



Heavy Vehicle Roadworthiness Program

Final Regulatory Impact Statement
July 2015



National Transport Commission

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Final Regulatory Impact Statement

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Report outline

Title:	Heavy Vehicle Roadworthiness Program Regulatory Impact Statement
Type of report:	Regulatory Impact Statement
Purpose:	For decision
Abstract:	The Heavy Vehicle Roadworthiness Program Regulatory Impact Statement (RIS) analyses options to improve the national heavy vehicle roadworthiness system. It has been prepared to reflect submissions received by NTC in response to consultation on a draft RIS from January to March 2015.
Key milestones:	Review of Current Status report published July 2014; Integrity Review published August 2014; Draft options for roadworthiness reforms and recommendations for improvements to the NHVAS to Transport and Infrastructure Council in November 2014; Final recommendations to Transport and Infrastructure Council mid-2015.
Key words:	Heavy Vehicle National Law (HVNL); roadworthiness; vehicle standards; defects; inspections; chain of responsibility (CoR); National Heavy Vehicle Accreditation Scheme (NHVAS)
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All information and data was correct at the time of printing.

Foreword

The National Transport Commission (NTC) is an independent statutory body responsible for developing, monitoring and maintaining uniform or nationally consistent regulatory and operational reforms relating to road, rail and intermodal transport.

This Final Regulatory Impact Statement (RIS) represents one aspect of a national reform agenda to improve road safety.

Regulators and industry are working together to identify and implement improvements to the operation and regulation of heavy vehicles. If mitigation costs are less than benefits gained, our community is better off.

While heavy vehicles comprise just a small proportion of traffic on our roads (approximately 3 per cent) they are involved in – although not necessarily responsible for – 18 per cent of road deaths and 3 per cent of road injuries. Heavy vehicles were involved in crashes that caused 894 deaths from 2011 to 2014.

Heavy vehicle crashes and breakdowns have multiple impacts, with the most severe being deaths and serious injuries. The social and economic costs are borne by individuals and communities directly and indirectly. These include losing the ability to earn an income due to injury, the costs of emergency services responses, and the impacts of crash-related traffic delays. Heavy vehicle crashes and traffic delays also reduce productivity.

This Final RIS sets out options to improve the roadworthiness of heavy vehicles, and assesses their impacts. It provides a recommended option that was developed following extensive consultation with government and industry and comprehensive research and analysis.

On behalf of the NTC I thank all who contributed to this Final RIS, particularly those who shared their time and expertise.

I also acknowledge the efforts of the Heavy Vehicle Roadworthiness Team: Jeff Potter, Nicola Rabôt, Julian Del Beato, Jose Arredondo, Jane Naughtin and Sri Kannan from the NTC, and Jan Powning and Wendy Sladen from the NHVR.

Executive summary

About this RIS

This Final Regulatory Impact Statement (RIS) sets out regulatory reform options to improve the roadworthiness of Australian heavy vehicles.

It sets out why reform is required and provides four reform options and a recommended composite option, with a cost – benefit analysis of each. Implementation and review steps are also set out.

A summary of those submissions to the Consultation RIS (NTC January 2015) that influenced the recommended composite option in this Final RIS is provided.

National reform of heavy vehicle industry

This Final RIS is part of a wider national reform program for heavy vehicles, which began in 2009 when the Council of Australian Governments (COAG) agreed that a single national heavy vehicle regulatory regime be established.

Central to the reform agenda was a single national regulator to administer a single set of national heavy vehicle laws to replace the separate and at times conflicting heavy vehicle regulatory requirements between states and territories.

- In 2012 the National Heavy Vehicle Regulator (NHVR) was established as Australia's first national, independent regulator for all vehicles over 4.5 gross tonnes.

The NHVR is responsible for administering the Heavy Vehicle National Law (HVNL) and for delivering a comprehensive range of services including managing the National Heavy Vehicle Accreditation Scheme (NHVAS).

- In 2014 the HVNL commenced in Queensland, New South Wales (NSW), Victoria, Tasmania, South Australia and the Australian Capital Territory (ACT). Western Australia (WA) and the Northern Territory (NT) are not participating in the national reform at this time.

The HVNL covers matters relating to vehicle standards, mass, dimensions and loading, fatigue management, the Intelligent Access Program, heavy vehicle accreditation and on-road enforcement.

From July 2018 all heavy vehicles in participating jurisdictions will be registered in a national scheme, replacing state- and territory-based registration.

It is important to establish an agreed national approach for the heavy vehicle roadworthy inspection requirements that are currently linked to state and territory heavy vehicle registration requirements before the National Heavy Vehicle Registration Scheme commences.

Need for action

Heavy vehicles provide an increasingly important element of Australia's transport and logistics network. Operators of heavy vehicles can be divided into:

- hire and reward operators – transport and logistics businesses that provide trucking services
- ancillary operators – businesses whose main activity is something other than transport but that have truck fleets to transport their own products
- the bus industry – an integral part of the public transport network and the tourism industry, with coaches used for regional travel.

Recent data shows that a significant proportion of the fleet of heavy vehicles carry a defect – for example the majority of vehicle combinations (prime movers and any trailers) carry a defect¹ and, of these, 13 per cent carry a major defect. Across the whole heavy vehicle fleet, 0.5 to 10 per cent of inspected vehicles have a major defect, depending on vehicle type.

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, the economic costs of heavy vehicle road crashes associated with vehicle defects, and traffic congestion caused by breakdowns attributed to poor maintenance, are estimated to be between \$2.3 billion and \$4.2 billion over the next 10 years.

Opportunities for improvement

Given the importance of the sector, it is worth considering whether the current regulatory arrangements encourage optimal levels of heavy vehicle maintenance.

Sub-optimal provision of maintenance will occur where:

- There are market failures that, in the absence of regulation, lead to the under-provision of heavy vehicle maintenance. Private incentives alone will likely lead to the under-provision of roadworthiness because owners and operators do not bear the full economic cost of a crash or breakdown caused by operating an unroadworthy vehicle, including the broader social costs (or externalities), such as other road users' pain and suffering and medical treatment, road asset damage, and the cost of traffic congestion. Insurance markets, on their own, are also unlikely to be able to internalise all these social costs. Further, information limitations exist for operators assessing safety, compliance and risk. Heavy vehicle owners and operators are also subject to commercial pressures whereby maintenance or repairs may be delayed if the business is under financial stress, compounding the above issues.
- The existing regulatory framework is not effective. The current regulatory framework generally uses vehicle inspections (both random and scheduled) and accreditation processes to incentivise heavy vehicle operators to maintain roadworthy vehicles, but there are significant differences in approach and resourcing between jurisdictions. The high costs associated with a lack of roadworthiness, the limited improvement in observed defects over time, and the differences in jurisdictional approaches suggest there may be value in assessing whether the regulatory arrangements and their implementation can be improved. This is reinforced by stakeholder consultation, which identified confusion over detailed interpretation of roadworthiness requirements and a lack of targeting of compliance and/or enforcement activities.

If maintenance is provided below socially optimal levels, regulations that effectively increase roadworthiness are likely to deliver net benefits to society (where the total benefits exceed the total costs) through increased productivity and safety.

This RIS investigates whether there are net beneficial changes that could improve the safety and productivity outcomes associated with heavy vehicle roadworthiness. As an outcome of this analysis and consultation, this RIS recommends a package of measures that are expected to deliver net benefits to Australia from the better regulation and management of heavy vehicle roadworthiness.

¹ Based on the most recent and most comprehensive survey information available from NSW in 2013.

Proposals to move forward

As part of the Integrity Review of the National Heavy Vehicle Roadworthiness System, the National Transport Commission (NTC) and National Heavy Vehicle Regulator (NHVR) have assessed the integrity of current regulatory and compliance practices and identified a range of opportunities for improving the national heavy vehicle roadworthiness system. Close consultation with stakeholders has been important in determining a viable approach.

Extensive consultation was undertaken to gather views from government and industry on heavy vehicle roadworthiness and the NHVAS, including information on current arrangements and potential areas for improvement. Prior to the development of the Consultation RIS, face-to-face meetings with jurisdictions, industry, road agencies and police were held. Surveys were also employed to gather data. The 'Heavy Vehicle Roadworthiness Review – Report of Current Practice' (Phase 1) and 'Integrity Review of the National Heavy Vehicle Roadworthiness System' report (Phase 2) were published in mid-2014 and further consultation followed, including the receipt of 21 written submissions.

The major principles, costs and benefits of identified viable options to improve heavy vehicle roadworthiness were then identified and assessed in a Consultation RIS released on 27 January 2015. The NTC received 30 written submissions in response to the Consultation RIS – including eight from jurisdictional governments, seven from industry associations and five from repairers. Feedback in response to the Consultation RIS has led to the further refinement of these options.

The number and size of heavy vehicles on Australia's roads has increased substantially over recent decades. Interstate trucking has generated a significant portion of this growth (BITRE 2014:1) and this trend is expected to continue as road freight is projected to triple from 2008 to 2050 (IPA 2009).

Crashes involving heavy vehicles (although not necessarily caused by them) resulted in 894 deaths on our roads from 2011 to 2014. Each year approximately 1,500 people are hospitalised due to injuries sustained in crashes involving heavy vehicles (BITRE 2015).

Traffic delays caused by heavy vehicle crashes also reduce productivity. The estimated total cost of heavy vehicle crashes and breakdowns over the next decade attributable to heavy vehicle unroadworthiness is estimated at \$2.3 billion to \$4.2 billion (see cost – benefit analysis in Appendix B).

Improving fatigue management, enforcing speed limits and improving vehicle construction and road design all help reduce heavy vehicle crashes and their consequences.

Improving the roadworthiness of heavy vehicles is also important.

Most heavy vehicles and operators are generally meeting roadworthiness requirements. However, many fail to meet roadworthiness standards on some occasions, while some fall significantly short of compliance more regularly.

In NSW, which has the most comprehensive scheme for checking heavy vehicle roadworthiness, the majority of prime movers and trailers inspected in 2013 – 14 (85 per cent) were found to carry a defect and, of these, 13 per cent had a major defect (NSW RMS 2014).

Improving heavy vehicle roadworthiness can prevent crashes, death and injury as well as lost productivity. A single national regulatory system can also reduce compliance and education costs for industry.

Consultation

This Final RIS was developed following comprehensive research, analysis and consultation.

It follows an initial review process and a consultation process with industry, regulators, government and enforcement agencies.

- *Phase One – Report of Current Practice* (NTC & NHVR July 2014) examined current heavy vehicle roadworthiness regulations and concluded that reform was warranted.
- *Phase Two – Integrity Review of the National Heavy Vehicle Roadworthiness System* (NTC & NHVR August 2015) tested the integrity of the heavy vehicle roadworthiness system.
- *A Consultation Regulatory Impact Statement* (NTC January 2015) investigated the major principles, costs and benefits of heavy vehicle roadworthiness and set out options for review and consideration.

The NTC received 30 written submissions in response to the Consultation RIS. These included eight from jurisdictional governments, seven from industry associations and five from repairers. Section 6 provides more information on consultation and submissions received.

These submissions were considered carefully and resulted in the recommended option being a composite of elements from all four options presented in the Consultation RIS.

Appendix G explains the differences between the options in the Consultation RIS and Final RIS.

Reform options

Key options relating to roadworthiness of heavy vehicles and the reform options considered in this Final RIS are set out in the Table below.

Reform options 1 – 4

Option 1 describes the status quo, under which most jurisdictions have adopted the HVNL, with the exception of the NT and WA. It retains the existing HVNL and state-based regulatory frameworks and operational variations across jurisdictions.

Option 2 proposes administrative actions (such as changes to material that provides guidance or direction on how to administer, or comply with, the law) that can be undertaken under the current provisions of the HVNL. It also includes operational improvements to the NHVAS approved by ministers on 7 November 2014.

Option 3 proposes the administrative measures described in option 2. It also:

- enables the NHVR to impose heavy vehicle inspections on high-risk vehicles and operators, facilitating a risk-based approach to scheduled inspections
- includes NHVAS improvements related to introducing vehicle inspections for a sample of an operator's fleet
- inserts a specific chain of responsibility (CoR) duty in the vehicle standards chapter of the HVNL, requiring parties to ensure that business practices will not cause a heavy vehicle to be used on a road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards
- provides for formal roadworthiness procedures, such as criteria for issuing a formal warning or a major or minor defect notice, and standardised inspection types, practices and defect clearance processes through documents with regulatory recognition
- provides for the use of enforceable undertakings under the HVNL.

Option 4 strengthens several measures described in options 2 and 3 (including by standardising inspection procedures and specifying roadworthiness criteria in statute). It also imposes:

- annual scheduled inspections on all heavy vehicles
- a primary duty for parties to ensure vehicles are roadworthy and compliant with vehicle standards
- a provision to enable enforceable undertakings.

The Consultation RIS presented a comparison of the four options (which ranged from a baseline option 1, which represents the status quo, to options with increasing levels of quasi-regulatory and regulatory measures), including a cost – benefit analysis on each. The cost – benefit analysis was updated following consultation, and an evaluation of a composite option, developed from elements of the four original options, was also undertaken. This Final RIS presents this updated analysis that shows the composite option to be the most viable in consideration of the goals of the reform and the associated complexities and practicalities of implementation. Options 1 to 4 are summarised on the next page, followed by a summary of the recommended composite option.

The options are not exclusive or indivisible, with each option containing implementable measures that could be combined in several ways.

The magnitude and distribution of the economic costs and benefits were assessed for all options. The Office of Best Practice Regulation (OBPR) Regulatory Burden Measurement Framework was used to undertake this assessment.

The potential benefits from heavy vehicle roadworthiness reforms accrue across a number of elements:

Increased road safety – reducing the number of heavy vehicle crashes for which mechanical defects are a contributing or causal factor.

- Increased productivity – from both (i) reduced operational costs for governments and heavy vehicle industry members and (ii) reduced impacts of traffic congestion resulting from roadworthiness-related breakdowns and crashes.
- Increased national uniformity (of roadworthiness regulation standards, procedures and practices, including for inspection, defect classification and clearance and compliance targeting criteria and practices) – reducing compliance costs and lowering training costs through scale economies.

Costs relate to the administrative compliance cost of businesses and heavy vehicle operators (such as changes in costs of undertaking required inspections) as well as the government administration costs (such as regulator and service provider costs of development, training and implementation).

Following consultation and analysis on the Consultation RIS (NTC January 2015) the NTC has determined that the reform option most likely to deliver the greatest net benefits is the composite option shown in the Table below. The NTC believes that, on balance, this option offers an achievable and practical approach to implementing the reform.

Implementing the recommended composite option offers the heavy vehicle industry consistency in how fleets will be inspected across all jurisdictions, and improved operator accountability (making it more difficult for operators to continue a fleet with substandard maintenance regimes).

Recommended composite option


Composite option – As a result of the consultation responses and analysis of the practicality of implementation and the regulatory burdens imposed by individual initiatives, a preferred option was identified that combined measures from options 1 to 4.

The composite option comprises:

- Revising the National Heavy Vehicle Inspection Manual (NHVIM) and providing material that provides guidance or direction on how to administer, or comply with, the law by the NHVR to service providers and operators for guidance only (from option 2).
- Developing a risk-based approach to scheduled inspections (from option 3). A decision to implement this approach would not be made until the necessary additional data is gathered (via the National Roadworthiness Data Strategy) and risk criteria based on that data are considered and approved.
- Strengthened compliance measures of a primary duty on employers, principal contractors and operators (from option 4) and enforceable undertakings (from options 3 and 4).
- Changes to the NHVAS Business Rules to allow for inspection of heavy vehicles before renewal of accreditation.

The elements of the recommended composite option and how they were arrived at from the original four options are set out in the following table.

Elements of the recommended composite option

Theme	Measures	Option 1: status quo	Option 2: non-regulatory package	Option 3: regulatory and quasi-regulatory measures	Option 4: regulatory standardisation		Recommended composite option
National consistency	<i>Standardised inspection types¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	Consultation and analysis 	As guidance. At an appropriate time after implementation, a review of the effectiveness of these measures will be conducted for the purpose of assessing the need to reference them under the HVNL
	<i>Standardised defect-clearing process¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL		Consistent guidance material
	<i>Criteria for assessing major or minor defects¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL		To be developed by NHVR to inform development of criteria for risk
	<i>Information and training package</i>	No change	Consistent guidance material				
Inspections	<i>National Roadworthiness Data Strategy¹</i>	No change	To be developed by NHVR	To be developed by NHVR	To be developed by NHVR		Implementation of requirement for scheduled inspections before registration of vehicle identified through risk-based criteria, subject to the ministers approving the risk criteria developed by the NHVR as part of the implementation of the National Roadworthiness Data Strategy
	<i>Scheduled inspections required for registration</i>	No change	No change	Risk-based requirement	Mandatory for all		Inserting a primary duty on operators, employers and prime contractors in the HVNL to address vehicle safety, including heavy vehicle roadworthiness and vehicle standards
Improving compliance	<i>Chain of Responsibility</i>	No change	No change	Specific duty on business practice for operators, employers and prime contractors	A primary CoR duty, extending beyond the operator, employer and prime contractor to a wider chain		Introduce new provision in the HVNL
	<i>Enforceable undertaking</i>	No change	No change	Introduce new provision in the HVNL			Review of current HVNL provisions
	<i>Formal warnings</i>	No change	No change	Review of current HVNL provisions			Accreditation and auditing improvements
NHVAS improvements	<i>Operational changes</i>	No change	No change	Accreditation and auditing improvements			Inspections on a sample of the operator's fleet of nominated vehicles at the renewal of accreditation.
	<i>Governance changes</i>	No change	No change				
	<i>Education</i>	No change	No change				
	<i>Inspections of a sample of the accredited vehicles</i>	No change	No change	At the renewal of accreditation	At the renewal of accreditation		

1: Part of NHVR's accelerated roadworthiness program approved by the ministers in November 2014.

The comparative ranking of the reviewed options is outlined in the Table below. A comparative ranking was used because the data is not available to quantify and compare the total value of the net benefits of each option.

Comparative ranking of the reviewed options

Cost type	Option 1	Option 2	Option 3	Option 4	Recommended composite option
Cost to operators of rectifying non-compliance	baseline	baseline	–	--	–
Operator administrative costs	baseline	+	++ / (ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)	--- (\$5.3b)	++ / (ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)
Regulatory administrative costs	baseline	~0 (\$15.8m)	~0 (ranges from \$135m in benefits to \$77m in costs, depending on implementation)	-- (\$253m)	~0 (ranges from \$135m in benefits to \$77m in costs, depending on implementation)
Crash risk reduction benefits	baseline	+	++	++++	+++
Likely to deliver net benefits	No change	YES	YES (depending on implementation)	NO	YES (depending on implementation)

0 = negligible, – means costs increase, + means benefits accrue, figures are for the 10-year period (NPV)

Within these overall results, there are significant differences in impacts between jurisdictions, due to the current differences in heavy vehicle roadworthiness management. In particular, implementing risk-based (option 3 / recommended composite option) or annual (option 4) scheduled inspections would increase operator costs significantly more in those jurisdictions where scheduled inspections are not generally required.

- Overall, the analysis shows there would be no change under the baseline option 1, while the cost to implement option 4 would exceed any potential benefits.
- Options 2, 3 and the recommended composite option are expected to deliver net benefits.
- The recommended composite option will deliver the greatest net benefits over option 3 because:
 - costs of the recommended composite option are expected to be the same as for option 3 because the major cost drivers are the same, primarily the development and implementation of national consistency initiatives and the risk-based approach to scheduled inspections
 - benefits of the recommended composite option are expected to be potentially greater than for option 3 because the elements of difference (namely the guidance approach to national consistency and the primary CoR duty in the recommended composite option) are expected to better integrate with industry and service providers to manage roadworthiness.

- Of option 2 and the recommended composite option, the recommended composite option will deliver the higher net benefits, provided it is implemented in the most effective way. It could deliver administrative cost savings to operators and reduce regulatory administrative costs, while delivering direct and indirect crash reduction benefits.

The net benefits expected from the recommended composite option are sensitive to how the risk-based approach to scheduled inspections is ultimately implemented. The benefits rely on no material increases in the number of inspections conducted overall, and on increased flexibility allowing for better targeting of existing inspection resources, leading to higher levels of compliance.

A decision to implement a risk-based approach to scheduled inspections under the recommended composite option will not be made until necessary additional data is gathered (via the National Roadworthiness Data Strategy) and risk criteria based on that data are agreed on following consultation and analysis.

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1. Introduction

This Final Regulatory Impact Statement (RIS) sets out regulatory reform options to improve the roadworthiness of Australian heavy vehicles.

It sets out four reform options and a recommended composite option.

Sections 2 and 3 set out why reform is required and the objectives and scope of the reform.

Sections 4 and 5 set out the reform options and an impact analysis of each.

Section 6 summarises submissions to the Consultation RIS.

Section 7 sets out the reasons why the recommended composite option is preferred.

Section 8 sets out reform implementation and review steps.

Appendices provide further information on research and analysis.

1.1 National heavy vehicle reform

This Final RIS is part of a wider national reform program for heavy vehicles, which began in 2009 when the Council of Australian Governments (COAG) agreed that a single national regulatory regime be established for heavy vehicles over 4.5 gross tonnes. These include rigid trucks, articulated trucks, non-freight trucks (such as mobile cranes and some motor-homes), buses and heavy trailers.

Central to the agenda was the establishment in 2012 of a single national regulator, the National Heavy Vehicle Regulator (NHVR), to administer a single set of national heavy vehicle laws to replace the separate and often conflicting regulations of states and territories.

The NHVR is responsible for administering the Heavy Vehicle National Law (HVNL) and for delivering a comprehensive range of services, including managing the National Heavy Vehicle Accreditation Scheme (NHVAS).

- The HVNL commenced in 2014 in Queensland, New South Wales (NSW), Victoria, Tasmania, South Australia and the Australian Capital Territory (ACT).
- The HVNL covers matters relating to vehicle standards, mass dimensions and loadings, fatigue management, the Intelligent Access Program, heavy vehicle accreditation and on-road enforcement.
- Western Australia (WA) and the Northern Territory (NT) are not participating in the national reform at this time.

Previous reports

Previous reports for review and consultation relating to this Final RIS are:

- *Phase One – Report of Current Practice* (NTC July 2014) examined current heavy vehicle roadworthiness regulations and concluded that reform was warranted.
- *Phase Two – Integrity Review of the National Heavy Vehicle Roadworthiness System* (NTC August 2015)

- A *Consultation Regulatory Impact Statement* (NTC January 2015) investigated the major principles, costs and benefits of heavy vehicle roadworthiness and set out options for review and consideration.

The NTC received 30 written submissions in response to the Consultation RIS – including eight from jurisdictional governments, seven from industry associations and five from repairers.

From 2018 all heavy vehicles in Australia will be registered in a national scheme, replacing state- and territory-based registration.

Heavy vehicle roadworthy inspection requirements are currently linked to Heavy Vehicle registration in most states and territories.

It is therefore important to establish an agreed national approach before the National Heavy Vehicle Registration Scheme commences.

This Final RIS has been prepared with regard for the submissions received during consultation and further analysis.

1.2 The heavy vehicle industry

A heavy vehicle is a vehicle with a gross vehicle mass (GVM) of more than 4.5 tonnes. This includes rigid trucks, articulated trucks, non-freight carrying trucks (including some types of plant and equipment such as mobile cranes and even some larger motor-homes), buses and heavy trailers.

