



NHVR Submission: Review of the National Freight and Supply Chain Strategy

Submission to the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (the Department)

26 October 2023

Introduction

The National Heavy Vehicle Regulator (NHVR) supports the early review and refresh of the National Freight and Supply Chain Strategy (Strategy) and welcomes the opportunity to provide a submission. We note the significant efforts made to implement the current Strategy and National Action Plan by the Australian Government, transport regulators and agencies, industry, and related parties.

The NHVR is a strong advocate of the Strategy as a means to maximising freight productivity. Alignment of our regulatory approach with the Strategy is specifically mentioned in the NHVR's [Statement of Expectations 2023–2024](#), as well as our [Heavy Vehicle Productivity Plan 2020–2025](#) where the Department was a member of our intergovernmental working group.

Our submission has been informed by our constant engagement with the heavy vehicle industry and road managers. To assist development of the new Strategy and Action Plan, we have made recommendations relating to:

- alignment of the Strategy's goals with the evolving needs of the road freight industry
- incorporating two new goals: supply chain resilience and decarbonisation of freight
- supporting a transition towards delivering fewer but more targeted national actions
- undertaking performance measurement through prescriptive and quantitative KPIs, including benchmarking against international peers
- government reporting on the modernisation of planning schemes, recognising its relationship to freight performance as outlined in the National Urban Freight Planning Principles
- stronger governance arrangements, particularly with respect to annual implementation reporting by transport agencies, and the composition and role of the Freight Industry Reference Panel (FIRP).

About the NHVR

The NHVR is Australia's dedicated statutory regulator for all heavy vehicles over 4.5 tonnes gross vehicle mass or aggregate trailer mass.

We were established in 2013 as a statutory authority pursuant to the Heavy Vehicle National Law.

Our Purpose

We provide leadership to, and work collaboratively with, industry and partner agencies to drive sustainable improvements to safety, productivity and efficiency outcomes across the Australian heavy vehicle road transport sector.

Our Vision

Delivering safe, efficient and productive heavy vehicle movements supporting a strong and prosperous Australia.

Our Mission

Through leadership and advocacy we administer a national statutory system to deliver streamlined regulatory services and administration to the heavy vehicle road transport sector, minimising regulatory burdens while fostering greater safety and productivity.

The NHVR's stakeholder profile


200,000 people
 in the Australian road
 freight industry¹


425 road managers
 under the HVNL



50,000
 Australian road
 freight businesses²


6 HVNL
 participating
 jurisdictions³

Australia's heavy vehicle profile⁴


353,759
 heavy rigid trucks


103,038
 articulated trucks


924,860
 Registered heavy vehicles
 and trailers⁵


99,379
 buses

¹ Australian Bureau of Statistics, 2018, 6291.0.55.003 - Labour Force, Australia, Detailed, Quarterly, November 2018

² Australian Bureau of Statistics, 2018, 8165.0 Counts of Australian Businesses, including Entries and Exits, June 2013 to June 2017

³ The Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria.

⁴ Australian Bureau of Statistics, 2018, 9309.0 - Motor Vehicle Census, Australia, 31 January 2019

⁵ NHVR, 2020, Registration demographics as at January 2020

Submission Response

Our submission responds to the questions and broad issues highlighted in the Discussion Paper, and aligns with the NHVR's heavy vehicle access and productivity agenda, as outlined in our Corporate Plan 2023–2026, Statement of Expectations 2023–2024, and Heavy Vehicle Productivity Plan 2020–2025.

The NHVR encourages the Department to consider the following NHVR documents in developing a new Strategy and Action Plan:

- [Corporate Plan 2023–2026](#)
- [Heavy Vehicle Productivity Plan 2020–2025](#)
- [Heavy Vehicle Safety Strategy 2023–2025](#) and [Heavy Vehicle Safety Strategy Action Plan 2023](#)
- [Vehicle Safety and Environmental Technology Uptake Plan](#)

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

While industry can best respond to the needs of their respective sectors, the NHVR believes that the current goals and critical action areas are appropriate and enduring from a government perspective.

The annual implementation reports, prepared by various government agencies, demonstrate collective efforts to deliver on the intent of the Strategy.

