Inquiry into Australia's Maritime Logistics System

Submission from the Infrastructure Commission of the Northern Territory Government

NORTHERN TERRITORY GOVERNMENT

Contents

1. Introduction

Infrastructure NT makes this submission to the Productivity Commission's Inquiry into Australia's Maritime Logistics System to highlight the opportunities which present from an enhanced contribution to national prosperity that can be delivered by a growing Northern Territory. Priority points include:

- More fully utilising ports in Australia's north will complement and enable a range of national development strategies;
- Future development of Australia's maritime and logistics system should focus on broad ranging strategic impacts and opportunities;
- Congestion, encroachment and governance are concentrated in the southern half of the nation, while the north has opportunities including international proximity, no last mile issues and abundant natural resources;
- The Northern Territory Government is committed to employment, population and economic growth targets to achieve a $40 billion economy by 2030;
- Maritime logistics and supporting land networks are critical to Northern Territory's objectives to support industry growth and market access;
- National maritime logistics and supporting land network risks have been highlighted recently with Northern Australia providing an opportunity to enhance national resilience;
- More fully utilising Northern Australia will also complement international connections with partners such as Papua New Guinea, Indonesia and Timor;
- Tasmania experiences similar challenges to the Northern Territory such as not being located along major international shipping routes and limited access to commercially viable coastal shipping. Tasmania receives a substantial subsidy program to mitigate this where the Northern Territory does not;
- The Northern Territory faces a significant infrastructure (including supply chain infrastructure) deficit and is taking a number of strategic actions to remedy;
- The Northern Territory would greatly value the opportunity to input into consideration of a maritime logistics strategy which more fully utilises Northern Australian attributes to the national advantage; and
- The Northern Territory is continuing to developing evidence based business cases and will continue to seek support from a range of sources to achieve growth and development goals.

2. Background

In December 2021, the Australian Government announced an inquiry into the long-term productivity of Australia's maritime logistics system.

In announcing the Terms of Reference for this inquiry, Federal Treasurer the Hon Josh Frydenberg MP outlined that the long term productivity of the maritime logistics sector is vital for supporting Australian businesses and communities to access and supply global markets at competitive rates.

This is also the case at a Territory level with the maritime logistics sector key to achieving the Northern Territory's strong economic growth targets.

The Northern Territory has a well-known low base of infrastructure, vast distances and sparse populations intensifying the need for optimal infrastructure investment and supply chain management. However, these parameters also offer unique strategic opportunities and advantages.

Congestion at Australia's capital city ports is contrasted against available land, water, renewable power, gas and mineral reserves in the Northern Territory. Land side connectivity constraints and encroachment at ports such as Sydney and Melbourne is contrasted by abundant coastline and underutilised port and rail infrastructure in Darwin.

Opportunity abounds to consider a nationwide maritime logistics strategy which more fully utilises Australia's under developed North to enhance resilience and productivity. These objectives can be achieved while simultaneously complementing other national policies and priorities including:

- Developing Northern Australia;
- Supporting Modern and Advanced Manufacturing;
- The National Gas Infrastructure Plans and Investment Framework;
- Australia's Critical Minerals Strategy; and
- Delivering Ag2030.

3. Scope

The purpose of the inquiry is to understand long term trends, structural changes and impediments that impact efficiency and dependability of Australia's maritime logistics system and connected supply chains, having regard to operational cost drivers including industrial relations, infrastructure constraints, data sharing and technology uptake to assess competitiveness including mechanisms to address identified issues.

3.1. Long term trends

Australia's largest ports are facing high and increasing levels of congestion. Increasing freight volumes at the largest ports incurs high levels of competing land use demands, interaction with commuters and public transport, concentrated levels of market power and impacts on industrial relations issues.

These issues are longstanding yet exacerbated due to the impacts of the COVID-19 pandemic and destabilisation of the global freight supply chain.

Federal oversight is also concentrated in these areas with examples including the Australian Government's Department of Infrastructure, Transport, Regional Development and Communications regular reporting [1] on throughput, productivity and costs of five ports in the southern half of Australia and nil in the northern half and the ACCC monitoring financial and operational performance of container stevedores [2] of six ports in the southern half of Australia and nil in the northern half.

[1] Waterline series: Waterline 67 | Bureau of Infrastructure and Transport Research Economics (bitre.gov.au): measures port productivity, throughput and costs at Adelaide, Brisbane, Fremantle, Melbourne and Sydney.
[2] Annual monitoring and reporting for container stevedoring: Monitoring & reporting for container stevedoring | ACCC measures prices, costs and profits of container stevedoring operators located in Adelaide, Brisbane, Burnie, Fremantle, Melbourne and Sydney under the direction of the Federal Government.

Figure 1: Australia's five major container ports are concentrated in the southern half of the nation.

