

Pacific National Submission to the Australian Government's Inquiry into a National Freight and Supply Chain Strategy

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1. Introduction

Pacific National welcomes the opportunity to make a submission to the Australian Government's Inquiry into a National Freight and Supply Chain Strategy (the Strategy). Pacific National is a major freight train operator throughout Australia's mainland states serving numerous supply chains including coal, mineral products, steel, grain, construction products, waste and containerised products. Further details on these supply chains are contained in Attachment 1.

In making this submission Pacific National recognises that the Strategy aims to focus on the efficiency and effectiveness of the nation's end-to-end supply chains with the aim of ultimately reducing end-to-end supply chain costs while improving supply chain performance. While end-to-end supply chain issues are the focus of Strategy it should be recognised that Pacific National operates almost wholly within one freight transport mode (rail) and as such this submission focusses on rail related issues.

Pacific National is a member of several advocacy groups and industry associations that are also making submissions to this Inquiry. These include the Freight on Rail Group (FORG), the Australasian Rail Association (ARA) and the Australian Logistics Council (ALC). Pacific National supports the submissions being made by these advocacy groups and industry associations.

This submission is public.

2. Pacific National's Broad Position on National Freight Strategy

Pacific National welcomes the Government's decision to develop the Strategy which we believe is very much needed. The national freight task is expected to grow by 26% over the next decade, but there is potential for supply chain inefficiencies and constraints to restrict this growth, with consequent negative impacts on national output, national productivity and social externalities. Conversely good public policy supporting more efficient supply chains will promote growth in freight with positive impacts on national output, and productivity. Getting this Strategy right now will provide scope for maximum growth in the future. Ideally, the Strategy will guide to future freight policy and underpin ongoing productivity and economic growth while also driving improved international competitiveness for Australian export markets.

Pacific National also has concerns about the Strategy's lack of clarity regarding the Government's objectives in relation to freight supply chains. Pacific National hopes that these objectives are clarified in the course of this consultation process. Pacific National believes that these objectives

must reflect social, environmental and commercial aspects of freight supply chain operation. This will then ensure that the significant social and economic benefits offered by rail freight are taken into account when determining freight supply chain policy and investment.

One of Pacific National's main concerns with current freight strategy is that in many instances the policies and regulations relating to freight infrastructure and operations are state based whereas supply chains cross these borders. Freight supply chains are national and a nationally consistent approach to freight infrastructure and regulation is required¹. Pacific National seeks that all levels of government develop and implement policies that enable the development and operation of efficient and sustainable freight supply chains. To this end Pacific National believes that the Strategy should give strong consideration to the development of a freight supply chain co-ordination body which includes representatives from government, the freight industry and users, and which acts to co-ordinate and integrate the removal of bottlenecks and ensure consistency across states, transport modes and supply chains. Such consistency is likely to become increasingly critical given the technological changes expected to impact supply chains in the medium term.

Pacific National seeks that the Strategy acts to facilitate an integrated national approach to freight and supply chain reform. An integrated national approach will address inefficiencies and constraints before they become problematic.

Pacific National recognises that improved coordination between the freight industry and government is required in order to achieve greater efficiency. Pacific National believes that freight rail operations must play an expanded role if we are to increase the productivity and capacity of freight supply chains. Pacific National is committed to engaging constructively with governments, industry and stakeholders to enable these policy outcomes to be achieved. In particular Pacific National would welcome involvement in a freight supply chain co-ordination body which acts to co-ordinate and integrate the removal of bottlenecks and ensure consistency across states, transport modes and supply chains.

3. Issues the Strategy Must Address

There are numerous issues that the Strategy must address in order to enhance freight supply chain efficiency and effectiveness including:

- Freight transport modes – including;

¹ Pacific National recognises that state freight strategies continue to be important tools to drive supply chain efficiencies within jurisdictions.

- Regulation and policy which is modally neutral – this may result in modal shift if modally neutral policy rebalances infrastructure pricing; and
- Modal impacts of un-costed market externalities (such as congestion costs, safety costs and environmental costs);
- Infrastructure – including;
 - The provision of new physical infrastructure;
 - Upgrading existing infrastructure to better meet the needs of future freight movements;
 - The cost and pricing of infrastructure;
 - The regulatory and operational settings applying to existing and new infrastructure;
- Technology and common standards – including facilitating the expected changes to transport and transport infrastructure technology; and
- Co-ordination – including the development of a freight supply chain co-ordination body which acts to co-ordinate and integrate the removal of bottlenecks and ensure consistency across states, transport modes and supply chains.

4. Freight Transport Modes

4.1 Modal Neutrality

Many freight supply chains use multiple transport modes and / or have a choice between transport modes. In order to support the choice of the most efficient freight transport mode by freight users the different transport modes should be regulated in a consistent manner.

One of the major issues impacting freight supply chains is modal neutrality. Pacific National strongly believes that freight and transport regulation, including the regulation of access to freight infrastructure should be modally neutral. Thus the same policy and regulatory approaches should apply equally across all freight transport modes (namely rail, road and sea)².

