compromise safety and environment outcomes or put infrastructure at risk
Main tools for managing asset use	Mass, dimension and configuration controls, compliance and enforcement, standards and road pricing	Transport pricing
Relationship between usage charge and infrastructure expenditure	Indirect for road and varied for rail	Direct relationship between usage charge and investment decisions
Vehicle and infrastructure standards	Based on infrastructure most at risk	Focussed on the productive capacity of both the vehicle and different parts of the infrastructure, across the network
Role of Compliance and Enforcement	Precursor to infrastructure access	Enabler to more productive access
Safety Regulation	Different approaches between jurisdictions and modes	Harmonised rules within modes and consistent principles across modes
Implementation of reform	Poor incentives to implement and harmonise	Improved incentives and more flexible approach to implementation
Land transport agenda	Planning and investment decision frameworks differ between modes and cross-portfolio miscommunication	Single, resourced, national decision making framework not aligned to any one government
Data availability	Limited and poorly valued	Highly valued, available and well managed
Mechanisms for joint decisions in application of national rules by jurisdictions	Non existent – informal networks for discussion	Widely used

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1. INTRODUCTION

The National Transport Commission (NTC) is an independent body established under Commonwealth legislation and an Inter-governmental Agreement (IGA). It is funded jointly by the Commonwealth, States and Territories. The NTC has on-going responsibility to develop, monitor and maintain uniform or nationally consistent regulatory and operational reforms relating to road, rail and intermodal transport.

The NTC's principal objectives are to improve transport and regulatory efficiency, safety and environmental performance in a uniform and nationally consistent manner. The principal objectives are achieved through the effective implementation (by others) of transport reforms. The NTC works in cooperation with industry, road and rail agencies and transport departments, and reports to the Australian Transport Council (ATC). The ATC is a council of transport and road Ministers from all jurisdictions.

Some of the key responsibilities and functions of the NTC that are set out in the IGA are:

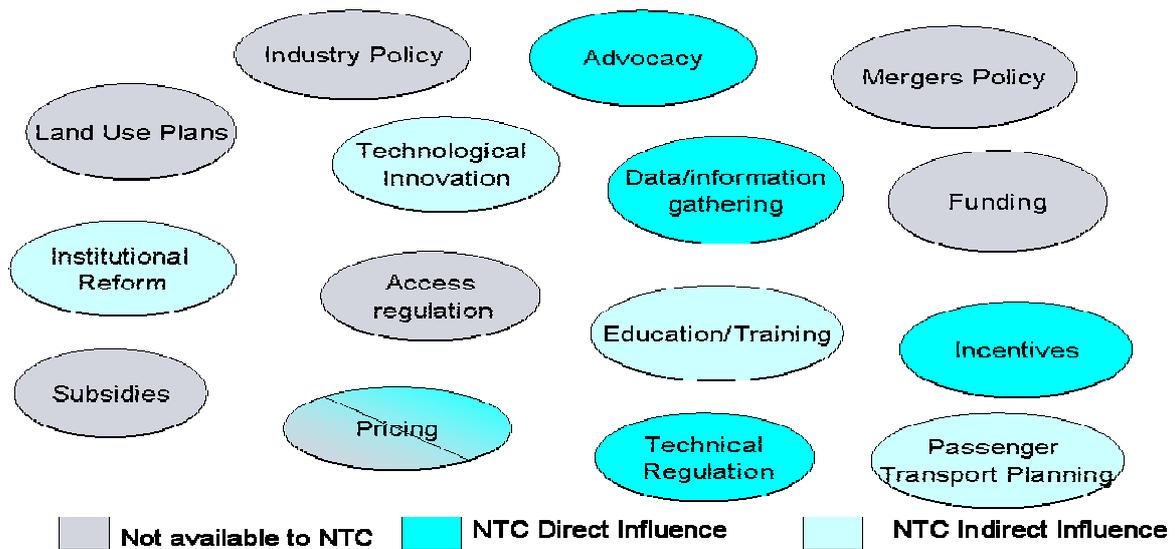
- developing regulatory reform proposals for road transport;
- developing a framework to improve and strengthen the co-regulatory system for rail safety including the application of mutual recognition;
- developing a national policy on key rail safety issues and procedures and standards to manage major rail safety risk factors;
- developing heavy vehicle road use charging principles and charges based on those principles;
- monitoring and reporting implementation of reforms to the ATC and maintaining and reviewing implemented reforms; and
- monitoring the effectiveness of the development and implementation of the Code of Practice for the Defined Interstate Rail Network and providing financial assistance for secretariat support to the industry owner of the Code.

1.1 Background

In April 2005, the NTC commissioned Sinclair Knight Merz (SKM) and Meyrick and Associates (Meyrick) to explore how the land transport system will cope with the forecast doubling of the domestic freight task over the next twenty years and to identify potential measures to manage the impact of the growth in freight. This project was entitled Twice the Task.

Further detail regarding the measures recommended in the Twice the Task Report (the Report) is outlined in Appendix B: Twice the Task Report and NTC Response. The full Twice the Task Report is available on the NTC website.

While the reforms recommended in the Report are capable of effectively standing alone, the other prioritised measures in the report indicate that a more integrated NTC response to the freight task is required. The measures described in the Report also cover the broader range of activities that can be undertaken to manage issues related to an increased freight task. As Figure 1 indicates, many of the instruments required to undertake these measures are either not available to the NTC or are outside the NTC's direct influence.

Figure 1. Instruments for Implementing Measures

Source: SKM and Meyrick and Associates (2005) *Twice the Task*, p. 59

That said, it is in the combined impact of regulatory and other areas of reform that the real benefits to productivity will occur. It is only through constant vigilance and a pro-active approach to regulatory reform by the NTC and other agencies that a doubling of a freight task will not lead to a crisis in terms of productivity, safety or environmental concerns and avoid significant costs to the Australian community.

1.2 Purpose

This paper aggregates the NTC's response to research investigating the implications of, and possible responses to, a doubling of the freight task in Australia by 2020 and subsequent deliberations on future issues facing the NTC over the next five years. It puts forward suggested improvements to the regulatory framework for freight transport productivity in Australia.

In its Review of National Competition Policy, the Productivity Commission states that

... Australia still has a long way to go to achieve a transport system that encourages an efficient distribution of the overall freight task between road, rail, water and air; allows for the efficient and seamless movement of freight along the entire logistics chain; and meets the needs of commuters in a cost-effective and sustainable fashion.
(Productivity Commission, 2005, p. xxv)

It is the purpose of this paper to propose a way forward for the NTC that will best assist in meeting these productivity outcomes without compromising the other aims of the NTC to improve environmental and social outcomes.

