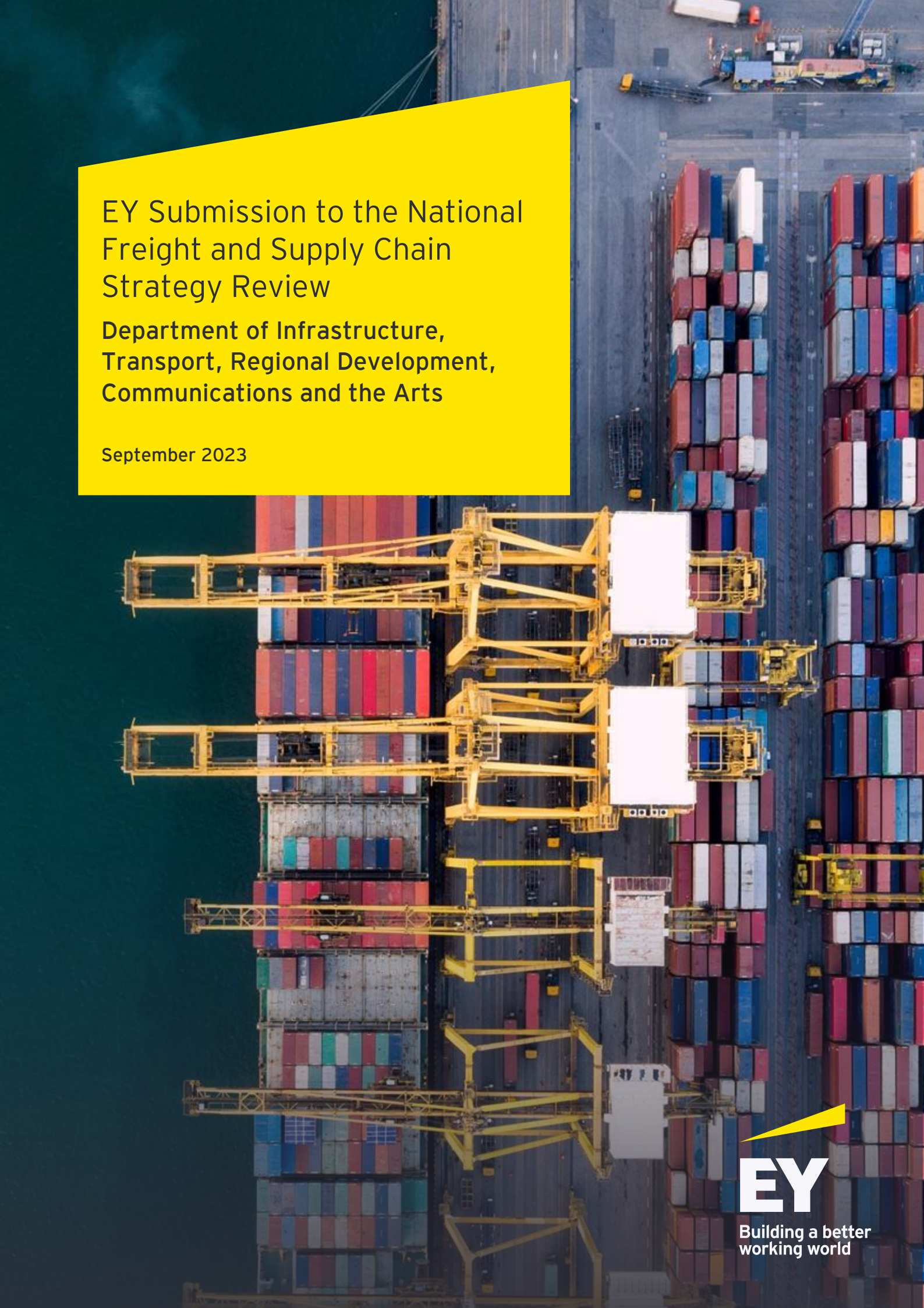

EY Submission to the National Freight and Supply Chain Strategy Review

Department of Infrastructure, Transport, Regional Development, Communications and the Arts