At the time of the 2014 Motor Vehicle Census there were 329,464 heavy rigid trucks, 93,853 articulated trucks, 23,144 non-freight carrying vehicles and 94,131 buses registered in Australia.^{2,3}

The trucking industry consists of hire and reward operators (transport and logistics businesses that provide trucking services), and ancillary operators (businesses whose main activity is something other than transport but that have truck fleets to transport their own products).

1.3 Growing freight task

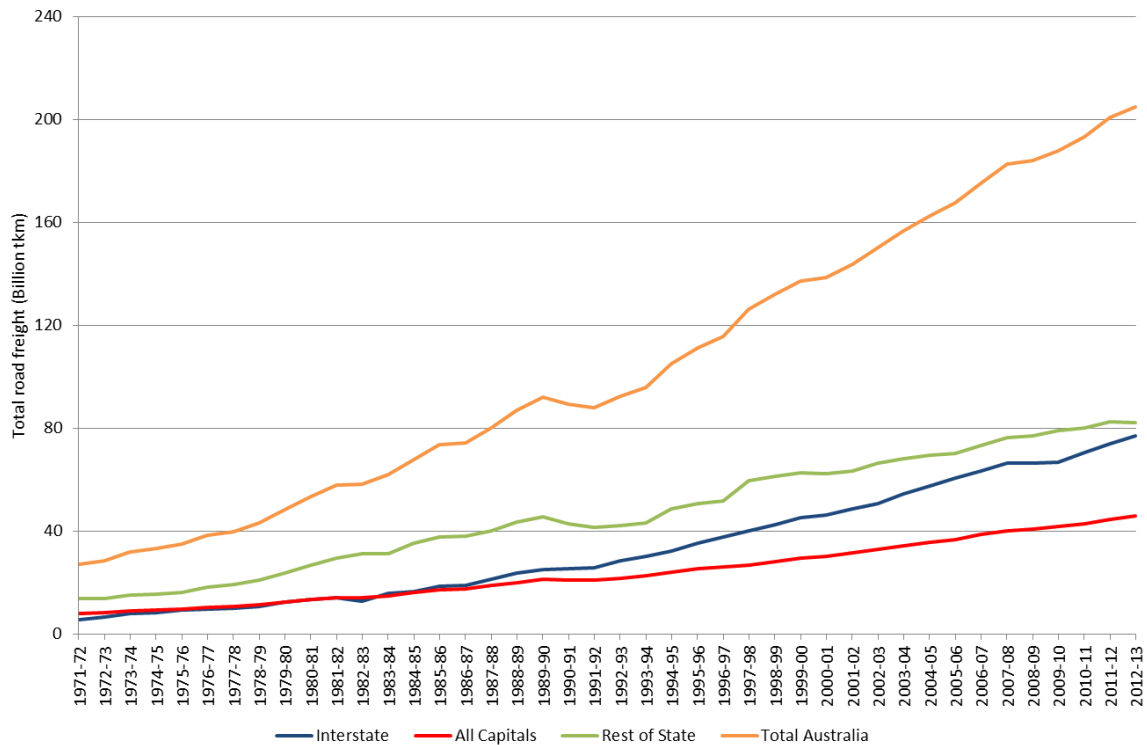
The road freight task has been growing by a little over 5 per cent per annum for the last 40 years. The total road freight estimate for Australia increased from 27.0 billion tonne kilometres (tkm) in 1971 – 72 to 204.9 billion tkm in 2012 – 13.⁴ Figure 1 shows that a significant portion of this growth has come from interstate trucking.

² Australian Bureau of Statistics Motor Vehicle Census, Australia, 31 Jan 2014 (ABS 9309.0).

³ Please note these figures are different from the heavy vehicle numbers used elsewhere in the report, which were sourced from vehicle registration data. This is because the Motor Vehicle Census does not separately list heavy trailers. Instead, it reports vehicle combinations as one vehicle. For example, a combination comprising a prime mover and a semi-trailer would be reported as one vehicle under the 'Articulated trucks' category. However, both the prime mover and the semi-trailer are separate vehicles, since both are classified as heavy vehicles in their own right (> 4.5 tonnes). Hence the data used in the RIS is a more accurate account of heavy vehicle numbers in Australia for the purposes of heavy vehicle regulation.

⁴ BITRE (2014) 'Australian road freight estimates: 2014 update', p. 1.

Figure 1: Road freight estimates by interstate, all capital cities combined, rest of state (combined) and all of Australia, 1971 – 72 to 2012 – 13



Source: BITRE (2014) Australian road freight estimates: 2014 update

A 2014 report by Infrastructure Partnerships Australia (IPA 2009) stated that:

It is expected that Australia’s freight task in 2020 will be double what it was in 2006 and by 2050 it will be triple its current size. There will be a continuation of the recent trend towards a dominance of road transport until 2020. Forecasts produced by IBISWorld for Infrastructure Partnerships Australia suggest that the freight task is set to increase from 503 billion tonne kilometres in 2008 to 1,540 tonne kilometres in 2050.

Heavy vehicles are also being used more intensively. The total annual distance travelled by heavy vehicles in Australia more than doubled between 1976 and 2012 – from 8,457 to 19,398 million kilometres. This growth and increased intensity of use are stretching regulatory resources, presenting a challenge for heavy vehicle roadworthiness regulation.

1.4 What is ‘roadworthiness’?

A roadworthy vehicle is a vehicle that has no safety-related defects 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.

Roadworthiness standards can be split into two categories, both of which must be met (Box 1):

1. the heavy vehicle standards under the HVNL
2. any and all other aspects of a heavy vehicle’s condition that may affect its safe operation.

Box 1: Provisions for 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.

As can be seen in Box 1, some criteria in sections 89, 525 and 526 of the HVNL are more subjective than those prescribed in the vehicle standards. The NHVR has developed a National Heavy Vehicle Inspection Manual (NHVIM) to guide the interpretation of these provisions. The NHVIM outlines consistent and practical steps needed for a heavy vehicle inspection and establishes consistent criteria for heavy vehicle roadworthiness. The NHVIM comprises 15 sections, covering relevant vehicle parts and different types of heavy vehicles.

Notwithstanding the legal requirements that must be met, in a practical sense a roadworthy vehicle is one that has all of 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.

1.5 Heavy vehicle crashes and breakdowns

Poor maintenance of heavy vehicles can lead to two distinct problems: crashes that result in death or injury and property damage, and breakdowns that impose an economic cost on the community due to congestion and delays of traffic.

The Bureau of Infrastructure, Transport and Regional Economics provides the most current Australian data on road trauma involving heavy vehicles (BITRE 2014). Crashes involving heavy

vehicles resulted in 220 deaths in 2014, 189 deaths in 2013, 256 deaths in 2012 and 230 deaths in 2011. The largest proportion involved articulated truck crashes; this was followed by heavy rigid truck crashes, while the remainder – around 10 per cent – involved buses. In addition, approximately 1,500 people per year are hospitalised as a result of crashes involving heavy vehicles.

Over the last decade, total annual deaths from fatal crashes involving heavy vehicles decreased on average by 3.2 per cent per year, from 276 in 2005 to 220 in 2014. Taking into account the increase in heavy vehicle numbers, the rate of fatal crashes per 10,000 heavy vehicle registrations has dropped even more significantly over this period: by an average of 6.8 per cent per year for articulated trucks, 4.1 per cent per year for heavy rigid trucks, and 9.9 per cent per year for buses. There has been no comparable decline in the incidence of serious injuries.

Generally it is other road users who are killed or injured in these crashes. Three-quarters of fatalities from crashes involving a heavy vehicle are drivers or passengers and three-quarters of these are light vehicle occupants. The remainder of fatalities are pedestrians (14.0 per cent), motorcyclists (8.2 per cent) and cyclists (2.7 per cent).

Each year, approximately 1,500 people are hospitalised from crashes involving heavy vehicles, with fewer than half being heavy vehicle occupants (45 per cent).

Heavy vehicle crashes impose significant costs on society through road users' pain and suffering and medical treatment, road asset damage, and the cost of traffic congestion due to crashes and breakdowns. In its economic analysis accompanying this RIS, Frontier Economics has estimated that the cost of heavy vehicle crashes and breakdowns over the next 10 years, attributable to heavy vehicle unroadworthiness, will total between \$2.3 billion and \$4.2 billion (Net Present Value – NPV).

Reducing the incidence of heavy vehicle crashes and breakdowns could lead to significant savings. Factors that can reduce risks of crashes include improvements in fatigue management, improved speed limit compliance and improvements in vehicle construction and road design.

The potential for improving heavy vehicle roadworthiness and reducing crashes and breakdowns attributable to unroadworthiness is an additional factor that is a focus of this RIS.

1.6 Current regulation of heavy vehicle roadworthiness

The NHVR administers one set of laws for all heavy vehicles over 4.5 tonnes gross vehicle mass – the HVNL. Some other aspects of heavy vehicle regulation remain in state and territory legislation.

The object of the HVNL is to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that, among other things, promotes public safety and encourages safe business practices, as well as promoting industry productivity and efficiency. The HVNL establishes a regulatory framework that prescribes requirements about the standards heavy vehicles must meet when on roads.

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, and authorised officers, also enforce heavy vehicle offences under the HVNL, using different approaches.

The statutory requirements governing heavy vehicle roadworthiness include the heavy vehicle standards themselves, and the circumstances under which inspections to determine whether a vehicle meets those standards is performed. These underlie the heavy vehicle roadworthiness assurance approaches currently in place, both under the HVNL and under the varying requirements of individual state and territory governments.

WA and NT are not party to the HVNL and administer their own regulations to address heavy vehicle roadworthiness.

1.6.1 How defects develop

Understanding how heavy vehicle defects develop is relevant to how compliance and enforcement policy is best developed – that is, in a responsive manner. There are several ways in which heavy vehicle defects develop:

- deterioration of a component's condition through vehicle use
- fitting (replacing) a component of substandard quality or incorrect specification (or not fitting a good-quality component correctly)
- modifying a vehicle or a component in a manner that compromises its effectiveness or safety
- improperly or inadequately repairing a component (for example, a faulty weld).

Of these, deterioration is the most common and is inherent in the vehicle's operation. Component deterioration can cause defects that cannot necessarily be mitigated. In light of this, maintenance can be used to manage deterioration in order to prevent it from posing an unacceptable safety risk or otherwise becoming unroadworthy. This intervention involves competent people regularly monitoring/inspecting a heavy vehicle's condition and, where necessary, repairing the vehicle. This maintenance is a significant and complex task because a heavy vehicle comprises hundreds of components that deteriorate at different rates.

Component deterioration alone is not evidence that the heavy vehicle's operator has poor maintenance management practices. Arguably, neither is the existence of isolated (minor) defects, as failure of individual components can occur in even well-maintained vehicles. As a result, 'spot check' inspections may only provide limited information on an operator's broader management practices. Rather, it is the pattern of component deterioration and associated resulting defects that offers a more reliable measure of how effectively an operator is managing roadworthiness. Measuring patterns of heavy vehicle component deterioration, resultant defects and defect management is difficult in practice.

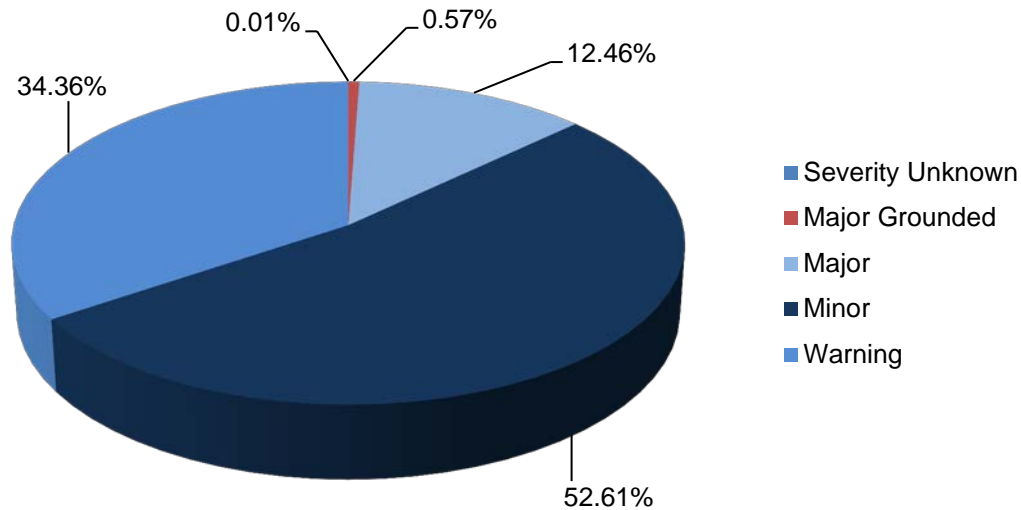
The other ways in which defects may develop (fitting substandard or incorrect parts, and modifying a heavy vehicle in a way that makes it unsafe) can affect overall heavy vehicle roadworthiness levels. They are not the major focus of this RIS.

Most heavy vehicles and operators are generally meeting roadworthiness requirements. Data provided by Australian states and territories shows that major defects are detected in 0.5 to 10 per cent of heavy vehicles inspected. Minor defects are more prevalent, at a rate of about 6 to 26 per cent of vehicles inspected.

Due to the subjective nature of how defects are assessed as minor or major, and significant variations in how inspections are conducted, and how vehicles are selected for inspection in each state and territory, readers should use a degree of caution in interpreting these figures

Figure 2 shows the relative proportions of different defect severity levels, using data sourced from NSW RMS (Roads and Maritime Services) roadworthiness enforcement data. The overwhelming majority of defects (over 85 per cent) were assessed as either minor or only requiring a warning. This means that, while still posing some degree of safety risk and so rendering the associated heavy vehicle unroadworthy, most defective heavy vehicles did not pose a major, immediate safety risk. By contrast, approximately 13 per cent of these defective vehicles had one or more major defects.

Figure 2: Proportion of defect severities



Source: NSW RMS 2013 – 14 enforcement data, as supplied to the NTC. For this data, which was sourced under outgoing NSW heavy vehicle law, 'major' and 'major – grounded' are nominally categories of what would correlate with major defects under the HVNL. The minor and warning categories correlate with what would be minor defects under the HVNL. A small proportion of defects were of an unknown severity category. 'Major – grounded' refers to a major defect where the vehicle was not permitted to proceed due to its unsafe condition.

1.7 Benefits of improving roadworthiness

Australia's heavy vehicle fleet has grown substantially in number and size as the nation's total freight task has grown over 5 per cent each year for the last 40 years. At the 2014 Motor Vehicle Census there were 329,464 heavy rigid trucks, 93,853 articulated trucks, 23,144 non-freight carrying vehicles and 94,131 buses registered in Australia (ABS 2014).⁵

The national freight task is expected to double from 2006 to 2020, and triple by 2050. Interstate trucking has generated a significant portion of this growth (BITRE 2014:1) and road freight using heavy vehicles is expected to dominate until 2020, with forecasts suggesting it will triple from 503 billion tonne kilometres in 2008 to 1,540 billion tonne kilometres in 2050 (IPA 2009).

Heavy vehicles are also being used more intensively. The total annual distance travelled by heavy vehicles in Australia more than doubled from 8,457 in 1976 to 19,398 million kilometres in 2012 (BITRE 2013).

Enforcing speed limits and improving vehicle construction and road design all help reduce heavy vehicle crashes and their consequences.

Improving roadworthiness offers substantial potential to improve safety and productivity.

⁵ Please note these figures are different from the heavy vehicle numbers used elsewhere in the report, which were sourced from vehicle registration data. This is because the Motor Vehicle Census does not separately list heavy trailers. Instead, it reports vehicle combinations as one vehicle. For example, a combination comprising a prime mover and a semi-trailer would be reported as one vehicle under the 'Articulated trucks' category. However, both the prime mover and the semi-trailer are separate vehicles, since both are classified as heavy vehicles in their own right (> 4.5 tonnes). Hence the data used in the RIS is a more accurate account of heavy vehicle numbers in Australia for the purposes of heavy vehicle regulation.

Crashes involving (but not necessarily caused by) heavy vehicles resulted in 895 deaths on Australia's roads from 2011 to 2014. Each year, approximately 1,500 people are hospitalised due to injuries sustained in crashes involving heavy vehicles (BITRE 2015:15).

Traffic and freight delays caused by heavy vehicle crashes also reduce productivity. In its economic analysis for this Final RIS (see Appendix B), Frontier Economics estimates the total cost of heavy vehicle crashes and breakdowns over the next decade attributable to heavy vehicle unroadworthiness at \$2.3 billion to \$4.2 billion.

Improving the roadworthiness of heavy vehicles can prevent crashes, death and injury as well as lost productivity. A single national regulatory system can also reduce compliance and education costs for industry.

1.8 The need for reform

A significant proportion of heavy vehicles on Australia's roads are detected as defective.

Data provided by Australian states and territories shows that major defects (imminent and serious safety risk) are detected in 0.5 to 10 per cent of heavy vehicles inspected. Minor defects (a lesser safety risk) are more prevalent, showing a rate of about 6 to 26 per cent per vehicle inspected.

Due to the subjective nature of how defects are assessed as minor or major, and significant variations in how vehicles are selected for inspection and how inspections are conducted, a degree of caution should be applied in interpreting these figures.

Recent data from NSW, which has the most comprehensive system for checking heavy vehicle roadworthiness, showed the overwhelming majority of defects (over 85 per cent) were assessed as minor or only requiring a warning (NSW RMS 2014). This means that while still posing a degree of safety risk and rendering a heavy vehicle unroadworthy, the defective heavy vehicle did not pose a major, immediate safety risk. However, approximately 13 per cent of these defective vehicles also had one or more major defects (NSW RMS 2014).

1.9 Current roadworthiness regulation and practices

The *Heavy Vehicle Roadworthiness Review* (NTC August 2014) set out current heavy vehicle roadworthiness practices in Australia. It highlighted that developing policy and regulation relating to managing heavy vehicle requires an understanding of how heavy vehicle operators approach roadworthiness management and the barriers to them complying with regulations.

The NHVR administers the HVNL, which prescribes the standards that heavy vehicles must meet when on roads. It aims to do this in a way that promotes public safety and encourages safe business practices, as well as promoting industry productivity and efficiency. WA and the NT are not party to the HVNL and administer their own regulations to address heavy vehicle roadworthiness.

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 and authorised officers also enforce heavy vehicle offences under the HVNL using different approaches.

The statutory requirements governing heavy vehicle roadworthiness include the heavy vehicle standards themselves and the circumstances under which inspections to determine whether a vehicle meets those standards are performed.

Inspecting, advising on and determining roadworthiness comprises three key activities:

1. Mandatory periodic or change-of-ownership inspections ('scheduled inspections') by a regulator. These are provisions of state and territory law, and are not required under the HVNL.
2. Random and targeted compliance checks of heavy vehicles, including roadside checks by regulatory or authorised officers and targeted off-road inspections.
3. Accreditation schemes based on operators demonstrating through audit they have a robust system of heavy vehicle maintenance. Accreditation schemes interact with operator maintenance systems and government-directed compliance inspections by informing how maintenance schemes are implemented and when/why compliance inspections are required.

Additionally, roadworthiness inspections may be required to clear a defect notice, where a vehicle's registered (garaged) address is transferred interstate or where a vehicle's registration has expired. Box 2 summarises key Australian heavy vehicle accreditation schemes.

Box 2: Heavy vehicle accreditation schemes operating in Australia

The three heavy vehicle accreditation schemes of primary relevance to this RIS are:

1. *National Heavy Vehicle Accreditation Scheme (NHVAS)* – an audit-based compliance system administered by the NHVR.
2. *Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS)* – a mandatory scheme for B-doubles, road trains, restricted-access vehicles and vehicles operating on permits or concessions in Western Australia.
3. *TruckSafe* – an industry scheme operated by the Australian Trucking Association and primarily focused on improving road safety and business performance of operators.

Approaches to roadworthiness assurance currently vary significantly between jurisdictions. Each jurisdiction has its own requirements for how a heavy vehicle must be inspected and the reasons why. They vary in frequency, cost, delivery model, ease of compliance, inspection 'trigger', assessment methodology and audit and control systems.

NSW and Queensland rely primarily on scheduled annual inspections of all heavy vehicles at dedicated workshops. NSW also undertakes significant roadside inspections. The other jurisdictions predominately rely on roadside inspections. The degree to which heavy vehicles are examined at these roadside inspections varies according to the type of equipment used.

Section 4.6.5 of the cost – benefit analysis in Appendix B discusses the difficulties associated with assessing the relative effectiveness of these different approaches. While it concludes that subjecting a vehicle to more frequent inspections is likely to reduce the crash risk, the marginal benefit from increasing vehicle inspections declines as these inspections become more frequent.

Developing an effective maintenance management system requires risk management principles. There is no single correct method of maintaining a heavy vehicle. Many defects (such as brake lining wear) are predictable and allow for effective, planned management. However, other defects (such as a cracked chassis or broken lamp) arise more irregularly and unpredictably and only regular and thorough inspections will reduce the associated risk.

Risk management principles include an assessment of a heavy vehicle's defects in light of operating factors (such as size, weight and type of load; road condition and visibility levels). As with all risk management systems, the degree of risk management necessary is partly a matter of judgement.

While the HVNL prohibits a heavy vehicle being operated on road with any defect, in practice defects arise from time-to-time even with well-maintained vehicles. Minimising the frequency and severity of defects is a more practicable goal.

2. The problem

Recent data from NSW shows that a significant proportion of the fleet of heavy vehicles have a defect – for example the majority of vehicle combinations inspected (prime mover and any trailers)⁶ carry a defect and 13 per cent of these defective vehicles carry a major defect.

Unroadworthy heavy vehicles impose significant costs on Australian society. They compromise safety of drivers and other road users and impede productivity, including through congestion costs from breakdowns.

Given the importance of the heavy vehicle sector, it is worth considering whether, under current regulatory arrangements, heavy vehicle maintenance is occurring at levels below the societal optimum. If there is an under-provision of maintenance, then there may be net beneficial policy changes that can be made to increase the roadworthiness of the heavy vehicle fleet – with resultant societal benefits of increased safety and productivity of Australian roads.

This chapter explores the elements of this problem, namely:

- the market failures which, in the absence of regulation, lead to under provision of heavy vehicle maintenance (section 2.1)
- the effectiveness of the current regulatory framework (section 2.2).

It then considers whether further government action may be appropriate (section 2.3).

The RIS explores whether there are socially optimal changes that could improve the safety and productivity outcomes associated with heavy vehicle roadworthiness.

2.1 Market failures

Operators have a commercial incentive to ensure that their heavy vehicles are maintained to operate reliably. However, there is sometimes a gap between what an individual operator believes is necessary to achieve this – in terms of servicing and maintenance – and what is socially optimal – in terms of reducing the risk of crashes and breakdowns.

Private incentives alone will likely lead to under-provision of roadworthiness. There are a number of reasons for this:

- Owners and operators are unlikely to bear the full economic cost of a crash or breakdown caused by operating an unroadworthy vehicle.
- Owners and operators may lack the necessary skills and judgement required to assess what is safe, and to gauge the potential impact of defects. Or they may have less information on the causes or consequences of unroadworthiness than a regulator who has a broader view of the industry and access to research.
- Owners and operators may experience optimism bias (the belief that bad things will not happen to them) and therefore underestimate the likelihood and cost of a roadworthiness-related crash. Furthermore there may be a difference between public and private evaluations of risk and of the willingness to tolerate risks, with individuals tending to tolerate higher risks where they (erroneously) believe they can manage or influence the risk. This could also be argued to be a function of a lack of capability or understanding of the risk.

Owners and operators are also subject to commercial pressures which could lead to maintenance or repairs being delayed if the business is under financial stress.

