Department of Transport
Public Transport Authority

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WESTERN AUSTRALIA

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Western Australian Transport

Submission to *Inquiry into National Freight and Supply Chain Priorities: Discussion Paper*

Introduction

The Western Australian Transport Portfolio comprises Main Roads Western Australia (MRWA), the Public Transport Authority (PTA) and the Department of Transport. Together, these agencies work to accommodate both the movement of passengers and freight and collaboratively pursue the best outcomes for the State.

It is becoming increasingly apparent that the rapid change of technology, business models and social structures are changing the transport task, both in mode and method. However, how and when these changes occur and the impact that they will have is not yet clear. Infrastructure solutions may only be effective in the short to medium term. Policy and regulatory approaches providing alternative solutions need to become more flexible to facilitate Governments responding to environmental changes in a timely and innovative manner. Furthermore, it is no longer appropriate for Governments to extrapolate past performance and trends as an indicator for future needs.

The Western Australian Transport Portfolio is developing programs to deliver short and long term improvements in productivity across supply chains. These include:

- the identification and implementation of Fremantle Port landside freight productivity improvements (such as decreasing truck empty running, increasing freight on rail and improving some road intersections);
- mapping out and identifying projects to improve productivity across agricultural supply chains in the southern half of the State; and
- port master planning to determine the ultimate port and associated landside facilities required to support the Perth metropolitan region.

Whilst this submission considers the existing supply chains and opportunities to improve infrastructure in the short term, it also recommends other opportunities for reform be explored. The Land Transport Regulation 2040 work undertaken by the National Transport Commission incorporates scenario planning and sets a benchmark for the development of future strategies.

Where there are particular items in this response relevant to the questions raised in the Discussion Paper, these have been related to the question number. Otherwise, they have been grouped thematically. Case studies have also been included where they demonstrate how Western Australia has taken an approach which may provide benefits if applied nationally.

Western Australian freight context

Western Australia's freight task is diverse, and encompasses the movement of bulk export commodities, livestock, manufactured goods and the transportation of finished products for household consumption. Western Australia is an export State and exports 43 per cent of Australia's exports by value and 60 per cent of Australia's exports by weight.

The remote nature of much of the bulk freight in Western Australia creates specific transport challenges due to vast distances, small population, climatic extremes and demanding freight tasks – these are challenges that require a more considered approach to transport regulation, infrastructure and service delivery to maximise the efficiency and safety of freight transport. Innovation, data and technology are essential to ensure the WA economy continues to grow and contribute to the nation's prosperity.

General containerised freight is largely packed or unpacked in the major container precinct on the eastern side of the metropolitan area in Kewdale/Forrestfield, which processes both interstate and import/export containers, with the latter transported by rail or road to Fremantle Port.

The State-owned rail freight network extends across the southern half of the State and connects to the Eastern-Goldfields Railway owned and operated by ARTC. The PTA operates passenger transport services on both road and rail, and also manages the lease of the State-owned freight rail network, currently leased to Arc Infrastructure (previously Brookfield Rail) until 2049. Priorities on the freight rail network are only considered within this document at a strategic level and any more detailed consideration should be provided by and discussed with the infrastructure manager.

MRWA manages the primary road network in Western Australia, including both arterial urban roads and key regional freight roads. Local Government Authorities are responsible for maintaining lower trafficked roads within their jurisdictions.

Intermodal terminals (IMTs) in Western Australia are operated privately and on a commercial basis, in many cases on land leased from the State Government for freight purposes. In accordance with the recently published Perth Freight Transport Network Plan (2016), land for potential future IMT development has been quarantined for this purpose. This does not in any way restrict private businesses from developing their own intermodal terminals in other locations.

There are eight major ports in Western Australia governed by five Port Authorities, in addition to one managed under a Port Operating Agreement with the Minister for Transport and multiple other port facilities managed by private organisations. Regional ports primarily export bulk mineral and agricultural resources; Fremantle Port services the metropolitan area and is currently the only container port in Western Australia.