September 2023

Building a better working world

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EY Submission to the National Freight and Supply Chain Strategy Review

EY is committed to supporting the Commonwealth Government's leadership in refreshing the National Freight & Supply Chain Strategy (the Strategy). EY continues to differentially invest in our freight and supply chain capability, investing in new technology solutions, new personnel with deep industry experience, and strategic alliances with other industry partners to enhance the insights, services and value we can provide to our clients. As a trusted advisor, we bring our expertise in strategy, project development, operations, and technology to help drive the sector's transformation, addressing key challenges and capitalising on emerging opportunities for a sustainable and efficient freight and supply chain ecosystem.

Much has been achieved following the release of the first National Freight & Supply Chain Strategy and its associated National Action Plan in 2019 – but our world has changed immeasurably since. We support the Government's decision to bring forward its review of the Strategy and welcome the opportunity to provide a submission on future areas of focus to build on all that has been achieved to date and ensure Australia's freight and supply chains are future ready.

Our work with private and public sector organisations means we are attuned to our freight and supply chain industry's strengths and weaknesses as well as the opportunities and threats to a prosperous sector. We have identified the following overarching common themes and enduring questions which transcend Australian governments, industry, and modalities, based on our experience:

1. **Emerging infrastructure capacity:** Significant investments are being made to lift the capacity of our freight infrastructure through projects like the Western Sydney International Airport, Inland Rail and the ongoing expansion of our major ports. These infrastructure developments are still coming to fruition and offer increased capabilities and potential for improved capacity, efficiency and competitiveness.

   Looking beyond these key investments, what are future network capacity constraints and the next wave of freight and supply chain infrastructure investments required to address those constraints that will propel our sector forward?

2. **Fragmentation in urban freight settings:** Last-mile connectivity, particularly urban rail, remains fragmented and underutilised, contributing to congestion in major cities. Addressing these weaknesses is crucial to achieve seamless and efficient operations throughout the supply chain.

   So how might we drive affirmative action to better structure our last mile operations?

3. **Driving modal balance and integration:** Imbalances in cross-modal usage, with a persistent heavy reliance on road transport, are an enduring weakness in Australia's freight and supply chain networks. There is an opportunity to address the impacts associated with high road modal share in urban environments. Integrating different modes of transport and understanding the specific requirements of such modes and their usefulness to the freight supply chain network will be key to optimising the overall efficiency and sustainability of the sector.

   How might we achieve a better modal balance?

4. **Important information layer:** Enabling an efficient and effective information layer is just as important as the goods being moved. The information layer fundamentally enables the value chain and physical supply chain – without fast and effective exchange of data and information, buyers and sellers cannot transact and goods do not move. There is a step change occurring globally which will enable widespread adoption of technologies that foster digitalisation to support more efficient operations. Today, contemporary supply chains can be fully monitored through the application of digital technologies, such as sensorisation, imaging, artificial intelligence, space tech, blockchain, and the Internet of Things.

   How might we ensure all freight sector operators are able to access digital opportunities and share appropriate data to drive productivity improvements?

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5. **Better leveraging of existing supply chain models:** Opportunities exist to leverage existing successful supply chain models which drive collaboration and information sharing, such as the Hunter Valley Coal Chain (HVCC). These opportunities can improve productivity, enhance coordination, and drive operational excellence within the sector.

   Where and how can we apply similar frameworks to address longstanding barriers to better coordination and collaboration?

6. **Challenges of energy transition and decarbonisation:** The freight sector and supply chains face challenges in navigating the transition towards cleaner energy sources and decarbonisation. Ensuring a resilient and adaptable freight sector will be crucial to mitigating these challenges and successfully transitioning to a sustainable and low-carbon future.

   How might we enable the widespread adoption of low emissions technologies across our freight sector?

By focusing on these common themes and enduring questions, the Australian Government can develop a comprehensive strategy that fosters connected infrastructure development, supports end-to-end operations, promotes modal balance and integration, leverages existing successful supply chain models, data, and technologies, and proactively manages transition and disruption challenges. This will contribute to a stronger, more efficient, and resilient freight and supply chain sector that can support Australia's economic growth and sustainability.