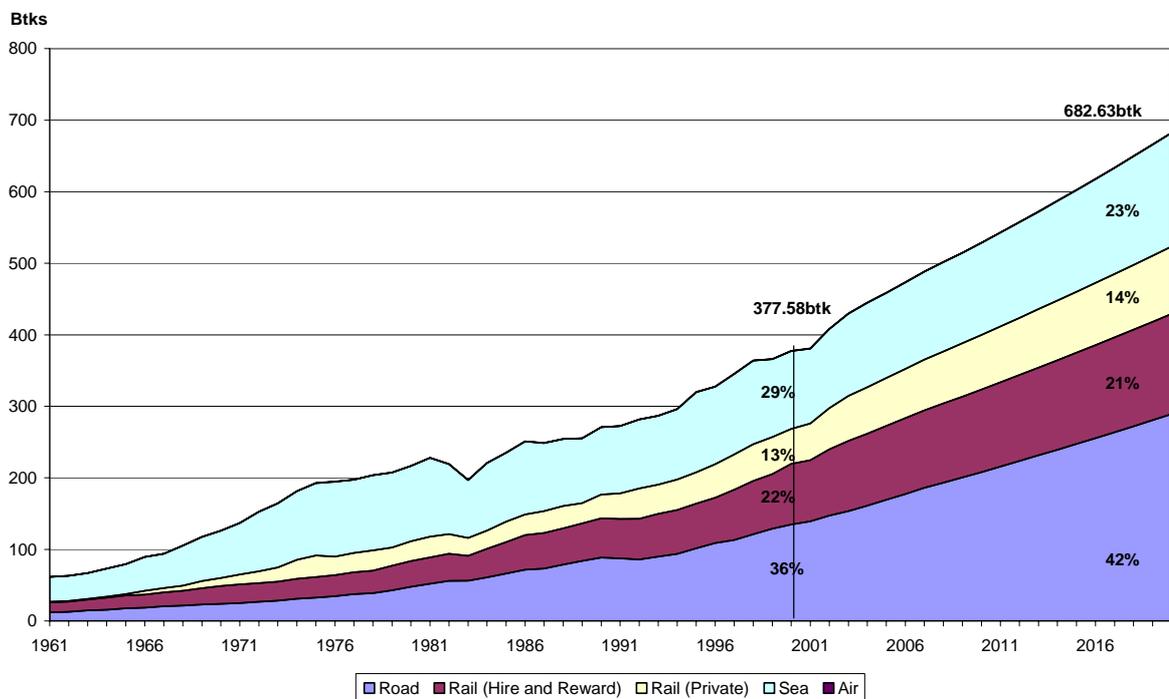
2. THE FREIGHT CHALLENGE

2.1 Freight Forecasts

The most recent estimates from Bureau of Transport and Regional Economics (BTRE) indicate that between 2000 and 2020 the total Australian freight task (including by air and sea), as measured by tonne-kilometres, will almost double from 378 to 683 billion tonne-kilometres. The land transport task (encompassing road and rail transport) will come very close to doubling over the same period, increasing from 268 to 523 billion tonne-kilometres by 2020.

Within land transport, the BTRE forecasts suggest that the road freight task will double by 2018.

Figure 2. Modal Split 1960-61 to 2119-20: of the Total (bulk plus non-bulk) Domestic Freight Task



Source: BTRE (2005 to be published) *Freight Measuring and Modelling in Australia: Road, Rail, Air and Sea*

The key influences on land transport demand are: increases in resource demand for minerals and agricultural production; changes to logistics chains; reducing freight rates; economic growth and the substitution and growth of imports as both consumer goods and raw material inputs. Air freight is also likely to increase. However, air freight is forecast to remain a minor player in the domestic freight task arena, carrying less than one percent on a tonne-kilometre basis.

Other forecast sources such as Australian Transport Facts (Apelbaum Consulting Group, 2005) and the internal modelling conducted by State transport authorities are generally in agreement with the BTRE estimates of the growth expected.

When presented with the likely forecasts, neither government nor industry expressed surprise with the aggregate results. Some divergence of opinion did occur around the role of the modes in the future freight task, particularly in the long interstate corridors of

Melbourne-Brisbane and the Eastern-States to Perth. One differing view in this regard is the Port Jackson Partners report for the Australasian Railway Association – the NTC is reviewing this report separately.

Although the domestic freight task is not forecast to double by 2020, the NTC is confident that Australia's freight task will increase significantly in a relatively short time period.

2.1.1 Urban Considerations

The growth of freight is not uniform across Australia. Nor will its impact be uniform.

Forecasts clearly indicate that adverse impacts will be greatest in urban areas, where congestion from cars compounds the impact from freight task growth. (SKM/Meyrick, 2005, p. 2)

Darwin is forecast to see the strongest freight growth at almost 3.5% per annum. Sydney, Brisbane, Perth and Canberra are all forecast to experience freight growths of over 2.7% per annum between 2003 and 2020. Melbourne is forecast to grow at 2.5% per annum and Adelaide and Hobart will rise at just over 2% over the forecast period. (SKM/Meyrick, 2005, p. 94)

These BTRE forecasts were in line with State transport authorities' sentiments that the impact of this growth in freight is greatest in urban areas.

In the light of strong forecast freight growth, limited opportunities for infrastructure development and the growing passenger transport task it will be in urban areas where the impact of freight will be the most evident. Operating under a 'business as usual' paradigm will see the impact of congestion growing at an exponential rate. These impacts are forecast to include:

- *road traffic predicted to increase by 40% during 2002-2020...*
- *Estimated cost of road delays to increase from \$12.8b in 1995 to \$29.7b in 2015 (Chair SCOT Urban Congestion Management Working Group, 2005)*

2.1.2 Other Freight Growth Considerations

The impact of such a significant growth in freight will vary geographically and by mode.

Rail infrastructure issues are generally greatest in the East coast capitals, where metropolitan passenger service requirements place great limitations on freight operations. There were also clearly stated concerns about major deterioration in Western Australia, South Australia, Victoria and New South Wales intrastate networks.

The infrastructure constraints in urban areas have already led to a number of ideas about how to manage the freight task. These ideas have included: targets to achieve modal shift from road; business activity harmonisation; and freight dedicated routes.

2.1.3 Is There a Crisis?

Localised bottlenecks have emerged as strong demand has run into tight and inflexible supply... The fact that these problems are localised suggests that to describe them as a major crisis at present is an exaggeration. But the difficulties involved in their resolution point to underlying weaknesses that must be addressed

if the problems are not to become more widespread. (Exports and Infrastructure Taskforce, 2005, p. 1)

Although there are pockets of infrastructure currently under significant stress within the national network, research and investigations over the past eighteen months have led to diminished assertions of a current transport infrastructure ‘crisis’.

Past freight growth was not handled by regulation standing still. Instead, significant productivity improvements were provided for within the system. Regulatory changes enabled productivity growth by increasing mass limits for road, providing for more productive vehicle configurations (such as B-doubles) to access the road network and double stacking for rail.

A ‘business as usual’ approach was not enough over the past fifteen years and is unlikely to be enough in the next fifteen years. Without measures to improve the productivity of land transport the number of freight vehicles on road and the mismatch of mass limits between modes will constrain the transport system. Under such a ‘business as usual’ approach the Truck Industry Council and the Commercial Vehicle Industry Association of Queensland predict that the total number of freight vehicles on the Australian transport system will increase by at least 50,000 by 2020 and over half of the increase will be in articulated vehicles (2004, p. 18).

BTRE forecasts imply that one in four vehicles on metropolitan roads will be a light commercial vehicle or truck by 2020 (BTRE, 2003). This will impact on production costs, safety and the environment.

2.2 Key Issues and Views

The Twice the Task project team canvassed key industry, government and academic stakeholders in order to ascertain the perceived growth in the freight task, the components and geographical dispersion of this growth, and the consequences on infrastructure and activities. In this section, key issues and views are outlined which were observed and recorded during this process.

2.2.1 Modal Competition

The oft stated comparisons of road and rail tonne-kilometres along routes can distort the reality that much of the task will remain road dominated, as a result of logistical issues. Independent research (MM Starrs, 2005) commissioned by the NTC has found that supply chain management changes are likely to have favoured road transport due to its inherent flexibility and ability to handle small shipment sizes. This research also suggested that rail has advantages where it already has a good market share and has potential advantages where costs can be reduced and service levels improved. Therefore, modal competition is highest in long routes such as the Eastern States to Perth, and Melbourne to Brisbane. However, even with the most balanced investment and pricing structures between road, rail, and to a lesser extent coastal shipping and air, much of the freight task will remain on road.

It is estimated that only 10-20% of the current and projected road freight task faces some competitive pressures from other modes. To deliver the best outcomes for the nation, it is important that as reforms progress, the utilisation of **each** mode is optimised.

Rail infrastructure is at capacity now and will take 2-3 years for new investment to kick in. – (ARA, Freight 2005)

2.2.2 Utilisation of Infrastructure

The NTC recognises that there is room to get more out of Australia's freight transport network. There is spare capacity on the network, partly as a result of prescriptive vehicle standards and partly because the current regulatory approach adopts a 'one size fits all' mentality, which constrains transport options (discussed further in section 3.3.5).

The relationship between pricing and infrastructure use is discussed further in section 3.3.3.

2.2.3 Modal Interfaces

It is what happens at the nodes which is the issue. (Australian Transport Association, Freight 2005)

Transport systems should operate smoothly across modes (particularly road and rail). Consequently, standards that determine what access is allowed on different parts of the transport infrastructure should be aligned. This would allow freight carried by rail to be seamlessly picked up and dropped off by road transport operations. As the road mode has greater potential flexibility, this means that more flexible rules governing access to the road network should be established.