In order to maximise the productivity benefits of limited State Government funding, State agencies continue to investigate options to partner with private industry and also pursue soft infrastructure solutions.

2.1 (a) What infrastructure is used in your supply chain and how well does it perform?

Road and rail are both competitive and complementary transport modes. Economies of scale make rail the preferable option for long-haul bulk freight transport, where short-haul flexible deliveries are best suited to road transport. Many transport tasks in between are contestable between road and rail, such as port container shuttle services, or bulk freight transported a distance of less than 150km. Improving the efficiency of rail, thereby reducing the cost differential between the two modes, will incentivise the use of rail transport where road and rail are contestable.

The Perth urban rail network has limited interaction with the movement of freight. Infrastructure, specifically tunnels and bridges, limits the type of rolling stock which can access and travel through the network. The network is predominantly narrow gauge with sections of dual gauge between Midland and East Perth, the termination of the EGR (14 kilometres) and a short section between Robb Jetty and North Quay in Fremantle (6 kilometres).

The current volume of freight and passenger rail movements on the shared track in the metropolitan area does not inhibit either service. However, increased growth in either passenger or freight transport may require expansion of existing infrastructure. There are also infrastructure constraints that currently preclude double stacking of containers into the metropolitan area beyond Kewdale/Forrestfield.

The Western Australian Government has committed to increasing the subsidy per container for eligible containers transported by rail between Kewdale/Forrestfield and the Fremantle Port Inner Harbour, to reduce the heavy vehicle movements in the metropolitan area. In 2016/17, rail captured 15 per cent of the container throughput of Fremantle Port, reducing the number of trucks on key arterial roads by up to 100,000 one-way movements. The subsidy is not intended to be a permanent solution to underwrite competitive neutrality, but in the short term is assisting in meeting Government objectives of more freight on rail and reducing congestion.

Infrastructure solutions need to be considered as only one approach to addressing a deficiency or seizing on an opportunity to improve productivity across the supply chain.

The existing transport infrastructure priorities for Western Australia are articulated in published plans including the Regional Freight Transport Network Plan (2013) and Perth Freight Transport Network Plan (2016). These plans are robust responses to meeting future demands by both road and rail freight for the region.

Many regional local government roads are under increasing pressure from heavy vehicle movements and do not have the required resources to maintain and/or renew these assets. These include some roads that are only utilised for a short ‘last mile’ link to the farm gate or facility as well as thoroughfares. Development of a framework for local governments to charge ongoing heavy vehicle movements for a particular freight task is now being investigated.

Recommendation: That 'last mile' roads are considered part of the supply chain and resourcing of improvements and/or maintenance of these roads is investigated.

Recommendation: That in the strategic evaluation of proposals for transport infrastructure improvements or developments, any parallel or complementary routes must be taken into account to ensure that scarce public resources are efficiently allocated.

2.1 (c) What data gaps are you aware of in relation to Australia's freight and supply chains?

Whilst rail generally carries more freight by volume, particularly bulk freight over long distances, the road transport industry undertakes a much larger number of trips for smaller volumes. This includes parcel and grocery deliveries as well as last mile container movements and palletised goods. Given the significant number of road freight transporters (estimated at 42,000 in the National Transport Commission's Who Moves What Where 2016 report), including a large number of owner-drivers, these movements are difficult to track.

Whilst there is some aggregated data available nationally, there is still an incomplete understanding of where freight moves to, and which routes are utilised. The Western Australian State Government is currently preparing a major commercial vehicle survey, which will provide valuable data and insight into what moves where within the Perth metropolitan area and allow an update of data in WA's key transport models. This will also incorporate an establishment survey and specific area freight generator surveys, such as a repeat of the 2011 Container Movement Survey, which will identify origins and destinations and staging points for import/export containers.

However, much better data is required for sound planning and policy development, especially for specific commodities or supply chains in regional areas.

Governments need to be proactive in order to integrate the increasing amount of data into decision making and planning; more importantly, the data needs to be analysed and interpreted in a meaningful way which allows it to add value to these decisions.

