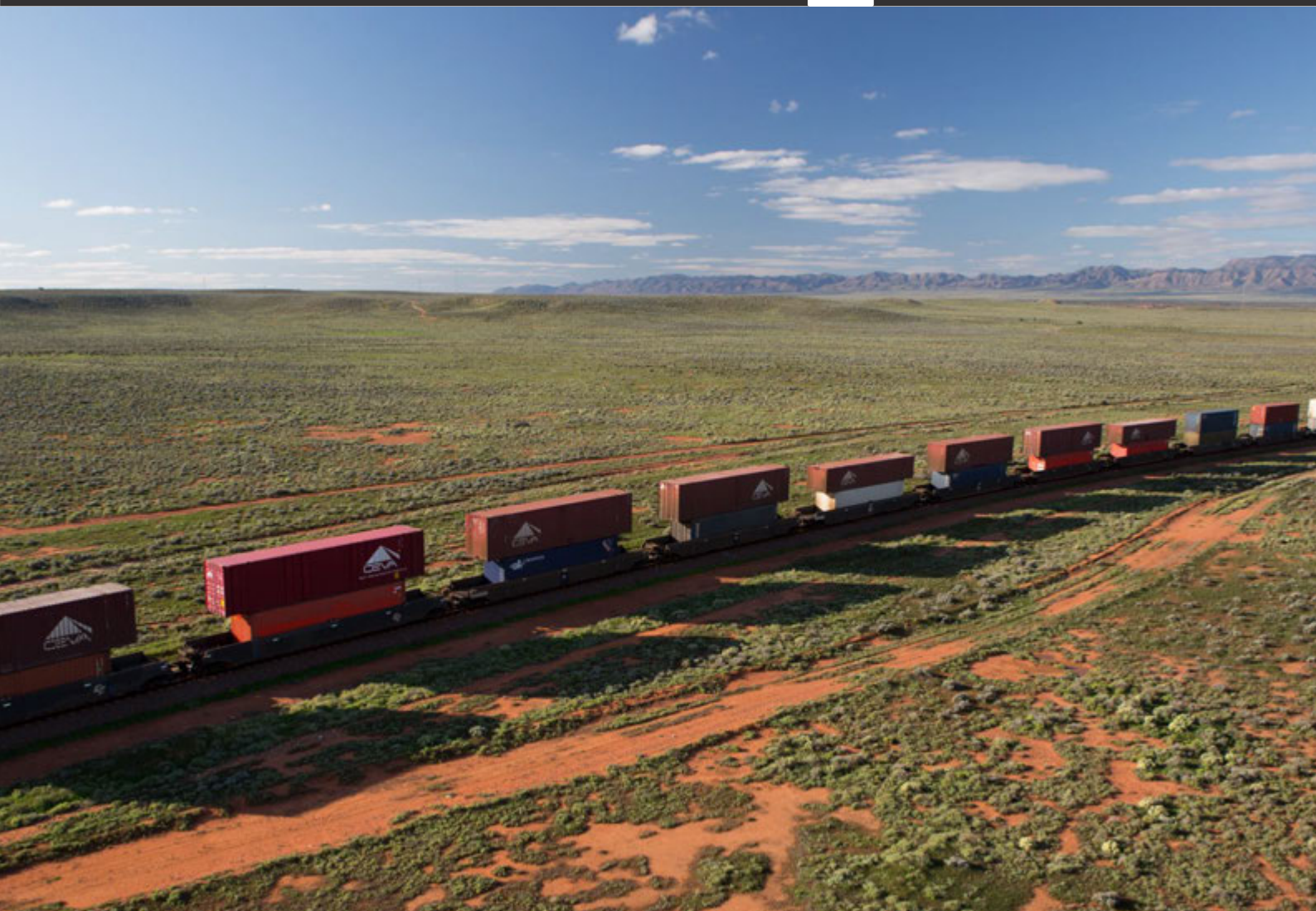
ARTC Submission

Productivity Commission Issues Paper

Vulnerable Supply Chains

May 2021

ARTC



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1 Executive summary

ARTC would like to emphasize its support for the importance of the purpose of the study to improve Australia's preparedness to deal with possible supply chain disruptions and supports the key findings of the report. In particular, ARTC strongly supports the findings (5.2 and 5.3) that:

- risks are best managed by those that have direct incentives to mitigate them;
- that firms will employ a range of strategies to effectively manage risk; and
- that all levels of government have responsibility for ensuring regulations are fit for purpose.