The NTC's paper, *Impediments to Improving Efficiency in the Area of Intermodal Transport* (August 2004) highlighted significant concerns regarding the interface between the modes, including use of non-standardised containers and the Australian pallet size.

The draft position of the NTC is that some of these issues do not represent market failure and thus are not best alleviated through regulatory intervention. They might, however, be addressed by operational reforms in which industry will need to take the lead role. However, a number of concerns regarding the interface between the modes can be alleviated through regulatory reform. These include the differential mass and loading limits between modes.

2.2.4 Role of Industry

The role of reform is not just for government, but also for industry, who will need to continue to maintain and strengthen its leadership role.

Freight users and transport operators, through a mixture of 'Just in Time' and changes in vehicle configurations have led to many of the changes in the transport task over the past fifteen years. Regulation and government action often followed. There is a strong feeling that industry should have a greater role in shaping the transport agenda in the future. This is likely to require a more cooperative approach to regulation which gives industry greater responsibility and discretion, particularly in road, if productivity gains are to be maximised as technology develops.

2.2.5 Collaboration is The Key

Many opportunities for efficiency gains in freight arrangements are at the boundaries between modes and where one company hands responsibility over to the next in the supply chain. (SKM/Meyrick, 2005, p 121)

As the period of huge gains from micro-economic reform are realised, new areas of reform are required to maintain Australia's international competitiveness. This challenge requires

new rules of engagement between industry and government and between freight businesses.

Some firm examples of the strength of new forms of collaboration include the work of the State and federal logistics councils, the Hunter Valley Coal Logistics Chain developments and the North American ‘Gateway’ concept. Government regulation can have the effect of the lessening the benefits of such arrangements. Regulatory structures should permit productivity gains that do not compromise the competitive nature of the market.

2.2.6 Cooperative Planning and Leadership

We look for leadership from government, and the rest we will do. (Industry Representative, Twice the Task Workshop)

AusLink has provided a basis for forward planning of the national network. Yet further integration and consistency in planning of at least the arterial transport networks is required at State and Territory level. This is particularly important in establishing priority freight routes through urban centres.

A number of portfolios develop policy that impacts on freight transport. These portfolios cover areas such as town planning, passenger transport, environment, noise abatement, and occupational health and safety. With greater divergence in regulation related to freight comes reduced potential for efficiency. This divergence requires careful management and advocacy for the benefit of the freight transport network.

2.2.7 Future Challenges

The impact of fuel scarcity and security concerns are significant and evolutionary challenges. Apart from being challenges in their own right, they indicate that often the challenges that will have the biggest impact are not easily predicted, even within two to five years. We need to develop flexibility in the regulatory system to cope with such shocks.

2.2.8 Supporting Innovation

The freight transport market is a competitive market. Thus, one company’s gains from innovation in, say, vehicle design, can be dispersed in as little as two to three years. Therefore, single organisations do not have a strong incentive to innovate when the benefits are rapidly dispersed. In this situation, the NTC believes that there is a role in supporting innovation for the benefit of the entire industry. The role of innovation is discussed further in section 3.3.6.

3. THE CURRENT REGULATORY APPROACH

3.1 Context

In establishing the NRTC/NTC, COAG recognised that consistency of regulation of freight transport is a national issue. Freight does not recognise State boundaries. Wagon manufacturers and truck designers don't build for one State—their product needs to transcend borders. So do regulations and standards.

The NTC, therefore, has an obligation to provide national leadership through regulatory reform in delivering freight transport outcomes.

Consider if the NTC had asked in 1990 what the freight task might look like in 2005. Who might have visualised a privatised national rail system? The rapid rise of third party logistics? Contract labour on the waterfront? Urban toll roads? The substantial decline in Australian owned shipping? At the same time, who might have predicted that Australia's port traffic would treble?

Who might have foreseen national heavy vehicle charges? Harmonisation of national heavy vehicle standards? Higher Mass Limits? The establishment of an outcomes-based approaches to truck and bus regulation?

In the space of fifteen years two major trends have occurred. The freight transport industry has reformed, reshaped and grown in sophistication. The regulation reform agenda has provided improved levels of national compliance and consistency, particularly for standard vehicles within a general access framework. However, increasingly, it is vehicles outside this framework that dominate the road freight task and must interface efficiently with the rail network. In tandem these have maintained public confidence in the freight transportation system and managed the potential negative impacts of freight transport.

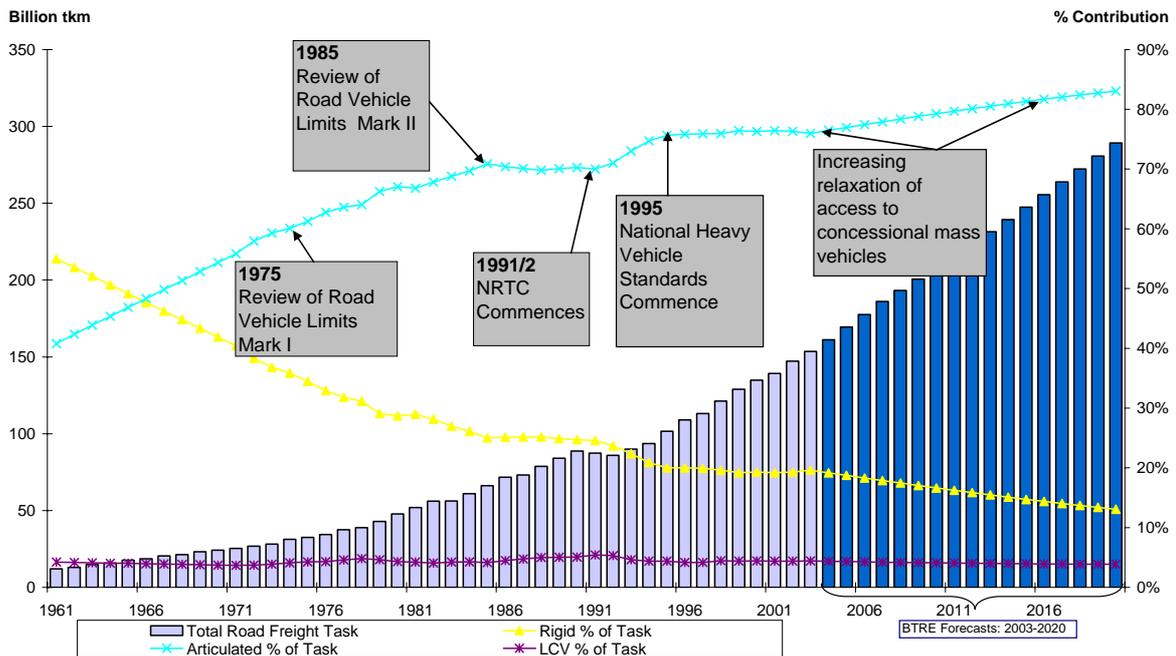
The regulatory reform agenda is now midpoint between the birth of the NRTC and 2020; the ability to foresee fifteen years is even more difficult. The exponential rate of change in the industry makes it difficult. However, it is recognised that the initial regulatory tools developed by the NRTC/NTC are now mature. It is timely that new regulatory tools are examined, developed, and some old ones discarded.

Regulation reform is but one element in managing an increased freight task. Complementarity of regulation with other key strategies such as planning, funding and collaboration will lead to a more sustainable freight transport system.

3.2 Contribution to Reform

History provides an indication of the contribution that road transport regulatory reform and harmonisation have played in managing an increasing freight task since the inception of interstate coordination measures. Using the composition of the truck fleet as a proxy for productivity gains, Figure 3 indicates the strong correlation between regulation reform and the move to more productive vehicle types such as B-doubles.