Road and Rail Modal neutrality

Policy and regulatory neutrality is particularly important when considering infrastructure pricing for road and rail freight. The road and rail infrastructure charges for these two freight modes are determined and paid for via two very different mechanisms;

- Road freight is charged for road infrastructure via heavy vehicle registration charges and fuel excise; and

² In recent years Pacific National has made numerous submissions to government consultations on coastal shipping and road infrastructure pricing (either as Pacific National or a member of the Freight on Rail Group (a freight rail industry advocacy group)). The Freight on rail Group submissions can be found at:

- <http://www.forg.com.au/media-publications>

- Rail freight is charged for freight rail infrastructure via rail freight access charges (either regulated or commercially negotiated) based on the cost of funding, maintaining and operating the rail freight infrastructure.

In summary freight rail infrastructure providers have pricing which is determined in reference to efficient costs whereas road infrastructure providers have pricing which is not necessarily determined in reference to efficient costs, potentially resulting in price distortions.

The issue of road and rail infrastructure pricing raises the issue of modal shift between road and rail. While road and rail are substitutes for some freight tasks they are complementary parts of the supply chain for other freight tasks. Therefore, the issue cannot be reduced to a simple road vs rail approach as the issue is more nuanced, as road and rail are both competitors and complementary depending on the specific freight task and supply chain.

Given this complex relationship between the two transport modes, Pacific National believes that the economic regulation that applies to the two modes should be consistent in order to minimise the potential for allocative or productive inefficiencies arising from misaligned regulation, resulting in perverse incentives for freight users to use the less efficient mode. Ultimately, the issue is ensuring the most efficient transport mode is utilised where the pricing for the transport mode is based on efficient costs³.

Pacific National welcomes the Commonwealth Government's recent announcement⁴ that it will progress heavy vehicle road charging reform via its Heavy Vehicle Road Reform (HVRR) project. However, Pacific National is concerned that the lack of detail regarding the proposed reform provides some scope for rail and road infrastructure pricing to remain mis-aligned even after the reforms are finalised. In particular Pacific National is seeking that the following principles be applied to the pricing of road and rail freight infrastructure:

- Road and rail Infrastructure pricing is based on the "building blocks" model used to set prices for regulated infrastructure in Australia;
- Road and rail infrastructure are priced on the mass of the loaded vehicle, the distance travelled and the location;
- Road and rail Infrastructure pricing are both regulated by the same regulator using a consistent approach to regulation across these freight transport modes; and

³ While this principle should generally be applied Pacific National recognises that there may be specific cases where one transport mode may be utilised for reasons other than costs, for example safety issues may be paramount in relation to the transport of certain types of dangerous goods.

⁴ The announcement was made on 24 November 2016. Details of response particularly as it relates to heavy vehicle road usage pricing can be found at pages 35-36 of the document below

- http://transportinfrastructurecouncil.gov.au/publications/files/Australian_Government_Response_to_Australian_Infrastructure_Plan_November_2016.pdf

- Revenue received from the pricing of freight road and rail infrastructure should be re-invested in this infrastructure. This re-investment is a critical element of this reform and will help ensure that freight supply chain costs are reduced as targeted investment reduces freight infrastructure bottlenecks.

Overall, there is recognition that the current road freight pricing approach is flawed, and given this the HVRR will shift road freight infrastructure pricing towards a regulatory model where the infrastructure prices levied on road freight more accurately reflect the costs incurred and that road and rail infrastructure prices are regulated in a consistent manner. Pacific National strongly supports these current policy developments and believes that the changes to road freight infrastructure charges are an essential pre-requisite for any policy reform of national freight supply chains. The Strategy provides a further opportunity for the Government to strengthen its approach to addressing competitive neutrality issues between freight transport modes.

Case Study: Infrastructure Pricing - Freight on Road vs Freight on Rail

Differences in infrastructure pricing lead to a lack of clarity as to which transport mode is more efficient. For example, a freight task which involved transporting approximately 300,000 tonnes of timber product per annum for five years (approximately 250 to 300 trains per annum) was costed by the freight task's proponent. The freight task went to road largely due to the differences in the infrastructure charges between road and rail infrastructure. (That is the costs of the train and the heavy road vehicle were comparable but the differences in costs for the transport infrastructure was the factor that drove the decision). If road and rail infrastructure prices were regulated using the same approach it would be clearer as to whether this choice was efficient.

Another factor which impacts on road and rail modal neutrality is the fact that the lack of rail infrastructure at Australian ports often leads to double handling of freight that is carried by rail. This adds a level of additional costs which are a factor in some freight supply chains using road rather than rail. This issue of double handling of freight is an issue that cannot be adequately addressed by aligning pricing and regulatory frameworks, rather it is an issue which requires infrastructure investment if it is to be adequately addressed.

Shipping and Rail Modal Neutrality

Policy and regulatory neutrality is also important when considering differing regulatory approaches to land freight transport and sea freight transport.

