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HVNL REVIEW CONSULTATION REGULATION IMPACT STATEMENT

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Executive Summary

The Heavy Vehicle National Law (HVNL) regulates the use of heavy vehicles on roads in a way that promotes public safety, industry productivity and efficiency and encourages efficient, innovative and safe business practices. Amongst other things, it focuses on ensuring that heavy vehicles and their drivers are safe and that they are operating on suitable routes to minimise public safety risks.

In November 2018, Ministers asked the National Transport Commission (NTC) to lead the review of the HVNL and its supporting regulations. To date the NTC has been consulting with stakeholders to identify key issues and opportunities for improving the HVNL. The review has unpacked the HVNL and found that overall its scope in the broader regulatory context and its approach rightly balances road safety and productivity goals. As a result, the HVNL review has focused on identifying reforms that could improve the effectiveness of the HVNL.

This Consultation Regulation Impact Statement (RIS) represents the next phase of the HVNL review. It is focussed on identifying the incremental costs and benefits of reform options identified by the NTC. It is qualitative, but in some areas the assessment strongly points to options that are likely to be of net benefit—suggesting they should be adopted. However, in other areas the results are less conclusive.

The purpose of this Consultation RIS is to seek feedback and comment from stakeholders on the problems identified, the options considered and the preliminary assessment of these options.

Problems identified and objective of reforms

Heavy vehicle road safety has been improving. Heavy vehicle crashes involving injury or death decreased by approximately 40 per cent between 2008 and 2018.¹ This is great news and it seems reasonable to conclude that the HVNL and actions taken by heavy vehicle operators have in some ways contributed to this.

Notwithstanding, as time has gone on, some problems or opportunities for improving the effectiveness of the existing HVNL have been identified:

- *Inconsistencies in approach* – The HVNL has not been implemented consistently across Australia. Most notably, it has not been implemented at all in Western Australia or the Northern Territory, and every participating jurisdiction has derogated from the HVNL in some areas. Fragmented arrangements and multiple rule sets can increase compliance and administrative costs particularly for stakeholders with cross border or national operations.
- *Prescriptive and inflexible* – The HVNL generally adopts a prescriptive 'one size fits all' approach to many diverse domains and operations within the industry. An overly prescriptive framework can restrict innovation and prevent the regulation from becoming more risk based or outcome focused.
- *Other barriers to adopting a risk-based approach* – Various features of the HVNL make it challenging for the National Heavy Vehicle Regulator (NHVR) to develop an evolving risk profile across the parties it regulates. It lacks visibility over parties that may be subject to the HVNL and the sources and significance of heavy vehicle related risks. In addition, the HVNL is difficult to change and, therefore, adapt to improvements in technology and vehicle safety.
- *Approval and administrative process* – The approval process relating to access and the Performance Based Standards (PBS) scheme can be complex, time consuming and costly for those involved. However, there are likely to be opportunities to streamline and improve these processes.

¹ Productivity Commission, 2019, *National Transport Regulatory Reform*.

These issues manifest in different ways, and to different extents, throughout the HVNL, and may have led to the imposition of unnecessary costs on industry and government. The review has therefore focussed on identifying and assessing options for reforming the HVNL with the aim of developing a risk-based and outcomes-focused HVNL that will:

- improve safety for all road users
- support increased economic productivity and innovation
- simplify administration and enforcement of the law
- support the use of new technologies and methods of operation, and
- provide flexible, outcome-focused compliance options.

Approach and methodology

The approach adopted in the Consultation RIS follows the requirements outlined in relevant government guidance. The Consultation RIS uses a qualitative cost benefit analysis (CBA) framework for assessing a number of reforms to specific provisions in the existing HVNL.

The HVNL Review has not found a case for repealing or overhauling the HVNL in its entirety. The reason for this is that the rationale behind the HVNL's creation and overarching approach remains sound (see section 3.2). Instead the review has identified a suite of incremental improvements to the HVNL. Consistent with this, the Consultation RIS has assessed reform options relating to key provisions of the HVNL separately. Further thought will be given to packaging reform options in developing the Decision RIS.

Policy options were identified by the NTC through consultation with stakeholders. The Consultation RIS sets out how each policy option will lead to incremental benefits and costs for industry, government and the community (relative to the status quo). The main benefit categories considered relate to reduced heavy vehicle crashes and improvements in industry operational efficiency or productivity. The key cost categories included industry compliance costs and costs to regulatory and enforcement agencies.

Key reforms for industry

Improving vehicle access

Current access arrangements are a pinch point for industry. Because of the time and effort involved in securing access to the road network these processes impose significant transaction and compliance costs on heavy vehicle operators. Given advances in vehicle design, the conditions of general access to roads may be somewhat risk averse and more stringent than required to ensure road safety and avoid damage to road pavements and infrastructure.

The Consultation RIS assesses a range of options to address these concerns (see chapter 9). In particular, expanding both the mass and dimensions limits for as-of-right access. Mass limits could be increased to those allowed under concessional mass limits (CML), either for all or a greater subset of heavy vehicles. While the dimension limits for general access could increase from 19 metres to 20 metres.

Taken together, these options are expected to give rise to substantial benefits to industry and the Australian community more broadly. With fewer vehicles required to apply for permits there would be a lower compliance burden on operators and a lower administrative burden on road managers, who would otherwise have to process these applications. Furthermore, it is expected operational efficiency in the industry will improve as operators have incentives to switch towards longer more efficient vehicles.

Fewer heavy vehicle movements for a given freight task reduces the likelihood of crashes. This is not expected to come at a cost to safety given improvements in vehicle design.

The Consultation RIS also considers options for improving the efficiency of the decision-making process for authorising access. Such as by expanding the use of expedited access processes, where there is precedent, that would facilitate faster handling of repeat and lower risk permits; streamlining key aspects of the decision-making process by amending statutory timelines; and introducing a nationally harmonised scheme for pilots and escorts.

These options are expected to provide considerable benefits to industry by ensuring faster and more flexible and responsive access decisions, and by reducing industry compliance costs.

A more efficient, streamlined PBS scheme

Stakeholders identified several concerns with the current PBS Scheme approval process including that it imposes high compliance costs, takes a lot of time and involves a high degree of uncertainty. Stakeholders also noted that vehicle standards have not kept pace with current international standards, and approved vehicles must still comply with smaller width dimension limits than permitted by international standards.

The Consultation RIS considers options for streamlining the PBS approval process (see chapter 10). This has a number of elements, including providing the NHVR with authority to assess and approve any application for a new or existing PBS vehicle design, linking access permissions to design (to give industry greater certainty about whether they will be able to secure road access once the vehicle has been constructed), allowing manufacturers to self-certify compliance with an approved PBS design, allowing for substitution of component vehicles that meet the design of the original vehicle, and allowing the transfer of approvals with the sale of a PBS vehicle.

In addition, the Consultation RIS also considers an option for introducing a PBS technology standard which would allow for recognition of technology as an alternative means of complying with PBS scheme standards (both infrastructure and safety-related). And creating a short-form PBS approval process for heavy vehicles whose only departure from the Australian Design Rules (ADRs) is that they exceed the permitted widths (i.e. 2.5m).

These changes to the PBS framework are expected to give rise to benefits for industry. In particular, streamlining elements of the PBS approval process should lead to more timely PBS vehicle approvals. This should therefore lower the administrative burden faced by operators seeking PBS approval and reduce administrative costs associated with the scheme as a reduced number of approvals will need to go through PBS Review Panel.

This in turn may encourage a greater uptake of the PBS scheme which could lead to improvements in operational efficiency as more productive heavy vehicles are able to be utilised for the freight and transport task. It may also lead to improved road safety outcomes if it increases uptake of new vehicles with more safety features and reduces the number of vehicle movements needed for a given task.

Finally, the ability to more easily obtain approval for wider vehicles may enable industry to buy standard heavy vehicles from abroad, e.g. the EU, which could reduce vehicle costs for the industry and ultimately enable more productive vehicles to be used.

Using technology to aid compliance

There is no overarching framework or clear process in the existing HVNL to enable new technology to be used to help with compliance (for example, on-board mass devices and fatigue and driver distraction monitoring devices). Instead, under current arrangements, legislative reform is required to do this. The Consultation RIS considers options which involve establishing a technology and data certifier who, as

the name suggests, would be responsible for certifying technology for use in enforcement and compliance of the HVNL (see chapter 6). This is expected to enable the regulator to more quickly introduce technology for compliance or risk-based safety management where it is expected to deliver value.

This would not limit other uses of data for non-regulatory safety or commercial purposes, including sharing that data where it may be beneficial to do so.

In addition, options are considered which reduce the need to carry paper documents in the heavy vehicle bringing the HVNL more in line with current technology.

Improving the regulation of fatigue

The HVNL review heard from stakeholders that the standard hours of work and rest contained in the HVNL was overly complex. Possibly because of this, enforcement of these provisions tends to focus on administrative breaches of work diary requirements. Some stakeholders also noted that the current approach was limiting a move to more risk-based regulation and provided no incentives for using innovative fatigue management technology.

A range of options have been considered in the RIS to both simplify the standard hours and streamline related record keeping processes and also to provide greater flexibility in relation to fatigue management to operators who seek it (see chapter 8). Additional reform options have also been considered to reduce the incidence of crashes related to the health and fitness for duty of drivers. These include the introduction of a national health assessment standard and a right for drivers to stop if they are deemed not fit for duty. A number of these options are expected to give rise to net benefits, including by reducing compliance burdens and administrative costs for industry and the regulator, and providing for more risk-based outcomes that would be expected to improve road safety outcomes. However, some uncertainties remain with respect to the impact assessment of some options, and there are clear trade-offs for stakeholders that need to be considered.

Creating a more effective assurance regime

Assurance and accreditation schemes could be considered to help outcome or performance based regulatory arrangements (which define high-level outcomes that must be delivered rather than prescribing specific actions or rules) work in practice. This is because they help the regulator, operators, suppliers and other parties have confidence with respect to an operator's capacity to manage risk. They also contribute to enabling industry to meet the objectives and standards in an efficient way that best suits their operations.

However, there is duplication and inconsistencies across the various assurance schemes operating within the industry, with most not recognised in the HVNL. This has created unnecessary financial and administrative burdens for industry and may have contributed to the low level of participation.

A number of options are considered in the Consultation RIS to amend the existing assurance landscape to increase effectiveness and usage (see chapter 7). The various options have different impacts and there are various inherent trade-offs between them. Stakeholders are encouraged to review the assessment of these options.

Key reforms for the NHVR and government

The current HVNL may not be enabling a regulatory approach that is as risk-based as it could be and therefore in some areas regulation may not be proportionate to the risk involved.

This is because there are constraints on the ability of:

- the regulatory approach to be adapted to take account of any improvements in technology, the understanding of risks and how best to manage them; and
- the regulator to identify and assess the magnitude of risks posed to road safety by different behaviours, vehicles, entities and persons.

Expanding the regulatory tool kit to support a more efficient, adaptive regulatory structure

The Consultation RIS considers options for expanding the regulatory tools available to the NHVR (see chapter 5). This includes allowing the NHVR to develop, vary and revoke codes of practice and safety standards (that would be Ministerially approved). These will help industry understand how to comply with the law including duties under the primary law. It will also allow more detailed rules, obligations and requirements to move out of the primary legislation so that they can be more efficiently adapted over time in response to changing circumstances. The assessment in the Consultation RIS suggests these reforms should help enable the HVNL to evolve and become more risk-based and targeted which should improve road safety outcomes.

Helping the NHVR build a better understanding of risk

The Consultation RIS also considers options that may help the regulator identify and assess the magnitude of risks posed by different behaviours, vehicle and entities. These include options that may enable jurisdictional agencies to share data with the NHVR (see section 5.3.2) and reforms would also enable the NHVR to better understand the nature of operators in the industry (see section 7.2.2).

Strengthening the role of technology and data

There have been significant developments in technology since the HVNL was drafted and therefore new methods of demonstrating and improving compliance are likely to be more effective and efficient than previously thought. These developments are likely to enable significant data to be collected on heavy vehicle use on roads and this data is likely to be useful to several stakeholders. For regulators, data underpins intelligence-led activities and strategies. For government and road managers, data can be analysed to improve planning, investment decision making and transport operations, and to support the design and delivery of new infrastructure.

There are two key problems with the current arrangements with respect to technology and data. Specifically, there is an absence of an overarching framework for the use of technology and data with respect to the HVNL, and the HVNL requires carriage of paper documents in a heavy vehicle (instead of allowing electronic documentation).

Therefore, the Consultation RIS considers reform options which help enable the use of technology under the law (see chapter 6). This includes options relating to the creation of a technology and data certifier and options to allow the use of electronic documentation for compliance.

We expect that the options that will give rise to the greatest increase in administrative and compliance costs for the NHVR and/or the government are those related to assurance and fatigue management. In both cases, additional costs will be incurred for the purpose of developing new systems and guidelines, educating industry on the changes, and undertaking additional compliance and enforcement activities. While the options are expected to give rise to benefits, the size of these benefits is presently unclear – given the costs involved, the assumptions underpinning the realisation of these benefits should be subject to further scrutiny.

Other reforms will also have implications for government

The options described as key reforms for industry, particularly those related to access, assurance and fatigue, may also affect government, the NHVR and/or enforcement agency administrative and compliance costs. They may also have potential implications for road safety.

Next steps

The Consultation RIS aims to draw out, through stakeholder submissions, additional information that may inform these impact assessments. The NTC will undertake an extensive consultation process in relation to the proposals and options explored in this Consultation RIS. The formal consultation process will consist of:

- a formal written submission process;
- targeted meetings with key stakeholders; and
- a web-based comment facility for consumers to share their experiences: <https://hvnireview.ntc.gov.au/>.

Questions are contained at the end of the various sections of the RIS and stakeholders are strongly encouraged to respond to these questions (and refer to the relevant focus questions) in their submissions. Where possible, the NTC encourages stakeholders to provide case studies, data and evidence to support their views.

1 INTRODUCTION

1.1 The HVNL Review

In November 2018 Ministers asked the National Transport Commission (NTC) to lead the review of the Heavy Vehicle National Law (HVNL) and its supporting regulations. This was in recognition that the current law, which has been in place since 2014, may not be as effective as possible.

Efficient and safe freight and passenger movement is critical for Australia's economy. Heavy vehicles play a vital role in fulfilling Australia's freight task. Both in terms of providing long haul freight movement and 'last mile' delivery services. In 2015-16, road freight accounted for over one-quarter of Australia's domestic freight task.² In 2015-16, road transport activity generated \$137.2 billion in economic output – approximately 7 per cent of gross domestic product (GDP).³ Similarly buses play a critical role in Australia's public and community transport operations and are an important input into Australia's tourism industry.

Therefore, any improvements that can be made to the HVNL that improve the safety and efficiency of the road freight and passenger transport industry have the potential to be of significant benefit to the community.

The HVNL Review has focussed on identifying and assessing options for reforming the HVNL with the aim of developing performance-based and outcomes-focused HVNL that will:

- improve safety for all road users
- support increased economic productivity and innovation
- simplify administration and enforcement of the law
- support the use of new technologies and methods of operation, and
- provide flexible, outcome-focused compliance options.

To date the NTC has been consulting with stakeholders to identify key issues with the HVNL and to generate and further develop potential solutions to these problems. The Review has unpacked the HVNL and found that overall its scope in the broader regulatory context and approach balances the goals of road safety and productivity. As a result, the HVNL review has led to identifying reform options that could improve the effectiveness of the HVNL. Most particularly by looking for new ways to regulate similar issues.

1.2 Purpose and structure of the Consultation RIS

This Consultation Regulation Impact Statement (RIS) represents the next phase of the review of the HVNL and is focussed on analysing policy reform options. Frontier Economics has prepared this Consultation RIS on behalf of the NTC, based on the reform options developed and advised by the NTC.

When conducting a RIS, consideration must first be given to whether there are problems that warrant government action. If a case for action is established, consideration is then given to the set of feasible

² Bureau of Infrastructure, Transport and Regional Economics, 2019, *Yearbook 2019: Australian Infrastructure Statistics, Statistical Report*.

³ Australian Bureau of Statistics, 2018, *5270.0 - Australian Transport Economic Account: An Experimental Transport Satellite Account, 2010-11 to 2015-16*.

options that could be implemented to address the problems. The impacts of each option must then be identified and compared in order to derive preferred solutions that may yield the greatest net benefit for society.

The Consultation RIS also looks to draw out, through stakeholder submissions, additional information that may inform these impact assessments. This feedback and additional information will be used to develop the final Decision RIS. The purpose of the Decision RIS is to aid the Transport and Infrastructure Council (the Council) in its decision making on reforms to the HVNL.

In developing both the Consultation and Decision RIS the principles that must be employed are set out in Council of Australian Governments (COAG's) Best Practice Regulation Guide.⁴

On this basis the remainder of the consultation RIS is structured as follows:

- Chapter 2 outlines key features of the existing HVNL
- Chapter 3 discusses common or overarching problems that have emerged with the HVNL
- Chapters 4 – 12 focus on specific provisions within the HVNL and for each discusses the specific problems that have emerged with the current legislative arrangements, the reform options being considered, the impact of these different options and outlines a series of questions for stakeholders.

1.3 Scope of the Consultation RIS

The Consultation RIS focuses on qualifying the impacts (i.e. costs and benefits) of reforms that address deficiencies identified with the existing HVNL as implemented. The Western Australian government and Northern Territory government are not party to the HVNL and administer their own regulations to address the matters contained in the HVNL. However, because the HVNL somewhat affects individuals and businesses in non-participating jurisdictions the Consultation RIS does assess the impact of reforms to the HVNL on operators, drivers and others in these jurisdictions.

That said, the Consultation RIS considers the impact of reform options from the national perspective rather than from the perspective of individual jurisdictions. Similarly, the Consultation RIS has not specifically assessed the impacts of Western Australia and the Northern Territory signing up to the HVNL. While the scope of the RIS is limited in this way, many of the reform options are focussed on how to better harmonise regulatory arrangements across jurisdictions to the extent possible.

The option would remain open for the Western Australian and Northern Territory governments to sign on to the HVNL or otherwise implement some or all of the proposed measures in their jurisdictions if it considered it appropriate to do so. In general, should Western Australia and the Northern Territory sign on to the HVNL the benefits of the reforms are likely to go beyond those described in this Consultation RIS assuming that harmonisation reduces burdens of cross-border operations and results in an efficient standard being applied (see Box 1: for further discussion of this).

More specific reform options that have not been assessed as part of this Consultation RIS are outlined in section 3.9.

⁴ Council of Australian Governments, 2007, *Best Practice Regulation: A guide for ministerial councils and national standard setting bodies*.

Box 1: The benefits of national harmonisation

Uniform regulations across jurisdictions can enhance operational efficiency and reduce the costs for industry of complying with jurisdiction-specific regulation. The cost savings from harmonisation are most likely to eventuate for operators with cross border operations.

Interstate freight is thought to represent about 32% of Australia's freight task by tonne-km.⁵ However, the vast majority of this involves interstate trade between HVNL participating jurisdictions. Regulatory harmonisation was one of the major motivations behind the push for the HVNL and National Heavy Vehicle Regulator (NHVR). Therefore, many of the potential cost savings from regulatory harmonisation are already captured in the baseline to the RIS because the national regulator and national law is already established.

Interstate trade involving the non-participating jurisdictions (Western Australia and the Northern Territory) is only around 5% of Australia's freight task by tonne-km⁶ and these operations may continue to be hampered by a lack of harmonisation. However, it should be acknowledged that for national operators, or transport companies with operations in both participating and non-participating jurisdictions, the compliance costs associated with this are likely to be fixed and irrespective of the scale of any cross-border operations.

In principle, harmonisation can lead to economic efficiencies from the point of view of society as a whole. Where operators face lower costs and fewer barriers, more operators will be encouraged to extend their services geographically where they see opportunities to make profits. This could increase the level of competition in the industry. Increased competition may lead to greater choice for consumers. It could also incentivise operators to improve their efficiency. In a more competitive industry, operators less able to meet the needs of consumers at the lowest price will be more likely to exit the market. Conversely, operators who are more able to meet these needs will be more likely to remain. As a result, the efficiency of the industry will be improved.

In this context, it is important to emphasise that regulatory harmonisation is more likely to reduce costs when harmonisation is efficient i.e. the standard applied does not, in and of itself, create unnecessary costs (for example, through over-prescription). Where harmonisation is based on regulation that places unnecessary costs, the scope for economic efficiencies is diminished. That is because the increased costs can lead to increased prices and/or a contraction in services. Moreover, harmonisation through costly regulation can constrain the extent to which competition may develop in the future, and the future competitiveness of the trucking industry.

⁵ Australian Bureau of Statistics, 2015, 9223.0 - Road Freight Movements, Australia, 12 months ended 31 October 2014.

⁶ *ibid.*

2 THE HVNL

The objective of the HVNL is to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that, amongst other things, promotes public safety, industry productivity and efficiency and encourages efficient, innovative and safe business practices.⁷

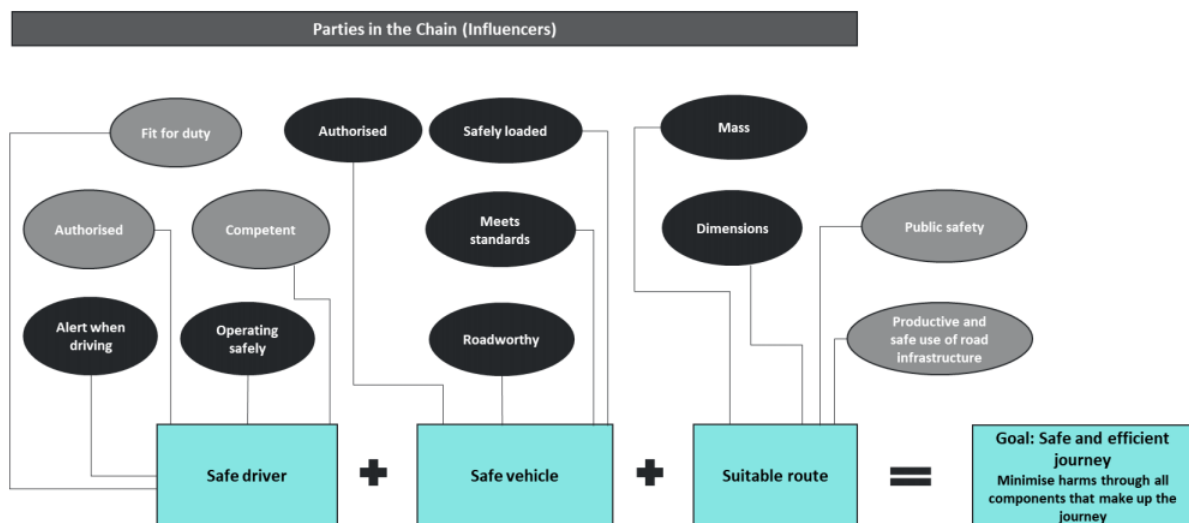
The primary purpose of the HVNL can be described as ensuring that a heavy vehicle operates safely while delivering an efficient service. A safe and efficient heavy vehicle journey comprises:

- a safe driver – one who is well-trained, competent, fit for duty and alert when driving
- a safe vehicle – one that is registered, roadworthy and safely loaded, and
- a suitable route – one that minimises public safety risks and excessive impacts on road infrastructure (given a heavy vehicle’s mass and dimensions) and maximises productivity.

Risks to a safe and efficient journey must be managed in order to comply with the HVNL. The law recognises threats that may lead to harms can originate well before, and far away from, the heavy vehicle journey (and may be controlled by others, such as schedulers).

The HVNL applies to all heavy vehicles over 4.5 tonnes gross vehicle mass and regulates a number of parties who can reasonably influence the safe and efficient journey of these vehicles (through a defined chain of responsibility), as well as those that play a key administrative or enforcement role.

Figure 1: Elements contributing to a safe and efficient heavy vehicle journey



Source: National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*.

⁷ See *Heavy Vehicle National Law*, part 1.1, section 3.

The HVNL consists of the Heavy Vehicle National Law Act 2012 and five sets of regulations.⁸ Other regulatory instruments such as registered industry codes of practice and guidance material support the objectives of the HVNL.

The HVNL could be categorised as *ex post* regulation. This means it relies heavily on roadside inspections and compliance audits and the ability to credibly threaten penalties and punishment for breaches to encourage compliance.

Given the diversity of the industry it regulates, the HVNL relies on the imposition of a primary duty, on parties in a Chain of Responsibility (CoR) to ensure, *so far as is reasonably practicable*, the safety of transport activities relating to a heavy vehicle (see chapter 4). This is similar to the approach taken in Work Health and Safety legislation.

Complying with primary duties can be challenging for regulated parties and in the case of the HVNL further requirements on what parties must do, or not do, are contained in the Law itself. Therefore, the HVNL has key provisions relating to the following (amongst others) which contain quite prescriptive requirements for compliance:

- Vehicle operations
- Vehicle mass, dimensions and loading
- Fatigue (work and rest hours and record keeping)
- Access
- Performance based standards
- Enforcement.

It is worth noting that the HVNL is considerably different in style and scale from comparable laws. In particular, the HVNL is large and highly prescriptive, with a lot of detail in the primary legislation rather than sub-ordinate instruments such as Standards and Codes of Practice (see Chapter 5 for further discussion of this).

To provide operators with more flexible options for compliance, operators can seek to become accredited under the National Heavy Vehicle Accreditation Scheme, the NHVAS (see chapter 7). This provides exemptions from certain prescriptive requirements. By way of example operators that are accredited under the advanced fatigue management (AFM) module of the NHVAS are able to access more flexible hours of work and rest on the basis that they have in place management processes and controls to reduce the risk of fatigue.

The HVNL is implemented by means of an applied law scheme, supported by regulations and other instruments. Essentially, the law is hosted by Queensland and has the force of law for participating jurisdictions.⁹ The HVNL can be modified by the Queensland Parliament at the unanimous direction of the Council.

All States and Territories, (excluding Western Australia and Northern Territory) are participating jurisdictions in the HVNL.¹⁰ Each state and territory covered by the HVNL has passed legislation that modifies some aspects of the HVNL for that state or territory. Given Western Australia and the Northern

⁸ These five regulations comprise: Heavy Vehicle (Fatigue Management) National Regulation; Heavy Vehicle (General) National Regulation; Heavy Vehicle (Mass Dimension and Loading) National Regulation; Heavy Vehicle (Vehicle Standards) National Regulation; and Heavy Vehicle (Registration) National Regulation.

⁹ The reason for this approach is that the Australian Constitution doesn't give the Commonwealth power to make laws with respect to road, rail and intermodal transport. Land transport is a matter for the states and territories to regulate.

¹⁰ *ibid.*

Territory are not parties to the HVNL they administer their own regulations to address matters contained in the HVNL.

The National Heavy Vehicle Regulator (NHVR) administers the HVNL and is responsible for monitoring and enforcing compliance with the HVNL and related regulatory instruments. However, some other aspects of heavy vehicle regulation remain in state and territory legislation. For example, heavy vehicle registration and related inspections, driver licensing and carriage of dangerous goods are still the responsibility of state and territory authorities. State and territory police, as well as authorised officers of the NHVR, enforce heavy vehicle offences under the HVNL.

The HVNL also links with the wider safety related regulatory framework in place across Australia i.e. through State and Territory work health and safety legislation.

3 CONTEXT AND EMERGING PROBLEMS WITH THE HVNL

3.1 Heavy vehicle road safety is improving

Data suggests that heavy vehicle road safety is improving. Heavy vehicle crashes involving injury or death decreased by approximately 40 per cent between 2008 and 2018.¹¹ This is great news and it seems reasonable to conclude that the HVNL and actions taken by the trucking industry has in some way contributed to this. However, fatal crashes involving heavy vehicles increased over the last 12 months by 27 per cent when compared with the corresponding 12-month period one year earlier (from 136 to 173 crashes). This represented a deviation from the most recent trend with crashes decreasing by an average of 0.6 per cent per year for the three years to December 2019.¹²

In any case, it is challenging to separate the impact of the HVNL from other factors affecting the safety of road travel in general like improvements in road infrastructure or vehicle safety. A similar decline in crashes has also occurred in light vehicles (see **Figure 2** below).¹³ While this might be taken to suggest that more general road vehicle and network improvements are the key driver of improved safety, it is equally possible that the HVNL has reduced the likelihood of crashes involving heavy vehicles and that this has been a contributing factor to the fall in crashes involving light vehicles. Hence, the evidence on whether the HVNL has delivered improved road safety outcomes is inconclusive. Given many factors can contribute to heavy vehicle road safety outcomes a comparison of outcomes across jurisdictions that apply different regulatory approaches is also unlikely to be conclusive.

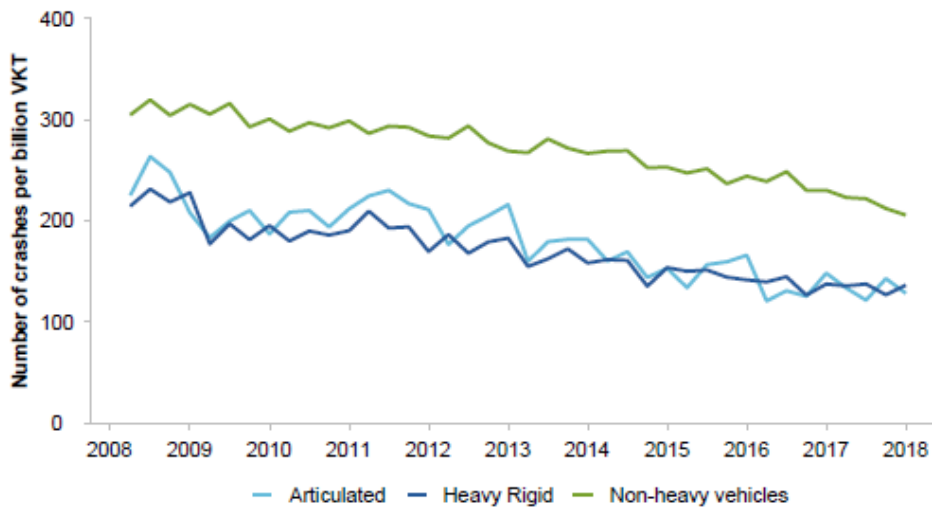
Irrespective, improving road safety is not a reason for complacency. As a result, the HVNL review has focused on identifying reforms that could incrementally improve the effectiveness of the HVNL.

¹¹ Productivity Commission, 2019, *National Transport Regulatory Reform*.

¹² Department of Infrastructure, Transport and Regional Economics, 2019, *Fatal heavy vehicle crashes Australian quarterly bulletin Oct – Dec 2019*.

¹³ Productivity Commission, 2019, *National Transport Regulatory Reform*.

Figure 2: Crashes involving injury or death per billion vehicle kilometres travelled (VKT)



Source: Productivity Commission, 2019, *National Transport Regulatory Reform, Draft Report*, p.14

3.2 The rationale for the HVNL remains unchanged

The business practices and decisions of heavy vehicle operators, drivers and others within the industry affect the safety of heavy vehicles on Australian roads. The behaviour and practices of these parties has the potential to impact on the risk of crashes and breakdowns involving heavy vehicles which can be costly not only for those directly affected but also wider society.

Although heavy vehicle drivers are generally safer than other drivers, by virtue of their size, heavy vehicles are disproportionately involved in casualty crashes and these crashes tend to be more severe. Heavy vehicles account for 7 per cent of vehicle kilometers travelled on Australian roads yet they are involved in 16 per cent of road crash fatalities.¹⁴

Heavy vehicle crashes can impose:

- cost on drivers, other road users, their families associated with death, rehabilitation, and/or loss of income
- cost on operators associated with any losses of capital stock, lost man hours or lost productivity
- indirect cost on operators associated with any lost customer confidence in the reliability of heavy vehicles and hence reduced volume and revenues
- cost on customers associated with any resulting delays and lost freight
- costs for other road users from resulting delays to their journey, and
- cost for society more broadly from environmental and infrastructure damages and clean-up, death and injury of members of the public and costs to the hospital and health system.

In addition, unfettered access to public roads by all kinds of heavy vehicles could create risks to community safety, reduce public amenity from noise or congestion and contribute to excessive road infrastructure and pavement damage where vehicles access unsuitable roads.

¹⁴ Department of Infrastructure and Regional Development, 2016, *Heavy truck safety: crash analysis and trends*.

Heavy vehicle operators, drivers and others within the industry may not bear the full social costs of any road accident or damage that results from any action, or lack of action, on their part. It is important to note that these parties do face some exposure to costs stemming from crashes or their use of the road network.¹⁵ Drivers may pay for a crash with their life and operators face reputational risk and legal liability arrangements. However, they may still not take into account (or “internalise”) all the costs that are borne by society as a whole.

Because of this there is a risk that heavy vehicle operators may not invest enough in mitigating the risks of crashes. In other words, those within the industry may not deliver improvements in road safety outcomes that would be valuable from society’s perspective. This is the *prima facie* case for regulatory intervention in the form of the HVNL. As a result, the HVNL exists as a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that, amongst other things, focuses on ensuring that heavy vehicles and their drivers are safe, and that they are operating on suitable routes to minimise public safety risks.

The HVNL review has not explored reform options which fundamentally change the focus and form, or overarching approach, of the HVNL. This is because regulation that is mostly *ex post* in nature would seem to remain appropriate (see Box 2:) for the reasons outlined below.

- The fundamental market failure rationale for the existence of the HVNL remains unchanged. While operators and drivers may not bear all costs and risks of operating in an unsafe way, they do face exposures from crashes and are incentivised to manage risks. This means misconduct cannot be presumed.
- The nature of the industry remains diverse (ranging from single-vehicle operators to large corporations) as does the context surrounding their operations. As a result, it is not always easy to describe or be certain in all contexts what risk management actions are most appropriate.

Instead the HVNL review has focussed on how provisions within the HVNL could be incrementally improved. As time goes on it should be expected that opportunities for improvement will be identified and this has occurred. Moreover, as new technology has emerged, and new evidence has come to light, it is timely to review the HVNL to ensure it has kept up with these changing circumstances. Particularly in areas where the HVNL balances road safety and wider productivity objectives, such as in relation to road vehicle access arrangements (see section 3.6 for further discussion of this). In these areas the form and approach to regulation specified in the HVNL may no longer be the most efficient and effective and may need to be adapted to take account of new technology for managing risks.

Through consultation with industry, regulators, jurisdictions (participating and non-participating) and others, the NTC has identified several common or overarching problems with the HVNL. These are discussed in the sections 3.3 to 3.6 that follow.

¹⁵ There are existing mechanisms that expose responsible parties to the wider costs for society stemming from heavy vehicle accidents. Most notably, legal liability arrangements (for example, the imposition of damages for crashes with impact on public safety, infrastructure or the environment) and the insurance costs associated with protection against liability. Legal liability may be only partially effective in accounting for externalities because of:

- 1) Difficulties associated with attributing blame when, more often than not, a myriad of factors contribute to an incident. This makes it less likely that an operator would be deemed responsible for any incident, which in turn may reduce the likelihood of successful litigation.
- 2) Information asymmetries between operators and insurers — It is costly for insurance companies to monitor operators’ crash mitigation efforts, and this may lead to imperfect monitoring by insurers. In such circumstances, operators will face weaker incentives to undertake preventive efforts that are of net benefit (in terms of avoided future crash costs).
- 3) Damages being dispersed— For example many road users may experience productivity losses from a crash, such as from being caught in the resulting road congestion. This makes it difficult to co-ordinate civil action against a negligent operator.

Box 2: The effectiveness of *ex ante* (preventative) vs *ex post* (deterrent) regulation

Ex ante regulation is preventative and involves intervention in advance to control actions and activities of regulated businesses. It is based on the presumption that the regulated entity will be incentivised to cause harm or take unacceptable risks, and so imposes rules up front to prevent/limit this harm.

In contrast *ex post* regulation aims to deter misconduct by applying punishments. Intervention is *ex post* (after the fact) and typically discretionary (not automatic) following review of evidence of the abuse/harm.

Some conclusions from the literature in terms of effectiveness of *ex post* vs *ex ante* regulatory regimes suggest that *ex post* regimes are more likely to be effective when:

- It is easy to identify, demonstrate and measure misconduct or harm. This relies on an ability to adequately monitor compliance or outcomes and behaviour.
- There is less certainty around what risk management actions are appropriate or best placed to manage risk in different contexts.
- Probability of misconduct is low or uncertain i.e. there are not competing incentives on operators.
- There is a credible threat of punishment i.e. penalties that are sufficiently high and certain (or not perceived as avoidable) to act as a discouragement of misconduct.

Source: Relevant literature includes work by Steven Sharvell (1987) Economic Analysis of accident law, Posner (2011) Regulation (agencies) versus Litigation (Courts) An analytical framework; Brian Galle (2015) In Praise of Ex Ante Regulation, and Kyle D Logue (2016) Kyle D. Logue, In Praise of (Some) Ex Post Regulation: A Response to Professor Galle.

3.3 Inconsistencies in regulatory approach remain

The HVNL has not been implemented consistently across Australia. Most notably it has not been implemented at all in Western Australia or the Northern Territory, and every participating jurisdiction has derogated from the HVNL (that is, made local variations or exceptions) in some areas.

Fragmented arrangements, in which requirements and approaches vary across jurisdictions, can increase compliance and administrative costs particularly for stakeholders with cross border or national operations by obligating them to ensure compliance with multiple rule sets, this:

- increases compliance costs by requiring additional internal management to ensure compliance with the multiple requirements.
- can result in management systems that are compliance focussed rather than risk focussed. At best, this results in inefficiencies and increased costs. At worst, it can reduce the effectiveness of controls and create unnecessary complexity.
- removes flexibility, reducing efficiency and productivity.

Inefficiencies have arisen from inconsistencies across jurisdictions which has created challenges for the NHVAS (see chapter 7) and created issues with the process for clearing vehicle defects (see chapter 11).

That said, it is important to remember that regulatory harmonisation is more likely to reduce costs when the standard/rule/approach being required does not, in and of itself, create unnecessary costs (for

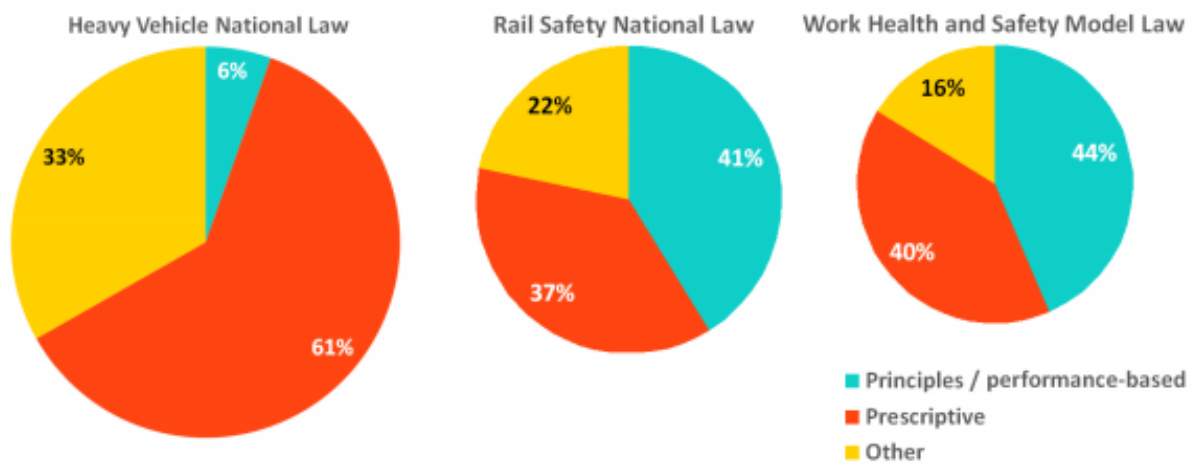
example, through being overly prescriptive).¹⁶ Hence, it is important to analyse the consequences of specific inconsistencies in requirements.

3.4 The law is overly prescriptive and inflexible

The HVNL generally adopts a prescriptive and inflexible 'one size fits all' approach to many diverse industries, domains and operators.

The HVNL is considerably different in scale and style from comparable laws. Figure 3 below provides a comparison of the size and regulatory styles used in the HVNL, Rail Safety National Law (RSNL) and model Work Health and Safety (WHS) Act. By simple count of provisions in the primary legislation, the HVNL is more than twice the size of the RSNL and the model WHS Act. The HVNL is also highly-prescriptive — almost two-thirds of the Act contains prescription.

Figure 3: Comparison of regulatory styles by legislative instrument



Source: National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 33.

The recent Productivity Commission draft report into national transport safety regulation, found that:

*The prescriptive approach of the Heavy Vehicle National Law impedes the National Heavy Vehicle Regulator from administering the law consistently with the Council of Australian Governments’ objectives. A more outcomes-based approach to legislation and regulation would improve road safety, reduce the burden of compliance and administration, and increase the efficiency of road transport.*¹⁷

The HVNL was intended to enable regulated parties to adopt a flexible, risk-based approach to managing heavy vehicle safety and complying with the law. The reason for this is that the heavy vehicles, and heavy vehicle operators, covered by the HVNL are diverse. They include individual owner drivers operating on a single route and large logistic companies providing services across Australia. The many

¹⁶ As noted by the Productivity Commission: “The question of whether or how to pursue national consistency is not straightforward. Inconsistencies between jurisdictions may have significant implications for safety or productivity. Where this is the case, governments should consider whether moves toward consistency are supported by evidence and, if so, whether the appropriate course of action is via uniformity, mutual recognition, or greater flexibility” (Source: Box 2, Productivity Commission, 2019, *National Transport Regulatory Reform*).

¹⁷ Draft finding 7.1, Productivity Commission, 2019, *National Transport Regulatory Reform*.

diverse heavy vehicle uses, domains and operators suggest that the risk profile applicable to heavy vehicle use around Australia is likely to be diverse (see Box 3:). This makes it difficult to establish common prescriptive requirements that are applicable and appropriate in all circumstances. In this context, less prescriptive approaches can be less costly for industry and society at large. Where operations are diverse, a regulator will rarely be in the best position to understand the range of risks affecting an operator, and how best to manage them. This is because the information necessary to make the best risk management decision most commonly sits with the operator.

However, the HVNL primary legislation contains a great deal of detail and prescription, often focusing on inputs or specific actions parties must take rather than the safety outcomes they must deliver. For example, the HVNL:

- contains highly prescriptive hours of work and rest (see chapter 8);
- sets specific vehicle dimension and mass limits below which heavy vehicles have general road access (see chapter 9).

Prescription can be an efficient way of achieving certain outcomes. Undoubtedly the certainty can make compliance and enforcement simple. However, it can restrict innovation and lock in inefficient risk management approaches, particularly where specific risk mitigation actions are prescribed, or where standards and obligations are based on an existing set of technologies or measures. The potential cost savings for industry from the uptake of newer safer vehicles, emerging technologies and other innovations is lost when regulations require or prescribe specific measures. In addition, a prescriptive or “one size fits all” approach could be preventing the regulation from becoming more risk-based. Prescription can make regulation unnecessarily operationally restrictive for low risk matters or operators. A risk-based approach to regulation centres on the principle that regulation should target the more significant risks to safety. Risk-based regulation is widely considered good regulatory practice.¹⁸

Given the diversity of operations in the industry a high level of prescription (particularly where this is input focussed) risks creating regulation that is poorly aligned with harms and therefore delivering limited safety benefits. This can encourage resources to be diverted to administrative compliance activities, rather than improving safety outcomes. For example, there is a tendency for enforcement of the HVNL’s fatigue provisions to focus on record-keeping requirements. Stringent regulation of illegal-but-not-harmful behaviours (such as administrative technicalities, like not filling out forms correctly) risk creating perceptions that the law is pedantry and ‘revenue-raising’. Any unnecessary or ineffective compliance burden will impact on productivity as these resources could have been better focussed on achieving improved operational efficiencies.

It is worth noting that there are mechanisms within the HVNL to provide operators with greater flexibility such as through the Performance-Based Standards (PBS) scheme (see section 10.1). This scheme provides operators with greater flexibility to use higher productivity vehicles where it can be demonstrated that broader impacts are likely acceptable from a societal point of view. Similarly, the NHVAS which is further discussed in chapter 7 is intended to recognise operators who set up systems (relating to mass, fatigue management and vehicle maintenance) to proactively manage heavy vehicle related safety risks. However, within these provisions of the law problems with prescription remain. By way of example, operators certified under modules of the NHVAS are still only provided with limited access to alternative compliance arrangements. This limits the extent to which the HVNL is risk-based or applies regulatory burdens proportionate to the risk involved.

¹⁸ See discussion in National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 21.

Box 3: Diverse heavy vehicle operations

Parties regulated by the HVNL, are diverse. They influence or control the operation of different vehicles, under varied business models, and each have different capacities and risk profiles.

Heavy vehicles are used for diverse purposes in Australia such as:

- freight movements - for example, oversize overmass, interstate line haul, urban distribution, livestock movements, refrigerated transport and dangerous goods
- specialised services - for example, cranes, agricultural vehicles and concrete pumps
- passenger services - for example, buses, and
- waste management services.

Vehicles carrying livestock have different needs and present different risks from that of a passenger service or waste management vehicle. The diversity of purposes for heavy vehicles means a diversity of vehicle types.

In addition, road transport in Australia operates in vastly different domains. From interstate line-haul freight operations on state and national highways to local bus operations on suburban roads.

Road freight is one of the biggest sectors regulated by the HVNL but, even in this business operations and operators are diverse. In 2018 there were an estimated 40,332 operators in the road freight industry, ranging from single-vehicle operators to large corporations.¹⁹ These operators range from seasonal farmers to international logistics chain businesses. Approximately 70 per cent of all operators only have one truck in their fleet and about 24 per cent have two to four trucks.²⁰

The NTC has previously observed that the HVNL appears to focus on regulating interstate line-haul freight operations on the eastern seaboard.²¹ This means these diverse operations are subject to broadly equivalent requirements.

3.5 Restrictions on the HVNL becoming more risk based and outcome focussed

Box 4: below discusses the benefits and challenges associated with adopting a risk-based approach to regulation. However, there are other specific features of the HVNL that may limit enforcement and compliance activities from becoming more risk-based or proportionate to the risk involved. These are further discussed in the sections that follow.

¹⁹ IBISWorld, 2018, *Road Freight Transport June 2018*.

²⁰ National Transport Insurance, 2016, *NTI's Guide to the Trucking Industry 2016*, p. 6.

²¹ National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 37.

Box 4: A risk-based approach to regulation**Why adopt a risk-based approach to regulation?**

A risk-based approach to regulation centres on the principle that regulation should target the most significant risks to safety. Risk-based regulation is considered good regulatory practice and has been applied internationally, across different transport modes and across different types of industries.²²

By focussing regulatory efforts on harm minimisation or material risk, well targeted risk-based regulation makes the best use of limited public resources by improving the effectiveness and efficiency of regulation. The result of this should be more proportionate compliance and enforcement activity but ultimately improved road safety outcomes.²³

For this reason, the reform options in the Consultation RIS are often aimed at better reflecting a risk-based approach to regulation. A risk-based approach aligns with a safe systems approach discussed in the National Road Safety Strategy.²⁴

The challenges

A challenge of risk-based regulation is that it requires meaningful data and a methodology to accurately assess risk on an ongoing basis.

Adopting a risk-based approach to regulation in this sector is necessarily challenging as there is a lack of certainty around the links between the management of risks and the likelihood of crashes/incidents.

By way of example there are a range of variables that could affect the likelihood of a heavy vehicle crash such as the presence of any vehicle defects (which are in turn affected by the level of maintenance effort applied), the way a driver handles the vehicle (which is affected by their competency which is vehicle and route specific), the behaviour of other drivers, the quality of the road infrastructure, and the weather.

Regulatory styles that can be adopted under a risk-based approach²⁵

There are three broad regulatory styles that can be adopted under a risk-based approach to regulation which largely differ based on who owns, or is responsible for undertaking, different aspects of the risk management role:

- Prescription (rules-based) – the government/regulator is responsible for identifying risks and prescribing specific risk treatments; operators are responsible for implementing the prescribed treatments.
- Outcomes (performance-based) – the government/regulator is responsible for identifying risks and setting performance standards for risk treatments; operators are responsible for specifying and implementing risk treatments that meet those performance standards.
- Principles (safety assurance) – the government/regulator specifies an overall safety objective and monitors outcomes; operators and the government share responsibility for identifying

²² See discussion in National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 21.

²³ Improvements in the effectiveness and efficiency of regulation can also result in cost savings or regulatory resources being freed up. For the purposes of this assessment we have assumed any administrative costs savings or freed up resources are channelled back into improving road safety outcomes.

²⁴ National Road Safety Strategy, no date, *Safe System principles*.

²⁵ National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 23.

risks; operators manage risks to attain the safety objective and provide assurances to government of appropriate risk management policies and procedures to attain the safety objective.

Consistent with a principles approach to regulation described above some operators within the industry have adopted Safety Management Systems (SMSs). An effective SMS could be considered to be one “that helps to continually identify interdependencies between risk factors and to adapt to work conditions and processes”... “this should be based on the idea that any WHS incident results from a set of interacting causes, not simply from a proximal error occurring at the time and place of the incident.”²⁶

3.5.1 Limitations on regulator’s ability to build a risk profile of the industry

The HVNL is primarily a deterrent regime whereby compliance is primarily monitored through roadside inspections and audits. As a result, the regulator lacks general visibility over entry and exit into the industry and hence the parties that may be subject to the HVNL (see chapter 5). And to some extent the sources and significance of heavy vehicle related risks. This makes it challenging for the regulator to develop an evolving risk profile across the parties it regulates.

3.5.2 Challenging to change

The HVNL is difficult to change and so unresponsive to changes in circumstances. The reason for this is that the primary legislation contains a great deal of prescriptive detail (as discussed in section 3.4). Any changes to primary legislation require unanimous agreement from all responsible ministers and subsequent passage through the Queensland Parliament. Even relatively straightforward amendments take more than a year.²⁷ As a result, it is difficult to tailor and adapt heavy vehicle regulation as understanding of the severity of potential risks improves or as new approaches or technologies emerge.

These issues are discussed further in chapter 5 in relation to reforms to regulatory tools and in chapter 6 in relation to data and technology.

3.6 Process for approving heavy vehicles and their access to roads

Some of the approval processes outlined in the HVNL may be unnecessarily costly to industry because of complexity. The HVNL has both a safety and productivity focus. The intent behind this is that heavy vehicle use can affect multiple parties with competing interests in different ways. For example, the makeup of the heavy vehicle fleet can impact the risk of road crashes, road damage, freight efficiency and productivity more generally.

The HVNL is where these competing impacts are balanced. For example, the controls on heavy vehicle access should ideally enable heavy vehicle access to roads close to optimal levels – where the marginal social benefits (in terms of improved efficiency and productivity) balance the marginal social costs of access (taking into account the risk of crashes, environmental and road damage costs). However, determining this is challenging, vehicle and context specific and necessarily involves multiple affected parties and balancing considerations around safety and productivity. This creates complexity in approval

²⁶ Mooren, L, 2016, *An Evidence-based Safety Management System for Heavy Truck Transport Operations*, p. 51.

²⁷ National Transport Commission, 2019a, *A risk-based approach to regulating heavy vehicles*, p. 36.

processes for restricted access vehicles which can make getting access to roads for these vehicles time consuming and costly.

In the face of improvements in vehicle safety it is timely to re-consider whether general road access arrangements appropriately balance safety and productivity consideration (see section 9.4). It is also worth exploring whether there are opportunities for streamlining and improving the restricted access vehicles approval processes (see section 9.5).

Issues of a similar nature have arisen in relation to the PBS scheme approval process which can also be both lengthy and onerous. Therefore, the Consultation RIS also looks for opportunities for streamlining and improving the PBS approval processes (see section 10.2).

3.7 How these problems manifest throughout the HVNL

The chapters that follow relate to key provisions of the HVNL. These chapters contain more detailed descriptions of how these problems described in sections 3.3 to 3.6 have manifested throughout key provisions of the HVNL. **Figure 4** below summarises this.