We would welcome the opportunity to discuss any aspect of this submission with you.

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Key Questions and Responses

Key Questions

Fit for Purpose

1. *Do the Strategy's current goals support the needs of the freight and supply chain sector moving forward?*

2. *Should other goals be included in the Strategy, and if so, what?*

The 2019 Strategy has established a solid foundation with a good set of goals and many initiatives have been progressed, however the goals should be refreshed. Over the past decade, and especially since the COVID-19 pandemic, there has been a significant increase in overall freight volumes, driven by growth in resourcing outputs, population, and economic activity. However, this surge in demand has not been accompanied by a commensurate boost in productivity within the freight sector. Productivity levels have declined by approximately 9% over the past 10 years.[1] To meet escalating freight demands, the industry has relied on increased workforce, capital, and time, leading to heightened costs that are fundamentally unsustainable.

The current goals are inspirational aligning principles but could be improved with greater specificity and measurability. We recommend refining the goals to identify specific actions and targets, responsible parties, and markers of success. The Western Australian Freight Plan is an example of a strategy that integrates goals, actions and responsibilities.

On top of this refinement, we support the Australian Government's identification of two additional goals: resilience and decarbonisation.

Creating greater resilience to externalities and shocks should be a key consideration for governments. Factors such as the impacts of COVID-19, volatile geopolitical dynamics, changing climatic conditions and changes in consumer behaviour highlight the need for flexible and adaptable supply chain systems. By fostering innovation and embracing technological advancements like data analysis using satellite imagery (to assess, quantify and monitor the impact of the changing climate on infrastructure resilience), AI and automation, the sector can enhance its ability to respond to changing environments and mitigate potential disruptions. Supporting and aligning with the work of the Office of Supply Chain Resilience should be a key input into the refreshed Freight and Supply Chain Strategy.

It is also critical for governments to support the freight sector in decarbonisation and energy transition efforts. The transport sector alone makes up 19% of Australia's emissions.[2] With Australia's commitment to reach net zero emissions by 2050, there is a growing need to explore alternative fuel sources, invest in renewable infrastructure, and promote sustainable modal balance and practices throughout the supply chain. This represents perhaps the most significant challenge facing our economy and the freight and supply chain sector as the connector and integrator of our key industries.

By prioritising resilience, decarbonisation, and energy transition, the updated National Freight & Supply Chain Strategy can position the freight sector to thrive in an evolving landscape. This will not only drive long-term sustainability but also strengthen the sector's competitiveness and ensure its ability to adapt to geopolitical, economic, and environmental changes.

[1] Page 6-7 Bureau of Infrastructure and Transport Research Economics Research Report 154.
[2] Reducing transport emissions (dcceew.gov.au)

National Action Plan

3. *Should the National Action Plan focus on a smaller number of targeted national actions, or do you want to retain the existing reporting structure?*

4. *If we focus on a smaller number of targeted national actions, what action areas should be included in the National Action Plan that require national coordination?*

The Strategy should focus on fewer but larger initiatives that require national coordination. The following examples are offered as suggestions:

Nationally significant freight & supply chain cluster masterplans

Freight systems often operate in geographic "clusters." The Strategy should identify and define nationally significant freight clusters (building on the early work from the National Freight and Supply Chain Inquiry) and develop corresponding masterplans to take a long-term view and support urban planning in *advance* of freight infrastructure developments. These masterplans should support a fit-gap assessment of current infrastructure and investment plans; identify critical players, bottlenecks, and risks; and support the establishment of new governance arrangements to drive collaboration and information sharing while maintaining competition and innovation.

Useful insights on governance arrangements can be drawn from the HVCC and applied elsewhere (such as Port Botany). The HVCC demonstrates the advantages and opportunities of more effective integration within a supply chain cluster. By designating a single chain coordinator in each cluster, coordination and alignment can be significantly improved, efficiency enhanced, delays reduced, and overall productivity increased. The cluster model facilitates the identification and dissemination of best practices across the industry, fostering a culture of continuous improvement. However, this to be successful there needs to be government-led efforts to balance the need for collaboration in each cluster with the need for competition to maintain market efficiencies.