There is currently competition between rail freight and coastal shipping, particularly in relation to containerised transport. The Australian Government is currently considering reforms to coastal shipping regulations which will allow foreign shipping companies to compete against Australian land freight transport while the shipping companies are exempt from Australian workplace regulations (which apply to land freight transport). In relation to coastal shipping Pacific National is seeking modal neutrality between sea and land transport in relation to the regulations which apply to both transport modes⁵.

4.2 Modal shift where un-costed market externalities exist

In some cases, even if freight transport modes are priced on a similar basis, un-costed externalities may exist which mean that pricing does not provide efficient signals for freight choice. Most externalities will involve a cost which is not fully reflected in the infrastructure price such as costs arising from traffic congestion, differential environmental impacts or differential safety impacts.

- Congestion – in urban areas, the social and economic cost of road congestion is often quoted by government as a policy driver for the need for more freight to be transported on rail, but this stated position may not be reflected in government policy. For example significant additional funding is often dedicated to new or improved roads rather than infrastructure to enhance rail freight within the broader freight network;
- Safety – similarly, the social and economic cost of road safety is often quoted by government as a policy driver for the need for more freight to be transported on rail, but it is not evident that these safety benefits are quantified and incorporated into infrastructure investment decisions;
- Environment – again the environmental costs of road transport may support more freight being transported on rail but it is not evident that these environmental benefits are quantified and incorporated into infrastructure investment decisions.

Pacific National suggests that governments consider a **full triple-bottom-line** analysis (social, environmental and financial) when considering freight and supply chain expenditure and investment in order to ensure social and environmental measures are factored into decision-making alongside the financial cost-benefit analysis.

4.3 Other Issues relating to Modal and Cross Modal Regulation

There are numerous other issues relating to modal and cross-modal regulation which should be considered under the Strategy including:

⁵ Further details on Pacific National's position of coastal shipping reforms can be found at:

- <http://www.forg.com.au/media-publications>

Alignment of Access Regimes across States and Commonwealth

It should be recognised that there are substantial differences between different state's approaches to rail infrastructure regulation and infrastructure pricing. In particular some monopoly freight rail infrastructure providers are not price regulated. This acts as a constraint to optimising freight market efficiencies as prices are determined by an infrastructure monopoly rather than either the competitive market or a regulator setting prices on the basis of efficient costs. Attachment 2 to this submission shows the differences between these regimes in greater detail. Given the desirability of aligning road and rail infrastructure pricing frameworks (as outlined above in section 4.1) there should also be a move towards aligning rail infrastructure pricing frameworks and regulation between the states.

Pacific National believes that a common national approach to rail infrastructure regulation and infrastructure pricing are a necessary pre-requisite to ensuring freight supply chain efficiency is maximised.

Separation of Network and Passenger Functions

In Australia's three largest cities (Melbourne, Sydney and Brisbane) freight services need to use rail infrastructure owned by operators of passenger services. Freight services are therefore competing with passenger services for rail capacity. Given political and community pressures passenger services are preferred. In these instances there is no formal codification and enforced separation of the passenger and network functions of these organisations. The National Freight Strategy should seek to address this issue via:

- The promotion of more transparent regulation separating these network and passenger functions where rail network managers also operate passenger services; and
- The promotion of the separation of freight and passenger services through congested metropolitan areas (including infrastructure investment in separate freight and passenger networks where appropriate).

Case Study: Freight Rail vs Passenger Rail – Sydney Train Operations Protocols

Transport for New South Wales (TfNSW) is currently developing a new set of operations protocols which will apply to the Sydney rail network (both passenger and freight networks).

The new rules will require that freight trains present to the network for their timetabled windows within five minutes of the scheduled time or they will be delayed until a new path is available.

While such a requirement may be reasonable for passenger trains originating within the network most freight trains originate outside the network and may be delayed on adjoining rail networks for reasons outside the train operator's control.

These proposed changes are expected to have a substantial negative impact on freight supply chains as the timetable windows do not take into account the cyclic nature of bulk freight operations and issues which arise with traversing multiple infrastructure networks.

While the actions of TfNSW are understandable in the context of ensuring the efficient operation of the passenger rail network these actions directly contribute to inefficiencies in the freight rail network.

5. Infrastructure

Pacific National believes that reliability of infrastructure is a major issue for freight supply chains. In the freight rail context rail infrastructure reliability is negatively impacted by track quality, misaligned track repair windows and interfaces with passenger networks. These issues can be addressed by increased physical separation of freight and passenger infrastructure, enhancements of existing freight networks and improved alignment of freight operations between different infrastructure owners.

5.1 Provision of new physical infrastructure

Pacific National supports the development of an integrated and efficient national freight transport network. While road and rail are and should continue to be complementary freight transport modes, Pacific National is concerned at the disproportionate investment in road infrastructure over recent years when compared to rail infrastructure, which is only now being re-balanced. Even considering the recent allocation of Federal funding for rail improvements, expenditure in urban areas over coming years will be heavily skewed toward road building and improvement projects. Pacific National believes that an efficient and integrated national freight network requires substantial increases in freight rail infrastructure investment.