Concurrently, infrastructure gaps in Northern Australia impede efficiency and limit economic growth. High quality and fit for purpose supply chain infrastructure is essential to supporting industry growth and development in renewable energy, offshore and onshore gas, advanced manufacturing, minerals development and processing, agribusiness, the space industry and tourism.

A growing and more productive Northern Territory and Northern Australia is beneficial to the nation by enabling a greater contribution to national GDP and strategic objectives. The opportunity for the Northern Territory to more fully participate in wealth creation is not just about local jobs and benefits, but a matter of productivity that can improve the lives of all Australians.

A national maritime logistics system which delivers more balance to these pressures will bring benefits to the nation as a whole. A maritime logistics system which more fully utilises its northern Australia ports can deliver benefits which include:

- Easing congestion in major ports and cities;
- Nation building and investment equity;
- Defence and strategic considerations; and
- Risk mitigation and critical supply chain certainty adding to national resilience.

Impacts of the current global logistics crisis have included surges in international shipping costs. These costs may stabilise but are not expected to return to pre-pandemic levels. If national land based supply chains were more regionally equitable this would equate to a comparative advantage accruing to shorter international shipping routes.

Greater activation of Australia's northern ports would also complement actions taken in the foreign policy space including agreements for upgrade and refurbishment to priority ports in Papua New Guinea supported by a loan and grant finance via the Australian Infrastructure Financing Facility for the Pacific.[3]

[3] Prime Minister of Australia: Media Release 21 January 2022: Papua New Guinea port upgrades to support trade and connectivity | Prime Minister of Australia (pm.gov.au)

Coordination and cooperation opportunities with neighbouring countries should be a consideration of Australia's maritime system.

3.2. Broad economic impact

The Northern Territory Government has affirmed its goal of creating 35,000 new jobs and building a $40 billion economy in the Territory by 2030, representing an ambitious 4% to 5% annual economic growth. Logistics and supply chains have been identified as a key enabler to support economic and industry growth and development.[4]

Figure 2: The Territory Government has set clear goals to be achieved by 2030.

Gross State Product		$40 billion
Economic base		Diversifying our sectors and markets
Employment		Create 35,000 more jobs
Population		Boost our population beyond 300,000

As the nation's infrastructure advisor, Infrastructure Australia recognises under its national remit, that if Northern Australia prospers, the broader Australian community benefits.[5]

The Northern Territory has an ambitious growth agenda and a range of major private sector projects in stages of development.[6] It is imperative that NT supply chains enable each agribusiness, mining, oil, gas or digital development to access inputs and have products meet the market in the most cost and time efficient way. All other things being equal, more efficient supply chains will enable more viable Australian businesses and more competitive exports. The Northern Territory faces significant infrastructure challenges which are beyond the capacity of our small economy to unilaterally deliver, however there is also unprecedented optimism in an economic transformation in the next ten years, led by private investment and the Government delivering the right enabling infrastructure in the right place at the right time.

From a national perspective, the recent destabilisation of the international freight market has placed intense pressure on internationally exposed businesses [7] and exposed vulnerabilities and risks to self-sufficiency[8]. Creating contingency and redundancy and across Australia's maritime logistics system and supporting landside supply chains would be a way to not only reduce risks and boost sovereign capability but also:

- Increase competition in the domestic market;
- Support development in regional and Northern Australia; and

[4] Territory Economic Reconstruction Commission: Territory Economic Reconstruction Commission final report (nt.gov.au)
[5] Infrastructure Australia CEO Romilly Madew AO: Developing Northern Australia Conference | Infrastructure Australia
[6] NT Major Projects About major projects in the Northern Territory - Department of the Chief Minister and Cabinet
[7] ACCC Container stevedoring monitoring report 2020-21.pdf (accc.gov.au)
[8] Productivity Commission Vulnerable Supply Chains - Study Report (pc.gov.au)

- Optimise strategic fit with a broad range of the Australian Government goals including:
    - Australia's Critical Minerals Strategy;
    - Delivering Ag2030;
    - 2021 National Gas Infrastructure Plan; and
    - 2020 Modern Manufacturing Strategy.

3.3. Operational cost drivers

3.3.1. Market Power

The concentration of Australia's international and national freight task also concentrates market power. Increasing capacity across a greater number of ports and across a geographic spread will increase national resilience and reduce sovereign risk throughout the supply chain.