Collaborative investment models

Collaborative investment models are crucial for long-term development, as exemplified by the Moorebank Intermodal project, one of the largest freight precinct sector investments in the last 40 years. The Australian Government's leadership was instrumental in initiating Moorebank, as the scale of investment exceeded the capacity of the private sector alone. Capacity needs frequently precede demand and new investment funding models are necessary to address the reluctance of freight operators to invest in long-term infrastructure. Freight and supply chain operators face challenges due to the disparity between the long asset life of infrastructure and their short contract periods, which creates the risk of competitors benefiting from infrastructure without contributing to its development.

A government-led approach is essential to provide proactive "affirmative action" in promoting and enhancing the role of large-scale infrastructure in freight markets and achieving the right modal balance. With resources, long-term vision, and effective management, governments can initiate investments, set appropriate regulations, and incentivise private sector involvement in developing infrastructure. Rail freight presents a particular opportunity, due to its high-capacity throughput and low carbon intensity. Rail will be a necessary intermediate step in decarbonisation while road fleets undergo electrification. A coordinated national approach will support aggregation, interoperability, and address supply chain inefficiencies caused by fragmentation.

Next horizon National Freight Data Hub

The National Freight Data Hub serves as a valuable tool for enhancing investment decision-making through better access to historical freight and supply chain datasets. It enables researchers and professional services to better serve their clients and helps governments to prioritise infrastructure investments, as well as measure KPIs to assess the effectiveness of the Strategy. To maximise its effectiveness, the National Freight Data Hub should expand its capabilities and capacity, taking on the role of a steward in freight data exchange and endorsing global standards. Currently, operational freight data exchange is limited through a reliance on paper and fragmented between different freight sector operators who are not incentivised to share for a range of reasons.

To address this, understanding the different incentives for data exchange between governments and private sector operators is crucial. Introducing measures supporting collaboration within and across industries (for example, like the HVCC) will be necessary to create incentives for private sector players to openly share their data. Lessons can be learned from the United Kingdom's recent introduction of an Electronic Trade Documents Act which places data and digital documents on the same legal footing as their paper equivalents under UK law. This reform enables the digitalization of key freight documents such as the bill of lading and consignment note – removing one critical barrier to better data sharing – being the reliance on paper.

Urban logistics best practice blueprints

The most significant freight challenge confronting Australia is the growing complexity and demands of logistics in the context of expanding conurbation. Urban freight volumes are projected to increase 60% by 2040.[3] New thinking around material handling and freight logistics needs to integrate with a vision of future Australian cities and encompass master planned connected freight precincts. Some key considerations include corridor connectivity for new vehicle technologies, last-mile solutions, amelioration of impacts incurred from 24/7 operations, and the creation of "buffer" or "green" zones to enhance urban amenity. Recent advances in sensorisation, including RFID tracking, automated object detection, and satellite tracking and analysis, provide opportunities for increased efficiency in urban supply chains. There are several international exemplars, such as Singapore and Hong Kong, and some initiatives are provided in response to Question 7.

[3] National Urban Freight Planning Principles | National Freight and Supply Chain Strategy (freightaustralia.gov.au)

Measuring Performance

5. *What KPIs are useful to measure the success of the Strategy?*

6. *What data do we need from industry, state and territory governments to measure potential KPIs?*

The Strategy should consider a tiered framework of KPIs at both a strategic and operational level to ensure that the objectives of the Strategy are met. This will connect tangible measurements of companies' supply chains to the strategic objectives being sought.

Strategic performance of any supply chain is fundamentally dependent on five key leading indicators:

1. How **Connected** our supply chains are from the perspective of transparency and traceability, information flow and data interoperability

2. How **Responsive** our supply chains are from the perspective of effectively delivering essential and non-essential goods and the mode of freight adopted.