There are a number of rail corridors where maintaining and improving the standard of the rail infrastructure is important to ensuring efficient freight supply chains that will in turn support improvements in the international competitiveness of the Australian economy. Any decline in rail infrastructure standards compared to road standards results in a shift from rail to road on important freight corridors and a reduction in the options for freight customers who previously used a combination of rail and road services, with a negative impact on freight operations and innovation. Such investment should be focussed on infrastructure where rail has a particular strength as a key component of a freight supply chain or is a key component of the national freight transport network. Rail has economic advantages in long haul freight movements generally and in shorter haul freight movements where there are either high freight volumes and / or externalities such as road congestion. Thus rail investment should be focussed on:

- Long-haul rail freight corridors for bulk and intermodal supply chains; and
- Shorter haul rail freight corridors with higher volumes and externalities (for example grain supply chains and port shuttles).

Beyond the Inland Rail project, Pacific National believes the Commonwealth Government can play a greater role in building a productive freight rail network by increasing investment in freight rail infrastructure. There are numerous areas where additional investment in freight infrastructure is needed to address inefficiencies and constraints within freight supply chains.

Physical Separation of Freight and Passenger Infrastructure

Within many of Australia's major population centres freight rail and passenger rail share the same rail infrastructure often to the detriment of both as freight and passenger rail operations negatively impact on each others performance.

Pacific National is seeking that the Strategy provide increased support for the separation of freight and passenger rail functions in urban areas via the construction of dedicated freight and / or passenger lines. Funding announced in the recent Federal Budget for passenger rail enhancements in urban areas is welcome if it can be targeted at the key congestion 'pinch points' in cities where increasing passenger rail requirements are leading to a clear deterioration in freight rail efficiency.

For example in considering the issue freight and passenger separation in Sydney it should be recognised that in Pacific National's experience approximately 70 per cent of intermodal freight rail traffic that uses the Sydney rail network is actually travelling through Sydney. It does not originate or terminate in Sydney.

Case Study: Western Sydney Freight Line

The Western Sydney Freight Line is a planned dedicated rail freight line which is planned to link the existing Sydney freight rail network in the vicinity of Sefton to the main Western Sydney line in the vicinity of St Marys⁶. The main Western Sydney line currently takes substantial volumes of freight traffic to Port Botany in the east, Port Kembla in the south and Newcastle in the north. These freight movements are currently restricted by curfews arising from passenger movements. Similarly the freight movements limit the number of passenger paths available in non-peak times.

The construction of the Western Sydney Freight Line will allow freight movements to the east and the south to occur during peak periods and will provide additional passenger paths in non-peak periods. In an environment where freight movements are expected to increase this separation of infrastructure is a necessary step to ensure that both freight and passenger movements can occur without impacting each other.

Pacific National recognises that road freight and passengers also share the same road infrastructure and believes that there is also merit in separating road freight and road passenger infrastructure in some locations near freight terminals and ports.

Enhancements of Existing Freight Networks

In many cases the efficiency of existing freight infrastructure can be enhanced by relatively small levels of infrastructure investment which will address bottlenecks and constraints in the freight supply chain.

These bottlenecks are best identified through consultation with freight supply chain users and infrastructure owners. Such consultation would need to be via a national process which quantified the benefits and then funded the benefits with the greatest benefit to a given supply chain of national importance (for example grain). Such a program could be modelled on the NSW Government Fixing Country Roads and Fixing Country Rail programs. Any Commonwealth program should seek to be integrated and complementary to a state program.

⁶ Note that a map showing the general location of the line is shown in Infrastructure Australia Corridor protection: Planning and Investing for the Long Term July 2017 page 50.

Case Study: NSW Fixing Country Rail

The New South Wales Government has introduced a program to enhance the efficiency of regional rail infrastructure in New South Wales via a process where proponents of regional rail infrastructure projects submit expressions of interest for rail infrastructure funding from a defined fund. These expressions of interest are via template forms and financial models allowing ready comparison between the expressions of interest. These projects can then be prioritised based on the benefits arising from the infrastructure investment sought.

Freight supply chain users and participants drive the submission of the projects, which ensures that the projects being considered are projects which supply chain users and participants believe are most necessary.

In addition to “de-bottlenecking” programs outlined above the Strategy should support a series of engineering studies to identify broader infrastructure network constraints. Similar studies could be undertaken for other freight infrastructure. Following these studies the investments with the greatest cost-benefit should be identified and funded.