The NHVR is of the view that the Strategy would benefit from an increased focus on non-infrastructure solutions to address the growing freight task. There would also be value in the states and territories reporting on non-infrastructure solutions (e.g. data, environmental, social, governance and regulatory initiatives). This has been the approach of the NHVR in our annual reporting on delivery against the Strategy.

The NHVR does see value in the addition of additional goals – refer to our response to Question 2.

Question 2: Should other goals be included in the Strategy, and if so, what?

The NHVR agrees the goals of the current Strategy are appropriate:

- improved efficiency and international competitiveness
- safe, secure and sustainable operations
- a fit for purpose regulatory environment
- innovative solutions to meet freight demand
- a skilled and adaptable workforce
- an informed understanding and acceptance of freight operations.

The NHVR agrees with the Discussion Paper that two new goals should be introduced: (1) supply chain resilience; and (2) decarbonisation of freight.

The last few years have demonstrated the impact of unexpected events on the transport network and freight movements. While disruption cannot be eliminated, the NHVR, governments and industry can work together to promote network resilience.

Supply Chain Resilience

The NHVR encourages a revised Strategy to include supply chain resilience as a new goal, and to explore opportunities to support resilience by:

- improving vital freight routes by unlocking their latent capacity (i.e. sweat current assets, such as what is being facilitated via bridge assessments under the Strategic Local Government Asset Assessment Project)
- delivering new freight routes and unblocking infrastructure bottlenecks (i.e. investment in new or upgraded assets)
- land use planning and road design that ensures modern vehicles can be accommodated, particularly larger and heavier higher productivity freight vehicles (HPFVs) and low and zero emission vehicles.

The Road and Rail Supply Chain Resilience Review, which the NHVR assisted to provide data and insights, provides a strong basis to inform a revised Strategy.

Decarbonisation of Freight

The NHVR supports decarbonising freight and Australia's ambition to have net zero emissions by 2050.

There have been significant advancements in, and uptake of, environmental technologies in international markets. The challenge will be to introduce these into Australia's heavy vehicle market. The NHVR's Vehicle Safety and Environmental Technology Uptake Plan outlines a program of work we will undertake to accelerate the introduction of new safety and environmental technologies into the Australian heavy vehicle market by:

- removing regulatory barriers that limit the adoption of advanced technologies
- offering productivity gains as an incentive for the adoption of advanced technologies
- providing education to industry on the safety, productivity and environmental benefits of new vehicle technology.

The NHVR requires support from different levels of government to incentivise the uptake of cleaner and greener vehicles. Recent announcements to increase the overall width limit for new heavy vehicles to 2.55m will go a long way towards accelerating transition. However the key challenge will be higher vehicle masses associated with low and zero emission vehicles.

Australia has the largest and heaviest freight vehicle fleet in the world, the road freight sector is responsible for about 7 per cent of Australia's emissions¹, and our road freight task challenge is set to grow 77 per cent by 2050 while rail in the same period is forecast to grow only 5.7 per cent². Achieving our Net Zero commitment requires fewer but larger HPFVs on roads, and transitioning to zero emission alternatives.

Industry uptake of electric and hydrogen HPFVs is growing, but industry needs payload parity with internal combustion engine (ICE) HPFVs. Electric and hydrogen HPFVs weigh between one to three tonnes more than their ICE counterparts and present serious challenges to infrastructure.

While much of the conversation has focused on energy infrastructure, road infrastructure is a critical bottleneck to HPFVs being part of the climate change solution. The key concern for road managers is pavement and structures impact, in particular, reduced asset life, and replacement and rehabilitation costs.

Governments also need to look at whether heavier electric and hydrogen HPFVs can traverse structures safely, requiring significant cost and effort to assess different models' impact to the bridge stock.

¹ Electric Vehicle Council and Australian Trucking Association, 2022, Keeping shelves stocked in a net zero world

² BITRE 2022, Australian aggregate freight forecasts – 2022 update, Research Report 154, Canberra, ACT

The NHVR has commenced developing a Future Heavy Vehicle Roadmap to provide a blueprint of how industry and regulators can plan for the introduction of new technologies. The roadmap captures key developments at their highest level, the identified regulatory barriers, and describes a potentially prioritised approach for reform.

The NHVR is partnering with OEMs, road managers and Austroads to progress trials for electric HPFVs at atypically high mass limits, to research the effect of increased axle masses on infrastructure. Collaboration in these trials are vital to testing and data gathering to reduce barriers to transitioning to more sustainable HPFVs.