⁶ Based on the most recent and most comprehensive survey information available from NSW in 2013.

Some of the key market failures described above are discussed further in the sections that follow. Section 2 of the cost–benefit analysis (see Appendix B) contains more detail on these matters.

Most heavy vehicles and operators are generally meeting roadworthiness requirements. However, many fail to meet roadworthiness standards on the odd occasion, while some fall significantly short of compliance more regularly.

The scale and nature of the problem – as can be assessed with the available information and data – does not justify any major increase in regulatory effort (as measured on a national, aggregated basis). However, significant differences exist between jurisdictions and it is logical and justified that under a national approach and regulator, regulatory practices be more consistent across the country in line with the economic objectives under the COAG seamless national economy.

There is substantial evidence that existing legal arrangements/regulatory practices are not functioning properly/efficiently – leading to problems such as lack of transparency around what compliance is, unnecessary red tape, compromising efforts of regulators to manage roadworthiness.

When developing this Final RIS, the NTC considered whether current regulatory arrangements for heavy vehicle maintenance were occurring at below optimum levels and if so, if changes were possible where the benefits outweighed the costs.

2.1.1 Unaccounted external costs

A heavy vehicle may be maintained sufficiently to meet commercial objectives (so that it does not regularly break down) but it may be maintained at less than optimum level from a societal perspective. This is because some of the costs of heavy vehicle crashes and breakdowns, resulting from unroadworthy vehicles, are borne by other road users and the broader community rather than the operator. These broader social costs (or externalities) include:

- cost of traffic congestion (loss of productivity for those caught in crash or breakdown related congestion)
- other road users' pain and suffering
- emergency responder and clean-up costs
- medical treatment costs
- lost workforce participation
- road asset damage.

There is limited feedback to operators of these external costs which are borne by society, including through the use of taxpayer funds, payments from individuals, or a loss of utility for individuals. The costs of insurance, which operators may pay, are also unlikely to be able to internalise all these social costs (see Box 3).

The avoidance of these costs by operators means they will not take them into account when determining how much to invest in ensuring their vehicles remain in a roadworthy state. In the absence of other regulation, this leads to an under-provision by operators in vehicle maintenance.

2.1.2 Lack of operator knowledge and subjective nature of roadworthiness

Operators may have less information on the causes or consequences of an unroadworthy vehicle than the regulator or authorised officers who have a broader view of the risks as well as the standards that apply.

The complex nature of roadworthiness standards across jurisdictions – including the differing inspection assessment standards (see Appendix D) – make it difficult for an owner or operator to understand what is required from a maintenance. This is a topic identified in the Intergovernmental Agreement on heavy vehicle reform, which has an objective of removing the inefficiencies from inconsistent jurisdictional requirements.

Equally, within the industry, knowledge is likely to vary between operators. This may be most acute in ancillary operations where the operation of heavy vehicles is not the core activity of the business. Ancillary operators may be large such as extractive companies or large supermarket retailers but are frequently small operators such as green grocers, furniture removalists and farmers who may operate only one heavy vehicle.

The nature of the roadworthiness standards makes it difficult for owners and operators to build up the necessary skills and judgement required to assess what is safe, and to gauge the potential impact of defects, or interactions between different defects. While the Heavy Vehicle (Vehicle Standards) National Regulation and the NHVIM contain significant, detailed information on roadworthiness standards, they are not exhaustive. The roadworthiness of a vehicle is largely determined by the judgement of individual compliance inspectors, based on some overarching criteria. These judgements inevitably include a degree of subjectivity.

Numerous industry members have recounted examples of heavy vehicle defects that were not precisely specified in any regulatory publication, but that a compliance inspector nevertheless assessed as defects. At times, the identified defect may be a result of a breach of the overarching provision that it not pose a safety risk, but without detail as to its specific nature.

2.1.3 Owners and operators are unlikely to bear the full economic costs

A heavy vehicle may be maintained sufficiently to meet commercial objectives so it does not regularly break down but it may be maintained at less than optimum level from a societal perspective. This is because some costs of heavy vehicle crashes and breakdowns caused by unroadworthy vehicles are borne by other road users and the broader community, rather than by the operator.

Broader costs (or externalities) include productivity losses from traffic delays, the pain and suffering of others, emergency response costs, medical treatment costs, lost workforce participation and road asset damage costs. The costs of insurance that operators may pay are also unlikely to internalise all these social costs. Box 3 provides more detail on addressing externalities from crashes involving heavy vehicles.

This means operators will not account for these costs when determining their investment levels in maintaining the roadworthiness of heavy vehicles. In the absence of other regulation, this leads to an under-provision by operators in vehicle maintenance.

Box 3: Limitations on feedback to internalise external costs

The existing mechanisms for addressing the externalities present are legal liability arrangements (for example, the imposition of damages for crashes that affect public safety, infrastructure or the environment) and the insurance costs associated with these. Legal liability may be only partially effective in accounting for externalities, because of the following factors:

- **Difficulties associated with attributing blame.** It is difficult to pinpoint a vehicle defect as the primary cause of any crash. Rather, it is more likely to be one of various factors that contribute to an incident. This makes it less likely that an operator is deemed responsible for an incident, which in turn may reduce the likelihood of successful litigation. In addition, it can be difficult to prove the causes of a vehicle defect were in the operator's control or reflect a lack of maintenance effort.
- **Information asymmetries between operators and insurers.** Operators are aware they may bear some of the broader social costs associated with any incidents. This is evidenced by the fact they take out liability insurance to limit the financial risks of an 'at fault' crash. However, monitoring the crash mitigation efforts of operators is costly and may lead to imperfect monitoring by insurers. In these circumstances, operators will have weaker incentives to undertake preventive efforts that achieve net benefit (in terms of avoided future crash costs). This is because the negative consequences would be borne by the insurer, who would have been unable to monitor preventive efforts and reduce crash pay-outs in the event of 'insufficient effort'. This is more likely to be the case with less-experienced operators and/or operators financially viable at the margin.
- **Damages may be dispersed.** Many road users may lose productivity from a crash or breakdown from time lost due to traffic delays. This makes it difficult to coordinate civil action against a negligent operator. This means the societal cost of traffic congestion caused by a crash or breakdown (resulting from inadequate maintenance) is unlikely to be covered by insurance or internalised by an operator.

2.1.4 Owners and operators may underestimate the risk

Owners and operators may experience optimism bias – the belief that bad things will not happen to them.

This may mean an operator underestimates the risk of being in a crash or underestimates how much a particular defect in their heavy vehicle will influence the risk of being in a crash, as well as the cost of a roadworthiness-related crash.

Owners and operators are also subject to commercial pressures, which could lead to maintenance or repairs being delayed if their business is under financial stress.

Section 2 of the cost – benefit analysis in Appendix B contains more detail on these matters.

2.1.5 Conclusion on market failures

Despite the strong private incentive for operators to maintain roadworthiness of their heavy vehicles, in the absence of regulation, the resultant private investment is likely to be below the social optimal level. This is because heavy vehicle operators are not required to take into account the full set of social costs of potential crashes and breakdowns. Insurance markets will go some way to internalise this externality, but are unlikely to be able to internalise all these social costs. Informational limitations related to interpreting 'roadworthiness' and optimism bias may further exacerbate the private under-provision of vehicle maintenance.

2.2 Effectiveness of the current regulatory framework

As described above, the key problems identified with heavy vehicle roadworthiness relate to the effectiveness of the existing regulatory framework and approach to compliance, specifically:

- whether the level or allocation of existing roadworthiness compliance efforts is adequately addressing market failures which might otherwise lead to under-provision of heavy vehicle maintenance
- limitations with the existing regulatory framework that are preventing it from being as effective as it might otherwise be.

There is substantial evidence that existing arrangements and practices relating to heavy vehicle roadworthiness are not functioning optimally or efficiently.

The available information and data indicate there are significant differences between jurisdictions.

It is logical and justified that regulatory practices should be more consistent under a national approach and regulator. A significant element of the COAG National Partnership Agreement to Deliver a Seamless National Economy is to remove jurisdictional inconsistencies and establish national systems to improve safety and reduce costs and regulatory burden. The current regulatory framework uses vehicle inspections (random and scheduled) and accreditation processes to increase the incentives for heavy vehicle operators to maintain roadworthy vehicles. The approach to heavy vehicle roadworthiness management varies significantly by jurisdiction.

Industry confirmed in consultations that current regulatory arrangements motivate private investment in heavy vehicle maintenance, but there are indicators the current framework could be more effective:

- Observed defects are not declining. For example, the rate of major defects in hauling units in 2012 (4.0 per cent) was similar to the rates in 2006 (3.9 per cent) and 2009 (4.6 per cent). The rate of major defects in trailers in 2012 was 6.1 per cent compared with 4.2 per cent in 2006 and 6.3 per cent in 2009 (NSW RMS 2012:1).
- While there is a declining trend in fatalities associated with heavy vehicle crashes from 2005 to 2014 (– 3.2 per cent p.a.), this is comparable to the decline observed for all road users over the same period (– 4.1 per cent p.a.) (BITRE 2015:Table 1.6). The number of serious injuries associated with heavy vehicle crashes has not declined (BITRE 2015:Table 1.12).

Inconsistent roadworthiness requirements across jurisdictions can lead to inefficiency. Jurisdictions may be supporting roadworthiness compliance beyond their state borders. The disparity is also likely to raise compliance costs for interstate operators.

Stakeholder consultation highlighted significant concerns with the effectiveness of the current regulatory regime. Key concerns include inconsistent interpretations of roadworthiness, a lack of inspection targeting, and limited consequences for repeated non-compliance.

2.2.1 Inconsistent interpretations of roadworthiness

Consultation with both industry and government representatives indicated a degree of confusion and disagreement over what heavy vehicle roadworthiness means at the detailed, technical level. Industry submissions to the *Integrity Review of the National Heavy Vehicle Roadworthiness System* (NTC & NHVR July 2014) and the *Consultation Regulatory Impact Statement* (NTC January 2015) have expressed the view that regulators assess roadworthiness standards inconsistently or incorrectly. This is regarded by industry as a considerable burden on operators, both in understanding what they need to do to maintain their vehicle in a safe condition and, for interstate operators, what they must do to comply with requirements of different jurisdictions.

The roadworthiness of a vehicle is largely determined by the judgement of individual compliance inspectors, based on overarching criteria. These judgements inevitably include a degree of subjectivity. Box 4 provides examples of industry concerns about inconsistencies in roadworthiness inspections.

Box 4: Industry examples of inspections issues

Numerous industry members have recounted examples of heavy vehicle defects that were not precisely specified in any regulatory publication, but that a compliance inspector nevertheless assessed as defects. At times, the identified defect may be a result of a breach of the overarching provision that a vehicle defect not pose a safety risk, but without detail as to its specific nature.

This uncertainty may dissuade greater levels of compliance effort, if there is an expectation that effort will not be recognised. Examples of inconsistencies given by stakeholders include:

- issuing defect notices or sanctioning vehicles for defective components that have no measurable safety consequences
- issuing defect notices for components on grounds that are not reasonable, as the condition of the component could not be practicably assessed (for example, at the roadside)
- using assessment criteria inconsistent with those prescribed under the HVNL (in the Vehicle Standards Regulations)
- inconsistently applying assessment criteria (what one inspector accepts, another rejects)
- issuing a defect notice for components in a general sense, without specifying the defect's precise nature
- applying generic assessment criteria to proprietary components.

The NHVR has made progress in addressing issues relating to inconsistencies since the HVNL commenced in February 2014. This has included developing a NHVIM and accompanying inspection procedures. It is possible industry feedback is based on experiences that occurred before the NHVR was established and the HVNL commenced.

It is also reasonable to assume that, as the NHVR continues to develop material on how to administer or comply with the law, and embeds it through service agreements with state and territory road authorities, greater consistency will be achieved over time.

2.2.2 A lack of inspection targeting

Roadworthiness inspections can occur at a predetermined time (scheduled inspections) or randomly (without warning). Both serve as a means of detecting non-compliance and as a deterrent to non-compliance. The effectiveness of these measures as a deterrent depends on the perceived likelihood of detection and the consequences of being detected.

The likelihood (and perceived likelihood) of detection varies substantially, depending on where a vehicle is being used. The likelihood of an inspection is highest in those states that utilise scheduled inspections as a requirement for registration, and when operating on major freight routes, particularly those with permanent checking stations.

However, whether the inspection is scheduled or conducted at the roadside, the likelihood of detection (or of being subjected to an inspection) is not generally dependent on other known roadworthiness risk factors, such as an operator's poor track record or lack of maintenance plans or procedures. Roadside random inspections are conducted in a more targeted manner than scheduled inspections, with enforcement personnel making use of a range of available information (which can vary substantially between jurisdictions) to identify higher-risk vehicles to intercept. Industry stakeholder feedback was that current arrangements do not provide a sufficient deterrent against non-compliance by operators, and that resources could better target them.

Currently there is no nationally applicable means to direct resources to focus on higher-risk operators (at greater risk of having a non-compliant vehicle) or higher-risk vehicles (more likely to crash or that present greater consequences if they do crash).

2.2.3 Capability

Capability poses a significant challenge for government and industry when seeking to improve roadworthiness levels. Roadworthiness is a complex matter, with an inexhaustible range of heavy vehicle defects that may arise.

While an owner's or repairer's ability to maintain a heavy vehicle in a roadworthy condition is often described in technical terms (for instance, mechanical competency), managerial competency and capability also have significant consequences. In particular, the key challenges for operators relate to:

- determining how much maintenance is necessary
- balancing the pressure associated with maximising a heavy vehicle's earning capacity by 'keeping the wheels turning', with the need to remove it from service for timely maintenance
- organising maintenance tasks and delegating responsibility for them between responsible parties (developing and implementing a maintenance management system).

To do this, operators need to possess the skills and knowledge to accurately assess the risk posed by an ineffective maintenance system and have sufficient managerial competency and time to manage the maintenance task. Sufficient working capital is required to fund such a system.

The difficulty with recognising and assessing risks associated with low-probability, high-consequence events is well known. This applies to heavy vehicle roadworthiness, where an unroadworthy vehicle may be operated for an extended period without any major incident.

When a high-consequence event (for example, a major crash) occurs, its consequences typically affect only a small segment of the industry (for example, the single owner-operator involved in the crash). This can lead operators to believe it will not happen to them. While this behaviour is often categorised as intransigence, it is arguably more a function of misunderstanding or lack of capability in risk assessment.

Technical competency is another factor in effectively maintaining a heavy vehicle. While many operators contract out heavy vehicle maintenance to professional mechanics and repairers, problems can arise when an operator attempts to perform themselves, or delegates to someone else, a maintenance task that is beyond their competency. While building and maintaining capability in roadworthiness management are not entirely the responsibility of regulators, a lack of capability in this area will limit the effectiveness of the regulatory approach, which seeks the operator to undertake preventive action.

2.2.4 Limited consequences for repeated non-compliance

The current regulatory framework does not make use of risk factors associated with the characteristics of the vehicles and/or operators that might be used to better target compliance or enforcement activities.

Repeat offenders do not necessarily suffer stronger (or escalating) sanctions than operators found to have vehicles on the road with infrequent or one-off defects.

Stakeholders consider there is scope for improving overall industry capabilities to deliver a more roadworthy fleet.

The HVNL provides limited flexibility to regulators in how they address instances of unroadworthy heavy vehicles. They may issue a defect notice requiring rectification action by the operator,⁷ and/or impose a financial penalty.

The maximum financial penalty is \$6000 for a natural person operating an unsafe vehicle.⁸ or \$3000 for operating a vehicle in breach of the Heavy Vehicle Standards.⁹

The predominant regulatory response is to require the vehicle operator to rectify the defect. During consultation, some road agencies advised that issuing a defect notice is commonly preferred, as it is more likely to ensure the defect is rectified. Data available to the NTC does not identify the proportion of defects for which financial penalties were imposed.

The cost of addressing a defect identified at a scheduled inspection may not be any more significant than if it was identified by the operator itself, so this approach provides little additional incentive to maintain a roadworthy vehicle. However, the cost of rectifying a defect is likely to be higher at a roadside inspection (because there is a risk of delay to the current journey, or the vehicle could be taken off the road), so these inspections may provide a greater incentive for operators to proactively meet roadworthiness requirements.

The evidence from NSW (the state with the highest perceived risk of detection, due to annual inspections and level of roadside inspections) shows almost half of heavy freight vehicles inspected in a 2012 survey were found to have a defect, with around 5 per cent of inspected vehicles having a major defect (NSW RMS 2012).

A further drawback with the current approach is that defects are treated as individual events, so repeat offenders do not face consequences for incremental or serial non-compliance. This is a symptom of insufficient access to compliance data and information, or insufficient capacity to use such data.

⁷ The HVNL authorises officers to deem a heavy vehicle as defective regardless of how serious and imminent a safety risk a specific defect poses. It also allows authorised officers flexibility in how they may require an operator to rectify defects, for example, to provide more flexibility in relation to minor defects than major defects.

⁸ See s 526, HVNL – Issue of vehicle defect notice.

⁹ See s 60, HVNL – Compliance with heavy vehicle standards. The amount rises to \$6000 for an offence related to speed limiter tampering.

2.2.5 Conclusion on effectiveness of regulation

The current regulatory regime is not as effective as it could be, based on:

- limited improvement in compliance over time
- limited available evidence from the divergent approaches of different jurisdictions, suggesting that roadworthiness levels are not overly sensitive to the scale of regulatory intervention
- industry feedback, which highlighted strong concerns with a lack of clarity and inconsistencies in the interpretation of roadworthiness requirements, the lack of targeting and consequences for repeated non-compliance and overall industry capabilities in the area.

2.3 The need for government action

The existence of a problem does not automatically justify government action. However, this may be justified where both of the following apply:

- It is clear the market is failing to deliver an optimal outcome.
- The benefits of intervening to achieve that optimal outcome are higher than the incremental costs of the intervention.

In this case, there is a prima facie case that the market would fail to deliver an optimal outcome, due to the noted market failures. Improved roadworthiness could deliver significant benefits if the estimated \$2.3 billion to \$4.2 billion of costs associated with unroadworthiness could be reduced (see cost – benefit analysis in Appendix B). At the same time, the incremental costs of any intervention could be relatively low, given there is already a regulatory regime in place that could potentially be made more effective without increased resources.

Further, with the HVNL and a new regulator in place it would seem timely to address more detailed issues associated with implementing the regulatory framework, and reconsider questions and issues associated with differing jurisdictional approaches that were not resolved before the HVNL commenced.

The supporting arrangements needed to implement the reform recommendations will include drafting any necessary legislative amendments and implementing other practical arrangements necessary to support the reforms. This includes procuring regulatory resources, training NHVR staff, police officers, and other authorised officers and industry personnel, along with developing regulatory policies and procedures.

Some measures being considered will require changes to existing jurisdictional arrangements that create particular challenges for reform. A more detailed discussion of these implementation arrangements and risks is contained in Section 8.

Finally, the July 2018 date set for commencement of the National Heavy Vehicle Registration Scheme will require jurisdictional change. Heavy vehicle scheduled inspection requirements are currently linked to heavy vehicle registration in most states and territories, so it is important to establish an agreed national approach before the National Heavy Vehicle Registration Scheme starts.

3. Objectives and scope

This section discusses the objectives and intended outcomes of the heavy vehicle roadworthiness reforms, and defines the scope of this Final RIS.

3.1 Reform objectives

The objective of heavy vehicle roadworthiness reforms is to identify a package of measures that delivers net benefits.

This supports the objectives in s3 of the HVNL, which calls for roadworthiness policy and measures that are efficient:

The object of this Law is to establish a national scheme for facilitating and regulating the use of heavy vehicles on roads in a way that—

- (a) promotes public safety
- (b) manages the impact of heavy vehicles on the environment, road infrastructure and public amenity
- (c) promotes industry productivity and efficiency in the road transport of goods and passengers by heavy vehicles
- (d) encourages and promotes productive, efficient, innovative and safe business practices.

3.2 Reform scope

The scope of this Final RIS and the work undertaken by the NTC and NHVR as part of the Integrity Review of the National Heavy Vehicle Roadworthiness System (NTC & NHVR August 2014) assessed the integrity of current regulatory and compliance practices and identified opportunities for improving the system. This scope included:

- considering the broad duties and regulatory approaches most likely to best support the reform objectives and resolve the identified problem
- considering supporting duties and regulatory approaches that:
 - identify any regulatory requirements for regulated parties that may need to be established or amended
 - identify any regulatory powers needed to effectively oversee compliance with those requirements that may need to be established or amended.
- combining those measures into integrated, coherent packages of options (see Section 4 of this RIS)
- assessing the regulatory impacts, including costs and benefits, of all identified viable options (see Section 5)
- taking into account stakeholder views (see Section 6)
- making the case for, and recommending, the preferred package of options and priority measures assessed as best supporting the reform objectives (see Section 7)
- developing a plan for implementing the recommended package of options (see Section 8).

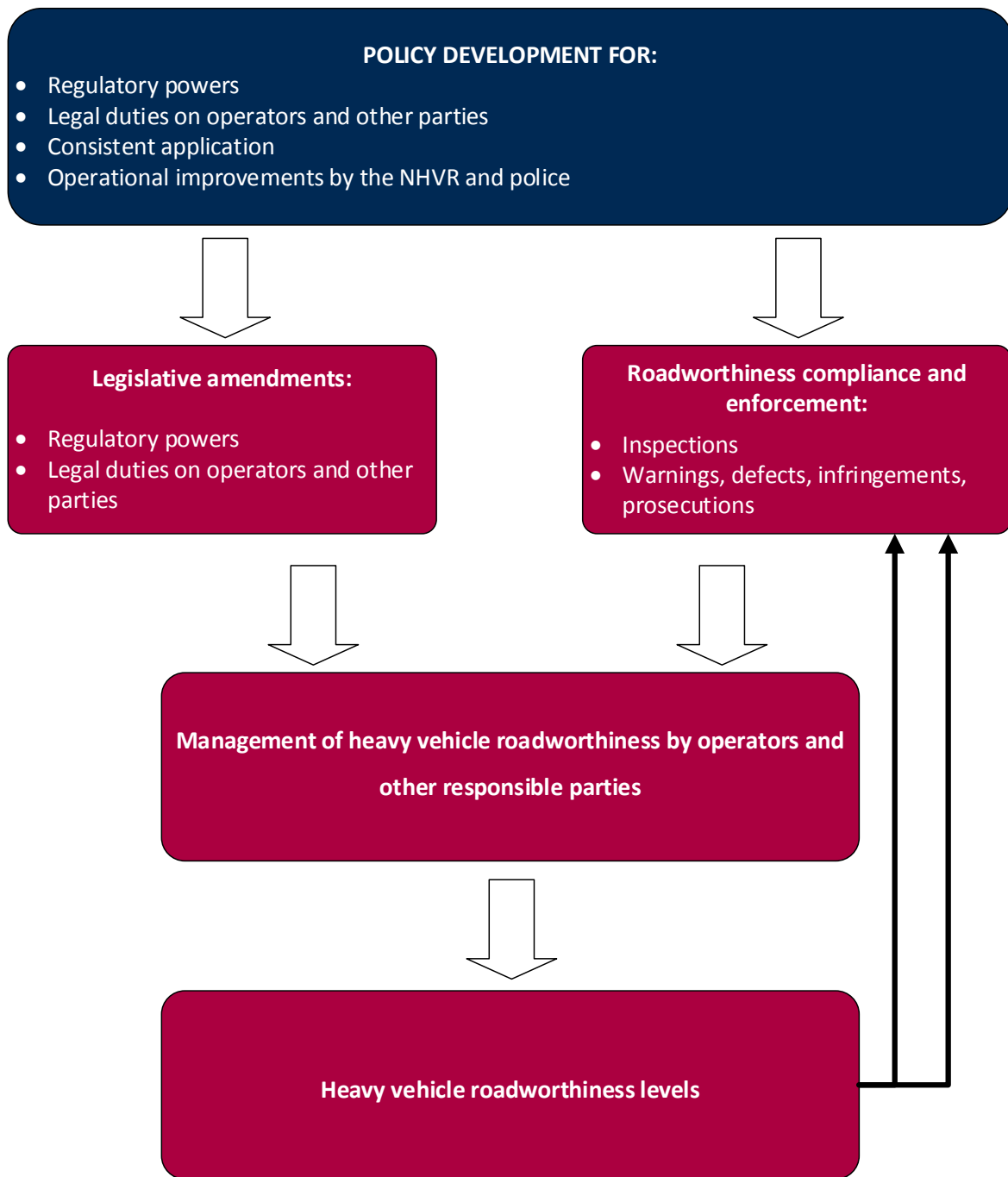
This RIS is restricted to assessing the major principles, costs and benefits of identified viable options to improve heavy vehicle roadworthiness.