3. How **Reliable** our supply chains are in delivering accurate and on time needs of consumers

4. How effectively our supply chains utilise their assets and whether the **Return on Assets** is feasible to the investment and ongoing costs

5. Whether our supply chains have optimal **Agility**, and if they can adapt to changing demand or market conditions with optimal redundancies in place

To assess these leading indicators, an aggregation of industry KPIs will need to be undertaken and a baseline calculated. Once completed, these industry KPIs will facilitate evidence-based decision making and drive further enhancement to the freight and supply chain ecosystem. The National Freight Data Hub can provide the basis for this information, but governance and regulation considerations are necessary for its effectiveness.

A cluster model like the HVCC, which encourages collaboration and standardisation of data from different private sector actors will ultimately enable effective data aggregation. A common blueprint for clusters allows comparisons between geographic supply chain clusters, facilitating better national assessments. These governance arrangements are essential for scaling the depth and breadth of the National Freight Data Hub.

Some operational KPIs to consider and support the performance measurement of existing goals are:

1. **Goal: Improved efficiency and international competitiveness**.

    - Decrease in supply chain lead time – average time taken for goods to move from point of origin to destination within the supply chain.

    - Increased industry turnover rate – how often essential goods stockpiles are replaced. An optimal turnover ratio indicates, greater balance in the supply and demand of such products, efficiency in management and lower supply chain costs.

    - Infrastructure utilisation rates – increased utilisation rate of key freight infrastructure (e.g., ports, rail terminals, highways). A higher utilisation rate suggests better optimisation of investments. We have optimal asset redundancies in place.

    - Infrastructure maintenance index – assesses the condition and maintenance of critical freight infrastructure. A higher index score indicates well-maintained infrastructure, reducing disruptions.

2. **Goal: Safe, secure and sustainable operations**
    - Freight-related accidents and incidents rate
    - Emissions reduction targets
    - Resilience measures to understand the ability of the supply chain to withstand and recover from disruptions
3. **Goal: Fit for purpose regulatory environment**
    - Reduction in regulatory compliance time and cost (e.g., border clearance times and costs, median approvals times etc)
4. **Goal: Innovative solutions to meet freight demand**
    - Adoption of key technologies – measure the adoption rate of emerging technologies in freight operations, such as Internet of Things or autonomous vehicles.
5. **Goal: A skilled and adaptable workforce**
    - Key certifications/qualifications awarded
    - Skilled migration targets
    - Vacancy rates for key industries
6. **Goal: An informed understanding and acceptance of freight operations**
    - Sentiment analysis surveys

Related Works for Consideration

7. What outcomes, findings or principles should the Review take into consideration from related works?

The challenges faced by freight and supply chains worldwide are similar. By staying cognisant of policy developments, technological advancements, and public and private sector responses around the world, government can harness the collective knowledge and learnings to build a resilient, efficient, and sustainable supply chain strategy. A number of cities have launched programs and plans to address changing and intensifying demands for urban logistics:

- **Singapore's Urban Logistics Programme:** designed to better optimise last-mile delivery in urban areas, the programme supports a shift towards collaborative distribution involving the sharing of logistics resources such as vehicles, drivers, and warehouses to coordinate delivery schedule to selected zones, improving the overall effectiveness of the sector for mutual benefit.[4]

- **Singapore's Urban Redevelopment Authority:** has led the way in re-inventing urban logistics in response to the surging demand of last-mile delivery during and following COVID. This includes using data to drive infrastructure investment, collaborating with industry to generate best-practice guides, updating regulations around emerging market demands such as 'cloud kitchens', and piloting new ideas and technology such as autonomous vehicles and new fleet management software.[5]

- **Hong Kong's Smart City Blueprint for Hong Kong 2.0:** expands and iterates on a 2017 plan, supporting initiatives under six areas: Smart Mobility, Smart Living, Smart Environment, Smart People, Smart Government and Smart Economy. The Smart Mobility section is particularly relevant and aims to achieve the "SIGMA Vision": Safe: Reduces the risk of traffic fatality or injury; Informative: Provides useful information to road users; Green: Promotes the use of environmentally friendly modes of transport; Mobile: Moves people and goods expeditiously and efficiently, meeting the needs of both users and operators; and Accessible: Delivers easily-reachable and reliable transport services.[6]