For example in rail these studies could focus on:

- Tonne axle load of the track – in some regions axle load is particularly problematic. For example the West Moreton coal supply chain in Queensland is restricted by a 15.75 tonne axle load rather than a 25 tonne axle load which would normally be expected as a minimum axle load in an efficient coal supply chain.
- Length of trains which can utilise the track given the passing loop length;
- Constraints on double stacking containers. Any new freight rail infrastructure designed for substantial intermodal usage should allow for the double stacking of containers; and
- Rail to the port – as outlined in section 4.1 above the lack of rail infrastructure at Australian ports often leads to double handling of rail freight, adding a substantial level of additional costs to some freight supply. This requires investment in rail infrastructure at the port if it is to be adequately addressed and
- Gauge change - changes from broad gauge rail to standard gauge rail should be assessed where freight supply chains would benefit. Such a gauge change process is currently occurring in the Victorian Murray Basin region. Pacific National supports this process and believes that the outcome of this process will assist in informing assessments of the gauge conversion of other sections of broad gauge track in the future. Shifting to a single gauge assists in increasing the efficiency in rolling stock utilisation and removes gauge transfer activities and thus adds to supply chain efficiency.

Inland Rail

Pacific National strongly supports the recently announced Melbourne to Brisbane Inland Rail project as it will substantially enhance Australia's freight infrastructure capability and provide capacity to serve the east coast freight market for the next fifty years. This rail line will enhance freight productivity and provide an improved supply chain for new and existing export producers, particularly in regional Australia.

However, Pacific National urges government to provide certainty to the freight sector through swift resolution of outstanding matters including the finalisation of the route, inter-governmental agreements, financing arrangements, the construction timetable and expected access prices, particularly on the section of the network to be delivered under a PPP.

Pacific National strongly believes that the Inland Rail project will only reach its potential if key transport infrastructure policy settings are changed. The main policy to be changed is heavy vehicle road infrastructure pricing which is addressed in section 4.1 above. The operational success of Inland Rail will depend on price signals which shift long-haul freight from road to rail, and road pricing will be a key policy element in this regard.

The Inland Rail project will impact on adjoining road and rail infrastructure and this will require complementary investment in this infrastructure in order to fully realise the benefits of Inland Rail.

In addition there needs to be a coordinated approach to the development of freight terminals that will service the Inland Rail route. While the private sector will develop and operate terminals, the interface with government policy and planning at a state and Federal level will be critical to the overall success of the project. For example, in Melbourne there must be careful consideration of the interface between the current Port, any proposed port rail shuttle, the potential second Port location, the proposed intermodal freight terminals and the terminus of the Inland Rail project. This requires concerted coordination between the industry and the federal and state governments.

Freight Terminal Investment

In addition to freight network infrastructure investment the Strategy needs to address issues with freight terminals such as port terminals and intermodal terminals. There are numerous issues to be addressed including:

- Urban encroachment on terminals, which is addressed in more detail in section 5.3 below;
- Clearer strategy for port – rail and terminal interfaces at the ports of Sydney, Brisbane and Melbourne. In particular the Inland Rail project will require rail – port interfaces in Brisbane and Melbourne to be clarified.
- Increased co-ordination between Commonwealth, state and local government and private sector operators in relation to terminal development. Many terminals are developed by

private sector operators. These private sector developers require certainty of future infrastructure investment and certainty of future urban planning outcomes prior to terminal investment.

- Increased co-ordination of infrastructure investment and terminal development is needed to ensure that the capacity of terminals and connecting infrastructure is aligned. The interface and integration of multiple terminals with other parts of supply chain needs to be co-ordinated.

Case Study: Port of Melbourne Rail access

The Port of Melbourne has commenced a process to consider improved rail access where this access is expected to minimise costs and improve productivity along supply chains. In considering these issues numerous operating issues need to be considered including scheduling of port services through the urban rail network, prioritisation of services to the port and alignment of the port operations with Melbourne, regional and interstate rail infrastructure and the constraints of this infrastructure. This demonstrates that in considering issues of rail to the port the issue is a whole of supply chain issue requiring consideration of rail infrastructure and operations 'upstream' of the port.

5.2 Operational settings applying to existing and new infrastructure

The Strategy should include clear policies which co-ordinate and integrate freight supply chains and provide policy and regulatory certainty and consistency. As outlined in section 4.1 the main area where policy consistency is needed is consistent pricing approaches for road and rail freight infrastructure. Other areas where improved provide policy and regulatory certainty and consistency are needed are:

- Alignment of infrastructure and freight regulation between the states and between the states and the Commonwealth. For example as outlined in Attachment 2 there are numerous approaches to freight rail access and regulation in Australia. Pacific National strongly supports a move towards a single national approach to rail regulation for national freight supply chains, including aligning freight rail access regulation and legislation. For example Pacific national requires over 120 different permits to move an intermodal freight train from Sydney to Perth. Increased alignment and standardisation between access regimes and operational processes will reduce this administrative burden.

A single national approach is being achieved in rail safety and Pacific National believes that a similar approach can be used for access and pricing regulation which impact on freight supply chains which use rail.