The report does highlight the criticality of transport to the supply chains; however, it does not review the vulnerability of those supply chains; rather focusing on the vulnerability and concentration associated with nodal markets. The methodology therefore effectively assumes that the transport links in the supply chains will be available, and in a manner which supports firm based risk management. This is not necessarily true and highlights some essential areas of focus to ensure that the transport links in supply chains are resilient and available to support the critical supply chains addressed in the report. These areas are:

- The exposure of transport supply links to the flow on effects of government policy, threatening the commerciality of those links, increasing the risk of closure and hence increasing the vulnerability of supply chains;
    - In particular, the risk of proposed coastal shipping legislation and the introduction of international shipping on the domestic transport industry needs to be broadened from a focus on developing domestic shipping industry to domestic freight transport (eg road and rail) and that a first option on such freight movements to domestic rail and road companies before international shippers are provided the haulage opportunity.
- Ensuring that freight data is made available to allow greater analytical management of risks across the supply chain and support evidenced based policy across the supply chain;
    - The Commonwealth Government's development of a National Freight Data Hub is critical to this process and should continue to be a priority for Governments and Industry alike.
- Ensuring that appropriate investment is made to develop the infrastructure required to most efficiently, and safely, transport freight across the supply chain;
    - The capital investment required to create and maintain transport links is substantial, with usage over a timeframe that is beyond the usual investment horizon of private firms; suggesting a role for government in taking this temporal investment risk; and
    - Facilities that were developed to support supply chains in the previous supply chain may no longer be fit for purpose for the 21st century needs of firms. Support for the development of new, integrated, infrastructure that optimize the modal transfer of freight, such as the development of new rail terminals with new automated technology and collocated warehouse facilities for better supply chain management, is required.
- Ensuring that the introduction of new technology to improve the operation and safety of networks is consistent across the supply chains, notwithstanding the involvement of different firms and ensuring the avoidance of a 21st Century rail gauge issue through the coordination of network investments;

    - The Commonwealth Government has a critical role to play in coordinating the introduction of new network management systems (such as ARTC's Automated Train Management System, or ATMS) across states and network owners to ensure that there is a single process across the national rail network to minimize cost and maximize the efficiency of the national rail network.
- The need for regulatory frameworks which promote the individual risk management decisions of firms within the supply chain and their ability to negotiate the terms of service they require.
    - Consistent regulation between competing modes of transport is essential. As highlighted in the PC's 2018 Transport Review, road freight enjoys substantial regulatory and safety benefits over its modal competitor rail. These benefits advantage road freight and risk the survival of rail; notwithstanding the substantial economic benefits that arise for the Australian economy from greater freight on rail through lower accidents, lower congestion and lower emissions;
    - Rail has inconsistent regulatory access regimes which increases costs and complexity of operation. A consistent national rail access regulatory framework is essential to ensure rail maximizes its position in the transport supply chain;
    - In keeping with the recommendations of the report, this framework needs to maximize the contracting ability of individual firms accessing the network, whilst ensuring a transparent, non-discriminatory access regime is in place.

(a) Key Recommendations

Specific recommendations made by ARTC as part of this response to improve network resilience to lessen the vulnerability of supply chains:

- Government should partner with industry to establish a co-ordinated system to better manage, foresee and limit the severity of disruptions;
- The right provided within the Coastal shipping legislation framework for domestic shipping companies to be given first right to transport freight in Australian waters should be extended to all domestic transport providers including rail and road, not just shipping;
- The development of the National Freight Data Hb should be a priority for the Federal Government and the Transport Industry;
- Commonwealth and State Governments should prioritize the analysis of optimal locations and investment strategies for the development of new, fit for purpose, rail terminals;
- The Commonwealth Government continue to coordinate the introduction of new network management systems (such as ATMS) to ensure that there is a single process across the national rail network to minimize cost and maximize the efficiency of the national rail network.
- The pace of Heavy Vehicle road reform should be accelerated to reduce the legislative and regulatory competitive advantage of road transport;
- The development and introduction of a consistent national rail regulatory framework should be prioritized.

2 ARTC Background

ARTC was created in 1998 through an Inter-Governmental Agreement (IGA) signed by the Commonwealth, Victoria, South Australia, NSW, Western Australia and Queensland and is a company under the Corporations Act, whose shares are held by the Commonwealth of Australia. The formation of ARTC was a key plank in the significant focus on rail freight productivity in the late 1990's which also included the creation of Australian Transport Commission targets and significant government investment to enhance the rail network's performance.

ARTC was established as a consolidated interstate rail track owner to create a single process for access. ARTC's charter is to:

- Improve performance and efficiency of interstate rail infrastructure;
- Increase capacity utilization;
- Listen, understand and respond to the market;
- Operate on sound commercial principles; and
- Provide shareholders with a sustainable return on capital invested.