Figure 3. The Milestones of Reform To Road Freight Productivity



As noted in the Twice the Task Report:

The introduction of increased mass limits, longer semi trailers, larger vehicle dimension limits and subsequently the roll out of extensive B-double and road train routes have all provided productivity gains for the road transport industry. The productivity improvements in road freight transport achieved in the shift from semi-trailers to B-doubles was a major contributory factor in coping with freight task increases over the past 20 years. (SKM/Meyrick, 2005, p. 14)

3.3 Concerns with the Current Regulatory Approach

The present regulatory approach to vehicles and vehicle use across Australia uses direct government regulation through prescriptive tools in the road freight sector and a co-regulatory approach in the rail sector. Rules apply to vehicles and their operation and they have a number of aims, mainly, safety, environment and asset protection. The NTC has used three main methods of regulation to protect public road infrastructure: road pricing, compliance and enforcement, and prescriptive standards for vehicle dimensions and masses. Co-regulatory rail safety systems, although in the process of being harmonised, differ between jurisdictions. Rail infrastructure is managed through self-regulation.

In effect, regulation has helped embed a focus on infrastructure asset protection by transport agencies rather than the productive use of the asset. There remains a very indirect relationship between road usage charges and road investments. Charges in all but one jurisdiction are being paid to consolidated funds managed by central agencies. No charges flow directly to local governments. Thus, there are no direct revenue flows to road agencies and there is little linkage between vehicle use and expenditure. By comparison, in the rail sector there is a relationship, albeit impacted by other factors, between access charges and infrastructure management.

Finally, the process of achieving nationally consistent regulatory improvement is exacerbated as a result of process issues such as slow decision making and inconsistent implementation across jurisdictions.

Freight transportation now operates in a different contextual environment, which requires a different regulatory response. What are some of the pressures facing today's regulatory environment?

- The rate of technological advancement exceeds the capacity of the prescriptive regulatory environment to respond in a timely manner; this delays potential productivity gains.
- Industry focuses on outcomes for customers. It is stymied by the prescriptive approach to regulation.
- Relevant data is not available.

A number of emerging or 'beyond the horizon' regulatory issues also require further consideration. These include the impacts of:

- more complex concerns regarding safety and environmental impact of freight;
- increasing congestion in urban areas;
- cross-portfolio responses for freight transport management such as in areas of occupational health and safety;
- technology and automation advances in areas such as vehicle design;
- environmental concerns which can affect productivity outcomes;
- community attitudes towards freight movement; and
- the unknown effects of security concerns.

How will the current regulatory, planning and investment approaches deal with these and other previously unforeseen issues?

Position 1. The Current Approach

The NTC considers that the current regulatory, planning and investment approach to land freight transport can be summarised as follows:

Element	Current Paradigm
Regulation Model	Direct government regulation
Aim of regulation	To manage the negative impacts of freight
Focus of regulation	Asset protection
Relationship between safety, environment and productivity outcomes	Seen as conflicting
Main tools for managing asset use	Mass, dimension and configuration controls, compliance and enforcement, standards and road pricing
Relationship between usage charge and infrastructure expenditure	Indirect for road and varied for rail
Vehicle and infrastructure standards	Based on infrastructure most at risk
Role of Compliance and Enforcement	Precursor to infrastructure access
Safety Regulation	Different approaches between jurisdictions and modes
Implementation of reform	Poor incentives to implement and harmonise
Land transport agenda	Planning and investment decision frameworks differ between modes and cross-portfolio miscommunication
Data availability	Limited and poorly valued
Mechanisms for joint decisions in application of national rules by jurisdictions	Non existent – informal networks for discussion

3.3.1 Direct Government Regulation

The NTC's current methods, particularly for road, are direct methods of regulation. Direct government regulation provides high levels of control and enforcement through prescriptive methods to assure confidence in a system, in this case vehicle use of roads. Direct government regulation requires little from the industry; industry is only required to adhere to the standards set.

Direct government regulation works best where there are significant concerns regarding the negative impacts of a system and where there is little evidence that industry has the ability to self regulate. Prescriptive approaches to regulation are more suited to a static technological environment, where little innovation is occurring.

3.3.2 Pricing

Heavy vehicle pricing for road access is currently determined by ATC following recommendations from NTC. Charges are based on recovery of an average of the previous three years road expenditure. They are applied to vehicle classes on the basis of estimates of expenditure allocated to each vehicle type. The charging instruments are a registration charge, paid to the State/Territory treasuries, and a fuel charge, paid to the Commonwealth through diesel excise. About seventy per cent of total cost recovery is through the fuel charge and thirty per cent through registration charges.

Road pricing can achieve three main policy outcomes:

1. It can be used to ensure that road users take account of the full costs of road use, including costs to governments and the community, of their decisions to use roads.
2. It can be used to ration demand for space/travel speed on parts of the road network where there is congestion.
3. It can provide signals to road managers about the level of services they should provide in terms of pavement and bridge strength, amount of road space, and other aspects of service quality.

The NTC is in the process of reviewing its pricing policy through the fourth pricing determination. To attempt to achieve significant micro-economic reform within this process will require consideration of both demand and supply issues. Current pricing tools provide only partial solutions because:

- Road and rail infrastructure access are neither costed nor priced on a comparable basis.
- Heavy vehicles are the only elements of the road transport fleet subject to the current pricing arrangements.
- There are no linkages between pricing and the supply of infrastructure through the pricing of road transport access.
- Absence of direct pricing systems means road managers have little incentive to permit or provide for high productivity vehicles.
- The charging system is unable to incorporate consideration of externalities into the charging system.

3.3.3 The Relationship between Pricing and Infrastructure Use

Further to the criticisms above, the present pricing arrangements do not provide incentives to road agencies to allow increased mass on their network. Increased mass may lead to more rapid deterioration of a road agency's asset. Without any direct linkage to the revenue required to maintain or enhance the asset, their incentive to encourage productivity is reduced.

Further, from the perspective of the transport industry, there is no mechanism to choose to elect to pay for a higher level of asset consumption, irrespective of the potential productivity benefits. For example, a wine exporter, unable to fill a wine container due to mass restrictions on a short road link to a rail terminal, may be forced to send an under-loaded container to its destination in the USA.

3.3.4 Prescriptive Vehicle Design Standards

The present prescriptive approval process for heavy vehicles, indeed all vehicles, operates largely around the Australian Design Rules. The process relies on a combination of mostly prescriptive standards combined with some performance (outcome) standards. This process is by nature retrospective (i.e. standards are developed in response to technology advances). Prescriptive standards also tend by definition to be rigid. They will apply to generic types of vehicles, or components. In an industry that is continually faced with technology change and highly variable customer needs, this runs counter to the need for adaptability and rapid take up of technology.

The consequence is that technology take up is slow and at times impossible through lack of compatibility of standards, resulting in sub-optimal safety, environmental and productivity outcomes.

In contrast, rail operating stock standards are not prescriptively regulated, but instead safety outcomes are required to be managed across an operation.

3.3.5 Combining Infrastructure Standards and Prescriptive Regulation

Road infrastructure is far from homogenous. Road and bridge characteristics (strength, condition, geometry, etc) vary depending on a range of factors including:

- soil type and environment;
- intensity and type of use (by different vehicle types); and
- funding decisions for construction and maintenance.

Prescriptive vehicle standards, intended for application through all or most of the road system, result in standards which do not allow maximum productivity because they are designed to protect critical points in the infrastructure. The result is spare or unused capacity in much of the infrastructure.

This is best illustrated with reference to bridges. Modern bridges are designed to higher standards than their predecessors; however mass standards are often set for bridges of lower standard.

Prescriptive standards are proxies for the intended safety, environment and asset protection outcomes. They have been developed to provide clarity in an unsophisticated industry.

They may enable effective enforcement through traditional tools, but are based on a poor understanding of relationships between performance standards and desired outcomes.

There are issues involved with both the progression of standard accreditation and harmonisation. In general, operations within the prescriptive framework are ‘as of right’, meaning that they can be undertaken until a breach of standards is demonstrated by an enforcement agency. Within this framework, there is a reasonable degree of consistency in rules that apply, along with mutual recognition, providing for relatively seamless operations across State/Territory borders. Outside this framework, operation is generally seen as a privilege, whereby agencies can require an operator to demonstrate that they should not lose the right to operate. Reduced confidence in the right to operate may lower incentives to invest in innovative solutions. Outside the ‘as of right’ framework there is less consistency and limited mutual recognition. Thus while specific arrangements may allow more productive vehicles to be used, lack of consistency and lack of mutual recognition impose significant constraints on the extent to which this productivity can be realised.