Case Study: National Approach to Rail Safety

In 2011 Australian Governments agreed to establish a national uniform system of rail safety regulation and investigation and a single national rail safety regulator (Office of the National Rail Safety Regulator) under a single Act (Rail Safety National Law). This approach replaced the approach of each state having its own system of rail safety regulation and rail safety regulator. Given the national footprint of the freight rail network the introduction of a national approach to rail safety has increased certainty and introduced opportunities for improved systems and processes.

This consistent national approach in rail safety regulation contributes to ongoing efficiency improvements in freight supply chains and Pacific National believes that a similar approach should be used in other areas of rail regulation where different regulatory approaches exist between the states.

- Alignment of freight operations between different infrastructure owners and modes. The Strategy should act to promote and facilitate single national approaches to freight supply chain processes such as container tracking and train ordering. Standardising processes and IT will contribute to efficiency at a relatively low cost. Pacific National believes that the freight supply chain co-ordination body proposed in section 2 this submission would be suited to standardising these processes.

In addition, freight infrastructure maintenance and repair windows (particularly in rail) should be aligned across different infrastructure providers to minimise the impact on freight supply chains. These maintenance and repair windows have a disproportionate impact on supply chains and a misalignment of maintenance and repair windows further compounds this impact.

Case Study: DTPOS

Between 2013 and 2015 Sydney Trains and John Holland Rail, which operate rail infrastructure in New South Wales, implemented Daily Train Path Ordering System (DTPOS), which automated train path ordering, aligned train path ordering between the two networks and removed manual processes. Following the success of the implementation of DTPOS in New South Wales, the DTPOS system is being implemented by ARTC in 2017. This standardisation of processes between freight rail infrastructure providers contributes to efficiency improvements in freight supply chains. Pacific National believes that the Strategy should encourage further alignment of systems and processes between freight rail infrastructure providers to allow readily available efficiencies to be realised.

In addition to the areas identified above Pacific National believes that the Strategy should consider development of platforms to transfer non proprietary information and the development of supply chain co-ordinating bodies to schedule freight movements according a set of agreed guidelines in order to improve the flow of freight from one end of a freight chain to another. Such a supply chain co-ordinating body is likely to be most beneficial in supply chains with a limited number of participants and / or which occur within a defined region. (Such a body could be modelled on the Hunter Valley Coal Chain Co-Ordinator).

More broadly Pacific National believes that the freight supply chain co-ordination body proposed in section 2 this submission would be suited to facilitating the transfer of information and facilitating the establishment of supply chain bodies for specific supply chains. Information transfer, co-ordination and consistency are likely to become increasingly critical given the technological changes expected to impact supply chains in the medium term.

5.3 Regulatory settings applying to existing and new infrastructure

There are numerous issues impacting on the efficient utilisation of new and existing infrastructure including those outlined below. These issues are in addition to the reform of heavy vehicle road infrastructure pricing which is addressed in section 4.1 above.

Urban Encroachment on Freight Precincts

An efficient freight supply chain needs to be able to operate for 24 hours a day, seven days a week so that freight movement is able to occur at all times and operators can take advantage of reduced road and rail congestion. However, freight precincts such as ports and rail yards are increasingly being subject to residential urban encroachment resulting in increased community complaints regarding freight activities. Thus urban encroachment places restrictions on freight supply chain operations.

Urban encroachment is a joint responsibility of federal, state, territory and local governments and Pacific National seeks that the Strategy provides a co-ordinating framework to these three levels of government to allow the issue of urban encroachment to be addressed in order to ensure that urban planning processes recognise freight as a priority, provide sufficient land for freight activities and provide adequate separation between freight and residential land use. Improved planning frameworks and practices are needed to ensure urban encroachment issues do not continue to impact of freight supply chain efficiency.

Case Study: Spotswood Maintenance Facility

Pacific National utilises a rolling stock maintenance centre at Spotswood in Melbourne which provides engineering maintenance services 24 hours a day. The centre has been in operation for many decades. These maintenance activities generate noise emissions. Recent residential development near the maintenance facility has resulted in noise complaints and may restrict rail maintenance activities on the site and limit the lifespan of the facility.

Corridor protection

The Strategy discussion paper notes that freight corridor protection is vital for ensuring ongoing efficient freight supply chains. Further to this issue Infrastructure Australia's July 2017 report, "Corridor Protection – Planning and Investing for the Long Term" found that Australian governments could save \$10.8 billion in land purchases and construction costs with adequate corridor protection. Examples highlighted in this Infrastructure Australia report include a future freight rail line in Western Sydney and a future freight rail connection to the Port of Brisbane. Pacific National encourages the Strategy to adopt Infrastructure Australia's recommendation for a national corridor protection framework.

Corridor protection is a joint responsibility of federal, state, territory and local governments and Pacific National seeks that the Strategy provides a co-ordinating framework to these three levels of government to allow the issue of corridor protection to be addressed.

6. Technology

Pacific National strongly believes that the efficiency and success of Australia's freight supply chains will be highly dependent on emerging technological trends. As a nation, we must recognise future technology as a key enabler of our freight and supply chain goals and ensure governments and industry work together to harness and leverage the opportunities presented by this technology.