3.3.2. Infrastructure constraints

The Northern Territory faces a huge infrastructure deficit and is working to convert these deficits into productive infrastructure through a variety of actions. These actions include the establishment of Infrastructure NT, the Territory's first Infrastructure Commission. The creation of Infrastructure NT is one component of the Northern Territory Government's process of implementing a new blueprint based on strategic advice developed by a prominent group of Australians on accelerating economic recovery and positioning the Territory for growth, known as the Territory Economic Reconstruction Commission (TERC). The Northern Territory Government seeks to balance social, economic and environmental outcomes when considering sustainable infrastructure investment. The total Northern Territory Government's infrastructure expenditure for the 2021-22 is budgeted as $1.619 billion, with a total pipeline of work of $2.76 billion. There is a significant focus on investment in infrastructure with a high level of economic enabling projects including:

- Significant road upgrades including the Carpentaria Highway $150M, Tanami Road $42.3M, Central Arnhem Road $78.1M, Tiwi Islands roads $61.1M, Port Keats Road $59.6M and Buntine Highway $53M;
- Remote Housing Investment Package $217.1M;
- Land Servicing to support Remote Housing Investment $151.9M;
- National Aboriginal Art Gallery $46.9M;
- State Square Art Gallery $44.5M;
- Infrastructure in Kakadu to support the township of Jabiru $74.6M;
- Headworks and subdivision works $35.5M;
- Katherine Logistics and Agribusiness Hub $28.9M;
- Royal Darwin Hospital mental health inpatient unit $31.8M;
- New ambulatory care at Alice Springs Hospital $25.7M; and
- Youth Justice Centres $64.4M.

Notwithstanding this investment, there will remain a huge infrastructure deficit, particularly unsealed roads that provide essential connectivity to increase productivity of the 1.3 million square kilometres of the Territory's land mass - 1/6 of Australia's total land mass. The 2021-22 capital works program by function is

included in Table 2 below, highlighting the significant joint effort of the Territory and the Commonwealth to connect the Territory through roads and transport infrastructure.

Table 1: NT Government Infrastructure Pipeline 2021-22.

Classification of the Functions of Government 2021-22	$M	%
Transport	1 271.5	46.1
Housing and community amenities	753.4	27.3
Recreation, culture and religion	202.8	7.3
Economic affairs	159.7	5.8
Health	137.4	5.0
Public order and safety	119.6	4.3
Environmental protection	46.8	1.7
Education	37.0	1.3
Social protection	28.2	1.0
General public services	4.1	0.2
TOTAL GENERAL GOVERNMENT	**2 760.5**	**100**

Currently, the Northern Territory has eight projects listed on Infrastructure Australia's National Infrastructure Priority List including:

- Tanami Road upgrade
- Enabling infrastructure and essential services for remote NT communities Wadeye, Tiwi Islands, Jabiru
- Darwin region water supply infrastructure upgrades
- Enabling infrastructure for developing the Beetaloo Sub-Basin
- Common user infrastructure at the Middle Arm Precinct
- Northern Territory remote community power generation program
- Northern Territory large-scale solar generation (submitted by Sun Cable)
- Outback Way road access (submitted by Outback Highway Development Council)

While there are many competing priorities to remedy the infrastructure deficit, three key projects listed above will create the right economic conditions for industry growth in northern Australia. The Middle Arm Precinct, Beetaloo Sub-Basin and Darwin regional water supply are all economic enabling projects in their own right. However, the synergies between the three projects trigger economic multipliers that will uplift and transform the Territory's economy and contribute to national economic wealth and sovereignty. Case Study 1 provides more details.

Case Study 1: A Territory ecosystem of economic enabling projects

Growing the Northern Territory economy through developing and diversifying the gas industry is an opportunity to deliver on the Northern Territory Government's Gas Strategy. By 2030, the Territory will be a world class hub for gas production, manufacturing and services. **Developing the Beetaloo Sub-Basin**, which has been identified by industry as containing a significant quantity of gas that could be within economically feasible depths to extract, requires supporting infrastructure including roads, rail, aviation and utilities of which some will be sustainable common user mid-stream infrastructure. The required road upgrades have been jointly funded by the Australian and Northern Territory Governments including $150 million to upgrade the Carpentaria Highway, $70 million for the Buchanan Highway, $85 million for Western Creek Road and $62 million for Gorrie Dry Creek Road. An estimated $250 to $300 million is required for the balance of unfunded enabling infrastructure by mid-2026.

Developing the **Middle Arm Sustainable Development Precinct** complements the development of the Beetaloo Sub-Basin as well as the $400 million ship lift facility and associated marine industry park on Darwin Harbour which will provide world-class maritime services and supply industry for Northern Australia. The Middle Arm Sustainable Development Precinct entails upgrading access roads, drainage, power, water, telecommunications and logistics. Middle Arm is being developed as a sustainable, advanced manufacturing hub that will increase the value of the Territory's supply chains through export of products rather than just raw materials. There is significant interest from industry in manufacture of downstream gas processing, renewable hydrogen, renewable energy component manufacture and high-value minerals processing and refinement. Projects already underway to support this include environmental and infrastructure studies, master planning for low emissions petrochemicals and renewables based hydrogen manufacturing to help de risk the investment for industry and attract investors. The estimated investment required is $2 billion.