If and when ministers approve recommendations on those matters, further work on the detailed supporting arrangements will be necessary. However, there are regulatory policies and practices for overseeing heavy vehicle roadworthiness that exist in parallel to the HVNL, as adopted over time by individual state and territory governments. Practical heavy vehicle roadworthiness compliance and enforcement is conducted not only by the NHVR, but also by police and state regulatory agencies.

'Compliance and enforcement' includes the day-to-day management of compliance operations, strategic development of compliance activities, and intelligence gathering and processing and its use in deploying regulatory resources.

The scope of the reforms being considered and their associated impacts are shown in Figure 3. This scope poses some challenges for assessing the regulatory impacts of each option identified in this RIS. Difficulties arise because it is necessary to make some forecasts or assumptions about how the NHVR, police and other regulators may respond to legislative changes.

Figure 3: Scope of this reform



Legend

Policy deliverables (within the scope of this phase of the reform)

Implementation of policy (to be addressed after the RIS process)

3.3 Potential benefits of reform

Road safety

The major objective of assuring or improving heavy vehicle roadworthiness is to maintain or improve road safety levels, such as by reducing the risk of heavy vehicle crashes for which mechanical defects were a contributing or causal factor.

The primary measure of the effectiveness of this reform on road safety would be the relative number or frequency of heavy vehicle crashes caused or contributed to by heavy vehicle defects. However, there are currently a relatively low number of crashes where relevant data is collected. Even where data is collected, there are practical difficulties in identifying the role of defects. These factors introduce uncertainty as to the size of the effects the proposed measures may have.

Productivity

There are two major productivity-related impacts of this reform:

- increases or reductions in operational costs associated with the proposed reform measures for the NHVR, government and industry (including the consequences of vehicles not being available for income-producing work)
- reduced traffic delays because improved heavy vehicle roadworthiness means fewer breakdowns.

There is no fixed, defined target for productivity improvements (or reductions). The crash costs considered under the safety impacts include the lost productivity associated with reduced workplace participation due to injury or death. However, this RIS has assessed the proposals based on the principle of their achieving, in aggregate, a net benefit. This means the value of all improvements should exceed the related costs.

4. Options

4.1 Key reform measures

Figure 4 identifies the key problems and reform options considered when developing this Final RIS and how they address the market failures and regulatory inefficiencies identified in Section 2.

Figure 4: Key reform measures considered

Theme	Measures
National consistency	Standardised inspection types ¹
	Standardised defect clearing process ¹
	Criteria for assessing major or minor defects ¹
	Information and training package ¹
Inspections	National Roadworthiness Data Strategy
	Scheduled inspections required for registration
Improving compliance	Chain of responsibility
	Enforceable undertaking
	Formal warnings
NHVAS improvements	Operational changes
	Governance changes
	Education
	Inspections of a sample of the accredited vehicles

¹ Part of NHVR's accelerated roadworthiness program approved by the ministers in November 2014

4.2 Summary of reform options

This RIS considers options ranging from a baseline option that represents the status quo, to options with increasing levels of quasi-regulatory and regulatory measures. These options are not exclusive or indivisible, with each option containing implementable measures that could be combined in several ways.

The options were revised from the options presented in the Consultation RIS (NTC 2015) based on consultation feedback. Differences between the options in the Consultation RIS and the options presented for analysis in this Final RIS are set out in Appendix G.

The Consultation RIS made clear that elements of the four Consultation RIS options were not locked into a single option. Following consultation and analysis of the practicality of implementation and the regulatory burdens imposed by individual initiatives, this RIS provides a composite option that combines measures from options 2, 3 and 4. The reasoning and evidence for this composite option are discussed below.

Option 1 describes the status quo, under which most jurisdictions have adopted the HVNL, with the exception of the NT and WA. It retains the existing HVNL and state-based regulatory frameworks and operational variations across jurisdictions.

Option 2 proposes administrative actions (such as changes to material that provides guidance or direction on how to administer, or comply with, the law) that can be undertaken under the current provisions of the HVNL. It also includes operational improvements to the NHVAS approved by ministers on 7 November 2014.

Option 3 proposes the administrative measures described in option 2. It also:

- enables the NHVR to impose heavy vehicle inspections on high-risk vehicles and operators, facilitating a risk-based approach to scheduled inspections
- includes NHVAS improvements related to introducing vehicle inspections for a sample of an operator's fleet
- inserts a specific chain of responsibility (CoR) duty in the vehicle standards chapter of the HVNL requiring parties to ensure that business practices will not cause a heavy vehicle to be used on a road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards
- provides for formal roadworthiness procedures, such as criteria for issuing a formal warning or a major or minor defect notice, and standardised inspection types, practices and defect clearance processes through documents with regulatory recognition
- provides for the use of enforceable undertakings under the HVNL.

Option 4 strengthens several measures described in options 2 and 3 (including by standardising inspection procedures and specifying roadworthiness criteria in statute). It also imposes:

- annual scheduled inspections on all heavy vehicles
- a primary duty on parties to ensure vehicles are roadworthy and compliant with vehicle standards
- provisions to enable enforceable undertakings.

Composite option – As a result of the consultation responses and analysis of the practicality of implementation and the regulatory burdens imposed by individual initiatives, a preferred option was identified that combined measures from options 1 to 4.

The composite option comprises:

- Revising the NHVIM and providing material that provides guidance or direction on how to administer, or comply with, the law by the NHVR to service providers and operators for guidance only (from option 2).
- Developing a risk-based approach to scheduled inspections (from option 3). A decision to implement this approach would not be made until the necessary additional data is gathered (via the National Roadworthiness Data Strategy) and risk criteria based on that data are considered and approved.
- Strengthened compliance measures of a primary duty on employers, principal contractors and operators (from option 4) and enforceable undertakings (from options 3 and 4).
- Changes to the NHVAS Business Rules to allow for inspection of heavy vehicles before renewal of accreditation.

The NTC canvassed a range of options for heavy vehicle roadworthiness reform. Consistent with the Australian Government Guide to Regulation, the approach adopted by the NTC identified the underlying problem the proposed options seek to address and considered the full range of costs and benefits associated with potential reforms.

After due consideration to the RIS guidelines, the NTC concluded that the above options covered the range of feasible and implementable options available. Table 1 summarises the measures contained in each option. These measures fit within four themes: national consistency, vehicle inspections, improving compliance and NHVAS improvements:

- national consistency – supporting more effective and efficient roadworthiness compliance practices via standard approaches across all jurisdictions
- inspections – the options present different frequencies on which inspections occur
- improving compliance – the options offer a number of measures aimed at improving compliance with roadworthiness requirements
- NHVAS improvements – the measures to strengthen the NHVAS maintenance module.

Table 1: Summary of reform options

Theme	Measures	Option 1: status quo	Option 2: non-regulatory package	Option 3: regulatory and quasi-regulatory measures	Option 4: regulatory standardisation	Composite option
National consistency	<i>Standardised inspection types¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Standardised defect clearing process¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Criteria for assessing major or minor defects¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Information and training package</i>	No change	Consistent guidance material			
Inspections	<i>National Roadworthiness Data Strategy¹</i>	No change	To be developed by NHVR			
	<i>Scheduled inspections required for registration</i>	No change	No change	Risk-based requirement	Mandatory for all	Risk-based requirement
Improving compliance	<i>Chain of responsibility</i>	No change	No change	Specific duty on business practice for operators, employers and prime contractors	A primary CoR duty, extending beyond the operator, employer and prime contractor to a wider chain	A primary CoR duty on operators, employers and prime contractors
	<i>Enforceable undertaking</i>	No change	No change	Introduce new provision in the HVNL		
	<i>Formal warnings</i>	No change	No change	Review of current HVNL provisions		
NHVAS improvements	<i>Operational changes</i>	No change	No change	Accreditation and auditing improvements		
	<i>Governance changes</i>	No change	No change			
	<i>Education</i>	No change	No change			
	<i>Inspections of a sample of the accredited vehicles</i>	No change	No change	At the renewal of accreditation		

¹ Part of NHVR's accelerated roadworthiness program approved by the ministers in November 2014

4.3 Option 1 – status quo

Option 1 involves no changes to roadworthiness regulatory requirements beyond anything that the NHVR and jurisdictions have already made. Hence, variations across jurisdictions, particularly in regard to the use of scheduled inspections, would remain.

4.4 Option 2 – Non-regulatory package

Option 2 includes measures aimed at addressing some of the limitations of the existing regulatory framework. These measures are administrative and procedural rather than regulatory and so do not require any amendment to the HVNL. Some are already under development by the NHVR. The changes proposed are as follows:

1. Revisions to the NHVIM to clarify its intent and embed a consistent interpretation of roadworthiness.
2. Establish / define inspection types.
3. Define defect clearance process.
4. Develop national criteria for roadworthiness.
5. Develop competency standards for heavy vehicle inspectors.
6. Implement education and training.
7. Implement the National Roadworthiness Data Strategy.

Ministers have requested that a number of measures that do not involve changes to regulations be progressed by the NHVR and NTC:

- Review the NHVIM.
- Develop standardised inspection types and procedures.
- Develop competencies for heavy vehicle inspectors.
- Develop a classification of defects and associated procedures for rectifying them.
- Develop national criteria for roadworthiness.
- Develop the National Authorised Vehicle Examiner scheme.
- Educate and train inspectors

These elements are being developed, but their implementation will not occur until after ministers have considered the recommendations of this Final RIS. Any implementation will be dependent on, and consistent with, decisions made by ministers with regard to this Final RIS.

More information on each of these proposed changes is set out below.

4.4.1 Revisions to the National Heavy Vehicle Inspection Manual

The NHVIM is a technical manual that informs people undertaking vehicle inspections on how to inspect a vehicle or component for roadworthiness. It contains pass / fail criteria and is generally used by third-party or government inspectors undertaking an inspection at an inspection facility and not at the side of the road.

Revising the NHVIM will increase transparency and understanding of roadworthiness requirements.

An industry technical working group reviewed the NHVIM and made a number of recommendations, most of which relate to changes to the Australian Design Rules (ADR) and are outside the scope of the NHVIM and the NHVR's powers. This work formed the basis of a recommendation at the Transport and Infrastructure Council Meeting on 7 November 2014 that the NHVR accelerate the next planned revision of the NHVIM for implementation through service providers for no later than 1 November 2015.

There are two parts to the review of the NHVIM: technical issues and formatting. The starting point for the review of technical issues will be NHVR's current list of NHVIM work program items. The format of the NHVIM is relatively unchanged since its inception.

Work on this review is under way and involves consultation with states and territories, the Australia New Zealand Policing Advisory Agency (ANZPAA), and industry.

4.4.2 Establish / define inspection types

Developing nationally consistent inspection requirements will promote cross-recognition between jurisdictions as well as a common and agreed understanding of roadworthiness requirements. This includes an agreed list of items to check, inspection methodology, technology and equipment to use. The objective is to create specific inspection types for particular inspection scenarios, including:

- full roadworthiness
- targeted inspections
- partial on-road inspections with:
 - detail (some testing equipment)
 - visual (no testing equipment).

Development of the inspection definitions will be undertaken in consultation with the states and territories, police, the inspection industry and the heavy vehicle industry. In developing the inspection types, the NHVR will take into account the relative costs and benefits of each inspection type, rural and remote issues, the ability to undertake roadside inspections safely, and sector-specific issues.

The focus of the different inspection types varies depending on the circumstances of the inspection (for example, at the roadside or in a dedicated, well-equipped facility). An example of the form this may take is outlined in Box 5.

Establishing inspection types is also a precursor to a national risk-based scheduled inspection regime.

Box 5: Examples of standardised inspections

Compliance inspections undertaken in a workshop or dedicated inspection facility could be categorised as:

Level 1 – undertaken by an approved vehicle examiner in a facility / location that is not fully equipped to the level shown in the first column of Table D-1 in Appendix D, such as at a checking station. It would focus on (at least) the key safety features of lights, brakes, steering, tyres and couplings. However, it is likely the authorised officer may also check other non-key safety components of the vehicle.

Level 2 – a detailed inspection of the vehicle (not involving disassembly) by an approved vehicle examiner in a fully equipped facility (equipped to the level shown in the first column of Table D-1 in Appendix D). For the purposes of this RIS, a Level 2 inspection would be approximately 30 minutes in length and include agreed standard components, similar to how NSW and Queensland undertake their annual scheduled inspections.

Level 3 – a full inspection of the vehicle undertaken by an approved vehicle examiner. This may extend to include partial disassembly to inspect concealed safety-relevant features in a fully equipped facility (equipped to the level shown in the first column of Table D-2 in Appendix D). For example, heavy vehicles in Victoria are subjected to a similar kind of inspection when a heavy vehicle changes ownership. Level 3 inspections are not being proposed in this RIS as suitable for scheduled inspections, but rather as an option available to authorised officers if it is deemed necessary to escalate a heavy vehicle, such as if a Level 2 inspection identifies significant concerns.

Similarly, Level 1 on-road inspections could be categorised as:

- *Level A roadside inspection* if the inspection is undertaken with the use of brake performance test equipment by an authorised officer trained and experienced in its use. It is likely an inspection of this kind would occur in a dedicated checking station.
- *Level B roadside inspection* if the inspection is undertaken without the use of brake performance test equipment. This could take place anywhere on the roadside that an authorised officer deems safe for a roadside inspection.

It is worth noting that Level A and B roadside inspections could, in line with s522 of the HVNL, trigger a vehicle to be subject to further inspection at a workshop.

It is proposed that a Level 2 inspection constitute the standard for any scheduled periodic inspection proposed in the options presented in this RIS. While analysis has been conducted on this basis, it is recognised that in remote areas, a Level 1 inspection may be accepted for this purpose. The NHVR will develop more detail around these standards.

4.4.3 Define defect clearance process

Developing a nationally consistent approach to the management and clearance of heavy vehicle defects will increase understanding and promote cross-recognition between jurisdictions. Responses to vehicles detected on road with a defect include a formal warning (sub-category of minor), a minor defect notice, a major defect notice, or a major grounded defect (category of major).

Defining the process for clearing defects will include determining the inspection type required to clear the defect.

Consultation will occur with states and territories and industry on the development of this project. Police will also be consulted, as they play a significant role in detecting and clearing heavy vehicle defects.

4.4.4 Develop criteria for roadworthiness

Developing national roadworthiness criteria will improve consistency in interpreting and applying the law when issuing defect notices or formal warnings and conducting inspections of heavy vehicles. This will provide consistent guidance on what constitutes an unroadworthy heavy vehicle and on the categorisation of a defect as major or minor. Consultation will occur with states and territories, vehicle manufacturers, industry and police in developing these criteria.

4.4.5 Develop competency standards for heavy vehicle inspectors

Developing national competency standards for NHVR service providers that form the basis of qualification and competency standards for those who undertake inspections of heavy vehicles will create consistency that facilitates delivery of the NHVR's inspection-type regime.

Competency standards for authorised officers and third-party service providers vary:

- Authorised Officers – understanding the legislative and institutional contexts, undertaking inspection, conducting investigations, including gathering and presenting evidence as well as technical prerequisites.
- Third-party personnel – legislative and institutional contexts, undertaking inspection and technical prerequisites.

4.4.6 Implementing education and training

The above measures would deliver greater national consistency in the operation of the national roadworthiness framework. Most changes directly affect authorised officers and third-party vehicle examiners.

Authorised Officers and inspectors will need training in application of the new guidelines and procedures and the information made available for use. Information and training resources for authorised officers, operators and drivers will be needed as part of the changes proposed in this RIS. Providing this information to responsible parties can help them understand and comply with their legal obligations. It can also encourage the adoption of other best-practice, desirable, but non-mandatory, measures.

4.4.7 National Roadworthiness Data Strategy

The National Roadworthiness Data Strategy will specify the methods, approaches and systems for gathering intelligence on the operation of the national heavy vehicle fleet. This will provide a robust information baseline for roadworthiness management, potentially including risk-based inspections.

The data strategy will provide the foundation of the ongoing data collection required for the NHVR to continually review and assess, among other things, the roadworthiness risk of the heavy vehicle fleet. This will provide the information that is a prerequisite to develop risk-based criteria to determine the need for, and frequency of, periodic scheduled inspections.

4.5 Option 3 – Regulatory measures with a risk-based approach

Option 3 includes regulatory and administrative measures designed to provide for a risk-based approach to roadworthiness, but allows for some flexibility and discretion in how the NHVR may deploy powers under the HVNL. It includes:

1. a CoR duty for parties to take reasonable steps to ensure that business practices will not cause a heavy vehicle to be used on a road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards
2. regulatory recognition of the NHVIM, which will incorporate changes to material that provides guidance or direction on how to administer, or comply with, the law proposed under option 2, namely: standard inspection types, defect clearance processes, and criteria for roadworthiness (major or minor defects and formal warnings)
3. enabling the NHVR to use a risk-based approach to scheduled inspections. The NHVR will be able to require high-risk vehicles (that is, based on vehicle age or load type) to undergo scheduled inspections, either at a default interval or as the result of a triggering event such as change of ownership.
4. enforceable undertakings where an operator may be offered the option to conduct binding measures aimed at improving their compliance as an alternative to prosecution in cases where regulatory officer has evidence an offence is committed
5. roadworthiness audits to be conducted on a sample of an operator's fleet as a condition of accreditation under the NHVAS.

More information on these measures is set out below.

4.5.1 Chain of responsibility duty on business practices

Option 3 involves inserting a specific duty focused on business practices in the vehicle standards chapter (Chapter 3) of the HVNL. This would require operators, employers and prime contractors to take all reasonable steps to ensure their business practices¹⁰ will not cause a heavy vehicle to be used on a road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards.¹¹

Similar duties already exist in the HVNL. In particular, the speed and fatigue chapters contain duties requiring the relevant party (operator, employer and prime contractor) to ensure business practices do not cause the driver to breach speed limits (s204 of the HVNL) or drive while fatigued (s230).

4.5.2 Regulatory recognition of guidance material

Option 3 would incorporate the enhanced guidance measures proposed under option 2, namely: standard inspection types and processes, clearer and more precise criteria for determining major or minor defects, and standardised defect clearing processes.

¹⁰ The HVNL could include examples of measures that may be covered by the term 'business practices', such as the allocation of resources and setting of schedules for vehicle servicing, maintenance and repairs.

¹¹ Option 3 stems from broader CoR review activities undertaken by a combined government and industry taskforce between 2012 and 2014, and further consultation between the NTC, governments and industry in 2014 and 2015.

However, under option 3 the NHVIM would be formally referenced under the HVNL, as well as the material that provides guidance or direction on how to administer, or comply with, the law developed under option 2 (for example, inspection types and defect classification). This recognition would mean authorised officers would need to have regard to these documents in assessing a heavy vehicle's roadworthiness. All parties under the HVNL would have reduced flexibility in varying from those standards and requirements compared with option 2. However, giving regulatory recognition to these matters may deliver greater consistency in the interpretation and application of roadworthiness regulation.

It is noted that requirements and standards themselves may be developed with a degree of built-in flexibility. This means that even if referenced under the HVNL, it would not preclude authorised officers from exercising discretion in applying the legal provisions when circumstances warrant it.

4.5.3 Enabling a risk-based approach to scheduled inspections

Under option 3 the data from the National Roadworthiness Data Strategy (and other sources) would be used by the NHVR to develop risk criteria for identifying which vehicles have a higher risk of being unroadworthy. The data strategy would draw on jurisdictional understanding of risk to roadworthiness. If it is agreed that the resultant criteria are sufficiently robust, they would form an acceptable basis for a risk-based approach to scheduled inspections.

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. Such an approach would allow the NHVR to inspect heavy vehicles at different frequencies based on an assessment of risk associated with criteria linked to individual vehicles, operators and industry sectors. It 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.

Under a risk-based approach, it is proposed that scheduled inspections are conducted as a Level 2 inspection (as described in Box 5 on p. 28), similar to those currently performed in NSW and Queensland.¹² These inspections take about 30 minutes to complete and are less comprehensive than, for example, the change-of-ownership inspections required in Victoria. As is common under existing arrangements, these would be conducted by third-party providers (private or public) authorised by the NHVR. The providers would charge for inspections on a fee-for-service basis.

Heavy vehicles would also be inspected on the transfer of a heavy vehicle's registration from one operator to another (this would only represent a change to current arrangements in South Australia).

Heavy vehicles accredited under the NHVAS maintenance management module would continue to be exempted from the requirement to be inspected on a scheduled basis.

Without pre-empting any detailed assessment of roadworthiness risk, some relevant parameters are likely to relate to vehicles with:

- 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
- greater potential adverse consequences if a crash occurs, based on the type of load being carried and industry segment (i.e. dangerous goods vehicles).

By way of example, described below are some sub-options that use different combinations of these factors to explore how current inspection regimes may change under a risk-based approach. More detail on these sub-options is provided in Appendix E.

¹² The equivalent of a Level 2 inspection, as described in Box 4 on p. 15 of this RIS.

- Sub-option A – *Heavy vehicle age*: annual inspection for all heavy vehicles built more than 20 years ago (about 30 per cent of the fleet)
- Sub-option B – *Heavy vehicle age*: annual inspection for all heavy vehicles built more than 15 years ago (about 60 per cent of the fleet)
- Sub-option C – *Default annual inspections with exemptions based on risk factors*: this scenario assumes the jurisdictions that currently undertake annual inspections continue to do so, but that:
 - High-risk vehicles (assumed to be dangerous goods vehicles) are subject to six-monthly inspections
 - new vehicles under four years of age are subject to inspections every two years, given they are likely to be subject to scheduled maintenance by the manufacturer
 - the jurisdictions that currently do not require annual vehicle inspections introduce this for high-risk vehicles, which include dangerous good vehicles and vehicles over 20 years of age.
- Sub-option D – *Dangerous goods vehicles*: Annual inspections for all vehicles (trailers) licensed to transport dangerous goods.
- Sub-option E – *Vehicles with a demonstrated risk*: Inspections every six months for dangerous goods vehicles and annual inspections of other vehicles assessed, by the NHVR, as posing a significant risk of being operated in an unroadworthy condition on the basis of other known compliance risk factors (i.e. past compliance) across Australia.

The Consultation RIS (NTC 2015) considered annual scheduled inspections of all vehicles over 10 years of age across Australia. This resulted in a very similar number of inspections to sub-option 3C above, and therefore a very similar cost. Therefore, this example is not presented individually.