Significant achievements have been realised in recent months, including the announcement of a permanent low and zero emissions network in Victoria, which follows facilitation of trials between the NHVR, industry and the Victorian government. Similar trials are already under way in New South Wales, Queensland and South Australia.

While the trial findings will enable government and industry to co-design policies, regulations, infrastructure, technology and incentives to accelerate sustainable mobility and meet our climate targets, a national approach such as consistency in mass limits, network conditions and extensive cross-border networks are critical to facilitating uptake of low and zero emission vehicles.

Case Study: Optimising road network utilisation

The NHVR has an interest in how road infrastructure assets are managed and maintained, as there is a direct relationship to access and productivity. The heavy vehicle industry relies on roads and structures being fit for purpose: that is, their ability to move goods and services where they need to go safely and efficiently, and also to support road use by heavier and larger modern vehicles.

The local government road network accounts for around 75 per cent of the total road length in Australia; however, many local governments have insufficient funds and many lack technical expertise to manage and maintain their assets to the highest standard³. Most have limited data available regarding the capacity and capability of key freight roads and structures within their respective jurisdictions and limited ability to acquire that information.

The NHVR's [Strategic Local Government Asset Assessment Project](#) (SLGAAP) is an Australian Government funded initiative to optimise heavy vehicle access on local road networks across Australia. The project assists local government road managers to undertake heavy vehicle assessments of on-road assets, such as bridges and culverts. Working collaboratively with engineering consultants and local government road managers, SLGAAP supports councils to better understand their asset capability and inform heavy vehicle access decision making.

Question 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?

The NHVR has contributed towards the annual implementation reports for the National Action Plan. The focus of our reporting has been on specific initiatives of national interest and directly relevant to the goals and actions of the Strategy.

The NHVR agrees with the sentiments of the Discussion Paper that the current reporting approach is too broad, with over 350 initiatives reported by relevant transport and freight agencies. Notwithstanding the local

³ Australian Local Government Association (2019), 2019 Local Government Roads and Transport Agenda, <https://alga.com.au/2019-local-government-roads-and-transport-agenda/>

or regional criticality of these initiatives, in the NHVR's review of updates provided by other parties, there are instances where it is unclear on how the initiatives deliver on the intent of the Strategy, or if these initiatives are of national importance.

Targeted national actions will assist to demonstrate cross-border collaboration to deliver end-to-end supply chain improvements that would have a material effect on improving the safety, sustainability and productivity of the industry, rather than isolated local or regional initiatives.

Question 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 industry is diverse across all freight modes, and government initiatives are also very diverse and important to address freight safety, sustainability and productivity. Overly specifying actions, or removing some of the current actions from a revised Strategy, may have undesirable effects, such as: non-reporting of important initiatives resulting in lack of awareness from interested parties; non-pursuit of initiatives which are critical to improving Australia's supply chain performance; or making the task of reporting more difficult and lengthier than required.

The NHVR, however, recommends that reporting consider some specification as summarised below.

Safety, sustainability and productivity are linked. The NHVR recommends actions and reporting structure be framed to consider how various initiatives deliver against Vision Zero and Net Zero, while simultaneously addressing freight growth, where initiatives have a cross-border impact (i.e. not necessarily national, as this would potentially overly restrict what could be reported).

Each initiative that would be reported as facilitating the delivery of the National Strategy should ideally specify: their relevance to the goals and actions of the Strategy (tick-box should be sufficient), how the initiative results in cross-border outcomes (qualitative response), and the mechanisms/outputs of the initiative relevant to supporting Vision Zero, Net Zero and managing freight growth (qualitative response).

Currently, various transport agencies adopt inconsistent reporting styles. In some instances, transport agencies simply point back to reporting of their own state freight strategies. It would be useful if there was a consistent reporting approach (e.g. a template provided).

Question 5: What KPIs are useful to measure the success of the Strategy?

Alongside the current annual implementation reports, it would be useful if the Strategy adopted some prescriptive and quantitative means of understanding national performance. The below provides a useful starting point, and recognises that the Australian Government has already commenced the journey to collecting and reporting meaningful data relevant to supply chain performance.