Darwin region water supply infrastructure upgrades are essential to secure water supply. Even with demand management, water supply to the greater Darwin area is required in the next 3 to 5 years. In addition to supporting urban water needs, there is an opportunity to support agricultural development as well as manufacturing at Middle Arm. Water is an essential enabler for the Middle Arm project to reach its potential as a world class sustainable development precinct for manufacturing, fabrication, assembly, maintenance and technology development, servicing the defence, marine, oil and gas, and resource industries. A preferred solution will be submitted to Infrastructure Australia for the February 2022 National Infrastructure Priority List with an estimated cost of $1.2 billion.

Even though these projects can be considered in isolation, the infrastructure ecosystem provides significant sustainable economic opportunity for the Territory to value-add to national economy. The infrastructure ecosystem is expected to enable production of goods such as renewable hydrogen, mineral processing, petrochemicals, food, defence, space, construction, fabrication and recycling, while critically growing the skills and workforce along a continuum of services, from research at our higher education institutions to distribution, sales and exports into new domestic and international markets. Their combined public value and social impacts will be transformational.

The Northern Territory Government is also building the largest ship lift in Northern Australia. The Darwin Ship Lift Facility will enable the maintenance and servicing of Defence and Australian Border Force vessels, along with commercial and private vessels, including from the oil, gas and marine industries. The Darwin Ship Lift Facility will be designed to meet the needs of the general maritime sector and the current and long-term needs of the Department of Defence and the Australian Border Force, while supporting local jobs and economic growth in the Territory.

Once operational the facility will be a catalyst for the development of a marine maintenance and servicing industry, and the creation of many new jobs.

The common user ship lift facility will include:

- a ship lift 26m wide, 103m long and 6m deep
- lifting capability of 5,000 tonnes
- wet berths (wharves)
- additional hard stand area for ship repair and maintenance works.

The ship lift will have the capacity to lift vessels such as the new fleet of offshore patrol vessels procured by the Australian Defence Force. The Darwin Ship Lift Facility will be a common user facility, which will enable vessel owners to choose and manage their own service and maintenance providers. This will also enable multiple providers to operate concurrently at the facility.

The ship lift is a common user facility that will operate on a commercial basis. There will be a legislated open access regime to ensure fair and equal use for all customers. Pricing and access will be overseen by the independent Utilities Commission. Construction is anticipated to take two years, becoming operational in 2024.

At earlier stages of planning are a series of supply chain initiatives including:

- Establishment of a coalition of industry, business and government to act as an advisory body to the Northern Territory Government on logistics issues, the Northern Territory Logistics Advisory Council;
- Consolidated forecast of growing freight volumes, modes and types due to the expected economic transformation in the next ten years lead by private investment;
- Assessment of the capability of freight and logistics infrastructure to facilitate this transformation including roads, rail, port and intermodal facilities.

These assessments will inform specific infrastructure requirements to support optimal supply chain operations.

3.3.3. Technology uptake

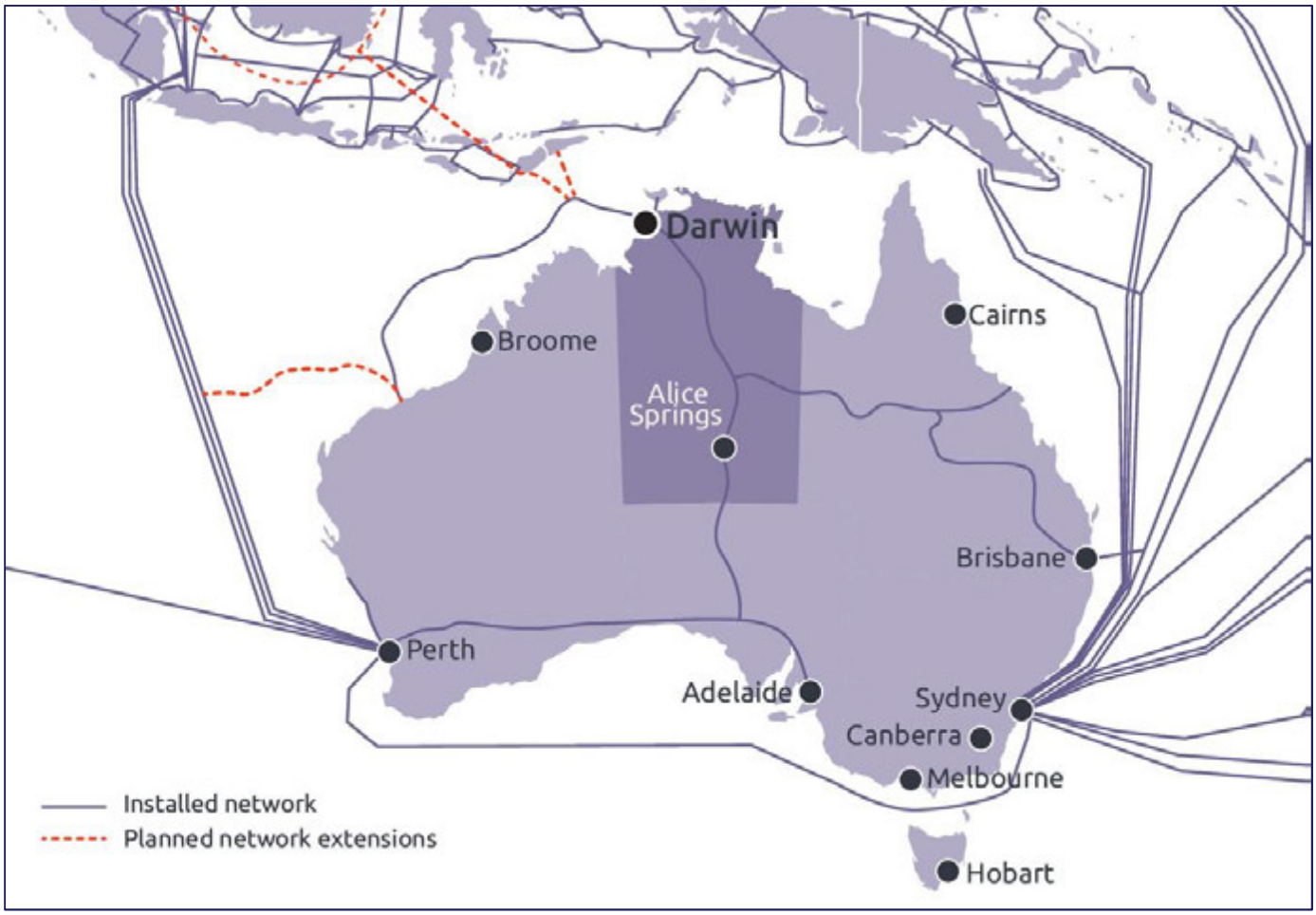
Darwin is set to take a leading role in international telecommunications across South East Asia. As Australia's most northern capital city, Darwin is uniquely placed to become an international hub between Australia's east coast and major commercial and population centres in neighbouring South East Asia.