ARTC currently has responsibility for the management of around 8,500 route kilometres of standard gauge track, in South Australia, Victoria, NSW and Western Australia which includes the interstate freight network in those states as well as the Hunter Valley Coal Network in NSW. In Queensland, ARTC leases the section from the Queensland Border to the Acacia Ridge Terminal. Over these corridors, ARTC is responsible for, inter alia, the operational management and infrastructure maintenance of the network.

ARTC therefore operates and maintains the critical rail infrastructure that provides the transport links in the vulnerable supply chains assessed within the report.

The report highlights the critical nature of these links but assumes they will be available in a manner which supports the findings of the report; in particular that they support greater risk management by agreement across the supply chain.

ARTC believes there are critical risks to this assumption, which are addressed further below.

3 Network resilience

Resilience of our transport networks is essential if we want network capacity to be availabe 'no matter what'. Operators and decision makers therefore need to design and implement strategies that deliver optimized outcomes between the need for resilience, sustainability, efficiency and the safety of transport networks during operations.

Meeting future freight demand and resilience requires consideration of technological, societal, organisational, environmental and physical systems. It requires a long-term plan as well as a whole-system, cross-sectoral approach involving multiple stakeholders; suggesting a role for Government in coordinating the planning and investment required to deliver this outcome. In particular, there needs to be greater consideration on long-term planning and policy measures that encourage greener transport modes (like rail) and climate-resilient infrastructure innovation. The introduction of road pricing reform should be a catalyst for behaviour incentives to better manage our resources.

This long term planning includes the need to preserve corridors for future freight purposes which face challenges from urban encroachment particularly in inner city areas where urban amenity is highly valued. The continued scarcity of urban land will further impact future investment in transport

corridors and terminals. Greater planning is therefore required to ensure corridor and land preservation to allow future supply-chains to be developed.

4 Rail During Covid

The coronavirus has exposed the fragility of Australia's supply chains. Moving ahead, consideration needs to be given to how to build the capabilities necessary to respond to these future events with both pace and certainty.
In light of these circumstances, states should consider modifying their approach to recognise the supply chain as a key business driver. One solution is for governments to partner with industry to establish a co-ordinated system to better manage, foresee and limit the severity of disruptions. Collaboration across the rail industry, government and other stakeholders will improve the understanding and management of future major crises.

5 Impact of Foreign Competition

Freight can be transported between Australia's cities by rail, or road or sea. The impact of coastal shipping on domestic freight networks was clearly highlighted in an article by Robert Gottliebsen in The Australian (Stage set for a Chinese inland rail squeeze, 18 March 2021) where it was stated that, in direct response to increased competition from foreign shipping (under existing legislation), domestic rail haulage companies reduced their haulage capacity on key freight routes. This capacity reduction meant that, due to the short-term impacts of COVID-19 on demand for freight services, rail was not in a position to meet the surge of demand during the peak Christmas period, therefore increasing the vulnerability of transport supply chains.

A further loosening of coastal shipping legislation will only exacerbate this problem, placing further pressure on road and rail networks and therefore increasing the vulnerability of the supply chains. The resilience of transport links to competitive shocks should therefore not be assumed away as, individual transport firms within those networks will make commercial decisions on the capacity they support; and where that capacity is reduced in response to legislative decisions, the resilience of the networks is reduced and vulnerability of supply chains increased.

ARTC does support the need for firms to make the most appropriate decisions to manage the risks of their supply chains (including costs). The broader economic impact of these decisions, however, does need monitoring, and considered as part of the legislative process. ARTC therefore recommends that any new changes to transport policy should be considered in the context of the overall impact on all transport networks and the impact on the overall Australian economy.

The Coastal shipping legislation framework includes a need for domestic shipping companies be given first right to transport freight in Australian waters. To ensure that the resilience of Australian transport networks is not risked as a consequence of further coastal shipping reform, ARTC recommends that this right be extended to all domestic transport providers, not just shipping. That is, the ability for road and rail to transport the freight, and the support this provides for the resilience of national transport networks, should be a priority over international shipping; provided the risk management needs of the beneficial freight owner can be met.

6 Understanding risk requires access to data

A key aspect of the findings is for firms to understand their risks across the supply chain and for government to understand where its involvement is required. Critical to both of these tasks is access to data; to allow tracking of specific freight, understanding of the operational performance of the supply chain, valuation of firm specific risks and strategic options and finally to inform evidenced based policy assessment.