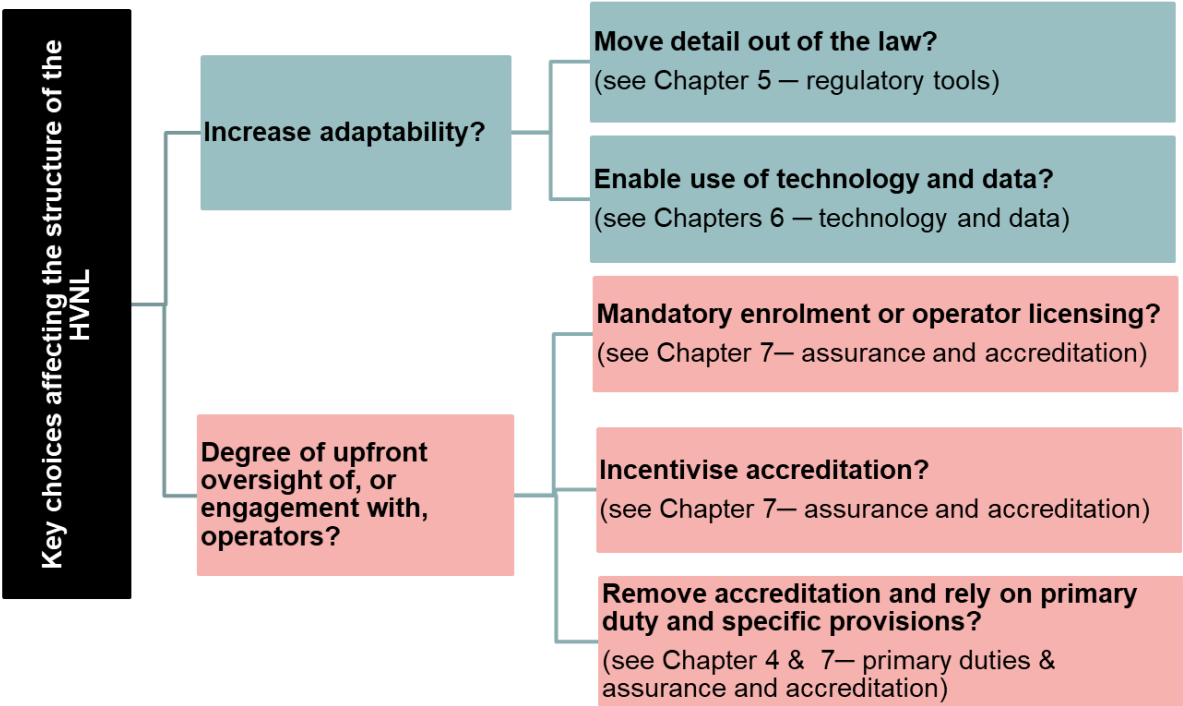
Figure 4: Provisions of the HVNL where these problems have presented

	INCONSISTENCIES IN APPROACH	PRESCRIPTIVE AND INFLEXIBLE	BARRIERS TO A RISK BASED APPROACH	COMPLEXITY OF PROCESS	OTHER
Primary duties and responsibility					Scope of provisions limited. Driver duties not sufficiently defined.
Regulatory Tools			Limited visibility of risks. Lack of adaptability.		
Technology and data			Lack of adaptability – can’t easily introduce new risk management approaches.		
Assurance and accreditation	Duplication of, and inconsistencies in, scheme.	Lack of flexibility offered by regimes.	Limited visibility of regulated parties.		
Fatigue	Inconsistency in approach across jurisdictions.	Provisions highly prescriptive.	Difficulties detecting breaches. Lack of adaptability – doesn’t recognise innovative ways to manage fatigue.		Scope of provisions limited.
Access			Lack of adaptability – Provisions may be more stringent than needed given advances in vehicle design.	Approval process not timely and efficient.	
Vehicle design/PBS			Lack of adaptability – Provisions more stringent than needs to be given advances in vehicle design.	Approval process not timely and efficient.	
Roadworthiness	Inconsistencies in approaches to vehicle inspections			Defect clearance process imposing unnecessary delays.	

For the most part, the reform options developed in relation to each key provision can be considered in isolation. However, there are some reforms which may more broadly affect the structure and operation of the future HVNL (see **Figure 5**) and therefore its more detailed provisions. These relate to changes that are intended to either increase adaptability of the legislation or change the degree of upfront engagement with, or oversight of, operators. Reforms in these areas have been considered first in Chapters 4 to 7. Reforms to specific provisions relating to fatigue, access, safer vehicles and roadworthiness (that may be affected by the more fundamental structural reforms) are then considered in Chapters 8 to 11. Where an option is dependent on reforms elsewhere to the HVNL this has been noted.

In developing the Decision RIS consideration will be given to how the large number of specific reform options considered in this Consultation RIS can be sensibly packaged together. This will depend on feedback from stakeholders on the specific reforms outlined in this document and the degree to which reforms are complementary or dependent on each other.

Figure 5: Reform choices that would affect the wider structure and operation of the HVNL



Source: Frontier Economics

3.8 Policy objectives

Below are some broad and high-level policy objectives for the reforms to the HVNL being progressed through this Consultation RIS process.

- The future HVNL should have a clear and balanced object, and provide the scope and coverage needed to manage the risks. This includes ensuring that parties that have significant influence and/or control over heavy vehicle safety are sufficiently incentivised to use their role to promote safe outcomes.

- The future HVNL should be more risk-based and outcome focussed by:
 - enabling risks specific to Australian heavy vehicle operations to be better identified
 - targeting the most significant risks associated with heavy vehicle operations
 - encouraging operators to take on the burden for risk management (where they are better placed to do this) and providing operators with flexibility to choose the most suitable compliance option, where appropriate
 - being responsive, flexible and able to readily accommodate changes to technology and business models and to adapt over time to better reflect changes in the severity of the risk, and
 - adopting the regulatory model that recognises the risk severity, and the regulated party's expertise, willingness and capacity to identify, develop and implement risk controls.
- The future HVNL should recognise the diverse risk profile of the industry, operators and regulated parties and provide flexibility (in a harmonised manner) for those operating across vastly different domains and under different business models.
- The future HVNL should deliver better safety and productivity outcomes and lead to continual improvement across these key performance areas.
- The future HVNL should ensure regulatory, compliance and enforcement processes are as proportionate, timely and as efficient as possible.

3.9 Reforms that have not been assessed as part of this RIS

3.9.1 Reforms relating to other legislative instruments

Through the consultation process conducted to date as part of the HVNL review, several recurring issues were raised by stakeholders that highlight the potential need for further work relating to other legislative instruments. These include:

- Reforms to Australian Design Rules (ADRs) to keep pace with changing heavy vehicle designs.
- Reforms to improve the extent to which the heavy vehicle fleet meets the latest environmental standards (further details below).
- Reforms to licensing and registration arrangements to help operators ensure the competency of drivers (further details below).
- Alternative policy approaches to achieving mutual recognition of regulatory and accreditation arrangements (further details below).
- Alternative policy measures proposed by NSW to assist local governments to develop approved freight paths.

This Consultation RIS is unable to consider in detail reforms to address these issues as they are likely best progressed through reforms to other legislative instruments rather than the HVNL. However, given the parallels with changes proposed for the HVNL, Transport Ministers may wish to consider undertaking further work on reform options in relation to the above.

Reforms to vehicle emission standards

Stakeholders have suggested there may be further opportunity to reform the PBS process by incorporating vehicle emissions standards and/or fuel efficiency requirements. In particular, by granting greater access to the road network for vehicles that meet the latest environmental standards.

An option of this nature has not been assessed in this Consultation RIS. This is primarily because this reform would cut across the other legislative mechanisms in place for controlling vehicle environmental

standards, which apply at the point of import into the country. It would appear sensible that alternative reform options to achieve the stated goals should be considered more broadly rather than by restricting the options to those that can implemented through the HVNL.

Further thought also needs to be given to how this novel policy proposal would be administered. For example, reforms of this nature might best be enacted through reforms to heavy vehicle access arrangements more generally (i.e. through arrangements for granting access via permit or notice conditions) or through accreditation modules, rather than through the PBS.

Requiring licensing authorities to share driving history with employers

Operators may be somewhat constrained in their ability to understand the capability and driving history of their drivers. Operators do not receive notification from licensing authorities about driving offences committed by their drivers, unless they are the registered operator of the vehicle such that the infringement notice is sent to the vehicle's registered operator's address.

One option that has been raised by stakeholders for addressing this could be to impose obligations on licensing authorities to notify transport operators in respect to any fines or enforcement actions taken against drivers or in relation to registered vehicles being used by these operators under hire and reward arrangements.

Licensing and registration are not within the scope of the HVNL therefore this option has not been explored as part of the RIS. There are also likely to be a number of legislative and practical challenges associated with this option.

Mutual recognition of regulatory and assurance arrangements

Chapter 7 discusses legislative reforms to the existing assurance and accreditation regime some of which are intended to reduce duplication and inconsistencies across the various assurance schemes covering the industry. In particular, many operators are also required to enrol in the NHVAS and Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS) regime if they operate in Western Australia.

There are likely to be other ways the NHVAS can recognise the WAHVAS and vice versa (and potentially other accreditation schemes) without the need for legislative reforms such as through a memorandum of understanding. More broadly, ministers could set an agenda of mutual recognition across regulatory requirements that enables simpler cross-border operations and also establishes a "light on the hill" for ongoing heavy vehicle regulatory reforms.

Developing mutual recognition arrangements would go a significant way towards reducing the financial and administrative burden for operators working in multiple jurisdictions. This would involve regulators working together to either resolve inconsistencies across the regulatory frameworks and assurance schemes or otherwise acknowledging and accepting these differences.

Given this option is not clearly dependent on legislative reform – though it may drive it – it has not been assessed as part of this Consultation RIS. However, it would seem to be worthy of greater consideration and could be progressed irrespective of the outcomes of the RIS.

3.9.2 Reforms to the objects of the Law

Chapter 2 sets out the object of the HVNL as being to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that:

Promotes public safety

Manages the impact of heavy vehicles on the environment, road infrastructure and public amenity; and

Promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles; and

Encourages and promotes productive, efficient, innovative and safe business practices.

The object provision of the HVNL serves to describe the main purpose of the law. Object clauses are often used by the courts and others to resolve ambiguity about how the law should be interpreted.²⁸

Some stakeholders are concerned that the HVNL object implies that productivity may be achieved at the expense of safety. Specifically, that the use of the word “*promote*” in relation to productivity and efficiency, infers the NHVR should provide regulatory incentives for increased productivity and that prioritising this could compromise safety.

On the other hand, it has been raised by industry stakeholders that there has been little to no advance in productivity outcomes since the introduction of the HVNL. They state it is a false dichotomy to suggest that an improvement in productivity comes at the expense of safety, and that productivity and safety should continue to have equal status with regard to the object of the HVNL.

The current objects give public safety and industry productivity and efficiency equal status

The current object of the law sets out the promotion of public safety as well as industry productivity and efficiency with equal status.

These objects are read against the functions of the NHVR, which include (amongst other things) encouraging and promoting safe and productive business practices of persons involved in heavy vehicle transport (s 659(k) of the HVNL).

Under the current approach both safety and productivity would remain clearly within the NHVR frame of reference. This safety-productivity dynamic plays out in a number of ways, with examples including:

- road access decisions, where the NHVR looks to allow access for vehicles that are as highly productive as possible, provided their design is safe and would not detrimentally affect road infrastructure. With each application the road manager and NHVR would balance safety and productivity considerations but never with an outcome that safety is compromised.
- new vehicle configurations, where higher productivity vehicles are approved under the PBS scheme if they meet certain vehicle safety and infrastructure protection standards. Here industry is incentivised by the prospect of higher productivity but are encouraged to achieve this by building safer vehicles.

Changes to the HVNL objects that are best considered outside the RIS

It is possible to reform the objects of the HVNL in the ways described in the box below in order to resolve uncertainty or ambiguity and assist the courts and others in interpretation of the law. The objects clauses have no direct regulatory impact (i.e. they do not control or command a particular outcome) beyond the intended impact of the provisions of the HVNL itself. Based on advice from the Office of Best Practice Regulation (OBPR) they do not need to be subjected to a RIS process. Rather decisions about whether to reform the objects of the law are best progressed by Ministers outside a RIS process and as such reform options relating to the object of the law are not consider in this document.

²⁸ Section 15AA of the *Acts Interpretation Act 1901* (Cth) states that: in the interpretation of a provision of an Act, a construction that would promote the purpose or object underlying the Act ...shall be preferred to a construction that would not promote that purpose or object. The states and territories have jurisdiction-based statutes that contain similar or identical provisions.

Box 5: Potential reforms to the objects of the HVNL**Elevating safety to the primary object of the law**

There is potential to amend the HVNL to state that safety is the primary objective of the law. Productivity would be a secondary object of the law, and the word 'promotion' would be removed. This is in line with other transport and safety legislation such as the Rail Safety National Law and work health and safety law.

Other objects (including managing the impact on the environment, road infrastructure and public amenity, and promoting productivity) would also be included as secondary objects under the overarching safety object.

Safety and productivity both as primary objects of the law

There is also a case to keep safety and productivity as equal-status objectives of the HVNL but also clearly state that productivity should never come with any material safety compromise. Productivity would also be defined as including industry sustainability, productive business practices, innovation and efficient access to roads. This approach would also clearly charge the Regulator with functions that link to the elements of productivity so that it is clear what they should do. This would include (for example):

- Promoting best practice methods for productive and efficient heavy vehicle road transport; and
- Encouraging and promoting safe and efficient business practices.

The intention here would be to set a mandate for the NHVR to allow and encourage industry to achieve the maximum level of productivity provided safety is never compromised. The HVNL would be clear the Regulator plays a dual role of safety enforcer and also partner of industry to achieve productivity.

3.9.3 Other reform options not assessed in detail

A number of potential reforms have, more recently, been identified by stakeholders. However, the impact of these reform options has not been assessed in detail in this Consultation RIS. Either because:

- the details of the option have not been fully worked through (in which case these will be considered in parallel processes with stakeholders),
- because the implications of the option are unclear, or
- the option is believed to be beneficial with no trade-offs or unintended consequences.

These reform options are described below and stakeholders are invited to provide comment on these potential reforms which may be progressed in the final Decision RIS.

Giving the regulator flexibility to respond to emergency situations

The HVNL should provide flexibility for industry, the NHVR and others to respond to emergency situations that arise. However, recent experiences in Australia – floods, bushfires and the COVID-19 responses – have shown the HVNL may not effectively support responses to emergency or fast-paced scenarios. In particular, the NHVR has to impose exemptions to allow industry to continue to operate, or operate in a different way, during emergencies. For example, permits for hay being carted during the drought, heavy vehicles entering and exiting areas impacted by bushfires and floods. This requires the NHVR to dedicate resources to action and inform operators of changes.

An option for addressing this would be to give the NHVR and others, such as police, emergency response powers which could provide them with more flexibility during these circumstances. This would provide the NHVR and others with the ability to align requirements with the relevant local risk context. The NHVR would need to balance road safety against a more-urgent-than-usual need, this could be achieved by, for example, a time and condition-limited notice or permit. The HVNL could also contain a defined list of events when this power could be exercised, for example when a state of emergency is declared, when a pandemic is declared, or a clear and present danger exists (regardless of formal declaration). By way of example, clarity for police or other traffic authorities on their powers to redirect heavy vehicles unable to travel on a planned route due to an emergency.

The HVNL should recognise that road user and driver safety is paramount in emergency situations. However, the HVNL could be amended to provide a defence for heavy vehicle drivers that breach the law when following emergency directions. For example, a heavy vehicle driver who is leaving a fire zone would have a defence for any breaches of driving hours to ensure they reach a safe location during a flood or fire. A defence power in emergency situations, with safety recognised as paramount, would protect drivers (and operators) who are evacuating in an emergency situation that may result in non-compliant behaviour.

Reforms to investigation and enforcement powers, sanctions and penalties

The HVNL relies on the ability to investigate potential breaches and credibly threaten penalties and punishment to encourage compliance. Once a new framework and approach for the HVNL is settled, the HVNL will need reviewing to adjust investigation and enforcement powers as well as reviewing sanctions where consequences of a breach are less material and conversely increasing penalties where a breach represents a significant risk to road safety. For example, this could involve suspended prison sentences and other sentencing orders such as community service and probationary orders.

Potential reforms to these mechanisms are not considered in the Consultation RIS. However, the NTC is intending to undertake a separate review of penalties and sanctions under the HVNL upon settling policy, but before legislation is finalised.

3.10 Questions for stakeholders

- 3.1 Are you aware of any other problems with the effectiveness of the HVNL that are not discussed here or in the problem statements in each of the Chapters that follow relating to the key provisions of the HVNL? If so, please explain and detail any related policy options which you think should be considered as part of the RIS.
- 3.2 Do you have any comments, concerns or additional information relating to the impacts of the policy options outlined in section 3.9.3 which have not been assessed in detail in the Consultation RIS?

4 PRIMARY DUTIES AND RESPONSIBILITY

The HVNL imposes a primary duty, on parties in the chain of responsibility (CoR) (a defined list), to ensure, so far as is reasonably practicable, the safety of transport activities relating to a heavy vehicle.²⁹

This essentially requires these specified parties³⁰ to take steps to ensure that drivers behave safely and that vehicles used on the road network are safe for drivers and other road users. Instead of prescribing what parties must not do, it sets a standard that parties should work to achieve, requiring them to apply a proactive and preventative approach to managing safety.

At a high level, duties specify broad-based performance or outcome standards for regulated parties to meet. Subsidiary instruments such as regulations, standards and codes of practice then offer mechanisms to assist parties in meeting the overarching duties (see Chapter 5). More flexible options to comply with overarching duties may be offered through an accreditation scheme (see Chapter 7, with Chapter 8 providing specific examples of accreditation in the context of fatigue). Duties are not unique to the HVNL. Other examples of duties-based legislation include Work Health and Safety legislation and the Rail Safety National Law.

The primary duty enables the NHVR to investigate off road parties (such as schedulers or executives of larger operators) where there is a concern about their business practices and risk management approaches and the impact this is having on driver behaviour and the safe use of a heavy vehicle.

Under the HVNL, the driver of a heavy vehicle³¹ is not included as a CoR party and is therefore not subject to the primary duty. Although, heavy vehicle drivers do have obligations under various provisions in the HVNL which are specific to drivers including:

- S 60 – requirement not to drive heavy vehicle that doesn't comply with heavy vehicle standards
- S 89 – requirement not to use or permit to be used on a road a heavy vehicle that is unsafe
- S 96 – requirement to comply with mass requirements
- S 111 – requirement to comply with loading requirements
- S 192 – duty not to drive a vehicle not complying with a container weight declaration
- S 228 – duty to avoid driving while fatigued.

Drivers also have obligations under other legislative instruments:

- Under WHS model law (which is implemented by most jurisdictions across Australia) drivers have a duty to take reasonable care of their own health and safety, and reasonable care that their acts or omissions do not adversely affect the health and safety of other persons.³²

²⁹ Section 26C of the HVNL. The Chain of responsibility (CoR) parties are defined in section 5 of the HVNL.

³⁰ The HVNL specifies parties in the chain of responsibility as being an employer of a driver (if the vehicle's driver is an employed driver); a prime contractor (if the vehicle's driver is a self-employed driver); an operator of the vehicle; a scheduler; a consignor; a consignee; a packer; a loading manager; a loader; and an unloader.

³¹ Although drivers often perform multiple functions which mean they do fall within the chain of responsibility. Owner drivers, for example are both operators and drivers. Quite often drivers also load goods on to heavy vehicles and are in the chain of responsibility for this role.

³² Section 28(a) & (b) of model WHS model law. The WHS model law has not been formally applied in Victoria, however the Victorian Occupational Health and Safety Act 2004 sets out a similar duty on employees to take reasonable care (s 25).

- State or territory driver licensing arrangements that mandate heavy vehicle driver minimum competency requirements to obtain a driver licence and medical fitness to drive.
- State and territory transport legislation sets out rules for the use of the road network by all drivers and addresses unsafe driving behaviours such as speeding, drink/drug driving, restraint use and driver distraction. This includes the Australian Road Rules model law, as implemented in each jurisdiction.

Other examples of parties not currently captured by the CoR include third party repairers, stevedores, freight forwarders, brokers and agents.

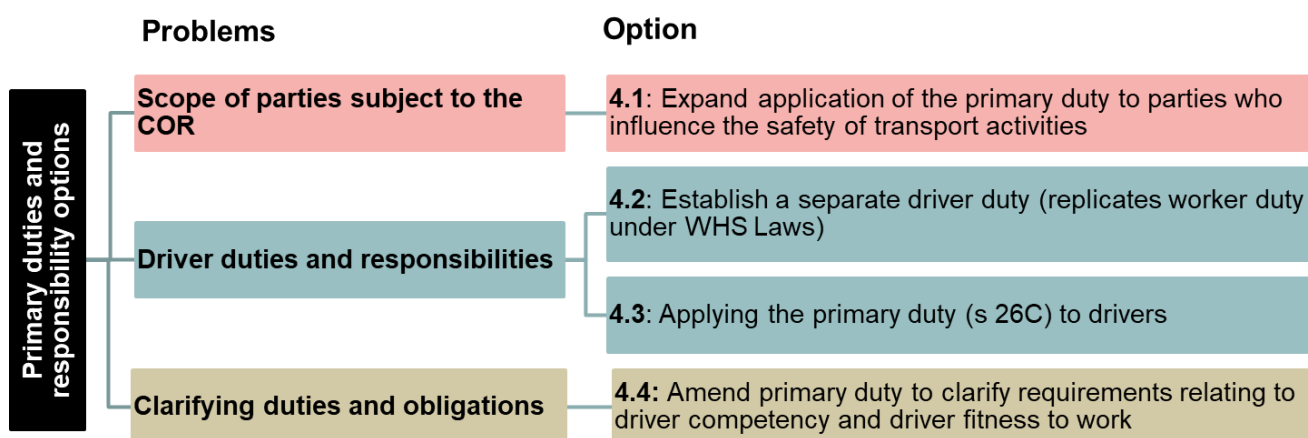
During consultation stakeholders highlighted concerns about some parties not having defined duties and responsibilities under the HVNL, limiting the extent to which they can be subject to enforcement action, and therefore the extent to which they are incentivised to manage risks within their control. Stakeholders also suggested that the current primary duty in the HVNL is very general and can be ambiguous, making it difficult for CoR parties to understand the precise nature of their obligations.

This chapter focusses on assessing stakeholder suggested reforms which relate to the primary duties of the HVNL and regulated parties’ obligations. Namely:

- expanding the parties subject to the primary duty;
- creating driver duties; and
- clarifying parties’ obligations under the primary duty.

The options set out in this chapter are summarised in **Figure 6**. Option 4.2 and 4.3 represent discrete options, however, all other options can be perused in isolation or combination.

Figure 6: Summary of options relating to primary duties and responsibility



**base case not included in regulatory options*

4.1 The base case for the assessment

The base case for the assessment assumes the status quo is maintained. Namely, the HVNL would continue to impose a duty on parties in the CoR to ensure the safety of heavy vehicle transport activities, *so far as is reasonably practicable*.³³

³³ The primary duty - section 26C of the HVNL.

The primary duty would continue to apply to a defined list of parties.³⁴ This includes employers of drivers, prime contractors for self-employed drivers, operators, schedulers, consignors, consignees, packers, loading managers, loaders and unloaders. Any party not in the defined CoR list would continue not to be captured by the primary duty. For example, this would mean drivers, manufacturers, repairers, and technology service providers would not be captured.

These parties would still have safety-related obligations under WHS legislation, however authorised officers under the HVNL do not have power to enforce these obligations. Drivers and other workers would continue to have a duty to take reasonable care of their health and safety, and reasonable care that their acts or omissions do not adversely affect the health and safety of others (under ss 28(a) & (b) of WHS model law). PCBU's (Persons carrying out business undertakings) would also have a primary duty of care to ensure the health and safety of workers (under s 19 of the WHS model law).

The nature and content of the duty will remain the same. *Transport activities* will remain broadly defined as including business practices and making decisions associated with the use of a heavy vehicle. Insofar as s 26C(2) seeks to clarify the content of the primary duty, it will also remain drafted in broad terms, to include:

- not causing a driver to contravene the HVNL;
- not causing a driver to speed; or
- not causing another person to contravene the law.

4.2 Expanding the parties subject to the CoR

4.2.1 What is the problem?

Stakeholders have expressed concern that the current list of parties in the CoR does not adequately reflect the current state of the heavy vehicle supply chain.

Third party repairers, heavy vehicle manufacturers, stevedores, freight forwarders, brokers, agents, those who prepare livestock for transport and technology service providers have all been raised as examples parties who influence heavy vehicle safety. By way of example a third-party repairer can through their actions (or inaction such as failing to undertake vehicle checks) have an impact on vehicle safety, often without the knowledge of the operator or driver. As these parties are not on the CoR list there is potential for them to disavow themselves of responsibility, causing other parties (particularly operators) to carry a larger burden for managing safety.

Further problems may arise from the fact that the HVNL CoR list is exhaustive. While there are benefits in expressly listing parties an exhaustive list is unlikely to keep pace with new business practices and a constantly evolving heavy vehicle supply chain.

4.2.2 Expand application of the primary duty to parties who influence the safety of transport activities (Option 4.1)

This option would amend the HVNL to expand application of the primary duty to parties who have an influence on the safety of heavy vehicle transport activities. The current list of CoR parties (as defined in s 5 of the HVNL) would remain to ensure that these parties are caught by the primary duty.

³⁴ Under section 5 of the HVNL – *party in the chain of responsibility*.

An additional category of parties *who influence heavy vehicle transport activities* (or equivalent) would be added to the end of that list. The driver would continue to be excluded from the CoR.³⁵

The word *influence* implies the ability to have an effect on transport activities relating to a heavy vehicle. It is a lesser degree of involvement than having *control* over safety outcomes. While this would cast the net of the primary duty wide, the principles under s 26B of the HVNL would continue to apply such that the level of responsibility of each party would be determined by reference to:

- The functions the party performs,
- The nature of the public risk; and
- The party's capacity to control, eliminate or minimise the risk.

Box 6: Sub-options for option 4.1

Option 4.1b: Add specified parties to the defined list of parties in the CoR

This option would amend the HVNL to add specific parties to the definition of *party in the chain of responsibility* (s 5 of the HVNL), making them subject to the primary duty under s 26C of the HVNL. This list could include:

- heavy vehicle repairers
- heavy vehicle manufacturers and componentry manufacturers
- freight forwarders
- freight brokers
- those who prepare livestock for transport
- stevedores
- safety technology service providers

Parties added to the list would have a duty to ensure, so far as is reasonably practicable, the safety of transport activities relating to the vehicle. However, what is expected would be determined by reference to their capacity to influence and control the matter (s 26B(b)(i)).

It could also be possible to have a hybrid of Option 4.1 and 4.1b which specifies some specific parties (e.g. manufacturers and third-party repairers) and also has an additional category for parties *who influence heavy vehicle transport activities*.

4.3 Driver duties and responsibilities

4.3.1 What is the problem?

Some stakeholders have expressed concerns about drivers having poorly defined duties and responsibilities under the HVNL. The actions, competency and fitness to work of heavy vehicle drivers undoubtedly impact the risk of road crashes. Driver competency was a causal factor in around 15 per

³⁵ As with the base case, the exception here is where the driver has another role which does fall within the CoR. For example, if the driver loaded the goods on to the heavy vehicle then they would be in the CoR for this role.

cent of significant safety incidents at the logistics company Toll between April 2018 and March 2019.³⁶ Recent data suggests fatigue is a factor in 9.8 per cent of heavy-vehicle involved major crashes,³⁷ and it is widely agreed that poor driver health and fitness can significantly increase the risk of driver-fatigue.

Under current arrangements the regulation of the duties and responsibilities for drivers is fragmented, with the HVNL acting in combination with WHS law, state and territory licensing legislation, road rules and industry codes. Possibly as a result of this there appear to be gaps with insufficiently defined responsibilities (in the HVNL and other legislative arrangements) for driver competency and fitness to work.³⁸

While drivers do have a duty under WHS legislation to take reasonable care of their own safety and the safety of others, the NHVR has no power to enforce this duty. Crossovers in regulatory responsibilities like this create a risk that some hazards will not be managed at all. By way of example police and the NHVR who are responsible for audits and roadside enforcement have limited ability to penalise or prosecute a driver who is not fit for fit to work.

Some stakeholders have also raised concerns that the current primary duty and CoR provisions allow drivers to disavow themselves of responsibility by shifting responsibility “up the chain”, particularly in relation to heavy vehicle loading. Conversely, other stakeholders are concerned that it is drivers that bear the primary consequences from roadside enforcement.

Equally the law does not have a positive mechanism to encourage drivers to apply a proactive approach to managing safety. Operators report incidents of repeated unsafe driver behaviour that may not be picked up by roadside enforcement. Through use of telematics operators can detect poor driver behaviour such as aggressive driving, repeated speeding, and lax load management. While operators can dismiss drivers when unsafe behaviour becomes systemic, they often get jobs elsewhere without repercussions, posing a continued risk to road safety.

In the absence of specific and well-defined duties or responsibilities it can be challenging to prosecute a driver or proactively act against risky drivers who fail to reasonably manage safety risks. In the absence of consequences or penalties there is a risk that drivers will not adequately manage safety risks that impact on the wider community (see section 3.2 for further discussion of this).

These arrangements could lead to inefficient safety outcomes and reduced productivity if risks that can be managed by drivers are not being managed. This could be because:

- drivers are not aware of their obligations
- the law does not encourage drivers to take a proactive and preventative approach to managing safety; and
- existing arrangements do not sufficiently discourage risky driver behaviour, because the risk of being punished is low penalties are too low or are perceived as being avoidable.

It is worth noting that CoR provisions in the HVNL were originally intended to create a regulatory lever to prosecute parties other than the driver where there were concerns about their business practices' impact on the safe use of a heavy vehicle. For example, where a scheduler creates unreasonable delivery timeframes that cause a driver to speed or drive fatigued and thus raises safety risks.

³⁶ Toll Group, 2019, *Submission to A risk-based approach to regulating heavy vehicles issues paper*, p. 11.

³⁷ National Transport Insurance (NTI) examined accidents involving claims exceeding \$50,000.00 during 2017 and found fatigue was a factor in 9.8 per cent of cases: NTI, 2019, *Major Accident Investigation Report 2017*.

³⁸ While the HVNL includes a definition for 'fit' to drive a heavy vehicle, this definition centres on fatigue, drugs and alcohol, and on its own does not impose any obligation on drivers.

It should be noted that drivers do have an incentive to act in a safe manner as ultimately any unsafe activity imposes risks to their own welfare. Given this, current regulatory arrangements can not automatically be assumed to create suboptimal safety outcomes.

The consultation RIS considers two reform options for addressing this:

- A separate driver duty could be established that substantially replicates the duty of workers under s 18 of the model WHS Laws (Option 4.2).
- The existing primary duty could be applied to drivers (Option 4.3).

These options are outlined in the sections below.

4.3.2 Establish a separate driver duty that substantially replicates the duty of workers under s 18 of the model WHS Laws (Option 4.2)

This option would amend the HVNL to establish a duty on drivers to take reasonable care of their own safety and reasonable care that their acts or omissions do not adversely affect the health and safety of other persons. Drivers already have this duty under ss 28(a) and (b) of the model WHS laws,³⁹ but authorised officers under the HVNL do not have power to enforce it. While the WHS duty applies broadly to all behaviour in the workplace, this duty would be confined to the context of transport activities relating to the heavy vehicle.

The driver safety duty would stand separate to the primary duty on CoR parties. The standard expected is one of *reasonable care*. This framework aligns with WHS model legislation which applies the higher standard of *so far as is reasonably practicable* to PCBU's and the lower standard of *reasonable care* to workers. The intention here was to reflect that workers have a more limited level of influence and are often less able to take active measures to eliminate or reduce risks to health and safety.⁴⁰ Under this option the same thinking is applied to drivers, whose control and influence over safety a certain matter is often limited by the business practices of operators, employers, and other CoR parties.

The aim would be to encourage drivers to take a proactive and preventative approach to managing safety. Box 7: provides examples of things drivers can do to proactively manage safety. It would also seek to address systemic and repeated unsafe behaviours by drivers and not one-off roadside incidents. The same examples of proactive and preventative safe driver behaviour mentioned in Box 7: would be captured by this duty, although a legal standard of *reasonable care* would be applied.

Enforcing the duty would likely be predicated on a system of improvement notices and formal warnings. Authorised officers could have discretion to determine the most appropriate instrument to use.

If an improvement notice is issued, prosecution for breach of the driver safety duty may occur if the driver fails to comply with the notice. If a driver receives two formal warnings for unsafe behaviour, prosecution would follow for any further breach of the duty (i.e. similar to a third strike policy).

Mass and dimension offences would be excluded from this duty, as a failure to meet mass and dimension requirements is dealt with separately through other offences in the HVNL.⁴¹

³⁹ As applied in each jurisdiction, and in Victoria under s 25 of the *Occupational Health and Safety Act 2004*.

⁴⁰ Boland, M, 2018, *Review of the model Work Health and Safety laws: final report*, p. 52.

⁴¹ Sections 96 and 102 of the HVNL.

Box 7: Examples of driver behaviours that might be affected by a driver safety duty

- **Driver competency:** while jurisdictional licensing processes mandate minimum competency requirements, this duty may require drivers to take responsibility for maintaining and updating their competency so that they are competent to do the specific driving task.
- **Safe load management:** while s 111 of the HVNL already prohibits drivers from using or permitting use of a vehicle that doesn't comply with loading requirements, this duty would require drivers to ensure they drive appropriately for their load. This might include safe positioning of the load, allowing for change in stability, appropriate braking for the load, and checking and rebalancing the load on route.
- **Fitness for duty:** while drivers already have an obligation not to drive while fatigued (s 228 of the HVNL), this duty would require drivers to ensure they are healthy, fit, and alert enough to safely drive their vehicle when they start their shift and for the duration of the journey.
- **Driving safely according to road conditions:** while speeding is already managed by jurisdictional traffic law through speed limits, this duty might expect that drivers interpret road conditions and adjust their speed accordingly (for example weather conditions, surface conditions, and night driving). It might also expect they avoid unsafe overtaking, abrupt lane changing and aggressive driving behaviour in general.
- **Safe route planning:** this duty might require a driver to ensure they understand the route they are driving and that they are competent to drive that route in the vehicle they are tasked with driving.

4.3.3 Applying the primary duty (s 26C) to drivers (Option 4.3)

This option would amend the HVNL to apply the primary duty to drivers. This would mean drivers would have a duty to ensure, so far as is reasonably practicable, the safety of transport activities relating to the heavy vehicle they are driving. They would be subject to the same offence categories and penalty framework as CoR parties who breach the primary duty.

The standard of 'reasonably practicable' requires parties to consider all circumstances and take action commensurate to the likelihood and seriousness of the harm.⁴² Essentially this would require a driver to assess what is able to be done to manage a risk, and then do what can reasonably be done.

A key principle applying to the primary duty is that if more than one person has a duty in relation to managing a risk, the duty must be discharged to the extent that the person has capacity to influence and control the matter.⁴³ This is an important point for drivers because their capacity to influence and control a safety matter is often severely constrained by the behaviour of operators, employers, prime contractors, and other CoR parties.

Drivers would continue to carry other safety obligations under the HVNL, including:

- requirement not to drive heavy vehicle that doesn't comply with heavy vehicle standards (s 60)
- requirement not to use or permit to be used on a road a heavy vehicle that is unsafe (s 89)
- requirement to comply with mass requirements (s 96)

⁴² Stewart-Crompton, R, Mayman, S & Sherriff, B, 2008, *National Review Into Model Occupational Health and Safety Laws: First Report*, p. 40.

⁴³ HVNL section 26B(b)(i)

- requirement to comply with dimension requirements (s 102)
- requirement to comply with loading requirements (s 111)
- duty not to drive a vehicle not complying with a container weight declaration (s 192)
- duty to avoid driving while fatigued (s 228)

The intention of this option would be to encourage drivers to take a proactive and preventative approach to managing safety. This goes beyond what is prescribed by the Australian Road Rules and the other provisions of the HVNL.

Arguably drivers are already required to do these things as part of their duty as workers under the model WHS laws,⁴⁴ however HVNL authorised officers do not have WHS functions. This option would therefore allow the NHVR to manage a broader range of risks to safety stemming from unsafe driver behaviour.

4.4 Clarifying duties and obligations

4.4.1 What is the problem?

The primary duty is drafted in broad terms to capture a comprehensive suite of potential risks to the safety of heavy vehicle transport activities. This has the benefit of providing parties flexibility to determine the most serious safety risks in their business operation and tailor risk management priorities accordingly. As part of their duty to *ensure* safety of transport activities, they should apply a proactive approach to prevent safety risks from eventuating.

The broad definition of transport activities, however, makes it challenging for parties to ascertain exactly what this requires. The law mentions speeding and “contravening the law” as examples of what CoR parties should prevent their drivers from doing. In particular, it is unclear whether driver competency and fitness for work are covered by the primary duty. Risks relating to driver competency and fitness for work are not specifically called out, meaning that some parties may not direct attention/resources to managing these risks.⁴⁵ It also worth noting that while state and territory licensing arrangements mandate minimum competencies and medical fitness to drive standards, these mechanisms are not suited to managing competency and fitness to drive on an ongoing basis.

Compounding this issue of lack of clarity, the NHVR is not empowered to develop codes of practice (COP) to provide clarity to parties on how they should comply. By way of contrast, WHS model law imposes broad-based safety duties on workers and persons conducting business undertakings, but is supported by COPs which give specific, tailored guidance to parties on how to comply.

Without clarity of obligations parties may not be sufficiently incentivised to actively manage safety because they are confused or unsure of what the law requires them to do.

⁴⁴ The model Work Health Safety (WHS) Laws set out a duty on workers to take reasonable care of their safety and the safety of others (ss 28(a) and (b)). The model WHS laws have been implemented in the Australian Capital Territory, New South Wales, the Northern Territory, Queensland, South Australia, Tasmania and the Commonwealth. The Victorian Occupational Health and Safety Act 2004 sets out a similar duty on employees to take reasonable care (s 25).

⁴⁵ A related issue is that the NHVR cannot develop codes of practice or safety standards to provide relevant, specific, and tailored guidance to parties on how to comply with the primary duty. The Industry Master Code of Practice was registered under s 706 of the HVNL to provide guidance to operators, although it is not sector-specific and doesn't cover all CoR parties.

4.4.2 Amend primary duty to clarify requirements relating to driver competency and driver fitness to work (Option 4.4)

This option is not intended to alter or change who the primary duty applies to or what the primary duty requires CoR parties to do.

Instead this option would amend the HVNL to clarify that the primary duty covers driver competency and driver fitness for work. The aim would be to clear up ambiguity about the meaning *transport activities*, which is currently broadly defined within the primary duty in the HVNL. While the primary legislation would not be prescriptive as to what the elements of the duty requires, this option would clarify that:

- CoR parties should ensure, *so far as is reasonably practicable*, that drivers are competent to do the heavy vehicle journey they are tasked with. They should have the skills and experience to drive the particular route and the particular vehicle. Their competency should be checked and updated with appropriate training and instruction.
- CoR parties should ensure, *so far as is reasonably practicable*, that drivers are fit to work. This includes managing long term medical conditions but also short term, temporary conditions that can affect a driver's ability to remain concentrated on the task.

The primary duty would remain a broad safety duty and would not be limited to matters of driver competency and fitness for work. The same standard of *so far as is reasonably practicable* would apply. The level of responsibility would also continue to be limited by the CoR party's control and influence on the relevant matter.

Consistent with other duties-based safety legislation, guidance material, codes of practice and safety standards would provide further clarity on how parties should meet their primary duty obligations.⁴⁶ It should be noted that a variation on this option might be to develop codes of practice which clarify the content of the primary duty without the need to modify the HVNL. This could be in the form of a ministerial approved codes of practice, however, this would rely on reforms to the tools the regulator can currently use — see chapter 5 for further discussion of these reform option. For the purpose of the consultation RIS these reforms have been considered separately.

4.5 Impact assessment

The impact of changes to the parties' obligations can be quite abstract. In isolation, changes to the primary duty do not have an obvious, direct impact on safety outcomes. Rather, the impacts are second order – changes to regulatory obligations are intended to stimulate behavioural change of parties who have a role which can impact on heavy vehicle safety.

This behavioural change should then impact on the safety of heavy vehicles. For example, placing specific duties with respect to heavy vehicle safety on CoR parties is intended to make them focus on these duties. The flow on impact of these parties having a greater safety focus should be an incremental increase in the safety of heavy vehicles operating on the road network and thus reduce heavy vehicle crashes.

⁴⁶ See chapter 5 details of regulatory tools and relevant options on this topic.

Box 8: Behavioural responses to the duties and responsibilities reform options

A key driver of benefits relating to reforms to duties and responsibilities arise from the behavioural response of parties. Given that the options generally aren't prescriptive in terms of requirements, the benefits are typically indirect and dependent on the extent to which parties change their behaviour in response to an option. For example, applying a primary duty to drivers may result in a step change with respect to how a driver manages their load during in a journey. Equally, applying a primary duty to a driver may not result in any change in their behaviour if the existing incentives they face are sufficient for them to actively manage their load during a journey. The upshot of this is that there is significant uncertainty about magnitude of benefits from these reforms.

This is not unique to duties and responsibilities options or even to this RIS. A paper by Purnhagen and Feindt looks at the topic of behavioural insights for regulatory impact assessment in Europe.

They point towards the importance of identifying relevant actors, understanding the desired behaviour of these actors and factors influencing their behaviour. This paper then suggests an assessment of the expected change in behaviour by groups of actors as a result of a proposed option.

Source: Purnhagen and Feindt, 2015, Better Regulatory Impact Assessment: Making Behavioural Insights Work for the Commission's New Better Regulation Strategy.

4.5.1 Application of the primary duty to parties who influence the safety of transport activities (Option 4.1)

The key change in this option is that it expands the CoR to include any party who influences heavy vehicle transport activities. In effect this means that the CoR would capture a significantly broader group of parties, including vehicle manufacturers, heavy vehicle repairers, stevedores, freight forwarders, brokers and agents (and potentially many more parties in the future as heavy vehicle transport advances and business practices change). Drivers would remain excluded from the CoR.

It is important to note that the current CoR list would remain in order to retain some level of certainty of which parties are covered. Other parties (for example heavy vehicle repairers and manufacturers) might be added to this list, as well as the non-exhaustive category of parties who *influence* heavy vehicle transport.

Benefits

Essentially the primary duty would be imposed on more parties to the extent that they have control or influence on a heavy vehicle journey. These parties would be obligated to ensure the safety of transport activities *so far as is reasonably practicable*. This could result in an incremental improvement in terms of heavy vehicle road safety if these additional parties become more aware of, and hence more responsive to, their obligations, by virtue of facing the threat of punishment.⁴⁷ There is some evidence

⁴⁷ CoR provisions help enable the NHVR to proactively investigate individual office-holders where there is a concern surrounding their approach. Fines for CoR breaches are typically higher than elsewhere in the HVNL. This is intended to create incentives for compliance.

that suggests that CoR has fundamentally changed the heavy vehicle industry's approach to fatigue management, which has had a positive impact on the industry safety outcomes.⁴⁸

However, the key question here is whether the additional parties that would now be captured under the CoR are already sufficiently incentivised to proactively act in ways that do not impact on the safety of heavy vehicle transport activities. This is uncertain. Operators, employers, and prime contractors are understandably nervous that under the HVNL they effectively bear responsibility for the actions of other parties outside the CoR. However, mechanisms do exist to enable parties in the CoR to shift responsibility to parties outside the chain such as through their contractual arrangements. In addition, the obligations of parties involved in heavy vehicle manufacturing, sales, service, repair and modification may already be sufficiently covered in common law and consumer law (i.e. relating to product safety).

Similarly, it is unclear whether this option would drive a change in regulation or enforcement, for example by encouraging the regulator to be more proactive and focus on promoting positive risk management actions by a broader set of parties in the industry. It is unclear whether this change in approach would induce a change in behaviour of those additional parties to the CoR.

There is very little evidence to suggest whether or not this option would be effective. Therefore, stakeholder feedback is sought on whether the additional parties that may be captured under this option already have their obligations specified in other mechanisms and whether this option would drive a change in regulation or enforcement.

Assuming this option induces a change in behaviour of those additional parties to the CoR It is possible that there may be reduced heavy vehicle crashes, for instance due to safer loads and safer vehicles. Equally, these same changes could improve heavy vehicle reliability and efficiency.

What can be said is that by applying a non-exhaustive approach this option would be flexible to any changes in the industry over time, for example the development of new business models such as Uber Freight. This flexibility may lead to better safety outcomes, for example through having better defined responsibilities for safety technology service providers.

Costs

This option has the potential to drive an increase in compliance costs for industry. This could come in the form of additional third-party audits of other parties within the CoR looking to discharge their responsibilities. This is an issue in the base case and has the potential to worsen in a scenario with more parties in the CoR. That said, this may be tempered if the HVNL is amended to provide parties with an entitlement to rely on third party accreditation. This reform is further considered in chapter 7.

This option creates potential for added complexity with enforcement and prosecution. This relates to potential need to establish that parties had (or have) influence on safety transport activities. The complexity here should largely be mitigated by retaining a CoR list and the fact that influence is relatively low threshold to establish.

Box 9: Sub-options 4.1b: Expand the defined list of parties in the CoR

By way of example this option could involve expanding the list of parties subject to the CoR to expressly include heavy vehicle repairers and potentially others. The impacts of this sub option will be largely as per Option 4.1 above. However, there would be less adaptability in terms of the parties covered. Whilst clearly the expanded list could be somewhat futureproofed at the time of

⁴⁸ National Transport Commission, 2014, *Heavy vehicle compliance review final report*, p. 60.

updating, it is not possible to anticipate future changes to the market and thus there may be gaps in the CoR in the future.

Although we note that this option would reduce uncertainty about who is captured which could prevent parties with no control or influence on a heavy vehicle journey attempting to unnecessarily discharge their perceived obligations.

Given the commonality in the impacts between Option 4.1 and 4.1b, we have not assessed Option 4.1b expressly. However, stakeholder comments are sought on whether this sub option has any material advantages or disadvantages relative to option 4.1.

4.5.2 Establish separate driver duty that substantially replicates the duty of workers under s 18 of the model WHS Laws (Options 4.2)

This option amends the HVNL so that a distinct duty is applied to drivers, duplicating WHS requirements to “take reasonable care” within the HVNL⁴⁹.

Benefits

This option is relatively straightforward in terms of implications. Essentially, drivers would have the same obligations as in the base case (as this option replicates their existing WHS requirements). Moreover, the enforcement of this option is expected to be through the use of warnings and improvement notices rather than penalties. Therefore, it is not immediately clear this would have any impact on drivers.

This option would enable the NHVR to draw attention to unsafe behaviour. Hence, the implication of this option would be that the NHVR could enforce instead of the relevant jurisdictional WHS authorities. The likelihood of the NHVR acting on this, and therefore the benefits of the NHVR having this option, are unclear and stakeholder feedback is sought on this.

Costs

The costs are unclear on the basis that the impact of this change on the actions of enforcement agencies and the behaviour of drivers is unclear. On the one hand, it may increase enforcement costs if the NHVR chooses to conduct more investigations and prosecutions due to the separate driver duty. On the other hand, the overlap with the general common law, and the NHVR giving preference to police investigations, may mean that in reality there are no changes in costs.

There is also the risk that this option could result in two regulators enforcing the same obligation and that this could result in duplicated costs.

4.5.3 Application of the primary duty to drivers (Option 4.3)

This option centres on an obligation being placed on drivers to ensure the safety of transport activities *so far as is reasonably practicable*. Essentially drivers will have a primary duty under the HVNL in addition to their other existing obligations under the HVNL, WHS laws, Australian Road Rules, vehicle permits and any relevant industry or employer schemes.

Benefits

The intended implications of this option are that it may encourage greater management of some safety risks by drivers, noting the CoR list of parties would remain. Specific safety risks which may be better

⁴⁹ It is worth noting that the “reasonable care” threshold applied in this option is not as burdensome as the threshold applied in option 4.2.

managed include vehicle loading during a journey, managing vehicle defects during a journey, driver competency for their required route and fitness for duty. This option also provides an alternative approach, through which a driver can be held responsible for a safety breach (i.e. in addition to non-compliance with the Australian Road Rules).

In reality, it is hard to see how applying the primary duty to drivers would change their behaviour and therefore how it would lead to any road safety benefits. This is because they are subject to other regulatory mechanisms which carry far more severe penalties. Using South Australia as an example, a driver of a heavy vehicle that drives in a culpably negligent manner that causes death or serious harm to a person, is liable for imprisonment of 15 years, or for a second or subsequent offence, imprisonment for life. Where the risk has not manifested, a driver who endangers the life of another is liable for imprisonment of 18 years, or if their act/omission is likely to cause serious harm, imprisonment up to 12 years. Other jurisdictions are understood to have similar offences and penalties.⁵⁰ It can be assumed that enforcement agencies will prefer an investigation which yields the most serious offence available and so it is difficult to imagine the primary duty ever being used to prosecute a driver.⁵¹

It is also not clear that applying a primary duty to drivers, in the absence of any additional educative action by the regulator, will result in drivers more actively managing their health and fitness, or regularly updating their competency over and above the action that may be driven by the penalties described above. The application of the primary duty to drivers would not necessarily drive the regulator to adopt a more proactive and preventative approach to driver related road safety risks beyond any actions they may already take. It is also not clear whether additional proactive action in this space would be effective. Essentially there is nothing stopping the regulator taking this action under current legislative arrangements. Indeed, there is a risk that subjecting the driver to the primary duty might unintentionally undermine the CoR framework. Unsafe driver behaviour is often more easily observable and there is a risk enforcement agencies could choose the “lowest hanging fruit” instead of putting effort into investigating and prosecuting up the chain.

Additional action by drivers to manage the safety risks in their control could occur if CoR parties seek assurance of the safety activities that a driver has conducted in respect of their primary duty. However, under this option there is nothing obligating operators, employers or other parties in the CoR to do this.

Costs

The costs related to this option are also unclear. Information provided by the NHVR stated that offences for breaching safety duties are some of the most difficult offences to investigate and prosecute.⁵² Given this, additional investigations related a primary duty for the driver would increase NHVR costs. However, the NHVR has indicated it would be unlikely to look to prosecute against this provision. Instead it would preference police prosecution under general criminal law.⁵³

It is possible this option may unintentionally increase paperwork for drivers if CoR parties seek assurance of the safety activities that a driver has conducted in respect of their primary duty. It should be noted that the threshold of “so far as is reasonably practicable” is high and would be an onerous duty for drivers. This compounds existing obligations on drivers and the fact drivers tend to be the primary focus of enforcement activities.

⁵⁰ Section 19A of the Criminal Law Consolidation Act 1935 (South Australia)

⁵¹ The NHVR has also indicated they would be unlikely to give priority to driver-based duties offences where police were investigating.

⁵² Based on advice from the NHVR.

⁵³ *ibid.*

4.5.4 Amend primary duty to clarify driver competency and driver fitness to work (Option 4.4)

This option relates to applying three specific duties relating to ensuring driver competency and driver fitness to work in order to clarify the existing content of the primary duty.

Benefits

Essentially, the implications of this option stem from the clarity provided by the three specific duties, particularly if supported by regulatory codes of practice. Assuming this certainty around what parties are required to do incentivises CoR parties to take action to discharge their obligations the following outcomes can be expected.

- First, there should be greater competency of heavy vehicle drivers with respect to routes, vehicles and loads.
- Second, there should be fewer heavy vehicle drivers on the road network in an unfit state due to clearer processes by the operator/employer/prime contractor with respect to driver condition both prior to and during heavy vehicle operation.

This option could therefore reduce the risk of heavy vehicle crashes due to improved driver competency and fitness to work.

A less ambiguous primary duty may also be easier to enforce which may further drive compliance.

Costs

There may, however, be compliance costs associated with any operational changes made by operators, employers and prime contractors in order to comply with these aspects of the duty. For example, additional medical checks of drivers to ensure fitness to work.

This option also has the potential to create additional administrative costs. For example, it may be that an operator/employer/prime contractor simply imposes additional paperwork on a driver in order to discharge their obligations to ensure the competency and/or fitness to work of their drivers.

4.5.5 Summary of assessment

The impacts of the options considered above are summarised in **Table 1** below.