Darwin will transform from a gigabit city to a Terabit Territory, and a digital leader in the region through the development of a highly secure, high speed terabit network. Using existing infrastructure with some additional installations, the terabit network will support the needs of business, government and defence.

This development will build on Darwin's position as the only Australian capital city with full Fibre to the Premises connection to the National Broadband Network. Planned fibre links will connect Darwin and Port Hedland to Kupang, Dili and Singapore providing contemporary high speed, low latency links through South East Asia.

These fibre links are expected to be operational by the end of 2022. There is also a planned fibre link which will span the Indo-Pacific regions, providing the first subsea route to directly connecting Darwin, Singapore, Indonesia and the United States.

Figure 3: Installed and Planned Cable Connections



3.3.4. Related transport networks

The Northern Territory Government seeks to balance social, economic, cultural and environmental outcomes when considering sustainable infrastructure investment. Transport connectivity is a good example of this. Arts and culture play a crucial role in strengthening social inclusion and identity for Australian communities and in delivering economic empowerment, particularly for Aboriginal and Torres Strait Islander communities. Using a sustainable approach to infrastructure investment will balance the benefits realisation of a 'drive market tourist' following the Territory 'Arts Trail', and sharing the same sealed and flood mitigated road as a livestock transport operator and a gold mine prospector. The business beneficiaries form part of a value chain producing flow on effects through the participation and purchase of arts which goes to the goal of economic empowerment for Aboriginal Territorians. In turn, the public investment for multiple road users is contributing to the benefits realisation of quality-of-life, access and wellbeing, to create an inclusive and fair society and growing productivity.

Infrastructure Australia also agrees with this view through their key publications which draw attention to the importance of sustainable infrastructure which provides social, economic and environmental outcomes.

The 2019 Australian Infrastructure Audit highlighted that shortfalls in infrastructure service disproportionately affected Aboriginal and Torres Strait Islander people, reinforcing existing disadvantage. Therefore the social and economic benefits of roads and transport corridors and digital connectivity cannot be considered in isolation but rather as an ecosystem of opportunity.

As highlighted in Section 2.3.2 above, the Northern Territory continues to invest heavily in road and transport infrastructure however a huge infrastructure deficit and unsealed roads remain.