Therefore, the ability to make improvements in the resilience of supply chains, especially transport linkages, requires access to data. The lack of this data availability is a constraint on the commerciality of freight networks; especially rail in respect of assessing and managing the risk of intermodal competition. Lack of data to inform decision making is therefore a significant risk to the operation of transport networks and hence increases the vulnerability of supply chains.

The Commonwealth Government is aware of this and is working with Industry on the development of a National Freight Data Hub. ARTC considers this development a necessary, and critical, innovation to ensure data is available which allows in depth analysis of the operation of the freight supply chain to ensure optimal policy, risk management and investment decisions are made. The development of a centralized and independent freight supply chain data hub will also provide a framework for the potential development of a national freight supply chain operator who is responsible for assessing the overall productivity of Australia's freight supply chain, and not just a particular mode.

The data hub should leverage the significant work of industry in developing the GSI system of global supply chain standards to ensure there is standardization across the supply chain, allowing for more informed decision making by participants and governments alike.

The potential productivity and policy benefits to freight, and also to the wider Australian economy, from this development are significant. The benefits to government through better informed investment decision making will more than offset the cost of development of the hub. The development of this data hub should therefore be a significant policy priority for all levels of government and industry; with funding initially by government but with a requirement, similar to the ABS, that bespoke requests be met on a user pays basis.

7 Appropriate investment for an Efficient Supply Chain

At a time when the country is looking to drive economic growth and decrease Australia's supply chain vulnerability, ARTC would encourage governments to work with private industry to assess investments in productive assets that improves the efficiency and resilience of Australia's economy.

The infrastructure which underpins Australia's transport networks has been developed over time with a mixture of public and private sector involvement. The capital investment required to create and maintain transport links is substantial, with usage over a timeframe that is beyond the usual investment horizon of private firms; suggesting a role for government in taking the initial temporal investment risk.

The Government and Industry have committed substantial investment in projects such as Inland Rail and the port Botany duplication which provide real options in developing the resilience of Australia's supply chain networks. In addition, future proofing of the network to provide resilence

against futire demand needs has required investments in network upgrades to meet future freight needs (such as higher axle loads and provision for double stacking of containers). The upfront nature of investment and back ended nature of benefits means that there is a role for Government to bridge this investment risk gap to ensure that Australia's transport network infrastructure is best placed to meet the challenges of tomorrow.

The sustainability of rail supply chains depends on the availability of rail freight terminals which represent the modal transfer point from rail to road and delivery to customers.; especially those with access to warehousing and strong rail connections, including short haul "port shuttle" services and the interstate freight network.

Much of the Australian terminal network in operation today was developed in the 1980's and 1990's and support the operation of the supply chains in place at that point (from both a location and physical infrastructure perspective). These terminals are now becoming land constrained due to urban expansion, may not be structured for modern efficient trains and have not been developed with the communication and data needs of today in mind. The land constraints inhibit both capacity expansion but also do not allow for the development of warehousing on adjacent land to assist in inventory management and hence in making the integrated supply chain as efficient as possible.

The one exception to the timeframe for infrastructure above is Sydney, where the Moorebank facility development has only just been completed and hence is tailored to the information and infrastructure needs of today. The successful development and integration of Moorebank facilities with warehousing, and the consequent benefits to the management of the rail supply chain, demonstrates the benefit of new investment in transport infrastructure.

This development has been undertaken with a mixture of private and government involvement further demonstrating the ability of both to work together to deliver fit for purpose, modern and efficient infrastructure that enhances supply chain efficiency and hence resilience.

ARTC understands that the Commonwealth and state governments are assessing the need for new terminal infrastructure to enhance the rail supply chain efficiency and network resilience. ARTC strongly supports this analysis as new investment is required.

In summary, facilities that were developed to support supply chains in the previous supply chain may no longer be fit for purpose for the 21st century needs of firms. Support for the development of new, integrated, infrastructure that optimize the modal transfer of freight, such as the development of new rail terminals with new automated technology and collocated warehouse facilities for better supply chain management, is required. ARTC therefore supports reviews of the development of new infrastructure and the identification of where private investment is possible; but where government fills the gaps to ensure the vulnerability of supply chains is mitigated.

8 New technology

The discussion above around the importance of data, and the role of technology developments such as the Internet of Things and Blockchain as highlighted in the report to assist in supply chain risk management, demonstrates the ongoing need for investment not only in the physical asset, but also in communication and data links to maximize the efficiency of the operation of that asset. Finally, new technology can have a critical role in the safe and efficient management of transport networks.