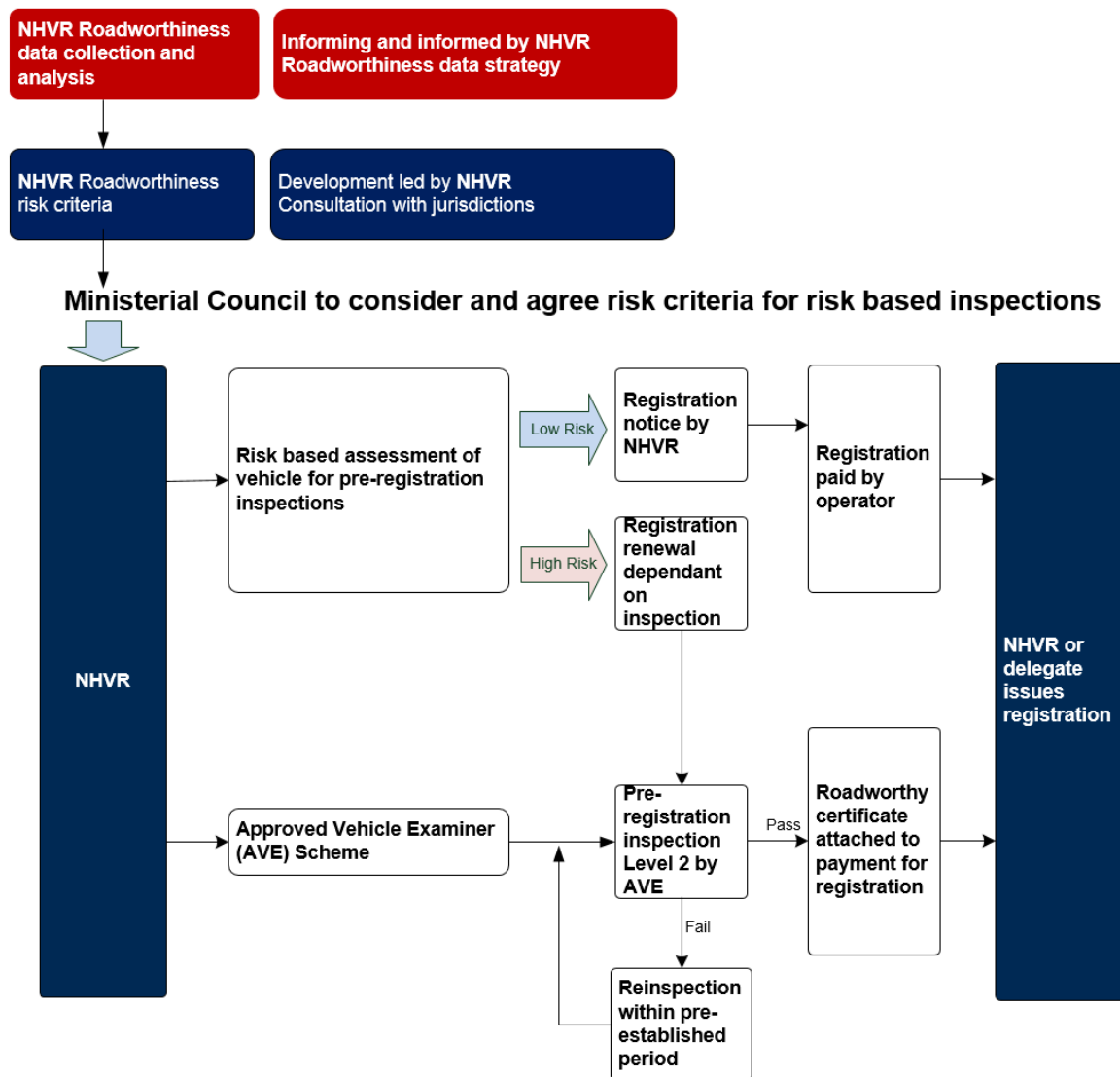
The number of required annual heavy vehicle inspections varies substantially, depending on how the risk-based scheme is structured. Further details on this are provided in Section 5.

Implementation of the proposed risk-based approach would need to be built on a strong base of evidence. This would include roadworthiness data and analysis to develop agreed risk criteria. Ministerial approval would be sought to apply the criteria to a risk-based inspection regime.

The proposed risk-based approach would result in the NHVR determining the categories of vehicles and operators to be subject to a scheduled inspection as part of the registration renewal process. This categorisation would be based on the jurisdictionally agreed risk criteria. Before completing a registration renewal, operators subject to an inspection would need to provide evidence to the NHVR (or its delegate) that the vehicle had passed a Level 2 inspection conducted by an approved vehicle examiner. Fees for inspections conducted by approved vehicle examiners would be market based (i.e. it would not be a regulated fee).

If implemented, the risk-based scheduled inspection regime would complement existing inspections for defect notice clearance and transfer of ownership. It would also link directly into a national approach to heavy vehicle registration. Figure 5 sets out the process for risk-based scheduled inspections and national registration.

Figure 5: Risk-based schedule inspections and national registration



4.5.4 Enforceable undertakings

An enforceable undertaking (EU) is a legally binding compliance arrangement that may be voluntarily entered into with regulators as an alternative to court proceedings. EUs are used to fix a problem and make sure it does not recur. An EU can be used instead of taking an operator to court. It would generally be used where an investigation has shown a relevant law has not been followed; the operator is prepared to voluntarily take steps to fix the issue and agrees to preventive actions.

EUs are most commonly used in consumer, financial, safety and environmental regulation. Generally, the statutory power for the use of EUs is broadly drafted, to accommodate a variety of possible uses. Regulators who use EUs have then circumscribed the use of the power by issuing guidelines, practice notes and procedures outlining how and when they will accept EUs. The proposal in this Final RIS is for EUs to be applied only to breaches of the roadworthiness provisions of the HVNL.

An EU is a written agreement between a regulator and a person in connection with a matter relating to a contravention or alleged contravention by the person of the law. The details of what a particular EU contains is specific to the individual case. An EU can contain obligations that go beyond the requirements set out in the law. These would typically include an agreement by the operator to take certain actions to prevent future breaches of the law (such as implementing maintenance management systems) and a commitment by the operator to future compliance measures (such as regular internal audits, training for managers and staff, or future reporting to the NHVR). As is the case in national rail safety law, entering into an EU would not constitute an admission of guilt.

If the regulator were to decide that an EU is the best way to resolve a breach of roadworthiness requirements, it may negotiate terms with the operator that are practical, can be complied with and are effective.

Once an EU is agreed to, the regulator would be able to apply to a court to enforce the terms of the agreement.

Changes to the HVNL would be required to provide for an EU and corresponding powers of enforcement. These changes would insert a provision to allow the NHVR to accept a written undertaking by a person in connection with a matter relating to a contravention or alleged contravention of vehicle standards and roadworthiness provisions of the HVNL, a penalty provision if the EU is breached, a provision to vary or withdraw the EU, and a provision for the NHVR to apply to a magistrates court for an order if the EU is breached. The provisions contained in Division 6 – Enforceable Voluntary Undertakings of the *Rail Safety National Law (South Australia) Act 2012* could serve as a model for the necessary amendments to the HVNL.

4.5.5 Roadworthiness inspections on a sample of an accredited operator's fleet

A revision has been made to the measures relating to the NHVAS in option 3 of this RIS, on the basis of stakeholder consultation. These measures now include roadworthiness inspections (Level 2) that would be conducted on a sample of an accredited operator's fleet at re-entry into the scheme, occurring every two years. This would be a condition of accreditation under the NHVAS.

The number of vehicles sampled would be based on sampling procedures prescribed in AS 1199.1-2003 *Sampling Procedures for Inspection by Attribute* relating to the quality of acceptance. For the purposes of NHVAS inspections, the criteria (quality of acceptance) for a fleet to be acceptable for re-accreditation would be based on the number of sampled vehicles identified without defects (or major defects). Under the procedures in AS 1199.1-2003, *Sampling procedures for inspection by attribute* for the typical accredited operator (operating between 35 and 50 heavy vehicles), eight vehicles would be subject to an inspection upon re-entry.

The measures for sampled inspections have replaced the following measures in option 3 of the consultation RIS removed from this RIS:

- making the NHVAS maintenance management module a prerequisite for the NHVAS mass management module, to ensure that operators seeking regulatory concessions are taking a systemic approach to roadworthiness by adopting appropriate safety management systems for vehicle maintenance
- a new power for the NHVR to make aspects of maintenance management accreditation mandatory for some classes of vehicles or classes of operators, based on risk or operator roadworthiness performance.

While there was some support from stakeholders for these proposals, there was limited evidence of the benefits to warrant the regulatory burden. Furthermore, the policy rationale for making aspects of maintenance management accreditation mandatory for some classes of vehicles or operators, based on operator roadworthiness performance, was to seek to improve the compliance of operators with a demonstrated poor record through the compulsory use of safety management systems. Feedback from stakeholders has indicated the same policy objective can be achieved through the use of EUs without potentially providing the benefits of NHVAS accreditation to operators with a poor compliance history.

4.6 Option 4 – Regulatory standardisation and annual inspections for all vehicles

Option 4 contains several measures proposed in options 2 and 3 and, in some cases, strengthens these measures by including them in regulation. It also proposes scheduled inspections for all heavy vehicles. The key measures are set out below.

1. A primary duty requiring parties¹³ to take all reasonable steps to ensure that vehicles over which they have influence are roadworthy and compliant with vehicle standards. This primary duty is broader than the option 3 duty and it would further extend the chain of responsibility (CoR) to a greater number of responsible parties, as it focuses on the outcome of having safe vehicles rather than on business practices. A similar duty applies to driver fatigue under s 229 of the HVNL.
2. Statutory criteria for roadworthiness and standardised inspection types, practices and defect clearance processes (as described in option 2) to be included in the HVNL. Having such criteria prescribed under the HVNL would require all affected parties to comply, and so would result in greater consistency. However, it would also constitute a more rigid requirement than having such criteria only referenced under the HVNL (as per option 3). This would remove the flexibility for these criteria and processes to be readily changed in the future, should better information become available (unlike option 3).
3. Scheduled annual inspections for all heavy vehicles.
4. Enforceable undertakings (as per option 3, see Section 4 of this RIS).
5. Roadworthiness audits to be conducted on a sample of an operator's fleet as a condition of accreditation under the NHVAS (as per option 3, see Section 4).

4.7 Composite option – A suite of measures from options 2, 3 and 4

The composite option was developed by the NTC in response to feedback received on the Consultation RIS and further analysis and consideration.

The composite option brings together a suite of measures from options 2, 3 and 4. The key measures incorporated into this option are described below.

4.7.1 Scheduled inspection

The composite option includes the development of a risk-based approach to scheduled inspections (from option 3).

¹³ This duty could apply to third-party maintenance providers, loaders, dispatchers, schedulers, consignors and consignees, employee or contractor maintenance providers, and vehicle or component manufacturers. Note: executive officers are not considered a 'party' in the CoR and liability is extended to them via different means (see Appendix C on the current HVNL approach to holding executive officers liable). However, should this offence be assessed as satisfying the COAG Principles and Guidelines – Personal Liability for Corporate Fault, then the duty may extend to executive officers via the executive officer liability provisions in s 636.

4.7.2 Compliance and chain of responsibility provisions

The composite option includes strengthened compliance measures of a primary duty (from option 4) and enforceable undertakings (from options 3 and 4).

4.7.3 Guidance on inspection processes and procedures

The composite option includes the revision of the NHVIM, and provision of material that provides guidance or direction on how to administer, or comply with, the law by the NHVR to service providers and operators for guidance only (from option 2).

4.7.4 Education and training

The composite option includes the NHVR developing consistent education and training material for authorised officers, operators and drivers, as per option 2.

4.7.5 National Heavy Vehicle Accreditation Scheme

The composite option includes changes to the NHVAS Business Rules to allow for inspection of heavy vehicles before renewal of accreditation, as per options 3 and 4.

4.7.6 National Roadworthiness Data Strategy

The composite option includes the National Roadworthiness Data Strategy. This information will provide the foundation of the ongoing data collection required for the NHVR to continually review and assess, among other things, the roadworthiness risk of the heavy vehicle fleet. It would also provide data to support the risk criteria used to implement risk-based scheduled inspection.

5. Impact analysis

This section provides an analysis of the impacts of each of the regulatory options described in Section 4.

Frontier Economics was commissioned to undertake a cost – benefit analysis to quantify the economic impact of the options. Data limitations constrained quantification of the net present value of costs and benefits associated with the options. Consequently, the analysis draws on available information and data to establish a relative ranking of options. Frontier Economics' findings are referenced throughout Section 6 of this Final RIS. Full details of the analysis and rankings are presented in Appendix B. The economic assessment in Appendix B is essential to the impact analysis and should be read with this section, which explores the qualitative and theoretical dimensions.

Table 2 summarises the key measures presented in the options described in Section 4.

Table 2: Summary of reform option, key measures

Theme	Measures	Option 1: status quo	Option 2: non-regulatory package	Option 3: regulatory and quasi-regulatory measures	Option 4: regulatory standardisation	Composite option
National consistency	<i>Standardised inspection types¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Standardised defect clearing process¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Criteria for assessing major or minor defects¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance
	<i>Information and training package</i>	No change	Consistent guidance material			
Inspections	<i>National Roadworthiness Data Strategy¹</i>	No change	To be developed by NHVR			
	<i>Scheduled inspections required for registration</i>	No change	No change	Risk-based requirement	Mandatory for all	Risk-based requirement
Improving compliance	<i>Chain of responsibility</i>	No change	No change	Specific duty on business practice for operators, employers and prime contractors	A primary CoR duty, extending beyond the operator, employer and prime contractor to a wider chain	A primary CoR duty on operators, employers and prime contractors
	<i>Enforceable undertaking</i>	No change	No change	Introduce new provision in the HVNL		
	<i>Formal warnings</i>	No change	No change	Review of current HVNL provisions		
NHVAS improvements	<i>Operational changes</i>	No change	No change	Accreditation and auditing improvements		
	<i>Governance changes</i>	No change	No change			
	<i>Education</i>	No change	No change			
	<i>Inspections of a sample of the accredited vehicles</i>	No change	No change	At the renewal of accreditation		

¹ Part of NHVR's accelerated roadworthiness program approved by the ministers in November 2014

5.1 Groups affected by the proposed options

The primary groups affected by the proposed options will be heavy vehicle operators, the NHVR, its authorised officers and police who implement changes to the compliance and enforcement system.

However, there are also likely to be some impacts for a broader group. This includes repairers and those in the heavy vehicle maintenance industry, such as businesses providing inspection services, and the executive officers of companies operating heavy vehicles, as well as drivers.

Key groups directly affected by the policy options in this RIS are described below.

Other road users and society more broadly will be affected by the outcomes of the proposed policy options, including benefits from reduced crash risk and traffic delays.

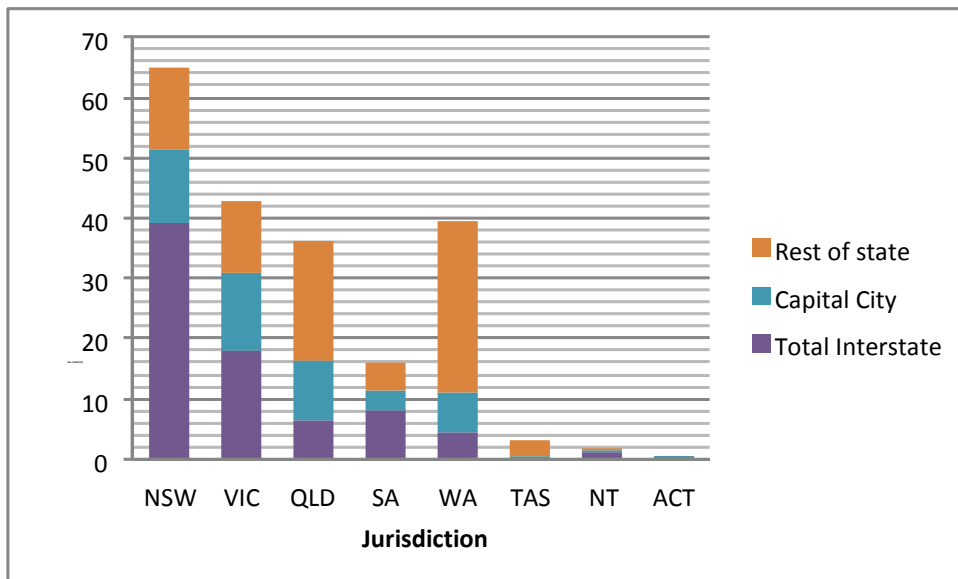
5.1.1 Heavy vehicle operators

Any change to the compliance and enforcement of roadworthiness standards will necessarily affect heavy vehicle operators. These operators can be broadly categorised as:

- hire and reward operators – transport and logistics companies and other businesses that provide trucking services. While these operators are estimated to represent only 15 per cent of operators in the industry (ACIL Tasman 2004), they operate 45 per cent of Australia's heavy vehicle fleet (ABS 2012). It is estimated they travel over twice the kilometres of ancillary operators (ACIL Tasman 2004)
- ancillary operators – businesses whose main activity is not road freight transport (such as manufacturing firms) that operate truck fleets to transport their products. Ancillary operators operate 55 per cent of Australia's heavy vehicle fleet (ABS 2012). The largest ancillary operator sector, the agriculture, fishing and forestry industry, operates 43 per cent of the heavy vehicle fleet, with the wholesale and retail sector being the next largest (8 per cent) (ACIL Tasman 2004).

It is important to note that the vast majority of trucking services are provided by small businesses or owner-operators, with around 72 per cent of operators operating a single vehicle, and a further 24 per cent operating a fleet of two to four vehicles (ACIL Tasman 2004). Owner-operators are likely to be particularly affected by any regulatory change that affects their costs, as it is estimated that owner-operators with no employees account for 60 per cent of all businesses in the road freight transport industry (hire and reward) but only 11 per cent of income earned (ACIL Tasman 2004). Figure 6 shows that of the jurisdictions participating in the HVNL, the vast majority of the freight task occurs within, or to and from, NSW, Victoria and Queensland. Consistent with this, approximately 75 per cent of heavy vehicles are registered in these three states. Approximately 38 per cent of the freight task involves moving goods interstate and 40 per cent involves intrastate movements outside metropolitan areas (particularly important in Queensland). Western Australia is not participating in the HVNL and has a vast majority of freight tasks occurring outside metropolitan areas.

Figure 6: Heavy vehicle freight by jurisdiction / interstate / intrastate movement 2012–13



Source: BITRE (2014) *Australian Road Freight Estimates: 2014 Update*.

5.1.2 NHVR and service providers

The NHVR administers the HVNL and NHVAS. However, compliance matters and enforcement of roadworthiness standards are provided by state-based service providers (authorised officers) under service agreements for which the states and territories are paid, and by police who are funded through state and territory consolidated revenue.

Under the Intergovernmental Agreement establishing the NHVR, the ongoing costs of regulation are to be funded from industry through a regulatory component of the registration charge and direct fees for service. To date the costs of the NHVR have been paid by states and territories, but this is expected to change from 1 July 2016. Therefore the ongoing costs associated with changes to the HVNL in respect to roadworthiness will be funded by industry (where it relates to service agreement payments) and by states and territories (should it result in changes to police enforcement).

System changes in relation to the interaction of roadworthiness inspections with the national registration scheme are being considered as part of the separate project on the national registration scheme.

As a result, any changes to the compliance and enforcement system will affect the NHVR, state-based service providers and police. For the purpose of the impact analysis, the costs imposed on these parties are combined. These costs can be considered to fall on government.

5.1.3 Other affected individuals and businesses

The policy proposals may also have incidental impacts on the following individuals and businesses:

- Heavy vehicle repairers and private inspectors (workshops) – any change to the number of scheduled inspections (and the subsequent numbers of defects identified) will impact industries that support the maintenance of these vehicles.

- Auditors – the NHVAS is an audit-based compliance system and requires independent auditors to undertake accreditation audits of an operator’s management systems. Any change to the HVNL provisions for the governance, accountability or liability of auditors, or change to the number of operators seeking accreditation, will affect businesses and individuals in the industry.
- Executive officers of heavy vehicle operators – any change to the CoR provisions will affect the executive officers of any operator.
- Drivers – changes to the NHVAS and CoR provisions will potentially affect drivers (who are not owner-operators) indirectly. For example, with an increased focus on roadworthiness, these persons may be increasingly required to assess and report on any vehicle roadworthiness issues. Drivers may also receive greater support when these issues are reported.

5.2 Outline of cost–benefit assessment approach

The approach taken in the cost–benefit analysis (Appendix B) is consistent with the requirements in the Australian Government Guide to Regulation, and more specifically the Office of Best Practice Regulation (OBPR) guidance note for cost–benefit analysis and the OBPR Regulatory Burden Measurement Framework.

Under these requirements, a necessary starting point for the cost–benefit analysis is to identify the underlying problem that the proposed options seek to address. Section 2 of this RIS sets out how market failures and existing regulatory inefficiencies could warrant a regulatory response. However, it does not provide a basis for assessing the appropriate compliance and enforcement response. Determining this requires an assessment of the extent to which various policy options will:

- deliver incremental benefits – primarily in terms of crash risk reduction (which drives expected avoided crash costs), relative to the baseline
- impose incremental costs – primarily on operators and governments – associated with complying with and administering new regulations, relative to the baseline.

The cost–benefit analysis does not seek to measure the impact of the RIS options versus no regulation at all. Rather, it assesses the *incremental* impact of options 2, 3 and 4 against a baseline (option 1).

A challenge for this RIS is that little quantitative evidence linking changes to the compliance and enforcement of roadworthiness with crash risk reduction benefits *relative to the baseline* is available for several reasons. First, it is difficult to establish a causal link between defects and heavy vehicle crashes in isolation from other safety and non-safety factors. By extension, establishing a causal connection between changes in practices (that result from changes in the methods used to assess compliance) to changes in risk is even more difficult. Second, there is limited evidence on the extent to which differences in the form of enforcement (specifically, between accreditation and different inspection approaches) impact defect-related risks.

Because of this, the cost–benefit analysis does not attempt to quantify the impact of the different policy options on the crash risk relative to the baseline. Instead, where there are material changes to implementation and compliance costs, the assessment considers the plausibility, rather than the actual value, of the risk reduction that would have to result to counteract any additional costs created.

While some data relevant to the cost–benefit analysis was sourced from stakeholders (government reports, operators and the NHVR), data relating to the wider economic benefits that reflect the possible reduction of certain crash risks has been sourced from external sources (BITRE and the OBPR).

5.3 Categories of costs and benefits

There are a number of cost and benefit categories that can be expected as a result of implementing the proposed changes to enforcement and compliance in roadworthiness standards.

These impacts are grouped on the basis of who is affected and the type of cost or benefit, as shown in Table 3. Sections 5.3.1 to 5.3.6 further describe how the different policy measures in options 1 to 4 may affect these costs.