The preliminary conclusion of the impact assessment is that Option 4.4 may drive benefits that outweigh the costs, suggesting this option is worthwhile considering further as part of the HVNL review. At this stage there is a lack of data to support definitive conclusions about Options 4.1 to 4.3 will also be net beneficial.

Option 4.1 could result in net benefits, but only to the extent that there are additional parties that are not subject to the CoR that are in fact acting in ways that are impacting on the safety of heavy vehicle transport activities.

It should be noted that Options 4.1 and 4.4 are not alternative options and both could be progressed.

Options 4.2 and 4.3 are considered unlikely to drive net benefits with Option 4.3 being disproportionately onerous on drivers. It is not clear that either applying the primary or specific safety duty on drivers would add to existing obligations in a way that would change driver behaviour. The NHVR have indicated they are unlikely enforce these provisions. Therefore, it is not clear that Options 4.2 and 4.3 would incentivise a change in driver behaviour (for reasons described in sections 4.5.2 and 4.5.3).

Table 1: Impact of duties and responsibility options

OPTION	INDUSTRY			GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Admin, enforcement and compliance costs	Avoided road infrastructure damage	Avoided costs associated with reduced crashes	Other
4.1: Expand application of the primary duty to parties who influence the safety of transport activities	May increase third party audits of unaccredited parties within the CoR.	What about possible reduced compliance costs for some COR parties who no longer have to share as much of the burden?	Unclear. May increase enforcement costs if it results in more investigations and prosecutions.		Unclear. Could reduce crashes if additional parties to the CoR respond to primary duty by increasing their safety management.	Flexibility to change over time as parties with influence change offers an advantage over the base case.
4.3: Establish separate driver duty that substantially replicates the duty of workers under s 18 of the model WHS Laws	Note that burden is less onerous on drivers than 4.2.		Unclear. May increase costs if it results in more investigations. These costs might be offset by the warning notice system which should stimulate behavioural change before full prosecution needs to happen.			
4.2: Apply the primary duty (s 26C) to drivers	May increase paperwork for drivers and so drive additional administrative costs.		Unclear but unlikely to increase costs. May increase enforcement costs if it results in more investigations.	Unclear but unlikely. Could reduce road infrastructure damage if drivers respond to primary duty although unclear if this would occur in practice given existing incentives.	Unclear but unlikely. Could reduce crashes if drivers respond to primary duty by increasing their safety management (e.g. safer loading during journeys) though unclear if this would occur in practice given existing incentives.	
4.4: Amend primary duty to clarify driver competency and driver fitness to work	May increase compliance costs for operators/ employers/ prime contractors.	Greater operational efficiency from improved driver competency and fitness to work. More clarity of obligations.	Unclear. May increase enforcement costs if it results in more investigations and prosecutions.	Possibility of reduced road infrastructure damage due to more competent drivers on the road network.	Reduced crashes due to increased driver competency and fitness to work. Also clarity of obligations.	May increase paperwork for drivers so drive additional administrative costs.

4.6 Questions for stakeholders

- 4.1. Are there other costs or benefits that we should consider in the impact assessment?
- 4.2. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated with the options presented in this chapter?
- 4.3. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.
- 4.4. What are the advantages and disadvantages of establishing a WHS-style worker duty for drivers in the HVNL? What evidence can be shown to suggest this may incentivise safer driver behaviour?
- 4.5. Do you consider there are any benefits that would arise from the NHVR having the ability to prosecute against a separate driver duty that substantially replicates the duty of workers under s 18 of the model WHS Laws in lieu of the relevant jurisdictional WHS authorities?
- 4.6. What are the advantages and disadvantages of specifying that the primary duty covers driver competency and fitness for work? Do you consider this will be sufficient to clarify obligations under the primary duty?
- 4.7. Do you have any evidence or examples of the additional parties that would be captured under the CoR under Option 4.1 (such as vehicle manufacturers, third party repairers, stevedores, freight forwarders, those who prepare livestock for transport, brokers and agents) currently acting in ways that are impacting on the safety of heavy vehicle transport activities?
- 4.8. Would there be any advantages or disadvantages to expanding the defined list of parties in the CoR (as per Option 4.1b) relative to expanding the application of the primary duty to parties who influence the safety transport activities (as per Option 4.1)?

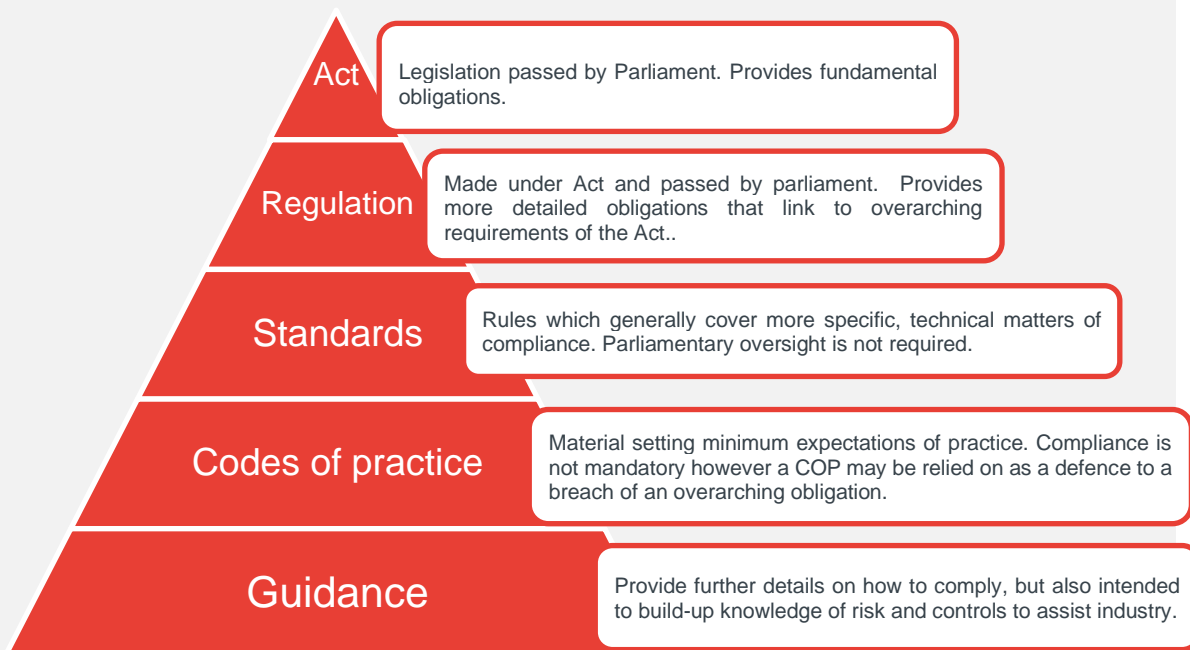
5 REGULATORY TOOLS

As discussed in chapter 4 the HVNL imposes a primary duty, on parties in the CoR, to ensure, *so far as is reasonably practicable*, the safety of transport activities relating to a heavy vehicle.⁵⁴ Complying with primary duties can be challenging for regulated parties and in the case of the HVNL further requirements on what parties must do, or not do are contained in the Law itself, with more flexible options for compliance offered through accreditation (see Chapter 7).

In addition, under the HVNL (section 659), the NHVR’s role includes identifying and promoting best practice methods for complying. Therefore it can, and does, develop guidance that is non-binding to support compliance. However, it cannot develop sub-ordinate instruments such as Standards and Codes of Practice (see Box 10:). This means details on how to comply with the HVNL primary duty are either contained in the primary legislation (which is difficult to change) or in guidance (which has little force).

Box 10: Typical legislative hierarchy with subordinate instruments

Under an Act of Parliament there are typically a number of subordinate instruments as outlined in the figure below. As a general principle the Department of Prime Minister and Cabinet’s legislative handbook notes that: “matters of detail and matters which may change frequently are best dealt with by subordinate legislation”.⁵⁵



⁵⁴ Section 26C. The Chain of responsibility (CoR) parties are defined in section 5 of the HVNL.

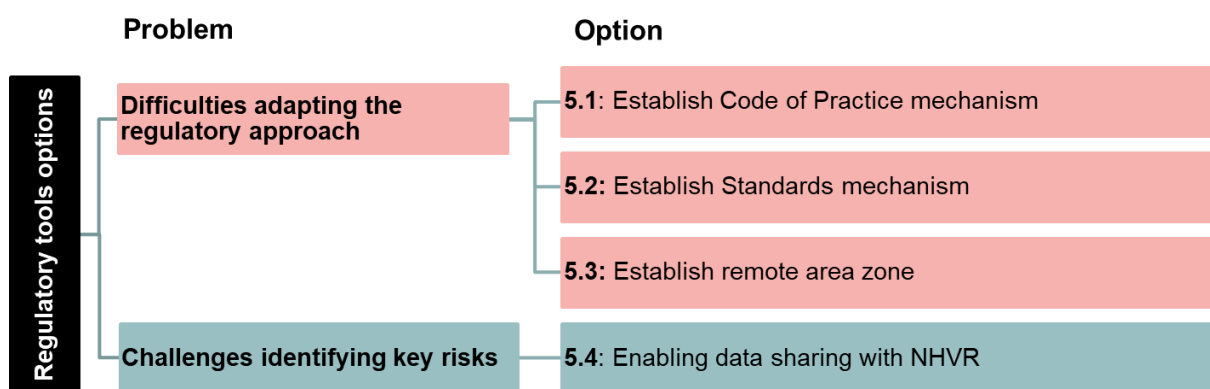
⁵⁵ Section 5.65 of the Department of Prime Minister and Cabinet, 2017, *Legislation Handbook*.)

Effective risk-based regulation requires regulators to tailor and adapt their use of enforcement and other regulatory tools based on the severity of potential risks.⁵⁶ However, as discussed in section 3.5 the current HVNL may not be enabling a regulatory approach that is risk-based or proportionate to the risk involved because of barriers to the regulator being able to:

- adapt the regulation and its compliance and enforcement activity to changing risks or risk management approaches; and
- identify key risks and harms as they evolve and to develop a risk profile across the parties it regulates.

This Chapter explores reforms that seek to address these challenges for the NHVR, by providing it with additional tools and resources to enable it to more effectively implement a risk-based approach. **Figure 7** below provides a summary of the policy options considered in this chapter and how they relate to the specific problems identified. These options can all be progressed in isolation or in combination and are not dependent on any options in other chapters of the RIS.

Figure 7: Summary of options relating to regulatory tools



**base case not included in regulatory options*

5.1 The base case for the assessment

The base case for this assessment presumes the current structure of the HVNL remains. This comprises:

- the HVNL primary legislation;
- the HVNL regulations; and
- Industry codes of practice (made under part 13.2 of the HVNL).

The NHVR would continue to be able to produce guidance and provide general advice on how to comply with the HVNL. Currently it does so in the form of safety bulletins, alerts, guides, and factsheets.⁵⁷ This guidance is not legally binding but has evidentiary weight in court proceedings for prosecution of an HVNL offence.

⁵⁶ Commissioner for Better Regulation, 2016, *Guidance for regulators to implement outcomes and risk-based regulation*, p. 9.

⁵⁷ There are no constraints on the NHVR’s ability to produce and change this guidance; that is, there are no consultation or Ministerial signoff requirements.

However, the NHVR would not have the ability to develop safety standards that prescribe rules for managing risks; for example, relating to vehicle standards, fatigue work and rest hours, mass, dimension, loading and other technical safety matters. These requirements would continue to be prescribed in the primary legislation or regulations and amending these requirements would be subject to parliamentary scrutiny and passage through Queensland Parliament.

The NHVR would also not have the power to develop codes of practice to provide tailored, industry-specific support to parties on how to comply with duties under the HVNL. This differs from other safety regulatory contexts where codes of practice are generally recognised as providing a minimum standard of practice for what is required to comply with a safety duty. Compliance is not mandatory, but parties should find practices that are equivalent to or better than the minimum standard.⁵⁸

Industry codes of practice would continue as a mechanism under part 13.2 of the HVNL. These would still need to be registered by the NHVR and made pursuant to NHVR guidelines produced by the NHVR.⁵⁹

The power of the NHVR to investigate parties would remain confined to circumstances of a contravention or suspected contravention of the HVNL.⁶⁰ That is, the NHVR would not have the power to investigate a party to obtain information about general business practices without first suspecting a contravention of the law.

The law would continue to provide for the authorised use or disclosure of information by state, territory and Commonwealth agencies, but would not explicitly enable the NHVR to access this information. Jurisdictions may still be reluctant to provide this information because the NHVR is not expressly defined as a law enforcement agency and there is otherwise no obligation on them to do so.

5.2 Addressing constraints on the regulator adapting its approach

5.2.1 What is the problem?

Risks, harms and indeed risk management approaches evolve over time. Therefore, to be effective regulation needs to be responsive, and adapt to any improved understanding of risks and how to manage them.

However, as discussed in section 3.4 the HVNL is a large and prescriptive law, with detailed obligations for regulated parties specified in the primary legislation (the Heavy Vehicle National Law Act 2012) and supporting regulations. This creates two key problems.

Firstly, any changes to primary legislation and supporting regulation require unanimous agreement from all responsible ministers (through the Transport and Infrastructure Council). Changes to the Act then require subsequent passage through the Queensland Parliament, while amendments to the supporting regulations are made by the Queensland Governor in Council. While this provides certainty and ongoing predictability, it can at times make the law unresponsive as uncontroversial amendments can take over a year, with more challenging amendments taking far longer to finalise. By way of contrast, standards or codes of practice could potentially be amended with only ministerial council agreement as a formal process and so may be in place far quicker.

⁵⁸ See for example guidance given on codes of practice by SafeWork SA (<https://www.safework.sa.gov.au/law-compliance/laws-regulations/codes-practice>), and SafeWork NSW (<https://www.safework.nsw.gov.au/resource-library/list-of-all-codes-of-practice>).

⁵⁹ Unless reviewed and re-registered, these codes of practice will continue to expire after three years (s 751(2) of the HVNL).

⁶⁰ See definition of investigation purposes under s 5 of the HVNL.

Essentially, it is difficult to tailor and adapt heavy vehicle regulation. In the five years since the commencement of the HVNL, the NTC has led nine amendment packages for the primary legislation. These have all had to be considered by the Council and then nine sets of amendments have been introduced and passed through the Queensland Parliament. With each amendment the Law must be applied by every participating state and territory. By way of example, recent amendments relating to increasing height and definition of 'tag trailers' took many years to be discussed, drafted, approved by ministers, passed through Queensland Parliament and then applied by jurisdictions.

Second, the prescriptive detail contained in the primary legislation tends to apply a "one size fits all" approach. Under these arrangements it is very difficult to create tailored regulation that applies to segments of the industry or types of operators.

Therefore, in the context of evolving business models, improving understanding of risk and risk management opportunities and rapidly emerging technology changes, for the HVNL to be responsive and flexible obligations ideally should be placed as far down the legislative hierarchy as is tolerable (see Box 10:).

However, currently the NHVR cannot develop and issue legally binding standards or codes of practice that can more easily be adapted over time. These additional instruments would still require Ministerial sign off but do not need to go through parliamentary processes.

This limitation may also be preventing the HVNL from encouraging and promoting safe and productive business practices that reduce road safety risks. In some areas of the law regulated parties may lack an understanding of what is required to comply, how desired outcomes can be achieved, and the level of management effort required. This may be particularly important in the context of heavy vehicles as the number of contributing factors to a crash, as described above, can hide the extent to which factors in an operator's or regulated parties' control (such as an adequate maintenance system) help reduce the risk. This in turn makes it difficult for an individual operator to quantify the crash risk arising from its business practices and hence determine the form and extent of controls that should be put in place.

While the NHVR can develop guidance (safety bulletins, alerts, guides, and factsheets) to assist regulated parties to comply, these tools have limited government oversight and therefore carry limited evidentiary weight. By contrast safety standards and codes of practice used in other transport modes generally have Ministerial oversight and are often used by regulators to set minimum standards of practice and issue improvement notices for non-compliance.

5.2.2 Establish a code of practice mechanism in the HVNL (Option 5.1)

This option would establish a power to develop, vary and revoke codes of practice (COPs). In practice most COPs would be developed by the regulator, but other parties (including the NTC and other agencies) would be able to develop and propose COPs.

This option could impact on the structure of the law, such that:

- The primary law would focus on primarily high-level principles and fundamental duties which define a standard or outcome linking to the objects of the law. For example, the primary duty under s 26C of the HVNL requires parties in the chain of responsibility (CoR) to ensure the safety of transport activities relating to heavy vehicles. This duty may be complemented by other, more specific duties.
- Supporting regulations would prescribe specific requirements for complying with duties under the primary law. For example, the regulations might prescribe certain driver fitness for work checks to support an overarching duty under the primary law to ensure drivers are fit for duty.
- Codes of practice would serve to provide further clarity on how to comply with duties under the HVNL. Standards would generally cover technical, sector specific requirements and rules. Codes of practice

would provide tailored guidance and set minimum expectations for business practices to comply with the law.

It is envisaged that this option may also impose obligations on the NHVR to continuously assess new and emerging business models, industries and hazards to ensure codes remain current.

COPs serve to provide certainty to industry about how to comply with safety duties under the primary law and regulations. They would be intended to set a minimum standard of safe practices for industry. While compliance would not be mandatory, parties would be expected to adopt practices equivalent to or better than those set out in the COP.

The scope of matters that could be covered by a COP is broad, but COPs would need a demonstrable link to HVNL duties and serve their primary purpose of providing practical guidance to industry. COPs could be drafted to apply to specific industry sectors, covering multiple safety risks. They could also be risk-specific and designed to apply to multiple areas of heavy vehicle transport.

The NHVR would be the main party to develop, vary and revoke codes of practice, but the NTC and other transport government agencies would also be vested with this power.

This option includes the following provisions for appropriate government oversight, consultation requirements, and obligations on the NHVR to ensure COPs remain risk-based and current:

- Government oversight — developing, amending or revoking a code of practice would require signoff by the Transport and Infrastructure Council (TIC). Since a COP sets out a minimum standard of safe practices for industry, any COP that could have a substantial impact on existing arrangements might require a Regulation Impact Assessment under the Council of Australian Governments Best Practice Regulation guidelines. This option would make an exception for very minor edits to COPs that do not change the meaning of what the COP says, as well as changes with immaterial regulatory impacts (maintenance). These variations could be signed off by the Chief Executive Officer of the NHVR or potentially the NHVR board. Any other variation of a COP would need signoff by TIC. Once a COP is signed off by the Council it would take effect on a specified date after appropriate notification and warning has been given to industry.
- Consultation requirements — before proposing a COP to TIC, consultation with governments, industry, regional or remote representatives, and other interested people, bodies and organisations, would be required.⁶¹ A minimum eight-week consultation timeframe would apply. The law would also set out a requirement to consider consultation responses and make revisions to the COP, as appropriate. Minor variations to COPs that are editorial in nature and do not change the meaning of the COP, would be exempt from consultation requirements.
- NHVR obligations — This option would establish a requirement for the NHVR to maintain COPs so that they remain risk-based and current. This would be listed as a key function of the NHVR and the NHVR would be required to report on the achievement of this function every financial year (s 693 of the HVNL).

⁶¹ This aligns with consultations requirements for the National Transport Commission under s 9 of the *National Transport Commission Act 2003* (CTH).

Box 11: Sub-option 5.1b: absorb industry COP mechanism into general COP mechanism

This sub-option is dependent and complementary to option 1. It would amend the HVNL such that the industry COP mechanism under part 13.2 of the HVNL would be absorbed into the general COP mechanism established in option 1. This would still provide an avenue for industry to develop sector-specific COPs in line with guidelines made by the NHVR. The Regulator would not, however, register industry COPs as it currently does under s 706 of the HVNL. Rather, it would receive proposed COPs from industry and then follow the same process of consultation and ministerial signoff required under option 1.

The aim of this option would be to retain an avenue for collaboration between the NHVR and industry for the development of COPs, while ensuring that all COPs have appropriate government oversight.

5.2.3 Establish a safety standard mechanism in the HVNL (Option 5.2)

This option would amend the HVNL to establish a power to develop, vary and revoke safety standards with appropriate government oversight measures in place. It is envisaged that this option may also impose obligations on the NHVR to continuously assess new and emerging business models, industries and hazards to ensure standards remain current and effective.

This option could be adopted in isolation or in combination with Option 5.1.

Safety standards would prescribe rules for how to comply with duties under the primary law. They could manage risks relating to vehicle standards, fatigue work and rest hours, mass, dimension, loading and other safety matters, but they would generally cover technical matters that are machinery in nature. By way of example the Load Restraint Guide and National Heavy Vehicle Inspection Manual could readily be adopted into safety standards.

Compliance with safety standards would be mandatory, and a breach of a safety standard would be an offence. The scope of matters that could be covered by a standard is broad, but safety standards could not:

- Create an offence or civil penalty
- Provide powers of arrest, detention, entry, search or seizure
- Impose a tax
- Amend or be inconsistent with the HVNL.⁶²

The driving intention of this option is to create a responsive, efficient mechanism to regulate parties' behaviour. To be clear, this is not an option to allow the unilateral development of safety standards by the NHVR or other agencies. Consultation and Ministerial signoff would still be required, but standards would not be subject to parliamentary scrutiny and passage through Queensland Parliament. Some matters currently provided for in the HVNL primary law and regulations could potentially be converted to safety standards as part of a more efficient three-tier legislative structure. Fundamental legislative principles laid out in the *Legislative Standards Act 1992* (QLD) would govern whether a matter is appropriate to regulate by way of a standard, or whether it should be dealt with in the HVNL regulations

⁶² This is consistent with Queensland's fundamental legislative principles and also aligns with the approach of other transport safety legislation (see for example regulation 5 of the *Civil Aviation Regulations 1988* (CTH)).

or primary law. Standards would also still need to be assessed for compliance with the *Human Rights Act 2019* QLD.

As per option 5.1, the NHVR would be the main party to develop, vary and revoke safety standards, but the NTC and other transport government agencies would also be vested with this power.

This option includes provisions relating to appropriate government oversight, consultation requirements, and obligations on the NHVR to ensure COPs remain risk-based and current as outlined in Option 5.1.

5.2.4 Remote zone (Option 5.3)

As described above, the HVNL tends to apply a “one size fits all” approach whereby it is very difficult to create tailored regulation that applies to segments of the industry or types of operators. This is particularly a problem for remote heavy vehicle operations. These operations and their associated risk profiles are unique due to the distance covered, lack of appropriate rest areas and facilities, extreme temperatures and limited interaction with other road users. Despite this they are regulated in the same way as operations in more densely populated areas, such as along the eastern seaboard.

This option would introduce into the HVNL a remote zone (most likely prescribed in a geospatial instrument, approved by ministers – see option 9.2c) to enable a more targeted risk-based approach to regulation to be developed for vehicles operating in these unique areas. By way of example, the remote zone could include the region shown in **Figure 8** below. The remote zone boundary would likely be inside the inscribed roads, such that driving along the inscribed road is outside the remote zone.

The remote zone could be used to enable risk based regulatory approaches to be developed in relation to various provisions in the Act. Most particularly in relation to hours of work and rest. By way of example, this option may enable flexible work and rest schedules to be approved by the NHVR for operations in the remote area zone. This is further described as Option 8.3c in chapter 8.

Figure 8: Possible remote area zone



Source: National Transport Commission, 2019d, Suggested Policy Option SPO-B04 Introduce a remote zone

5.3 Enabling the NHVR to identify key risks

5.3.1 What is the problem?

To be an effective risk-based regulator the NHVR needs to be able to identify and assess the magnitude of the risk posed to road safety by different persons, or more particularly the different business practices, of those involved in heavy vehicle road transport. This would allow the regulator to target its compliance and enforcement actions to prevent harm increasing the efficiency of its efforts. In much the same way jurisdictional enforcement agencies could also benefit from this if it allows them to better target operators based on known roadworthiness risk factors.

A challenge to achieving this is that the regulator requires meaningful data and a methodology to accurately assess the relative importance of a range of risks. Ideally a regulator has the tools it needs to develop a risk profile across the parties it regulates. However, there are currently limitations in the way intelligence information is collected, stored and disseminated, which appear to affect the efficiency of the NHVR's compliance and enforcement efforts.

Firstly, under section 660(2) of the HVNL, the NHVR has the power to ask a government agency of a participating jurisdiction, or the Commonwealth, for information to exercise its functions under the law. However, this section limits the type of information that can be provided to that required for *purposes related to administering the HVNL*. Information related to other transport activities, such as vehicles carrying dangerous goods, cannot be freely shared with the NHVR under section 660(2) (see Box 12: below for a further example). As a result, information can be withheld by agencies. That said, some jurisdictional agencies do share information with the NHVR, that is for purposes wider than the NHVR *administering the HVNL*, by utilising information sharing or service agreements.

Secondly, anecdotally it appears some agencies – specifically those jurisdictions that use the terminology of “law enforcement agency” in their privacy or associated legislation – are not able to freely disclose information to an agency that is not expressly identified as a law enforcement agency in the laws of their jurisdiction.⁶³ While the NHVR performs the functions of a law enforcement agency it is not expressly defined as one in the HVNL. This means the NHVR may not be recognised as a law enforcement agency in Australian jurisdictions making it difficult to receive information that could be used to inform a risk-based enforcement approach.

There are also other barriers that limit the ability of agencies to adopt a risk-based approach to regulation and enforcement that are discussed in other chapters. These involve:

- Barriers to the dissemination of intelligence information including information about inspection outcomes, crashes and incidents⁶⁴ which limits the ability of officers to target operators based on their past levels of compliance (a known risk factor). Options for addressing this are considered further in chapter 6.
- Difficulties relating to the NHVR's visibility over all regulated parties (and therefore risks) arising primarily because operators can freely enter and exit the industry. The NHVR can access registration data but cannot see drivers at an individual level, nor others in the CoR. This makes it difficult to build a clear picture of the industry. Options for addressing this issue are contained in section 7.2.2.

⁶³ The definition of enforcement body is contained in section 6 of the *Privacy Act 1988* (Cth). The definition of law enforcement agency is contained in various state and territory legislation including: schedule 5 of the *Information Privacy Act 2009* (Qld), section 3 of the *Privacy and Data Protection Act 2014* (Vic), section 3 of the *Privacy and Personal Information Protection Act 1998* (NSW), section 3 of the *Personal Information Protection Act 2004* (Tas).

⁶⁴ With the exception of NSW's 'TruckScan', state transport and enforcement officers do not necessarily have ready access to information about past compliance at the roadside, making it difficult to conduct targeted inspections on this basis.

Box 12: The NHVR's Safety and Compliance Regulatory Platform and the effect of the narrow scope of the law

The NHVR's Safety and Compliance Regulatory Platform integrates data from many sources to support a risk-based approach to regulation. The NHVR also uses other internal systems to capture data on industry and to inform its compliance and enforcement approach.

While these systems have been valuable in developing an understanding of risk in the industry, many useful datasets are unavailable to the NHVR, making their work harder than it needs to be.

The law provides a narrow scope of the type of information that can be provided by agencies and police. For example, in 2019, NHVR Safety and Compliance Officers intercepted a heavy vehicle being driven by a disqualified driver. The NHVR officers, who were authorised under South Australian law to prosecute these offences, sought information from the jurisdiction that issued the licence to support prosecution. The jurisdiction refused to provide this information because licensing was not regulated under the HVNL.

Source: NHVR Effective enforcement submission

5.3.2 Enable sharing of data with the NHVR (Option 5.4)

This option expands the purpose for which information can be shared between the NHVR and agencies to *any purpose associated with the regulation of heavy vehicles*.

As noted above, while jurisdictional agencies do share information with the NHVR, for purposes wider than the NHVR *administering the HVNL*, this currently requires an information sharing or service agreement.

This option will remove the need for such an agreement. The HVNL would be amended to clearly and unequivocally provide that state, territory and Commonwealth agencies, including police agencies, be enabled to disclose information (whether it be data, personal information or otherwise) collected or held by such an agency to the NHVR for any purpose associated with the regulation of heavy vehicles⁶⁵. For the most part relevant jurisdictional privacy legislation provides for the disclosure of information if the information is required or authorised by or under an Australian law. The HVNL would also be amended to clarify the NHVR's status as a law enforcement agency for the purposes of state, territory or Commonwealth privacy or related legislation.

These changes would enable the NHVR to seek access to not just information collected by agencies for the purposes of the HVNL itself, but also information obtained in the course of administering other laws. The new provisions will also specifically provide a reciprocal authority for the NHVR to disclose information to agencies.

⁶⁵ Information the NHVR may seek access to for these purposes includes not just information collected by agencies for the purposes of the HVNL itself, but also information related to the regulation of the heavy vehicle industry for other purposes - including road use laws (for example, speeding and other traffic offences) and the transport of dangerous goods (regulate by other state or territory legislation). This is not an exhaustive list. Such information could assist the NHVR with intelligence gathering, with risk identification and management and also in better targeting its compliance activities based on risk. It may also assist the NHVR to develop or input into policies such as the creation of dangerous goods rest stops which are the responsibility of states and territories.

5.4 Impact assessment

This section considers the impacts of reforms to the regulatory tools and instruments within the HVNL.

It is worth noting that the significance of the impacts of the reforms considered in this chapter depend on the benefits of adopting a more risk-based approach to regulation. The impact analysis that follows assumes this would reduce the risk of crashes and improve safety outcomes as discussed further in Box 16: .

The focus of the impact analysis is therefore on the degree to which the proposed reform options would enable the HVNL to become more risk based and drive other impacts.

5.4.1 Establishing a code of practice mechanism in the HVNL (Option 5.1)

This option centres on a change to the HVNL that enables COPs to be developed, varied or revoked.

The implication of this is that in the future new or varied regulatory obligations, compliance arrangements and standards of practice will be able to be contained in a COP. This means these regulatory changes could be implemented or updated without the need to revise the HVNL primary law and hence go through parliamentary processes (which can take up to two years). This would streamline the introduction of, or updates to, regulatory arrangements and would lead to a reduction in government administrative costs associating with implementing any amendments.

It would also enable the HVNL to better keep pace with, and respond to, any new developments in the regulator's understanding of risks and improvements in risk management practices. Similarly, COPs can be tailored to specific operators and segments of the industry so that they have better guidance on how to manage risks specific to them. This flexibility will enable the HVNL to evolve and continue to be targeted and risk-based in the future.

The regulator already has the option to develop guidance material and if option 5.1 is progressed it is possible that some regulatory guidance material will be moved into COPs in the future. This would increase the level of government oversight over this material and also give it more evidentiary weight. Although compliance with COPs is not mandatory, they are likely to drive greater compliance with the law because they clarify parties' legal obligations by setting out minimum expectations of how to comply.

Under option 5.1 the NTC and NHVR would have the ability to choose whether to continue to rely on guidance material or develop a COP as any new issues emerge. It does not seem unreasonable to assume that they would choose the regulatory tool that is most efficient and effective depending on the context in question. Since COPs set minimum expectations of practice, a Regulation Impact Assessment would sometimes need to be developed for a COP and hence the party developing the COP would need to expressly consider impacts on industry as well as government and wider society. Therefore, it seems reasonable to assume this additional optionality around where in the legislative hierarchy obligations are contained is likely to be beneficial.

On this basis it seems reasonable to assume it would not result in more regulatory obligations being developed and hence increase regulatory compliance cost for industry. Rather, it would enable these obligations to better adapt to changing circumstances and hence the efficiency of these obligations would be improved.

It is possible that the NHVR might have increased administrative costs in maintaining COPs and on reporting on this annually. However, the extent of these costs will depend on the degree to which the option is utilised by the regulator.

Box 13: Assessment of sub-option 5.1b

As discussed in section 5.2.2 there is an additional sub option that could be progressed in concert with the key features of option 5.1 which proposes absorbing the current industry COP mechanism into a general COP mechanism. This would change the avenue for industry to develop sector-specific COPs. Rather than the regulator registering industry COPs⁶⁶ as it currently does, the regulator would instead receive proposed COPs from industry and then follow the process of consultation and ministerial signoff required under option 5.1.

This arrangement would increase the level of government oversight over industry developed COPs but also give them more evidentiary weight and set out minimum expectations of practice making them more likely to be complied with. It is unclear whether this would drive any additional benefits on top of those described in relation to option 5.1a. Similarly, this option is unlikely to significantly add administrative costs to industry or government on top of those associated with option 5.1a. It is also not immediately evident whether the change in process would drive any other impacts.

In a more practical sense, it is possible that if industry COPs continued in their current form this might create a confusing regulatory environment whereby the law would have two different “types” of COPs, with different levels of government oversight and different evidentiary weight.

Stakeholder feedback is sought on whether this sub-option would be beneficial relative to maintain the current arrangements for the development of industry COPs.

5.4.2 Establishing a safety standards mechanism in the HVNL (Option 5.2)

This option would amend the HVNL to establish a power to develop, vary and revoke safety standards which would prescribe rules for how to comply with duties under the primary law.

The type of impacts driven by this option would be largely the same as option 5.1. By moving prescriptive requirements, currently in the primary legislation, down the legislative hierarchy rules could be developed that apply to segments of the industry. It would also enable these rules to be more quickly adapted to changing circumstances. Hence the efficiency of the HVNL can be expected to improve as it is able to become more targeted and risk based.

As with option 5.1 the NTC and NHVR would have the ability to choose whether to rely on other regulatory tools (such as developing guidance material) or develop safety standards as any new issues emerge. As described in relation to option 5.1 (see section 5.4.1), it does not seem unreasonable to assume that they would choose the tool that is most efficient and effective depending on the context in question.

Option 5.2 could be progressed with or without Option 5.1. It is possible that the marginal benefit of adding additional regulatory tool would progressively reduce. However, this option may still be of net benefit.

5.4.3 Remote zone

The impacts of this option have not been assessed in detail as they will largely depend on the specifics of how the remote zone is drawn upon for developing compliance arrangements in relation to other

⁶⁶ Under s 706 of the HVNL.

provisions of the HVNL. The most notable example of how the remote zone may be used is to enable more flexible arrangement for hours of work and rest for operations within the zone. The impacts of this option are already expressly included in relation to Option 8.3c and so have not been repeated here.

However, feedback is sort from stakeholders on this option and its potential use and impact.

5.4.4 Option 5.4 — Expressly enable sharing of data with the NHVR

Option 5.4 is intended to expressly enable sharing of data (related to the regulation of heavy vehicles) collected by other agencies (such as the police) with the NHVR. This option will enhance the effectiveness of the NHVR's compliance and enforcement efforts by enabling it to better target operators based on known risk factors. Which should in turn increase the levels of industry compliance and lead to improvements in road safety outcomes.

This option also provides a reciprocal authority for the NHVR to disclose collected information. This could help enable the collection and use of aggregated and de-identified heavy vehicle data to be used for wider purposes such as to better understand or identify freight movements, volumes and generators, and improve asset management practices. Albeit that this is not the primary aim of this provision and this outcome would depend on the nature of the information collected by the NHVR.

The nature and significance of the costs for government agencies associated with enabling the sharing of data with the NHVR are unclear and stakeholder feedback is sort on this issue.

There may be other implications that arise from the NHVR becoming a law enforcement agency under the HVNL and stakeholder feedback is sort on this issue.

5.4.5 Summary of assessment

All the options assessed in this chapter could be progressed in isolation or in combination as they do not rely on one another. All the options would seem likely to generate net benefits. Options 5.1 and 5.2 essentially provide the NHVR and NTC with greater future optionality around where regulatory obligations and compliance requirements are contained and how they are described.

Assuming options 5.4 enable the NHVR to better prioritise its compliance monitoring and enforcement activities, then, it can be expected to drive increased levels of compliance and improvements in road safety outcomes.

The identified impacts of the regulatory tool options outlined in this chapter are contained in **Table 2** below.

Table 2: Impact of regulatory tool options

OPTION	INDUSTRY			GOVERNMENT AND COMMUNITY			
	Compliance costs (admin and or additional expenditure)	Improvements in operational efficiency	Government admin costs	Enforcement and compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
5.1 Establish a code of practice mechanism in the HVNL		Clarity around legal obligations may assist parties in more efficiently managing safety.	Avoided costs given fewer revisions to regulatory arrangements will need to go through parliamentary processes	There may be an additional cost for the regulator associated with maintaining COPs.		HVNL more able to evolve and become more risk-based and targeted which should improve road safety outcomes*	
5.2. Establish a safety standards mechanism in the HVNL		Sector-specific standards may assist industry in identifying how to most efficiently manage safety.	Avoided costs given fewer revisions to regulatory arrangements will need to go through parliamentary processes	There may be an additional cost for the regulator associated with maintaining standards.		HVNL more able to evolve and become more risk-based and targeted which should improve road safety outcomes*	
5.3. Establish a remote area zone						HVNL more able to evolve and become more risk-based and targeted which should improve road safety outcomes*	
5.4 Expressly enable sharing of data with the NHVR			There may be some additional cost for agencies associated with sharing data. However, the nature and significance of these costs are unclear. Data sharing already occurs under jurisdictional agreements and so this option may actually streamline processes for the NHVR and government agencies.			Increase in level of industry compliance can be expected to lead to some improvement in road safety outcomes.	
Notes	* If a more risk-based approach to regulation is enabled it could instead result in reduced enforcement and compliance costs for government. However, to reduce the risk of double counting the benefit has only been captured once.						

5.5 Questions for stakeholders

- 5.1. Are there other costs or benefits that we should consider in the impact assessment?
- 5.2. Are you aware of any information or data that may assist us in quantifying the nature and scope of any potential costs or quantifying the magnitude of any of the costs or benefits associated with the options presented in this chapter? Please note we are particularly interested in receiving submissions on the impacts shaded in grey in the impact tables.
- 5.3. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.
- 5.4. What would be the implications of changing the process associated with industry developed codes of practice in line with sub-option 5.1b as outlined in this chapter? Would this be beneficial relative to maintain the current arrangements?
- 5.5. Are there any other implications or unintended consequences that may arise from the NHVR becoming a law enforcement agency under the HVNL?
- 5.6. Do you consider that establishing codes of practice or safety standard mechanisms in the HVNL is likely to enable a move toward a risk-based approach to compliance and enforcement? If so why or why not?
- 5.7. How effective is preventative compliance action by the regulator in improving risk management practices of operators beyond what is possible through the regulator running education campaigns?
- 5.8. Are there any unintended consequences associated with any of these options i.e. establishing codes of practice or safety standard mechanisms in the HVNL?

6 TECHNOLOGY AND DATA

Technology, data and information are key enablers for a risk-based approach to regulation. As discussed in section 3.4, the HVNL could be inadvertently restricting innovation and the uptake of new technology where obligations are based on an existing set of technologies or measures. Where this occurs, potential cost savings from the use of emerging technologies and innovations is lost.

In the case of the HVNL, the primary legislation contains a great deal of detail on specific areas where technology can be used to demonstrate compliance. However, the approach is piecemeal with only two opportunities explicitly mentioned - the Intelligent Access Program (IAP)⁶⁷ and Electronic Work Diaries (EWDs).

The IAP is contained in Chapter 7 of the HVNL which sets out a framework for the collection, storage, handling and privacy of IAP data and includes an approach to data assurance. In contrast, EWDs are covered in various sections within the HVNL. See section 6.1 for details on the status quo including details on the IAP and EWD.

There have been significant developments in technology since the HVNL was drafted and therefore new methods of demonstrating and improving compliance are likely to be more effective and efficient than previously thought. Many transport operators are increasingly adopting safety technologies and telematics to derive safety, productivity and commercial benefits. In 2018, the NTC undertook a best practice review and found safer operators were using technology to demonstrate compliance under CoR and to manage speed and fatigue of drivers.⁶⁸ These same developments are likely to enable significant data to be collected on heavy vehicle use on roads and this data is likely to be useful to regulators and road managers alike.

For regulators, data is an important component that underpins intelligence-led activities and strategies. They use data such as intercept information which includes defect records and formal warnings to understand and track the compliance rates of vehicles, operators and drivers. The NHVR's Intercept app and national cameras assist authorised officers with roadside vehicle intercepts. The NHVR believes that technology and data will play a key role in its future compliance and enforcement strategies.⁶⁹

For government and road managers, data is an extra resource. It can be analysed to improve planning, investment decision making and transport operations and to support the design and delivery of new infrastructure. Government and road managers can use aggregated and de-identified data from heavy vehicles to make decisions and understand road usage.

This chapter considers reform options that address two distinct key problems identified with the current arrangements in respect to technology and data. These are:

- An absence of an overarching framework for the use of technology and data with respect to the HVNL.

⁶⁷ The IAP offers heavy vehicles more access or increased allowable mass in exchange for using an intelligent transport system (satellite tracking and wireless communication technology) to remotely monitor compliance with the stated access conditions.

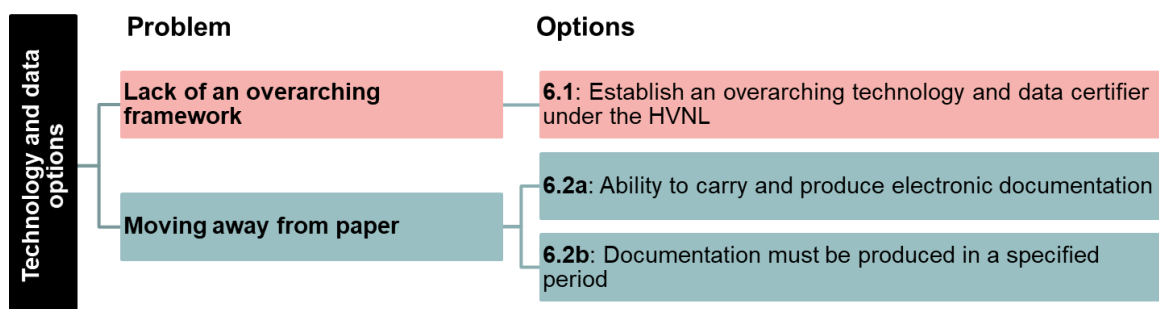
⁶⁸ National Transport Commission, 2018a, *Best Practice Review of Heavy Vehicle Telematics and Other Safety Technology*, pp. 29-34.

⁶⁹ National Heavy Vehicle Regulator, 2018a, *National compliance and enforcement policy*, p. 4.

- The HVNL requires carriage of paper documents in a heavy vehicle (rather than allowing electronic documentation).

The options set out in this chapter are summarised in Figure 9. These options can all be pursued in combination or in isolation. These options are partially linked to option 5.4 which relates to data sharing arrangements.

Figure 9: Summary of options relating to technology and data



**base case not included in regulatory options*

6.1 Base case for the assessment

Chapter 7 of the HVNL contains duties, powers and obligations for parties in relation to IAP data. The IAP allows heavy vehicles to have access, or improved access, to the road network in exchange for using satellite tracking and wireless communication technology to remotely monitor compliance with their stated access conditions.

The IAP is one of many telematics applications under the National Telematics Framework (NTF) (see Box 14: for further details). However, the NTF is much broader and also enables the use of other regulatory applications and data services that are not called up in the HVNL. Under the HVNL, Transport Certification Australia (TCA) performs a technology and data assurance role for the IAP.

TCA has developed the IAP Functional and Technical Specification to ensure all operators, service providers, auditors and government agencies meet their legislative requirements. The IAP Functional and Technical Specification provides level 3 assurance (the highest level) so the data can be used for prosecution purposes. There are currently five service providers certified for the IAP and there have been 15 successful prosecutions using IAP data.

Enrolment in the IAP is mandatory for some vehicles, however this differs across states. The IAP is understood to be mandatory for the following:

- Higher Mass Limits vehicles (Queensland and New South Wales)
- Performance-Based Standards vehicles (New South Wales and Victoria),
- Special purpose vehicles, such as mobile cranes and concrete pump vehicles (Queensland, New South Wales and Victoria).

Chapter 7 of the HVNL also contains duties, powers and obligations for parties in relation to IAP data which builds upon the Australian privacy principles from the *Privacy Act 1988* (Cth). Provisions in Chapter 7 impose penalties between \$6,000 and \$20,000 for breaches of the roles and responsibilities. These penalties are higher than those contained in other privacy legislation and appear to have been effective in driving compliance.

The other form of telematics recognised in the HVNL relates to EWDs. The use of EWDs is not mandated by the HVNL and there are currently no EWDs approved for use. The NHVR is responsible for approving EWD technology. The NHVR has developed several policies and standards for the EWD, including: EWD compliance policy, EWD policy framework, EWD privacy policy and EWD standards.

There are many other telematics applications used by operators for safety and commercial purposes and by government for planning purposes. However, these are not recognised or required by the HVNL.

6.2 Developing an overarching framework for the use of technology and data

6.2.1 What is the problem?

The HVNL contains a great deal of detail on specific areas where technology can be used to demonstrate compliance. However, there is no overarching framework or clear, general process to enable new technology to be used to aid compliance (for example, on-board mass devices and fatigue and driver distraction monitoring devices). Similarly, the HVNL does not recognise commercial systems already being used by industry for safety, compliance and efficiency purposes.

Without an overarching framework it is difficult to introduce new approaches or technologies given, for example, amendments to primary legislation can be expected to take more than a year. This means potential cost savings from the use of emerging technologies may be lost or could be lost in the future.

In addition, there are missed opportunities to use data collected:

- to enable enforcement and regulation to become more risk-based and,
- in an appropriate de-identified format, to inform research and infrastructure planning and investment.

6.2.2 Establish an overarching technology and data certifier under the HVNL (Option 6.1)

The purpose of this option is to recognise a single technology and data assurance provider under the law. This would provide a clear and consistent approach to managing data under the law and allow technology to be used for risk management and assurance under the HVNL in a way it cannot presently while also protecting regulated parties.

From an outcomes-perspective, the HVNL would recognise emerging technology and data with demonstrable safety or efficiency benefits. The HVNL would recognise technology as a primary data generator that can underpin compliance, enforcement and assurance. The HVNL would also encourage the sharing of data to drive risk-based regulation and inform governments on matters such as road investment decisions, while protecting drivers' and operators' rights.

An overarching framework would recognise the value of data used for informational purposes, without necessarily subjecting it to assurance processes. That is, the HVNL would recognise and support operators, the NHVR, police, road managers and authorities to share data (also discussed in option 5.4). Where technology and data requires a higher or evidentiary standard, such as levels 2 or 3 of the NTF (see Box 14:), the HVNL would specify the framework to assure users of that standard. The HVNL would achieve this by recognising an entity who:

- Develops standards and specifications for heavy vehicle regulatory technology and data collection. These standards would contain a balance of prescriptive and performance-based elements and aim to be technology neutral.

- Certifies, approves, cancels and audits technology service providers to ensure it meets defined assurance levels.
- Collects, stores and disseminates data from certified technology providers and systems following clear data sharing rules. Depending on the purpose of the data collected, data would be provided in detailed and aggregate form. Where data is de-identified it would follow a privacy-by-design approach.
- Establishes a clear and consistent approach to mandating the use of certain telematics and technology systems.
- Generates certificates of evidence when required for prosecution purposes.

The NTC has identified two possible entities to undertake this role: TCA and the NHVR. Stakeholder views are sought on whether TCA, the NHVR or another entity is the most appropriate provider.

The HVNL does not currently recognise commercial systems already being used by industry to manage risk as part of their safety management system. Under this option the HVNL could recognise commercial systems already in use. Meaning operators would not be required to go out and purchase new equipment to meet their regulatory obligations. The data and technology framework would recognise the role that unaccredited technology can play in risk management and underpinning compliance.

More detail on this option follows.

Data Assurance

A single entity would take on the administration of assurance for all telematics technologies and associated data under the HVNL.

The law would recognise and/or require different levels of assurance to provide flexibility to accommodate many forms of technology and data.

The single entity assurance role would only be required for technology and data requiring high levels of assurance. For example, where it could be used for prosecution, or where data aggregation should be undertaken 'at arm's length' from the regulator.

The NHVR would be explicitly empowered in the law to recognise technology and data in many other ways. For example, for industry development, industry or operator profiling and risk-targeting, road manager performance or opt-in record keeping (such as EWDs). This would enable the law to be technology neutral and responsive to changes in the regulatory environment.

The NTF contains three levels of assurance (see Box 14:). The IAP currently requires level 3 assurance which provides the necessary environment for collection and secure storage of high-integrity data which may be used as evidence. Under the law, while data sharing would be essential for all levels of assurance, only level 3 assurance systems would be used for prosecution purposes. Data produced with level 1 and level 2 assurance systems would provide valuable insights for research, road use and planning decisions and inform a risk-based approach for compliance and enforcement activities.

Box 14: Data framework – National Telematics Framework and ISO 15638

The NTF is based on a globally recognised International Standard (ISO 15638) and consists of infrastructure and rules that support an open marketplace of telematics and related intelligent technology providers. The NTF is agnostic of policy content, technology provider or other market-restricting requirements. The NTF supports not just the HVNL, but also other regulatory, policy, planning and operational functions for a range of government bodies. It is, therefore, not limited to just heavy vehicles, which gives it consistency, adaptability and economies of scope.

The NTF includes the following interrelated documents/components:

- Telematics data exchange
- Telematics data dictionary
- Allocation of responsibilities to authorities, providers and operators
- Governance frameworks
- Privacy
- Levels of assurance
- Approval, oversight and audit
- Functional and technical specifications
- Operational administration.

The NTF contains three levels of assurance:

- Level 1 Assurance supports self-assessment and the use of a wide range of telematics systems, without the need for type approval. This level is associated with ‘advisory’ applications, where data is not being depended upon for high levels of accuracy or integrity.

An example of Level 1 Assurance is Road Infrastructure Management (RIM) application which allows road managers to collect road use data for asset management application planning and network management while using lower level of assurance. This is currently being piloted in New South Wales.

- Level 2 Assurance requires telematics systems to be type-approved in line with certain specifications, though generally not to a standard that could directly support enforcement. Level 2 is complemented with other data sources (such as data and information collected from other systems, administrative records and/or operational programs).

An example of Level 2 Assurance would be “IAP lite” where road managers and regulators can apply monitoring of conditions to vehicles that are commensurate with the risks being managed. IAP lite allows road managers and regulators to monitor conditions that do not require high evidentiary and granularity of data (i.e. it does not require detailed GPS data every 30 seconds like the IAP). This concept is still in development by TCA.

- Level 3 Assurance requires telematics system to be type-approved and service providers to be audited. Data needs to meet high standards of accuracy and integrity and be of an evidentiary standard that supports compliance and enforcement activities.

Examples of this are IAP and On-Board Mass (a system which is able to measure axle groups and calculate the gross vehicle mass of a vehicle). IAP is currently in use. On-Board Mass is being certified and will be applied as a condition for notices soon.

Data handling and privacy provisions

This option would also provide a clear framework for the permitted collection and use of data for government, regulators and industry. The framework would support sharing non-regulatory data (for information and advice between parties). This would be achieved by applying the strict data handling

provisions relating to personal and protected data (as contained in Chapter 7 relating to the IAP) more generally⁷⁰.

The inclusion of these privacy related principles in the HVNL acknowledges that many telematics applications go beyond collecting personal information and could be deemed surveillance tools. The law must contain consequences for the misuse of data to reflect the seriousness of data collected.

With respect to planning, these privacy provisions would formalise the use of aggregated and de-identified data from heavy vehicles to be used for non-compliance, non-regulatory purposes to assist with asset and network planning by road authorities.

Roles and responsibilities

The HVNL would also contain roles and responsibilities for other parties, such as service providers, drivers, operators and auditors. This would be similar to the obligations that already exist in Chapter 7 of the current law, but not restricted to a single telematics application.

The NTF contains four roles: authorities, operators, providers and TCA. Similar or modified roles could be included in the technology and data framework.

Authorities

Authorities are creators of applications, including government bodies and regulators. This approach would recognise jurisdictions, police and the regulator as authorities, allowing a more dynamic (and justified) approach to data collection and use.

As authorities, jurisdictions, police and the regulator would be able to prescribe requirements for technology and data, with varying assurance levels, for regulatory or planning purposes. For example, New South Wales is currently using the RIM application as a condition of a notice for some vehicles carrying shipping containers. The RIM is an application administered by TCA and is available at a low cost to operators. Although it doesn't provide the high levels of assurance as the IAP does, it provides road managers with important data on road network usage.