All of these improvements add to network resilience and ensure more efficient transport networks allowing greater flexibility in individual firm risk management and therefore should be encouraged. Private investment should be prioritized based on negotiated outcomes; however where private investment is not feasible or, more critically, there is a need to coordinate investment across jurisdictions and firms, there is a key role for Government to play to ensure the most efficient outcome.

Development of technology has allowed the development of new ways to safely manage network operations; improving both network capacity but also, most importantly, network safety based on a level of automation. These technologies enhance the resilience of rail networks. They reduce the potential for human error therefore making systems faster, smarter and more adaptive. Technologies like the Advanced Train Management System (ATMS) being developed by ARTC and technology partner Lockheed Martin will improve rail safety by allocating freight trains to be remotely controlled during an emergency, including automatic braking, and boost efficiency of services. This requires investment both in track infrastructure but also train borne units; and it is the impact on the train operators that is critical for efficient operation of the networks. Industry and governments are collaborating on ways to accelerate its roll-out on the national rail network

The standard gauge interstate freight network is not operated by ARTC alone but involves a number of other networks depending on the origin and destination of freight, with different network managers in WA, SA/NT, NSW (2) and Victoria. Each of these networks makes rational investment decisions that best fit their own specific requirements. However, it is highly probable that this would not be the most efficient outcome for the transport network as a whole; as it would create a range of different operating systems and infrastructure which imposes excessive costs on the above rail operator who traverses multiple networks on a single journey and therefore needs the relevant technology to meet the requirements of each network operational management system. This therefore leads to inefficient investment across the whole supply chain; even if the choice at the network level is rational. In effect, this is the 21st century version of the decision by individual colonies to invest in different gauged rail networks in the 19th Century, which inhibited the efficient transport of freight for over a century and was only resolved with the standardization of the network in the mid 1990's.

The Commonwealth Government therefore has a critical role to play in coordinating the introduction of new network management systems to ensure that there is a single process across the national rail network to minimize cost and maximize the efficiency of the national rail network.

9 Inconsistent Regulatory Framework for Transport

The lack of a consistent regulatory framework for freight transport increases the vulnerability of supply chains as it:

- Creates a significant legislative regulatory competitive advantage for road over rail due to an inability to price and manage road capacity consumption as well as significant regulatory safety benefits (such as fatigue management) which road enjoys over its competitors. This leads to:
    - excess consumption of the road network capacity by heavy vehicles, imposing significant costs on the Australian economy based on increased accidents,

congestion and emissions which reduce road network resilience; In turn, excess road consumption reduces the consumption of rail capacity which decreases rail's resilience as highlighted above in discussing the impact of coastal shipping legislation on rail capacity and commerciality; therefore
    - The pace of Heavy Vehicle road reform should therefore be accelerated to help reduce the competitive advantage of road.
- The lack of a consistent rail access framework across the national rail network adds costs and regulatory burden to participants and inhibits the efficient operation of the national freight rail network. ARTC believes the development of a consistent national rail access framework should be a key priority for state and federal governments and would greatly improve the efficiency (and hence resilience) of the freight transport network; and
- Given the focus of the report on the importance of contractual risk management for firms to decrease the vulnerability of supply chains, as well as the importance of data availability in risk assessments, ARTC believes that the core principles of the consistent rail regulatory framework should be:
    - the importance of negotiation in delivering efficient outcomes;
    - The provision of open and non-discriminatory access to key infrastructure; and
    - Transparency of data across the supply chain to ensure effective and accurate assessments of the value of risks can be made by all parties in the supply chain.

ARTC submitted extensively on this issue to the PC as part of its 2019 Transport Review and has attached it's January 2020 submission on the PC's Draft Decision in Appendix 1 to provide further detail on these issues.

10 Key Recommendations

Specific recommendations made by ARTC as part of this response to improve network resilience to lessen the vulnerability of supply chains:

1. The right provided within the Coastal shipping legislation framework for domestic shipping companies to be given first right to transport freight in Australian waters should be extended to all domestic transport providers including rail and road, not just shipping;
2. The development of the National Freight Data Hb should be a priority for the Federal Government and the Transport Industry;
3. Commonwealth and State Governments should prioritize the analysis of optimal locations and investment strategies for the development of new, fit for purpose, rail terminals;
4. The Commonwealth Government continue to coordinate the introduction of new network management systems (such as ATMS) to ensure that there is a single process across the national rail network to minimize cost and maximize the efficiency of the national rail network.
5. The pace of Heavy Vehicle road reform should therefore be accelerated should be accelerated to help reduce the competitive advantage of road;
6. The development and introduction of a consistent national rail regulatory framework should be prioritized.

11 Appendix 1: ARTC's January 2020 Response to PC's Transport Review