Table 3: Key categories of costs and benefits

Group affected	Cost / benefit
Businesses and heavy vehicle operators	Administrative compliance cost (see section 5.3.1)
	Cost of maintaining a compliant vehicle (section 5.3.2)
	Benefits from reduced crash risk and improved vehicle reliability (section 5.3.4)
Government	Regulator and service provider (government) administrative costs (section 5.3.3)
	Police administrative costs (section 5.3.3)
Other road users and society more broadly	Benefits from reduced crash risk (section 5.3.4)
	Benefits from improved vehicle reliability (section 5.3.4)
	Benefits from reduced emissions (section 5.3.5)
	Higher transport costs (section 5.3.6)

5.3.1 Administrative compliance cost

For an operator, the administrative costs of complying with any change to the compliance and enforcement system will reflect:

- additional once-off costs associated with investments needed to modify or develop new reporting and information management systems
- ongoing costs of employing additional staff to manage these systems and complete paperwork in order to gain accreditation or demonstrate compliance
- costs incurred in dealing or negotiating with the inspector, NHVR or police throughout any:
 - accreditation audit (that is, over and above what is required under the baseline) or
 - inspection processes.

The following policy measures will have a material impact on operator administrative compliance costs:

- **Increased application of scheduled inspections** (options 3 and 4) – for an operator, the most significant cost associated with this change is the opportunity cost in terms of revenue foregone while the vehicle is off the road for inspection. Also, some regional areas do not have inspection facilities, so operators may need to travel to have the vehicle inspected. To fully gauge these consequences it is important to identify the expected changes to the number of scheduled inspections under options 3 and 4 and the associated increase in operator compliance costs.

- **Increased inspections for accredited operators** (options 3 and 4) – accredited operators will have a sample of their fleet subjected to an inspection at re-entry to the scheme.
- **Changes to voluntary participation in accreditation** following an expansion of scheduled inspections (option 4 and option 3 under some scenarios) – if the number of vehicles subject to periodic inspection increases, this may lead to more operators deciding to seek accreditation to access the exemption from such inspections. Conversely, if there is a reduction in the number of vehicles required to present for annual inspections, or an increase in the costs of being accredited (such as the introduction of inspections of a sample of the fleet upon re-entry), the number of operators seeking maintenance accreditation may decrease. An operator will incur a number of administrative compliance costs upon entry. There will be:
 - once-off costs associated with developing and implementing compliant vehicle maintenance processes and procedures
 - intermittent costs associated with the follow-up vehicle audits, representing the opportunity costs in terms of revenue foregone while the vehicle is off the road being inspected
 - avoided ongoing scheduled inspection costs because operators in jurisdictions that subject heavy vehicles to annual inspections will no longer need to participate.
- **Education, training and standardised inspection processes and procedures** (options 2, 3 and 4) – operator compliance costs may be reduced if the operator is better informed about what information is required to demonstrate compliance.

Section 4.1 of the cost–benefit analysis in Appendix B provides further details on how these costs were estimated to compare the policy options.¹⁴

5.3.2 Cost of maintaining a compliant vehicle

Operator cost of maintaining a compliant vehicle includes maintenance costs and identified defect repair costs. The latter cost will typically reflect the number of defects identified and the costs of rectifying them, including the value of the time that a vehicle and driver are off-road. The following feature of the policy options are expected to incrementally affect these costs:

- **Increased scheduled inspections** – options 3 and 4 are likely to increase the number of defects identified and hence the cost of defect repair.

Section 4.2 of the cost–benefit analysis in Appendix B provides further details on how these costs have been estimated for the purpose of comparing the policy options.¹⁵

5.3.3 Regulator and service provider (government) administrative costs

For regulatory agencies and police, the administrative costs of enforcing any change to the roadworthiness system will reflect:

- additional once-off costs associated with any investments (in equipment or management systems to support the proposed changes) or staff time needed to develop new educational material that provides guidance or direction on how to administer, or comply with, the law.
- ongoing costs associated with employing additional staff to manage systems and complete paperwork to assess operator process and procedures or assess compliance.

¹⁴ It should be noted that expected reductions in operator administrative compliance costs (relative to the baseline option 1) associated with the proposed operational improvements to the NHVAS and the increased provision of education and training were not costed in the cost–benefit analysis. However, these benefits will occur under all the policy options and will only be relevant in comparing the preferred policy option with the baseline ('do nothing') scenario.

¹⁵ As above.

- Staff costs incurred in overseeing systems for accreditation audits and inspections (over and above what is likely under the baseline).

The following policy measures will have a material impact on government costs:

- **Increased scheduled inspections** – options 3 and 4 may result in increased scheduled inspections, creating a need for more staff to oversee a national approved vehicle examiner scheme and administer the registration renewal process.
- **Increased inspections for accredited operators** (options 3 and 4) – accredited operators will have a sample of their fleet subjected to an inspection at re-entry to the scheme, creating a need for more staff to oversee a national approved vehicle examiner scheme.
- **Increased voluntary participation in accreditation** following an expansion of scheduled inspections (option 4 and option 3 under some scenarios) – the NHVR will therefore incur additional ongoing costs associated with administering a larger and more complex scheme. However, as with operators, there will be cost savings associated with any reduction in the annual inspection costs for accredited operators in states with annual inspection.
- **Education, training and standardised inspection processes and procedures** (options 2, 3 and 4) – this will mean one-off NHVR costs for developing educational material and guidelines, educating and training existing staff, new information systems, and working with inspectors and operators to bring them up to speed on the any changes to requirements. Other government costs include the NTC development of regulatory instruments and police costs of education and training for the new system. Standardising test equipment will also incur costs.

Section 4.3 of the cost–benefit analysis in Appendix B provides further details on how these costs were estimated to compare policy options.¹⁶

5.3.4 Benefits from reduced crash risk and congestion

Each year, heavy vehicles in Australia are involved in around 200 crashes resulting in fatalities, 1500 crashes resulting in hospitalisation, 11,000 crashes resulting in less serious injuries, and 32,000 crashes causing property damage (see discussion in Appendix B). These events result in death, extensive medical costs, property damage (including to the road, road infrastructure and vehicles), environmental contamination, and lost productivity (for the affected operator and other individuals) as a result of road blockages and lost time due to injuries, property damage and other factors.

The primary benefit of policies that improve heavy vehicle roadworthiness is the expected reduction in crashes and breakdowns involving heavy vehicles and the costs of these incidents for society. Any policy that reduces the prevalence of defects in the heavy vehicle fleet will result in some benefit in terms of reduced crash and breakdown risk.¹⁷ There are also expected to be benefits from increased national consistency, from increased transparency and reduced compliance costs.

To understand the significance of the potential safety benefits it is necessary to understand the costs imposed by heavy vehicle crashes and incidents, the proportion of these due to unroadworthiness, and the extent to which different regulatory approaches reduce the level of unroadworthiness in the fleet.

The Frontier Economics cost–benefit analysis estimates that heavy vehicle crashes will, over the next 10 years, impose total costs in the order of \$14.2 billion (NPV). This figure assumes that

¹⁶ As above.

¹⁷ A reduction in defects can also reduce heavy vehicle breakdowns and therefore the lost productivity (for the affected operator and other individuals) as a result of any road blockages. This has not been quantified in the cost–benefit analysis.

fatalities associated with future heavy vehicle crashes will continue to decline at the average 3.2 per cent trend identified by the BITRE (2015:Table 1.6).

Frontier estimates that 4 to 17 per cent of heavy vehicle crashes are likely to be due to heavy vehicle unroadworthiness (see Box 6 below and section 4.6 of Appendix B). This range is based on evidence relating to the proportion of crashes:

- where a defect was the primary cause of the crash (the lower bound of 4 per cent), or
- a secondary cause that contributed to some degree (the upper bound of 17 per cent).

Based on this, road crashes caused by heavy vehicle unroadworthiness are likely to impose crash-related costs of \$0.57 billion to \$2.4 billion (NPV) over the next 10 years (see Appendix B for details of this calculation).

In addition to this, the economic analysis estimates that heavy vehicle breakdowns impose costs in the order of \$1.7 billion on other road users as a result of consequent traffic congestion.

This means the cost of heavy vehicle road crashes and breakdowns attributed to unroadworthiness is likely to be from \$2.3 billion to \$4.2 billion over the next 10 years.

Box 6: Link between roadworthiness and crashes

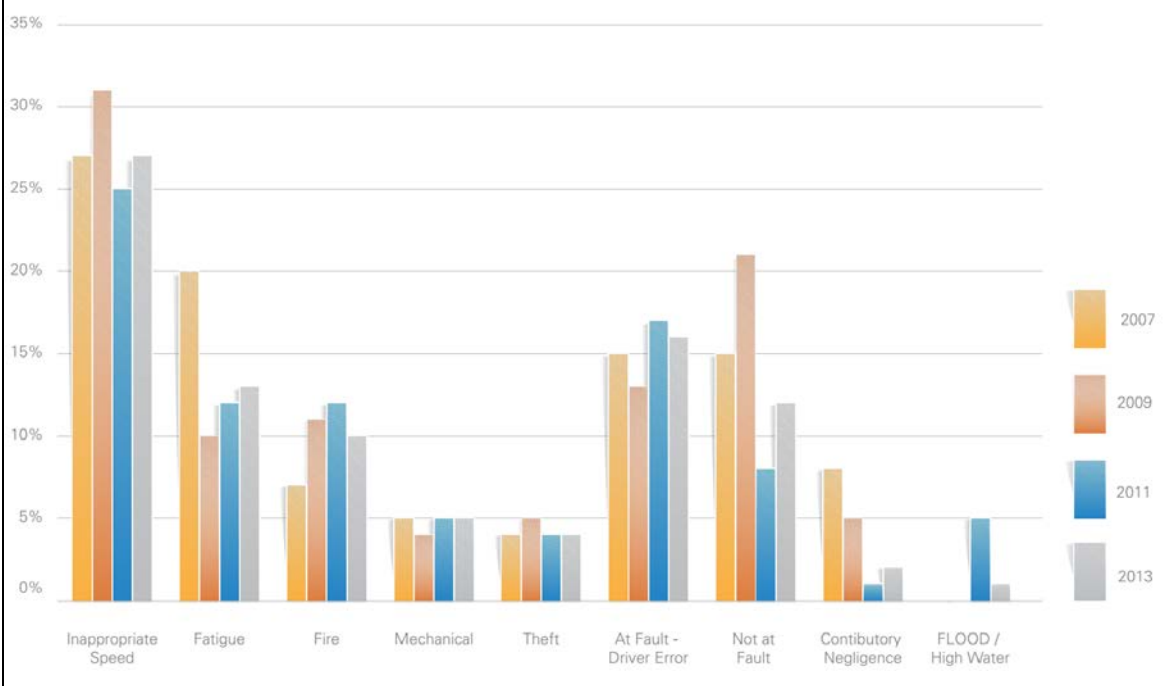
Broadly, there are two types of heavy vehicle crash related to roadworthiness. These are where one or more mechanical defects:

- constitute the primary crash cause (such as complete brake failure)
- constitute a contributing crash factor (a distracted driver, in conditions of poor visibility, failing to properly identify an approaching heavy vehicle with a defective headlight).

The risk of a mechanical defect causing or contributing to a crash, or making the outcome of a crash more severe, is more difficult to measure. International studies suggest defects are the primary cause in 1 to 5 per cent of heavy vehicle crashes (US DoT 2006, EC & IRTU: Fig 1: 40).

Figure 7 shows the proportion of serious (fatal and non-fatal) heavy vehicle incidents in Australia by cause, using data from a major heavy vehicle insurer (National Transport Insurance – NTI) for claims over \$50,000 in value. Mechanical defects are the primary cause of about 4 to 5 per cent of these claims, and a slightly higher rate when expressed as a percentage of crashes, rather than all incidents. However, this does not take into account that unroadworthiness is also likely to be a contributing factor to crashes. Currently minor contributing factors are not commonly recorded in crash data. This means defects may have contributed to some crashes attributed to other primary causes (such as inappropriate speed).

Figure 7: Causes of serious heavy vehicle incidents, Australia, 2007–13



Source: National Truck Accident Research Centre (NTARC) 2015, p. 8

For the purpose of this RIS it is important to understand the extent to which different approaches to roadworthiness enforcement and compliance impact the roadworthiness-related crash risk. The cost-benefit analysis reviews in detail the evidence linking the implementation of a particular compliance and enforcement measure to changes in crash risk.

Setting aside compliance costs, the analysis concludes that:

- Targeting inspections (whether conducted on the roadside or scheduled) on vehicles with a higher risk of defects will yield greater benefits. Successful targeting of higher-risk heavy vehicles is likely to identify more defects for a given number of inspections. Furthermore, it may act as a better deterrent for non-compliance and encourage operators to improve maintenance management. Options 3 and 4 include measures aimed at improving the targeting of on-road and random inspections.
- Increased inspections will reduce the risk of defects and hence crashes. However, as vehicle inspection frequency increases it is expected the benefit will become increasingly marginal.
- It is not possible to differentiate between the benefits delivered by accreditation versus an inspection regime in terms of the attributable impact they have on safety risks.
- The inclusion in the HVNL of CoR provisions for vehicle standards and roadworthiness, included under options 3 and 4, could potentially increase roadworthiness compliance by making all off-road parties more aware of their obligations and also assist by increasing the implicit penalties for non-compliance. This may encourage operators to improve their maintenance effort and therefore increase roadworthiness in the heavy vehicle fleet, which would deliver benefits associated with reduced crash risk.

Sections 4.4 to 4.6 of the cost–benefit analysis in Appendix B provide further details on how these costs were estimated for comparing the options.¹⁸

5.3.5 Benefits from reduced emissions

Increased heavy vehicle roadworthiness is expected to deliver a reduction in heavy vehicle emissions and associated costs.

Roadworthiness standards include measures designed to address non-safety-critical defects that affect the level of pollutants emitted by heavy vehicles. As a result, the policy options described are also likely to reduce the prevalence of emission-producing defects in the fleet, potentially resulting in a small benefit in improved air quality and reduced carbon emissions.

The cost–benefit analysis did not quantify this benefit.

5.3.6 Higher transport costs

It is important to note that where the policy options impose unnecessary compliance and regulatory costs (because of the standards applied, or the extent of compliance and enforcement activity), the scope for economic efficiencies is diminished. In these circumstances increased costs can lead to increased transport prices, and contraction in trucking services, depending on the extent to which any cost increase can be passed on to end consumers.

The cost–benefit analysis did not directly consider this issue. Instead, it notes where compliance costs could increase, and in these circumstances higher transport costs could result even if there are overall net benefits.

¹⁸ It should be noted that the cost–benefit analysis does not attempt to quantify the impact of the different policy options on the crash risk relative to the baseline. Instead, it considers how the options proposed fare against the estimated costs. Where there are material changes to costs, it considers the plausibility of the risk reduction that would have to result to counteract any additional costs.

5.4 Outline of baseline option 1

Option 1 assumes the continuation of the status quo – namely, the existing roadworthiness provisions in the HVNL, and state-based variations in compliance and enforcement approaches. Therefore, it is assumed to impose no regulatory impact and is the benchmark against which other options are assessed.

This means the incremental safety benefits from changes to regulations that encourage compliance will not occur. However, it does not mean the cost of crashes associated with unroadworthy vehicles will not fall. Over the last decade, total annual deaths from fatal crashes involving a heavy vehicle have been declining an average 3.2 per cent per year. This declining trend is not observed in other types of crashes such as serious injury hospitalisation crashes (BITRE 2015). For the purposes of estimating the incremental benefits of alternate policy options it has been assumed that under the baseline option 1, fatalities associated with heavy vehicle crashes will continue to decline at 3.2 per cent and other types of crashes would continue at present levels (see section 4.6.1 of the cost–benefit analysis in Appendix B).

This decline may have been the result of technological developments such as improvements in the ability of on-board computers to detect defects, meaning it is likely to continue regardless of whether alternative regulatory options are adopted. However, it may also have been the result of specific actions taken in response to other crash risk factors, such as improvements in road infrastructure.

Under option 1, any inefficiency associated with the existing approaches to roadworthiness compliance and enforcement would be unaddressed. There would also be limited targeting of operators for inspections based on known roadworthiness risk factors, largely because of limitations in the way intelligence information is collected, disseminated and used.

5.5 Expected costs and benefits of option 2

Option 2 was found to be net beneficial in the cost–benefit analysis. Table 4 shows the expected changes to the key costs and benefits under option 2. Appendix B contains the details of the assessment.

Table 4: Impact of option 2 on key costs and benefits

Group affected	Cost or Benefit	
Heavy vehicle operators	Administrative compliance cost	Saving – cost reduction
	No change in cost of rectifying non-compliance (defects)	Nil
	Benefit in reduced crash risk and improved vehicle reliability	Saving – cost reduction (small)
Government	Government administrative cost	Cost increase (small)
Individuals and broader society	Crash risk	Saving – increased safety (small)
	Reduced emissions	Saving – improved air quality (small)

5.5.1 Impact on crash and breakdown risk

The main benefit expected from option 2 is a reduction in crash risk as a result of a) the standardisation of process and procedures under the NHVIM and other material that provides guidance or direction on how to administer or comply with the law, and b) improved education material and training.

Readily available and consistent education and information for operators will improve compliance and hence reduce the number of defective vehicles on the road, which in turn would reduce crash risk.

Inconsistencies in what is meant by roadworthiness make it hard for operators to understand how to comply. Phase 2 of the heavy vehicle roadworthiness research by the NTC that underpins this RIS also identified a lack of capability in the industry (understanding what is required to meet roadworthiness standards, how these technical outcomes can be achieved, and assurance that they have been achieved) as a key cause of unacceptable levels of roadworthiness. The provision of education material and training should help to address this.

Hence the measure proposed under option 2 would improve operator understanding of their responsibilities and the risks associated with a lack of vehicle roadworthiness and facilitate identification of safety critical defects. This would also improve the levels of compliance and hence reduce the crash risk.

Option 2 would need to reduce heavy vehicle defects (and hence the crash risk associated with unroadworthiness) by 0.3 per cent for the benefits to outweigh the costs. It is reasonable to assume it is capable of this.

This suggests this relatively low-cost option is likely to generate net benefits to society.

5.5.2 Operators

The effect of option 2 on operators' overall costs is likely to be small.

It is likely the change proposed would have a limited impact on the costs of rectifying identified defects. The proposed changes to the NHVIM may result in more defects being identified. However, the development of standardised inspection processes may reduce the cost of rectifying defects, particularly for interstate operators.

There is also likely to be a reduction in administrative costs for operators as a result of the improved education and training material.

We have judged that operator costs will on balance remain unchanged.

5.5.3 Government

The main quantifiable impact of option 2 is a one-off increase in the NHVR administrative costs of \$15.8 million over the next 10 years, associated with developing and implementing:

- revisions to the NHVIM
- education and training material for authorised officers, operators and drivers
- standardised inspection processes and procedures
- the National Roadworthiness Data Strategy, including information on operator compliance history and enabling this to be access to improve inspection targeting.

Finally, in their role as NHVR service providers, the regulatory agencies of some jurisdictions may incur some additional costs associated with harmonising:

- inspection testing equipment (differing depending on the type of inspection)
- existing procedures for managing roadworthiness.

5.5.4 Other individuals and groups

- Option 2 would also deliver additional unquantified societal benefits associated with reduced heavy vehicle emissions, given the greater number of defects that would be identified.

Given that operator costs do not increase significantly under this option, there would be negligible impact on transport costs for the general public.

- Expected costs and benefits of option 3

Table 5 shows the expected changes to key costs and benefits under option 3. Appendix B contains the details of the assessment.

- The cost–benefit analysis estimates the net present value of the total quantified costs/benefits associated with these options is between \$3459 million in savings to \$1423 million in cost over the next 10 years. This wide range highlights how sensitive this option is to the assumptions around the expected increase/decrease in the number of inspections.

Table 5: Impact of option 3 on key costs and benefits

Group affected	Cost or benefit	
Heavy vehicle operators	Administrative compliance cost (depending on approach taken to scheduled inspections)	Cost increase
	Cost of rectifying non-compliance (defects)	Cost increase
	Benefit in reduced crash risk and improved vehicle reliability	Saving – cost reduction
Government	Government (NHVR) administrative cost (depending on approach taken to scheduled inspections)	Cost increase
Individuals and broader society	Crash risk (depending on approach taken to scheduled inspections)	Saving – increased safety
	Reduced emissions	Saving – improved air quality

5.5.5 Impact on crash and breakdown risk

Option 3 can be expected to reduce defect-related crash risks to a greater extent than option 2, for a number of reasons.

First, the expected reduction in the crash risk from the improved ability to target high-risk vehicles at roadside inspections, the standardisation of procedures under the NHVIM and other material that provides guidance or direction on how to administer or comply with the law, and improved education material and training as described under option 2 can also be expected under option 3.

Second, the proposed changes to the CoR provisions would also impact the executive officers of operators, who would be increasingly held accountable for any lack of roadworthiness. This would result in an increased focus on roadworthiness within businesses, which in turn may lead to increased requirements on drivers and subcontractors to assess and report on vehicle roadworthiness concerns and hence increase compliance.

Third, option 3 enables the NHVR to impose scheduled heavy vehicle inspections on high-risk vehicles and operators (for example, according to vehicle age, body type, or load). The impact of this change is difficult to estimate because it need not necessarily mean more scheduled inspections. For example, this policy change could be used to enable existing inspection resources to be redeployed and retargeted. In other words, the number of inspections could be increased for higher-risk heavy vehicles and reduced for lower-risk heavy vehicles. In this way option 3 could deliver a higher level of compliance – and so reduce the crash risk – when compared with the baseline (option 1) and option 2, but without imposing additional costs.

While the impact of scheduled inspections on roadworthiness has not been precisely quantified, it can reasonably be assumed to be positive (more regular inspections can be expected to lead to increased levels of roadworthiness) for a given approach (for instance, degree of targeting).

The lower and upper bounds of the cost of crashes and breakdowns associated with heavy vehicle unroadworthiness are estimated at \$2.3 billion and \$4.2 billion respectively (see 5.3.4 above). The component value of reductions attributable to scheduled inspections would be a proportion of these values. This proportion would depend on how effective the scheduled inspections were in reducing heavy vehicle defects that would otherwise lead to a crash or breakdown.

By way of example, if 60 per cent of defects were present in older heavy vehicles and these vehicles were subjected to scheduled inspections on an annual basis, and if annual inspections of these vehicles reduced the presence of defects by 60 per cent, then inspecting these vehicles may be estimated to reduce the (total) roadworthiness-related crash risk by 36 per cent. This equates to a benefit, in terms of reduced crash risk, of \$0.9 billion to \$1.5 billion.

5.5.6 Operators

The biggest impact of option 3 is on operator administrative compliance costs, which may either increase or decrease dramatically depending on how the risk-based approach to scheduled inspections is applied. This is because the scheduled inspection scheme would be operated by licensed inspectors on a fee-for-service basis. This means that, all things being equal, the greater the number of inspections the greater the administrative cost for operators.

Five example sub-options (described in detail in 4.5.3 above) relating to the application of scheduled inspections were considered under option 3. Table 6 presents the increase in scheduled inspections under each sub-option and the resulting costs for operators.

Table 6: Expected changes to number of scheduled inspections and resulting cost to operators for 5 sub-options under option 3

Sub-option	3A All HV over 20 years old	3B All HV over 15 years old	3C Risk- targeted annual	3D Dangerous goods vehicles	3E High risk only
Expected scheduled inspections ('000)	284.9	354.3	441.0	107.2	127.3
<i>Incremental change</i>					
Articulated and rigid fleet ('000)	-64.5	4.9	91.6	-242.2	-222.1
Incremental cost to operators (\$m pa)	\$141.6	\$10.9	\$201.0	\$-531.4	\$-487.2

Option 3D removes scheduled inspections for all heavy vehicle operators except dangerous goods operators, and so results in significant savings. Option 3C assumes regulatory changes will increase the number of scheduled inspections in states other than NSW and Queensland as a result of expanding inspections to include vehicles over 20 years of age and dangerous goods operators, while reducing the number of inspections in NSW, Queensland and the NT for vehicles still subject to scheduled maintenance by the manufacturer.