Information transfer, co-ordination and consistency are likely to become increasingly critical given the technological changes expected to impact supply chains in the medium term. Given this Pacific National believes that the freight supply chain co-ordination body proposed in section 2 this submission should be used to ensure information transfer and consistency across technological solutions.

However prior to leveraging opportunities presented by new technology there are several issues with current technology in freight rail that need to be addressed:

- Radio blackspots – there is not full radio coverage over the Australian freight rail network. This matter should be addressed and would seem to be a prerequisite for the introduction of more technologically advanced forms of train management; and
- Multiple radio and pathing systems – different rail infrastructure providers have different IT approaches to radio software and hardware and train pathing. These should become aligned prior to the introduction of more advanced forms of train management

Future technological trends which will impact on freight supply chains include:

- Driverless road freight vehicles – Pacific National believes that in the medium term such vehicles are likely to be introduced into some Australian freight supply chains:
- Driverless rail freight – Pacific National believes that driverless trains are likely to be introduced into some Australian freight supply chains in the medium term although implementation may be impacted by issues such as the suitability of current transport infrastructure, rolling stock and regulatory frameworks for testing. (In relation to the latter issue Pacific National notes that while a regulatory framework is being established for testing automated road vehicles by late 2017⁷ there is no similar framework that has been developed for the rail sector).
- Other rail freight technology improvements - Even if trains continue to have drivers it is very likely that improved rail technology will impact on supply chains. This improved technology is likely to include:
 - “in-cab” signalling where trackside rail signals are removed (saving investment in signal construction and maintenance) and signalling occurs on a screen within the train cab;
 - Single driver only operations;
 - Automatic Train Management System (ATMS) and European Train Control System (ETCS) projects which will act to better manage trains and facilitate driver only and driverless trains. Pacific National has concerns that different track providers are developing different train management systems and is seeking that the Strategy ensures that either a single system is ultimately adopted or, in the event that multiple systems are adopted such systems are compatible; and
 - Driverless road vehicles accessing freight rail terminals.
- Improved efficiency motive power– for example the recovery of power from regenerative braking in both road and rail vehicles;
- Alternative fuel engines with possible consequent reductions in emissions in both road and rail vehicles;
- Improved tracking of freight; and

⁷ National Transport Commission and Austroads “Guidelines for Trial of Automated Vehicles” 2017

- Increasingly large data sets which can be analysed to better understand the bottlenecks and cost drivers in freight supply chains.

There is considerable uncertainty about what technological change might mean for the competitiveness of road and rail; however these technological trends are likely to have significant productivity benefits. While these trends will have significant benefits they will require co-ordination across supply chains and industries. The nature of the technological changes may be such that all participants in a supply chain will need to move to the improved technology within a similar time frame.

The Strategy should establish frameworks to facilitate this co-ordination. In particular the freight industry would be seeking that:

- Governments facilitate and / or ease regulations to allow trials of new technologies to be undertaken;
- Facilitate a consistent national approach for rail industry standards and national regulation so that any innovation can be applied across the nation rather than just in one state; and
- Support and facilitate a single national approach to areas of innovation which require extensive co-ordination such as automated signalling and automated train control.

Pacific National believes that the freight supply chain co-ordination body proposed in section 2 this submission should be used to ensure these matters above are addressed. Pacific National believes that the rail industry could adopt advanced technology more quickly if consistent national standards and approaches are established, and potentially some targeted investment in innovation is undertaken via pilot programs.

7. Other Matters

Freight Performance Measurement

The Strategy discussion paper sought input on:

- The need for a freight performance framework and performance measurement. Pacific National believes that before freight performance can be measured the Strategy must clearly articulate the Government's objectives in relation to freight. Any performance measurement framework and performance indicators should then seek to measure performance against this objective; and
- The international competitiveness of Australian freight systems. Pacific National believes that assessing the international competitiveness of Australian freight systems is problematic due to the difficulty of finding suitable comparators.

Overall Pacific National believes that the Government's clear objectives for the freight supply chains need to be clarified before they can be measured and compared to other freight supply chains. In considering these objectives Pacific National believes that they should include modally neutral approaches to freight infrastructure regulation.

8. Conclusion

Pacific National supports the need for the Strategy but has concerns that there is a lack of clarity regarding the Government's objectives in relation to freight supply chains and seeks that these objectives be clarified in the course of this consultation process.

One of Pacific National's main concerns with current freight strategy is freight strategies are often state based whereas supply chains cross state borders. Pacific National seeks that the Strategy acts to facilitate an integrated national approach to freight supply chain reform.