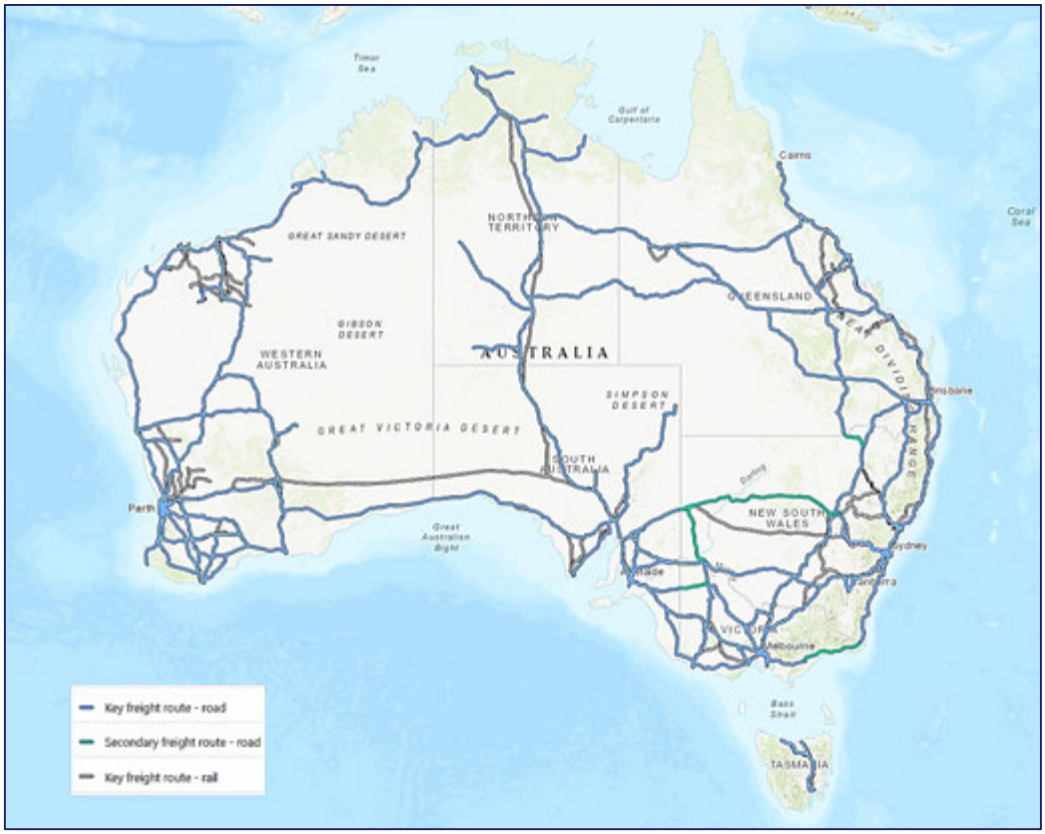
Additionally work is underway to quantify the infrastructure gap that exists in the Northern Territory's rail, port and intermodal capacity.

In the context of essential services, the 2020 Royal Commission into National Natural Disaster Arrangements recommended "The Australian Government, working with state and territory governments and critical infrastructure operators, should lead a process to

1. identify critical infrastructure
2. assess key risks to identified critical infrastructure from natural disasters of national scale or consequence
3. identify steps needed to mitigate these risks
4. identify steps to make the critical infrastructure more resilient, and
5. track achievement against an agreed plan."

And notes "Supply chains, being the distribution of essential goods and services across the country, are critically important to our economy."

Figure 4: Australia's national freight (road and rail) routes. Source: 2020 Royal Commission into National Natural Disaster Arrangements



3.4. Overall competitiveness of Australia's ports

3.4.1. Market power

Some Australian ports offer differentiated offerings, such as bespoke iron ore export facilities in the Pilbara or bulk coal export facilities in Newcastle. This results in specific freight routes for specific trade tasks. However many products such as containerised freight could be transported through a number of Australian general cargo facilities assuming fit for purpose road/rail/intermodal/storage facilities and cost efficiency.

An increase in the capacity of Australia's smaller ports and the ability to more fully cater to the international and national freight task across a geographic spread will increase national resilience, reduce sovereign risk and increase Australia's market power.

3.4.2. Economic regulation

Price and performance regulation as it relates to ports is a complex process due to bespoke freight types (containers, bulk, break bulk etc), varying charges (essential maritime services and non-essential maritime services, navigation charges, harbour services, wharf charges), vessel types (handymax, panamax, tankers, car carriers, etc) and varying time at berth. For this reason benchmarking across an assumed, specified set of cargoes, ships and time is the most accurate method to compare costs and efficiencies.

The most recent publicly available price benchmarking of Australian ports was undertaken by the Essential Services Commission of SA (ESCOSA) in 2017 [9] and did not include Darwin.

One of the world's best known management maxims of "If you can't measure it, you can't improve it" is pertinent. To ensure a nationally optimal maritime logistics system, there needs to be a nationally consistent understanding of comparative pricing and service levels. For the Darwin Port, this would highlight what aspects are competitive and what aspects act as a disincentive or constraint to economic growth and development of industry. It is expected this transparency would also be beneficial for other ports and industry, and lead to national efficiency gains.

A similar methodology could be targeted for national rail connections.

An outline of potential benchmarking parameters is attached at Appendix A.