Compliance costs would also be expected to increase for operators:

- with a poor record of compliance, if these operators become increasingly targeted
- for operators with vehicles registered in Victoria, South Australia, Tasmania and the ACT as vehicles in these jurisdictions are not currently subject to annual inspections.

The distribution of inspection impacts on operators is not just the result of the number of additional inspections required. It is also a function of the current pattern of scheduled inspections and the assumed increases that would occur under option 3.

The impact of sub-options 3A to 3E on the number of inspections conducted in each state and territory is shown in Figure 8 and Table 7.

Figure 8: Impact of sub-options 3A to 3E on the number of inspections conducted in each state and territory

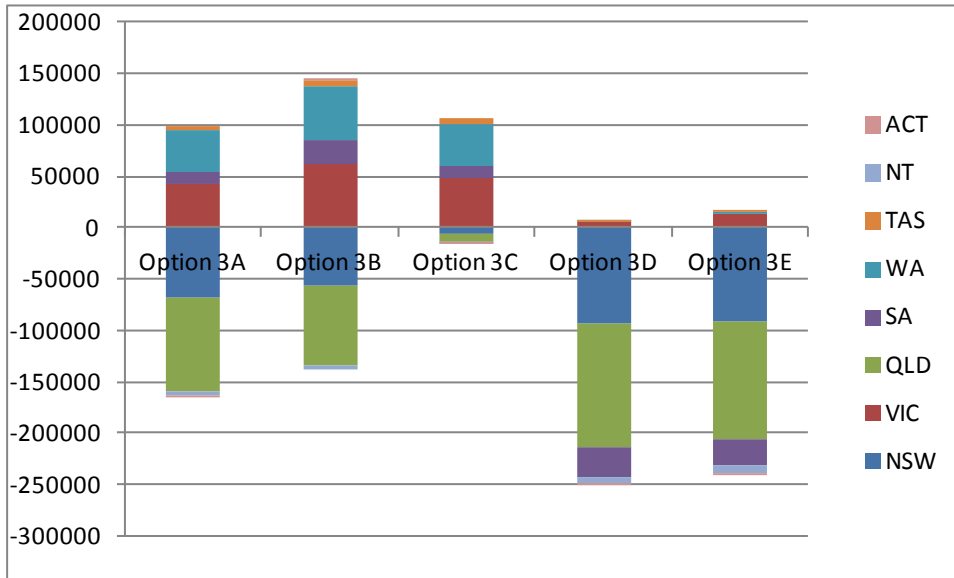


Table 7: Distribution of inspection impacts of sub-options 3A to 3E

State or territory	Sub-option				
	3A All HV over 20 years old	3B All HV over 15 years old	3C Risk-targeted annual	3D Dangerous goods vehicles	3E High risk only
NSW	(67,701)	(56,258)	(5,851)	(93,576)	(90,844)
VIC	41,929	62,055	47,292	5,363	12,403
QLD	(91,332)	(78,821)	(8,667)	(120,643)	(114,922)
SA	12,841	22,352	13,305	(27,595)	(26,179)
WA	39,450	52,600	40,443	993	3,301
TAS	5,076	6,586	5,535	459	1,054
NT	(4,582)	(3,665)	(298)	(6,353)	(6,095)
ACT	(204)	105	(161)	(869)	(789)
Total	(64,522)	4,953	91,598	(242,220)	(222,072)

The changes to NHVAS in option 3, which introduce inspections on a sample of the operator's fleet of nominated vehicles at the renewal of accreditation, would impose an additional positive obligation. The NHVAS Business Rules already authorise the NHVR to require such inspections of an accredited operator. While this requirement would not require the HVNL to be amended, it would in practice form a new requirement. One impact of this additional obligation is that it may discourage some operators from becoming or continuing to be accredited under the NHVAS maintenance management module. This would particularly be the case for operators who had elected to become accredited for the principal purpose of qualifying to be exempted from mandatory, scheduled inspections.¹⁹ In practice, there is a nominal threshold below which NHVAS accreditation may be more costly to an operator than the benefits it provides. Under a system that imposed costs drawn from both systems-management and physical inspections, this threshold would likely increase (i.e. yielding reduced levels of participation in the NHVAS).

5.5.7 Regulatory agencies

Option 3 also imposes additional administrative costs on the NHVR, jurisdictional regulatory agencies and police.

Firstly, the NHVR would face additional administrative costs as described in option 2.

Secondly, the NHVR will incur costs associated with administering the use of scheduled inspections for high-risk vehicles. (As noted in the previous section, the cost of the inspection itself is borne by operators.)

Table 7 shows the magnitude of the changes in inspection numbers according to how they vary with the different example sub-options considered. It is important to note that the costs to government of additional inspections are predominately borne by operators, who pay an inspection fee either to market providers or to regulatory agencies to cover the costs incurred. However, should inspection numbers increase significantly under a risk-based approach to scheduled inspection this may present implementation issues for the NHVR in states that currently do not undertake these inspections .

Further, the ongoing operating costs of the NHVR would be recovered from industry through the regulatory component of the heavy vehicle charges determination. Any changes that impact the ongoing cost of the NHVR will flow through to the industry.

5.5.8 Other individuals and groups

- Option 3 would deliver additional unquantified societal benefits associated with reduced heavy vehicle emissions, given that a greater number of defects are anticipated to be identified.

Any increase in scheduled inspections will impact the industries that support maintenance of these vehicles. Option 3 could therefore increase demand for heavy vehicle repairs, servicing and private inspectors (workshops), particularly in states where scheduled inspections are not currently undertaken.²⁰

¹⁹ The cost of being accredited under the NHVAS is subject to economies of scale. For an operator of a small number of heavy vehicles, the cost of maintaining a maintenance management system and having it audited may be greater than the saving associated with being exempted from scheduled inspections.

²⁰ The NTC considers it is unlikely that any significant increase in heavy vehicle inspections would be serviced by government-operated entities should it occur under this option. This demand would fall to industry members. This process must be carefully managed by the scheme owner (NHVR) if there is a significant risk of demand outstripping supply (that is, a shortfall in willing and capable inspectors).

5.5.9 Summary of costs and benefits

The major costs and benefits of option 3 are:

- reduction in crash risk due to more targeted scheduled inspections bringing about reduced numbers of heavy vehicles operating in a defective state (benefit)
- changed costs to operators of complying with scheduled inspections – for some operators scheduled inspections (and thus costs) will decrease rather than increase.

There exists an inexhaustible range of combinations in which both scheduled inspections could be applied and how resulting benefits could be manifested. See the cost–benefit analysis in Appendix B for more detail.

However, it is worth noting that the example suboption 3C is the only one that significantly increases the number of scheduled inspections conducted (at a cost of \$1.3 billion). This is largely because it envisages an expansion of scheduled inspections outside jurisdictions that already impose annual inspections. Interestingly, a further option was considered that proposed moving to annual inspections for all vehicles over 15 years of age across Australia. This resulted in a very similar number of inspections to option 3C and therefore a very similar cost. Under both these scenarios the costs are less than the lower bound of the potential benefits in terms of eliminating all heavy vehicle crash and breakdown risk – \$2.3 billion (see Appendix B). If 60 per cent of all defect-related related crashes and breakdowns were avoided, option 3C could still deliver net benefits.

Option 3 allows existing inspection resources to be redeployed and retargeted. For example, the number of inspections relative to the baseline would be increased for heavy vehicles with a higher likelihood of, or consequence from, having a safety-critical defect and fewer inspections would be conducted on heavy vehicles at lower risk. Example option 3B demonstrates one way this could be achieved. By inspecting all vehicles over 15 years of age, roughly the same number of inspections would be conducted across Australia, albeit with significant changes at a state level. The cost of this option is estimated to be \$220 million (NPV).

The critical question is: ‘To what extent could annual inspections of high-risk vehicles prevent unroadworthiness and hence reduce the costs of crashes associated with roadworthiness-related defects?’

The answer depends on how well targeted the inspections are, and therefore how many defects can be identified and rectified. For example, if the following is assumed then inspecting these vehicles would reduce the roadworthiness-related crash risk by 36 per cent:

- additional annual inspections are imposed on older vehicles
- older vehicles in the fleet contain 60 per cent of the fleet defects
- an inspection of these vehicles every two years reduces the presence of defects by 60 per cent.

This would equate to a benefit in terms of reduced crash and breakdown costs of \$0.9 billion to \$1.5 billion.

5.6 Expected costs and benefits of option 4

Option 4 was ranked last in the cost–benefit analysis and assessed as inferior to all other options.

Table 8 shows the expected changes to key costs and benefits under option 4. Appendix B contains the details of the assessment.

The cost–benefit analysis estimates the net present value of the total quantified costs associated with this option as \$5.5 billion over the next 10 years.

Table 8: Impact of option 4 on key costs and benefits

Group affected	Cost or benefit	
Heavy vehicle operators	Administrative compliance cost	Cost increase
	Cost of rectifying non-compliance (defects)	Cost increase
	Crash risk and improved vehicle reliability	Saving – increased safety and operating cost reduction (respectively)
Government	Government administrative cost	Cost increase
Individuals and broader society	Crash risk	Saving – increased safety
	Reduced emissions	Saving – improved air quality

5.6.1 Impact on crash risk

Option 4 can be expected to reduce the defect-related crash risk to a greater extent than options 2 and 3. This is because option 4 enables the NHVR to impose scheduled inspections on all vehicles. As a result, this option can be expected to deliver a higher level of compliance and so reduce the crash risk when compared with all other options.

The link between scheduled inspections and roadworthiness is difficult to quantify but likely to be positive (more regular inspections can be expected to lead to increased levels of roadworthiness). However, it should be noted that the incremental benefit (crash risk-reduction) associated with imposing scheduled inspections on all vehicles is likely to be lower than the incremental benefit from imposing scheduled inspections only on high-risk vehicles (as per option 3) because the additional inspections are on heavy vehicles with a lower expected risk of defect.

Further, option 4 involves a primary duty being placed on heavy vehicle operators, prime contractors and employers to ensure that vehicles over which they have influence are roadworthy and compliant with vehicle standards. The NTC considers a primary duty of care that applies to executive officers of operators, prime contractors and employers is the best option for reform to encourage greater compliance and improve safety outcomes. This is because these parties have direct control over the condition of their heavy vehicles and trailers, the resourcing of vehicle maintenance and repairs and the safe use of vehicles on the road. The NTC considers that greater clarification of the obligations of operators, prime contractors and employers will result in improved focus on the safe condition of vehicles by those in a position to control, influence or encourage safe on-road behaviour.

The cost–benefit analysis in Appendix B considers whether option 4 is likely to deliver sufficient crash risk-reduction benefit to outweigh the costs associated with conducting annual inspections for all heavy vehicles. This option is expected to result in annualised costs (NPV of \$5.5 billion) that exceed the upper cost bound of the total defect-related crash risk (NPV of \$4.2 billion) (see 5.3.4). Therefore, it is unlikely to be of net benefit.

5.6.2 Operators

Option 4 imposes the biggest impact on operator administrative compliance costs, which are expected to increase relative to the baseline and all other options, given all heavy vehicles would be subjected to scheduled inspections.

In particular, compliance costs would be expected to increase for operators with vehicles registered in Victoria, South Australia, Tasmania and the ACT, given that all heavy vehicles are not currently subject to annual inspection in these jurisdictions. Operators in all jurisdictions would have the option of offsetting this cost increase by becoming accredited, which would remove the requirement for annual scheduled inspections. However, this is only likely to reduce the overall compliance costs for larger operators. Owner-operators and smaller operators may be less able to implement the management systems needed to meet the accreditation requirements. The expected increase in inspection by jurisdiction is shown in Table 9.

Table 9: Distribution of incremental change in the number of annual inspections under option 4

State	Increase in inspections for articulated and rigid heavy vehicles
NSW	0
VIC	166,650
QLD	0
SA	91,600
WA	131,500
TAS	13,750
NT	0
ACT	>1,500
Total	(approx.) 405,000

As noted for option 3, the option 4 changes to the NHVAS to introduce inspections on a sample of an operator's fleet of nominated vehicles at the renewal of accreditation may reduce levels of participation in the NHVAS, particularly for those operators with smaller fleets.

The primary duty on operators, prime contractors and employers does not impose a significantly greater regulatory burden above that which they should be currently doing to comply with ss 60 and 89 of the HVNL. Instead, this duty seeks to clarify these existing obligations, separating them from obligations upon other parties such as 'persons' and moving away from offences, which rely upon some harm having to occur, to duties, which result in preventative compliance.

5.6.3 Regulatory agencies

Option 4 also imposes additional administrative costs, which mainly affect the NHVR.

First, the NHVR would face the same additional administrative costs as described under option 2.

Second, the NHVR will incur costs associated with the administration of the scheduled inspection program for heavy vehicles. Costs incurred by operators who are charged an inspection fee are not part of this administrative cost.

5.6.4 Other individuals and groups

Option 4 would deliver additional unquantified societal benefits associated with reduced heavy vehicle emissions, given that a greater number of defects are anticipated to be identified.

Any increase in the number of scheduled inspections conducted will impact the industries that support maintenance of these vehicles. Option 4 would thus likely increase demand for heavy vehicle repairs servicing and private inspectors (workshops).

A significant increase in scheduled inspections and associated costs could lead to significant changes in the trucking industry, and involve broader economic impacts. For example, it could lead to structural changes in the composition of the heavy vehicle fleet in each state and territory to rebalance existing differences in the proportion of the heavy vehicle fleet that is 20 years of age or greater. The capital cost of replacing many older vehicles in states such as Victoria and South Australia, and the ongoing costs of scheduled inspections (and addressing identified defects) in these states, could increase the cost of trucking services and the relative costs of doing interstate business in truck-reliant industries.

5.7 Expected costs and benefits of the composite option

The cost–benefit analysis estimates the net present value of the total quantified costs and benefits associated with these options is between \$3459 million in savings to \$1423 million in costs over the next 10 years. This wide range highlights how sensitive this option is to the assumptions around the expected increase/decrease in the number of inspections.

Table 10: Impact of the composite option on key costs and benefits

Group affected	Cost or benefit	
Heavy vehicle operators	Administrative compliance cost (depending on approach taken to scheduled inspections)	Cost increase
	Cost of rectifying non-compliance (defects)	Cost increase
	Benefit in reduced crash risk and improved vehicle reliability	Saving – cost reduction
Government	Government administrative cost (depending on approach taken to scheduled inspections)	Cost increase
Individuals and broader society	Crash risk (depending on approach taken to scheduled inspections)	Saving – increased safety
	Reduced emissions	Saving – improved air quality

5.7.1 Impact on crash and breakdown risk

The composite option can be expected to reduce defect-related crash risks to a greater extent than option 2 or option 3, for a number of reasons.

First, as with option 3, the composite option enables the NHVR to impose scheduled heavy vehicle inspections on high-risk vehicles and operators (for example, according to vehicle age, body type, or load). The impact of this change is difficult to estimate because it need not necessarily mean more scheduled inspections. For example, this policy change could be used to enable existing inspection resources to be redeployed and retargeted. In other words, the number of inspections could be increased for higher-risk heavy vehicles and reduced for lower-risk heavy vehicles. In this way the composite option could deliver a higher level of compliance – and so reduce the crash risk – when compared with the baseline option 1 and option 2, but without imposing additional costs

Second, the proposed introduction of a CoR duty on the executive officers of operators, employers and prime contractors would result in an increased focus on roadworthiness within businesses, which in turn may lead to increased requirements on drivers and subcontractors to assess and report on vehicle roadworthiness concerns and hence increase compliance. This is a stronger mechanism than the specific CoR duty considered in option 3 and is therefore expected to induce greater compliance than option 3.

5.7.2 Operators

The biggest impact of the composite option is on operator administrative compliance costs, which may either increase or decrease dramatically depending on how the risk-based approach to scheduled inspections is applied. As with option 3, this is because the scheduled inspection scheme would be operated by licensed inspectors and funded predominantly by heavy vehicle operators, on a fee-for-service basis. This means that, all things being equal, the greater the number of inspections the greater the administrative cost for operators.

Compliance costs would increase for particular groups of operators – namely those assessed as posing a high risk. Compliance costs would also be expected to increase for operators:

- with a poor record of compliance, if these operators become increasingly targeted
- for operators with vehicles registered in Victoria, South Australia, Tasmania and the ACT as vehicles in these jurisdictions are not currently subject to annual inspections.

The distribution of inspection impacts on operators is not just the result of the number of additional inspections required. It is also a function of the current pattern of scheduled inspections and the assumed increases that would occur under the composite option. The analysis of suboptions outline in 5.5.6 above is directly relevant since the risk-based approach to scheduled inspections is a shared element of option 3 and the composite option.

The changes to NHVAS in the composite option, to introduce inspections on a sample of an operator's fleet of nominated vehicles at the renewal of accreditation, would impose an additional positive obligation. The NHVAS Business Rules already authorise the NHVR to require such inspections of an accredited operator. While this requirement would not require the HVNL to be amended, it would in practice form a new requirement. One impact of this additional obligation is that it may discourage some operators from becoming or continuing to be accredited under the NHVAS maintenance management module. This would particularly be the case for operators who had elected to become accredited for the principal purpose of qualifying to be exempted from mandatory, scheduled inspections.²¹ In practice, there is a nominal threshold below which NHVAS accreditation may be more costly to an operator than the benefits it provides. Under a system that imposed costs drawn from both systems-management and physical inspections, this threshold would likely increase (i.e. yielding reduced levels of participation in the NHVAS).

5.7.3 Regulatory agencies

The composite option also imposes additional administrative costs on the NHVR, jurisdictional regulatory agencies, and police.

Firstly, the NHVR would face additional administrative costs as described in option 2.

Secondly, the NHVR will incur costs associated with administering the use of scheduled inspections for high-risk vehicles as described in option 3.

Further, the ongoing operating costs of the NHVR are to be recovered from industry through the regulatory component of the heavy vehicle charges determination. Any changes that impact the ongoing cost of the NHVR will flow through to the industry.

5.7.4 Other individuals and groups

- The composite option would deliver additional unquantified societal benefits associated with reduced heavy vehicle emissions, given that a greater number of defects are anticipated to be identified.

Any increase in scheduled inspections will impact the industries that support maintenance of these vehicles. The composite option could therefore increase demand for heavy vehicle repairs, servicing and private inspectors (workshops), particularly in states where scheduled inspections are not currently undertaken.²²

5.7.5 Summary of costs and benefits

The major costs and benefits of the composite option are:

- reduction in crash risk due to more targeted scheduled inspections and a strong CoR incentive for compliance, reducing the number of heavy vehicles operating in a defective state (benefit)
- changed costs to operators of complying with scheduled inspections – for some operators scheduled inspections (and thus costs) will decrease rather than increase.

²¹ The cost of being accredited under the NHVAS is subject to economies of scale. For an operator of a small number of heavy vehicles, the cost of maintaining a maintenance management system and having it audited may be greater than the saving associated with being exempted from scheduled inspections.

²² The NTC considers it unlikely that any significant increase in heavy vehicle inspections would be serviced by government-operated entities should it occur under this option. This demand would fall onto industry members. This process must be carefully managed by the scheme owner (NHVR), if there is a significant risk of demand outstripping supply (that is, a shortfall in willing and capable inspectors).

Appendix H summarises the changes for each state and territory in implementing the elements of the composite option.

5.8 Comparative assessment of options 1, 2, 3, 4 and the composite option

Based on the analyses presented in the preceding sections and in the cost–benefit analysis (Appendix B), the NTC has established a ranking across the different options.

The available quantitative data precludes the NTC establishing a ranking based entirely on the net present value of the net benefits associated with each option. Instead, the available information and data has been analysed to establish relative option rankings for each impact category. The different rankings are unweighted.

The results are reported in Table 11. For each major cost category, the NTC has assigned a positive ranking (marked '+') to options with a favourable (socially beneficial) impact relative to the baseline (zero or '0'), and a negative ranking (marked '-') to options with an unfavourable impact. The NTC has then considered which options are likely to deliver net benefits, and ranked the options with 1 being assigned to the option considered to have the most favourable impact.

The category rankings suggest that the composite option may be preferred (with option 2 and option 3 also delivering net benefits), although this depends on the weighting applied to the crash risk-reduction benefits. Given the composite option is likely to be of net benefit, it is also preferable to doing nothing (option 1).

Table 11: Comparative ranking of options relative to the baseline option 1

Cost type	Option 1	Option 2	Option 3	Option 4	Recommended composite option
Cost to operators of rectifying non-compliance	Baseline	Baseline	–	– –	–
Operator administrative costs	Baseline	+	++ / – (Ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)	– – – (\$5.3b)	++ / – (Ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)
Regulatory administrative costs	Baseline	~0 (\$15.8m)	~0 (Ranges from \$135m in benefits to \$77m in costs, depending on implementation)	– – (\$253m)	~0 (Ranges from \$135m in benefits to \$77m in costs, depending on implementation)
Crash risk reduction benefits	Baseline	+	++	++++	+++
Likely to deliver net benefits	No change	YES	YES (depending on implementation)	NO	YES (depending on implementation)
Overall ranking	4	3	2	5	1*

Note: A positive ranking (+) is assigned to options with a favourable impact relative to the baseline (0), and a negative ranking (–) is assigned to options with an unfavourable impact. Figures are for the 10-year period (NPV).

* This ranking is contingent on an implementation of option 3 / composite option, where inspections are highly targeted and there are only limited increases in the number of scheduled inspections.

This conclusion hinges on the regulatory changes proposed in the composite option not being used to impose significantly more scheduled inspections and therefore significantly higher overall compliance cost. Instead, the regulatory changes would enable existing resources to be redeployed and retargeted. For example, there could be an increase in the number of inspections relative to the baseline for heavy vehicles with a higher likelihood of, or consequence from, having a safety-critical defect, and fewer inspections for heavy vehicles at lower risk. In this way, the composite option would deliver a higher level of compliance, and therefore crash risk-reduction benefits, when compared with options 1, 2 and 3, but with no change in the number of inspections conducted overall, and therefore limited cost impacts.

It should be noted that an implementation of the composite option that involves significant additional cost (such as through significantly increased inspection efforts) would be less preferable than either option 1 or option 2.

5.9 Identified regulatory burden offsets

Options 3, 4 and the composite option would increase compliance costs for some or all operators registered in Victoria, South Australia, Tasmania and the ACT, as vehicles in these jurisdictions are not currently subject to annual inspections. Operators in these jurisdictions would have the option of offsetting this cost increase by becoming accredited under the NHVAS, which would remove the requirement for annual scheduled inspections. However, this is only likely to reduce the overall compliance costs for larger operators. Owner-operators and smaller operators may find the management systems and re-entry inspections needed to meet the NHVAS requirements too costly to implement.

6. Communication and consultation

6.1 Purpose and objectives of consultation

Consultations during development of this Final RIS gathered views from government and industry to contribute to developing options to improve heavy vehicle roadworthiness. The consultation addressed current arrangements and potential areas for improvement in heavy vehicle roadworthiness measures and in the NHVAS.

The NTC conducted extensive consultation with jurisdictions and industry from November 2013 to September 2014.

It also considered submissions to the *Heavy Vehicle Roadworthiness Review, Phase 1 Report of Current Practice* (NTC & NHVR July 2014) and the *Heavy Vehicle Roadworthiness Review, Phase 2 Integrity Review of the National Heavy Vehicle Roadworthiness System* (NTC & NHVR August 2014).