3.3.6 Performance-Based Standards and Pricing Incentives

In response to the issues raised above, the NRTC/NTC has been developing an alternative performance-based (PBS) approach to heavy road vehicles standards by encouraging the development of innovative vehicles that will perform optimally without increasing the wear and tear on land transport infrastructure. This has the potential in turn to reduce the costs of road and rail transport by making optimal use of the existing network.

By requiring that vehicles meeting PBS also comply with stringent safety and environmental standards, these reforms will better meet community expectations for cleaner, quieter, more efficient and safer transport. This smarter approach to regulation will increase flexibility for industry and provide more tangible results.

Standards based on performance are not a new concept. It has been applied to infrastructure contracts with success over a number of years. By setting the performance ‘envelope’ rather than specifying process, performance contracting requires infrastructure managers to clearly define the limits of what they require, but leave the process for delivery to the contractor. This permits innovation in delivery methods and materials, promoting an efficient and competitive market.

PBS exists in the rail sector at present through the agreed co-regulatory approach. This requires government to set high level safety or environmental standards, and for industry in turn to demonstrate compliance, through industry developed codes or systems.

In the case of road transport, the task of implementation of PBS is in its infancy. It will require further development of standards, finalisation of the proposed regulatory framework and guidelines for decision-making and enforcement processes, before final agreement from ATC. PBS requires a paradigm shift in thinking by both regulators and industry alike.

The challenge it poses for the road transport industry is that while it removes the constraints imposed by prescriptive rules on what a vehicle must look like and do, it also removes the certainty these rules provide over what is legally accepted and the bounds within which operators must compete. Under the performance-based approach, innovative operators may achieve significant advantages over their competitors. Thus it increases market-driven incentives to innovate and find productivity advances.

3.3.7 Rail Safety

The productivity of the rail industry is significantly impeded as a result of differing safety arrangements in States and Territories. The situation mirrors that faced by the national road industry before the harmonisation of regulation across Australia.

The ATC has agreed that streamlining processes and establishing uniform and effective rail safety arrangements would deliver further productivity benefits for the industry. At the last ATC meeting the Ministers noted that the development of model legislation has led to substantial progress towards harmonisation of rail safety regimes (ATC, 2005, p. 3).

There is considerable pressure from industry to progress from the current multi-jurisdictional arrangements, given a major consolidation of players on rail transport, mostly operating across jurisdictions. AusLink is developing a national approach, and the present system of multi-jurisdictional regulation, at least for interstate operations, is at odds with this.

3.3.8 The Process of Regulation

The NTC believes that some of the key weaknesses in the national land transport regulatory reform process are related to processes, rather than specific reforms. These weaknesses include:

- the protracted process to obtain agreement on a reform, often risking a lowest common denominator outcome;
- delays and inconsistencies in implementation; and
- almost universal unwillingness of jurisdictions to make joint decisions or automatically recognise processes followed and decisions made elsewhere. This often adds significantly to the regulatory burden, rather than reducing it. This applies to recognition of decisions made collegiately or in other jurisdictions.

The NTC model is intended to oblige jurisdictions who vote against a proposal to implement if there is a majority support. However, the NTC has no power, other than influence, to ensure approved proposals are implemented consistently. It can only report any divergences to ATC; it is up to the ATC to take action to address inconsistencies. This limits the effectiveness of the present reform process.

Timing of implementation of national reforms can also vary significantly due to the difficulty in securing passage through State/Territory parliaments and internal resourcing difficulties in transport agencies. Following ATC approval of a legislative reform, local implementation can take from six months to several years, depending on local resources, access to parliament and the priority given to reform.

Reasons for departing from consistent implementation include:

- staff turnover in transport agencies, with new staff not understanding the need for adherence to the national model or what has been agreed;
- transport agencies not agreeing with the national proposal; and
- transport agencies considering that the national model could be improved through local divergences.

The NTC acknowledges some divergences to the national model may be required to retain consistency within jurisdictions, for example in penalties in other areas of law or with broader criminal justice policies. For this reason, national penalties are proposed as model only, with an expectation of local variation. This is why some elements of compliance and enforcement reform were designated as ‘desirable’ rather than essential.

However, these difficulties in the timing and consistency of implementation are the source of considerable frustration, both to the NTC, and the national road transport industry, and have adversely impacted on the benefits of previously approved reforms.

Even when reforms are implemented consistently, regulatory burdens can be overly onerous when they require administrative processes and decisions to be duplicated across jurisdictions. This is an issue for road vehicles operating outside the ‘as of right’ framework and also within the rail freight sector. Efficient and effective processes for national decision making are needed in addition to processes for improving consistency of implementation.

3.3.9 Transport Planning and Investment

The growing freight task and the issues discussed in section 2.2 highlight the need for an overarching land transport framework. While AusLink has provided a way forward for planning and investment, there remain some policy spaces regarding cross-portfolio issues, implementation and a cooperative forward National Transport Plan. This framework would need to incorporate considerations of consistency between modes to create a cooperative approach whereby government at all levels, and industry, are able to work effectively together.

This need was recognised in the 2002 review of the NRTC Act. This review recommended the establishment of a mechanism and resources to provide the ATC with strategic analysis and advice on issues including priorities for national infrastructure investment, options for infrastructure pricing policies and priorities for reform to support inter-modal integration.

4. A NEW REFORM AGENDA

Position 2. Reform Agenda Elements

The NTC considers that, given the increasing freight task and the consequential impacts of this growth, there is a need to reinvigorate land transport regulation. A new generation of initiatives is required, that are based on:

- the application of a consistent approach to all modes of freight transport, which applies to both the demand for transport and the supply of infrastructure ;and
- providing a regulatory framework that facilitates meaningful productivity increases, while maintaining and improving environmental and social outcomes.

The NTC believes that the new approach should encompass the following elements:

1. A move from direct, prescriptive rules to more cooperative forms of regulation that give transport operators more discretion about how they comply with public obligations and reflect advances in the sophistication and technology in the freight industry and the growing focus on collaboration between participants.
2. A change in the overarching aim of regulation, from asset protection to improved economic, social and environmental outcomes from the transport sector. This will shift the focus of regulation from constraining the use of assets to optimising asset use and pursuing consistency between modes.
3. The development of transport pricing that will directly relate the price paid for use of transport networks to infrastructure investment. Ideally, this will be as a result of a direct fee for service relationship between the infrastructure user and suppliers.
4. Standards and compliance and enforcement tools based on outcomes and focussed on the productive capacity of both the vehicle and infrastructure. This means that vehicle standards are no longer set to match minimum capacity across the network, but can vary so that both vehicles and infrastructure have matched requirements, but differing at different parts of the network. This change would be signified by a greater focus on performance based standards and the Intelligent Access Program.
5. The alignment and harmonisation of safety regulation for rail transport across jurisdictions.
6. A more proactive and flexible approach to implementation of reform across jurisdictions.

This agenda signifies much work for the NTC. As well, complementary measures are required to achieve a transport infrastructure system that will meet the needs of the country for the next fifteen to twenty years and beyond, while also allowing the most to be achieved out of a new regulatory system. The elements of this broader land transport reform agenda are reflected in Table 2. Table 2 lists elements of the freight transport agenda now and a vision for a new agenda.

The nature of this revised paradigm to regulation, in particular changes to pricing and the land transport agenda will have impacts that extend beyond the remit of the NTC and transport agencies. The positions, therefore, need to be considered by Australian Transport Council (ATC) in the context of the present Council of Australian Governments (COAG) reform agenda.