The current Strategy document has a section on stagnating freight productivity for all modes, measured in terms of the cost of operations in net tonne kilometres. Unpacking how these figures were determined, and reporting against the components (rather than the operational cost as an end product) will enable targeting of initiatives that address inputs into the equation. This information may be more useful to mitigate stagnating productivity and operational costs. It would also be appropriate to benchmark, using the same approach, Australia's performance internationally. As it stands, it is not understood if Australia is better, equivalent to or worse compared to other countries.

[BITRE](#) has recently released freight task projections, using a single equation econometric model based on population growth, world oil prices, and GDP. At a macroeconomic level, undertaking regular sensitivity checking and reforecasting on more recent data sets would assist to determine how Australia is performing (e.g. acceleration or slowing of freight growth in subsequent calculations). Expanding the equation to consider more data inputs will make the approach more robust (e.g. information from the Supply Chain Benchmarking Dashboard).

The [Supply Chain Benchmarking Dashboard](#) also contains useful measures on the freight task across different modes, in particular: annual trailers/wagons, annual tonnes of commodities, travel time and distances.

Regular longitudinal reporting against these metrics, partnered with other datasets (e.g. crash data), will enable comprehensive analysis on supply chain performance and allow observations on related externalities (e.g. growing payload tonnes and trailers but reduced vehicle travel distance would mean increasing productivity, static or reduced crashes could thereby mean improved safety relative to productivity).

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

In addition to the above, the NHVR recommends governments report on the modernisation of their planning schemes to support modern vehicles, as planning outcomes have a material relationship to freight performance (e.g. as per the [National Urban Freight Planning Principles](#)). This is important given the growing size and weight of the road freight fleet, with the road freight task also forecast to grow 77 per cent from 2020 to 2050.

This recommendation aligns with Recommendation 5.3 of the Inquiry into National Freight and Supply Chain Priorities report: *“Raise awareness of the importance of freight and the need for appropriate planning, development approval conditions, protection and regulatory regimes in the government sector, particularly land use and transport planners, environmental regulators and developers, through formal and informal education.”*

Governments are responsible for managing growth and change through planning that balances the social, environmental and economic needs and aspirations of their communities.

The NHVR is aware of cases where truck bans and curfews have been implemented in industrial and commercial areas because of adjacent residential development and communities misunderstanding the freight task and the impacts of heavy vehicles. These decisions impact productivity, can increase the cost of goods and services for the community, and may affect logistics operations for domestic and international supply chains. An increased risk to safety, infrastructure and amenity may occur when the opposite effect is desired.

Industry and government have indicated to the NHVR that heavy vehicle access was refused, even within industrial and commercial areas (often where key gateways are located), due to substandard site and road design. Importantly, examples were provided where everyday general access heavy vehicles (e.g. waste removal trucks) and emergency vehicles (e.g. fire engines) could not service properties safely and effectively because of inadequate site and road designs.



Common design deficiencies include narrow lanes, inadequate driveway designs, insufficient lot size, rear of vehicles protruding into oncoming traffic because of short turn-pocket space, and small intersections requiring vehicles to veer onto the wrong side of the road to make turns.

Many industrial and commercial developments and roads were constructed for historically smaller and lighter vehicles. Continued use of outdated design standards will mean land and infrastructure will increasingly fail to accommodate innovation in the heavy vehicle fleet.

Case Study: Modernisation of planning schemes

Planning for infrastructure and industrial estate developments should cater for a minimum level of access for heavy vehicles, particularly for the growing number of longer Performance Based Standards (PBS) vehicles. Upgrading existing freight networks to safely accommodate the dimensions of higher categories of freight vehicles, which are equally or better performing, will lead to significant productivity benefits for industry and, at the same time, deliver significant improvements to safety and environmental sustainability.

An important example of planning and design to unlock the potential of freight networks is upgrading B-double networks to be able to accommodate PBS Level 2B vehicles, such as the 30m A-double – the new working horse of the road freight fleet. The following table demonstrates the productivity benefits in reduced truck trips of B-doubles and PBS Level 2B vehicles, compared to the standard as-of-right semi-trailer.