- **London's Freight and Servicing Action Plan:** aims to address critical issues of urban logistics, such as congestion and emissions, through strategic infrastructure investment, the promotion of non-road modals of logistics, and the creation of ultra-low emission zones.[7]

Other international freight strategies also contain useful lessons:

- **The United Kingdom's Future of Freight:** emphasises multi-modal logistics and promoting the development of regions throughout the United Kingdom.[8]

- **The United States' National Blueprint for Transportation Decarbonisation (2022-26):** provides a whole-of-government approach for decarbonisation in the United States structured around improving community design and land use planning, increasing options for efficient travel, and the transition to zero emission vehicles and fuels.[9]

- **The United States' National Freight Strategic Plan:** defines strategies and goals for the U.S. Department of Transportation to realise a freight transportation system that will strengthen U.S. economic competitiveness with safe and reliable supply chains that efficiently and seamlessly connect producers, shippers, and consumers in domestic and foreign markets.[10]

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[4] Urban-Logistics-Media-Factsheet.pdf (imda.gov.sg)
[5] Essay - How Singapore is reinventing itself in the new era of urban logistics (clc.gov.sg)
[6] Hong Kong Smart City Blueprint 2.0 (smartcity.gov.hk)
[7] Freight and servicing action plan (london.gov.uk)
[8] Future of Freight (publishing.service.gov.uk)
[9] The US National Blueprint for Transportation Decarbonisation (energy.gov)
[10] The United States' National Freight Strategic Plan (transportation.gov)

The refreshed strategy should also take into consideration:

- **The United Kingdom's introduction of the Electronic Trade Documents Act 2023:** puts digital data and documentation on the same legal footing as their paper equivalents. This reform measure brings UK legal frameworks into line with the United Nations Model Law on Electronic Transferable Records along with Singapore and a range of other countries. Australia should follow suit and introduce these reforms to enable to greater freight sector productivity through digitalisation.[11]
- **Australia's Long-Term Emissions Reduction Plan:** outlines the Commonwealth's proposed pathway to achieve net zero emissions by 2050. This includes decarbonising the freight sector, with initiatives such as the Freight Energy Productivity Program identified.[12]
- **Invested: Australia's Southeast Asia Economic Strategy to 2040**: sets-out a plan to improve Australian trade and investment opportunities in Southeast Asia. The report recommends that the government explore solutions with the private sector to reduce freight for Australian products.[13]

There are also substantial national reforms mooted in Australia which will substantially impact the sector which should also be factored into the review:

- **The Simplified Trade System Implementation Task Force** and its work to modernise and simplify current trade systems and processes, notably the Integrated Cargo System and the potential introduction of a more holistic trade single window for all import and export related reporting.
- **The proposed Maritime Single Window** which seeks to align and standardise maritime reporting requirements across all Australian jurisdictions and ports to reduce the regulatory costs and duplication for maritime freight vessel operators.

[11] Electronic Trade Documents Act 2023 (legislation.gov.uk)
[12] Australia's Long-Term Emissions Reduction Plan (DCCEEW.gov.au) Australia's Long-Term Emissions Reduction Plan (DCCEEW.gov.au)
[13] Invested: Australia's Southeast Asia Economic Strategy to 2040 (dfat.gov.au)

Governance

8. *Are the current governance arrangements appropriate to support the effective implementation of the Strategy going forward?*

9. *What role, if any, should the Freight Industry Reference Panel have to support the implementation of the Strategy?*

Effective governance arrangements for a refreshed National Freight and Supply Chain Strategy should aim to balance the interests of various stakeholders while promoting efficiency, sustainability, and resilience in the supply chain. Regular evaluation and adjustment of the governance framework are essential to adapt to evolving challenges and opportunities in the global logistics landscape. We have set out a potential revision which focuses working level effort on the key themes and enduring questions.