Table 2. Reform Paradigms

Element	Current Paradigm	Future Paradigm
Regulation Model	Direct government regulation	Cooperative forms of regulation which give industry a greater responsibility and discretion in the process
Aim of regulation	To manage the negative impacts of freight	To improve economic, social and environmental outcomes
Focus of regulation	Asset protection	Optimal asset use and consistency between modes
Relationship between safety, environment and productivity outcomes	Seen as conflicting	Productivity outcomes that do not compromise safety and environment outcomes or put infrastructure at risk
Main tools for managing asset use	Mass, dimension and configuration controls, compliance and enforcement, standards and road pricing	Transport pricing
Relationship between usage charge and infrastructure expenditure	Indirect for road and varied for rail	Direct relationship between usage charge and investment decisions
Vehicle and infrastructure standards	Based on infrastructure most at risk	Focussed on the productive capacity of both the vehicle and different parts of the infrastructure, across the network
Role of Compliance and Enforcement	Precursor to infrastructure access	Enabler to more productive access
Safety Regulation	Different approaches between jurisdictions and modes	Harmonised rules within modes and consistent principles across modes
Implementation of reform	Poor incentives to implement and harmonise	Improved incentives and more flexible approach to implementation

Land transport agenda	Planning and investment decision frameworks differ between modes and cross-portfolio miscommunication	Single, resourced, national decision making framework not aligned to any one government
Data availability	Limited and poorly valued	Highly valued, available and well managed
Mechanisms for joint decisions in application of national rules by jurisdictions	Non existent – informal networks for discussion	Widely used

4.1 Cooperative Regulation

Cooperative regulation methods result in a shared role for industry and government in administering regulations.

In effect, the NTC and other transport regulatory agencies are already progressing towards this form of regulation through such initiatives as industry codes of practice, accreditation based compliance, chain of responsibility, and performance based standards. These tools provide greater flexibility and are more output-focused than prescriptive forms of regulation.

The NTC acknowledges that, with the pursuit of cooperative forms of regulation, industry is empowered with greater discretion but they must also realise a concomitant increase in responsibility for outcomes.

4.2 The Pricing System

In order to optimise the efficiency of land transport in Australia, the primary objective of any road pricing system would be to more directly link road use, road wear and road expenditure, particularly for freight vehicles.

Adoption of a new approach to road pricing for vehicles is required: one that will permit governments to consider a range of policy initiatives that improve utilisation of the road asset; address congestion; and acknowledge other community concerns. Reform of this type will need to involve central agencies as well as transport agencies, because it cannot be separated from current revenue and funding arrangements. Future processes are likely to require linkage of road charges with optimal expenditure; provision for charging for externalities; and establishing direct relationships between road users and road managers via pricing. These approaches will permit a new generation of pricing and a move towards a level playing field for supply, in which standards are set by operators.

The future pricing system will need to consider mass, distance, spatial considerations, and the move towards a more direct relationship between road users and infrastructure managers. This system may include factors such as dimension, time of day, and type of vehicle.

Pricing regimes for using transport infrastructure can and should be aligned more closely to encourage the efficient allocation of transport tasks between different modes (road, rail, sea and air) on the basis of their underlying demand and cost conditions. Economic

efficiency, and particularly the need for efficient future investment in transport infrastructure, must be a key objective of the transport pricing regime. The Export and Infrastructure Taskforce stated:

If progress is not made in addressing the competitive neutrality problems between road and rail, the distortions to infrastructure investment will become even more widespread, as pricing that is out of line with costs leads to capacity expansion choices that poorly reflect the underlying economics (Export and Infrastructure Taskforce, 2005, p. 33).

More directly linking heavy vehicle charging to route choice, mass and distance as well as impact, would improve land transport efficiency by encouraging transport users to factor these charges into their: route choice; vehicle axle mass choice; configuration choice; and mode choice whether road or rail. Ensuring other competing freight modes, particularly rail services, are also charged the full cost of services used, on a comparable basis, would significantly improve the efficient allocation of freight tasks across transport modes.

Linking road use and road expenditure would enable freight operators to choose and pay for the level of consumption of the road asset that gave the best returns. Freight operators would need to pass that revenue on to road owners for asset maintenance, enhancement or expansion. If road owners were confident that they directly received infrastructure-related road revenues, they would have an incentive to respond to demands for the operations of higher mass vehicles and adopt a less conservative position in relation to vehicle performance standards. Provided safety and environmental standards were complied with, this would lead to improvements in efficiency (through more productive vehicles), and to improved safety and environmental sustainability (through reduced numbers of heavy vehicles for a given task).

In Australia, pricing aimed at traffic demand management would include freight vehicles but not be specific to them, as they constitute only a small proportion of the traffic stream. This form of pricing could provide further encouragement to freight applications to switch to use of the infrastructure outside of peak periods, thus improving utilisation of the road network. However, shifts in freight traffic associated with traffic demand management would not be likely to have any direct effect on infrastructure provision. Freight operations would benefit from reduced travel times in peak periods, as delays from other traffic are a significant cost (usually much larger than for private motorists) to freight operators.

Heavy vehicles constitute only a small proportion of the traffic stream. To be fully effective as a regulatory tool, consideration will need to be given, over time, to extending pricing to cover all classes of vehicles to achieve the optimum utilisation of the network.

Moving away from highly aggregated charges to a system where the charges more accurately reflect the costs of road use has the potential to yield efficiency gains. There is an unavoidable caveat – **the cost of such a system**. The main components of the cost would be those of introducing and running the system and measuring the use of individual vehicles across the road network.

The benefits of a pricing approach over other means of managing traffic demand and controlling externalities associated with vehicle use, (such as noise, emissions and crashes), need to be carefully considered. As transport is relatively price inelastic (price changes do not generally result in significant changes in the level of demand), achieving desired safety, air quality or greenhouse gas targets via pricing may prove difficult, with

regulatory tools providing a more cost effective means of achieving these targets in some cases.

Adoption of a new approach to road pricing for heavy vehicles will need to involve central agencies as well as road agencies, as it cannot be separated from current revenue and funding arrangements.

4.3 The Role of Regulatory Tools

More sophisticated pricing and funding arrangements could permit replacement of mass limits with individual choice of operating mass by transport operators. Such arrangements do need to be accompanied by safety requirements, because vehicle mass has implications for both infrastructure wear and vehicle safety.

There are strong jurisdictional and community expectations of high safety and environmental standards in heavy vehicle operation. Given that a high proportion of the land freight task (including almost all the urban task) is not contestable between road and rail, resistance to larger vehicles has resulted in a larger number of smaller vehicles. This has somewhat perverse safety, environmental and productivity outcomes. Safety and environmental reforms will therefore need to progress, but in a manner that has regard for concurrent productivity reforms and balancing community expectations.

4.3.1 Performance-Based Standards

The performance-based standards (PBS) project will allow industry-initiated productivity improvements to be implemented in a timely manner by providing standards closely linked to outcomes as an alternative to the current prescriptive standards. In effect, this project involves the establishment of a parallel regulatory regime to the current approach of prescriptive standards combined with conventional (on-road) enforcement. The approach may well replace the use of prescriptive standards over time as industry and governments become familiar with their application. Further development of this project will be required to agree to standards that encourage productivity while providing appropriate levels of protection to the national road network.

When fully developed, PBS will:

- provide a regulatory policy framework based on risk management;
- allow industry to establish either generic standards or codes of practice, or to propose specific solutions for individual situations;
- provide industry with the incentive to take up new technology immediately it is available and continually search for more productive innovations;
- allow for various combinations of vehicles or components to be assembled, again subject to demonstration of compliance with PBS; and
- provide certainty about where vehicles can operate while retaining the need for duplicate assessments in multiple jurisdictions.

At present, the agreed interim PBS standards are not comprehensive, but are capable of being extended over time to be a comprehensive regulatory framework. Once complete, PBS is capable of operating as a stand-alone **alternative** to prescriptive standards **for all categories of heavy vehicles**. This would mean that industry would have the option of seeking approval through either prescriptive means (the present mass, dimension and configuration rules) or performance-based standards. PBS would in fact be capable of

extension to all types of vehicles, although this is beyond the scope of this discussion. As the performance-based standards process matures and becomes well understood, it is possible, even likely, that the prescriptive system of heavy vehicle regulation will eventually become redundant.

4.3.2 Acceptance and Implementation of PBS

There would need to be a well structured process and accepted timeline to permit the development of a comprehensive PBS system. This would include agreement on the full suite of (government determined) PBS standards required, as well as the development of a complementary set of industry developed and owned codes or standards. This regulatory framework would be similar to that which exists in the Australian and UK rail sector. The Australian road industry, which is used to prescriptive standards, will need to be brought along with the major cultural change that PBS will require.