The Northern Territory Government also notes the level of governance and financial support provided by the Australian Government to the freight and logistics system of Tasmania via the Tasmanian Freight Equalisation Scheme. The objective of this scheme is to "provide Tasmanian industries with equal opportunities to compete in other markets, recognising that, unlike their mainland counterparts, Tasmanian shippers do not have the option of transporting goods interstate by road or rail." [10] The Australian Government has provided financial assistance to shippers of freight between Tasmania and mainland Australia since 1976, outlaying over $2 billion to date.[11] Industry in the Northern Territory experience greater distances, similar exclusion from major shipping routes and lacking coastal shipping services yet do not receive a similar level of support.

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[9] Essential Services Commission of SA, Port Pricing Benchmarking Study, 2017, 20170424-PortsPricingAccessReview2017-BenchmarkingStudy-GHD.pdf.aspx (escosa.sa.gov.au)
[10] Department of Infrastructure, Transport, Regional Development and Communications: Tasmanian Freight Equalisation Scheme | Department of Infrastructure, Transport, Regional Development and Communications, Australian Government
[11] Productivity Commission Inquiry Report, Tasmanian Shipping and Freight, 2014

3.4.3. Ways the systems works well and not so well

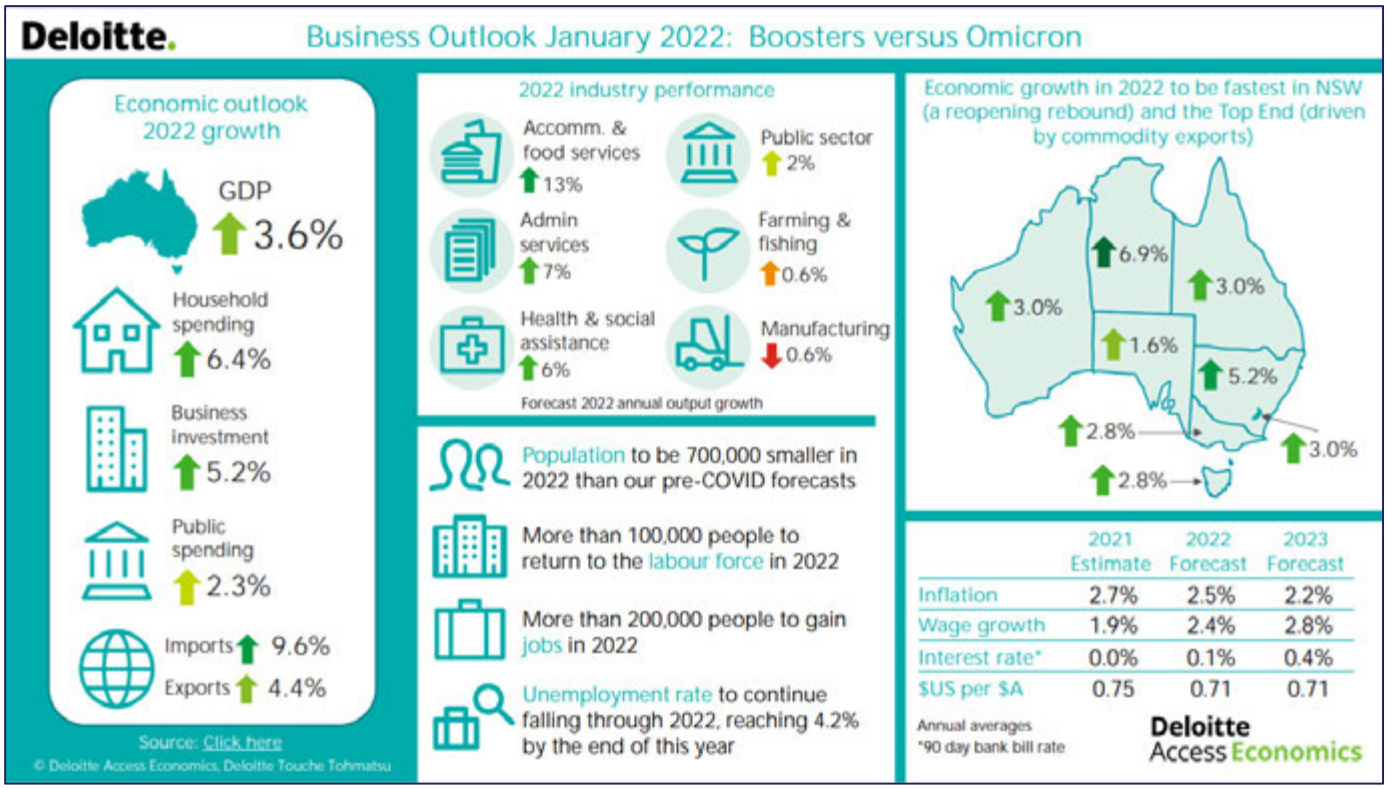
Australia's supply chains have to date proven generally resilient in recent years amid the COVID-19 pandemic. However examples such as the national shortage of Adblue, shipping containers and imported goods and emerging rising risks to fuel, energy and fuel security demonstrate the need to strengthen supply chains and mitigate sovereign risk.