Authorities would also be able to develop technology to meet the standards set by the assurance entity and be certified. Authorities could also include operators who have developed a technology solution to address a regulatory need. For example, operators who have developed their own fatigue or mass monitoring systems could have it certified by the assurance entity and use it to demonstrate compliance under the law rather than purchasing duplicative equipment.

Operators

Operators are buyers or users of framework offerings and applications, such as heavy vehicle operators and drivers. This approach would provide a single entity for assurance of technology and data and in turn, regulatory certainty to operators. This would assist in moving towards a 'one box many uses approach', rather than using multiple devices to meet regulatory requirements and commercial needs.

Providers

Providers are the interface between producers and consumers. They make technology offerings and applications available to consumers.

⁷⁰ Specifically, the following provisions in Chapter 7 (currently relating to the IAP) would also be expanded to apply to the collection of data for other regulatory and planning purposes: Powers to collect and hold information; Collecting information; Keeping records of information collected; Protecting information; Making individuals aware of personal information held; Giving individuals access to their personal information; Powers to use and disclose information; Destroying information.

6.3 Moving away from paper

6.3.1 What is the problem?

A missed opportunity is that the HVNL requires the carriage of paper documents in the vehicle. This imposes a regulatory burden on heavy vehicle operators and drivers who must print, store, carry and produce paper documentation. However, many vehicles already have sophisticated systems that would allow for this information to be produced electronically at the roadside.

The reform options considered for addressing these two distinct problems are outlined below. It is worthwhile highlighting upfront that all these options are intended to be technology neutral and opt in. In other words, they don't require industry to implement new technology but rather create a clearer framework for the use of technology in heavy vehicles by operators and drivers.

6.3.2 Ability to carry and produce electronic documentation (Option 6.2a)

This option involves the law permitting all documents to be carried and produced electronically. There would also be the option to access documents via a reference to the NHVR system. As such this option would provide flexibility to stakeholders in how they carry and produce any required documentation. The law would require the electronic document to be accessible by drivers, operators, the NHVR and enforcement at the roadside. This option would also allow for no touch/contact confirmation to continue following industry's response to the corona virus.

Penalties would still be imposed for not producing required documentation, but it would allow operators and drivers to decide on the best way to meet this obligation, i.e. through a paper based, electronic or internet-based system.

This option is likely to require that the following must be met:

- Records must not be altered or manipulated and must be stored in a way that restricts information from being altered or manipulated.
- Generally, they must be retained for five years after the records are prepared or obtained.
- They must be capable of being retrieved and read by the NHVR or police when required.

These requirements are based on the Australian Tax Office (ATO) ruling (Taxation Ruling TR2018/2) which permits individuals to keep and produce records in electronic form to meet their tax obligations.

A performance-based approach, like the ATO principles, would be included in the law. This would provide operators with the flexibility to meet their legislative obligations in a way that suits their business needs.

From an enforcement perspective, the NHVR and police would be consulted on their specific requirements to access documents at the roadside. The health and safety of industry, government and regulators would be paramount, and the law would allow for minimal physical interaction through contactless data transfer and confirmation.

For documents that are easily discoverable online, for example notices published on the Commonwealth Gazette, operators and drivers could provide the relevant web reference at the roadside. This would be considered sufficient for demonstrating compliance. Additionally, permits and notices could be verified at the roadside by drivers providing a reference, assuming internet access is available for authorised officers. Enforcement would need access to the NHVR portal to verify this information. This would resolve issues of documents being altered, address IT security concerns and allow the majority of documents to be accessed at the roadside.

Related to this option, it is worth noting that authorised officers can currently access these permits through the NHVR Portal. The NHVR is progressing implementation of the 'live permit data in truck' initiative.

6.3.3 Documentation must be produced in a specified period (Option 6.2b)

Under this alternative sub-option, some documentation would not be required to be accessible immediately when requested. Instead operators and drivers would be required to produce it to the NHVR or police within a specified period of time (for example within 48 hours). Failure to produce the documentation within the period would result in a penalty.

This option adopts a similar approach to the way some states and territories allow drivers to produce their driver's licence at a police station within 48 hours⁷¹ where they have failed to produce it at the roadside.

As outlined in option 6.2a, for documents that are easily discoverable online, such as notices, a web reference would be sufficient for demonstrating that the driver or operator is carrying the document.

There would be some exceptions to this arrangement. For documents that are specific to the route and could impose an infrastructure risk, for example an oversize overmass (OSOM) load travelling across vulnerable bridge, operators and drivers would be required to demonstrate on the spot that they have permission to be on the route. This could be achieved through carrying a paper-based permit, electronic permit or requesting roadside enforcement to verify access via the NHVR's portal.

Similarly, work diaries would be required to be produced on the spot as it has potentially critical information in terms of allowing the driver to continue their journey.

6.4 Impact assessment

6.4.1 Establish an overarching technology and data certifier under the HVNL (Option 6.1)

As described above this option comprises three distinct elements:

- A single entity is responsible for the certification of technology associated with the HVNL.
- The same entity will take the role of data certifier with responsibility for both aggregation and certification of data.
- Data handling provisions as set out in the HVNL with respect to the IAP are broadened to apply to all higher-assurance data with respect to the HVNL.

It is assumed that, under this option, future decisions, related to the use of technology for enforcement and compliance of the HVNL, will be completed in a timelier manner when compared to the base case. This is because specific legislative reforms to the HVNL will not be required to enable this.

This should provide certainty for investment in technology and better enable industry (or indeed the regulator) to better implement technology-based solutions for risk-based safety management. The impacts stemming from this will be reduced industry administrative compliance costs and improvements to industry operational efficiency. This option may also promote the concept of using a single device for multiple applications under the HVNL which could provide further operational efficiencies to operators.

⁷¹ s 58(3) of the *Police Powers and Responsibilities Act 2000* (Qld) and s 96(1) of the *Motor Vehicles Act 1959* (SA) and 7 days under s 59(3)(c) of the *Road Safety Act 1986* (Vic).

The implications of the broader data certification role are that it may enable data to be better used for enforcement, assurance, information and research purposes in the future. The impacts arising from this are somewhat esoteric in the absence of specific data being collected. However, it seems reasonable to assume that it could enable more targeted, risk-based enforcement and compliance activities which may lead to reduced heavy vehicle crashes. More generally there is also the potential for aggregated and de-identified data on heavy vehicle road use to drive better asset management and road investment decision-making.

This option reduces the risk of data being misused by generalising the IAP data provisions relating to the use of data. It also provides a clear framework for data privacy and sets out a process for reporting of data tampering or suspected data tampering. These provisions help prevent the option from creating any unintended costs.

6.4.2 Ability to carry and produce electronic documentation (Option 6.2a)

This option centres around enabling stakeholders to carry and produce electronic documentation in lieu of paper documentation whenever required by the HVNL. The implications of this are that drivers and operators could move towards carrying documents electronically where efficient. Hence this option should reduce administrative compliance costs for industry.

There may be additional costs to industry with respect to the purchase of any equipment and technology associated with utilising electronic documentation. Providing electronic documentation at the roadside could impose delays for some operators due to the time spent accessing and verifying information by enforcement. However, given the opt-in nature of the option, operators and drivers could choose the lowest cost way to comply with documentation requirements. Therefore, we can assume industry would only shift to electronic documentation where it is efficient to do so, such that any upfront costs would be balanced out by the reduction in ongoing administrative costs.

While uncertain, it is possible that by enabling electronic documentation, technology may emerge that facilitates greater compliance. For example, a heavy vehicle's electronic access permits might be linked telemetrically to its location and drivers may be alerted if they are going outside any permit conditions. By encouraging greater compliance with access conditions this may in turn reduce road infrastructure damage.

6.4.3 Documentation to be produced in a specified period (Option 6.2b)

Option 6.2b would give industry some additional flexibility in terms of demonstrating compliance. Being able to provide some documentation within a specified period rather than at the roadside may have some marginal benefit in reducing industry administrative compliance costs associated with the amount and complexity of documentation that must be carried. Although this flexibility would only apply to some types of documentation.

The nature of the option is such that industry should only opt in to providing documentation after the fact where it is more efficient than the base case requirement to provide at the roadside. The option could transfer some resourcing, cost and burden to enforcement agencies.

With some documentation no longer available at the roadside, it is possible that this option will focus roadside inspections more on on-road safety risks rather than administrative compliance issues. However, given that some information would still be required to be produced at the roadside, including work diaries, this benefit is at best speculative.

There could also be unintended consequences associated with this option. In particular, drivers and operators could become less focussed on documentation and therefore potentially more lax on compliance. This could reduce road safety. Similarly, there is no known evidence to substantiate this.

6.4.4 Summary of assessment

The preliminary conclusion of the assessment is that for both options 6.1 and 6.2a the benefits outweigh the costs. That is to say, they both appear to be worthwhile elements to pursue, as a part of the HVNL review.

It is difficult to conclude whether option 6.2b is likely to be of net benefit, and stakeholder views are sought on the likely impacts of this option.

A summary of the identified impact of the data and technology related sub options are contained in **Table 3** below.

Table 3: Impact of technology and data options

INDUSTRY			GOVERNMENT AND COMMUNITY			
OPTION	Compliance costs	Improvements in operational efficiency	Enforcement and compliance costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
Option to address the absence of an overarching framework for the use of technology and data with respect to the HVNL						
6.1: Establish an overarching technology and data certifier under the HVNL	Industry able to bring forward technology which delivers compliance cost savings on a more timely basis.	Industry able to bring forward technology which provides operational efficiencies on a more timely basis.	Potential benefit, depending on what technology and/or data uses are brought forward.	Potential benefit, depending on what technology and/or data uses are brought forward.	If this enables a more targeted and risk-based approach to enforcement, it should lead to a reduction in crashes*.	This option may provide additional benefits if it promotes the use of single devices for multiple applications under the HVNL.
Options to address the HVNL requiring carriage of paper documents in a heavy vehicle						
6.2a: Ability to carry and produce electronic documentation	Reduced administrative compliance costs. Given opt in nature, would only see uptake if the compliance benefit outweighs the costs.		Potential benefit of facilitating greater compliance with permit conditions through alerting drivers if operating outside permit conditions.			
6.2b: Documentation to be produced in a specified period	Unclear impact. Depends on relative costs between collating documentation for the journey vs producing it after the fact.		Unclear impact.		Unclear impact. Depends on whether: <ul style="list-style-type: none"> there is greater benefit in focussing roadside inspections on on-road safety issues; and whether greater flexibility reduces compliance. 	

*NB If a more risk-based approach to regulation is enabled it could instead result in reduced enforcement and compliance costs. This benefit has only been captured once.

6.5 Questions for stakeholders

- 6.1. Is there value in an over-arching data framework and, if so, to what levels of data assurance requirements should it apply?
- 6.2. In relation to option 6.1, is TCA, the NHVR or another entity, best placed to take on the technology and data assurance role?
- 6.3. In relation to option 6.1, do the chapter 7 data handling privacy provisions provide enough clarity? Should they be expanded to cover more, wound back or be removed from the law?
- 6.4. In relation to option 6.1, what specific technologies would industry be expected to bring forward under this option and what would the implications be for safety and productivity?
- 6.5. In relation to option 6.2a, what documents would operators and drivers prefer to carry electronically? What is the current cost of carrying these documents in paper form? What do you estimate the cost to be to carry them electronically?
- 6.6. In relation to option 6.2a, what do NHVR authorised officers and police require in order to access electronic information at the roadside?
- 6.7. In relation to option 6.2a, to what extent do industry already have the necessary equipment and systems to be able to produce electronic documentation?
- 6.8. In relation to option 6.2b, would operators and drivers exercise the ability to produce documents after a roadside inspection, or would this impose an additional burden?
- 6.9. In relation to option 6.2b, which documents would be appropriate to be produced in a specified period and which are required at the roadside for safety reasons?
- 6.10. Are there other costs or benefits that we should consider in the impact assessment?
- 6.11. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 6.12. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.

7 ASSURANCE AND ACCREDITATION

Assurance schemes set out procedures that, if followed, should lead regulated parties to behave consistently with the principles of the law. They give the regulator, operators, suppliers and other parties greater confidence with respect to capacity to manage risk and comply with the law. Assurance schemes can help give operators and others confidence that they are more capable of managing risks and complying with the primary duty.

Assurance regimes could be considered to help outcome or performance focussed regulation⁷² work in practice. They enable regulated parties to meet the same objectives and standards using risk controls that better suit their operations and are therefore more efficient. This frees regulated parties from having to meet potentially more onerous or restrictive obligations. In exchange, they are required to take on more responsibility for specifying and implementing risk treatments that meet legislated performance standards.

Assurance frameworks implicitly recognise that some regulated parties may have more experience and a more sophisticated approach to risk management than a regulator or government. With detailed knowledge of their operations they may be better placed to identify risks and how to effectively manage them.

The HVNL (Chapter 8) provides for operator certification under the National Heavy Vehicle Accreditation Scheme (NHVAS), which is administered by the NHVR. The scheme is voluntary, with four independent modules relating to mass, maintenance, basic fatigue management (BFM) and advanced fatigue management (AFM). The NHVAS certification recognises operators who take on a greater share of risk management and proactively manage heavy vehicle related safety risks in these specific areas. Certified operators are provided with regulatory concessions⁷³ or alternative pathways for compliance with some of the HVNL's requirements. These concessions are not available to participants in other industry run schemes.

There are currently several other heavy vehicle assurance schemes operating in Australia. These schemes, led by both government and industry, are outlined in Box 15: . The purposes of the schemes differ subtly. TruckSafe is designed to assist and demonstrate (to the participant and their customers) that they are a safe operator. The Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS) is (effectively) a licensing scheme for operating a Restricted Access Vehicle (RAV) in Western Australia.

Membership of all schemes appears to reflect at most 20 per cent of heavy vehicle industry participants.⁷⁴ This is perhaps unsurprising, as accreditation under an assurance scheme may not be

⁷² These regulatory approaches focus on defining the objectives, obligation or high-level outcomes that a regulated party must deliver rather than prescribing specific actions or rules.

⁷³ These regulatory concessions are summarised below:

i) Mass Management – operators with Mass Management accreditation can operate at concessional mass limits (CML) above the national general limits; ii) Maintenance Management – operators based in States with annual vehicle inspection requirements, may not have to undergo such inspections (a State decision); iii) Basic Fatigue Management – operators can operate under more flexible work and rest hours. iv) Advanced Fatigue Management – operators may operate with greater flexibility in hours provided they have systems for managing fatigue risks.

⁷⁴ This is likely to be an overestimate and include some double counting, given operators are sometimes certified under multiple schemes: Fellows, Medlock and Associates, 2018, *Analysis of heavy vehicles safety accreditation schemes in Australia*, p. 47.

suitable or beneficial for smaller operators who may prefer more prescription. Evidence from a range of published reports suggests accredited operators are safer.⁷⁵ There is anecdotal evidence from operators that accreditation improves their efficiency and productivity.

In May 2020 there were 207 operators in TruckSafe⁷⁶ and as at June 2019 there were 7,260 operators in the NHVAS and approximately 4500 in the WAHVAS⁷⁷.

Box 15: Heavy vehicle assurance schemes operating in Australia

There are three main heavy vehicle assurance schemes of relevance to this RIS:

- **National Heavy Vehicle Accreditation Scheme (NHVAS)** – an audit-based compliance system based on a set of standards and administered by the NHVR. It provides alternative pathways for compliance with the HVNL’s requirements relating to mass, maintenance and fatigue.
- **Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS)** – a mandatory scheme for operators of B-doubles, road trains, restricted access vehicles and vehicles operating on permits or concessions in Western Australia. The scheme is voluntary for all other operators. All participants must be able to demonstrate that they comply with standards under fatigue management, dimension and loading, and maintenance.
- **TruckSafe** – an industry scheme operated by the Australian Trucking Association. TruckSafe is designed to improve safety culture and helps give operators confidence that the business has responsible work practices, well maintained vehicles, healthy and trained drivers and management systems to meet their transport needs. TruckSafe has around 200 operators enrolled and has assisted operators in developing a sustainable safety culture. TruckSafe accreditation is based on a set of minimum standards across five compulsory core modules (including a module on driver health and fitness for duty and on-road compliance, including speeding) and one voluntary module (animal welfare). The HVNL does not recognise TruckSafe and it cannot be used to qualify for regulatory concessions, although it is widely recognised as being more comprehensive than the NHVAS.

CraneSafe and jurisdictional-based bus industry assurance schemes also exist.

This Chapter explores a number of reforms to the existing assurance arrangements within the HVNL identified during the HVNL review process to date. These relate to:

- Using operator enrolment or licensing to improve the regulator’s awareness of operators within the industry;
- Reforming the existing NHVAS to improve its value for operators and reducing duplication given the many assurance schemes covering the industry.

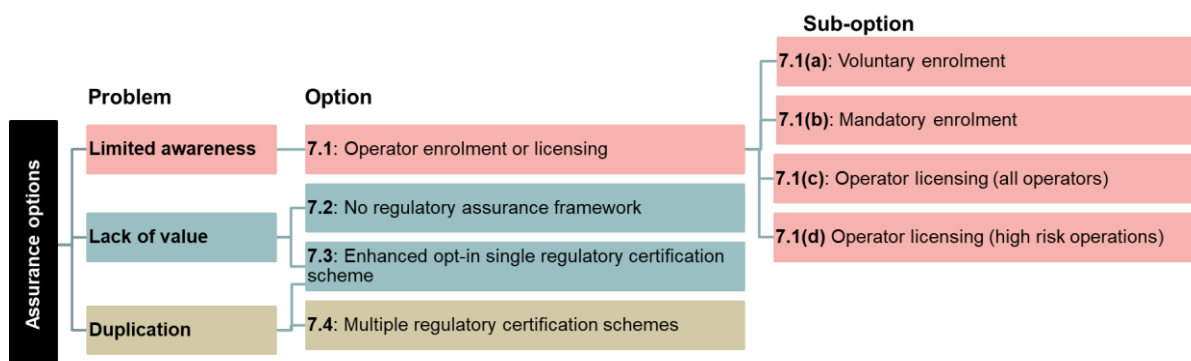
Figure 10 below provides a summary of the assurance related policy options and sub options considered in this chapter and how they relate to the specific problems identified. Unlike many other chapters in this Consultation RIS, the options explored here are largely discrete and represent alternative choices available to decision makers.

⁷⁵ Fellows, Medlock and Associates, 2018, *Analysis of heavy vehicles safety accreditation schemes in Australia*, pp. 39-46.

⁷⁶ Australian Trucking Association, 2020, *Accredited TruckSafe Members*.

⁷⁷ Participation data received from NHVR.

Figure 10: Summary of options relating to the assurance



**base case not included in regulatory options*

7.1 The base case for the assessment

Currently operators who want to access alternative arrangements for mass, maintenance and fatigue can do so through NHVAS accreditation. These alternative arrangements include the ability to operate at CML, exemptions from annual inspection requirements and more flexible work and rest requirements. The NHVAS is administered by the NHVR.

Under the current NHVAS, operators are responsible for completing scheduled compliance audits using registered NHVAS auditors.

There are other assurance schemes outside the HVNL. These include industry schemes like TruckSafe and schemes in non-participating jurisdictions like the WAHVAS. These schemes are not recognised under the HVNL. Participants in these schemes do not have access to alternative arrangements under the HVNL like those available through the NHVAS (although participants in WAHVAS receive some concessions when operating in Western Australia).

There is no provision for operator licensing or enrolment under the HVNL. Heavy vehicles are registered but this does not provide visibility over an operator’s fleet size, industry sector, freight task or participation in assurance and licensing schemes.

7.2 Improving the regulator’s awareness of regulated parties

7.2.1 What is the problem?

As discussed in section 3.5.1, the NHVR faces several constraints in its ability to build risk profiles of regulated parties. One constraint is that it has limited awareness of who it is regulating. This is because barriers to entry into the transport industry are low and under current arrangements there are no mechanisms to record who is operating as a heavy vehicle operator.

The NHVR has some registration information in the Safety and Compliance Regulatory Platform; however, it appears to lack sufficient contact information to improve the flow of information between the NHVR and regulated entities.

Nor is there any mechanism to check if heavy vehicle operators meet even the most basic safety requirements. Instead, monitoring of compliance with the HVNL relies on roadside enforcement — the scope of which can be limited. This makes it challenging for the NHVR to build a risk profile of operators in the industry and enabling it to move to a more risk-based approach to regulation.

7.2.2 Operator enrolment or licensing (Option 7.1)

Under option 7.1, operators would enrol with the NHVR or become licensed as operators. There are several sub-options, all of which are intended to enhance the NHVR's visibility of the industry.

- **7.1a Voluntary enrolment** — Operators would elect to enrol with the NHVR — that is, identify themselves and provide a high-level picture of their operations. Enrolment would require registration with the NHVR and would require enrolees to provide information about themselves and their operations, such as:
 - the reasons for their operation (incidental (e.g. vehicle used for trade purposes) or hire/reward (i.e. payment for transport service)),
 - the scale of their operations, what they move, as well as the nature and extent of their movements.

Enrolment will not involve auditing or meeting performance standards. That is, enrolment is not the same as a licence would be, and it is only the most basic level of assurance.

This option would not make enrolment compulsory. However, it would be a prerequisite for assurance certification or accessing certain provisions of the law, such as access permits and applying for a new PBS vehicle certification. New options such as regulator schedules relating to fatigue (see section 8) may be available only to enrolled operators. Operators who did not want access to these provisions could still choose to enrol to better collaborate with the regulator on their shared goals of productivity and safety.

Operators would be required to maintain their enrolment by ensuring their details are kept up to date. Operators could be delisted from enrolment when they cease operating or where enrolment is no longer necessary for their business operations. Operators would need to submit a request detailing their reasons for unenrolling. Incentives could be created to encourage operators to enrol.

- **7.1b Mandatory enrolment (for some operators)** — This would require operators of RAVs to enrol with the NHVR. Enrolment would remain open to all operators. All other features of this sub-option are the same as option 7.1a. Penalties may be required to ensure that operator enrolment provides meaningful information that can be used to provide better outcomes. This may include receiving a penalty for failure to enrol or providing false or misleading information.
- **7.1c Operator licensing (all operators)** — Operator licensing would require operators to establish they are capable and responsible enough to conduct those operations. It essentially sets a base level of capacity. Under this sub-option operator licensing could be required for all operators or be targeted in some way (i.e. those operating under hire-and-reward business models and operating a heavy vehicle 8 tonnes GVM or greater). Licensing would be based on a regulator-approved basic safety management system⁷⁸ (SMS). Operators would not be able to engage in transport activities until they are licensed, and penalties would apply to those conducting transport operations without a licence. Under this option the NHVR would have the power to suspend or cancel an operator's licence.
- **7.1d Operator licensing (higher risk operators only)** — Under this sub-option operator licensing would be required but for only a subset of operators, namely those with inherently (untreated) higher-risk operations (such as transport of dangerous goods, RAV operations or passenger transport which, by virtue of transporting people, creates a high risk to human life). All other features of this sub-option are the same as option 7.1c, including the SMS requirement.

⁷⁸ The modules in an enhanced NVHAS could include fatigue and distraction management; managing driver fitness to work; vehicle maintenance and roadworthiness; safe on-road behaviour plans; mass management; managing driver competence and training; business operations; technology, data and information management. Additional modules could also exist in relation to safe loading, livestock, dangerous goods, OSOM, remote operations, urban operations.

7.3 Enhancing the effectiveness of the assurance framework for operators and reducing duplication

7.3.1 What is the problem?

There is both anecdotal and quantitative evidence that accreditation improves an operator's risk management (see Box 16:). Thus, all things being equal, a higher level of industry accreditation would lead to improvements in risk management and therefore safety outcomes.

More generally, an effective assurance scheme helps enable a more outcome and risk-based approach to regulation (the benefits of which were discussed in chapter 3). It does so by assisting both operators and regulators to be sure they are complying with the law.

It has been estimated that over 80 per cent of operators are not enrolled in any accreditation scheme.⁷⁹ It can be assumed that many of these operators are not enrolled as the value to their business is minimal— either because it is of limited value to their operations or because of the costs involved. For example, their customers may see no value in accreditation and/or they are content to operate under the more prescriptive base requirements of the HVNL, which is typically the case for smaller operators. These operators cannot be presumed to operate unsafe or inefficient transport businesses.

NHVAS certification is given to operators who proactively set up systems (relating to the various modules) to manage specific heavy vehicle related safety risks. Assuming the assurance scheme is effective it can be inferred that certified operators represent a lower risk to road safety.

Box 16: The effectiveness of assurance regimes

There is both anecdotal and quantitative evidence that accreditation may improve operator risk management and ultimately road safety outcomes.

It seems reasonable to assume that by virtue of assurance placing a greater focus on road safety performance this should stimulate greater awareness and therefore management of these risks within an organisation. In turn, this should reduce the crash risk.

Anecdotal evidence from operators suggests that accreditation not only reduces their crash risk but improves their efficiency and productivity. The NTC and NHVR Integrity Review of the National Heavy Vehicle Roadworthiness System (2014) concluded that assurance schemes were of value in this regard:

“Some studies show that operators may initially enter accreditation schemes for the regulatory benefits, but then discover the broader benefits of having management systems in place. Over time, the safety performance of these operators may improve as a result.

Most significantly, the enduring effect of a systematic approach to managing vehicle roadworthiness indicates there are important advantages to be gained from including accreditation in the regulatory mix rather than solely relying on an inspection system aimed only at detecting defects.”

There is also quantitative evidence that suggests accredited operators are safer.⁸⁰

⁷⁹ Fellows, Medlock and Associates, 2018, *Analysis of heavy vehicles safety accreditation schemes in Australia*.

⁸⁰ Most evidence focusses on the effectiveness of roadworthiness or maintenance accreditation modules in reducing the presence of defects as opposed to the effectiveness of fatigue or mass compliance modules.

- Austroads analysed crash data and found that crash rates for accredited vehicles were around half that of non-accredited vehicles (2008).
- The Western Australian Heavy Vehicle Roadworthiness Survey (2017) found that of the accredited vehicles inspected, 10 per cent had identified defects, compared to 35 per cent of non-accredited vehicles.
- The NHVR National Roadworthiness Baseline Survey (2016) found that major non-conformities occurred in 9 per cent of freight hauling vehicles participating in either the NHVAS or TruckSafe, compared to 13 per cent for nonparticipating vehicles.

It should be noted that this evidence may be affected by a self-selection bias. Rather than operators becoming safer and more efficient as a result of being accredited, safer operators might be more likely to participate in an assurance regime.

Source: Fellows, Medlock and Associates, 2018, Analysis of heavy vehicles safety accreditation schemes in Australia, p. 39 – 46.

Accreditation arrangements under the NHVAS could be improved

Features of the NHVAS may reduce its effectiveness and the value it delivers for operators. This may limit the number of operators who apply to be certified and hence to some extent the degree to which operators take on the burden for risk management (even where they are better placed to do this). This, in turn, may limit the extent to which the HVNL is risk-based or applies regulatory burdens proportionate to the risk involved.

First, NHVAS certification does not provide the broad safety assurance called for by governments and industry. The NHVAS predates the HVNL and the primary duty and its coverage is limited to mass, maintenance and fatigue management. While it has been progressively adapted and improved over the years, its modules were designed as alternative compliance options for specific areas of risk. Under current arrangements, there is no clear link between the NHVAS and the primary duty and CoR obligations in the HVNL. This means certification does not give an operator certainty or the ability to demonstrate that it is likely to be complying with the HVNL and its CoR obligations. In contrast, the industry assurance scheme Trucksafe is far more comprehensive.

Secondly, the modules within the NHVAS are quite prescriptive and do not encourage operators to actively manage the risks associated with their operations. Linked to this, under the NHVAS, certified operators are only provided with limited regulatory concessions. This means accredited operators receive limited advantage or acknowledgment for the work they have done in managing the mass, maintenance or fatigue related safety risks in their operations.

There is duplication and inconsistencies across the various assurance schemes

Industry developed assurance schemes were developed with the aim of giving greater confidence to parties that they are complying with the HVNL more broadly. For example, TruckSafe is a more comprehensive assurance scheme than the NHVAS. It has a much clearer focus on risk assessment and management and has been designed to align with the primary duty and CoR obligations in order to give certainty to accredited operators that they are complying with their obligations *so far as is reasonably practicable*. However, TruckSafe accredited operators do not get access to the benefits of regulatory programs like higher mass limits (HML) that are available for NHVAS mass certified operators. And so many operators are required to enrol in both schemes.

In addition, many operators are also required to enrol in the WAHVAS regime if they operate in Western Australia.

Without a mechanism in the HVNL to recognise other assurance schemes, some operators join multiple schemes for different activities. This duplication creates a financial and administrative burden for operators because they must pay multiple membership fees and comply with inconsistencies across the schemes. For example, operators often must comply with different (and typically duplicative) compliance requirements because each scheme maintains its own auditing arrangements.

It should be noted that mutual recognition could be possible between regulator run assurance schemes, namely the WAHVAS and NHVAS without any regulatory change. Box 17: further describes beneficial arrangements that could be developed outside of this regulatory review process for achieving mutual recognition. This option is not dependent on legislative reform and has not been assessed as part of this Consultation RIS. However, seems worthy of greater consideration and could be progressed irrespective of the outcomes of the RIS.

Box 17: Non regulatory options for enabling mutual recognition

Many operators are required to enrol in the NHVAS and WAHVAS regime if they operate in Western Australia.

There are likely to be ways the NHVAS can recognise the WAHVAS and vice versa (and potentially other accreditation schemes) without the need for legislative reforms; for example, through a memorandum of understanding.

Developing mutual recognition arrangements would go a significant way towards reducing the financial and administrative burden for operators required to enrol in multiple schemes. This would involve regulators working together to resolve inconsistencies across the schemes or otherwise acknowledge and accept these differences.

7.3.2 Remove the regulatory assurance framework and rely on performance standards (Option 7.2)

Under this option the NHVAS would be discontinued. Instead, performance standards, which define acceptable outcomes relating to mass, vehicle maintenance and fatigue, would replace prescriptive requirements within the HVNL. This would provide flexibility to operators to enable them to choose their compliance approach, provided they could demonstrate that their approach meets the required performance standards. TruckSafe and any other assurance schemes independent of the HVNL could continue to operate.

This would be implemented within the HVNL in a similar way to regulation of load restraint (see Box 18:). Using mass as an example, the HVNL would contain a performance-based obligation for operators to ensure their trucks are not overloaded. To meet this obligation and ensure trucks do not exceed the relevant mass limits, an operator would need to know what their trucks weigh when they are loaded. The law would not prescribe how the operator should do this — they could use on-board scales, estimated weight from the volume of the load or a combination of methods. However, at a roadside compliance check, operators would need to be able to demonstrate that they know the weight of their truck.

The same approach could be adopted with fatigue management; fatigue monitoring technology is emerging as a more effective way to measure a driver's fatigue levels than prescriptive requirements.⁸¹

Where appropriate, for the NHVAS modules with a more prescriptive focus such as BFM, standards could be incorporated as specific conditions in regulatory tools (regulations, standards, notices etc).

This could also apply to specific regulatory programs (like HML) that currently require NHVAS accreditation. Instead of the requirement to be accredited under the mass management module of NHVAS, conditions, such as a certified method to demonstrate on-board mass and road friendly suspension, could be attached to the appropriate regulatory tool.

Without an assurance framework, compliance with the performance standards would only be checked roadside.

Box 18: Load restraint performance standards under the HVNL

Currently the HVNL regulates load restraint in the following way:

- The law contains an obligation to ensure:
 - the load is secured in a way that's unlikely to fall off the vehicle
 - the load is not placed in a way that makes the vehicle unstable and
 - an appropriate method is used to restrain the load.
- The regulations contain load performance standards which outline the level of restraint required to meet the loading obligation. However, the regulations do not prescribe the way to meet these standards.
- An operator can choose a restraint method appropriate to their vehicle and load. They can use methods outlined in the load restraint guide (guidance developed by the NTC) or they can use their own method. If using their own method, they need to be able to demonstrate it meets the performance standards.
- Compliance is checked at the roadside. Enforcement officers use the load restraint guide as a basis to assess compliance with the load performance standards.
- Operators can also have their load restraint system certified as meeting the performance standards and use this certification to demonstrate compliance.

7.3.3 Enhanced opt-in single regulatory certification scheme (Option 7.3)

Under option 7.3, the framework of the current NHVAS assurance model would remain.

The NHVR would continue to administer the NHVAS, setting the standards and certifying operators that meet those standards using an audit framework. The NHVR would continue to have powers to impose sanctions on certified operators for non-compliance, including suspension from the scheme.

Enhanced NHVAS

The NHVAS would be revamped so that it better links to obligations under the primary duty and is explicitly framed around risk management roles. This would require the existing modules to be revised

⁸¹ NTC and the Cooperative Research Centre for Alertness, Safety and Productivity (Alertness CRC) a world-first study into heavy vehicle driver fatigue. (source: Cooperative Research Centre for Alertness, Safety and Productivity, 2019, *Heavy Vehicle Driver Fatigue Project - Final project report*.)

and, potentially, new modules to be added to make the regime more comprehensive and facilitate a SMS approach. While the NHVR would continue to identify the risks and the standard to which they are treated, the risk treatments would be less prescriptive.

Certification could continue to be fully modular, with operators able to choose which modules they want to be certified for. Alternatively, there could be certain modules that would be compulsory for all operators wanting to be certified.

Under this option regulatory recognition would remain limited to the NHVAS.⁸² Non-regulatory assurance schemes such as TruckSafe would remain independent of the HVNL. Operators certified under schemes other than the NHVAS would not have access to the same flexible arrangements as NHVAS certified operators.

Entitlement of third parties to rely on accreditation

This option would also amend the HVNL to explicitly provide that customers can rely on an operator's accreditation as part of establishing their own compliance with the primary duty. This option could also be framed as a defence to a breach of the primary duty. Essentially the law would provide that if:

- an assurance scheme provides for a matter linking to an obligation under the HVNL, and an operator is certified under that scheme, then - another person is entitled to rely on that accreditation as part of meeting their obligations relating to the conduct of that person (for example, a customer with obligations relating to the conduct of that person).

The entitlement would only apply to those elements of the duty that are covered by the assurance scheme.⁸³ For example, if an operator is certified under a fatigue management module of the NHVAS, a customer would not need to do their own audit of the accredited operator's fatigue management practices. Instead, they would be entitled to rely on the assurance scheme certification as verification that the heavy vehicle operator has suitable fatigue management practices in place and is being audited to confirm this.⁸⁴

The intention of this change is to prevent duplicative auditing.⁸⁵

7.3.4 Enable multiple regulatory certification schemes (Option 7.4)

There is no mechanism in the HVNL to recognise assurance schemes other than the NHVAS. Operators can be forced to be in multiple assurance schemes for different purposes or if they operate across participating and non-participating jurisdictions.

This option focusses on changing the assurance framework to allow for the recognition of assurance schemes other than the NHVAS that meet the necessary standards.

⁸² Certification could be linked to regulatory programs such as HML but this would not be the primary purpose of certification. Certification would be focussed on how the responsibility for risk management is shared between the Regulator and the operator.

⁸³ If the other person has capacity to influence and control (s 26B(3)(b)(i)) a matter beyond what is provided by the assurance scheme, they must still do what is required to address that matter to discharge their duty.

⁸⁴ This would not remove their fatigue management obligations under the Primary Duty (s 26C). For example, unduly tight scheduling arrangements can cause a driver to drive while fatigued, and customers have capacity to influence and control this matter. If the customer was found to have breached the primary duty by forcing unduly tight scheduling arrangements on the operator, they would not be able to claim "reliance on an accreditation scheme" as a defence.

⁸⁵ This would not mean that an accredited operator cannot be audited by third parties. A customer may still determine an audit is necessary to ensure they are complying with the full suite of obligations under the primary duty. To assess this, third parties would need to check accreditation details and audit records. The law would therefore compel operators to share this information when requested.

Assurance schemes outside of the current law (such as WAHVAS or TruckSafe) will be able to be recognised in the HVNL, with associated alternative regulatory compliance options for certified operators.

Like option 7.3, the NHVR would be responsible for setting standards. However, the NHVR will no longer administer a certification scheme itself. Instead, it would be responsible for accrediting certification schemes that meet their standards. Accredited certification schemes would then certify operators. It would be a conflict of interest for the NHVR to accredit and run its own certification scheme in the presence of competing schemes. As a result, the NHVAS would be functionally, or ideally, structurally separated from the NHVR.

In accrediting certification schemes, the NHVR would focus on how schemes will ensure certified operators meet the required standards, rather than on assessing operator compliance directly. Accredited certification schemes would need to have robust auditing process in place to provide the required level of assurance. However, the NHVR would still retain the power to directly audit certified operators to check that accredited certification schemes are working effectively. The NHVR could also recommend to an accredited certification scheme that one of their certified operators be de-certified. This acknowledges that the NHVR may have access to more enforcement/non-compliance data than the accredited certification schemes.

Ministers and the regulator will retain standards-setting roles, giving governments confidence that certified operators meet the criteria needed to provide for alternative regulatory compliance options under the law.

The NHVR would remain the only body with the power to grant access to exemptions or alternative means of compliance with regulatory requirements. Although this may be through granting this to all operators certified under specific certification schemes or modules under these schemes.

The NHVR would also be able to de-accredit certification schemes if they were not performing.

As an interim measure, the NHVR could recognise current operators under schemes like TruckSafe and WAHVAS, to the extent the standards were similar to those under NHVAS.

Entitlement of third parties to rely on certification under an accredited scheme

The HVNL would specifically provide that a third party (for example, a customer) can rely on an operator's certification under an accredited scheme as part of their compliance with the primary duty (see section 7.3.3 for further description of this).

7.4 Impact assessment

This section considers the impacts of reforms to the nature and structure of the assurance regime (the NHVAS) within the HVNL. The significance of the impacts of the reforms depends primarily on the effectiveness of the assurance regime in improving accredited operators' risk management.

The impact analysis that follows assumes that operator assurance is likely to reduce the risk of crashes and improve safety outcomes for participating operators (see Box 16: for the rationale behind this assumption).

7.4.1 Option 7.1 — Operator licensing or mandatory enrolment

Benefits

This option centres on a change to the HVNL that requires some or all operators to become licensed or enrol with the NHVR. As discussed in section 7.2.2, there are four sub options. All the licensing and enrolment sub-options could potentially result in a reduced risk of crashes if they:

- improve the NHVR's awareness and understanding of operators, which in turn supports the development of a risk-based approach to regulation; and/or
- enable greater early, proactive engagement with operators⁸⁶ (that would otherwise not seek accreditation) and this is more effective in improving safety outcomes than the current regime — which relies heavily on deterring non-compliance through penalties.

We will address these assumptions in turn.

First, it is unclear whether (and to what extent) the NHVR can obtain any additional information under either operator enrolment or licensing that would assist it to move towards a more effective risk-based approach to compliance and enforcement. Early input from the NHVR suggests that this option could enable it to better understand the scale and complexity of different operators' businesses and link vehicles with operators.⁸⁷ It is less clear if this would enable the NHVR to better identify high risk operators and target compliance and enforcement efforts towards them, in order to drive improvements in compliance and road safety.

Secondly, licensing and mandatory enrolment may enable the NHVR to better communicate with all entities. This may ensure regulatory obligations are more widely understood. However, it is unclear how effective additional early preventative regulatory intervention would be in improving risk management practices of operators. The effectiveness of such intervention is particularly unclear when there is uncertainty about what risk management actions are appropriate to effectively manage risk in a particular operational context. Box 2: considers the circumstances in which preventative regulation may be more appropriate than deterrent regulation.

A key difference between the sub-options is that, unlike enrolment, licensing would enable the regulator to cancel or withdraw an operator's licence. It is unclear whether the ability to cancel an operator's licence would be more effective in driving compliance compared to relying on penalties currently enabled through the HVNL.

Costs

This option (and all associated sub-options) require operators to identify themselves to the regulator and complete the administrative task of enrolling with the regulator or applying for a licence. The cost implications of this are:

- Operator administrative costs associated with enrolling or applying for a licence. This will probably be highest under option 7.1c where licensing applies to all operators and some operators would be

⁸⁶ The NHVR has indicated that this would enable contact with the entire industry and specific sectors regarding safety risks and emerging issues, provide introductory information for new operators, better understanding of regional issues and ability to target education and promotion. They would therefore be less reliant on external parties to inform industry of safety issues. (source: advice from the NHVR on 5/3/2020).

⁸⁷ The NHVR has suggested it would collect registered operators' contact and identifying details — to link vehicle registrations, company name (as used for NHVR services such as permits and accreditation), nature of business/industry sector and contact details. The NHVR's Safety and Compliance Regulatory Platform (SCRIP) performs data matching between the National Exchange of Vehicle and Driver Information System (NEVDIS) -Austroads collection of state and territory registrations and registration holder information-, ASIC (for company name), the NHVR Portal (customers and regulated parties for permits and the National Heavy Vehicle Accreditation Scheme (NHVAS)).(source: advice from the NHVR on 5/3/2020).

required to confirm they have met certain safety related obligations. Meeting these safety-related obligations may also involve the operator incurring expenses.

- Administrative costs for the regulator associated with developing, maintaining and updating the register of operators or operator licences. Implementation would also need resourcing for education.
- Licensing and to a lesser extent enrolment (particularly if it comes with more stringent obligations) could act as a barrier to entry into the freight industry for new, smaller operators. This, in turn, could reduce competition in the freight and logistics industry which could ultimately reduce economic efficiency more generally.

Box 19: Indicative industry administrative cost increases under option 7.1d

The following provides an indication of the possible increase in administrative costs for operators with high-risk operations under option 7.1d. Operators would be required to be licensed by the NHVR and meet some basic safety requirements. For the purpose of this analysis we have assumed that this would involve annual vehicle inspections and the provision of some basic details of their operations.

We have also assumed that inherently higher-risk operations would predominately capture all heavy vehicle operators carrying dangerous goods. Based on this assumption, the requirement to enrol has been assumed to affect up to 16,060 vehicles (using NTC data) and 1,235 operators (assuming each operator has 13 vehicles — this is the current average number of vehicles per accredited operator).

However, it can be assumed that some of these operators are already accredited under NHVAS (assume 25 per cent). It can also be assumed that some operators, registered in Queensland, New South Wales and the Northern Territory, are already subject to scheduled inspections (assume that this applies to a further 40 per cent based on analysis of the current breakdown of NHVAS involvement and dangerous good vehicle numbers by state). As a result, option 7.1d would increase the number of annual vehicle inspections by approximately 5,600 in each year at a cost of \$689 each (based on South Australia inspection fees – see Appendix A). This would increase industry costs by \$3.85 million per year.

Summary of Impacts

There are expected to be administrative costs for the regulator and industry associated with the four sub options being assessed. These are likely to be highest for option 7.1c which involves the introduction of licensing for all operators. There is also a risk that these sub-options (particularly 7.1c) could affect competition in the freight market or segments of the market.

These costs must be balanced against the benefits, which are uncertain, but possibly small. There may be a reduced risk of crashes, but only if some or all of the following assumptions hold:

- The NHVR could obtain additional information under either operator enrolment or operator licensing which helps it to move towards a more effective risk-based approach to compliance and enforcement.
- Additional early, preventative regulatory intervention with operators (i.e. beyond what is already mandated or possible under current arrangements) would be enabled and would improve risk management practices of operators.
- The ability to cancel an operator's licence would be more effective in encouraging compliance than the existing penalty regime.

Identified impacts of the operator licensing/mandatory enrolment sub options are in **Table 4** below.

Table 4: Impact of operator licensing/mandatory enrolment options

INDUSTRY			GOVERNMENT AND COMMUNITY				
OPTION	Compliance costs (admin and or additional expenditure)	Improvements in operational efficiency	Government admin costs	Enforcement and compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
7.1a Voluntary enrolment	Minor cost associated with enrolment possibly only for those that value incentive offered*.		Costs associated with developing maintaining and updating enrolment register and educating industry about changes.			Unclear. Depends on whether there is any information that the regulator can obtain to enable move toward a risk-based approach.	
7.1b Mandatory enrolment	Minor cost associated with enrolment but for operators*.					Unclear. Depends on whether the obligations will encourage any additional effective risk management action by these operators.	Unlikely but possible reduction in efficiency if enrolment acts as a barrier to entry of new operators.
7.1c Operator licensing (all operators)	Cost increase associated with obtaining licence*.		Costs associated with developing, maintaining and updating licence register and educating industry about changes.			Unclear. Depends on whether <ul style="list-style-type: none"> the ability to remove an operator's licence would deter risky behaviour and reduce the crash risk 	Reduced efficiency if licensing acts as a barrier to entry of new operators.
7.1d Operator licensing (for higher-risk operators only)	Cost increase associated with obtaining a licence for captured operators. Although many of these operators may already be accredited*.					<ul style="list-style-type: none"> the obligations will encourage any additional effective risk management action by these operators. 	Reduced efficiency if licensing acts as a barrier to entry of new operators in this area. However, impact on only a segment of the market.
Notes	*Costs may be one off or semi-regular depending on length of licence or enrolment period						

7.4.2 Option 7.2 – No operator assurance framework

Option 7.2 removes the NHVAS assurance framework and replaces many of the prescriptive standards in the HVNL with performance-based standards (particularly for mass, vehicle maintenance and fatigue management). The HVNL and associated regulations would continue to identify the risks and the standard to which they are treated, but the risk treatments would be described in terms of performance standards (with specific guidance on prescriptions to meet the performance standards).

Benefits

This option would result in some administrative cost savings for the 7,513 operators currently enrolled in one, or several, modules, in the NHVAS.⁸⁸ There would also be cost savings for the NHVR from the removal of the NHVAS. This option would remove the need for accreditation audits.

However, the NHVR would still incur costs to update and create new standards and guidelines to support industry. Guidelines would be needed to assist industry to decide which specific risk management measures are likely to be considered compliant under the new performance-based requirements. It is envisaged that most of the risk controls acceptable under existing NHVAS modules would be incorporated into these standards and guidelines, although they would be revised to clearly link to the primary duty.

It is not clear whether this option would have any specific impact on road safety outcomes assuming that key risks continue to be managed.⁸⁹ Rather, the benefit of this option is that it would provide operators flexibility to choose how they comply. This would give operators more risk management responsibility as they would be responsible for identifying and implementing their own risk treatments.

This flexibility should, in theory, reduce industry compliance costs as operators can choose the best way of demonstrating compliance based on their circumstances. However, the extent of industry compliance costs savings will depend on:

- the limits imposed by the need to demonstrate compliance at the roadside⁹⁰ — under performance-based standards operators may need to increasingly rely on technology (relating to fatigue monitoring or on-board mass) to demonstrate compliance at the roadside. Otherwise, they may need to use existing prescriptive compliance methods.
- the degree to which flexibility creates uncertainty for operators about whether the approaches they propose to adopt are likely to be compliant — uncertainty can create additional costs in the form of time and effort spent understanding the most appropriate way to comply. This uncertainty is likely to be a particular problem for smaller operators.

It is unclear whether flexibility in how to comply would be valuable to operators or if it would be outweighed by uncertainty about whether their proposed measures comply with regulation.

Costs

Removing the NHVAS under this option would result in some costs.

First, unlike the other NHVAS accreditation modules, the AFM module of the NHVAS may not be able to be maintained or continue to operate in an alternative form (i.e. under standards or guidelines). This is because to be granted AFM accreditation, an operator must demonstrate to the NHVR that they:

⁸⁸ Data from the NHVR on total accredited operators as at 20 February 2020.

⁸⁹ This also assumes that assurance schemes are not more effective than other regulatory approaches in reducing road safety risks (see Box 16: for further discussion of this).

⁹⁰ Without an assurance framework, compliance with the performance-standards would only be checked roadside.

- understand the risks the proposed operator specific hours can create; and
- can and will take steps to off-set these risks.

It's unlikely that the performance-based standards proposed in option 7.2 could capture the current AFM arrangement. In addition, there would be no ability for the regulator to approve operator specific arrangements as it currently does. Therefore, for AFM accredited operators, some flexibility would be lost. This may have a flow on effect for safety particularly for fatigue management issues although the significance of this is uncertain.

Currently, 62 operators are enrolled in AFM which accounts for less than 1 per cent of accredited operators.⁹¹ Under this option, the regulator would lose some oversight of, and insight into, accredited operators' business and risk management actions. However, the extent to which this would affect the NHVR's ability to do its job or move towards a more risk-based framework is unclear.

7.4.3 Option 7.3 – Enhanced single opt-in regulatory certification scheme

Benefits

Under option 7.3 the NHVAS would be revamped. The proposed changes are intended to enhance the benefits operators would receive from being certified under the NHVAS by:

- clarifying the link between certification and compliance with the primary duty and CoR obligations
- providing NHVAS accredited operators with greater access to expanded and better-linked modules which should improve operators' flexibility in compliance options.

The aim of these changes would be to improve the value of the NHVAS and therefore increase the number of operators seeking certification. At a minimum, there would be administrative cost savings for operators who may no longer choose to be accredited by other industry schemes. Given this option is voluntary, it is assumed that operators will only opt-in where efficiency gains exceed any increase in compliance costs (see Box 20: for a further explanation of this).

This option would also enable third parties to rely on NHVAS accreditation as part of complying with the HVNL primary duty. This would remove the need for duplicative customer audits. The NTC has anecdotal evidence suggesting this is a problem for operators, although it is unclear how significant or widespread this duplicative activity is. In any case, this option would be expected to reduce industry administrative costs for enrolled operators. It can also be expected to increase the number of operators seeking certification and so add to the benefits described above.

Assuming accreditation improves road safety outcomes for accredited operators then it is possible that this option would lead to road safety benefits.

Costs

As described above, it is assumed that this option increases voluntary participation in the NHVAS, by offering greater value to operators.

The NHVR would continue to certify operators but against a more comprehensive accreditation scheme. It can be expected that costs to the NHVR of administering the regime will increase, particularly, if a greater number of audits are required (however, these costs will ultimately be recovered from operators). Similarly, operators will incur administrative compliance costs upon entering accreditation.

⁹¹ Data from the NHVR on accredited operators as at 20 February 2020.

However, as discussed in Box 20: below, provided operator accreditation fees cover the NHVR's costs, then the combined effect of the changes proposed will be beneficial.

The NHVR will also incur some one-off costs to develop new materials to help operators understand and meet the new NHVAS requirements.

Box 20: Benefits of opt-in regulatory arrangements

It can be assumed that the benefits to participants of a regulatory scheme will outweigh the costs where a regulatory scheme:

- is opt-in/voluntary, and
- the full costs of administering the regime are funded by the industry participants.

This is because it can be assumed that each individual participant decides whether or not to enter the scheme based on whether it represents value for them. Participants will decide to enter the scheme up to the point where the benefits equal the costs they would incur. The combined effect of this individual decision making is that only operators who receive a net benefit will enter the opt-in scheme.

In the case of option 7.3 which revamps the NHVAS regime, it can be assumed that accredited operators will obtain benefits that exceed any increase in compliance costs they may incur to comply with revised NHVAS requirements. Otherwise they would not enter. Estimating the total net benefits of the revised scheme, however, requires an understanding of the likely increase in operators that would seek accreditation.

7.4.4 Option 7.4 – Multiple regulatory certification schemes

Benefits

Option 7.4 would allow multiple certification schemes to be recognised (or more specifically accredited) by the regulator. This would mean operators could choose the scheme they want to be part of and would not be forced to be certified under multiple schemes.

Option 7.4 is likely to reduce industry administrative costs because operators would be able to select and enter the most effective scheme for their operations. Third parties would be entitled to rely on certification under an accredited scheme as part of complying with the HVNL primary duty. This would remove the need for duplicative customer audits of suppliers.

It is possible that certification scheme providers could be incentivised to continuously improve the quality and effectiveness of their scheme in order to continue to attract operators. This could lead to the emergence of new bespoke schemes (that potentially go beyond consideration of HVNL compliance issues) and that provide additional benefits to specific types of operators. However, these impacts are predicated on there being competition in the market for operator assurance. There is a possibility that the market could default to only one or two schemes. This could occur if there are barriers to entry (because certification schemes are complex to establish) and/or if there are economies of scale and scope in relation to running a scheme. If these circumstances prevail, operators won't have the choices anticipated above and the benefits of competition will not be delivered.

Furthermore, there is a risk that certification schemes may become less stringent over time as providers may be incentivised to reduce their focus on compliance in order to attract more operators to enrol. The likelihood of this will depend on the effectiveness of the NHVR's approach to accrediting schemes.