This is unlikely to be a short term process, and may extend over a significant period (3-5 years). The rate of development would be influenced by the level of take up by industry of the PBS system. The NTC will need to continue to focus on completing the present PBS project (Stage 1) but, at the same time, review options to extend PBS (Stage 2) .

Ongoing review of the initially adopted interim standards, particularly relating to infrastructure, is required to permit PBS to be capable of delivering significant productivity, safety and environmental benefits. Pavement and bridge standards are currently the subject of further investigation and will require review and revision over the coming few years to enable fullest use of the available infrastructure.

PBS safety standards provide the means by which allowable mass can be varied by how much an operator is willing to pay without putting safety at risk.

PBS, when combined with a revised pricing system—one that provides incentives to both industry and governments to maximise the use of available infrastructure—will be a powerful new regulatory framework.

4.3.3 Compliance and Enforcement

Variations in standards that enable higher levels of transport productivity will almost certainly need to be supported by more sophisticated compliance tools, to demonstrate that safety and environmental externalities are being addressed. In addition to the retention and enhancement of existing enforcement approaches, the NTC in conjunction with road agencies and Austroads have a well developed range of enabling compliance tools. These tools promote cost-effective monitoring and administration and include accreditation-based compliance, Chain of Responsibility, industry Codes of Practice, and the Intelligent Access Program (IAP).

Developed by AustRoads, in conjunction with the NTC, the IAP can allow monitoring of operating conditions (location, time-of-day, speed) through Global Positioning Systems by certified service providers, with exception (breach) reports supplied to road agencies. It is expected that the IAP can provide a mechanism for more refined road pricing arrangements and potentially extend to collecting information to support direct charging of vehicles by mass, location, distance and time.

Compliance and enforcement tools such as IAP and tools such as prescriptive and performance-based standards have been crucial in the development of the road transport

system. However, they must be seen as tools to support the flexible and open systems that fourth generation pricing and cooperative regulation will spearhead.

4.4 Rail Safety

Road transport reform over the last fifteen years has moved to align and harmonise road regulation across jurisdictional boundaries.

Present rail reform in progress through the NTC provides a move to greater national consistency in rail safety regulation. However, the rapid and ongoing consolidation of the rail sector, particularly freight operations, is starkly at odds with State and Territory based regulatory systems. Rationalising regimes and regulatory bodies would enable better use of scarce skills and resources available for safety investigations and regulation. It has the potential to improve the effectiveness of safety regulation, safety outcomes and the use of public resources. Greater consistency and uniformity in rail safety regimes would also reduce compliance costs for rail users.

Options available are either to take the iterative route, where the independence of all rail safety regulation is maintained in the State of operation, or to review the system entirely and make a national regulatory body with aligned regulation across Australia. The NTC is presently examining options, and will report in October 2006 on institutional issues associated with such an initiative. Such a move could also act as a precursor to a national land transport safety regulator.

4.5 Improving the Process of Regulation

A national transport system is crucial to Australia's economic and social well-being. It is essential that decisions made in one jurisdiction should be mutually recognised elsewhere. To achieve this would require an integrated, national and efficient decision-making framework to gain access to the national road and rail system.

Many impediments to such a system stem from the division of policy responsibility between Australian and State and Territory Governments. As well as contributing inefficiencies in service delivery and in the interface between different services, this division of policy responsibility has impeded the development of the sort of institutional arrangements needed to support a more integrated approach to reform. Reform efforts will fail to fully realise the transport system that Australia needs until there are more effective means of national coordination.

In line with the pillars of reform outlined in this freight transport agenda, the NTC advocates enhanced implementation mechanisms.

In some instances, reforms may be delayed or watered down through lack of hard supporting evidence of their effectiveness. An alternative to full national implementation is progressive implementation, using a single, or several supportive, jurisdictions, to pilot the reform. Whilst this is a deviation from historical NRTC/NTC approaches, it may in the longer term deliver improved benefits and provide for a shorter route to implementation.

This is a relatively non-disruptive change to the current implementation arrangements, as there are already trials being undertaken in some jurisdictions prior to full implementation. These include the PBS trials in Queensland and the original trial of IAP in Tasmania.

This 'prototype' approach does not require consideration of cross border issues until the performance of the reform has been assessed. This is a constructive method of

management of risk and allows the unintended consequences to be worked through, prior to full implementation.

4.6 Transport Planning and Investment Agenda

There remains a policy gap in the coordination of the National Freight Transport planning agenda that has only been partially filled by the development of AusLink. AusLink is a program that meets a number of the imperatives of the earlier proposed NTAC, but does not go as far as originally envisaged. This can at times leave the NTC in a policy vacuum when considering forward initiatives. A single, resourced, national decision making framework, when set alongside the complementary regulatory functions of the NTC, would provide a strong basis for improved co-ordinated transport policy, infrastructure and regulatory development.

In keeping with the move to a focus on cooperative forms of regulation, a single, resourced, decision making body should involve industry representation to ensure that recommendations and considerations are practical and in line with industry requirements.

Responses to the urban congestion issues that are of particular concern to the sustainability of the land transport system could also be well coordinated by such a cooperative body. It could also assist in development of data development, management and dissemination procedures.

The reform agenda envisaged by the NTC has the potential to provide for significant changes in the way the freight task is handled, so that growth in this task can be managed. However, greater leverage will be possible if these reforms are also able to influence transport planning and investment decisions.

The route assessment process of PBS, combined with new pricing arrangements, can not only be used to optimise freight productivity, but can be used by local and state governments as a significant planning tool. These mechanisms have the potential to encourage freight onto routes chosen by planning agencies, thereby avoiding sensitive locations such as residential areas, schools or hospitals, and helping encourage freight-intensive commercial activities to be located in desired places. In turn this allows infrastructure providers to concentrate their investment in a smaller number of key freight routes, rather than solely responding to freight transport infrastructure impacts over a disperse network.

These same tools have the potential, when combined with decisions about location and design of intermodal terminals, to significantly improve intermodal transport productivity. While the NTC can provide the tools for this to occur, leveraging transport planning and investments in these ways is clearly the province of others. Incorporating such approaches in AusLink processes is one example of how this may occur.

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APPENDIX A: NTC STRATEGIC PLAN 2005-06 TO 2007-08

The NTC Strategic Plan 2005-06 to 2007-08 (the Strategic Plan) outlines the proposed outcomes for the next three years against the five strategic objectives (Table 3). All of the outcomes detailed in the Strategic Plan are relevant when responding to a doubling of the freight task. In particular, the outcomes related to the objective of developing efficient regulatory arrangements that maximise the likelihood of best land transport outcomes occurring and supporting sustainable improvements in transport productivity to deal with increased transport demand.

Table 3. NTC Strategic Plan Objectives And Outcomes

Objective	Detail	Outcomes
1 Regulatory Frameworks	Develop efficient regulatory arrangements that maximise the likelihood of best land transport outcomes occurring	1.1 Improved regulatory approaches that deliver the best possible outcomes for a given infrastructure 1.2 Progress towards a stronger risk foundation for land transport 1.3 Clear pathway for removing impediments to new technology 1.4 Greater use of technology to deliver improved land transport outcomes 1.5 A framework for safe and efficient rail operations
2 Safety	Continually improve land transport safety through regulatory initiatives	2.1 Improved approaches to managing rail safety risks 2.2 Progress towards the national Heavy Vehicle Safety Strategy target 2.3 Provide a basis for ensuring land transport personnel in key safety roles are fit for duty 2.4 Improved understating of where the risks to safety in land transport activities lie
3 Environment	Reduce the negative impact of land transport on the environment	3.1 Containment of negative impacts of land transport on air quality and noise levels 3.2 A clear path to continuing reduction in negative impacts of land transport on the environment
4 Transport productivity	Support sustainable improvements in transport productivity to deal with increased transport demand	4.1 Partnerships with industries and governments to provide for productivity improvements in land transport 4.2 Regulatory arrangements for heavy vehicles that provide flexibility for innovative approaches to

Objective	Detail	Outcomes
		completing the transport task 4.3 Identification of the impediments to improved productivity in rail transport and progress towards removing these impediments
5 Sustained Results	Land transport regulation is relevant, active and effective in ensuring the best land transport outcomes ¹	5.1 Existing reforms are monitored and maintained to that they remain nationally relevant and effective 5.2 Progress on a programme of review of existing reforms so that they continue to deliver best land transport outcomes 5.3 All proposals for reforms set out how they will be implemented

¹ National Transport Commission (NTC) *Strategic Plan 2005-06 to 2007-08* p. 8-9

APPENDIX B: TWICE THE TASK REPORT AND NTC RESPONSE

In April 2005, the NTC commissioned Sinclair Knight Merz (SKM) and Meyrick and Associates (Meyrick) to explore how the land transport system will cope with the forecast doubling of the domestic freight task over the next twenty years and to identify potential measures to manage the impact of the growth in freight. This project was entitled Twice the Task.