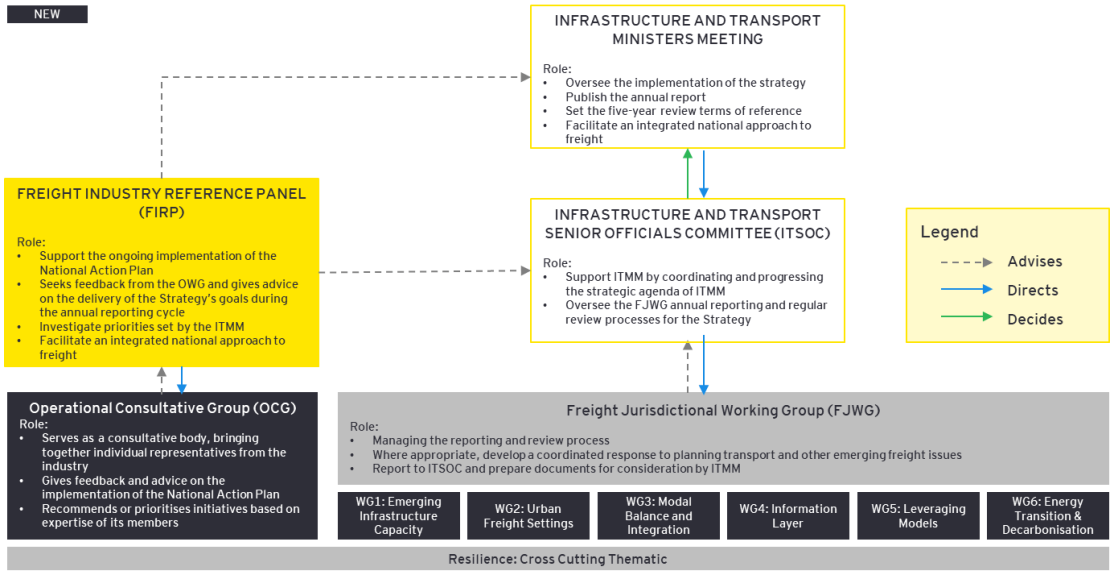

Figure 1: Enhanced Governance Model

Figure 1 illustrates a suggested revised governance structure which reflects the changing landscape and provides a greater voice of the freight operator:

- **Greater voice of the freight operator** is required to provide feedback and advice on the unique challenges and needs of the freight and supply chain sector. Invariably, freight operators and governments have diverse perspectives on supply chain drivers, with each group having distinctly different roles, motivations, operating models, and outlook timeframes. The Operational Consultative Group (OCG) therefore recognises this diversity and provides a forum that can include individuals and organisational representatives who will provide recommendations or identify priority initiatives to the Freight Industry Reference Panel, based on the expertise of the group.

- **The Freight Industry Reference Panel** will seek feedback form the Operational Working Group, to ensure that the delivery of the Strategy's goals and the implementation of the National Action Plan are meaningful and to identify any emerging conflicts. The FIRP in turn keeps the ITSOCT and the ITMM updated.

- **The Freight Jurisdictional Working Groups** are to continue managing the reporting and review process, with a focus on the six overarching themes that are key to freight and supply chains and may create sub-working groups who are responsible for reporting to ITSOC.

Whilst the recommendation is to create an Operational Consultative Group that represents the freight sector, consideration must be given to stakeholder engagement fatigue. Individuals or organisations involved in the governance of the Strategy and National Action Plan may become overwhelmed, disengaged, or exhausted due to the continuous demands, communications, and interactions with various stakeholders. This is particularly relevant when participants are also involved in other state and federal initiatives, such as the Simplified Trade System or Maritime Single Window, among others.

To address stakeholder fatigue and maintain productive engagement, Government should streamline and align communication efforts across major strategies and reform initiatives to ensure that stakeholders receive relevant information without being inundated with excessive messages. Stakeholders should also be informed about Strategy progress and developments to demonstrate that their input is making a difference and they are heard.

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