It is unclear what the effect of this option would be on the number of operators seeking certification as this will depend on the specific features offered by the different schemes.

While this option can be expected to reduce the NHVR's costs associated with running the NHVAS, this saving is likely to be offset by increased costs for the accredited certification schemes that fill this void or otherwise pick up the administration of NHVAS.

Costs

Under this option, the NHVR would incur some additional costs.

- It would need to develop new standards and processes for its role as an accreditor of schemes (rather than a certifier of operators) which would create some one-off costs.
- It would need to ensure schemes seeking accreditation meet and continue to meet the standards developed. The NHVR would incur compliance costs in auditing schemes (and some operators under these schemes) to ascertain whether the NHVR standards are continuing to be met.

More generally this arrangement creates some risks for the NHVR as if any one or more certification schemes proved ineffective or problematic the NHVR would retain some responsibility for this.

7.4.5 Summary of assessment

The options proposed under 7.1 would all increase industry compliance costs to differing degrees (see **Table 4**). It is not immediately clear what benefits the sub-options under 7.1 might drive. Further consideration needs to be given to:

- what specifically would be requested from operators under a licensing or enrolment scheme and
- how the regulator might change their approach or activities in response to the additional information gathered through an enrolment or licensing process.

Any or none of the sub-options in option 7.1 could be progressed in combination with options 7.2, 7.3 and 7.4.

Table 5 below summarises the impact of options 7.2 to 7.4.

The value of moving to performance-based standards (option 7.2) depends on the degree to which these standards could facilitate a flexible approach to operator compliance, while at the same time providing sufficient compliance certainty for operators and the regulator. This option may result in operators being required to install technological solutions to achieve this. That is not to say that the form of this technology would be prescribed.

A revamped and enhanced NHVAS (Option 7.3) seems likely to deliver industry benefits in the form of:

- reduced administrative costs for some NHVAS operators or those seeking to participate in the NHVAS (from removal of duplicative audits and duplicative enrolments in alternative schemes).
- improvements in operational efficiency, assuming operators get greater access to alternative risk management approaches and more flexible scheduling and loading arrangements etc.

Having multiple competing certification schemes (Option 7.4) could also reduce industry administrative costs by removing duplicative enrolments and audits (as option 7.3). However, it may also create additional costs by introducing another administrative layer and its effect on industry operational efficiency and on on-road safety is unclear. The benefits of this option largely depend on:

- whether it is likely that market competition could develop in the form of different certification schemes
- whether competition would enable improvements in the quality and effectiveness of assurance and therefore enable the development of innovative compliance and risk management approaches.

Table 5: Impact of options for reforming the regulatory assurance regimes

INDUSTRY				GOVERNMENT AND COMMUNITY		
OPTION	Compliance costs	Improvements in operational efficiency	Admin, enforcement and compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
7.2. Move to performance-based standards	Reduction in NHVAS admin and audit costs for currently enrolled operators (7,513). Unclear whether flexibility offered through performance-based standards is valuable to operators or whether it would increase costs due to uncertainty around whether approach adopted is compliant.	Reduction in efficiency from cessation of AFM accreditation module.	Administrative cost savings from the removal of the NHVAS. However, would be costs to update and create new standards and guidelines to support industry.		Possible negative impacts on safety as a result of the cessation of the AFM accreditation module.	Reduced regulatory oversight of accredited operators may affect ability of NHVR to move towards a more risk-based framework.
7.3 Enhanced single opt-in regulatory certification scheme	Reduced costs for some NHVAS participating operators from removal of duplicative customer audits and duplicative accreditation	Increase as a result of greater access to alternative risk management approaches and compliance options*	*See note below	Possibly avoid road damage if have more certainty over mass management of operators under this option.	Possible benefits from increase in number of accredited operators assuming assurance improves road safety outcomes.	
7.4 Multiple certification regimes	Reduced costs for some NHVAS participating operators from removal of duplicative customer audits and duplicative accreditation	Possible increases from improvements in the quality and effectiveness of accreditation. But this relies on competition developing in the market and this may not occur.	Some additional costs for the NHVR in accrediting certification schemes (other costs associated with running NHVAS would pass to other schemes)		Possible will get improved road safety from improvements in the quality and effectiveness of accreditation. This relies on competition developing in the market.	
Notes	*increase in industry operational efficiency is anticipated to outweigh any increase in industry compliance costs and any increase in government administrative costs given it is opt in.					

7.5 Questions for stakeholders

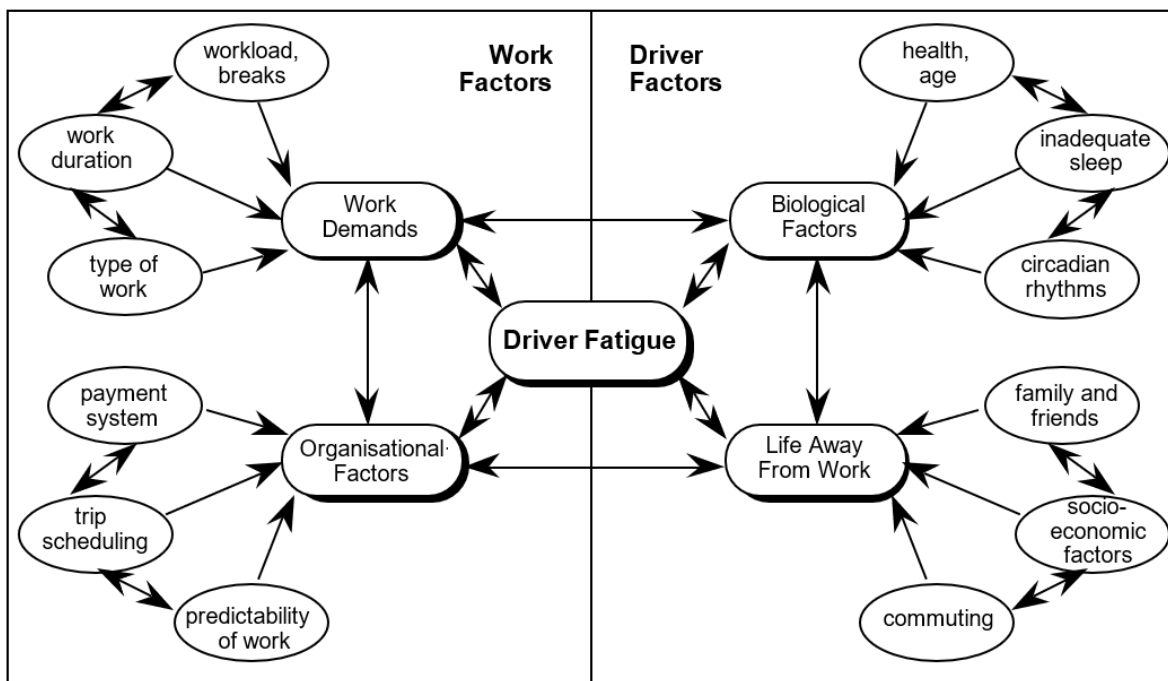
- 7.1. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 7.2. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.
- 7.3. Is there additional information that the NHVR could obtain through mandatory operator enrolment or operator licensing that would enable it to better target compliance and enforcement efforts? Please outline the data that could be obtained and how it would assist with targeting compliance and enforcement activities.
- 7.4. Are there any preventative risk management actions, or safety related obligations that the NHVR could mandate to improve operator risk management (beyond NHVR education campaigns)? Could these be applied to all operators, irrespective of the context in which they operate?
- 7.5. Would operator licensing, with an associated ability to withdraw or cancel a licence be an effective regulatory instrument for driving compliance? Would it be more effective than relying solely on current penalties in the HVNL?
- 7.6. Would flexibility around the method for compliance through the introduction of performance-based standards which replace some prescriptive requirements within the HVNL (see section 7.2.3), be of value to industry? Would this increased flexibility introduce uncertainty about compliance for operators, the regulator or other enforcement agencies? What measures could be taken to lessen any uncertainty about compliance?
- 7.7. Under option 7.2 it is likely that the NHVAS AFM module would be discontinued. What costs or operational inefficiencies might result from this change?
- 7.8. Under option 7.3 the NHVAS would be enhanced so that it better links to obligations under the primary duty and is explicitly framed around risk management roles. This is likely to require additional or revamped modules to be developed. What additional matters should be covered in the modules?
- 7.9. Options 7.3 and 7.4 remove the need for duplicative customer audits of suppliers. How significant is this problem?
- 7.10. Option 7.4 would allow multiple certification schemes to be accredited by the NHVR. What, if any, benefits do you think there would be from allowing multiple schemes to be recognised?

8 FATIGUE

Fatigue is a key risk to safety. Driving a heavy vehicle while fatigued will increase the risk of a crash and, over time, may impact the physical and mental well-being of the driver.

Figure 11 shows the many factors that can contribute to driver fatigue. However, research suggests that the most significant causes of driver fatigue in heavy vehicles are longer periods of work, night driving and shift work (especially early shifts, night shifts, backward shift rotations, long shift sequences, and shift sequences where a shorter break allows for less sleep).⁹²

Figure 11: Work and driver factors contributing to driver fatigue



Source: National Transport Commission, 2019c, *Effective fatigue management*, p. 16.

Under the HVNL, fatigue is defined with reference to how a driver feels and observations of a driver’s behaviour.⁹³ The HVNL includes several mechanisms to stop heavy vehicle drivers from driving while impaired by fatigue. The main one being maximum work and minimum rest requirements that are specified in the primary legislation and regulations for the drivers of ‘fatigue-regulated heavy vehicles’ (FRHVs).⁹⁴ Work diaries are typically used to check compliance with these requirements.

⁹² Cooperative Research Centre for Alertness, Safety and Productivity, 2019, *Heavy Vehicle Driver Fatigue Project - Final project report*.

⁹³ Under s 223 of the HVNL, fatigue is defined as feeling sleepy, physically or mentally tired, weary, drowsy, exhausted or lacking energy or behaving in a way that is consistent with any of these feelings.

⁹⁴ Under s 7 of the HVNL FRHVs are defined as vehicles with a gross vehicle mass (GVM) of more than 12 tonnes; combinations with a GVM of more than 12 tonnes; buses weighing more than 4.5 tonnes and fitted to carry more than 12 adults (including the driver); trucks or combinations including a truck that have a machine or implement attached and a total GVM of more than 12 tonnes.

Operators can operate under standard work and rest hours or they can seek accreditation for BFM, or AFM modules under the NHVAS. Certification under these modules gives operators and their drivers greater flexibility with respect to work and rest hour requirements. Essentially, this creates three tiers of work and rest hour requirements. Further details on each tier are summarised in Box 21: in section 8.1 below.

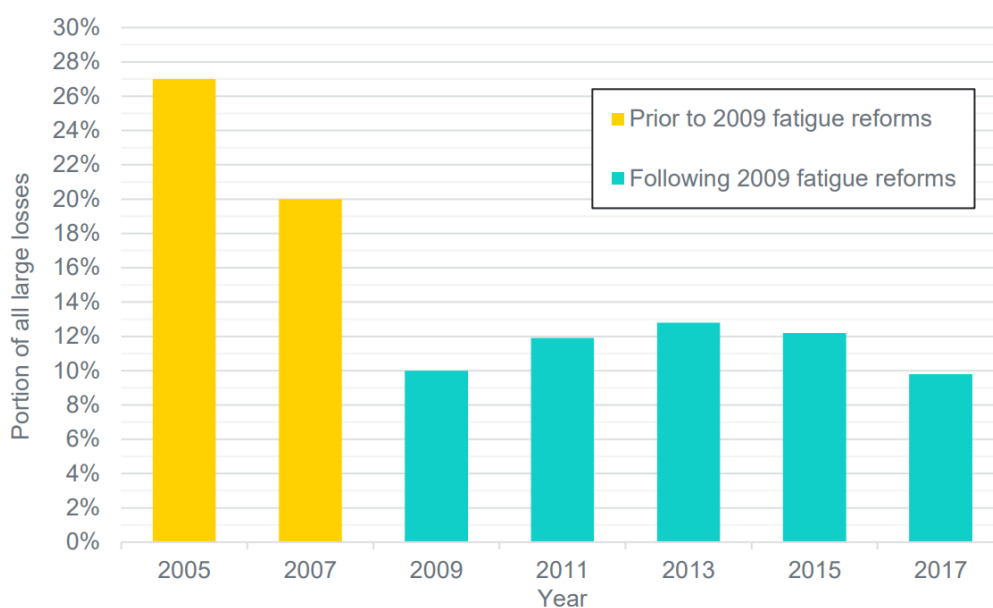
The HVNL also includes:

- a specific duty on drivers not to drive a FRHV on a road while impaired by fatigue.⁹⁵
- an overarching primary duty on parties in the CoR (a defined list) to make sure that everything they do relating to a heavy vehicle and its journey is done as safely as practicable.⁹⁶

Different approaches to fatigue management are taken in both the Northern Territory and Western Australia, where it is covered under state-based occupational health and safety legislation.

The number of fatigue related incidents decreased after fatigue management reforms were introduced in 2009, however, in recent years, incident levels have remained relatively constant (see **Figure 12**). Fatigue is still the leading cause of fatal single-vehicle crashes, and is a key factor in 9.8 per cent of major accidents.⁹⁷

Figure 12: Fatigue related incidents as proportion of all large losses



Source: National Transport Commission, 2019c, *Effective fatigue management*, p. 29.

Therefore, the HVNL Review has considered whether there were any opportunities to improve the HVNL’s approach to fatigue. Either by improving the effectiveness of current arrangement or by reducing the complexity (without affecting safety outcomes). The options considered in this section aim to address the specific problems identified, while also being mindful of the latest research and maintaining or

⁹⁵ HVNL, s 228.

⁹⁶ HVNL, s 26C.

⁹⁷ Major accidents are defined as heavy motor vehicle claims that exceed \$50,000. Source: National Transport Commission, 2019c, *Effective fatigue management*.

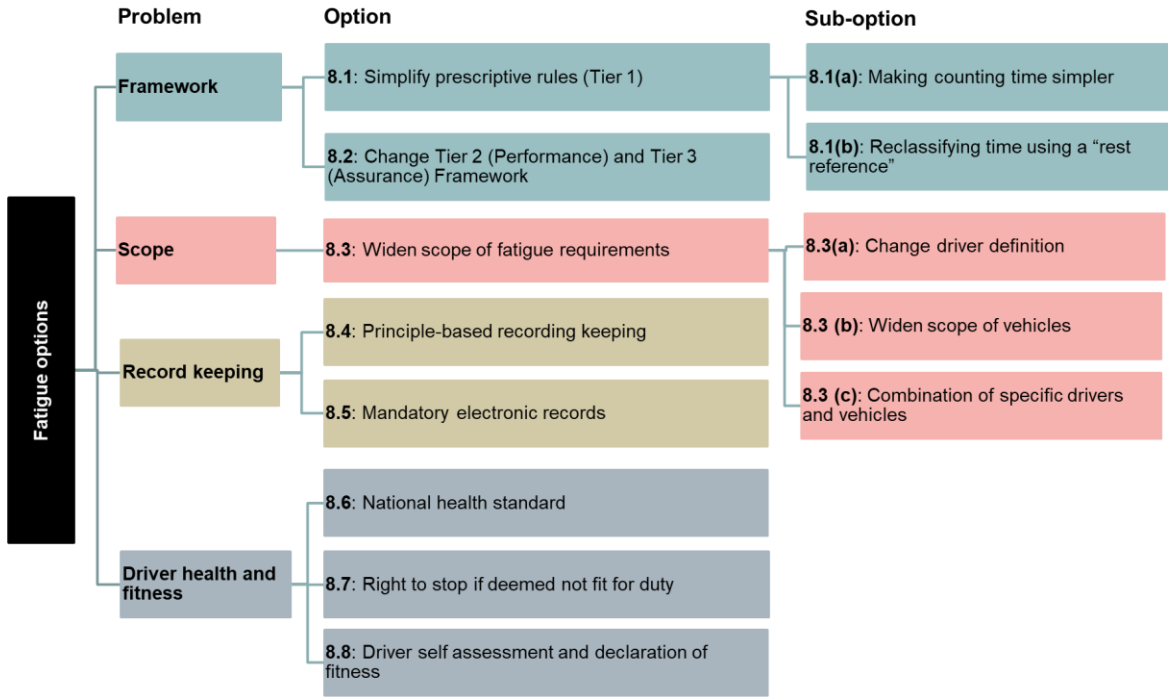
positively improving road safety. Through the HVNL Review consultation process a number of fatigue related reform options were identified and these are assessed in this chapter.

They relate to:

- the fundamental framework for managing fatigue, namely the standard hours outlined in the HVNL and the wider framework associated with assurance (i.e. fatigue modules under the NHVAS)
- widening the scope of the fatigue requirements to cover a greater number of heavy vehicles
- record keeping requirements
- driver health and fitness provisions.

Figure 13 below sets out the options considered (and any associated sub-options) and how these relate to the problems identified. The options themselves are largely complementary and can be pursued in combination. However, the sub options all represent discrete choices.

Figure 13: Summary of fatigue related options



**base case not included in regulatory options*

8.1 The base case for the assessment

The base case for the assessment involves maintaining the existing three-tiered system of work and rest hours, as laid out in Box 21: . Fatigue requirements would continue to apply to a defined set of FRHVs, including:

- vehicles with a GVM of more than 12 tonnes
- combinations with a GVM of more than 12 tonnes
- buses weighing more than 4.5 tonnes fitted to carry more than 12 adults.

Box 21: Overview of current fatigue management requirements in the HVNL

Tier 1 – Standard hours – prescribed work and rest hours

The base tier is often referred to as the standard hours tier. In this tier, work and rest limits are prescribed for solo drivers, bus and coach drivers and two-up drivers. Work diaries are the primary tool for checking compliance, unless the driver is travelling less than 100km from their base (local work). Local work drivers are not required to keep work diaries, but operators must keep some information on the drivers' hours of work. There are no specific training or health assessment requirements under the HVNL for drivers working under the standard hours tier.

Tier 2 – BFM under NHVAS accreditation – longer work hours prescribed with more flexibility for rest

While this tier offers more flexibility, work and rest limits are still prescribed for solo and two-up drivers. Operators must meet standards to be BFM accredited. These standards relate to scheduling and rostering; fitness for duty; fatigue knowledge and awareness; responsibilities; internal review; and records and documentation.

These standards are developed by the NHVR and approved by Ministers. Operators are regularly audited to check compliance with these standards. Work diaries are used to check compliance at the roadside.

Tier 3 – AFM under NHVAS accreditation – flexible work schedules as part of a fatigue management system

There are no prescribed work and rest hours under AFM. Operators can propose their own work and rest hours instead of complying with hours prescribed by the HVNL. To be AFM accredited, operators must demonstrate to the NHVR that they understand the risks associated with the proposed hours and will take steps to off-set these risks. This is done through a safety case which the Regulator approves. Accredited operators also need to comply with the following 10 standards – scheduling and rostering; readiness for duty, fatigue knowledge and awareness; responsibilities; internal review; records and documentation; health; workplace conditions; management practices; operating limits.

These standards are developed by the NHVR and approved by Ministers. Operators are regularly audited to check compliance with these standards. Record keeping requirements still apply and work diaries are used to check compliance with outer limits.

Source: NHVR

8.2 Reforms to the framework

8.2.1 What is the problem?

As discussed in section 3.4 fatigue management under the HVNL is highly prescriptive. The inputs or specific actions that parties must take are specified in detail rather than the safety outcomes they must deliver. In addition to hours of work and rest, the HVNL prescribes both how to count time, how to record time, and how rest breaks should be taken. For many operators, prescription may be desirable in principle as it provides a level of certainty around what they are required to do. However, the specific requirements in the HVNL are complex and highly administrative.

This is possibly the result of an attempt to draft the requirements in a way that takes account for the diversity of heavy vehicle operations in Australia. It should be noted that the HVNL fatigue provisions do not expressly recognise that:

- heavy vehicle use and freight types have different operating requirements
- the driving task and operating environment differs between urban, regional and remote domains
- operators have a different compliance capacity.

The same rules are applied to all operators regardless of their operational needs and risk profiles. That said, operators can still seek flexibility in their scheduling and rostering through becoming accredited under tier 2 (BFM) or tier 3 (AFM) but limitations with these arrangements remain.

More detail on the issues raised with the various tiers are provided in the headed sections that follow.

As a final note the HVNL fatigue management requirements do not apply in Western Australia or the Northern Territory. These inconsistencies could further complicate the compliance and enforcement environment for interstate operations in relation to fatigue. For example, for journeys between jurisdictions that do and don't participate, operators must comply with both jurisdictions' requirements. They also must maintain records under the HVNL, even when they aren't in participating jurisdictions. The extent to which this is a problem is unclear, as for example, in the Northern Territory an operator can continue to manage driver fatigue in accordance with the option they operate under in the HVNL.

The tier 1 standard hours are complex and sometime difficult to comply with

The tier 1 (standard hours) work and rest requirements are complex, particularly in respect to the rules for counting time and overlapping 24-hour periods, and understandably confuse many drivers (discussed further in 8.2.4). This complexity can mean that many heavy vehicle drivers find it difficult to know which work and rest requirements apply or how these are applied.

The primary source of confusion relates to counting time. There can be multiple major rest breaks in a 24-hour period. Some drivers assume that they can drive again after the second major rest break, however this is not the case if they have reached the maximum work limit for the past 24 hours. This misunderstanding can result in a critical risk breach.

This tier is also inflexible, particularly in relation to short rest break requirements. Short rest breaks are constrained by the definitions of "rest" and "rest time" under the HVNL, meaning this must be time that is "not work".⁹⁸ As such drivers are not allowed to undertake basic safety checks during this time. Furthermore, these requirements do not explicitly allow drivers to take a break when they are feeling tired and where there is a suitable place to stop.

The lack of flexibility in prescriptive work and rest requirements also creates other issues. For instance, due to unforeseen circumstances, drivers can find themselves forced to stop and rest in situations that do not allow them to get restorative rest (e.g., running out of hours 30 mins from home). In addition, it has been recognised that there is a shortage of suitable rest stops across Australia for trucks which can make complying with prescriptive limits difficult.⁹⁹

Lack of flexibility

Tier 2 and 3 are an attempt to account for the diversity of operations in the fatigue provisions of the HVNL. Tier 2 (BFM) is still prescriptive but allows for higher fatigue risk activities. However, it does not

⁹⁸ Section 221 of the HVNL.

⁹⁹ *ibid*, p. 40.

encourage operators to take a significantly more active approach to managing fatigue nor is its linked to the risk profile of an operator.

Tier 3 (AFM), in particular, was intended to provide more flexibility, but it still doesn't allow operators to take full responsibility for managing the risks associated with their operations and they must still use specific risk controls and compliance methods such as work diaries. Sophisticated fatigue management systems based on the use of technology are not currently recognised under AFM and the NHVR is limited in the exemptions it can give to accredited operators.

Stakeholder concerns remain about whether these arrangements sufficiently accommodate the needs of sectors of the industry with specific circumstances. For instance, the practical needs of particular freight may undermine an operator's ability to meet fatigue management requirements. For example, transport of livestock, dangerous goods and fresh produce have unique operational requirements that are not well accommodated.

8.2.2 Making standard hours less complex (Option 8.1)

This option (and its associated sub options) involve four key changes aimed at reducing complexity and enabling greater flexibility:

- The complexity of counting work and rest hours would be reduced (see sections below for two sub-options relating to this).
- More flexibility would be provided for rest breaks by allowing a:
 - 1-hour transfer: This would allow a driver to work for up to 13 hours in a 24-hour period, ONCE, in a 7-day period. The maximum work time of 72-hour in a 7-day period would still apply.
 - split rest break: This would allow drivers to split a 7-hour continuous rest break ONCE in a 7-day period. A 7-hour continuous rest break could be replaced with a work/rest pattern of 2 hours rest, 1 hour driving and then another 6 hours rest. The 72-hour work time cap would still apply.
- Alternative schedules could be approved by the regulator –The NHVR would be able to approve a work and rest schedule provided it is substantially equivalent or lower risk than prescribed hours.¹⁰⁰ Cumulative on-duty/work time limits and rest requirements would still apply, however, how these could be spread across 7 days (or 14-day cycles if required) and varied to suit particular operational requirements. Schedules could be developed by the NHVR or by industry and put to the NHVR for approval. The schedules could be provided by notice or permit (or equivalents under the new HVNL). There would still need to be clear and robust decision criteria/outer limits in the HVNL to ensure the schedules are of an equivalent or lower risk than the prescribed rules.

As flagged in the dot points above two possible sub options that relate to the approach taken to counting and classifying hours of work and rest have been considered. Please note that slight variation on these sub-options are likely to exist and the specific form hasn't been locked down. The NTC are happy to take submission on these alternatives.

Option 8.1(a): Making counting time simpler

This option changes arrangements for standard hours drivers so that:

- The maximum continuous driving time would be shorter (4 hours vs the current 5 hours 15 mins).
- Short rest breaks would not be prescribed.
- Night rest breaks would not be prescribed.

¹⁰⁰ This option could also specify that the regulator is able to charge for approving deemed equivalent schedules such that operators would only have an incentive to seek regulatory approval up to the point where the benefits exceed the costs.

Maximum work and minimum rest requirements for the 24-hour period and the 7-day period would remain the same, that is:

- Maximum work of 12 hours in a 24-hour period. This is because of evidence of the substantial increase in drowsiness for shifts longer than this period.¹⁰¹
- Minimum rest time of 12 hours in a 24-hour period, including one continuous rest break of at least 7 hours.
- The 24-hour period begins from the end of the continuous 7-hour rest break, but cannot be reset until the driver has had a total of 12 hours rest.
- Maximum work over 7 days is 72 hours.
- One continuous rest break of 24 hours in 7 days would be required.

For clarity the box below compares option 8.1(a) with current tier 1 requirements.

Box 22: Comparison of Option 8.1(a) with current prescribed work and rest requirements

- The maximum continuous drive time is shorter (4 hours vs 5 hours 15 mins).
- There would be no prescribed short rest breaks.
- There would be no specific night rest break requirements or 14-day cycle.
- More driver discretion opportunities since the 1-hour transfer & split rest opportunities do not exist under the current prescribed rules.
- No change to maximum work and minimum rest requirements for the 24-hour and 7-day period.

Option 8.1(b): Reclassifying time using a “rest reference”

Under this option, time would be reclassified to support simpler work and rest requirements that better align with scientific evidence — specifically that adequate sleep is the only cure for fatigue. There would be four classifications of time:

- Rest opportunity: continuous time not working and not on duty, with a reasonable opportunity to sleep.
- Driving: the task of driving a heavy vehicle.
- On duty: any time working (including driving and breaks from driving).
- Off-duty: any time not working (including rest opportunities).

This introduces the concept *on duty*, which is any time that a driver is working including driving and undertaking *on-duty* work tasks. It also includes breaks from driving, which is time away from driving the vehicle but is not a rest opportunity, i.e., the driver would still be on-duty during a break from driving. Time would be counted based on the time spent doing a specific task (resting, working or driving).

¹⁰¹ Evidence from the Alertness CRC suggests that shifts longer than 12 hours are associated with at least a twofold increase in drowsiness events. This confirms a substantial body of earlier research (source: Cooperative Research Centre for Alertness, Safety and Productivity, 2019, *Heavy Vehicle Driver Fatigue Project - Final project report.*)

Box 23: Simplified work and rest limits under option 8.1b

Work time and driving could now be linked to rest opportunity rather than a 24-hour period. Therefore, the work and rest limits could be simplified. The proposed rules that would apply under this sub-option are as follows:

- four-hours maximum continuous driving before a driver must take a break from driving
- minimum rest opportunity of 8 hours
- a driver cannot drive for a cumulative time of more than 12 hours from the end of the most recent 8-hour rest opportunity
- a driver cannot drive after 14 hours elapsed from the end of the most recent 8-hour rest opportunity
- there is a limit of 84 hours *on duty* per week, which can include 72 hours driving and 12 hours of on-duty work related tasks
- a driver cannot drive if they have accumulated 72 hours driving time since the end of the most recent 24-hr rest opportunity
- a driver must accumulate 84 hours off-duty in a 7-day period, including one 24-hour continuous rest opportunity (the 7-day period begins from the most recent 24h+ rest opportunity).

This option would also give rest-break flexibility for unforeseen circumstances.

For clarity the box below compares option 8.1(b) with current tier 1 requirements.

Box 24: Comparison of option 8.1(b) with current prescribed work and rest requirements

- The maximum continuous drive time is shorter (4 hours vs 5 hours 15 mins)
- It moves away from the 24-hour period constraint – a rest opportunity of 8+ continuous hours effectively resets allowable drive time
- The rules are focused on maximum driving from a continuous rest opportunity. Maximum daily drive time is potentially the same standard hours which allow 12 hours work time (all of which could be driving). However, there is no restriction on work time in a 24-hour period
- The minimum rest opportunity is longer than the minimum continuous rest requirements under standard hours (8 hours vs 7 hours)
- It uses the concept of a break from driving instead of short rest breaks. There is no specified length of the break, or restrictions on what the driver can do in their break from driving
- Does not have specific night rest break requirements as per the standard hours 14-day cycle
- More driver discretion opportunities (1-hour transfer & split rest opportunities do not exist under standard hours)
- Maximum drive time is the same over a 7-day period (72 hours), however total allowable on-duty time would be longer (84 hours). Breaks from driving would be included in on-duty time.

Source: NTC

8.2.3 Revision to Tier 2 and 3 of fatigue management framework (Option 8.2)

The purpose of this option is to establish a new three-tiered fatigue management framework with clear points of delineation and increasing flexibility moving up each tier. The intention is to create a framework with options reflecting the diversity of operators in heavy vehicle transport. For operators who prefer the certainty of prescriptive hours a base level **standard hours** tier will remain.¹⁰² For operators that want more flexibility a second **performance-based tier** will be established. For highly sophisticated operators with data-driven safety systems a third, **safety assurance** tier will be established.

Under this option the NHVAS (or some form of assurance regime) would continue and operators would be able to choose which tier to comply with based on what best suits their operations and represents the best value for their business.

This option lays out a framework with three tiers, but the material changes from the base case relate to tiers 2 and 3. Options to change the mechanics of tier 1 standard hours were canvassed in option 8.1 above.

A detailed summary of each tier is contained in Box 25: below.

Box 25: Indicative changes to Tier 2 and Tier 3 requirements under option 8.2

Tier 2 – Performance based

Tier 2 would be a **performance-based tier**. Work and rest limits and strict record keeping rules would not be prescribed, but the law would specify performance-based standards for operators to meet. This tier may be supported by an assurance regime to give the Regulator confidence that fatigue risks are being managed and/or may make use of fatigue monitoring technology.

This option would be similar to aspects of BFM and AFM in the base case. Operators would either seek to have their own schedules and risk management approved as part of a fatigue management system (FMS), whether set in standards or through an assurance framework, or use alternative schedules developed by the regulator to be equivalent risk to standard hours (potentially considering remote area issues). This option may require fatigue monitoring technology for operators seeking longer schedules (more than 14 hours of driving). The law would not prescribe the type of technology - an operator would be able to choose to use fatigue monitoring technology to demonstrate compliance.

The NHVR may develop tools and guidance materials (as they have for the current AFM scheme), and a COP for specific industries (like livestock transporters).

Tier 3 – Safety assurance

Tier 3 would be a **safety assurance tier** for highly sophisticated operators with data-driven safety management systems (SMS). No approved work and rest schedule would be required, though a schedule may well be a part of the approved risk management approach. Assurance framework controls would apply, with a balance of enforcement through auditing and incident reporting.

Similar to the aviation approach, the HVNL would outline high-level, outcome-based requirements for a fatigue risk management system (FRMS) which could include:

- Policy and objectives and related documentation.

¹⁰² Note that options to simplify complex counting time and record keeping requirements for standard hours operators are considered in option 8.1.

- Practical operating procedures.
- Hazard identification, risk assessment and mitigation procedures.
- Safety assurance procedures.
- Safety promotion procedures.
- Change management procedures.

The FRMS would most likely need to use technology and be data driven. To approve the FRMS the NHVR would need to be satisfied it is a safe, integrated, and data-driven system that will continuously and effectively monitor and manage fatigue-related safety risks using scientific principles and knowledge, and operational experience.

8.3 Reforms that expand the scope of fatigue provisions

8.3.1 What is the problem?

Fatigue management requirements under the HVNL only apply to FRHVs. FRHV is defined as a vehicle (or vehicle combination) with a GVM of more than 12 tonnes.¹⁰³ These vehicles are primarily focused on long-haul interstate journeys. In addition, while work diaries are the primary tool for checking compliance, they are not required for 'local work'— that is, vehicles operating within 100 km of their base.¹⁰⁴ This seems to implicitly presume that long-haul operations have a higher fatigue risk. As a result, the HVNL does not address fatigue risks associated with smaller heavy vehicles or those undertaking localised trips.¹⁰⁵

While the potential consequences of a crash may be higher for larger vehicles, the likelihood of a fatigue related crash is not directly related to the size of the heavy vehicle. It is related to the driver and their work and rest patterns. Research comparing the fatigue experience for drivers of short-haul lighter vehicles and long-haul heavier vehicles found that the effects of fatigue while driving were very similar.¹⁰⁶

Under the current HVNL, only part of a driver's work is considered under the fatigue management requirements (i.e., work associated with a FRHV). Any work that is not associated with driving a FRHV is considered 'rest' for the purposes of the law even if the driver has, in this period, been driving another smaller vehicle or completing other work duties.

¹⁰³ Section 7 of the HVNL.

¹⁰⁴ Section 291 of the HVNL.

¹⁰⁵ Where the journey is within 100km of the origin.

¹⁰⁶ Friswell, R & Williamson, A, 2013, *Comparison of the fatigue experiences of short haul light and long distance heavy vehicle drivers*, vol. 57, Safety Science, pp. 203-213.

8.3.2 Widen the scope of fatigue requirements (Option 8.3)

This option lays out three sub-options for changing who the HVNL fatigue provisions should cover. As discussed, fatigue requirements under the HVNL only apply to drivers of FRHVs. The objective is to deliver a more risk-based approach to regulating fatigue.

Option 8.3(a): Target requirements at high-risk category drivers

Under this option fatigue management requirements would apply to drivers that are at higher risk of fatigue due to the nature of their work. Evidence shows that long hours on task, night driving and inadequate sleep opportunity across an extended period all increase a driver's level of fatigue risk.¹⁰⁷

Based on these contributing factors, the HVNL would be amended so that fatigue requirements apply to *fatigue-regulated drivers*, defined as drivers who work:

- more than 60 hours per week; or
- more than once per week, working more than 10 hours out of any 24-hour period; or
- more than once per week, during the period from midnight to 5.00am.

These criteria are based on the definition of a commercial driver under the fatigue management regime in Western Australia.¹⁰⁸ The definition of work would be tied to the method of counting time for prescriptive work and rest requirements.

A mechanism to verify which drivers the requirements do and don't apply to would be required; however, the onus would be on drivers and operators to prove they are not a fatigue-regulated driver. The law would not prescribe how this should be demonstrated, leaving drivers and operators to use methods suited to their business. The law could, however, potentially require information to be provided within a certain timeframe. Drivers or operators that do meet the definition could also self-nominate with the NHVR. This could link to basic enrolment requirements (see section 7.2.2) if this option is pursued.

Option 8.3(b): Widen the scope of fatigue regulated heavy vehicles

Here fatigue requirements would continue to apply to the vehicle (as opposed to the driver) but the vehicles captured would be expanded to include either:

- all vehicles with GVM greater than 4.5 tonnes (ie. all heavy vehicles as per the HVNL definition)¹⁰⁹; or
- all vehicles with GVM greater than 8 tonnes. This would sit in line with HV licensing categories (medium or heavy rigid and above).

This option will capture heavy vehicles that are undertaking short haul operations that are currently not required to comply with the HVNL's fatigue management requirements due to their vehicle size.

Option 8.3(c): A combination of specific drivers and specific vehicles

This option combines options 8.1(a) and 8.1(b), establishing a concept of 'fatigue regulated driver' (per option 8.1(a)) while also confining fatigue requirements to certain heavy vehicles (as per the sub-options in 8.1(b)). The intention is to manage fatigue risk by attaching the fatigue management requirements to

¹⁰⁷ Cooperative Research Centre for Alertness, Safety and Productivity, 2019, *Heavy Vehicle Driver Fatigue Project - Final project report*.

¹⁰⁸ Government of Western Australia Department of Mines, Industry Regulation and Safety, 2019, *Code of Practice Fatigue Management for Commercial Vehicle Drivers 2019*.

¹⁰⁹ This is based on evidence contained in Jones, C.B., Dorrian, J., Rajaratnam, S.M.W. & Dawson, D. (2005) Working hours regulations and fatigue in transportation: a comparative analysis.

the fatigue risk of the driver while potentially minimising the regulatory burden for the lighter end of the heavy vehicle fleet.

One way to achieve this may be to include specific heavy vehicle licence categories (eg. heavy rigid, heavy combination, multi-combination) in the definition of drivers. The other elements would be as per option 8.1(a), although it would be necessary to clarify whether work time covered work associated with all heavy vehicles or just work undertaken using specific types of heavy vehicles (e.g., heavy rigids to multi-combinations).

An alternative approach would be to attach the criteria in the driver definition proposed in option 8.1(a) to FRHVs only (e.g., the criteria would become a driver who works more than 60 hours a week in a FRHV).

8.4 Reforms to record keeping

8.4.1 What is the problem?

Highly administrative

At present, work diaries are the primary tool for checking compliance with work and rest requirements. The HVNL prescribes what information a driver needs to record and how it should be recorded.¹¹⁰ There are significant fines for not complying with the prescribed requirements. The law also prescribes record keeping requirements for operators about the information they must keep in relation to drivers of FRHVs.

A whole division of the HVNL is dedicated to work diary requirements. It outlines detailed requirements for obtaining, filling in and carrying a work diary, and there are even more work diary requirements in the regulations. Drivers must also follow very specific instructions for filling in the work diary itself.¹¹¹

The complexity of the work and rest requirements also means that the information that drivers need to record is highly detailed. There is a lot of scope for administrative error and often unintentional errors result in disproportionately punitive fines.¹¹² Having different requirements for local work and 100+km work can add another layer of complexity to record keeping for operators. The NTC has provided anecdotal examples of drivers who have been penalised because they had misunderstood the controls, e.g., around counting time.¹¹³

Difficulties detecting breaches

While work diaries are the main tool used to check compliance, here there is an incentive for drivers to fill in diaries to be compliant rather than represent actual work and rest hours.

As mentioned above work diaries are not required for drivers who work under standard hours and:

- operate within 100 kilometres of their base (local work), or
- operate within 160 kilometres of their base (primary producers).

This means that only a small portion of the heavy vehicle drivers are being assessed for compliance with work and rest hours. The NTC has noted that drivers of as few as 22 per cent of all heavy vehicles are likely to be assessed for compliance with work and rest requirements (see **Figure 14**).

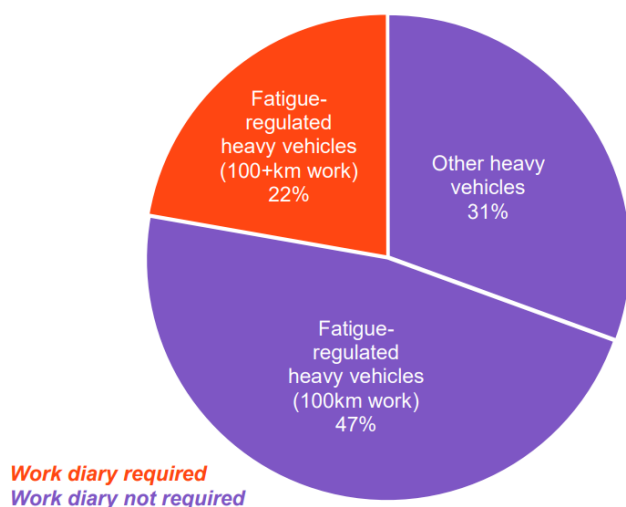
¹¹⁰ Note that under the HVNL, work diary requirements do not apply to drivers undertaking local work only (100km).

¹¹¹ Section 301 of the HVNL.

¹¹² For examples see National Transport Commission, 2019c, *Effective fatigue management*, p. 42.

¹¹³ National Transport Commission, 2019c, *Effective fatigue management*, p. 38.

Figure 14: Proportion of vehicles that require a work diary to be used



Source: National Transport Commission, 2019c, *Effective fatigue management*, p. 31.

8.4.2 Reforms to make record-keeping simpler and risk based (Option 8.4)

Under this option, the HVNL would contain an obligation to demonstrate compliance with the prescribed work and rest requirements. This obligation would apply to all operators working under tier 1 prescriptive rules, including the regulator specified equivalent schedules.

This option could remove or simplify prescriptive record keeping requirements and offences for simple administrative breaches for work diaries. Record-keeping would still be required and work diaries could still be used to check compliance with schedules. Three key principles would apply if *prescriptive* work diaries were no longer required:

- operators must keep a record of the driver’s work and rest time. The record must be clear enough to demonstrate compliance with the relevant schedule
- records must be kept in a clear and systematic manner for a period of three years
- records must be provided to the NHVR or police on request.

If the HVNL did not prescribe how the information should be kept the NHVR may develop templates and guidance. As part of this option operators would be able to use electronic record keeping as a method of compliance. Drivers would be required to provide operators with the information they need but would not necessarily be required to fill in a work diary.

In effect this option would remove the distinction between local work and 100+km work. Roadside enforcement would no longer be used for record-keeping offences. While police and other authorised officers would still have the power to ground a driver immediately for a fatigue risk, they could no longer check compliance with work and rest requirements roadside. They would however have the power to flag an operator to be audited by the NHVR.

8.4.3 Mandate electronic records (Option 8.5)

Under this option, all fatigue-regulated operators/drivers operating under the Tier 1 prescriptive rules would be required to use an EWD to record information required to demonstrate compliance with the work and rest rules. Operators in Tier 2 may choose to use an EWD as their primary method for

demonstrating compliance with any work and rest rules, however, they would also be able to choose other compliance methods (such as fatigue monitoring technology).

Any EWD used by an operator would need to be approved as fit for purpose. This may be done by the NHVR or may be outsourced to a technology certifier (based on performance requirements specified by the NHVR). If roadside enforcement remains the primary tool for checking compliance with work and rest rules, then EWD information would need to be made available to roadside authorities during checks. Alternatively, data could be provided to the NHVR for back of house compliance checks if there is a move away from roadside enforcement.

8.5 Reforms associated with driver health and fitness for duty

8.5.1 What is the problem?

The current HVNL provisions do not adequately address the level of fitness, health and wellbeing of drivers. Driver health is known to increase the risk of driver fatigue. The NTC, citing advice from the NHVR, noted that crash data from the Department of Transport and Main Roads indicates that 85 per cent of heavy vehicle crashes involving fatigue occur within the first four hours of the journey.¹¹⁴ This suggests that many drivers may not have been well rested or fit for work at the start of their shift.

That said, further data and evidence is sought from stakeholders on the extent to which driver health and fitness for duty is a significant contributing factor to the risk of heavy vehicle crashes.

8.5.2 National health assessment standard (Option 8.6)

This option would establish:

- A heavy vehicle driver national health assessment standard. This will apply a commercial Fitness to Drive medical standard under the Australian Assessing Fitness to Drive (AFTD) guidelines, and the sleep disorder assessment and management standard used in the Rail Safety Worker National Standard for Health Assessment.¹¹⁵
- A requirement for all heavy vehicle drivers to undertake **periodic and triggered** health assessments against this standard and demonstrated that they have been assessed and this assessment remains current.
- As part of meeting safety duty obligations operators would also be responsible for ensuring their drivers have been assessed and do what is reasonably practicable to facilitate further assessments when required (see Box 26: for further details).

Box 26: Periodic and triggered health assessment

Periodic health assessment

Periodic health assessment could work in one of two ways:

- A: Consistent with the approach outlined in BFM Standards (Standard 2 'Fitness for duty', clause 2.1), the AFM Standards (Standard 7 'Health', clause 7.1) and Trucksafe. This would require a periodic health assessment:
 - every three years for drivers aged 49 years and under; and

¹¹⁴ National Transport Commission, 2019c, *Effective fatigue management*, pp. 31-32.

¹¹⁵ National Transport Commission, 2017b, *National Standard for Health Assessment of Rail Safety Workers*, p. 144 (figure 24).

- annually for drivers aged 50 years and above.
- B: Consistent with the Rail Safety National Health Standard:
 - Every 5 years to the age of 50, then
 - Every 2 years to the age of 60, then
 - Every year.

Triggered health assessments (general)

In addition to periodic health assessments, additional assessments of drivers would be required in the event of certain triggers which would include:

- general concerns about the worker's health (such as observed fatigue events at work)
- requirements for more frequent monitoring of a medical condition; or
- requirement for further investigation to diagnose a medical condition.

The AFTD guidelines set out risk factors for blackouts, cardiovascular conditions, diabetes mellitus, loss of hearing and deafness, musculoskeletal, neurological, psychiatric, sleep, substance misuse and vision and eye conditions. These risks may trigger the need for more regular health assessments.

A medical practitioner may determine whether this is necessary, but drivers and operators would also have a responsibility to be conscious of and identify certain risk factors that may trigger the need for further assessment. This would form part of their safety duty obligations, e.g., it would require parties to be alert to indicators of ill health such as recurrent absenteeism, repeated incidents and recent traumatic events.

Triggered health assessment for sleep disorders

Drivers would first be tested for sleep disorders under AFTD and those that display risk factors would be referred for a further health assessment applying the *Sleep disorder assessment and management for Safety Critical Workers (Category 1 and 2)* in the Rail Safety Worker Health Assessment Standard. This triggered health assessment requires a diagnostic sleep study (also known as Polysomnography) to determine whether the driver has sleep apnoea or some other sleep disorder.

8.5.3 Right to stop if deemed not fit for duty (Option 8.7)

This option would establish a right for drivers to stop driving at the soonest safe opportunity if they are deemed not fit for duty. This option would not establish an offence, but it would link in with primary duty obligations on the CoR parties not to prevent a driver from stopping if they are deemed not fit for duty. It would also link in with any safety duty applied to drivers.

A definition of 'fit for duty' (or equivalent) would be established in the HVNL. This would include both not being impaired by fatigue or a medical illness that could have an immediate effect on the driver's ability to do the driving task safely. This option would then establish a non-exhaustive list (potentially in standards or a COP) of circumstances in which a driver could deem themselves not fit for duty. The list would include things like:

- having less than 5 hours sleep during a 24-hour period
- having less than 12 hours of sleep during a 48-hour period

- impaired concentration due to a medical condition (e.g. a cold, headache, or period of mental stress).

This option would also establish a power for authorised officers to direct drivers to stop and rest at the soonest possible opportunity if they observe a driver is not fit for duty.

8.5.4 Driver self-assessment and declaration of fitness to work (Option 8.8)

This option would establish a requirement on drivers to self-assess and declare their fitness to work at the start of a shift, and an obligation to ensure they do not continue driving if their fitness deteriorates to an unacceptable level during the course of a shift. At the start of the shift drivers would fill out a driver health checklist and sign-off that they are fit to drive. The checklist could include questions like:

- Have you had enough quality rest such that you are not fatigued?
- Are you affected by alcohol and could you have a blood alcohol concentration of more than 0.0?
- Do you have any temporary medical conditions? Is this temporary medical condition serious enough to affect your fitness to drive? For example:
 - The common cold
 - A respiratory condition
 - A gastrointestinal condition
 - Migraines or headaches
 - Nausea

This option could be implemented as a safety standard or a COP. The intention of this option is to compel drivers to take responsibility for their own fitness for duty. This option would not establish an offence for making a false declaration of fitness for duty. However, if it is clear a driver has falsely declared they are fit for duty, this may be used as evidence in a prosecution for breach of a driver safety duty. This option might also require operators to check a driver's declaration of fitness for work, or at the very least have practices in place to ensure drivers do not drive if they do not declare themselves fit.

8.6 Other features of the HVNL that may be limiting a move towards a more risk-based approach to fatigue management.

The HVNL is heavily focused on work diaries and demonstrating compliance with work and rest hours, rather than the outcome of actually preventing drivers from driving fatigued. It is generally easier to assess compliance with prescriptive rules. This may have led drivers, operators and the regulator and enforcement agencies to focus on these prescriptive work hour rules to the exclusion of the duty on drivers and other responsible persons.

The following features of the current HVNL may be limiting a move towards a more risk-based approach to fatigue management.

- **Aspects of NHVAS accreditation:** Stakeholders have suggested that accreditation under the AFM module in particular can be expensive. While the NHVR has streamlined the accreditation process over the last 18 months and developed tools and guidelines, it still remains inaccessible to a wide range of operators. Further, without exemptions from other prescriptive requirements such as record keeping, the benefits of accreditation to operators can be limited. Broader options for addressing this problem are considered in chapter 7.
- **Absence of incentives for or recognition of innovative fatigue management or technology:** Prescriptive work hour controls do not recognise or enable innovative ways to manage fatigue. This could mean that other potentially more efficient options for managing fatigue risk are not being given

proper consideration. Some operators have more capacity and are better placed to identify, understand and manage the fatigue risks of their operations (see, for example Box 27:). However, the current prescriptive requirements and the NHVAS models do not allow them to take on full responsibility for managing their fatigue risk in a way that suits their operations. The most notable limitation is that the role of fatigue monitoring technology is not currently recognised. For instance, the 'Seeing Machines' technology tracks fatigue and distraction in real time by monitoring a driver's alertness through eye movements. When there is a fatigue event, the system sounds an alarm and causes the driver's seat to vibrate. A notice is also sent to operations personnel who can contact the driver and assess his/her current state. This may give operators a more flexible, outcome-oriented approach to managing fatigue risk more effectively than by only relying on detailed manual diary entry and scheduling. Despite this, drivers still have to work within the prescriptive work and rest requirements and complete a work diary. Broader options for utilising technology for addressing this problem are considered in chapter 6.

Box 27: Fatigue monitoring technology can improve road safety outcomes

Operator Ron Finemore Transport has installed fatigue and driver distraction monitoring technology in its fleet and has seen an improvement in road safety outcomes as a direct result. The technology gives the company the opportunity to identify and respond to driver fatigue in real time. It also gives the business a better understanding of their fatigue problems and how to address them. Although the company is using an innovative system that results in better outcomes in managing fatigue, drivers still need to comply with work and rest hours and complete a work diary. The company's approach and policies provide safeguards that the law does not

Source: National Transport Commission, 2019c, Effective fatigue management.

8.7 Impact assessment

8.7.1 Simplify rules for counting time using a daily reference (Option 8.1(a))

Benefits

The primary outcome of this option is that Tier 1 work and rest requirements become simpler and easier to understand and apply. This has a range of potential benefits:

- it would increase compliance with the prescriptive rules, leading to a reduction in the risk of heavy vehicle crashes
- it would reduce compliance costs for operators by reducing training requirements for drivers and the risk of incurring fines due to non-compliance with the prescriptive rules. It could also enable the work diary to be simplified and so would reduce the administrative costs associated with keeping these records and
- it would reduce the regulatory administration costs since it would be easier for the regulator and police to check whether an operator has complied with the prescriptive rules.

This option would also provide more scheduling flexibility to operators, allowing them to overcome issues such as the lack of rest stops or constraining operations like market deliveries that need to start early in the morning. This added flexibility may help to increase operational efficiency for operators.

One further point to consider is that this option is still tied to the 24-hr period, so there is still the potential for confusion around overlapping 24-hour periods. This may temper some of the benefits compared to

option 8.1b, which involves revising the Tier 1 prescriptive rules around a rest reference (and is discussed further in the following section).

This option also allows a way for operators to vary from the prescriptive work and rest requirements in Tier 1 to adopt a schedule that is better suited to their operational requirements without having to incur the additional costs associated with moving to Tiers 2 or 3. Greater scheduling flexibility will help to reduce compliance costs and improve operational efficiency for industry.

In addition to addressing the specific problems identified this option is also expected to positively affecting road safety by virtue of how it addresses key fatigue safety risk elements relative to the current tier 1 standards hours. To assist stakeholders understanding the table below summarises the treatment of Option 8.1(a) and 8.1(b).