In the preparation of the Twice the Task report the consultants:

1. reviewed Bureau of Transport and Regional Economics (BTRE) and other forecasts of the future Australian freight task;
2. reviewed international responses to an increased freight task;
3. interviewed State and Federal transport authority representatives and freight and logistic industry leaders to determine:
 - the expected growth in the freight task;
 - the range of measures currently being considered to mitigate the expected negative impacts on productivity, as well as environmental and social outcomes that are expected to occur as a result of a growing freight task; and
 - views on the regulatory measures which were appropriate to complement other measures.
4. developed a framework for classifying measures which could impact on the increased freight task;
5. facilitated two workshops with government and industry representatives to coalesce measures and strategies.

There were a number of measures prioritised in the Twice the Task Report that relate directly to the current NTC agenda. These measures included:

- achieving higher mass limits for road vehicles;
- implementing direct user charging for road use;
- implementing enhanced Performance Based Standards for innovative vehicles, with alternative funding arrangements for research;
- implementing the Intelligent Access Program for monitoring vehicle use; and

- Reviewing market structures to achieve sustainable, competitive rail services.

The table below outlines the concerns raised by stakeholders during the consultation process for the Twice the Task study, the relevant prioritised measures and how the invigorated regulatory agenda of the NTC meshes with these concerns.

Table 4. Comparison of SKM/Meyrick Recommendation and NTC Positions

Issue	Concern	SKM/Meyrick Approach	NTC Response
Planning	<p>In the face of increasing cross-jurisdictional freight movement and rapid national consolidation of the road and rail industry into single owner logistic chains, there is a need to address planning considerations in a more national and consistent manner.</p> <p>Additionally, concern has been raised regarding the integration of freight transport considerations in wider land use planning and cross-portfolio regulatory overlap impeding the efficient, safe and sustainable movement of the freight task.</p>	<p>The SKM/Meyrick Report highlighted a number of measures in response to concerns regarding the planning agenda. These measures included:</p> <ul style="list-style-type: none"> • Establishment of an overall national transport planning body • Facilitation of essential transport data collection • Reservation of necessary land for transport corridors. 	<p>The establishment of a national transport body charged with planning, data collection and more broader policy considerations has been previously mooted but is yet to be implemented. AusLink is a program that meets a number of the imperatives of NTAC, but does not go as far as originally envisaged. This can at times leave the NTC in something of a policy vacuum when considering forward initiatives. A single, resourced, national decision making framework, when set alongside with the complementary functions of the NTC, would provide a strong basis for co-ordinated transport policy, infrastructure and regulatory development.</p>

Issue	Concern	SKM/Meyrick Approach	NTC Response
<p>Design Standards</p>	<p>As discussed earlier, many limits on freight vehicle operation are imposed by infrastructure design standards and transport management priorities set mostly for the needs of non-freight vehicles.</p> <p>Achieving greater productivity levels will come from the nexus of increasing the productivity of the vehicular fleet as well as the productivity of the infrastructure.</p> <p>In the case of roads, for too long the goal of road authorities' has been to minimise the cost of road provision, increasing pressure on the system requires a move towards minimising the cost of transport. As demands on the system increase a more sustainable goal is to reduce the cost of transport.</p>	<p>In response to these issues the SKM/Report recommended the following measures:</p> <ul style="list-style-type: none"> • Construct roads to standards which support greater productivity • Assess need for rail investment to achieve robustness • Determine optimal rail design standards to achieve increased productivity • Refocus road design standards and management to better suit trucks and road capacity. 	<p>The development of a pricing system based on optimal asset use and consistency between modes with usage directly related to investment will provide a vital link between optimal design standards and the incentives of the infrastructure manager.</p>

Issue	Concern	SKM/Meyrick Approach	NTC Response
Urban Issues	<p>In Australia’s major cities, growing passenger and freight tasks, the dominance of road-based transport and urban sprawl, is placing existing transport infrastructure under increasing pressure and producing significant transport bottlenecks.</p> <p>While some congestion sources are city-specific, many are common to all urban centres, including the needs of modern logistics chains and the impact of local commuter traffic on major economic corridors.</p> <p>Achieving effective solutions including improved integration of land use and transport planning, requires coordinated actions across agencies, modes and jurisdictions. Responses to congestion also are becoming more complex, shifting away from straightforward ‘predict and provide’ infrastructure development towards ‘anticipate and manage’ solutions, which include infrastructure, planning, regulation, pricing and industry/passenger behavioural components.</p>	<p>In response to the identification of urban areas as the most significant potential bottleneck, the SKM/Meyrick report recommended the following measures directly to address urban freight issues</p> <ul style="list-style-type: none"> • Invest in urban rail infrastructure where appropriate • Review freight and congestion relationship • Raise community awareness on balancing development and amenity • Incorporate freight considerations in land use planning • Ensure that transport management standards are more reflective of the productive freight movement. 	<p>Whilst the implementation of the initiatives to combat urban issues is likely to remain in the control of the jurisdictions, a single, national decision making framework could improve the coordination and communication of initiatives between jurisdictions.</p> <p>The current strategic SCOT framework goes part way to achieving this goal.</p>

Issue	Concern	SKM/Meyrick Approach	NTC Response
Data Management	<p><i>Good information on what is currently going on is essential at sufficiently fine grain to enable useful analysis of transport needs at local, regional and longer corridor levels. There is ample evidence that available data is declining in accessibility, detail and frequency of collection.</i> (SKM/Meyrick, 2005, p.131)</p> <p>Further to this, the shape of data requirements for freight planning and regulation is changing. In the past, data was collected on mass and distance travelled lines. The need in the urban areas increasingly concerned with the spatial consumption of a vehicle on a road (for this is where urban congestion stems). Time series volumetric based measurement of freight, particularly in urban areas, is an area where significant resource effort is required.</p>	<p>In response to these concerns regarding data, the SKM/Meyrick report reiterated calls for a more coordinated and developed transport data framework which would involve the collection and management of data as well as the coordination of development of new data sets.</p>	<p>This proposal is entirely consistent with the development of a single, resourced land transport decision making framework.</p>
Skills	<p>Labour resources are a significant pinch point for transport organisations. Securing and retaining operational staff such as truck and train drivers is a major industry concern. The NTC notes the work undertaken by industry to mitigate this issue including graduate schemes, less effort intensive vehicles and providing clearer career paths for staff.</p>	<p>In the areas of skills and human resources the SKM/Meyrick report highlighted two measures which could help ease this issue:</p> <ul style="list-style-type: none"> • Encourage use of progressive heavy vehicle licensing exemptions • Improve occupational health and safety for freight drivers. 	<p>The safety program of the NTC, which includes reforms in fitness for duty and fatigue management are complimentary to the measures outlined in the SKM/Meyrick report.</p>

Issue	Concern	SKM/Meyrick Approach	NTC Response
Collaboration	The role of industry in managing the freight task is also crucial to the sustainability of the network. Industry successes in this area have included the Hunter Valley Supply Chain Initiative and the Freight Councils which advise government and set transport agendas at the local, state and Federal levels.	The SKM/Meyrick report highlighted collaboration as a key way forward in managing an increasing freight task. The report noted that some areas of national competition policy currently impede collaboration on the grounds of anti-competitive behaviour. The report recommended change in the treatment of collaboration to improve efficiency.	The NTC agrees with the emphasis placed on collaboration within the SKM/Meyrick report.