More specifically Pacific National seeks that the Strategy addresses the following issues in order to enhance freight supply chain efficiency and effectiveness:

- Regulation applying to transport infrastructure must be modally neutral, in particular road and rail infrastructure should be regulated and prices in a consistent manner;
- New infrastructure should be provided an existing infrastructure should be upgraded, in particular passenger and freight infrastructure should be separated where possible;
- Issues of corridor preservation and urban encroachment must be addressed;
- Changes in technology should be facilitated; and
- Develop a freight supply chain co-ordination body which acts to co-ordinate and integrate the removal of bottlenecks and ensure consistency across states, transport modes and supply chains. Such consistency is likely to become increasingly critical given the technological changes expected to impact supply chains in the medium term.

Pacific National is committed to engaging with governments, industry and stakeholders to enable the policy issues above to be addressed. In particular Pacific National would welcome continued involvement in a freight supply policy processes which act to co-ordinate and integrate the removal of bottlenecks and ensure consistency across states, transport modes and supply chains.

Attachment 1 – Freight Supply Chains in which Pacific National plays a Key Role

Coal

Pacific National transports coal by rail in several coal supply chains across Australia including:

- The central Queensland supply chain where Pacific National transports coal from the Bowen Basin coalfields to export coal terminals at Gladstone, Dalrymple Bay and Abbot Point, and to domestic users.
- The Hunter Valley coal supply chain where Pacific National transports coal from the Hunter Valley and Gunnedah Basin coalfields to export coal terminals at Newcastle and to domestic users (including power stations and steel works in the Illawarra region).
- The New South Wales Western coalfields supply chain where Pacific National transports coal from the Western coalfields to export coal terminals at Newcastle and Port Kembla and domestic users.
- The New South Wales Southern coalfields supply chain where Pacific National transports coal from the Southern coalfields to the export coal terminal at Port Kembla and domestic users.

Other Mineral products

Pacific National transports other mineral products in several supply chains across Australia including:

- Copper concentrate supply chains including Mt Isa to Townsville and western New South Wales to Port Kembla and Newcastle
- Lead and zinc supply chains including western New South Wales to Newcastle and Port Pirie
- Mineral sands supply chains in regional Victoria
- Iron ore from eastern Western Australia to Perth

Steel

Pacific National transports steel products in several supply chains across Australia including taking steel products to and from steel production and processing centres in Whyalla, Port Kembla and Westernport and taking steel products from these production centres to distribution centres in major cities.

Construction products

Pacific National transports construction products in several supply chains across Australia including:

- Cement supply chains along the Queensland coast and from southern New South Wales to sites in Sydney and the New South Wales coast;
- Limestone supply chains within southern New South Wales;
- Aggregate supply chains from the southern New South Wales to Sydney; and
- Trains for specific construction projects (for example railway maintenance or pipeline construction).

Waste

Pacific National transports waste products in a waste disposal chain from Sydney to regional New South Wales. Given the increasing growth in Australia's population and the lack of available land-fill sites near major cities waste disposal chains are likely to become more important in the future.

Grain

Pacific National transports grain by rail in several grain supply chains across Australia including:

- New South Wales grain supply chain taking grain from sites in regional New South Wales to export terminals and to domestic users;
- Victorian grain supply chain taking grain from sites in regional Victoria and southern New South Wales to export terminals and to domestic users;

Containerised products

Pacific National transports intermodal containers between various population centres including:

- Interstate container movements between all the Australian mainland state's capital cities (i.e. Brisbane, Sydney, Melbourne, Adelaide and Perth)
- Intrastate container movements including movements between state capitals and ports and regional cities and locations within the state.

Attachment 2 – Australian Rail Access Regimes

The table below outlines the differing approaches to rail access regulation and price determination in Australia.

Network	Service Provider	Regime	Regulator
Brisbane Metropolitan and Qld Regional Network	Queensland Rail	State based regime using Access Undertaking with regulated contract but unregulated price ¹ .	QCA
Qld Coal Network	Aurizon	State based regime using Access Undertaking with regulated contract and price.	QCA
National Interstate	ARTC	Commonwealth regime using Access Undertaking with regulated contract and price.	ACCC
Hunter Valley Coal network	ARTC	Commonwealth regime using Access Undertaking with regulated contract and price.	ACCC
Sydney Metropolitan	Sydney Trains (Transport for NSW)	State based Regulatory Regime with unregulated contract and price.	IPART
NSW Regional	Country Rail Network (Transport for NSW)	State based Regulatory Regime with unregulated contract and price.	IPART
Melbourne Metropolitan	MTM	State Based Access Undertaking with regulated contract and price.	ESCV
Broad Gauge Regional Victoria	V/Line	State Based Access Undertaking with regulated contract and price.	ESCV
Broad Gauge Victorian rail yards	VicTrack	State Based Access Undertaking with regulated contract and price.	ESCV
SA Regional	Genesee and	State Based Regulatory	ESCOSA

	Wyoming Australia	Regime with unregulated contract and price.	
Darwin to SA	Genesee and Wyoming Australia	State Based Access Act with unregulated contract and price.	ESCOSA
WA Network	Brookfield Rail	State Based Access Code with unregulated contract and price.	ERA

¹ The Queensland Rail West Moreton Coal System has a regulated price.