Table 6: Relative treatment of key safety risks relative to the current tier 1 standard hours

Fatigue safety risk	standard hours	Option 8.1(a)	Option 8.1(b)
Minimum sleep opportunity	partially considered	better	better+
Time of day (circadian) effects	partially considered	not considered	not considered
Avoid cumulative sleep deficits	considered	considered	considered
Limit time on task	considered	better	better+

Source: NTC

Costs

There will be administration costs for industry to ensure compliance with the new tier 1 rules, or to seek regulatory approval for alternative schedules, however, we expect these to be outweighed by the cost savings identified above.

The option will also require the development and application of an appropriate compliance monitoring regime to provide the NHVR with the required certainty that operators are complying with the prescriptive rules. The NHVR will also incur additional costs to review operator proposed schedules or to developed deemed equivalent schedule and examine whether these are of an equivalent or lower risk than the prescribed rules. The impact on ongoing costs for the NHVR is less certain as it would depend on the number of operators that are likely to avail themselves of this option, which in turn is likely to depend on which (if any) of the other options are adopted. It is worth noting that if the regulator is able to charge for approving deemed equivalent schedules then operators would only have an incentive to seek regulator approval up to the point where the benefits exceed the costs to society.

8.7.2 Simplified standard hours using a rest reference (Option 8.1(b))

Benefits

This option shares the same type of benefits as option 8.1a, but arguably the magnitude of these benefits is larger. The primary advantage of this option is that it moves away from the 24-hour period. This is likely to make the rules easier to understand and apply, which is likely to reduce compliance costs and reduce the risk of heavy vehicle crashes.

In addition, under this option, the prescriptive rules would become more risk-based, emphasising rest as the cure for fatigue by directly linking maximum drive time to the continuous rest opportunity. The added flexibility means that drivers are able to stop when possible (provided they do not exceed 4 hours of continuous driving) and will not be tied into work patterns that are not conducive to restorative rest. The added discretion means that proportionately more of the onus for risk management is placed on to operators within the industry that are best placed to manage and control these risks.

Costs

Changing the way time is classified may require modifications to existing fatigue management systems including scheduling and rostering tools. This will impose one-off costs on industry, but we expect these to be outweighed by the cost savings identified above.

As there is no restriction on daily on-duty time, this option may result in longer daily shifts for drivers. It would be possible to be on-duty for up to 16 hours, although the maximum drive time would still be 12 hours and the driver could not drive beyond the 14-hour mark from coming on duty after their 8-hour continuous rest opportunity. Additionally, there are no restrictions on drivers stacking hours at the start of a 7-day period. Abuse of these factors may result in work patterns that are not conducive to restorative rest.

8.7.3 Revision to Tier 2 and 3 of fatigue management framework (Option 8.2)

Benefits

Improving the clarity and purpose of each fatigue management tier will make it easier for operators to choose a compliance option that best suits their operations.

- the new Tier 2 (performance based) will provide flexibility to operators by removing the application of prescriptive elements such as recording keeping requirements.
- the new Tier 3 (safety assurance) will similarly delivery greater flexibility to operators and also allow operators to take full responsibility for managing fatigue risk when they are well placed to do this.

The added flexibility provided under Tiers 2 and 3 are expected to deliver efficiency improvements for operators. Specifically, by reducing the need to comply with limiting prescriptive elements, operators will be able to adopt fatigue management practices that are better suited for their business model or which can be expected to deliver cost reductions or operational efficiency. This option makes it easier for different operators, with different operating requirements and compliance capacities, to propose fatigue management that work for them and will deliver outcomes in the most cost-effective way.

In addition, under this option, fatigue management becomes more output focused. It places more of the onus for risk management on to operators within the industry that are best placed to manage and control these risks. It provides operators with the flexibility to adopt fatigue management practices that are better targeted to the specific fatigue risks that arise in their operators. This transition towards more risk-based regulation is expected to reduce the number of heavy vehicle crashes in the future.

Costs

There will be administrative costs for industry seeking to avail themselves of the new tiers, though we expect this would be outweighed by the expected efficiency savings, as otherwise operators would not make the transition. If the new tiers require fatigue monitoring technology to be used, then this will pose an additional cost on operators.

The cost implications for the NHVR are likely to be more substantial as this option reflects a change to the base case. There will be initial costs associated with updating and developing an appropriate assurance regime, relevant compliance and enforcement systems and capacity building both staff, and

ongoing compliance and enforcement costs. The flexibility provided to operators by this option will likely make the compliance task harder and more resource-intensive since fatigue management options will differ by operator.

Whether these costs will outweigh the benefits depends on the level of take-up by operators. Take-up may be easier for AFM operators but harder for others. Particularly for Tier 3, there may only be few operators with the capacity and resources to take on this level of risk management responsibility. The NHVR may choose to assist operators in taking up the higher tiers by, for instance, providing additional guidance material or providing transitional support. While this will impose additional costs on the NHVR, if the investment helps to increase take-up, it may also increase the relatively benefit that the option provides.

8.7.4 Widen the scope of fatigue requirements (Option 8.3)

This option has three alternatives:

- Option 8.3(a): establish a definition for 'fatigue regulated driver (or similar) which would capture driver who works more than 60 hrs/wk; or more than 10 hrs/24hr; or works during midnight to 5am.
- Option 8.3(b): to change the definition of 'fatigue-regulated heavy vehicle' to: (a) all HVs, i.e., vehicles with a GVM > 4.5t; or (b) HVs with a GVM > 8t
- Option 8.3(c): a combination of 8.3(a) and 8.3(b) e.g., the obligations under option 8.3(a) could be either tied to: (a) specific HV licence categories; or (b) FRHVs.

Benefits

All three sub-options would be expected to reduce the risk of heavy vehicle crashes, though for slightly different reasons.

Under options 8.3(a) and 8.3(c), the fatigue management requirements under the HVNL would be targeted at the risk factors that increase fatigue for drivers, including driving long hours and driving at night. This would facilitate a move to a risk-based approach and ensure that the fatigue management regime is focussed on drivers undertaking high risk activities.

Under option 8.3(b), fatigue management requirements would apply to a greater number of drivers and therefore a greater number of journeys. This means that it could apply to potentially high-risk activities that are not captured by the current framework because the size of the heavy vehicle falls below the weight threshold of 12t.

Options 8.3(a) and 8.3(c) may also give rise to regulatory cost savings, though the precise value of these cost savings are presently unclear. For instance, it may be the case that some larger heavy vehicles (i.e., greater than 12t) only undertake low risk activities. While these vehicles would be regulated under the existing framework (since they are above the weight threshold for FRHV) they would be exempted under the new framework (since they would not meet the driver requirements). This provides an explicit reduction in regulatory costs for these drivers. The uncertainty arises because it is currently unclear how many heavy vehicles (if any) would be captured by this example.

Costs

Under option 8.3(a), if a driver works less hours or outside the times specified in the HVNL, the onus will be on the driver to demonstrate to the NHVR that they do not meet the requirements. This will impose a one-off cost on unregulated drivers.

Option 8.3(a) may also increase compliance costs for smaller heavy vehicles (i.e., less than 12t) that undertake activities with a high risk of fatigue. While these vehicles would not be regulated under the existing framework (since they are below the weight threshold for FRHV) they would be captured under the new framework (since they would meet the driver requirements). It is possible the compliance costs may also act as a barrier to entry for small operators, potentially reducing competition and economic efficiency in the segments of the industry previously not required to comply with the fatigue requirements.

The impact of option 8.3(a) on the enforcement and compliance monitoring costs of the NHVR and jurisdictional authorities is unclear for two reasons:

- Costs associated with monitoring compliance can be presumed to be affected by the total number of heavy vehicles that are subject to regulation. However, it is currently not clear whether option 8.1(a) will increase or decrease the number of FRHVs as against the base case.
- The NHVR would be required to develop and apply a mechanism to verify which drivers meet the definition of a fatigue regulated driver in the HVNL. In general, this would be expected to introduce additional administrative costs for the NHVR. However, one factor to consider is whether drivers that do meet the definition of a fatigue-regulated driver are allowed to self-nominate with the NHVR. If this is permitted, then it would help to moderate some of this cost increase.

Under option 8.3(b), it is clearer that a greater number of heavy vehicles will be subject to regulation, increasing regulatory compliance costs for industry and enforcement and compliance monitoring costs for the NHVR. However, it may also increase the number of operators that seek accreditation and access to the higher tiers of the fatigue management framework. This would increase industry and government costs (though presumably any increase in industry costs would be offset by corresponding efficiency gains otherwise the operators would not seek accreditation). Similar to the base case, option 1(b) is based on a tenuous link between vehicle size and fatigue risk. Expanding the scope to a wider range of vehicles has the potential to capture low risk fatigue operations, introducing a regulatory burden for little safety benefit.

The cost impacts of option 8.3(c) are generally similar to that of option 8.3(a). One critical difference is that tying regulatory obligations to specific heavy vehicle licence categories may help to avoid a regulatory burden for the lighter end of the heavy vehicle fleet. Having said this, this option has the potential to be overly complex and difficult to both comply with and enforce. It could have a large administrative burden for operators trying to keep track of when the fatigue requirements apply.

8.7.5 Simplified record keeping (Option 8.4)

Benefits

This option has three key effects:

- it allows operators to develop their own system for recording a driver's total work and rest times;
- it removes the obligation on drivers to maintain a work diary; and
- it extends the record keeping obligations to all FRHVs (rather than those operating > 100km).

The option provides flexibility to operators by allowing them to develop a record keeping system that is consistent with their own business model. That is, removing the prescription around how records must be kept will allow operators to adopt alternative approaches to maintaining records if this is considered to be efficient and likely to give rise to a cost saving. This may be the case if operators are able to utilise the information and technology which they already have on hand to meet record keeping obligations.

The extent to which operators will benefit from this flexibility may differ by operator.

It is clear that sophisticated operators with existing comprehensive information systems would be better placed to leverage these existing systems to achieve cost efficiencies against the base case. However, some of the larger operators may be accredited under the AFM and may be exempt from the requirement to maintain a work diary. Naturally, those operators that are already not required to maintain a work diary would achieve little benefit from this option. The impact on smaller operators is also not clear. Some operators may not have the resources available to design their own record keeping system and will require clear instructions from the NHVR on how to comply with their record keeping obligations. One way this could be achieved would be for the NHVR to provide default templates, which may limit any potential efficiency gains for these smaller operators against the base case.

Under this option, heavy vehicle drivers would not be expressly required to maintain a work diary. However, they would be required to provide the necessary information to the operator in order for the operator to comply with record keeping requirements. This would mean drivers won't be subject to fines for administrative errors. This will also significantly reduce roadside enforcement checks relating to compliance with standard hours work and rest obligations. Instead, the NHVR would need to undertake targeted audits of operators. This would be consistent with a move towards more risk-based outcome focussed regulation which could be expected to improve safety outcomes and reduce the risk of heavy vehicle crashes.

Finally, the option would remove the concept of 'local work' and extend record keeping obligations to all FRHVs. At present, heavy vehicle drivers that exclusively drive in an area with a radius of less than 100 kilometres from the driver's base are exempted from the record keeping requirements under the HVNL. Removing this exemption means that a greater number of heavy vehicle drivers will be regulated. While this would be expected to improve safety outcomes and reduce the risk of heavy vehicle crashes, the precise benefit is unclear and will depend on the extent to which fatigue is a contributing factor to heavy vehicle crashes involving drivers undertaking local work.

The impact on government costs is also uncertain. On one hand, extending record keeping obligations to all FRHVs will make the compliance and enforcement task simpler for the NHVR. This is because it removes the need for the NHVR to identify whether a driver is exclusively undertaking local work. On the other hand, it also means that a greater number of FRHVs are regulated and subject to enforcement checks by the NHVR. The net impact will depend on whether any increase in regulatory costs associated with extending record keeping obligations to all FRHVs is likely to be offset by the costs saved through removing the local work requirement and by shifting to targeted audits of operators rather than roadside checks of drivers.

Costs

The main cost implications of this option are as follows:

- One-off administrative costs for the regulator to develop default record keeping templates.
- Administrative costs for operators associated with developing and maintaining their record keeping system. We expect these costs to be outweighed by the potential efficiency gains from adopting an alternative record keeping framework since otherwise the operator would be expected to adopt any default record keeping template provided by the NHVR or stick with the status quo.
- Compliance monitoring costs for the NHVR and compliance costs for operators associated with audits of record keeping practices. Although reduced roadside enforcement checks of work diaries would lead to reduced compliance costs for operators and reduced enforcement costs for police.

There would need to be a clear process for police and authorised officers to flag operators that require auditing. The NHVR will need time to plan a transition from an enforcement approach that relies heavily on roadside enforcement to one based on auditing. This may be more resource intensive as the NHVR

currently relies on police to share this enforcement task. There is also a risk that authorised officers may not review records because they are too difficult, or costly, to access.

8.7.6 Mandate electronic records (Option 8.5)

Benefits

The main benefit of an EWD is that it automatically records the required information to check compliance with work and rest requirements. This provides a range of benefits:

- It reduces the administrative burden on both drivers and operators and makes day-to-day operations faster and more efficient.
- The information on the driving task is more accurate than a written diary (though we understand there may be limitations in accurately recording work of a stationary nature), which reduces the risk of non-compliance with prescriptive rules and hence reduces the risk of crashes due to driver fatigue.
- Since the information is recorded in electronic format, it can be more readily analysed using computer software, making it substantially easier to check compliance with rules, reducing industry compliance costs and government enforcement costs.

It could be argued that if EWDs were likely to improve operational efficiency then most operators would have adopted them already. However, under the current fatigue management requirements, the benefit to operators and drivers from using EWDs may not have outweighed the cost. This is because the current fatigue management requirements are highly prescriptive, inflexible and liable to give rise to substantial penalties for even minor breaches. These factors may have discouraged the voluntary adoption of EWDs since use of EWDs may increase the risk of fines for minor recorded breaches of prescriptive work and rest requirements. Operators may therefore prefer written diaries, not because they provide limited value but simply because they are harder to verify.

At least for operators, whether benefits outweigh costs is perhaps contingent on the other options that are adopted. If the fatigue management regime remains quite rigid with a high level of prescription, then EWDs may increase the risk of fines for breaches of prescriptive rules and so increase compliance costs for operators. On the other hand, if the fatigue management framework becomes more flexible, then the risk of non-compliance (and hence fines) falls and the benefits of EWDs may be more readily realised.

Costs

This option imposes costs on both operators and the NHVR. Operators will be required to maintain the EWDs and potentially invest in other related infrastructure or related infrastructure. A certifier will also need to undertake checks to make sure that EWDs are fit for purpose and analyse recorded data to inform the compliance and enforcement function. A transition away from roadside checks to back of office checks would most likely require more NHVR resources.

8.7.7 Enhance assessment of a driver's fitness to work (Options 8.6 to 8.8)

In this section, we jointly consider the benefits and costs of three related options:

- Option 8.6: establishing a requirement to satisfy a national health assessment standard
- Option 8.7: establishing a right to stop if a driver is deemed not fit for duty
- Option 8.8: establishing a driver self-assessment and declaration of fitness to work

Benefits

The outcome of option 8.6 is to increase the frequency of driver health assessments. This will lead to earlier diagnosis of illness and/or identification of circumstances in which a driver is likely to be affected

by fatigue, which may affect their ability to drive safely. This will, in turn, reduce the risk of heavy vehicle crashes due to fatigue or medical conditions that are undiagnosed or have not been properly treated.

Option 8.7 is designed to empower a driver to stop if not fit for duty. The extent to which this will deliver safety benefits depends on the extent to which drivers are unable or unwilling to do this under the base case and the extent to which having this power will enable or encourage them to do so.

Option 8.8 is also designed to increase the likelihood that a driver self identifies as to whether or not they are fit for duty, however, options 8.7 and 8.8 rely on drivers providing accurate information or acting on their fatigue levels and fitness. Failure to do so will not give rise to an offence but may give rise to a breach of the safety duty under the HVNL. The impact of these options on heavy vehicle crashes is likely to be beneficial but is less certain since it is not clear whether the options provide sufficient incentive to drivers to tell the truth (or, conversely, sufficient disincentive to lie). One key reason for this is that it would appear to be exceedingly difficult for an operator or the NHVR to prove that a driver did not consider themselves fit for work at the time of making the relevant declaration (even if that was the case). As such, a driver may be inclined to provide a false declaration if doing otherwise may limit their ability to earn income.

Costs

The main difference between the sub-options is relation to the type of costs that will be incurred.

- Option 8.6 will likely impose the greatest costs on the NHVR since it requires the development and periodic review of an appropriate health standard. Industry would also face increased compliance costs from the requirement to undertake periodic and triggered health assessments.
- Option 8.7 will impose some costs on the NHVR if it decides to develop a standard or guideline that provides a list of circumstances in which a driver could deem themselves not fit for duty, though we expect these costs would be low. Industry would also face administrative costs in relation to implementing appropriate systems to take a driver's declaration of fitness.
- Option 8.8 is largely industry driven and will impose few (if any) costs on the NHVR. However, similar to option 8.7, industry will face administrative costs in relation to implementing appropriate systems to record a driver's declaration of fitness.

8.7.8 Summary of assessment

Option 8.1b which simplifies the standard hour by linking these to a rest reference is considered likely to be superior to option 8.1a. We note either of these options is likely to be beneficial and could be progressed in combination with option 8.2 or any of the sub options relating to the scope of the provisions.

Option 8.2 which revises the tier 2 and 3 of the existing fatigue management framework would appear to be of net benefit although the extent will depend primarily on take up.

There would appear to be merit in further investigating options 8.3a and 8.3c which redefine who is required to comply with the fatigue provisions of the HVNL. Both these options have the prospect of delivering net benefits depending on the extent to which they increase compliance costs for industry, the regulator and enforcement agencies.

The simplified record keeping arrangements proposed in option 8.4 and mandated electronic diaries proposed in option 8.5 may deliver net benefits. In respect to option 8.4, there remains uncertainty around whether there would be cost savings from a compliance regime that would increasingly focus on periodic and targeted operator audits rather than roadside enforcement checks of work diaries.

Options 8.7 and 8.8 would seem less certain to deliver road safety benefits largely because it unclear whether either option provides sufficient incentive for drivers to tell the truth about their level of fatigue or fitness for duty. Option 8.6 which establishes a requirement to satisfy a national health assessment standard would appear to be more likely to deliver road safety benefits, however, it is not clear whether these benefits would exceed the compliance costs.

Table 7: Impact of fatigue options

OPTION	INDUSTRY		GOVERNMENT AND COMMUNITY				
	Compliance costs (admin and or additional expenditure)	Improvements in operational efficiency	Government admin costs	Enforcement and compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
8.1a: Simplify rules for counting time	Avoided costs since requirements easier to understand, reducing driver training and fines for non-compliance. There would be some additional cost for some operators to develop and seek regulatory approval for alternative schedules.	Greater scheduling flexibility likely to improve operational efficiency	Costs associated with developing new systems and guidelines, as well as capacity building Some additional costs associated with developing or approving deemed equivalent schedules, although this is uncertain since not clear how many operators would use this option	Avoided costs since easier for NHVR to check compliance with tier 1 rules.		Greater compliance with tier 1 rules expected to improve road safety outcomes.	
8.1b: Simplified standard hour using a rest reference	Avoided costs since requirements easier to understand, reducing driver training and fines for non-compliance. There would be some additional cost for some operators to develop and seek regulatory approval for alternative schedules.	Greater scheduling flexibility likely to improve operational efficiency	Costs associated with developing new systems and guidelines, as well as capacity building. Some additional costs associated with developing or approving deemed equivalent schedules, although this is uncertain since not clear how many operators would use this option.	Avoided costs since easier for NHVR to check compliance with tier 1 rules.		Transition towards more risk-based regulation and greater compliance with tier 1 rules expected to improve road safety outcomes.	
8.2: Revision to Tier 2 and 3 of fatigue management framework	Cost to enter and comply with new tiers, including investing in fatigue monitoring technology if required (can be assumed to be outweighed by industry benefits)	Greater flexibility with compliance options is likely to improve operational efficiency	Costs associated with developing new systems and guidelines, as well as capacity building	Greater flexibility may make the compliance monitoring task hard and more resource intensive However, impact would depend on operator take up.		Transition towards more risk-based regulation expected to improve road safety outcomes	
8.3a: Apply fatigue requirements to high-risk category drivers	May increase costs for some small operators and decrease costs for some large ones		Uncertain since not clear how many HVs would be regulated and/or self-nominate	Uncertain since not clear how many HVs would be regulated and/or self-nominate		Targeting high risk activities would be expected to improve road safety outcomes	
8.3b: Widen the scope of regulated vehicles	More regulated HVs will increase costs		More regulated HVs will increase costs	More regulated HVs will increase costs		More HVs subject to regulation would be expected to improve road safety outcomes	

OPTION	INDUSTRY		GOVERNMENT AND COMMUNITY				
8.3c: Combination of specific drivers and specific vehicles	May decrease costs for some large operators but has the potential to be complex, which would raise compliance costs		Uncertain since not clear how many HVs would be regulated, though costs are likely less than 1(a)	Uncertain since not clear how many HVs would be regulated, though costs are likely less than 1(a)		Targeting high risk activities would be expected to improve road safety outcomes	
8.4: Simplified record keeping arrangement	Removal of prescriptions around record keeping and work diaries likely to reduce compliance costs as operators can still chose to stick with status quo	Less time spent by drivers on completing work diaries. This could be expected or improve operational efficiency	Administrative costs associated with developing templates and guidelines	Costs associated with operator audits expected to increase. Costs associated with roadside enforcement would decrease Overall impact is uncertain.		Risk-based outcomes focused regulation through operator audits expected to improve road safety outcomes	
8.5: Mandate electronic records	Mixed, upfront cost from installing EWDs, but then ongoing compliance checks are expected to be easier	Reduced administrative burden on drivers since no longer required to fill in work diaries	Costs with establishing EWD standards, data sharing guidelines, and periodic checks that EWDs are fit for purpose	Use of electronic data makes it easier to check compliance with work and rest requirements		Reduced risk of non-compliance with work and rest requirements expected to improve road safety outcomes	
8.6: National health assessment standard for drivers	Administrative costs associated with implementing the new requirements		Costs associated with developing new health standard	Additional compliance and enforcement checks		Increased frequency of health checks expected to improve road safety outcomes	
8.7: Right to stop if a driver is deemed not fit for duty	Administrative costs associated with implementing the new requirements		Costs associated with developing guidelines	Additional compliance and enforcement checks		Uncertain, depends on whether drivers will be able and incentivised to identify they are not fit for duty.	
8.8: Driver self-assessment and declaration of fitness to work	Administrative costs associated with implementing the new requirements			Additional compliance and enforcement checks		Uncertain, depends on whether drivers provide accurate information	

Source: Frontier Economics

8.8 Questions for stakeholders

- 8.1. Are you aware of any evidence on the significance of driver health and fitness for duty as a contributing factor to the risk of heavy vehicle crashes?
- 8.2. Do you consider this chapter accurately describes the key risks and problems associated with the management of fatigue under the HVNL?
- 8.3. Do you consider it would be beneficial to widen the scope of drivers/vehicles that are subject to the fatigue provisions?
- 8.4. Do you think that a driver self-assessment and declaration of fitness to work would be effective in encouraging drivers to self-identify when they are not fit for work?
- 8.5. Are there other costs or benefits that we should consider in the impact assessment relating to the options presented?
- 8.6. Are you aware of or do you have any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 8.7. Are there any unintended consequences that have not been identified with any of the policy options considered? If so, please explain.
- 8.8. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.

9 ACCESS

Under the current HVNL, heavy vehicles are granted access to public roads depending on their mass and dimensions. Vehicles within specified mass and dimension limits have as-of-right, general access to the road network. General access is authorised under ministers' decisions, implemented in the law.

Restricted access vehicles (RAVs) need an authorisation (which may be an exemption) for road access. Authorisations apply either to a vehicle category (notice), to a specific vehicle or to a combination (permit). Around 64,000 of Australia's fleet of 432,000 heavy vehicles (15 per cent) are restricted access, with the remaining achieving general as-of-right road access.

The NHVR is not an independent access regulator, but effectively acts as the "agent" for heavy vehicle operators in negotiating restricted vehicle access with road managers. The power to authorise a route for a RAV lies with the NHVR, but the NHVR must liaise with road managers (generally state and local government agencies) to obtain consent for each applied route.

This Chapter explores a number of reforms to the existing access arrangements within the HVNL that have been identified during the review process to date. These are mostly aimed at supporting quick, simple and transparent access decision-making. **Table 8** below provides a summary of the policy options and sub options considered in this chapter. The options have been grouped into five packages for the impact assessment with each relating to specific facets of the HVNL that have hindered efficient access decision making (see section 9.2.1).

Table 8 Overview of access related options and sub-options assessed

Option	Sub option	Descriptions
9.1 Changes to general access	9.1a	Increase in GML to CML for all operators
	9.1b	Increase in GML to CML – enrolment
	9.1c	Increase in GML to CML – on board mass installed
	9.1d	Increase in general access length – Option 1 all vehicles – Option 2 vehicles with safety features – Option 3 – Additional space for the sleeper cabin.
	9.1e	Introduce “enhanced general access” with more weight, length and height for vehicles with increased safety features and on board mass
9.2 Permits and authorisation processes	9.2a	Recognise precedent and expand expedited process for equivalent/lower risk applications
	9.2b	Allow for opt-in road manager delegation
	9.2c	Geospatial map given authority in the law
	9.2d	A risk-based approach to vehicle classes – Option 1 – Freight and passenger, OSOM – Option 2 – Existing authorisation category, exemption categories
	9.2e	Amendment to third party consent requirements – Option 1 – Remove third party consents – Option 2 – Capture third parties in access decision making
	9.2f	Amendment to access decision criteria to allow access decisions to include whole-of-network impacts and strategic network management
9.3 Timeframes and reviews	9.3a	Statutory timeframe, deemed referral and refusal for nil response
	9.3b	External review of access decisions - Option 1 – Independent review panel - Option 2 – Referral to an existing tribunal or court
9.4 Access decision making		Move access decision-making process from primary legislation to regulations or standards
9.5 Pilots and escorts	9.5a	National scheme – single tiered pilot and escort accreditation
	9.5b	National scheme – dual-tiered pilot and escort accreditation

**base case not included in regulatory options*

Source: Frontier Economics

9.1 Existing heavy vehicle route access regulation

9.1.1 Why is access regulated?

Access by all kinds of heavy vehicles to public roads is controlled because unfettered access to public roads could otherwise:

- create risks to community safety from heavy vehicles, or from other motorists interacting with heavy vehicles
- reduce public amenity from noise or congestion and
- contribute to road pavement and infrastructure damage where vehicles access unsuitable roads.

The heavy vehicle access system matches vehicles to routes to mitigate these external costs. General road access is provided for heavy vehicles with limits, and restricted access is provided to those vehicles that cannot meet the general access standards.

Much of the challenge in improving access is related to engineering constraints and ageing bridges and pavements. While access policy and decision-making processes can be improved, we must acknowledge engineering constraints cannot be reformed quickly or without cost.

For completeness, it should be noted that other policy responses which control access are conceptually possible. For example, reforms to road charging and funding could help to mitigate costs imposed on road providers, by heavy vehicles either in conjunction with, or instead of, access controls. Currently there is no link between funding for roads and the costs imposed by heavy vehicles' accessing and using the road. As a consequence, road managers may view increased access (without further compensatory funding) as detrimental to their network assets and so be disincentivised to provide access. Reforms to road charging and funding are being considered in the Heavy Vehicle Road Reform (HVRR) program and so have not been explored as part of this RIS (see Box 28:). However, the NTC is cognisant of these reforms and will work with the Commonwealth to ensure consistency in approach.

Box 28: Heavy vehicle road reform

There is some overlap between the issues addressed in this Consultation RIS and the issues being addressed as part of the Heavy Vehicle Road Reform program (HVRR). This note provides some background on HVRR to assist the reader.

The Commonwealth, state and territory governments and the Australian Local Government Association are looking at a new and better national system for setting heavy vehicle charges and investing the funds raised in roads. The new system aims to boost productivity and deliver better government investment in roads by giving users more of a say.

Governments have agreed in principle to a new system which will have four broad elements:

- *National Service Level Standards* for roads that would be set by the Transport and Infrastructure Council, with user involvement in the design to capture their needs.
- *Oversight of state and territory expenditure plans* against the national Service Level Standards to ensure national consistency of expenditure that can be recovered from heavy vehicle user charges.
- *Independent determination of heavy vehicle charges* (both state and territory registration fees and the Commonwealth Road User Charge) to ensure efficient costs are recovered from heavy vehicle operators.
- *Distribution of revenue from heavy vehicle charges to road owners* for investment in the road network. Linking charges to investment provides a stream of revenue for road owners to better manage the network.

The proposed reforms would mean greater accountability for road users, investment decisions better informed by user needs, and more forward-looking planning and funding to meet those needs.

The reform benefits are estimated at \$6.5 billion to \$13.3 billion over 20 years (Deloitte modelling June 2017), depending on the extent of reform.

These benefits would come from safer, better-maintained roads; from faster and cheaper road freight; and through a system better able to deal with the infrastructure challenges ahead.

Public consultation on this new system is taking place in 2020. The Transport and Infrastructure Council is seeking stakeholder views as input to inform its consideration of the new national system. A consultation paper will be available at <https://www.infrastructure.gov.au/roads/heavy/>. Online workshops for interested parties are being planned for July-August 2020.

Source: Commonwealth Department of Infrastructure, Transport, Regional Development and Communications

9.1.2 Recent progress in access regulation and aspirations for a future regime

The NHVR, along with states and territories, have made progress in improving the heavy vehicle access regime under the current constraints of the law.

The NHVR has reduced the number of permits by developing several notices. The NHVR estimated that the Multi-State Class 1 Oversize Vehicle Notice in Victoria, New South Wales and South Australia would reduce permits by 25,000.¹¹⁶

The NHVR and road managers have also reduced the average end-to-end processing time for access decisions from 34 days in 2016 to 19 days in 2018.¹¹⁷ This has been achieved through process improvements. Some road managers have introduced pre-approvals for common access types to reduce the need to approve requests on a case-by-case basis and reduce the burden of work on the council's transport teams.¹¹⁸

Tasmania and New South Wales have also undertaken a number of projects to fast track access. In Tasmania, the Department of State Growth have created 'pre-consented' networks for OSOM and SPV vehicles to operate under notice (see Box 29:).¹¹⁹ Both industry and government have recognised the partnership and collaborative approach adopted by the Tasmanian government as the 'gold standard'.¹²⁰ Transport for NSW has developed the Heavy Vehicle Access Policy Framework that outlines a strategic approach to heavy vehicle access in NSW for both state and council roads.¹²¹ The framework aims to increase the use of safer and more productive vehicles and address local amenity issues, network impacts and infrastructure constraints.

Box 29: Tasmanian approach to access for OSOM vehicles

The Tasmanian Department of State Growth, in partnership with local governments, industry and the NHVR developed an innovative approach to access for OSOM movements within existing HVNL provisions. They procured engineering assessments of road corridors, bridges and other structures, and advice from industry to describe OSOM combinations and loads. This information was used to develop 'pre-consented' networks under a notice.

The State Growth interactive map system displays these approved networks. Users can enter vehicle details and the system automatically maps an approved network for that combination and load, including details on roads and bridges, pilot and escort requirements, load limits, speed restrictions and other features. The system can be used to inform investment decisions for both infrastructure owners and the transport industry. The project will result in 80 per cent of OSOM activity and 95 per cent of SPV activity operating under notice, without the need for individual permits.

Source: National Transport Commission, 2019b, Easy access to suitable routes

A further improvement that has facilitated improvements in access is the increasing use of PBS vehicles, which are safer than standard vehicles and can operate at higher mass and dimension limits.¹²² In 2019,

¹¹⁶ National Heavy Vehicle Regulator, 2016, *Regulation of Australian Agriculture Productivity Commission Draft Report*, p. 2.

¹¹⁷ National Transport Commission, 2019b, *Easy access to suitable routes*, p. 40.

¹¹⁸ *ibid*, pp. 73-74.

¹¹⁹ *ibid*, pp. 71-72.

¹²⁰ National Transport Commission, 2020, *Heavy Vehicle National Law Review: 2019 consultation outcomes*, p. 44.

¹²¹ Transport for NSW, 2018, *NSW Heavy Vehicle Access Policy Framework*.

¹²² NHVR and ARTSA, *Performance Based Standards: Australia's PBS fleet*, 2019 Edition, pp. 2-3

the NHVR noted that growth of PBS combinations has been strong over the last 5 years with 2018 achieving close to 1900 new approvals for new PBS combinations. In the last 5 years total new PBS combination approvals had doubled, whereas the heavy vehicle market grew by 20% over the same period.¹²³

In 2019 the NHVR released the draft Heavy Vehicle Productivity Plan for 2020-2025. The draft plan includes three objectives for the future access regime. These include:¹²⁴

- Objective 1: Provide access certainty and consistency
- Objective 2: Partner with local government to build capability
- Objective 3: Promote safer and more productive vehicles that are better for the environment and communities.

These objectives could be considered aspirations for a future heavy vehicle access regime.

9.2 Problems with current arrangements

Three broad problems have been identified with the current access arrangements:

- While heavy vehicles have become safer over time, this has not been reflected in increased general as-of-right access.
- The current process for obtaining access imposes excessive compliance costs on road managers and delay costs on industry.
- The current decision-making framework does not provide the best possible balance between the costs and benefits of providing access.

It is these problems which the options in this section are designed to address. The nature and cause of these problems are expanded on under the options considered in the following sections.

These concerns were discussed in the NTC's Issues Paper on access issues¹²⁵ in 2019. In response to the NTC's issues paper, government departments and road managers stated that operational improvements (such as improved route assessment processes and systems) as opposed to legislative amendments would provide a better way to improve heavy vehicle access.¹²⁶ This is acknowledged and such operational improvements that do not require regulatory change effectively form part of the base case against which regulatory access options can be compared.

¹²³ *Ibid.*

¹²⁴ National Heavy Vehicle Regulator, 2019b, *Draft Heavy Vehicle Productivity Plan for 2020-2025*.

¹²⁵ National Transport Commission, 2019b, *Easy access to suitable routes*.

¹²⁶ National Transport Commission, 2020, *Heavy Vehicle National Law Review: 2019 consultation outcomes*, p. 37.

Box 30: Benefits from higher productivity vehicles

In the past, the value associated with a greater move towards high productivity vehicles has been considered substantial.¹²⁷ This move is essentially tied to the access framework because higher productivity vehicles tend to be RAVs and so subject to permits.

A Deloitte report commissioned by the Australian Trucking Association suggested that the anticipated move to higher productivity vehicles has not been realised under the current access decision-making framework.¹²⁸

The Productivity Commission's draft report on COAG national transport reforms concurs.¹²⁹ It states heavy vehicle productivity (measured in tonne kilometres per vehicle) has not increased since 2010 and that "The productivity gains from the reforms so far are much less than expected, although there is scope in the future for greater improvements as Performance-Based Standards vehicles become a larger proportion of the heavy vehicle fleet" (Draft finding 6.5). It found the complexity of the vehicle classifications has limited the progress of faster access approvals, through permits, pre-approvals and notices (Draft finding 6.2).

There are a variety of ways to address the number of permits and delays within the present HVNL. For example, road managers could submit to the NHVR a pre-approved route that can be used by specified vehicles, which means that individual approval decisions are not required by the road manager. This was further supported by the Productivity Commission.¹³⁰ However, regardless of these approaches, a simpler regulatory framework that required fewer decisions would reduce the resource burden on local road managers.

9.2.1 How the options relate to overarching problems identified

A summary of the options considered in this chapter is presented in **Figure 15**. Each of the options addresses specific facets of the HVNL that have hindered efficient access decisions ('Problems addressed').

The options have been grouped into five packages for the impact assessment. This reflects some complementarity between individual package elements, i.e. where each element of a package is directed at addressing elements of the same problems.

¹²⁷ National Transport Commission, 2011b, *Performance Based Standards regulatory impact statement*.

¹²⁸ Deloitte, 2019, *Economic benefits of improved regulation in the Australian trucking industry*.

¹²⁹ Productivity Commission, 2019, *National Transport Regulatory Reform*.

¹³⁰ *ibid.* p. 17.

Figure 15: Overview of access options considered (not including base case)

Options	What is the problem?
Option 9.1: Changes to increase general access via mass and dimension limits	Heavy vehicles that could access roads safely currently require access permits, creating delay and compliance cost
Option 9.2: Improve the permit decision process by recognising precedent, allowing for delegations, providing for geospatial maps to have standing in the law, simplifying vehicle classifications	The current access authorisation approach requires large numbers of permits and induces delay and inconsistency in decisions. Such costs could be reduced by facilitating easier access for lower risk vehicles and routes, and streamlining decisions through more use of delegation and simpler vehicle classifications.
Option 9.3: Improve permit decision process by changing statutory deadlines and formalising the decision framework with deemed referrals, and allowing for third-party review of access decisions	As for 9.2, these changes also attempt to address problems of delay and inconsistency in decisions. These changes address elements of uncertainty in the law that hinder faster decisions (deemed referrals and refusals) and potential inconsistency (third party review of decisions)
Option 9.4: Move access decision-making framework into regulations/ standards	The current framework for access decision-making is inflexible and slow as key elements are in the law itself. More reactive decisions on access could be made through a change in legal approach that would largely formalise existing NHVR guidelines.
Option 9.5: National approach to pilots and escorts through a national operational accreditation scheme	The current approach is not consistent between jurisdictions and a simpler, uniform approach would reduce administrative and compliance burdens.

9.3 The base case for the assessment

The base case for this assessment is based on the existing arrangements in the HVNL and has the following features:

- Heavy vehicles get access to the road network depending on their mass and dimensions. The HVNL classifies heavy vehicles as either: general access vehicles or RAVs.
- General access vehicles can obtain “as of right” access to the road network. Mass and dimension limits are set for general access.
- RAVs need an authorisation for road access. Authorisations apply either to a vehicle category (notice), to a specific vehicle or to a combination (permit).
- There are three classes of RAVs:
 - Class 1 heavy vehicles. These include special purpose vehicles (SPVs), agricultural vehicles and vehicles designed to carry a large, indivisible item.
 - Class 2 heavy vehicles. These include B-doubles, road trains, buses longer than 12.5 metres, multi-deck car carriers and livestock vehicles, as well as PBS vehicles.
 - Class 3 heavy vehicles. These include other vehicles that don't fit a prescribed mass or dimension and aren't covered under class 1.
- There are several parties involved in the current access decision-making regime, including the operator, NHVR, road manager, road authority and third parties. The power to authorise a route for a RAV lies with the NHVR, but the NHVR must liaise with road managers to obtain consent for each applied route.
- Road managers have 28 days from the NHVR's request to decide whether to give consent. While most permits are granted within the statutory timeframe (noting a substantial portion are essentially re-issued permits), some applications receive a nil response. There is no mechanism in the access decision-making process to deal with a delayed or nil response.
- Only the NHVR's access decisions are subject to external review. There is no provision for external review of decisions made by road managers.
- The HVNL only contains one decision-making process. Therefore, the same risk level is implicit in all decisions, even though the risk of different freight tasks varies significantly
- In making access decisions, road managers may decide not to grant a request for access only if specific circumstances apply (e.g. granting access will damage infrastructure, impose adverse effects on the community or pose a significant safety risks).

9.4 Expand as of right general access (Option 9.1)

9.4.1 What is the problem?

Option 9.1 has sub-options which allow for increases in mass and dimensions for general access vehicles. These options all recognise that mass and dimension limits have not kept pace with advances with the heavy vehicle fleet over the past 30 years.

Current regulations impose access restrictions relating to:

- General access and the kinds of vehicles that qualify for such access.
- Restricted access and the process for which such vehicles can obtain access to public roads (authorisations, permits and notices).

General access limits have not changed since the 1990s due to unresolved policy and engineering issues. Mass and dimension limits have not kept pace with advances in the heavy vehicle fleet, despite vehicles becoming safer, more efficient and longer over the past 30 years.

The HVNL review has identified concerns that current access arrangements for RAVs are:

- not timely or efficient, and are imposing excessive transaction and compliance costs on heavy vehicle operators, the NHVR and local government; and
- the conditions of general access to roads may be more stringent than required (given advances in vehicle designs) to ensure safety and avoid damage to road pavements and infrastructure (i.e. risk averse).

Delays in access can impose economic costs in downstream supply chains, as they slow the efficient movement of goods and potentially distort the choice of vehicles towards those that are less efficient — for example, because of their reduced capacity, multiple movements may be required— but meet general access requirements.

9.4.2 Overview of mass and dimension options

Essentially, the mass options would allow for increasing mass limits as-of-right access to those currently allowed under concessional mass limits (CML). CML is currently only available to those operators with accreditation (NHVAS mass management). This is equivalent to an increase in GML by 5 per cent for eligible vehicles. There are three alternative options to achieve this:

- Option 9.1a: Increase GML to CML for all operators
- Option 9.1b: Increase GML to CML for enrolled operators
- Option 9.1c: Increase GML to CML conditionally to operators where an approved on-board mass system is used and data provided.

Option 9.1d provides for general access length to be increased from 19 metres to 20 metres, with three sub-options. This option would ideally be combined with one of (a)-(c) above as otherwise the benefits of either change would be limited.

Option 9.1e is a further option which would create a new category of “enhanced general access” for vehicles that meet certain standards and would effectively combine elements of 9.1b-d.

The NTC will work with the Commonwealth to ensure the preferred option does not compromise the direction and outcome of the HVRR project.

9.4.3 Increase GML to CML for all operators (Option 9.1a)

Under this option all heavy vehicles would be able to access the network at current CML.

It is not certain how many vehicles would be affected by this proposed change, as the NHVR’s data only records CML data for PBS vehicles that operate at CML under permit and operators enrolled in the mass module of the NHVAS.¹³¹ For the 2019 calendar year, the NHVR assessed 1,118 PBS access applications to operate at CML. Although achieving CML would not be the only reason why some PBS vehicles needed permits, it provides some indication that increasing GML to CML could substantially decrease the number of vehicles that need to apply for a permit.

¹³¹ Other vehicles authorised under a Class 2 permit do not require the exemption to be noted on the permit.

Operators enrolled in the mass module of the NHVAS have permission to operate at CML. This does not mean that all these vehicles operate at CML for every journey, however, it is assumed most are enrolled so they have flexibility to carry greater mass when required without having to apply for permits.

Broader application of CML would require a further assessment of the road network capability to accommodate the higher limits. The NTC seeks views on whether further infrastructure and road assessments would be likely to be required to accommodate more vehicles operating at CML.

9.4.4 Increase GML to CML for enrolled operators (Option 9.1b)

Under option 9.1b heavy vehicle operators who enrol with the NHVR would be able to access the network at CML. Enrolment options are considered further in the chapter on assurance (see section 7.2.2). This option is a slight variant on these. It is intended that by allowing increases to mass limits this would provide an incentive for operators to enrol with the NHVR.

It is estimated that increasing GML to CML for enrolled operators would result in fewer vehicles taking advantage of CML than for option 9.1a, but the difference should only be small.

The NHVR would then have a record of enrolled operators and would be able to verify the permitted mass limits for vehicles through a desktop analysis or at the roadside. The NHVR would use information obtained through enrolment to build a risk profile of the industry and of operators.

Although operators would be required to enrol, this would be a simple process that would not impose the same cost and audit burdens as experienced under the mass module of the current NHVAS.

9.4.5 Increase GML to CML conditionally to operators where an approved on-board mass system is used and data provided (Option 9.1c)

Under this option heavy vehicles with a certified on-board mass (OBM) system and data sharing capabilities would be able to access the network at CML. Operators would need to share the OBM data with road managers and regulators to provide certainty that vehicles are complying with mass limits on approved routes. This could be achieved through sharing data using new or existing telematics applications.

The OBM system would be certified by an entity recognised in the law (see section 6.2.2 for options relating to this). The OBM system may involve existing technology fitted to the vehicle or technology retrofitted to the vehicle. The OBM system would share data with road managers and regulators. Depending on the evidentiary value required, this data could be in an aggregated or detailed form.

Operator enrolment and mass data sharing would provide the NHVR and police with mass compliance information to inform a risk-based enforcement approach. Operators who demonstrate compliance with CML would be less likely to be stopped for roadside checks.

9.4.6 Access length increase (Option 9.1d)

General access length is currently specified at 19 metres in regulations to the HVNL. The HVNL also provides that a 25m B-double may be up to 26m long if it meets certain operating conditions.

Under this option general access length would be increased from 19 metres to 20 metres. There are two ways the additional metre could be made available:

- Option 1: The additional metre could be provided to all vehicles

- Option 2: The additional metre could be provided to vehicles that can demonstrate they have safety features installed.

For some restricted access vehicle combinations an additional allowance could also be implemented in a similar manner to the current additional allowance for B -doubles. Under Option 3 this additional meter would be provided only for additional space in a sleeper cabin.

Option 1: All vehicles

PBS Level 1 vehicles already have a length limit of 20 metres. In 2018 a notice was issued by the NHVR which granted general access to PBS Level 1 vehicles, but only those operating up to GML. This means that the longer length does not allow for the use of CML or HML with longer vehicles, even though studies suggest that longer combinations generally have lower bridge loading impacts due to the spreading of axles in a 20-metre combination.

Industry reports that many road managers already allow 20 metre combinations to get general access. This option would therefore recognise an existing arrangement and reduce the need for these vehicles to apply for permits.

This option would be combined with one of the options 9.1a-9.1c.

Option 2: Vehicles with safety features installed

Many operators are adopting a newer heavy vehicle fleet due to the safety and productivity gains they offer. Operators with safety features would be afforded an additional metre of length to be considered a general access vehicle. These safety features may include: electronic stability control, emergency brake assist, forward collision and lane departure warning systems, intelligent speed assistance, adaptive cruise control, fatigue and drowsiness detection devices.

This option would be combined with one of the options 9.1a-9.1c.

Option 3: Additional space for the sleeper cabin in restricted access vehicles

Drivers have commented that better sleeping cabins would provide better rest opportunities which may improve their levels of alertness. Vehicles with sleeper cabins could be afforded an additional metre of length to be used only for the purpose of adding an extra meter for the sleeper cabin.

Larger sleeper cabins are a common feature in some overseas heavy vehicle fleets. They are of particular importance to the health, safety and well-being of drivers operating in more remote areas and, as such, the length allowance could be available for journeys substantially undertaken in a remote zone.

This option would be combined with one of the options above and also with options 9.1a-9.1c.

9.4.7 Create enhanced general access category (Option 9.1e)

Rather than granting increased general access for all vehicles, an approach of granting general access on conditions could be pursued. For example, this approach could create a new category of access, enhanced general access, which could operate alongside the general access and restricted access regimes.

The legislation could be structured to allow requisite safety features, technology and data sharing requirement to be updated when needed with associated grandfathering provisions for existing vehicles.

This option would allow vehicles to operate up to CML and up to 20-metre-lengths, provided those vehicles meet a set of criteria such as:

- using an OBM system where data is provided (similar to option 9.1c)

- where emissions standards are met, and
- where vehicle safety features are installed (similar to option 9.1d)

This option needs to be considered in coordination with the vehicle classification system requirements discussed in option 9.2d.

The NTC seeks further views on whether this approach should be used as an alternative to effectively combine options 9.1b-d.

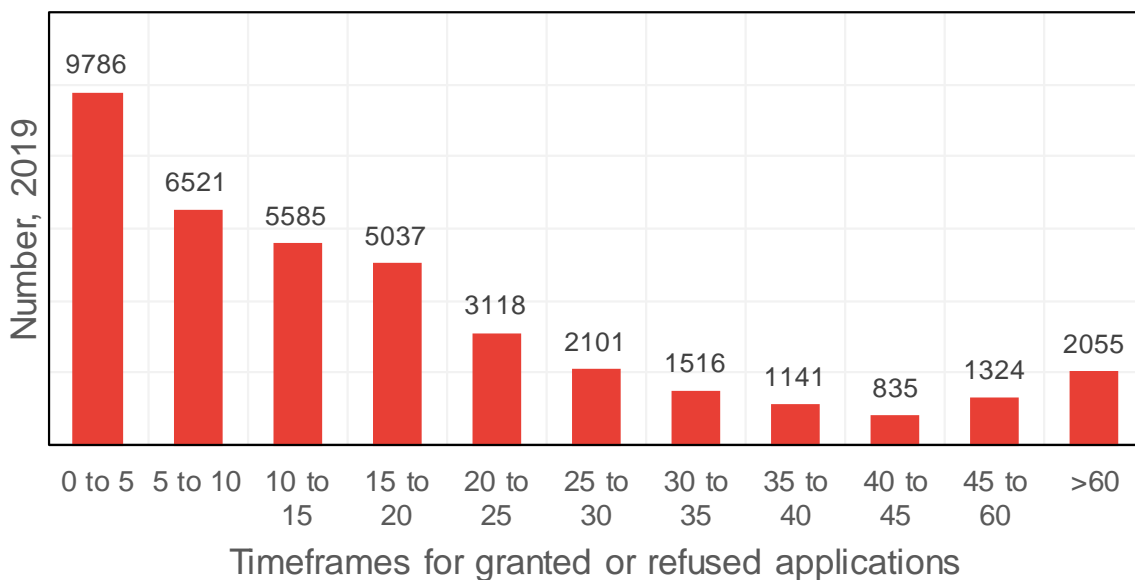
9.5 Improving the efficiency of the decision-making process for authorising access (Option 9.2)

9.5.1 What is the problem?

The current process results in the issue of a large number of permits, which creates administrative and compliance burdens for operators and road managers. It can also unduly delay the granting of access.

Data from the NHVR is summarised in **Figure 16**; this indicates that some 39,000 permits were considered in 2019. Around 80 per cent were issued within the 28-day statutory timeframe; however, the remaining 20 per cent indicate that significant delays were common (around 5 per cent had a delay of more than double the statutory timeframe). Of these, it is not known how many of these delays were a result of the road manager seeking an extension due to complexity or the types of access being sought (for example OSOM or PBS applications).

Figure 16: Access applications and time taken (days) to grant or refuse access, 2019



Source: NHVR

Further information obtained from the NHVR indicates that timeframes also differ by the type of application – whether it is for a new permit, an amended permit or a permit renewal. While this suggests that, as expected, new permits take the longest to process, even permit renewals take more than 10

days on average. The variation in time taken to grant an application can be attributed to many factors including complexity of the application, resourcing and expertise constraints of road managers, incomplete information provided in the application and the need to conduct route assessments.

Table 9: Permit applications, 2019, by type

APPLICATION TYPE	APPLICATIONS	TURNAROUND DAYS			
		Average days			
		NHVR	Customer	Road Manager	Total
Amend Permit	12,593	4.5	0.9	13.1	18.5
New Permit	13,694	7.0	2.0	20.9	29.8
Renew Permit	11,500	3.5	0.2	7.5	11.2

Source: NHVR

The permit application process is not risk-based and requires almost every application to be made via the same process, with limited recognition of any similar decisions that have previously been made and that could provide precedent.

There are a number of case studies that have been provided by industry on the cost of delays including to the OSOM review¹³² in 2018.

Access uncertainty also impacts the uptake of PBS vehicles. There is no guarantee a PBS design will get access to the network once the vehicle is built. PBS vehicles require significant upfront investment and operators are unlikely to pursue a more productive fleet if they don't have certainty that the vehicles will be able to operate on the network (see section 10.2 for further discussion of this).

9.5.2 Overview of option

This option includes a number of sub-options (that could be implemented in isolation or combination) that are expected to make the decision-making process for authorising access more risk-based and outcome-focused as outlined below:

- Expand the use of existing expedited access decision-making processes to include equivalent (or lower risk) applications, to better recognise precedent and risk in the access decision-making process.
- Allow for road managers to delegate their authority on access decisions to other parties on an “opt in” basis.
- Provide for better use of technology (geospatial maps) that would be recognised in the HVNL and facilitate faster handling of repeat and low risk permits.

¹³² Department of Infrastructure, Regional Development and Cities, 2018, *Review of Oversize Overmass (OSOM) Access Arrangements*.