As highlighted, the national freight task is not currently distributed in a manner leveraging geography (proportionate across Australia), international location (Northern Australia's international proximity and reduced shipping times) or mitigating risk (ensuring contingency).

Benefit Cost Analysis (BCA), Ratios (BCR) and quantification of impact have limitations in terms of measuring strategic fit with Federal Government objectives and nation building agendas.

The optimistic outlook for Northern Territory growth is held not only by Northern Territory Government, with recently released forecasts by Deloitte showing nation leading growth figures.

Figure 5: Deloitte Business Outlook January 2022



3.4.4. Who needs to do what to make those changes happen

In 2020, at the height of the global pandemic, the Northern Territory Government commissioned a prominent group of Australians to provide independent advice on accelerating economic recovery and positioning the Territory for growth. The Territory Economic Reconstruction Commission (TERC) provided a number of reports and briefings to Government and its agencies for consideration, culminating in a Final Report, *A Step Change to Win Investment and Create Jobs*, released in December 2020.

The Northern Territory Government is in the process of implementing a new blueprint based on this strategic advice. This blueprint will set the right economic conditions for industry growth through the sustainable use of resources and targeting enabling infrastructure as well as permeating a Territory-wide investor-focused economic culture.

Freight and logistics, including the maritime logistics sector, will be key to supporting industry and economic development and reaching the economic, jobs and population growth targets.

Specific actions relating to the maritime logistics system include:

- Development of a Maritime Industry Development Plan;
- Establishment of a Logistics Advisory Council to collaborate to improve market connections through the establishment of new institutional arrangements based on best practice governance;
- Development of a supply chain database to consolidate freight and logistics impacts resulting from a range of private sector projects to ensure evidence based decision making;
- Investigating demand for a network of Regional Logistics Hubs to form an efficient supply chain across the Northern Territory;
- Assessing the capacity of rail, port and intermodal facilities to support industry and economic growth;
- Investing in economic enabling infrastructure across the Territory and progressing nationally significant projects in line with Infrastructure Australia frameworks and priorities.

The Office of Northern Australia's *Our North, Our Future: 2021 – 2026* document outlines the Australian Government's commitment of $9.3 million to develop Master Plans to accelerate three Regions of Growth:

- Beetaloo Basin to Katherine to Darwin
- Mount Isa to Townsville; and
- Broome to Kununurra to Darwin.

This framework is based on priorities and considerations consistent with and complementary to the work underway at a Territory level.

The Northern Territory Government will continue to develop our infrastructure challenges and opportunities for the Territory to convert infrastructure deficits into productive infrastructure. We will continue to develop these in a way that demonstrate the benefit to national productivity and strategic fit with national objectives.

Appendix A

Potential National Port Benchmarking Parameters

Pricing:

- Navigation;
- Berth Hire;
- Cargo Charges;
- Pilotage;
- Towage;
- Stevedoring; and
- Other charges such as Customs, Quarantine and Security.

Services:

- Pilotage;
- Towage;
- Stevedoring;
- Shipping:
    - both international and coastal services;
    - including international shipping transit times offset against domestic road/rail transit times; and
- Other services such as Customs, Quarantine and Security.

Capacity:

- Infrastructure:
    - Land (port land areas and product zones, geotech, etc);
    - Storage and handling (sheds, containerisation, dust suppression, etc);
    - Loading facilities (conveyors, shiploaders, rotainers, cranes, hoppers, other);
    - Rail sidings and unloading facilities (bottom dump rail receival, decoupling).
- Operations:
    - Stevedores;
    - Shipping (lines, schedules) ;
    - Container availability and costs including repositioning, reefer slots, container storage, etc;
    - Freight consolidations, marshalling;
    - Customs, fumigation and other regulatory services (timing, cost);
    - Pilotage; and
    - Towage.
- Relating to existing freight volumes and growth volumes.

Commercial Aspects:

- Policies: approvals, access, licensing, restrictions, KPI's;
- Technology: RFID readers, other;
- Industrial relations: constraints and impacts;
- Industry and trade facilitation; and
- Supply chain coordination.

Related transport networks:

- Road connections;
- Rail connections;
- Intermodal facilities;
- Congestion.

Opportunities and Innovation

- Automated terminals;
- Automated vessels; and
- Hydrogen vessels.

Potential National Rail Benchmarking Parameters

Existing regulatory structure:

- Ownership;
- Access regime;
- Above rail; and
- Below rail.

Pricing:

- Transparency;
- Consistency;
- Methodology including regulated asset base, depreciated replacement cost, grant funding and weighted average cost of capital.; and

Services:

- Trade facilitation.

Capacity:

- Infrastructure:
    - Speed and Weight limits or restrictions;
    - Loading facilities;
    - Rail sidings; and
    - Passing loops.
- Rollingstock:
    - Locomotives;
    - Wagons. (lines, schedules) ;

Opportunities and Innovation

- Hydrogen locos; and
- Impact of user pays road systems.