Recommendation: That specific freight related data sets are identified and regularly updated to inform the planning and development of future transport policy and infrastructure requirements. This work may be incorporated in future programs developed by the National Transport Commission under its project: Supporting good decisions to improve transport productivity.

Recommendation: That State and Commonwealth Government departments continue to pursue open data arrangements where practicable and provide resources to analysing data sets to ensure that relevant data adds value to decision making.

3.1 Urban growth pressures

In accordance with Infrastructure Australia's recent report Corridor Protection: Planning and investing for the long term, it has been identified that encroachment of sensitive land uses, particularly housing, along freight routes is becoming more common in increasingly dense residential areas. This often leads to pressure to impose operational restrictions on transport, which reduce the efficiency of the freight network. WA has recently revised the WA Planning Commission's State Planning Policy 5.4, which provides guidance on the type and quality of dwellings built in proximity to freight corridors.

The limited space available for freight transport networks in urban and suburban areas, as well as limited funding available for greenfield developments, require Governments to think smarter about maximising the use of existing infrastructure.

There is growing anecdotal evidence suggesting that increasing numbers of online purchases and small parcel deliveries to dense urban areas or urban workplaces are creating additional freight movements on congested urban roads, which often have limited parking and access for light commercial vehicles. This 'last mile' delivery to final customer contributes to noise, air pollution and congestion, as well as creating conflict with other land uses in the urban environment. Improved technological solutions may permit consolidation of some deliveries to reduce these negative externalities, or it may increase demand.

It is essential for Governments to prepare for a different future; not just with respect to automation, but also a different economy, emerging business models and changing consumer preferences. These will significantly impact on the urban transport landscape. The rapidly changing end-consumer profile necessitates a more agile and diverse system across the whole supply chain.

Recommendation: That the Commonwealth Government broadens its focus from building new infrastructure to removing bottlenecks, sharing transport corridors, reducing truck empty running and other non-infrastructure solutions in order to optimise the use of existing infrastructure and reduce whole of supply chain costs.

Recommendation: That all national strategies and planning include alternative futures assessment (or scenarios) to ensure that, as far as is practicable, recommendations and implementation plans are robust.

3.2 Port Corridor Pressures – Protecting Land, Sea and Air Connections

Ports are often located in desirable residential areas, and providing freight access to these precincts is becoming more difficult. Freight corridors need to be identified and adequately protected before urban development renders them inefficient. The efficient operation of the landside freight task must be planned and optimised. New ports should be planned as part of broader industrial precincts that minimise the likelihood of similar conflicts occurring in future. The metropolitan port master planning process currently underway in Western Australia is taking into consideration both port and greater landside planning.

Increasingly larger ships will require a more efficient landside freight movement network that can handle large volumes of freight in a short period of time. This may involve higher productivity vehicles and the use of new technology to improve ship unloading times. Greater flexibility in operating hours would also help in spreading demand over the course of the day and minimising network congestion.

3.3 End to end supply chain integration and regulation

There are references within the Discussion Paper to a B-double being up to 26 metres in length, whereas in Western Australia, a B-double can be 27.5 metres in length.

Western Australia and the Northern Territory do not subscribe to the Heavy Vehicle National Law administered by the National Heavy Vehicle Regulator (NHVR). As a result, WA permits operation of larger, and more efficient, truck configurations and manages a more efficient permit process than those jurisdictions subject to the NHVR. Western Australia's mandate is to promote productivity efficiencies provided there is no detriment to public safety or adverse impact on the road asset. Under the current arrangements, road freight productivity would deteriorate if the NHVR was applied in WA.

Operators are best placed to respond to issues specific to empty containers movements, though consideration also needs to be given to the location of Empty Container Parks and their proximity to the freight supply chain (both road and rail).

Priority also needs to be given to establishing an interoperable train protection and control system to ensure that there are no break-of-gauge issues between rail infrastructure managers.