- Reduce the complexity of restricted-access vehicle classification (from three to two), to better allow decisions to focus on relevant risks.
- Consider the need for the NHVR to obtain consent from a range of third parties that might be relevant to consult, but that in practice unduly delay access decisions.

These sub-options can be implemented as a package and are not alternatives. Further details of each sub-option are contained in the sections that follow.

It is anticipated that under this option, there will be a significant role for the NHVR in partnering with road managers to deliver better access outcomes. That is, the delivery of the option would not entirely be up to road managers. The OSOM Review recommendations included the NHVR taking a more proactive role in supporting road managers in making better access consent decisions, which include:

- Provision of expertise to road managers, to help them make more informed access decisions.
- Sharing the risks associated with consent decisions to facilitate better decisions by road managers.

9.5.3 Recognise precedent and expand expedited process to including equivalent or lower risk applications (Option 9.2a)

This option would recognise precedent and risk in the access decision-making process. This would free up road manager resources by not having to provide consent where it has previously been provided. It would also promote consistency in access decisions and move towards a risk-based approach to access.

The HVNL currently allows for an expedited procedure for the renewal of previously consented mass or dimension authorities (section 167). In 2019 around one-third of consent applications were for the renewal of previously granted mass or dimension authorities. This option would expand the current expedited process to include equivalent or lower risk applications and fast track consent via the NHVR. This would allow permits to be renewed prior to expiration or re-applied for on an equivalent or lower risk basis. Specifically, this includes:

- By *equivalent* risk, we mean applications that are seeking the same level of access for a particular vehicle configuration and route that has been previously granted.
- By *lower risk*, we mean applications that are seeking the same or lower level of access for a lower risk vehicle configuration (e.g. lower mass, length or trailers) or lower risk route (e.g. a one-off trip or repeat trip that has been granted).

The definitions and scenarios related to equivalent and lower risk would be developed in consultation with industry, government, the NHVR and road managers.

The expedited process would be applied so far as is reasonable in the future HVNL.

9.5.4 Opt-in road manager delegation (Option 9.2b)

Option 9.2b would provide road managers with the flexibility to delegate their access decision-making powers. This would alleviate some of the resourcing and expertise constraints road managers face.

The HVNL would be amended to provide an express opt-in power for road managers to delegate access decision-making. Road managers would not be compelled to delegate their decision-making power but would have a choice about whether to exercise this delegation.

Road managers would either delegate access decision-making on a case by case basis (i.e. depending on the access being sought in each application), or delegate particular groups of applications (i.e. PBS or OSOM applications) or delegate all access decisions.

The delegation arrangement would be formalised through a delegation instrument. The delegate and delegator would be required to consent to the delegation.

The law would specify who the road manager can delegate to. For example, a delegate could be an officer in:

- the NHVR
- the relevant road authority
- another local government or organisation of councils
- a private business
- any other suitability-qualified person.

The law would provide a power and reasons for the road manager to revoke or refuse a delegation.

The liability for the decision would rest with the road manager who owns the infrastructure and network. In recognition of asset ownership, the road manager would have the ultimate decision-making power.

This option would not include an ability to sub-delegate to another party.

It is expected that some road managers may not exercise this delegation power due to liability and cost issues.

9.5.5 Geospatial map given authority in the law (Option 9.2c)

The purpose of option 9.2c is to provide a real-time 'single source of truth' for road access in the form of a geospatial map. This option would provide the heavy vehicle industry with reliable and accurate map information.

The geospatial map would be given authority and legal standing in the HVNL and would provide information on approved routes, 'no go' zones and precedent decisions. The map would be available to operators who are enrolled (see 7.2.2 for further details) and share telematics data.

Operators and drivers would access the map via a desktop computer, laptop or tablet system (when planning the access and route) or through an in-vehicle telematics or tablet system (when on route). Operators and drivers would provide information on the route and vehicle configuration to the system. The system would assess the information and provide a suggested route and map for the particular vehicle. The map would be capable of providing turn by turn instructions to operators while they are on route and so should consider machine readability to allow for turn by turn driver navigation. This would be similar to a Google Maps system for walking, driving or catching public transport. The map would also be capable of imposing and advising road, travel, vehicle or other operating conditions to specific road sectors or structures.

The map would rely upon an appropriate geo portal that is updated frequently with accurate information. This would enable self-service geospatial data to be accessible, providing tools for exploration, analysis and reporting.

Operators and drivers would be able to rely on the data from the map to avoid penalties for being off route. Operators and drivers could rely on the map as a defence if it incorrectly advised them to take a particular route. The NHVR would retain all archived maps to determine historic updates to the system.

In the future, the map could replace permits and notices and be used as the authority to move. It could be coupled with other in-vehicle telematics systems, such as OBM, IAP or RIM, to provide road managers with data on road use and assurance that vehicles are accessing the right parts of the network. It could also be integrated with the expedited precedent process. This would require the NHVR's portal to be connected to the geospatial map. This could reduce the need to apply for repeat and low risk permits as operators could rely on the information from the map system.

9.5.6 A risk-based approach to vehicle classes (Option 9.2d)

There are currently three classes of RAVs under the HVNL. Matching vehicles classes to networks for access can result in consequential complications, and some vehicles are themselves inherently challenging to assess for access. This is especially the case for vehicles/combinations that are included in Class 3. Road managers do not necessarily have a high degree of expertise with heavy vehicle classifications. This can complicate and protract access decisions.

The purpose of vehicle classification is to simplify decisions in some form; for example, to group a class of vehicles on which the same level of network access would be appropriate. This makes decision-making more efficient and potentially increases the equity of decisions to users, through more consistent treatment.

There are a number of different vehicle classification schemes that could be adopted. The intent of option 9.2d is to change existing categorisations to more closely categorise vehicles by the risk they present to the network. This option provides a risk-based lens to assessing vehicles and has the potential to significantly increase the efficiency of the access decision-making process.

This could be implemented in one of two ways:

- Option 1: Vehicle categories are (1) freight and passenger and (2) oversize overmass.
- Option 2: Categories are: (1) existing authorisation category (captures existing class 2 vehicles) and (2) exemption categories (captures existing class 1 and class 3).

Both option 1 and option 2 – indeed even the status quo – allow for sanctions relating to heavy vehicle mass, dimensions and access to be separated from the category of vehicle and instead be linked to the characteristic of vehicle imposing the harm. For example, penalties for an overloaded general access vehicle differ from those for an equivalent mass PBS vehicle, both unauthorised to be on a given bridge, despite both posing similar infrastructure risks. The key characteristic of the harm is mass of the vehicle, not its classification. Sanctions aligned to characteristics will be more proportionate to harms.

Option 1: Vehicle categories are (1) freight and passenger and (2) oversize overmass.

This option would reduce the current three vehicle classes to two categories: freight and passenger and oversize overmass.

The 'freight and passenger' category would include the existing Class 2 and 3 vehicles.

The 'oversize overmass' category would include the existing Class 1 OSOM vehicles, special purpose vehicles, agricultural vehicles, some Class 3 vehicles and Class 2 vehicles transporting oversize loads.

The current vehicle classification approach results in numerous permits and notices being required to facilitate the movement of a vehicle type. The same heavy vehicle can change classes based on the type of mass and dimension authority applying to it at any given stage of the same movement. For example, a loaded B-double livestock carrier is a Class 3 vehicle, however when the vehicle is unloaded

for the return journey it becomes a Class 2 vehicle. Therefore, industry are required to operate under both a Class 2 and Class 3 notice for the one journey.

There are several factors considered by a road manager when determining whether access to the road network is appropriate, some of these include:

- mass and dimension of the vehicle
- impact on vulnerable infrastructure such as bridges and culverts, pavement, roadside furniture
- primary purpose of the vehicle/combination i.e. freight versus OSOM movement, agricultural machine, tow truck
- frequency of the task
- area of operation or route(s)
- traffic volumes
- impact to amenity and community.

Reducing the classes to two and grouping vehicles and combinations by frequency (high versus low or infrequent) and primary purpose/use will assist road managers to determine the impacts and risk profile more effectively.

At present, the Class 3 category includes a range of heavy vehicles that don't meet prescribed mass or dimension requirements of the Heavy Vehicle (Mass and Dimension Loading) Regulations (MDL Regulation) that predominately are 'freight' vehicles, for example:

- 19m rigid truck and dogs that don't meet the mass tables in the MDL Regulation
- prime mover and semi-trailer towing a convertor dolly
- B-double towing converter dolly
- class 2 vehicles transporting oversize loads
- tow trucks that are over-mass on one or more axles.

Freight and passenger vehicles are generally high volume and frequency, require extensive access to the road network and due to their mass and dimension and frequency of use and will have the greatest long-term impact on infrastructure through wear and tear. Road managers will be conscious of this when making a decision and therefore it makes sense to group these vehicles into a single category which is effectively Class 2 at present.

Where 'freight and passenger' vehicles generally have higher volumes, oversize and overmass vehicles often travel less frequently and are generally targeted moves to specific areas or for a specific purpose. A road manager will utilise the above assessment criteria however the risk profile may be applied differently due to the lower number of moves and the additional controls that can be applied.

Including agricultural machinery, special purpose vehicles, tow trucks and Class 2 vehicles transporting oversize loads into the new category of 'oversize and overmass' would assist road managers with applying the appropriate risk profile and controls. This would also assist with developing appropriate vehicle, road and travel conditions in relation to access.

This approach would also enable envelopes to be developed for each category. Envelopes would determine the prescribed mass and dimension limits and promote a timely and risk-based approach to granting access.

Option 2: Risk-based approach to vehicle classification

This option involves categorising vehicles by risk or relevant factors for a given issue (e.g. location, mass), rather than applying all possible factors.

For access, vehicles would be classified by the authority needed (ie. general, authorisation or exemption). For issues such as being over-mass versus off route, vehicles would be characterised by their mass over route limit (regardless of categorisation). This approach will remove a range of perverse consequential issues in the current HVNL.

9.5.7 Third party consent requirements (Option 9.2e)

Under the HVNL, the NHVR can't provide consent until all relevant third parties are consulted with and have given their approval. Third parties include police, rail infrastructure managers, roadwork controllers, tunnel operators and utilities providers. This can lead to lengthy delays as the NHVR has no influence over third parties in order to incentivise a timely response.

There are two alternative ways this problem can be addressed:

- Option 1: Remove third party consent requirements
- Option 2: Capture third parties in access decision-making process and impose statutory timeframes.

Option 1: Remove third party consent requirements

The purpose of option 9.2e is to reduce delays caused by third party consent in the access decision-making process. This option removes the legislative obligation on the NHVR to consult with third parties. Operators would be required to consider their whole journey, including whether any third-party consents are needed. However, the need to receive formal consent from third parties would not be required by the NHVR to grant access. The NHVR would be required to consider any submissions from third parties on why access should or should not be granted.

Existing obligations in third party legislation would be maintained and need to be considered.

Option 2: Capture third parties in access decision-making process and impose statutory timeframes

This option includes third parties being listed as a party in the decision-making process that must make a decision within the statutory period of 28 days. This would mean the HVNL, and the NHVR, has greater influence over the third party making the decision. Third parties would be required to comply with the same process as road managers and road authorities.

Third parties would be required to register their assets and infrastructure with the NHVR to ensure the portal identified where third-party consent is required. The onus would be on the third party to ensure this information is kept up to date. The NHVR portal would automatically flag assets or infrastructure that are owned by a third party when the application is submitted. If the third party did not respond with the statutory timeframe, the decision would be automatically refused. The applicant would have the ability to seek a review of the decision. These elements are outlined below in option 9.3.

9.5.8 Amendments to access decision-making criteria (Option 9.2f)

The HVNL provides that road managers may decide not to grant consent for access only if specific circumstances apply (e.g. access would damage infrastructure, impose adverse effects on the community or pose a significant safety risk).

The HVNL currently does not support road managers in considering access along contestable routes where a mode shift between road and rail can have significant implications for the transport system as a whole. The current law only supports road managers considering access for individual vehicles rather than considering the effects of fleets of vehicles.

Under this option, the HVNL would enable road managers have regard to strategic transport network considerations and the impacts that could arise from fleet effects rather than just individual vehicles when considering requests for access. Access decisions would include whole-of-network impacts and strategic network management issues to deliver better safety and transport efficiency outcomes.

Provisions to guide the use of this circumstance when considering access will be required to ensure it is not misused as a general reason for not granting access.

9.6 Amendments to permit timeframes and procedures (Option 9.3)

9.6.1 What is the problem?

The HVNL formalised the role of local government as road managers in the access decision-making process. However, some local governments have only limited resources to assess roads and make timely decisions. Industry and government have recognised that local government lack of funding and resourcing play a role in decisions not being made within statutory timeframes.¹³³ Many road managers do not have visibility of what is happening on their roads, without introducing costly sample-based monitoring.¹³⁴

Currently, there are no implications arising for road managers from access decisions that exceed statutory timeframes, and decisions by road managers are only open to internal review. During consultation, the option to seek an external review of road manager decisions was raised. This was with the intention of facilitating better and faster decision-making and delivering more consistent access decisions.

Option 9.3 includes complementary elements designed to address these problems. This includes:

- Amending statutory timeframes and introducing deemed referrals and deemed refusals to address issues relating to delayed or nil responses.
- Providing for a review of access decisions by a third party.

9.6.2 Statutory timeframe, deemed referral and refusal for nil response (Option 9.3a)

The NTC has developed two options relating to amended statutory timeframes for consultation.

- Option 1: 28-day statutory timeframe with deemed referral and deemed refusal for nil response — This option sets out a two-stage statutory timeframe of 28 days for all vehicles.

¹³³ National Transport Commission, 2020, *Heavy Vehicle National Law Review: 2019 consultation outcomes*, p. 40.

¹³⁴ These concerns regarding delays and risk aversion of road managers might reflect that road managers have weak incentives to grant access in a timely fashion. In the absence of a road charging and funding model, managers receive little direct benefit from allowing access to heavy vehicles and therefore largely consider only or primarily the costs associated with granting access. As a result, there is a risk that access controls are reducing access below efficient levels, including by limiting the ability of operators to use more productive vehicles or by delaying the achievement of such a benefit.

The road manager would need to indicate to the applicant via the portal whether a route assessment is required within the first 7 days of receiving the application. Road managers would have the remainder of the 28-day statutory period to make a decision on consent and conditions and advise the NHVR.¹³⁵

Road managers would be required to give a decision of: yes (with or without conditions) or no (with a statement of reasons).

If the road manager failed to advise that a route assessment was required (within 7 days) or failed to make a decision within the 28-day period, the NHVR would deem the road manager to have referred the access decision and forward the request to the road authority (considered a deemed referral). The NHVR portal would send an automatic notification to the applicant advising them the application was referred due to a nil response by the road manager.

The same timeframes would apply to the road authority to make a decision. The decision of the road authority would be binding and replace any decisions of the road manager. If the road authority failed to make a decision within 28 days, the decision would be considered a deemed refusal. Further information on a deemed refusal is contained in Box 31: below.

This approach shortens the time to determine whether a route assessment is required. It also addresses the decision-making process failure caused by a nil response.

- Option 2: Varying timeframes for different vehicle categories — This option has two statutory timeframes to acknowledge the risk and complexity of different applications. A 28-day statutory timeframe would be imposed on OSOM or exemption category access applications (including deemed refusal for a nil response) and a 7-day statutory timeframe would be imposed on freight and passenger vehicles or authorisation category access applications (including deemed refusal for a nil response).

Both options are dependent on the NHVR portal accurately capturing the various decision dates of an application. The portal would also need to be capable of automatically refusing the application and notifying the applicant of the deemed refusal.

Changes to the statutory timeframe and introducing a deemed referral and/or deemed refusal mechanism would provide applicants with certainty about how long their application would take and provide a clear end after this period elapses.

Box 31: Deemed refusal

If a decision is not made by the road authority within the statutory timeframe, it would be considered a deemed refusal. The portal would send an automatic notification to the applicant advising the application has been refused due to a nil response by the road authority.

A deemed refusal with the ability to seek an external review would reflect the approach used in land use planning. This is a concept that state and local government is familiar with. For example, section 8.11 of the *Environmental Planning and Assessment Act 1979* (NSW) provides that if an application is not determined within the period prescribed by regulation then the application is taken to have been refused. Periods range between 40, 60 and 90 days.

¹³⁵ For example, if the road manager advised the applicant that a route assessment was not required on day 3, they would have 25 days to make their decision.

9.6.3 Review of access decisions (Option 9.3b)

Under the current law only access decisions made by the NHVR are subject to an appeal (external review)¹³⁶. Decisions by road managers are not (see Box 32: for further details on judicial and administrative reviews).

Option 9.3 would enable an applicant to have their access decision reviewed by a third party. This third party could be either:

- **Option 1: An independent review panel —** The independent review panel could review deemed refusals only.¹³⁷ The panel would comprise qualified personnel and a council member and would be led by the NHVR. The panels would either be established in each jurisdiction, or as a national panel (similar to the PBS panel). There would need to be a time limit for an applicant to seek a review. This could be similar to land use planning law which requires appeals to be made within 6 months of a deemed refusal or decision. The law would provide clarity around how this time is counted. The independent review panel would perform a technical assessment of the application and provide a recommendation within 28 days. The recommendation of the independent review panel would be published. This recommendation would *not* override the road manager's decision. The law would require the road manager to make their decision in light of the independent review panel's recommendation.
- **Option 2: Referral to an existing jurisdictional tribunal or court —** This option involves expanding the current administrative (merits based) review process to include access decisions (not deemed refusals), including those by road managers and road authorities. This would allow applicants to seek external merits review of decisions by road managers at their state or territory's tribunal or court. The decision of the tribunal or court would replace the decision of the original decision-maker. The appeal could result in a different finding of fact and a different decision. The applicant would be required to pay any costs involved with seeking an external merits review. The road manager or road authority would also be responsible for costs.

Irrespective of which approach is adopted, these options would also maintain the current administrative and judicial appeal avenues.

Box 32: Administrative and judicial review

It is common for decisions made by government entities to be subject to administrative and judicial review.

Administrative reviews may be subject to both internal and external review on the merits. This means that the original decision can be replaced by a new decision by the reviewer.

Judicial review involves a review about whether the decision has been made as required by law. Judicial review can be an expensive and uncertain process.

The HVNL does not expressly recognise judicial review of decisions, however common law and state and territory legislation may allow for judicial review. This is an option that is available to applicants, however it is not known whether this has ever been exercised.

¹³⁶ The NTC understands around 4 per cent of access decisions are refused. In 2019 there were around 39,000 granted or refused applications, meaning that around 37,500 access decisions were granted and 1,500 refused. This means that in 2019 it could have been possible for up to 1,500 decisions to be reviewed externally, although it is unlikely that all would be appealed.

¹³⁷ A review of a deemed refusal would not involve an application fee. A review of a general refusal would involve an application fee to ensure only genuine reviews are progressed.

9.7 Increasing the responsiveness of access decision-making (Option 9.4)

9.7.1 What is the problem?

The framework for access decision-making is set out in the HVNL itself (Part 4). Changes to decision-making therefore require changes in the law which commonly involves long lead times and delays (see further discussion in section 5.2). For example, many policy issues raised during maintenance cycles usually take several rounds of drafting and consultation before they become law. If this does not align with the Council's bi-annual meeting cycle, this can further delay the process.

9.7.2 The option

Option 9.4 involves the access decision-making process being moved from the primary legislation to regulations or standards. This would allow the process to be responsive to changes while maintaining oversight. The regulations or standards would be called up in the law. This would allow refinement as needed while maintaining ministerial oversight. This option would rely on the reforms considered in Chapter 5 being progressed.

The regulations or standards would contain decision making processes (including roles and responsibilities of parties) and considerations for access (including a requirement to consider productivity, safety, infrastructure, amenity or the environment and perform a comparison against general access vehicles and any existing notices).

It is expected that the 'NHVR Approved Guidelines for Granting Access' would be further developed into a regulation or standard.¹³⁸ These guidelines are currently referred to in the HVNL and need to be considered when making access decisions.

9.8 Pilots and escorts (Option 9.5)

9.8.1 What is the problem?

Under the base case an OSOM vehicle is a heavy vehicle that, together with its load, does not comply with an applicable prescribed mass requirement. Undertaking OSOM movements within Australia sometimes requires traffic management and increased safety measures that assist with progressing the OSOM movement from origin to destination while managing traffic and safety risks. This includes the use of pilots and escorts that work together to manage traffic both ahead and behind the OSOM vehicle.

In Australia, each state and Territory has different requirements for pilots and escorts required for OSOM movements.

A pilot vehicle is used to advise other road users of the oversize vehicle or combination being used on the road, to assist with the safe movement of the vehicle or combination. The roles and responsibilities of heavy vehicle pilots are currently regulated by state and territory road authorities.¹³⁹

¹³⁸ National Heavy Vehicle Regulator, 2019a, *Approved Guidelines for Granting Access*.

¹³⁹ National Heavy Vehicle Regulator, 2018b, *Pilots and escort training and recognition*.

Pilot accreditation is not a requirement in the Australian Capital Territory, New South Wales or South Australia. Pilots in Western Australia must complete the Western Australian Heavy Vehicle Pilot Licence course.¹⁴⁰

The Northern Territory, Queensland, Tasmania and Victoria have adopted a two-tier system that provides two levels of pilots—in Queensland this is for both pilots and escorts—with different levels of requirements and qualifications.¹⁴¹

An escort is authorised to direct traffic under Australian road law. Escort roles are performed by different authorised entities, depending on the jurisdiction in which they are operate. In some jurisdictions, the role of a heavy vehicle escort can include an authority to direct traffic.¹⁴²

Problems

Although national units of competency for both pilots and escorts exist, states and territories have different training and accreditation requirements for pilot and escort vehicle drivers, yet there are no formal arrangements to recognise driver accreditation when loads are moved across state and territory borders.¹⁴³

The OSOM review, conducted in 2018¹⁴⁴, identified problems with respect to jurisdictional consistency and harmonisation of regulations. As an example, an interstate OSOM movement from Brisbane to Adelaide would impose four different requirements on that movement - in Queensland, 2 escorts and a police escort, in NSW, 2 pilots and police would be notified, in Victoria, 3 certified pilots and in SA 2 pilots would be required in country areas. These inconsistencies mean a major cost component of OSOM movements is the escort, not the cost of the actual OSOM movement.

The OSOM review contained three relevant recommendations pertinent to this HVNL review:

- Recommendation 17 - Transport and Infrastructure Council agree to implement harmonised national standards for pilot and escort vehicle arrangements.
- Recommendation 18 - Transport and Infrastructure Council agree to harmonise inconsistencies around accreditation for Pilot drivers by 2020.
- Recommendation 19 - Transport and Infrastructure Council agree to simplify pilot and escort process to remove layers to the consent process. NHVR, Department of Transport and Main Roads and Queensland police to undertake a process improvement project.

9.8.2 National Operational Accreditation Scheme (single-tiered pilot approach) (Option 9.5a)

The first option is for the HVNL to establish a nationally harmonised pilot and escort accreditation scheme to be administered by the NHVR. The approach for pilot competency would be based on the single tier Western Australian model. The Western Australian approach requires the driver to hold a heavy vehicle pilot licence. The licence is granted if the driver:¹⁴⁵

¹⁴⁰ *ibid.*

¹⁴¹ *ibid.*

¹⁴² *ibid.*

¹⁴³ *ibid.*

¹⁴⁴ Department of Infrastructure, Regional Development and Cities, 2018, *Review of Oversize Overmass (OSOM) Access Arrangements*.

¹⁴⁵ Main Roads Western Australia, 2020, *Heavy Vehicle Pilots*.

- applies and pays for the licence
- holds an open driver's licence
- passes an Assessment of Fitness to Drive for Commercial Drivers examination, and
- passes a Western Australian Heavy Vehicle Pilot training course from a registered training provider.

This single-tier approach would involve developing training competencies. Training competencies would be established using the Western Australian accreditation pilot category. This would allow for a proven accreditation methodology to be applied broadly and simply with minimal implementation delay.

Exemptions from pilot accreditation for some types of oversize movement is important and would be provided. The predominant type of movement that is relevant is wide agricultural equipment. This equipment is normally driven or towed by road between farm gates for short distances in rural areas.

Jurisdictions would individually specify who is authorised to operate as an escort, the options being:

- the state or territory's police officers (current status of the law)
- the state or territory's road authority transport inspectors (current status of the law)¹⁴⁶
- an authorised officer as defined in the HVNL only while operating as an escort (option).

9.8.3 National Operational Accreditation Scheme (dual-tiered pilot approach) (Option 9.5b)

The second option is for the HVNL to establish a nationally harmonised dual-tiered pilot and escort accreditation scheme to be administered by the NHVR.

A **tier 1 pilot** would be suitable for accompanying 'small' oversize loads (e.g. 3.5m to 4.5m wide) or assisting Accredited Pilots who are accompanying 'small to medium' oversize loads (e.g. 3.5m to 5.5m wide). Registered Pilots be required to successfully complete competency-based assessments.¹⁴⁷

A **tier 2 pilot** would be suitable for accompanying 'small to medium' oversize loads (e.g. 3.5 to 5.5m wide) or assisting Escorts accompanying 'large' oversize loads (e.g. greater than 5.5m wide). Accredited Pilots would be required to successfully complete competency-based assessments.¹⁴⁸

Exemptions from pilot accreditation for some types of oversize movement is important and will be provided. The predominant type of movement that is relevant is wide agricultural equipment. This equipment is normally driven or towed by road between farm gates for short distances in rural areas.¹⁴⁹

Jurisdictions individually specify who is authorised to operate as an escort, the options being:

- the state or territory's police officers (current status of the law)
- the state or territory's road authority transport inspectors (current status of the law)¹⁵⁰
- an authorised officer as defined in the HVNL only while operating as an escort (option).

¹⁴⁶ Department of Infrastructure, Regional Development and Cities, 2018, *Review of Oversize Overmass (OSOM) Access Arrangements*.

¹⁴⁷ Austroads, 2013, *Harmonisation of Pilot and Escort Vehicle Driver Requirements*.

¹⁴⁸ *ibid.*

¹⁴⁹ Austroads, 2015, *Harmonisation of Pilot and Escort Vehicle Driver Requirements: Stage Two*.

¹⁵⁰ Austroads, 2013, *Harmonisation of Pilot and Escort Vehicle Driver Requirements*.

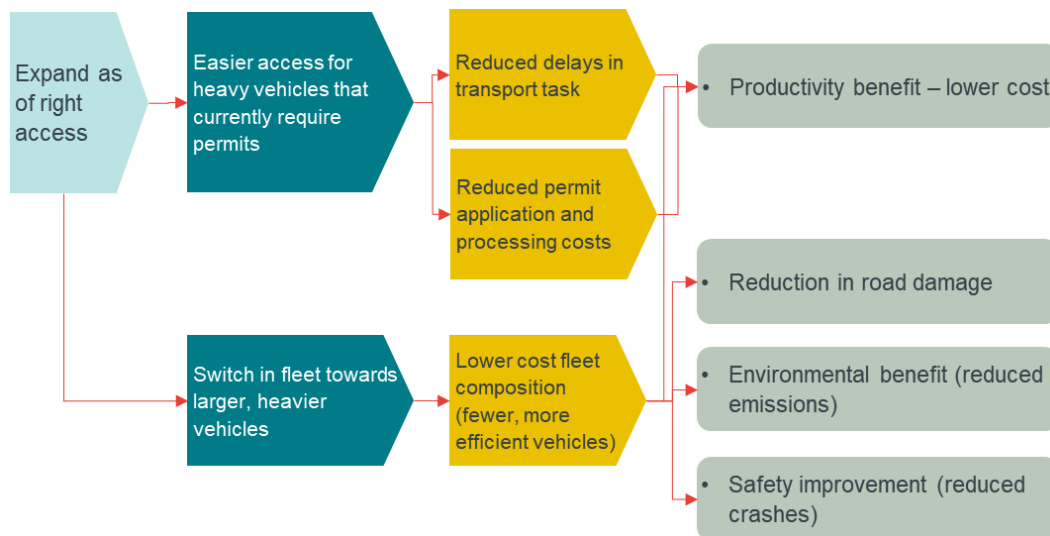
9.9 Impact assessment

9.9.1 Expand as of right access (Option 9.1)

Benefits

The generalised expected benefits of expanded as of right access are highlighted in **Figure 17**.

Figure 17: Overview of benefits from improved as of right access for heavy vehicles



There are a number of key benefits from measures that result in easier access, as of right, for heavy vehicles (not already receiving concessions under the NHVAS):

- Reduced compliance burden for operators of vehicles that (under the base case) would otherwise have to apply for a permit or notice or seek accreditation,
- Reduced administrative burden on road managers that would otherwise have to process these applications and grant permits.
- Improved operational efficiency as operators would have incentives to switch towards longer vehicles that can safely carry more mass and no longer need permits to achieve general road access.

The key relationships that determine the quantum of benefits are:

- The extent to which applying for permits and authorisations impose administrative and compliance costs on jurisdictions and operators.
- The extent to which delays in the granting of access have significant impacts on the transport tasks (including downstream impacts).
- The extent to which vehicle choice is presently constrained by the desire to avoid permits and authorisations.
- The increases in capacity that would result from higher mass and dimension limits being available, relative to vehicles that can already obtain general access, and the reduction in the vehicle fleet that would result from this higher capacity (given the need to deliver a certain transport task). Which would in turn lower vehicle operating costs.

- The relationship between the reduction in the number of vehicle kilometres driven and (i) road damage (ii) incidence and cost of crashes and (iii) emission of pollutants.
- The rate at which existing smaller fleet would be retired and replaced by newer higher productivity vehicles.

At this stage, we have not attempted to determine a quantitative estimate of the expected benefit, as it is potentially complex. However, we note that the benefits are potentially large as for common vehicle combinations, the increase in mass limit is 5% of mass, while the increase in vehicle length would allow for an increase in carry volume of around 10%.

Sub-option specific costs and benefits

There are few observable costs from the proposed changes. We note that:

- Option 9.1a imposes no costs on operators, and the only potential risk appears to be that more vehicles operating at CML may impose costs in the form of road damage, crashes or public amenity that would not arise if the majority of vehicles were limited to current GML. Broad application of CML may, however, require a further assessment of the road network capability to accommodate the higher limits. This reflecting that increased access is also an engineering issue of network capability.
- Option 9.1b creates a burden on operators to “enrol” with the HVNR to obtain access at CML. The costs and benefits associated with enrolment are discussed in section 7.2.2.
- Option 9.1c would require vehicles to obtain OBM systems, which are estimated to cost between \$1,000 to \$1,500 per axle group.¹⁵¹ Other products offered under the NTF such as the Telematics Monitoring Application or the RIM applications could also be considered to provide data. A proportion of vehicles are likely to already have OBM or similar systems installed and could immediately benefit from CML with no further cost. However, this sub-option would provide some additional benefits as it would enable road managers and road authorities to benefit from aggregated or de-identified data on usage of their network. Similarly, the regulator would benefit from detailed mass records as this would highlight compliant and non-compliant operators. It is unknown how many vehicles would opt into this option to receive additional mass, and it is likely to differ over time. Using the IAP as an indication, approximately 5 per cent of heavy vehicles have the IAP installed, either voluntarily or as a condition of access. However, as the vehicle fleet turns over, the incremental costs of OBM are likely to be very small increasing the likelihood that OBM would be installed.
- Option 9.1d – would impose no net cost on operators (who would be able to decide whether the additional meter provides value to their operations) and appears unlikely to impose material costs in relation to road damage (which is more a function of mass) or incidence or severity of crashes. However, the benefits will vary depending on which sub-options is progressed. Increasing the general access length for all vehicles, with no requirement for additional safety features, (sub-option 1) will likely result in more vehicles taking up this option. This in turn will drive greater productivity or efficiency benefits relative to the other sub options. If the additional meter is instead limited to vehicles with specific safety features fitted (sub-option 2) then fewer operators may choose to take up this option which will lead to reduce productivity benefits. However, this may drive additional road safety benefits. If additional space is provided for more combinations of restricted access vehicles for the sleeper cabin, then there will be no direct productivity or efficiency benefits, however, some safety benefits may result.
- Option 9.1e is effectively a hybrid option that has components of the other options in 9.1 and so offers a similar profile of costs. The imposition of additional safety and other requirements would

¹⁵¹ Type approval is the process that TCA uses to determine whether an OBM system meets the functional and technical requirements set out in the *On-Board Mass System Functional and Technical Specification*.

reduce the risk of increases in road damage or costs from vehicle crashes. However, administering a new system would add to compliance costs for government and for industry.

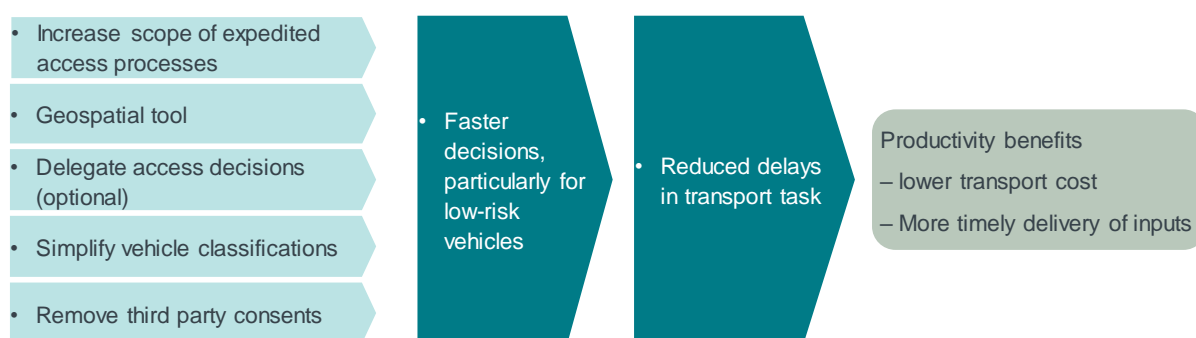
9.9.2 Improving the efficiency of the decision-making process for authorising access (Option 9.2)

Benefits

The immediate process benefits expected from this package of sub-options are (see **Figure 18**):

- The framework would support a transition towards a more network (notice)-based heavy vehicle access environment and move away from the current over-reliance on permits.
- Faster access decisions, particularly for equivalent or lower risk permits
- An increase in the consistency of decisions for equivalent or lower risk permits, and
- More resources devoted to higher-risk access requests.

Figure 18: Overview of expected benefits



Information from industry suggests the potential benefits from reducing delays could be material. The Australian Trucking Association estimates that the trucking industry could waste up to 4.5 million days per year waiting for permit decisions.¹⁵² For example, it can take more than 80 days to get a permit to transport OSOM steel products on tollways in Melbourne.¹⁵³ Most of the delay results from the various approval processes not working in parallel.¹⁵⁴

The benefits of more timely and better access decisions will be further increased if, as expected, some road managers elect to delegate some access decision-making; the geospatial mapping option is linked to the issuing of repeat and low risk permits; and through the possible removal of third-party consents.

The primary benefit of option 9.2d is that it would enable the permissioning process to focus on higher risk vehicles - either OSOM, or existing class 2 vehicles depending on which specific option is preferred. Benefits would arise from the more timely treatment of the lower-risk vehicle class. It would also reduce the number of permits that an operator needs to apply for and the number of notices that currently exist. This would reduce costs for both industry and the regulator.

¹⁵² Australian Trucking Association, 2018, *Inquiry into impediments to business investment*, p. 6.

¹⁵³ Deloitte, 2019, *Economic benefits of improved regulation in the Australian trucking industry*.

¹⁵⁴ *ibid*, p. 31.

As identified in Section 9.1, estimates of waiting times for permits indicate that in total around 600,000 days are spent awaiting a permit decision. While the objective of reform is not to reduce this number to zero, more reasonable targets of 28 days for new applications and 7 days for repeat and lower risk permits could result in around 100,000 fewer days of waiting time.

Two options are proposed for third-party consents (9.2e). Under the first option, consents are removed entirely which would reduce compliance burdens and reduce possible delays where nil responses would otherwise be received. A second option would be to explicitly move third party consents into access decision making, which would impose the same statutory timeframes on third parties, provide a deemed refusal if no response and ability to seek review of decision, would encourage third parties to respond within timely manner. Third parties would not have the same powers as a road manager but would have similar timeframes to respond.

The benefit of option 9.2f is that it would allow road managers to make access decisions that include consideration of whole-of-network impacts and strategic network management issues to deliver better safety and transport efficiency outcomes.

Costs

Options 9.2a, 9.2b and 9.2e are not expected to impose any (non-trivial) cost as the changes are largely procedural. They do not appear likely to impose greater risks or costs on any party.

Option 9.2c would require significant investment to establish and maintain a geospatial tool of routes, including linking past access decisions to routes. Once the system was in operation it would require training of users to ensure information is entered frequently and accurately. This option has not yet been costed but could also be deployed in stages which could spread the cost over a number of years.

Option 9.2d is a classification change but may require some resources to re-assess existing notices and permits to reflect new vehicle categories and to update the current IT arrangements. Education and information would need to be provided to road managers on these new permit categories. This is not expected to be material and would be coupled with an education campaign to explain all the new sections and processes under the new HVNL.

It is acknowledged that changing third-party consents (9.2e) would carry with it risks of liability that would need to be managed. Asset owners may have particular claims if damage to their infrastructure results. Further, the sub-option which would explicitly move third-party consents into access decision making would impose some costs on these parties. Significant changes to the NHVR portal and Route Planner could be required if third parties needed to integrate with these systems under a new model. The NTC seeks further comments on the incremental costs that might be expected with this change (those costs additional to current costs incurred).

While there may be little direct cost with option 9.2f, it would be complex for all road manager to make access decisions that include consideration of whole-of-network impacts and strategic network management issues. This could make deemed refusals more likely and it could result in reduced access where that may not be justified. This risk needs careful consideration along with whether this could be effectively managed through the use of guidelines or directions to prevent misuse or unintended consequences.

9.9.3 Amendments to permit timeframes and reviews (Option 9.3)

Benefits

The primary benefits associated with the options 9.3a and 9.3b are expected to be that:

- There would be a reduction in delays associated with the issuing of permits. This would have flow on effects. Notably it would reduce delays in the transport task and improve efficiency of the downstream supply process. This benefit will be more material for downstream functions that are more time-sensitive.
- The benefits would be greater under Option 2 under 9.3a (which for lower-risk freight and passenger vehicles limits timeframes to 7 days rather than 28). However, the extent of this benefit is difficult to measure because the delay in permit issuance may be effectively planned for in certain instances, minimising the cost of the delay.
- The benefits associated with a review of access decisions, together with deemed referrals and refusals, are that:
 - it could result in a reversal of decisions not to grant access where access is justified (benefits outweigh costs) and
 - it encourages road managers to make more timely decisions, as there is currently little disincentive to delay decisions.

Costs

There would be few direct costs from this option, as it largely involves changes in timeframes and optional reviews of decisions where the costs of seeking review are borne by the applicant. For reviews, costs will be sensitive to the number of reviews sought, and the type of review. Currently, 4 per cent of access applications are refused, but it is unknown how many would be sought to be overturned.

Legal reviews involving state or territory courts would potentially involve material costs for road managers and applicants. However, the threat of review may be sufficient to drive faster and better decision-making, meaning the actual costs incurred in reviews may be quite small.

Reviews by an independent panel led by the NHVR would likely result in lower costs as it would not invoke legal processes and would produce only advisory rather than binding decisions. The lower costs might mean that more reviews of decisions are sought, but this could also be offset by the lower expected benefit (as the recommendation cannot bind the road manager).

Before these review options are recommended, a further analysis of appropriate bodies and likely costs of such bodies will need to be undertaken.

9.9.4 Increase the responsiveness of access decision-making (Option 9.4)

Benefits

The primary benefit of this option is that it would allow for changes to the access-decision making framework to be more responsive to changes in matters such as technology. Arguably, some of the current issues experienced with the HVNL relating to access could be addressed more quickly through changes in regulations, which would require the approval of Ministers (section 730) but not the approval of jurisdictional parliaments. For example, changes to access decision-making timeframes could be better tailored to the particular type of approval or permission that is required.

Costs

There would be few direct costs associated with this option. Any costs are likely to arise from reduced parliamentary (as opposed to Ministerial) oversight of access provisions set out in the HVNL.

9.9.5 Pilots and escorts (Option 9.5)

Benefits

The benefits of a national scheme are primarily that it would reduce the complexity inherent in having multiple jurisdictional-based schemes. As for other regulations, the primary compliance burden is on operators that operate in multiple states or wish to complete OSOM journeys across jurisdictions.

Costs

The proposed options would involve costs for developing and running the national scheme.

The costs associated with the proposed options are likely to relate to developing training competencies suitable for use in all jurisdictions. However, these costs are not expected to be material given the existence of schemes in jurisdictions already, which could be adapted under either the single or dual-tiered pilot approaches.

9.10 Summary of assessment

All the options assessed in this chapter could be progressed in isolation or in combination as they do not rely on one another. With the exception of some sub-options presented, they are not alternatives.

It is likely that the sub options in 9.1 relating to changes to general access limits (mass and dimension) will deliver net benefits. There would appear to be merit in further investigating which of the sub-options would deliver the most benefits and stakeholder views are sought on this issue.

With respect to option 9.1a, a key unknown is the potential impact on road damage and the risk of crashes associated with more vehicles operating at CML rather than GML. With respect to option 9.1b the key area of uncertainty is the degree to which enrolment delivers benefits to the regulator (which is discussed further in section 7.2.2). While for option 9.1c, the key uncertainty is whether road managers, road authorities and the regulator would benefit from aggregate or de-identified data on usage of the network to the degree that this would offset the cost of OBM systems. Option 9.1e is an option that would appear to deliver many of the benefits of the other options and reduce the risk associated with increased mass and dimension limits. However, it would impose an additional regulatory layer on what is already a complicated framework.

Options 9.2a, 9.2b, 9.2d and 9.2e which include measures for improving the efficiency of the decision-making process for authorising access would all be likely to be of net benefit. This is on the basis that the costs of these options are minimal. Depending on the cost of option 9.2c which proposes the establishment of a geospatial map, it is also likely to be of net benefit. These sub-options can be implemented as a package of measures. The net benefit of option 9.2f will depend on how the discretion afforded to road managers regarding access decisions is used.

Similarly, options 9.3a and 9.3b, which involves changes in timeframes and optional reviews of decisions, would appear to be of net benefit for the same reason. Namely, it may deliver some benefits and impose few direct costs. The key cost uncertainty is the establishment and operation of review panels or additional court or tribunal burdens.

Option 9.4 which would move access decision-making process from the primary legislation to regulations or standards would allow the process to be responsive to changes in the operating or legislative environment. The benefits of this adaptability are discussed in section 5.4.5 and the same conclusions would apply here.

Option 9.5 would move towards more nationally consistent regulation of pilots and escorts. As with other reforms of this kind, the benefits of reduced regulatory fragmentation (mostly in the form of avoided compliance burden) must be weighed against mostly transitional costs associated with developing a national scheme. Net benefits are likely given the existing availability of pilot and escort competency schemes already in place in jurisdictions.

Table 10: Impact of access options

Option	INDUSTRY		GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Enforcement and compliance costs	Changes in road infrastructure damages	Change in costs associated with vehicle crashes
9.1 Options to enhance general access					
9.1a Mass from GML to CML	Nil	5% increase in allowed mass reduces number of trips required and vehicle kilometres driven.	Nil	Unclear. Heavier vehicles can increase road wear and damage costs on a per km travelled basis. Cost depends on axle loading, pavements and other factors. However, fewer movements will mean reduced damage if +ve relationship between vehicle kms and costs of road damage.	Unclear. Heavier vehicles can increase costs of crashes. However, fewer movements will mean reduced crashes if +ve relationship between vehicle kms and crashes.
9.1b Mass to CML on enrolment with NHVR	Costs of enrolling, maintaining enrolment.	5% increase in allowed mass reduces number of trips required, vehicle kms (fewer vehicles benefit compared to (a)).	Costs of administering enrolment system.	As above.	As above.
9.1c Mass to CML if on board mass installed	Costs of installing OBM equipment, if not already installed.	5% increase in allowed mass reduces number of trips required, vehicle kms (fewer vehicles benefit compared to either (a) or (b)).	NHVR incurs some costs to monitor whether only vehicles with OBM obtain CML.	As above. Additionally, improved ability to monitor routes and avoid damage.	As above.
9.1d Increase in allowable vehicle length – Option 1 All vehicles	Nil.	Estimated that allowing an extra metre for a general access would allow a 10 per cent increase in volume per trip, resulting in fewer trips needed. ¹⁵⁵ Reliant on investment in longer vehicles and “as of right” access for PBS vehicles at this length. This cost can be assumed to be outweighed by efficiency benefits as otherwise operators will not seek to increase vehicles lengths.	Nil.	No change expected. Road managers have already allowed General Access for 20-metre PBS combinations.	Change in fleet composition will reduce trips needed, reduced crashes.

¹⁵⁵ Advantia, 2019, *The case for the PBS 20-metre semi-trailer*.

Option	INDUSTRY		GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Enforcement and compliance costs	Changes in road infrastructure damages	Change in costs associated with vehicle crashes
9.1d Increase in allowable vehicle length – Option 2 Vehicles with safety features	Safety features would require some certification / approval.	As above. But fewer vehicles may benefit if safety requirements are costly.	Costs of administering certification / approval.	As above.	As above. Potentially offers a higher level of safety as ensures all vehicles have safety features.
9.1d Option 3 – Increase in allowable vehicle length for some RAVs for additional sleeper cabin only	May require some certification / approval.		Possible costs of administering certification / approval.	As above.	As above. Potentially offers a higher level of safety as helps address fatigue risk. But will depend on uptake.
9.1e Introduction of enhanced general access category	Compliance costs associated with qualifying for enhanced general access.	As above. Fewer vehicles may benefit if safety and other requirements are costly.	Costs of developing and administering new system.	Potentially mitigate any additional road damage from higher mass.	Potentially offers a higher level of safety as ensures enhanced vehicles have safety features.

9.2 Options to increase authorisation efficiency

9.2a Recognise precedent and expand expedited process for equivalent/lower risk applications	More consistent decisions and simpler vehicle classifications reduce compliance burden.	Faster access decisions, particularly for renewals / lower risk, with associated productivity benefit.	Reduced permit approval burden.	No change.	No change.
9.2b Allow for opt-in road manager delegation	As above. Dependent on whether opt in occurs.	As above. Dependent on whether opt in occurs.	Allowing delegations would likely reduce costs.	No change.	No change.
9.2c Geospatial map given authority in the law	Significant reduction expected.	Significant reduction expected.	Costs of establishment would be significant.	No change.	No change.
9.2d A risk-based approach to vehicle classes – Option 1 – Freight and passenger, OSOM	Simplification expected to reduce costs.	Simplification expected to reduce costs.	Upfront cost to agree and implement changes to classifications, ongoing benefits from simpler authorisation process.	No change.	No change.

Option	INDUSTRY		GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Enforcement and compliance costs	Changes in road infrastructure damages	Change in costs associated with vehicle crashes
– Option 2 – Existing authorisation category, exemption categories					
9.2e Amendment to third party consent requirements – Option 1 – Remove third party consents – Option 2 – Capture third parties in access decision making	No change.	Reduced delays in permit decisions would improve efficiency.	Unclear. Would likely increase responsiveness of third parties but potentially impose cost - would carry with it risks of liability that would need to be managed.	Unclear. May increase risk of inappropriate access where third party is assumed to have provided consent.	No change.
9.2f Amendments to access decision-making criteria - network management	Risk that will delay access decision making.	Unclear - may reduce access but could also enhance network efficiency.	No change.	May improve ability of road managers to take account of broader strategic network access concerns.	

9.3 Options to increase efficiency - timeframes and review

9.3a Statutory timeframe, deemed referral and refusal for nil response - Option 1: standard timeframe of 28 days - Option 2: varying timeframes for risk	No change.	Potential for reduction in delays associated with the issuing of permits from clarity of decisions.	Unclear. May impose some increased cost to meet statutory deadlines.	No change.	No change.
9.3b External review of access decisions - Option 1 – Independent review panel - Option 2 – Referral to an existing tribunal or court	Potential increase related to challenge of decisions.	As above. Where decisions are overturned may result in benefits from increased access.	Increase in costs to set up and operate review panel, and/or further tribunal/court funding. Increase in legal or other costs for road authorities to defend decisions.	No change.	No change.

Option	INDUSTRY		GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Enforcement and compliance costs	Changes in road infrastructure damages	Change in costs associated with vehicle crashes
9.4 Move access decision-making process from primary legislation to regulations or standards	No change.	Access framework should become more responsive to changes.	Fewer costs from parliamentary oversight of access provisions.	No change.	No change.
9.5 Pilots and escorts simplification					
9.5a National scheme – single tiered pilot	Reduction in compliance costs for national operators, interstate traffic.	Lower cost OSOM movements.	Some upfront cost, offset by regulatory simplification and consistency.	No change.	No change.
9.5b National scheme – dual-tiered pilot	As above Dual tiering may have lower costs for smaller movements.	As above.	As above.	No change.	No change.

9.11 Questions for stakeholders

- 9.1. Is it reasonable to increase mass and dimension limits for general access? Under option 9.1, which sub-option would be the preferred way to increase mass and dimension limits?
- 9.2. Under sub-options 9.1a to 9.1c, how much would an increase to CML reduce to need to apply for permits?
- 9.3. Under sub-option 9.1c, would the benefits of CML outweigh the costs of OBM for operators? Would the data provided by OBM systems provide regulators and road managers with the right information to make investment and planning decisions?
- 9.4. Under sub-option 9.2a, what would be the costs and benefits of a precedent approach for operators and road managers?
- 9.5. Would road managers exercise the delegation power proposed in option 9.2b? Why or why not?
- 9.6. Would operators benefit and use a geospatial map as proposed in option 9.2c? What would be the costs for road managers to input the data and keep it updated?
- 9.7. Under option 9.2d, which option would make it easier to adopt a risk-based approach to vehicle classification?
- 9.8. Under option 9.3a, which option would provide more transparent, quick and cost-effective decisions?
- 9.9. Under option 9.3b, which option would provide the right level of review? Would operators and road managers spend time and money seeking an external review?
- 9.10. Would the structure proposed in option 9.4 be responsive to future changes?
- 9.11. Would a single or dual-tiered pilot approach be preferred under option 9.5?
- 9.12. Are there other costs or benefits that we should consider in the impact assessment?
- 9.13. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 9.14. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.

10 SAFER VEHICLE DESIGN

As described in Chapter 9 there is the potential for productivity improvements to be driven by enabling more efficient higher productivity vehicles on to the road.

A safe vehicle is one that is registered, roadworthy and safely loaded. Key current mechanisms in place to achieve this include the Australian Design Rules (ADRs), vehicle standards and mass, dimension and loading regulations. The mechanisms are intended to ensure that heavy vehicles are fit-for-purpose to operate on the road network.

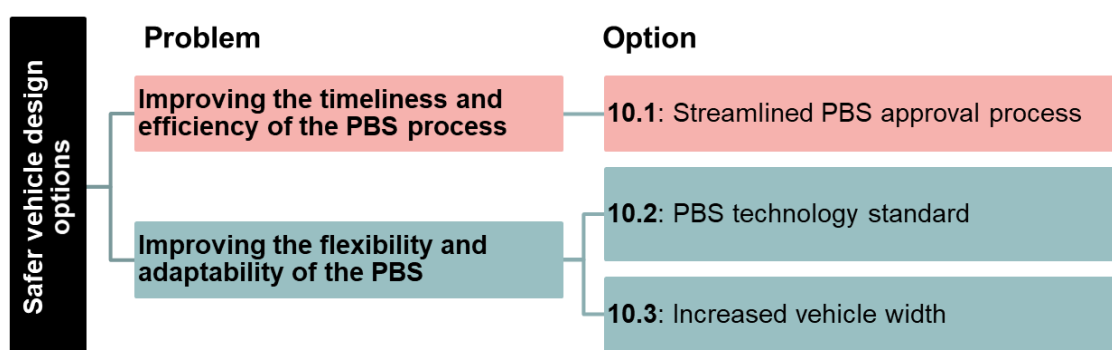
A further relevant mechanism in the HVNL is the Performance-Based Standards (PBS) scheme. This scheme provides for the use of heavy vehicles on Australian roads that do not comply with the relevant ADRs, vehicle standards or mass, dimension and loading regulations. Essentially the purpose of the PBS scheme is to make freight transport safer and more productive, while minimising the impact of freight movement on the environment and society.