Heavy vehicle combination types	Length (m)	Network Access	GCM (t)	Nominal Payload (t)	Payload Efficiency	Trips per 10,000 (t)	Trip Savings (%)
	≤ 26	B-double network	68.5	43.5	1.62	230	39
	≤ 30	PBS Level 2B	85.5	63.8	2.39	157	59

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

The NHVR encourages the Australian Government to review the NHVR [Heavy Vehicle Productivity Plan 2020–2025](#).

To develop the Plan, we engaged with 55 stakeholders in pre-submission consultation, received 23 formal submissions, presented a webinar with 178 registered participants, and held nine workshops with the Commonwealth Government, all state and territory transport agencies and all local government associations in participating jurisdictions.

The three objectives of the Heavy Vehicle Productivity Plan are:

- provide access certainty and consistency
- partner with local government to build capability
- promote safer and more productive vehicles that are better for the environment and communities.

The Plan does not include our full work program; instead, it sets out 31 actions over a five-year period based on priorities requested by our stakeholders. Annual reporting on progress is detailed on the NHVR website (refer hyperlink above).

We have already made significant progress in delivering these actions, in partnership with the Commonwealth Government, state and territory transport agencies, local governments and customers. As at 30 June 2023:

- 10 had been fully delivered (with ongoing improvements as required)
- 16 had been incorporated into the NHVR's core business
- 5 were in progress.

The NHVR intends to commence reviewing and developing a new Plan in FY24, and has already met with the Australian Government in this regard to ensure appropriate alignment and sequencing of activities with the refresh of the National Strategy.

Building on the recently released [Freight PASS](#) tool, which was built in-house by the NHVR, a suite of further access and productivity tools will be released. Collectively, they will assist to inform the NHVR's review of the Plan including identification of potential initiatives of national importance.

Upcoming tools to be released are:

- Pavement Impact Comparison Calculator – assists road managers, including those with no pavement engineers, to calculate the pavement impacts of different freight vehicles.
- Rapid Cost Benefit Analysis – assists road managers understand the opportunity cost of granting or not granting access by notice or pre-approval.
- Historic Access Reporting Tool – assists road managers to analyse and visualise data from historic access permit applications.
- Unnamed Tool – enables forecasting the future volume and composition of the Performance Based Standard fleet, and the productivity, safety and sustainability externality benefits association with replacement of conventional vehicles to perform the same freight task.

These tools will also help the NHVR, industry and road managers make more informed safety, productivity and sustainability decisions about the benefits of heavy vehicle combinations on the road network. For example, Freight PASS has been designed to:

- Enable users to specify a freight task scenario and compare over 200 common freight combinations.
- Estimate and compare the performance of the combinations against 14 productivity, safety and sustainability measures, specifically curated to assist industry and road managers to better understand the long-term effects of road freight activity.
- Use data and methods that road managers trust and already use as part of their transport, infrastructure and economic evaluations (e.g. from Austroads and the Australian Transport Assessment and Planning Guidelines).
- Visualise results in a series of graphs and scorecards, with full accessibility of the back-end.

The NHVR has already consulted and presented to various teams within the Department on these tools, and looks forward to continued collaboration to utilise outputs from these tools to improve national supply chain performance.

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

Refer to the NHVR's response to questions 3 and 4, relating to reporting arrangements.

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

Industry plays a critical role in helping implement the Strategy, and represents a key communication line between industry and government.

The NHVR understands the Freight Industry Reference Panel (FIRP) was established to provide industry a clear line of sight on implementation of the Strategy. The Panel provides independent feedback and advice on annual progress and acts as a lever to elicit more actions from all levels of government and industry more broadly. The Panel also complements broader industry engagement mechanisms already in place, and leverages existing state and industry advisory groups and bodies, where possible.

The NHVR is a member of other freight strategy implementation oversight groups, such as the Green Triangle Freight Action Plan Implementation Monitoring Group. In these other groups, a key role of industry which is not currently mentioned in the FIRP Terms of Reference (ToR) includes industry being:

- an important source of sector-specific information-sharing and provision of freight flow data
- an avenue to raise regulatory anomalies, across different types of legislation, that impede domestic and international supply chains
- a means to identify network bottlenecks and alternative route requirements to support supply chain resilience.

The NHVR sees value in a similar role being adopted on a national scale, rather than just at a local, regional or state level as in these other groups.

The ToR for a future FIRP could also be adjusted to require at least one member with sufficient and relevant experience from each of the major freight modes (road, rail, sea and air).