Recommendation: That an assessment is undertaken to compare the different regulatory approaches adopted across Australia and identify best practice in promoting productivity and overall supply chain efficiencies.

Recommendation: That the establishment of an interoperable train protection and control system be prioritised with participation from all key rail infrastructure managers.

3.5 Changing technology

The pace of technological change makes planning for transport infrastructure a complex process. Greater use of robotics, drone delivery, automated and connected vehicles and the increasing focus on shared utilisation of vehicles will increasingly impact on the regulatory and infrastructure requirements to govern the future transport task.

In order to best respond to this, greater recognition is needed for soft infrastructure solutions to improve productivity across supply chains. Historically, funding bodies such as Infrastructure Australia have focused on hard infrastructure projects. However, in a technologically advancing economy, such projects may quickly become obsolete and exhaust limited funding sources. Soft infrastructure solutions are generally also more adaptable to contextual changes than hard infrastructure, allowing more flexibility in how to best support the movement of freight in the future.

A well-managed port freight transport supply chain can result in improved operations and greater profitability for business as well as broader road transport benefits that can result in improved environmental and social outcomes for the whole community such as reduced road congestion and emissions and improved road safety.

Progressing initiatives such as the Port Community Systems (PCS) concept to facilitate shared, real-time information on freight movement will be essential for an effective, integrated solution for freight transport. Benefits from a well-established PCS are more efficient and faster port processes, through automation and reduced paperwork. A PCS also offers improved security, cost reduction and potentially more competitiveness for each user. The PCS aims to use industry supply chain information more effectively to improve the use of existing physical infrastructure, such as roads and port facilities, and to improve operational efficiency and productivity within a supply chain. The strategic use of existing infrastructure is a significant issue for both Government and industry, which can ultimately delay the need for major government or industry investments to upgrade key transport infrastructure assets.

Autonomous Heavy Vehicle Technology: Case Study

> *Main Roads is a member of the Australian Driverless Vehicle Initiative (ADVI) which was established to build momentum in the autonomous vehicle space by exploring the impacts and requirements of this technology in an Australian context. ADVI is a cooperative of members, including government, industry and academia. The economic benefits of automated trucks are already evident in the Pilbara where mining companies have implemented autonomous trucks to move large amounts of ore efficiently and safely on mine sites.*
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> *In consultation with ADVI, an opportunity has been identified to undertake a trial of an autonomous heavy vehicle platoon in WA. With an economic incentive to reduce costs, increase productivity and improve road safety, there is strong interest from transport operators in WA to participate in such a trial which is dependent on commitment from technology providers to bring the technology to Australia. ADVI is in discussion with various technology providers and expects to bring the technology to Australia in 2017.*
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> *The trial will raise awareness and provide insight into the benefits of this new technology. It will inform the development of further trials and the development of Government policy and legislation to ensure accessibility and safety for all road users. The trial is a longer term project and is likely to occur in the first instance on a private mine haul road where the potential safety risks around interaction with other vehicles can be tightly managed.*

Recommendation: That criteria to assess projects for Commonwealth funding give appropriate weighting to encourage soft infrastructure projects.

Recommendation: That strong support be given to the development of port PCS; in the first instance, supporting the proposed PCS pilot project in South Australia, with an expectation that this type of approach could be adopted in due course across jurisdictions.

Productivity, pricing and charging

It is important to make the most of the existing network and identify ways to increase efficiency, especially at a time when the State budget is constrained. This can be achieved through a range of key strategies including:

- encouraging the use of larger, more efficient heavy vehicles on appropriate routes, bearing in mind potential impacts on freight rail services;
- upgrading a select number of restricted access vehicle routes to enhance safety and productivity;

- the adoption of new technologies, including traffic management and intelligent transport systems and strategies;
- incentivising the use of rail to transport freight through appropriately targeted measures such as container subsidies;
- careful assessment of the alternative options for transport infrastructure proposals for funding;
- extending operating hours of the rail freight network to increase the frequency of freight trains; and
- better utilisation of the rail freight network through effective train scheduling to optimise available scheduled train paths.