PBS approval requires that a vehicle be tested against stringent safety and infrastructure standards to ensure they fit the existing road network and are safe. The scheme has been in operation since 2007.

The basic principle of the PBS scheme is matching the right vehicles to the right task.

The options set out in this chapter and how these relate to identified problems are summarised in **Figure 19**. These options can be pursued as a package or in isolation.

Figure 19: Summary of options relating to safer vehicle design



**base case not included in regulatory options*

10.1 The base case for the assessment

The base case for this assessment is that the PBS scheme continues to operate as presently enabled under the HVNL. A PBS permit is required on or off the PBS network for vehicles that do not comply with the relevant ADRs, vehicle standards or mass, dimension and loading regulations.

Under the current PBS scheme, there are 16 safety standards and four infrastructure standards. These are broadly classified into four categories as shown below.

- Powertrain – specifies engine and acceleration requirements.

- High Speed – stability, roll over and rearward amplification.
- Low Speed – swept path, frontal and rear swing requirements.
- Infrastructure – bridge and pavement requirements and maximum axle group mass limits.

A vehicle's performance results against these standards determines the vehicle's network access. Key to this process is the PBS Review Panel. This panel is responsible for determining whether or not a vehicle meets the performance-based standards.

The scheme is voluntary and sits alongside the long-standing prescriptive regulatory system for heavy vehicles. In accordance with the HVNL the NHVR administers the scheme. Approximately 1,600 operators and 6,000 vehicle combinations participate in the PBS scheme¹⁵⁶.

After an operator has successfully sought design and vehicle approval in the PBS process, they need to apply for an access permit through the NHVR. Permits are route and vehicle specific.

It should be noted that there is a PBS pre-advised design approval process for certain designs. This focusses on some of the well-known PBS designs and allows the NHVR to assess and issue a Design Approval without review by the PBS Review Panel.¹⁵⁷

10.2 Improving the timeliness and efficiency of the PBS process

10.2.1 What is the problem?

Stakeholders have indicated there are four key issues with current PBS processes.

First, the multi-step PBS approval process imposes high compliance costs – both in terms of dollars and time – on those seeking PBS vehicle approval. Particularly as a result of the following:

- Vehicle design application response: Although the NHVR has the expertise and technical capability to assess PBS applications, the HVNL requires that NHVR have regard to the advice of the PBS review Panel in relation to the application. It takes the Review Panel on average 25 business days to respond to design applications.¹⁵⁸
- Independent certification: The HVNL applies the PBS Scheme Vehicle Certification Rules which require that an independent certifier be appointed, which increases the time and cost associated with the PBS process. There is potential to streamline this process by allowing self-certification, subject to auditing.¹⁵⁹

Second, there is still a high degree of regulatory uncertainty regarding the ability to operate PBS-approved heavy vehicles because vehicle approval does not guarantee access. This uncertainty exists even where preliminary assessment of the operator's proposed route has been approved by the NHVR as this is deemed to be only indicative. Moreover, PBS vehicle operators need to set aside at least seven weeks (35 business days) to obtain an access permit.¹⁶⁰

The third issue relates to the transfer process for a PBS approved vehicle. At present, an entire PBS fleet may be under a single access permit. Where the fleet is transferred then the access permit can be transferred without road manager consent. However, where only part of the fleet is sold (for example, 5

¹⁵⁶ Fellows, Medlock and Associates, 2018, *Analysis of heavy vehicles safety accreditation schemes in Australia*, p. 21.

¹⁵⁷ For further details see National Heavy Vehicle Regulator, 2019d, *Updates to the PBS pre-advised design approval process*.

¹⁵⁸ National Transport Commission, 2017a, *Assessing the effectiveness of the PBS Scheme*, p. 20.

¹⁵⁹ National Heavy Vehicle Regulator, 2019c, *Performance Based Standards Scheme, Vehicle Certification Rules*

¹⁶⁰ National Transport Commission, 2018b, *Reforming the Performance-Based Standards scheme*.

of 50 vehicles) the new owner would be required to apply for a new access permit even if the routes use and masses carried are identical.

10.2.2 Streamlined PBS approval process (Option 10.1)

This option comprises five distinct elements with the intent of streamlining the PBS approval process.

NHVR is given the authority to assess and approve applications

The NHVR would be given the authority to assess and approve any application for a new or existing PBS vehicle design. Unlike current arrangements PBS designs and vehicles would not require approval by the Review Panel in all instances. For example, when the design is within certain limits of previously approved designs. The specifics of these arrangements would need to be worked through. The NHVR would be able to refer an application for a new vehicle design to a jurisdictional panel for technical advice if needed.

Linking access permissions to design

Under current arrangements a PBS vehicle can only seek provisional access to the road network before a vehicle is manufactured. This means industry face some uncertainty about whether they will be able to secure road access once the vehicle has been constructed.

This option proposes linking access permissions to an approved PBS design. PBS vehicles gaining access based on design could be subject to audit to ensure that the vehicle aligns with the approved design.

Manufacturers self-certify that the build is as per the design

A PBS Original Equipment Manufacturer approved by the NHVR will be responsible for ensuring compliance with an approved PBS design, allowing them to conduct necessary testing/certification of PBS vehicles without needing an independent certifier for each PBS vehicle variant.

To ensure consistency of both compliance and approach, an audit process would be established for PBS Original Equipment Manufacturers that self-certify their vehicles for compliance with PBS design approvals.¹⁶¹

Type approval of component vehicles

This element of the option is targeted at enabling greater flexibility in terms of fleet interchangeability where no additional safety risk is posed (e.g. swapping compatible prime movers). Under current arrangements PBS combinations of several vehicles (prime mover plus one or more trailers) are approved as a whole. This means substitution of one vehicle (say a trailer, or a new prime mover) requires a new application and then PBS approval and access approval for the 'new' combination. This option will allow for substitution of component vehicles that meet the design of the original component vehicle.

In practice this means a restructured approach to enable the approval of vehicle units with interchangeability of the component parts permitted in a combination.

Allow transfer of approvals with sale of a PBS vehicle

This element is to move towards a situation that, when a PBS vehicle is sold, the transfer includes not only their registration but also the PBS approval for the vehicle's use and access permits for use.

¹⁶¹ Under current arrangement the NHVR approves design and vehicle examiners, but not equipment manufacturers.

Additional elements which could form part of this option include removing the need for:

- Assessor and Certifier applications to go to the PBS Review Panel
- Assessor Accreditation Rules to be approved by Ministers
- Vehicle Certification Rules to be approved by Ministers.

The NTC would welcome comments on the optimal composition of this option.

10.3 Improving the flexibility and adaptability of the PBS

10.3.1 What is the problem?

The PBS scheme has not kept pace with current international standards, approved vehicles must still comply with smaller width dimension limits than permitted by international standards, limiting the use of safety equipment designed for these wider vehicles. In Australia width is limited to 2.50m, while in the USA this is 2.60m and in Europe maximum vehicle width is 2.55m for general freight vehicles and 2.60m for refrigerated trucks and trailers. Heavy vehicles built to European or US width standards cannot be directly imported into Australia. Instead they require manufacturers to design and construct narrower versions that meet Australian width requirements, which delays the availability of these technologies to the Australian market.

Furthermore, the PBS scheme does not recognise safety technology such as electronic stability control. Which could be considered when considering compliance with the static rollover requirements.

Box 33: Case Study: Hills Tankers' PBS vehicles

Hills Tankers are an enthusiastic user of A-double PBS vehicles for the fuel haulage market. However, they faced challenges in getting access to the network for these vehicles. Hills Tankers worked with the NHVR's Access Team and local road authorities to demonstrate that these PBS vehicles could safely operate without unacceptable damage to infrastructure. By collaborating with Roads and Maritime Services, NSW to trial their new A-Doubles from Port Botany through the Sydney city areas they obtained access for these vehicles at 81.5t gross combination mass (GCM). This provided a 30 per cent payload increase over prescriptive vehicles, with significant flow on benefits such as reduced fuel use, fewer journeys, reduced operational costs and lead time and other positive impacts on congestion, air quality, public health and emissions. It also provided increased fleet flexibility to the business with vehicles able to be reassembled as semitrailers, B-doubles or AB-triples as needed.

Source: NTC (2017), Assessing the effectiveness of the PBS Scheme

10.3.2 PBS technology standard (Option 10.2)

The creation of a PBS technology standard will allow for recognition of technology as an alternative means of complying with PBS scheme standards (both infrastructure and safety-related).

For PBS vehicle designers, this will mean that some aspects of vehicle performance could potentially be managed using technological means rather than conventional options. For example, electronic stability control / anti-rollover could be deemed to comply with the static rollover standard. In these cases, the approved technology would be added to an eligible list which would form an Appendix to the PBS scheme.

It would be made explicitly clear that if a vehicle only met the standard because of, for example, the use of electronic stability control, then that technology must be fitted and functioning at all times.

10.3.3 Increased vehicle width (Option 10.3)

The option focusses on aligning permitted heavy vehicle width in Australia with international standards. It would create a short-form PBS approval process for heavy vehicles whose only departure from the ADRs is that they exceed the permitted widths (i.e. 2.5m). These vehicles would receive NHVR approval for general access provided they meet the performance requirements of PBS Level 1 straight line tracking (2.9m) and complies with all other ADR requirements.

Box 34: Alternative means of increasing vehicle width

An alternative means of adopting international standards for heavy vehicle width would be to amend the Australian Design Rules. This is not an approach which could be addressed through the HVNL and hence is outside scope for this RIS. There would be value in exploring this option further, outside the RIS process.

A potential variant on this increased width option is for increased vehicle width to be linked to meeting newer safety standards (e.g. side-underrun, blind spot sensors, electronic stability control and anti-lock brake systems). The NTC would welcome submissions on how this option could work.

10.4 Impact assessment

It can be expected that an operator will only apply to the PBS scheme if the higher costs resulting from achieving and demonstrating compliance with the performance standards are likely to be offset by the ability to run more productive vehicles on a more extensive road network.

10.4.1 Streamlining the PBS approval process (Option 10.1)

The option is focussed on streamlining the PBS approval process through several smaller amendments to the PBS approval process.

The key implications of streamlining elements of the PBS approval process should be more timely PBS vehicle approvals. This option should, therefore, lower the administrative burden faced by operators seeking PBS approval and reduce administrative costs associated with the scheme as a reduced number of approvals will need to go through the PBS Review Panel.

This in turn may encourage a greater uptake of the PBS scheme which could lead to improvements in operational efficiency as more productive heavy vehicles are able to be utilised for the freight and transport task (the key driver for operators to go down the PBS vehicle route). There would be additional cost to industry related to the purchase of non-standard vehicles, however these costs should always be outweighed by efficiency gains as otherwise industry would not seek PBS approval.

It is likely this may also lead to improved road safety outcomes, if it results in increased uptake of new vehicles with more safety features.

10.4.2 PBS technology standard (Option 10.2)

This option, by enabling the PBS to recognise technology as an alternative means of complying with the PBS scheme standard, could be expected to lead to an increase in safety-related technology in PBS

vehicles. The impacts of this could be that heavy vehicles in the fleet become increasingly safer over time which may lead to fewer crashes.

It is possible that this option may encourage greater uptake of the PBS scheme, however, this would depend on the extent to which the PBS's inability to recognise technology is a limiting factor in certain vehicles getting approved. Stakeholder feedback is sort on this issue.

10.4.3 Increased vehicle width (Option 10.3)

This option is focussed on adopting an international standard regarding vehicle width. The implications of this option are that wider vehicles will be able to operate on the road network. There will be a greater ability for industry to buy standard heavy vehicles from abroad, e.g. the EU. This could reduce vehicle costs for the industry and/or the width of these vehicles may enable more productive vehicles to be used and therefore lead to improvements in operational efficiency. There may be a cost to industry of more non-standard vehicles, however, this would always be predicated on these vehicles providing efficiency gains to industry. Related to this, there could also be a reduction in the cost of second-stage manufacturing for imported vehicles requiring modification to meet Australian width requirements.

This option would also reduce the number of vehicles that need to go through the PBS process which could reduce regulatory administrative costs associated with assessing these options and reduce industry administrative costs associated with seeking PBS approval.

To the extent that the option results in newer vehicles with superior safety features being purchased by operators, this should result in reduced heavy vehicle crashes. However, it is possible that this option, which will lead to wider vehicles operating on the network, could increase the risk of crashes in sections of the network (especially where lanes are narrow).

10.4.4 Summary of assessment

All the options presented in this chapter could be progressed in isolation or in combination as they do not rely on one another. All the options seem likely to generate net benefits with a key benefit for all options being increased industry operational efficiency.

The identified impacts of the safer vehicle design options presented in this chapter are contained in **Table 11** below.

Table 11: Impact of safer vehicle design options

INDUSTRY			GOVERNMENT AND COMMUNITY			
OPTION	Compliance costs	Improvements in operational efficiency	Government admin, enforcement & compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
10.1: Streamlining the PBS approval process	Quicker more certain process would reduce compliance costs associated with obtaining PBS approval.	Should increase uptake of PBS vehicles and hence improve operational efficiency*	Reduce admin costs associated with reduced number of approvals going through PBS Review Panel		Evidence suggests newer vehicles are safer than the general heavy vehicle fleet. Hence, increase in PBS vehicles could reduce crashes.	
10.2: PBS technology standard	Impact on compliance costs unclear.	May increase number of PBS vehicles and hence improve operational efficiency*			Likely to increase the safety of PBS vehicles Hence, could reduce crashes.	
10.3: Increased vehicle width	May reduce industry expenditure on secondary manufacturing which may no longer be required to meet Australian width requirements. Reduction in number of vehicles requiring PBS approval should make the process quicker which should reduce industry compliance costs.	Improved operational efficiency from greater vehicle choice i.e. the additional capacity and other features of newer wider vehicles may improve productivity	Reduction in number of vehicles requiring PBS approval should reduce regulatory admin costs.		Potential road safety risk from more wider vehicles operating on network. Particularly in areas where lanes are narrow.	
Notes	*Industry would incur increase expenditure developing and seeking approval for more PBS vehicles and government would incur additional costs in approving these vehicles. However, these costs should be outweighed by the operational efficiency gains provided fees for PBS approval cover the costs incurred by government in assessing the application.					

10.5 Questions for stakeholders

- 10.1. Are there any other costs or benefits that we should consider in the impact assessment?
- 10.2. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 10.3. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.
- 10.4. In relation to option 10.1, do you have any comments on specific sub-elements of the option or the optimal composition of this option?
- 10.5. In relation to option 10.3, do you have any comments on how and whether the increased vehicle width option could be linked to meeting newer safety standards (e.g. side-underrun, blind spot sensors, electronic stability control and anti-lock brake systems)?

11 ROADWORTHINESS

11.1 Regulation of roadworthiness under the HVNL

A roadworthy vehicle is a vehicle that has no safety-related issues at a particular point in time. A vehicle might be roadworthy today but, if there is a failure of a component/s of the vehicle, may not be roadworthy tomorrow.

All heavy vehicle crashes and breakdowns impact on society in various ways and heavy vehicle roadworthiness is a contributor to the risk of vehicle crashes and breakdowns.

- Recent data shows that a significant proportion of the fleet of heavy vehicles carry a defect.
- Unroadworthy heavy vehicles impose significant costs on Australian society. They compromise the safety of drivers and other road users and impede productivity.
- In addition to the human suffering related to crashes involving heavy vehicles, there are significant economic costs of heavy vehicle road crashes associated with vehicle defects and traffic congestion caused by breakdowns that are attributable to poor maintenance.

As described in section 3.1 heavy vehicle crashes and breakdowns impose external costs on wider society and therefore the HVNL includes sections which relate to the roadworthiness of heavy vehicles. The mechanism to implement the heavy vehicle standards under the HVNL is the Heavy Vehicle (Vehicle Standards) National Regulation 2013.

Some HVNL criteria relating to vehicle roadworthiness are inherently more subjective than those prescribed in the vehicle standards. To help clarify them, the NHVR has developed a National Heavy Vehicle Inspection Manual (NHVIM). The current version of the NHVIM is v2.4, released in February 2020. The jurisdictions each have inspection regimes to support roadworthiness of the heavy vehicle fleet.

Notwithstanding the legal requirements that must be met, in a practical sense a roadworthy vehicle is one that has all its safety-related components maintained in a manner that makes it safe to operate on the road. The purpose of an effective roadworthiness system is to secure compliance with regulations and reduce the risks of vehicles that are not roadworthy being used on the road.

The NTC consultation processes in advance of this RIS identified several areas where there is the potential to better address roadworthiness. This chapter focusses on assessing the options identified, that are aimed at improving assessment and defect clearance processes and addressing inconsistencies in jurisdictional inspection regimes.

The options set out in this chapter are summarised in **Figure 20** below.

Figure 20: Summary of roadworthiness options



**base case not included in regulatory options*

11.2 Base case for the assessment

The base case for this assessment assumes that the current approach to managing roadworthiness under the HVNL remains (see Box 35:), with greater clarity around the relevant sections provided as guidance in the NHVIM.

The jurisdictions would each continue to have their own inspection regimes to support roadworthiness of the heavy vehicle fleet. This would mean inspections are generally required upon change of ownership and may occur as roadside checks. Some jurisdictions, such as NSW, also require inspections for heavy vehicles in order to renew their registration.

Box 35: Regulation of roadworthiness under the HVNL

Section 59(1) of the HVNL provides that the national regulations may prescribe vehicle standards (heavy vehicle standards) with which heavy vehicles must comply to use roads. Section 60(1) of the HVNL provides that:

[a] person must not use, or permit to be used, on a road a heavy vehicle that contravenes a heavy vehicle standard applying to the vehicle.

The Heavy Vehicle (Vehicle Standards) National Regulation 2013 prescribes the vehicle standards with which a single heavy vehicle or heavy combination must comply to use roads. However, criteria for assessing roadworthiness are not restricted to the vehicle standards. Section 89 of the HVNL provides that:

- (1) A person must not use, or permit to be used, on a road a heavy vehicle that is unsafe.
- (2) For the purposes of subsection (1), a heavy vehicle is unsafe only if the condition of the vehicle, or any of its components or equipment –
 - (a) makes the use of the vehicle unsafe; or
 - (b) endangers public safety.
- (3) Subsection (1) does not apply to a heavy vehicle for which a defect notice is in force and that is being moved in accordance with the terms of the notice.

Section 525 of the HVNL allows for a broader definition of roadworthiness. It defines a ‘defective heavy vehicle’ for the purposes of Division 6 of Part 9.3 as a heavy vehicle that:

- (a) contravenes the heavy vehicle standards; or
- (b) has a part that –
 - (i) does not perform its intended function; or
 - (ii) has deteriorated to an extent that it cannot be reasonably relied on to perform its intended function.

Section 526 allows an authorised officer who has inspected a heavy vehicle under the HVNL to issue a defect notice if the authorised officer reasonably believes the vehicle is a defective vehicle and the use of the vehicle on a road poses a safety risk.

11.3 Improving roadworthiness assessment and defect clearance processes

11.3.1 What is the problem?

Administrative processes for clearing a defect notice, after a defective vehicle has been repaired, can impose delays on the return of the vehicle with no risk to safety to the road.

There is no defined defect clearance process under HVNL, however, the NHVR has issued guidance¹⁶² which includes the following:

- Self-clearing defects no longer require an inspection of the vehicle by an approved person for the purpose of having the self-clearing defect notice cleared.
- A major or minor defect notice must be cleared according to the instructions in the defect notice. Operators may have the necessary inspection conducted in any state or territory providing the inspection is carried out by a suitably qualified person and in accordance with the instructions on the defect notice.

The guidance notes that a defect notice may instruct that the defect needs to be formally cleared by the registration authority before a repaired heavy vehicle can be returned to the road. Hence if defects are identified, the vehicle may need to be cleared by the registration authority in the State in which the defect was identified. This can result in significant and unnecessary delays for a repaired vehicle, particularly when it has been defecting, and/or repaired in a state other than that in which it is registered.

Situations have been reported where a repaired, inspected vehicle could not be 'cleared' of its defect status by its home registration authority, because they had not yet received notification of the imposition of the defect from the jurisdiction in which it was detected, and the defect notice issued.

In addition, the role of the NHVIM as applied in practice is a problem. Although all participating states and territories have adopted the NHVIM into their inspection regimes, there is no legal obligation to use the guidance in the manual to form the basis of an enforcement decision as to whether a vehicle is non-compliant with standards or unsafe. This presents a missed opportunity and may be affecting the consistency of enforcement between jurisdictions and enforcement agencies.

11.3.2 Standardised maintenance / roadworthiness assessment (Option 11.1)

This option has three key features:

- It recognises the NHVIM expressly in the HVNL in order to increase consistency in the roadside inspection of vehicles. Currently the NHVIM is only used for annual inspections or scheduled inspections to clear defects.
- It amends the HVNL to require the use of self-clearing defects for non-safety cases.

¹⁶² National Heavy Vehicle Regulator, 2017, *Heavy vehicle defects: Compliance and Enforcement bulletin 4*.

- Where a defect does relate to safety then an inspection for defect clearance would only be required to check whether the identified defect has been rectified, rather than a full inspection.

11.4 Addressing inconsistencies in inspection regimes

11.4.1 What is the problem?

Stakeholders have identified problems with inconsistencies in the way roadworthiness is managed across jurisdictions which relate to differences in jurisdictional inspection regimes.

Despite recent reforms that have improved the consistency on how and how often such inspections are undertaken there is still significant variation across the country in the nature and frequency of inspections.

- Scheduled or event-based inspections (change of ownership, renewal of registration) are currently determined by individual jurisdictions and provided through their vehicle registration authorities.
- In many cases, neither the nature nor the frequency of these inspections is affected by the risk posed by the operation of the vehicle concerned.
- The NHVIM provides authorised officers and industry with consistent criteria for heavy vehicle inspections. However, in Queensland, South Australia and Tasmania there are additional inspection criteria for certain vehicles due to legislation outside the HVNL.

The inspection regimes between jurisdictions vary significantly. In many cases, neither the nature nor the frequency of these inspections is affected by the risk posed by the operation of the vehicle concerned. The conduct of an inspection is both costly in terms of the expertise and equipment of the agency undertaking the test, and also in terms of the lost opportunity to use the vehicle for income earning activity during the time taken to get to and from the test location. Consequently, it is not immediately clear whether the benefit obtained (in terms of crash and breakdown risk reduction) from undertaking the testing process is greater than the cost of conducting it.

Although the current jurisdictional approaches may represent the best response by each jurisdiction (given the actions in other jurisdictions), there may be potential benefits from a more risk-based and coordinated inspection regime.

As described in section 3.3 fragmented arrangements, in which requirements and approaches vary across jurisdictions, can increase compliance and administrative costs particularly for interstate operators by obligating them to ensure compliance with multiple rule sets.

11.4.2 Risk-based inspection scheme (Option 11.2)

This option would comprise the NHVR developing a national regime of risk-based inspections of heavy vehicles (as set out in the NHVIM). Under this option the NHVR would develop risk criteria for identifying which vehicles have a higher risk of being unroadworthy, drawing on jurisdictional understanding of risk to roadworthiness. Based on these risk criteria, the NHVR would be given the power to require nominated heavy vehicles and/or classes of vehicles to submit to scheduled inspections at a frequency commensurate to the risk they present. Hence, different heavy vehicles could be inspected at different frequencies based on an assessment of risk linked to individual vehicles, operators and industry sectors.

This would replace existing state- and territory-based schemes (for those jurisdictions under the HVNL) and allow regulatory resources to be deployed more efficiently to the areas of greatest risk. Ministerial approval would be necessary to apply the criteria to a risk-based inspection regime. This option

encompasses measures that were agreed to by transport ministers in 2015, as part of the Heavy Vehicle Roadworthiness package, but have not yet been fully implemented.¹⁶³

In practice this scheme would:

- replace all existing jurisdictionally based periodic inspection regimes;
- enable the NHVR to develop sources of intelligence and carry out inspections based on intelligence-based risk assessments.
- enable the NHVR to require nominated heavy vehicles/classes of vehicles to comply with a schedule of inspections.
- use data from intercepts and knowledge based on type of freight and people carried, including the compliance of individual operators for individual sectors.
- include identified risk factors in regulations (for example compliance history, age of vehicle)
- require recognition of inspections by jurisdictional road authorities (if conducted regularly).

This option would rely on some amendments to the regulator tool kit as discussed in chapter 5.

¹⁶³ National Transport Commission, 2015, Heavy Vehicle Roadworthiness Program, Final Regulatory Impact Statement.

Box 36: What might a risk-based inspection regime look like?

Under this option the NHVR would develop risk criteria for identifying which vehicles have a higher risk of being unroadworthy. The result of applying these criteria would be that different vehicles and/or classes of vehicles would be required to submit to scheduled inspections at different frequencies.

Without pre-empting any detailed assessment of roadworthiness risk, some relevant parameters are likely to relate to vehicles with:

1. a greater risk of developing a safety-critical defect based on the vehicle's age (i.e. the older the vehicle, the more likely it will develop a defect) or the operator's track record
2. greater potential adverse consequences if a crash occurs, based on the type of load being carried and industry segment (i.e. dangerous goods vehicles).

Under a risk-based approach, inspections would likely be conducted:

- on a scheduled inspections basis — similar to those currently performed as annual inspections in NSW and Queensland. These inspections typically take about 30 minutes to complete. These would still be conducted by providers authorised by the NHVR who could charge unregulated fees for these inspections. The frequency of these inspections would be based on the risk profile of the heavy vehicle.
- on the transfer of a heavy vehicle's registration from one operator to another.

The NHVR would need to determine the categories of vehicles and operators to be subject to these scheduled inspections. Hence the number of heavy vehicle inspections could vary depending on the risk criteria developed and the specifics of how the risk-based scheme is structured. It is understood that this would be based on a strong base of evidence using jurisdictionally agreed risk criteria.

Heavy vehicles accredited under the NHVAS maintenance management module (or any equivalent scheme under the new law) would likely continue to be exempted from the requirement to be inspected on a scheduled basis.

11.5 Impact assessment

11.5.1 Standardised maintenance/roadworthiness assessment (Option 11.1)

This option, by recognising the NHVIM in law, could increase consistency in enforcement between jurisdictions and enforcement agencies. This option would remove ambiguity from the current definition of unsafe and defective vehicles as a vehicle which does not comply with the standards outlined in the NHVIM is an unsafe vehicle and/or a defective vehicle. Assuming the NHVIM remains as guidance or a COP this could still be regularly updated (to recognise new technology). This could reduce regulator costs and industry costs if it results in fewer spurious defect notices. There may also be an increase in regulator administrative costs for training inspectors in the NHVIM, both an initial one-off cost and then an ongoing cost to keep capability current.

This option, by enabling self-clearing of non-safety defects and limiting defect clearance to the specified identified defects will remove the need for follow up inspections for non-safety issues and prevent a vehicle being subjected to a full inspection in order to have a defect cleared. In additions to reducing

costs associated with these inspections this option will also reduce defect clearance time and hence the time in which a vehicle is off the road. This will improve operational efficiency in the industry.

11.5.2 Risk-based inspection scheme (Option 11.2)

Benefits

In theory, interventions that focus inspections (be they scheduled or on-road) on vehicles that have a higher risk of defects will likely deliver more benefits in terms of reduced defects and therefore reduced crash risk. This is due to two effects:

- Successful targeting of inspections on higher defect-risk vehicles will detect more defects which presumably will be subsequently rectified, reducing the crash risk.
- Successful targeting also encourages operators to comply by creating an incentive to avoid being ‘targeted’ — operators who use heavy vehicles with a higher risk of defects will be more likely to be caught and issued with fines or defect notices. This would be expected to encourage them to undertake more appropriate maintenance to minimise the occurrence of defects.

It seems reasonable to assume that this option, by enabling the NHVR to establish a risk-based inspection regime across jurisdictions participating the HVNL, should deliver road safety benefits. The key area of uncertainty in assessing the significance of this benefit is whether or not existing jurisdictional inspection regimes are already highly risk based and targeted. It is, however, difficult to draw firm conclusions from existing data about the relative effectiveness of existing jurisdictional approaches to vehicle inspection. Nonetheless, it can be presumed that some ability to redirect resources within and between jurisdictions could enable the overall inspection regime to become more risk based.

Costs

While the regulator would incur costs to establish and maintain the risk-based approach, the specific impact on the number and type of inspections (and therefore costs associated with these) is unclear. That said, assuming this option means the same number of inspections is undertaken but they are more targeted on vehicles and operators with a higher risk of defects, then this option should improve the effectiveness and efficiency of the inspection regime. The result of this should be more proportionate compliance and enforcement activity and ultimately improved road safety outcomes.

The expected impacts of this option were assessed in detail in 2015 as part of the HV Roadworthiness package which was agreed to by Ministers.¹⁶⁴

11.5.3 Summary of assessment

Both the options presented in this chapter could be progressed in isolation or in combination as they do not rely on one another.

It would appear from this initial assessment that option 11.1 is likely to be net beneficial with most of the benefits generated from the proposed changes to defect clearance processes.

Option 11.2 should in theory deliver benefits although the extent of these benefits is difficult to judge as it depends on the effectiveness of existing jurisdictional approaches and the extent to which they are risk based.

A summary of the identified impacts of the roadworthiness options presented in this chapter as contained in **Table 12** below.

¹⁶⁴ National Transport Commission, 2015, Heavy Vehicle Roadworthiness Program, Final Regulatory Impact Statement.

Table 12: Impact of roadworthiness options

OPTION	INDUSTRY			GOVERNMENT AND COMMUNITY		
	Compliance costs	Improvements in operational efficiency	Admin, enforcement and compliance monitoring costs	Avoided road infrastructure damages	Avoided costs associated with reduced crashes	Other
11.1: Standardised maintenance/ roadworthiness assessment	Reduced compliance costs for clearing non-safety defects.	Improved operational efficiency as a result of heavy vehicles being off the road for less time when awaiting administrative defect clearance on registration systems.	Reduced costs associated with clearing non-safety defects. Some additional costs for training inspectors in the NHVIM, both an initial one-off cost and then an ongoing cost to keep capability current.			
11.2: Risk-based inspection scheme			Some costs to develop and maintain risk-based inspection scheme		Assuming option enables a more risk-based approach to inspections then should deliver improved safety outcomes with the same number of inspections	

11.6 Questions for stakeholders

- 11.1. Are there any other costs or benefits that we should consider in the impact assessment?
- 11.2. Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented in this chapter?
- 11.3. Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages compared to the options set out in this chapter.
- 11.4. Do you have any new evidence on the effectiveness or otherwise of existing jurisdictional approaches to random and periodic vehicle inspections?
- 11.5. Are there any unintended consequences associated with any of the options identified?

12 CONSULTATION AND NEXT STEPS

12.1 Consultation

The NTC will undertake an extensive public consultation process in relation to the proposals and options explored in this Consultation RIS. The objective of this process is to gather additional evidence and data on the extent of the problem and to seek views on the benefits and costs of the proposed policy options in each of the chapters.

The consultation process will consist of:

- a formal written submission process;
- targeted meetings with key stakeholders; and
- a web-based comment facility for stakeholders to share their experiences which is accessible here <https://hvnireview.ntc.gov.au/>.

12.1.1 Responding to stakeholder questions

The questions in each chapter of this RIS are not repeated below. For ease of reference, stakeholders are encouraged to refer to the relevant focus questions in their submissions. The NTC is not expecting stakeholders to respond to all questions. Where possible, the NTC encourages stakeholders to provide case studies, data and evidence to support their views.

The NTC are also happy to receive general feedback on the RIS framework options, impacts and assessments. This may involve consideration of the questions below.

- Have we covered the issues with the current HVNL accurately and comprehensively? If not, what do we need to know?
- Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages.
- Are there any unintended consequences associated with any of the options identified?
- What option/s do you prefer and why?
- Are there any other costs or benefits that we should consider in the impact assessment?
- Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented?

12.2 Next steps

12.2.1 Identifying preferred reform options

Once this consultation process has concluded, a decision RIS will be produced which will draw on the evidence that has been gathered to identify the preferred policy options for each of the key HVNL reform areas. All submissions to the consultation process will be published on the NTC website, unless authors have indicated that they would like all or part of their submission to remain in confidence.

Specific questions may arise from this consultation paper which may have not been considered at the time of drafting and the NTC may undertake further targeted consultation with key stakeholders if necessary.

Both this Consultation RIS and the decision RIS will be published on the OBPR website.

12.2.2 Implementation of preferred package of reforms

To implement the preferred reform options, changes to the HVNL and associated regulations will be required. Subject to the Council agreeing to implement the preferred options, amendments to the HVNL required to give effect to the option would be drafted.

Following consultation, a final package of changes to these legal instruments would be submitted to the Council for its approval. If the package is approved, then the required changes to the HVNL would be progressed through the Queensland Parliament by the Queensland Minister for Transport. These changes would become law following proclamation.

12.2.3 Future Work

Given the parallels, Transport Ministers may wish to consider undertaking further work on reform options relating to the following.

- Reforms to the ADRs to keep pace with changing heavy vehicle designs.
- Reforms to vehicle emission standards.
- Reforms to ensure competency of drivers through reforms to licensing and registration arrangements.
- Alternative policy approaches to achieving mutual recognition of accreditation arrangements.
- Alternative policy measures proposed by NSW to assist local governments develop approved freight paths.
- Reforms to investigation and enforcement powers, sanctions and penalties.

A IMPACT ANALYSIS METHODOLOGY

A.1. Approach

A cost-benefit analysis, which determines the net benefit to society of different reform options is the OBPR's preferred impact analysis framework. However, it ideally requires the impacts (benefits and costs) to be expressed in monetary terms. A challenge for this consultation RIS is that many impacts cannot be robustly isolated and quantified.

Therefore, this consultation RIS has used **qualitative CBAs** to compare reform options under each key topic area. For each key area of the assessment in the consultation RIS:

- Describes how each policy options leads to **incremental** costs and benefits for industry, government and the community (relative to the base case). This involved identifying the practical effects of each option (e.g. who is affected and how) and the associated categories of costs and benefits that are likely to flow on from these effects.
- Qualifying costs and benefits associated with the different policy options (where possible) using any existing research data.
- Identifying data (and data gaps) for the analysis and any costs and benefits that are immaterial and so will be ignored.

To ensure this impact analysis is effective and robust the criteria used in the qualitative CBA align with categories of costs and benefits as described in **Table 13**. This approach helps prevent double counting. Where we have quantitative data this has been presented to support any qualitative assessment.

In undertaking this analysis, special consideration has been given to:

- whether a regulatory model, or other obligation, already in place can address the issues in question; and/or
- whether a uniform, harmonised or jurisdiction-specific model would be the least burdensome outcome (or the one with the greatest community benefits).

Administrative, compliance and enforcement costs are likely to be easier to monetise. We expect to use stakeholder data received in response to this Consultation RIS to, where possible, monetise the extent to which options result in changes in compliance and enforcement costs.

Other impacts are likely to remain challenging to value. Specifically:

- **Crash risk reduction benefits:** there is little robust quantifiable evidence linking changes to the regulation with crash risk-reduction benefits. While some data is available on the costs imposed by road crashes, there is much less certainty around the extent to which different risk management approaches might contribute to the likelihood of an accident, and on the extent to which different regulatory options might reduce this risk.
- **Impacts on innovation or operational efficiency:** measuring the benefits forgone if a regulatory reform option delays or reduces innovation is also challenging. For example, an overly prescriptive, burdensome or complex regime could slow the penetration of new technology foregoing potential operational and safety improvements. To capture these benefits, the regime will ideally need to have the ability to respond and adapt to the changing market and evolving technology/updates.

The final decision RIS will look to expand on this and included selective assessments of the reasonableness of the 'assumptions' that would be needed to make a reform beneficial. For example, if reliable estimates of the costs of the different reform options are obtained then these would be used to estimate the threshold 'benefit assumptions' (i.e. the extent to which the policy would need to reduce

crashes) in order for total benefits to outweigh total expected costs, resulting in a net benefit. The reasonableness of these assumptions could then be assessed and compared.

A.2 Impact categories assessed

The main impact categories used throughout this RIS are outlined in **Table 13** below. The benefits of reform will mostly relate to reduced HV crashes. Safety risk mitigation is not costless. Therefore, reform options also affect the costs borne by drivers, owners, operators and others in complying with the regime, and the costs to regulatory authorities associated with implementing and enforcing the regulation.

Further details on key drivers of these impacts are considered in the sections that follow.

Table 13: Costs and benefits that may arise from regulatory reforms to the HVNL

	IMPACT CATEGORY	DESCRIPTION
Industry	Compliance Costs	<p>For industry, the incremental costs of complying with any regulations (or the avoided costs of not complying) will reflect:</p> <ul style="list-style-type: none"> • Any investments or expenditure it needs to make to: <ul style="list-style-type: none"> ○ modify or develop new reporting and information management systems ○ develop and implement new technologies ○ maintain a compliant vehicle or schedule to meet revised regulatory requirements. • The ongoing costs associated with employing additional staff to manage these systems in order to implement the regulations or demonstrate compliance. • The costs incurred in dealing or negotiating with the NHVR or compliance and enforcement personnel throughout any: <ul style="list-style-type: none"> ○ administrative or reporting task ○ compliance audit or inspection processes (i.e. over and above what is required under the baseline). <p>This may include the need for management and staff time to complete forms, assist with audits and demonstrate compliance to the NHVR, appointed auditor or police; and/or the cost of obtaining advice from external sources.</p> <p>Industry compliance costs will be affected by the degree of regulatory harmonisation in place. Further discussion of this is contained in section A.3 below.</p> <p>In addition, compliance costs will also be affected by the subjectivity of the process. By this we mean situations where an operator or driver is uncertain of what information is required to satisfy the regulator or police of its compliance. The subjectivity of the process is likely to be a function of the regulatory system’s clarity and the capacity of operators, regulators and police to understand the system rather than of the form of regulation itself.</p>

IMPACT CATEGORY		DESCRIPTION
	Improvements in operational efficiency or productivity	<p>Reform options could result in improvement in industry operational efficiency or productivity particularly if it:</p> <ul style="list-style-type: none"> • reduces delays in the transport task, • encourages a move towards a lower cost more efficient fleet or • enables more efficient scheduling. <p>Reforms that impact rostering or scheduling practices or effect the uptake of new vehicles in the fleet can particularly drive these impacts.</p> <p>Further details on how these benefits can be estimated is contained in section A.6 below.</p>
Government and community	Administration, enforcement and compliance costs	<p>Reform could result in additional:</p> <ul style="list-style-type: none"> • one-off costs for the regulator associated with recruiting, educating and training existing staff, developing new systems, and working with industry to bring them up to speed on the new requirements. • additional ongoing costs associated with the need for additional staff to audit and monitor compliance as well as educate other staff, and to inform and maintain records. This would be the case if the amount of record keeping required increases under the policy option. <p>Policy options that result in a change in the number of inspections or audits or the approach to monitoring compliance would result in a more significant changes to the NHVR's or enforcement agency costs. An estimate of the costs associated with conducting inspections and audits is contained in section A.4 below. While not utilised in the consultation RIS these estimates may be used in the Decision RIS for estimating the cost of reform options if a reliable estimate of the impact of options on audit/inspection numbers can be determined.</p>
	Avoided road infrastructure damage	<p>Road infrastructure is affected by heavy vehicle use of the road network. This can be in the form of damage to the road infrastructure or bridges and other structures or through greater wear and tear of road pavement.</p> <p>Any reform that impacts on the vehicles or roads used will have some impact on road infrastructure damage.</p>

IMPACT CATEGORY		DESCRIPTION
Industry, government and the community	Avoided costs from HV related crashes	<p>The regulatory reforms are expected to impact on the level/risk of crashes and breakdowns involving heavy vehicles and therefore the costs associated with these incidents and crashes.</p> <p>This category captures the extent to which risks change as a consequence of changes in industry practice that are themselves a consequence of the change in regulation.</p> <p>The costs that result from heavy vehicle related crashes and incidents are broadly:</p> <ul style="list-style-type: none"> • Costs to drivers and their families associated with death or rehabilitation and care in the case of a crash. • Costs to operators associated with any losses of capital stock; lost man hours or lost productivity. • Indirect costs on operators associated with lost customer confidence in the reliability of services and hence reduced volume and revenues. • Cost on customers associated with any resulting delays or lost freight. • Cost on wider road users associated with any delays resulting from crashes. • Cost for society more broadly from any environmental damages and clean-up, and health care costs arising from the death and injury of members of the public. <p>Some of the costs described above are borne directly by the driver or operator, and some are borne by other parties. An estimate of the unit costs associated with heavy vehicle road crashes is contained in section A.5 below. While not utilised in the consultation RIS these estimates may be used in the Decision RIS. For example, if reliable estimates of the costs of the different reform options are obtained then these would be used to estimate the threshold ‘benefit assumptions’ (i.e. the extent to which the policy would need to reduce crashes) in order for total benefits to outweigh total expected costs, resulting in a net benefit.</p>

IMPACT CATEGORY		DESCRIPTION
Other	Competitive effects	<p>Some of the proposed reforms can create a barrier to the entry of new firms or in some other way effect on the level or competition in the heavy vehicle industry. Where operators face higher costs and higher barriers more operators will be discouraged from extending their services as they will see less opportunities to make profits. This could decrease the level of competition in the industry. Decreased competition may lead to reduced choice for consumers. It could also discourage operators from improving their efficiency.</p> <p>In a more competitive industry, operators that are less able to meet the needs of consumers at the lowest price will be more likely to exit the market. Conversely, operators who are more able to meet these needs will be more likely to remain. As a result, the efficiency of the industry will be improved. Therefore, with a less competitive heavy vehicle industry, productivity in the economy declines.</p> <p>Unfortunately valuing any of the impacts on efficiency driven by an increase or decrease in competitiveness is extremely difficult. In particular, it requires an estimate to be made of the incremental impact on freight prices.</p>
	Wider connectivity/ catalytic benefits for the economy	<p>Wider economic benefits may result from incremental improvements in freight connectivity as a result of the proposed reforms.</p> <p>In particular, reforms which lower the costs of transport and therefore lower the costs for transport-using businesses potentially enable them to expand to new geographical markets increasing competition in these markets. Lower cost transportation can also facilitate the provision of specialised inputs more efficiently, providing downstream firms with a larger choice of suppliers and the capacity to select the input type required for each specific production process. Both these effects can increase productivity in the economy.</p>

Source: Frontier Economics

A.3 The benefits of harmonisation

In principle, uniform regulations across jurisdictions can reduce the costs of service provision or enhance operational efficiency by reducing the extent to which parties need to make additional investments in labour and capital to ensure that their operations comply with jurisdiction-specific regulation. Reform measures aimed at harmonising processes and procedures can therefore result in cost savings.

These compliance cost savings typically relate to internal efficiencies i.e. they take place within operators and are of direct benefit to them. Compliance cost savings from harmonisation are most likely to eventuate for cross border operators (particularly those that operate in Western Australia and the Northern Territory).

It should be noted that regulatory harmonisation is more likely to reduce costs when harmonisation is efficient i.e. the standard applied does not, in and of itself, create unnecessary costs (for example, through over-prescription). Where harmonisation is based on regulation that places unnecessary costs, the scope for efficiencies is diminished.

Regulatory harmonisation has been prominent on the heavy vehicle reform policy agenda, and indeed is one of the major motivations behind the push for the HVNL and NHVR. Therefore, many of the

potential cost savings from regulatory harmonisation, particularly those associated with improvements in economic efficiency are already captured in the baseline to the RIS because the national regulator and national law has already been established. Hence this RIS focuses only on the industry compliance cost savings that may result from improved harmonisation in specific provisions of the HVNL.

A.4 Audit and inspection costs

The current cost of conducting inspections varies significantly across states. Examples of the range of inspection fees for heavy vehicles include a fee of \$689 in South Australia (for a full inspection of a B-double)¹⁶⁵ and \$151 in Queensland (for a vehicle with a vehicle mass of more than 16T).¹⁶⁶ It is important to note that the inspection fee is only part of the economic cost. States and jurisdictions do not necessarily charge their full cost of inspection or audit, for example there is no charge for a roadside inspection. Moreover, there are economic costs including those related to driver time and unavailability of the vehicle.

It seems reasonable to assume the cost of conducting inspections and audits increase in line with the number of inspections conducted as this cost is mostly associated with staff time. It seems reasonable to assume that there will not be any significant economies of scale.

A.5 The cost of crashes involving heavy vehicles

Estimating the cost of crashes involving heavy vehicles requires estimating the value of human consequences of a crash (including any lives lost) as well as the other economic consequences. BITRE¹⁶⁷ has the most current and comprehensive data to base to underpin this calculation.

Using data from BITRE, together with OBPR data on the value of a statistical life and Australian Bureau of Statistics price indices,¹⁶⁸ we have estimated the cost of crashes involving heavy vehicles.

The estimated cost of a fatal road crash differ between heavy vehicle types because articulated trucks are more likely to be involved in a crash resulting in multiple fatalities. These estimates are presented in **Table 14** below and are based on multiplying the average number of fatalities per crash with the costs per fatality and adding the estimates of the other costs associated with a fatal crash.

¹⁶⁵ Based on South Australian vehicle inspection fees effective from 1 July 2019.

¹⁶⁶ Based on Queensland inspection fees.

¹⁶⁷ Bureau of Infrastructure, Transport and Regional Economics, 2009, *Road crash costs in Australia 2006*.

¹⁶⁸ The Wage Price Index has been applied to the value of a statistical life and the value of a hospital injury. Other costs have been inflated to \$2019 using the Consumer Price Index.

Table 14: Cost of a fatal road crash involving a heavy vehicle, by type, 2019

TYPE OF HV INVOLVED IN FATAL CRASH	AVERAGE FATALITIES PER FATAL CRASH	VALUE OF A STATISTICAL LIFE (IN 2019\$'000)	OTHER COSTS ASSOCIATED WITH A FATAL CRASH (IN 2019\$'000)	TOTAL COST PER CRASH (IN 2019\$'000)
Articulated truck	1.16	4,947.1	363.0	6,114.6
Rigid truck	1.11	4,947.1	363.0	5,867.0
Bus	1.13	4,947.1	363.0	5,953.2

Source: Frontier Economics analysis; BITRE 2009; BITRE 2019; OBPR 2019; ABS 6345.0.

The aggregate cost of road crashes involving heavy vehicles can be derived by applying the estimated average cost of each type of crash to the estimated numbers of crashes of each type drawing on the best available data (Table 15).

Table 15: Cost of road crashes involving heavy vehicles, 2019

	AVERAGE COST OF CRASH (IN 2019\$'000)	NUMBER OF CRASHES (USING VARIOUS PROXIES)	TOTAL COST (IN 2019\$M)
Fatal crashes involving articulated trucks	6,114.6	93 ^a	568.7
Fatal crashes involving rigid trucks	5,867.0	90 ^a	528.0
Fatal crashes involving buses	5,593.2	25 ^a	148.8
Injury crashes resulting in hospitalisation ^e	359.5	769 ^b	276.5
Injury crashes not resulting in hospitalisation ^e	60.7	11,460 ^c	695.3
Property damage crashes	13.5	28,651 ^d	385.6
Total		41,088	2,603.0

Note: ^a Using 2017 data from BITRE (2019). ^b Using 2016 data from BITRE (2019). ^c Based on 2006 data (BITRE 2009) adjusted to 2017 data using BITRE trend of average per annum decrease in fatal crashes involving trucks for last 5 calendar years (BITRE 2019). ^d Injury crashes do not include fatal crashes.

Source: Frontier Economics analysis; ABS 6401.0; ABS 6345.0.

On this basis it is estimated that, in 2019, the total cost of heavy vehicle fatal and non-fatal crashes is in the order of \$2.6 billion.

Over a 10-year duration and using a real discount rate of 7 per cent, converted into a NPV the cost of road crashes involving heavy vehicles is \$18 billion.

Over the last decade, total annual deaths from fatal crashes involving a heavy vehicle have been declining. BITRE¹⁶⁹ estimates the trend as an average reduction of 3.8 per cent per year over the past decade (though this drops to 1.0 per cent if you’re just looking at the last decade). This declining trend in fatal crashes is not observed in other types of crashes (such as serious injury hospitalisation crashes)¹⁷⁰

It is possible that, even under the baseline, the crash and breakdown risk may continue to decline over time absent any reforms to the HVNL. This is because we would expect improvements in road infrastructure and vehicle technology (absent the HVNL encouraging greater renewal of the fleet) to reduce risks over time. Some of these changes can be expected to occur under the baseline and irrespective of which reform options might be implemented.

A.6. Estimating the avoided costs from improved access for heavier and larger vehicles

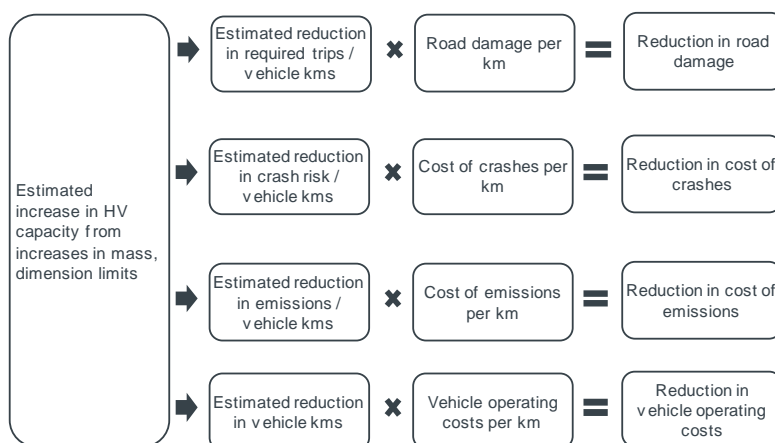
The benefits from improved access stem from two main sources:

- The ability to use new or existing vehicles on routes that are not currently accessible
- The ability to access more rapid permissions to use existing vehicles

The benefits of using heavier or larger vehicles effectively come from the fact that the total transport task is fixed. Stopping heavier or larger vehicles means that the task will be broken up among more vehicles. The total kilometres driven by heavy vehicles increases, and there is a consequent effect on private costs (total vehicle operating costs) and external costs (costs of more crashes and higher emissions).

The benefits identify from reform options that improve access for heavier and larger vehicles could potentially be quantified if we can estimate the reductions in kilometres driven by heavy vehicles, and identify parameters suitable to estimate the avoided cost for each kind of vehicle and/or transport tasks. This is illustrated in the following figure.

Figure 21: Approach to estimating benefits from increase in mass and dimension limits



¹⁶⁹ Bureau of Infrastructure Transport and Regional Economics, 2017, *Statistical Report Road trauma involving heavy vehicles: crash statistics 2017*.

¹⁷⁰ *ibid.*

B COMMON TERMS AND ABBREVIATIONS

Term	Definition
ADR	Australian Design Rule
AFM	Advanced Fatigue Management
AFTD	Assessing Fitness to Drive
ATO	Australian Tax Office
BFM	Basic Fatigue Management
CBA	Cost Benefit Analysis
CML	Concessional Mass Limit
COAG	Council of Australian Governments
COP	Code of Practice
CoR	Chain of Responsibility
EWD	Electronic Work Diary
FRHV	Fatigue Regulated Heavy Vehicle
FRMS	Fatigue Risk Management System
GDP	Gross Domestic Product
GVM	Gross Vehicle Mass
HML	Higher Mass Limit
HVNL	Heavy Vehicle National Law
HVRR	Heavy Vehicle Road Reform
IAP	Intelligent Access Program
NHVAS	National Heavy Vehicle Accreditation Scheme
NHVIM	National Heavy Vehicle Inspection Manual
NHVR	National Heavy Vehicle Regulator
NTC	National Transport Commission

Term	Definition
NTF	National Telematics Framework
OBM	On board mass
OBPR	Office of Best Practice Regulation
OSOM	Oversize Overmass
PBS	Performance-Based Standard
RAV	Restricted Access Vehicle
RIM	Road Infrastructure Manager
RIS	Regulation Impact Statement
RSNL	Rail Safety National Law
SMS	Safety Management System
SPV	Special Purpose Vehicle
TCA	Transport Certification Australia
The Council	Transport and Infrastructure Council
WAHVAS	Western Australian Heavy Vehicle Accreditation Scheme
WHS	Work Health and Safety

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