The consultations and submissions formed the basis for the options described in the Consultation RIS published in January 2015. Submissions to this Consultation RIS were requested before 23 March 2015. There were 30 written submissions received, including 8 from jurisdictional governments, 7 from industry associations and 5 from repairers (see Table F-2 in Appendix F for a full list of submitters).

Submissions on the Consultation RIS raised a number of key issues related to heavy vehicle roadworthiness and on the issues and options the RIS identified, namely:

- risk-based schedule inspections
- roadworthiness standards under the NHVIM
- CoR duty on business practices
- regulatory recognition of the NHVIM and other guidance material
- consistent education and training package
- enforceable undertakings
- NHVAS improvements, including introducing vehicle audits for a sample of an operator's fleet.

Other topics raised in submissions included: operator licensing; vehicle / trailer system integration; new technologies and vehicle designs; driver behaviours, competency standards and attitudes; better understanding of business models and financing systems; influencing vehicle maintenance; the use of concessions and rewards to promote compliance; recognition of TruckSafe; and Road Safety Remuneration Orders.

Several jurisdictions raised operator licensing as a potential mechanism for improving compliance with roadworthiness standards. Many overseas countries have operator licensing as part of their compliance regime for heavy vehicles, particularly those involved in carriage of freight for hire or reward. This was not included as an element of the options considered in this RIS, as it has ramifications across the entire framework of heavy vehicle regulatory compliance that are beyond the scope of the roadworthiness program.

The need for improvements to the technical competency standards of auditors was also identified during consultation. Changes to the NHVAS Business Rules approved by the responsible ministers on 7 November 2014 will result in the upgrading of the technical competency standards of registered auditors. This will enable auditors to supplement and validate the audit by a basic observational inspection.

6.1.1 Risk-based scheduled inspections

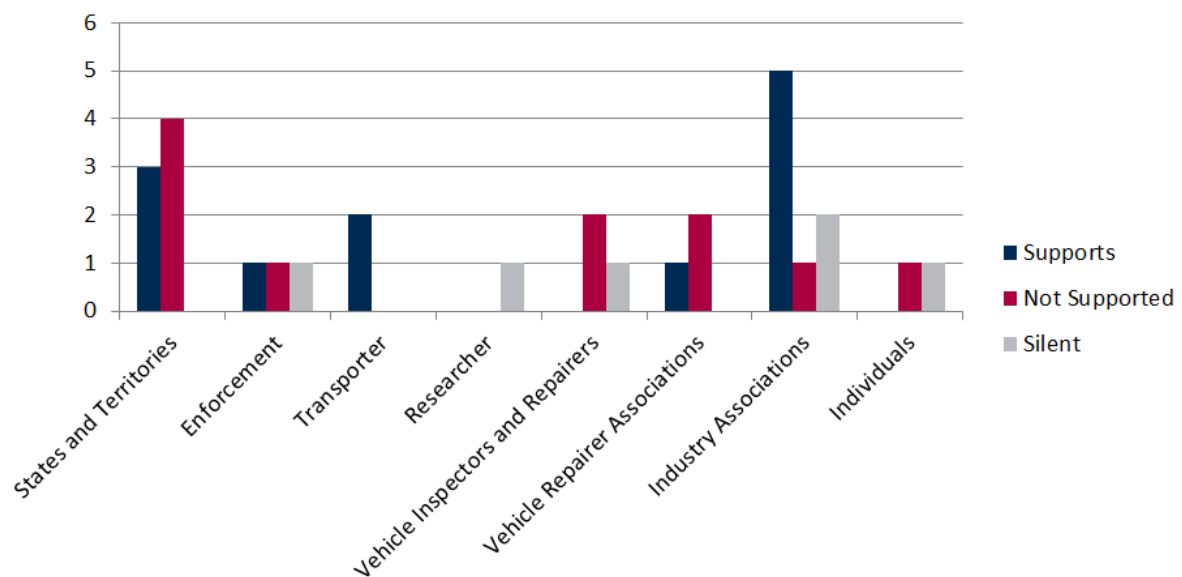
Risk-based scheduled inspections entail enabling the NHVR to use a risk-based approach to scheduled inspections. The NHVR will be able to require high-risk vehicles (for example, based on vehicle age or load type) to undergo scheduled inspections either at a default interval or as the result of triggering events such as change of ownership.

Figure 9 illustrates that this option was broadly supported by jurisdictions (77% of submissions received) and by transport and manufacturers' associations (66%). For example the Australian Livestock and Rural Transporters Association submitted that:

It makes sense to target resources to areas of higher risk while at the same time reducing red tape for low-risk operators. There must however be some checks and balances in a risk-targeting system.

Australian Livestock and Rural Transporters Association

Figure 9: Consultation position on risk-based scheduled inspections



The Tasmanian Government did not think inspections once a year were adequate, while the business Toll Group rejected a national system overlaying the existing systems:

[...from] research it is evident that bringing vehicles in for inspection once a year does not address how the vehicle is used or maintained for the rest of the year and what parts may wear out or become faulty in that time, such as brakes, tyres or lights.

Tasmanian Government

[Toll rejects]...an inspection system that is overlayed on the existing state-based systems. Instead, it supports a nationally consistent approach to heavy vehicle roadworthiness that is based on empirical evidence.

Toll Group

While the VicRoads supported the concept of risk-based scheduled inspections, it noted that it *'does not have any current plans to make changes to its system. Accordingly, VicRoads supports the option of preserving its existing roadworthiness system'*.

Repairers did not generally support the option for risk-based scheduled inspections, favouring annual scheduled inspections.

This risk-based approach relies heavily on the NHVR developing a National Roadworthiness Data Strategy. The support offered for this approach was in many cases conditional to the strategy being fully developed.

Going beyond risk-based scheduled inspections to mandatory annual inspections was not supported by many submissions due to questions of the high cost and limited additional impacts. One jurisdiction rejected mandatory annual inspections due to *'the high costs to industry and Government and the lack of evidence that links annual inspections to improve safety outcomes'* (Western Australian Government).

As a result of consultation and analysis, mandatory annual inspections will not be recommended.

In light of feedback from some stakeholders that support for a risk-based approach would depend on the nature of how risk was defined and the capability of the NHVR in assessing risk against an agreed criteria, the preferred option was amended. It now allows for risk-based criteria and the necessary supporting capabilities to be developed before any decision by ministers is sought on amending the HVNL to include a risk-based approach to scheduled inspections. This will provide ministers with better information to assess the option and its impacts.

6.1.2 Roadworthiness standards under National Heavy Vehicle Inspection Manual

Industry and jurisdictions broadly supported the review of the NHVIM to incorporate standard inspection types, defect clearance processes, criteria for roadworthiness (major or minor defects) and formal warnings. The basis for this supportive view focused on the deficiencies of the current system. For example one submission stated:

...there is a clear need for a nationally standardised system. Today it is still possible for a vehicle to pass at one inspection station and fail at another due to testing equipment tolerances or operator error. Further, the level of education amongst inspectors varies as does the application of the NHVIM.

Commercial Vehicle Industry Association Queensland (CVIAQ)

Comments also emphasised a desire for increased consistency between jurisdictions:

...[ALC supports] the concept of a National Heavy Vehicle Regulator (NHVR) enforcing a single rule book in a consistent manner and therefore supports the proposed administrative changes designed to standardise the way in which the roadworthiness of heavy vehicles are determined.

Australian Logistics Council

... a uniform national approach to vehicle roadworthiness is a vital part of a modern system that improves safety and enhances Australia's national competitiveness.

Australian Livestock and Rural Transporters Association

Consistent interpretation of a national heavy vehicle inspection manual by authorised officers to ensure consistent national treatment of heavy vehicle roadworthiness is imperative, and rigorous written guidance materials and systematic training must be provided to dedicated staff in relation to the exercise of their inspection powers.

Australian Trucking Association

One submission (Transport for New South Wales) stated that current criteria for roadworthiness (namely definitions in the HVNL) unnecessarily limit the enforcement options available to authorised officers in dealing with a vehicle. NSW proposed an amendment to the HVNL to allow greater flexibility for authorised officers when considering issuing a formal warning for defects. Provision for formal written warnings to be issued for defective vehicles that do not pose a safety risk will be progressed through the HVNL maintenance sub-program. The HVNL maintenance sub-program is part of the NTC’s routine maintenance of national laws.

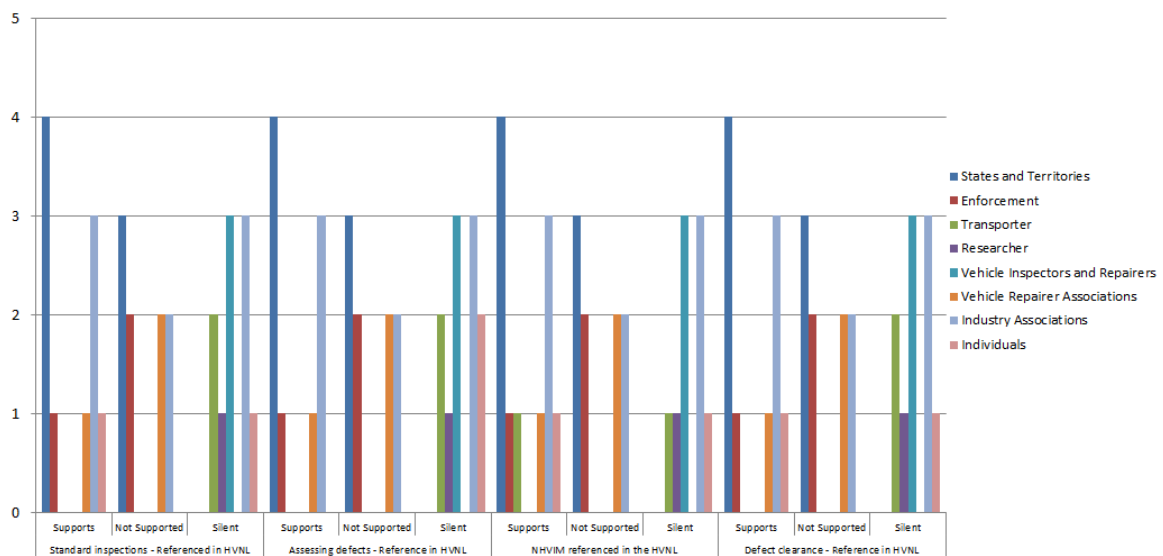
There were more mixed views on the regulatory recognition of the NHVIM and other material that provides guidance or direction on how to administer or comply with the law. Submissions generally supported standardisation of the practices and criteria used for issuing and clearing defect notices. For example: ‘the National Heavy Vehicle Inspection Manual (NHVIM) should be referenced within the HVNL’ (TfNSW). Associations including the Australian Trucking Association (ATA), Gas Energy Australia, the Transport and Infrastructure Council and others supported the regulatory recognition. The need for the regulatory recognition of such material to achieve this standardisation was not as broadly supported.

Authorised Officers (Australia New Zealand Police Advisory Agency and Victoria Police) and some industry associations (Australian Logistics Council) did not support the proposal. Authorised Officers continue to believe that any codification in law of inspections will remove some of their discretion. Victorian Police’s opinion was that ‘a codified approach would impinge on operational independence, officer discretion and subjective elements and variables unique to each intercept’. The Australian Logistics Council also did not support HVNL recognition of the NHVIM: ‘as the NHVIM is relatively new, ALC would not support the document being called up, or being prescribed, into regulation’.

As a result of consultation, including the mixed views on the need for regulatory recognition of the NHVIM, it is proposed the need for such recognition be reconsidered after implementation of the revised NHVIM and material that provides guidance or direction on how to administer or comply with the law. Their recognition in the HVNL may subsequently be recommended, should the adoption of and compliance with these materials prove insufficient to induce the required changes in compliance.

Figure 10 shows the levels of support for guidance options in the HVNL.

Figure 10: Support levels for referring guidance material in the Heavy Vehicle National Law

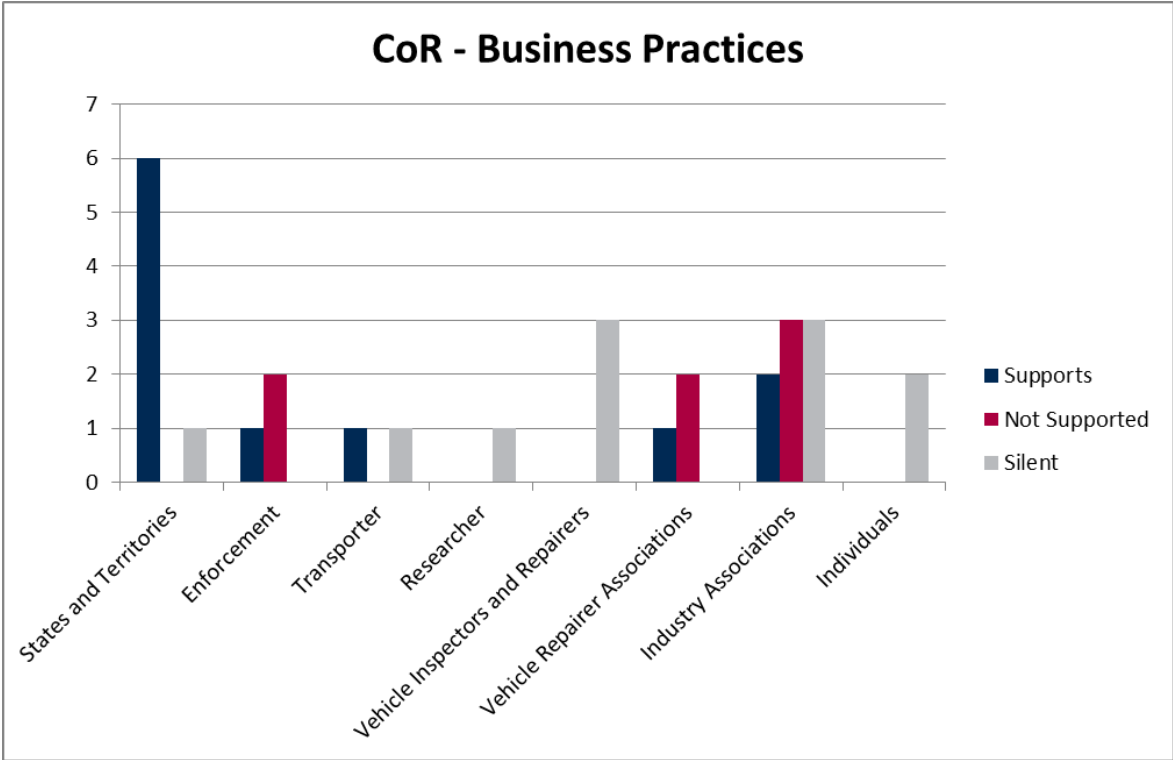


6.1.3 Chain of responsibility duty on business practices

Option 3 involves inserting a specific duty focused on business practices in the vehicle standards chapter (Chapter 3) of the HVNL. This would require operators, employers and prime contractors to take all reasonable steps to ensure their business practices will not cause a heavy vehicle to be used on a road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards.

Figure 11 illustrates wide support from jurisdictions for this proposal. However some comments indicated a preference for the application of a primary duty (option 4) rather than just on business practices. In similar fashion, the NHVR prefers the primary duty recommendation.

Figure 11: Support levels for a specific chain of responsibility duty on business practices for operators, employers and prime contractors.



The majority of submissions from repairers did not support the proposal for a business practices duty.

The concept of a specific duty on business practices can be compared with the primary safety duty that forms part of option 4. One submission stated their organisation would: *only support a primary (general duty of care) for CoR if it remains applicable to the existing parties not the manufacturing, sales, service, repair and modification sector of the transport industry*’ (CVIAQ).

A submission from authorised officers emphasised that implementing positive primary duties to ensure safety offered benefits:

[primary duties]... would also enable enforcement to be less reactive (i.e. currently a person is only accountable when a vehicle has become non-compliant with the standards (s 60) or the vehicle is unsafe (s 89) and is being used on the roads), and more greatly focussed on promoting and requiring that industry actively work to prevent and avoid risk and roadworthiness contraventions

Victoria Police

Some stakeholders identified other parties (beyond operators, employers or prime contractors) which they considered suitable for inclusion within the primary duty. These included third-party maintenance providers, vehicle or component manufacturers, workers, schedulers and consignors. The NTC considers these parties have limited influence when it comes to ensuring that vehicles are roadworthy and compliant with vehicle standards and their roles and obligations are more appropriately covered by other existing legislation such as under common or codified criminal law (under offences dealing with aiding, abetting, counselling and procuring), under workplace, health and safety and consumer law.

As a result of this consultation and also broader work undertaken as part of the separate NTC duties review, it is recommended that a CoR duty focused on vehicle safety be implemented, and that a primary duty on employers, principal contractors and operators is most appropriate. The development of this duty will be carried forward by the NTC Chain of Responsibility Duties Review. In May 2014, the Transport and Infrastructure Council endorsed in principle a restructure of the existing chain of responsibility obligations to construct primary duties of care to ensure safety, within the existing regulatory framework of the HVNL. The NTC will ensure that the proposed primary duty of care to ensure safety on operators, prime contractors and employers encompasses a duty to ensure vehicle safety.

6.1.4 Information and training

This proposal promotes the review and development of the currently available information, training and education resources for authorised officers, operators and drivers.

A consistent package containing the essential, relevant information will be developed and made available to industry and enforcement officers.

Most responders supported this proposal (63% in favour; 27% silent):

[The Queensland Transport and Main Roads] ... supports standardisation and believes positive advancements in this area can be achieved through guidelines and uniform education and training.

Queensland TMR

... consistent interpretation of a national heavy vehicle inspection manual by authorised officers to ensure consistent national treatment of heavy vehicle roadworthiness is imperative, and rigorous written guidance materials and systematic training must be provided to dedicated staff in relation to the exercise of their inspection powers. This will ensure a nationally consistent approach is used to assess any vehicle's roadworthiness condition at any time

Australian Trucking Association

With broad support expressed by stakeholders for this measure during consultation, it is retained as a recommendation in this RIS.

6.1.5 Enforceable undertakings

Figure 12 illustrates broad support for enforceable undertakings among those submissions that put their views forward on the issue.

For example, South Australia submitted:

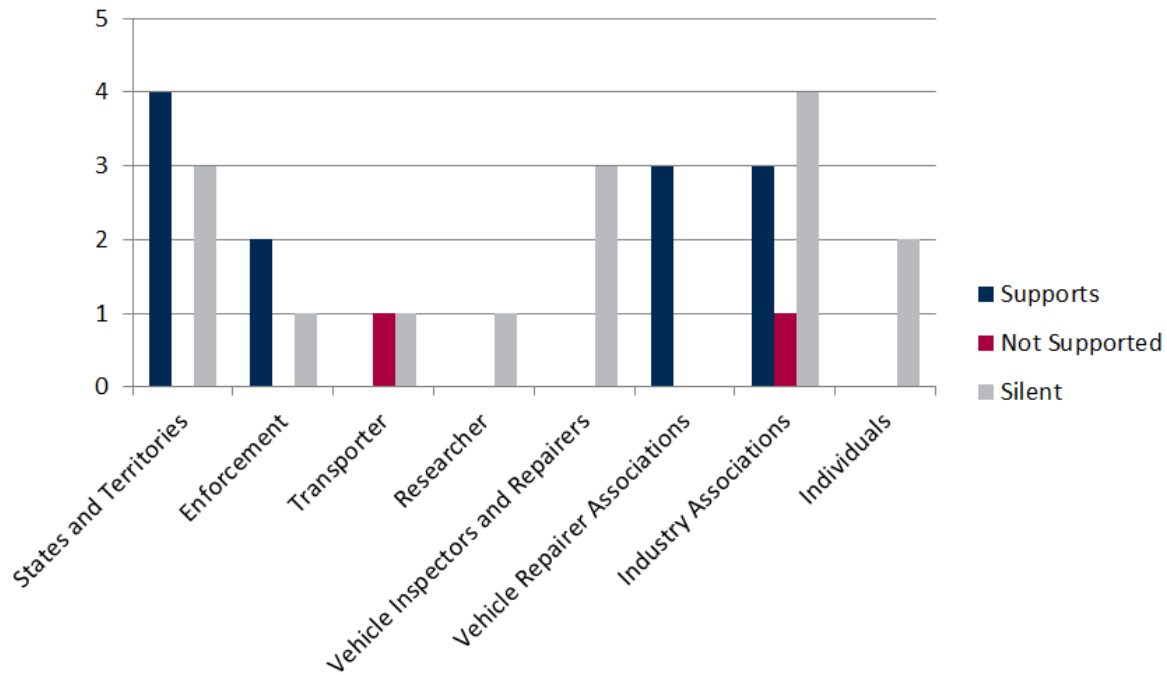
DPTI and SAPOL support the introduction of enforceable undertakings into the HVNL, as proposed in options 3 and 4. As an alternative to prosecution they are clearly worthy of further consideration, subject to additional detail on how this would be administered at a national and local level, including clarification as to the interaction, relationship and/or distinction between enforceable undertakings and improvement notices.

Only two submissions presented opposition to enforceable undertakings. For example, Toll Logistics put forward the opinion that other legal provisions are available to achieve the same end:

Toll Group has not, to date, supported enforceable undertakings, but this is on the basis that similar provisions already exist in the HVNL (e.g. improvement notices); they are simply not widely used.

Toll Group

Figure 12: Consultation position on enforceable undertakings



6.1.6 National Heavy Vehicle Accreditation Scheme improvements, associated with introducing vehicle audits for a sample of an operator’s fleet

The Consultation RIS canvassed the option of making participation in the NHVAS maintenance management module mandatory in some circumstances. These were:

- a new power for the NHVR to make aspects of maintenance management accreditation mandatory for some classes of vehicles or classes of operators based on risk or operator roadworthiness performance.
- the NHVAS maintenance management module to be a prerequisite for the NHVAS mass management module to ensure that operators who are seeking regulatory concessions are taking a systemic approach to roadworthiness by adopting appropriate safety management systems for vehicle maintenance.

This was not supported by a number of submissions. For example, the Queensland Department of Transport and Main Roads submitted:

[We do not] support making participation in the NHVAS maintenance management module a pre-requisite for the NHVAS mass management module. NHVAS participation should remain voluntary for motivated operators.

Queensland TMR

The Australian Trucking Association submitted:

Vehicles in robust accreditation schemes should not be subject to mandatory scheduled inspections as well. The design of the sampling system should provide adequate assurance that vehicles are roadworthy.

Australian Trucking Association

While there was support for these proposals from other stakeholders, evidence of the benefits was too limited to warrant the regulatory burden.

As a result of consultation, the option for the NHVAS maintenance management module to be made mandatory in some circumstances is not recommended in this RIS.

A separate proposal submitted to the NTC during consultation was for roadworthiness inspections to be conducted on a sample of an accredited operator's fleet as a condition of renewing its accreditation under the NHVAS.

Under this approach, inspections would be conducted by approved inspectors at accreditation renewal, or re-entry into the scheme (occurring every two years). The vehicles to be inspected would be identified by the NHVR and the number sampled based on sampling procedures prescribed in AS 1199.1 – 2003 (ISO 2859-1:1999) *Sampling Procedures for Inspection by Attributes* that relate to the quality of acceptance.

For the purposes of NHVAS inspections, the criteria for a fleet to be acceptable for re-accreditation would be based on the number of sampled vehicles identified without defects (or major defects). Under the procedures in AS 1199.1 *Sampling procedures for inspection by attribute*, for the typical accredited operator (with 35 to 50 heavy vehicles), 8 vehicles would be subject to an inspection upon re-entry.

This proposal for sample inspections as part of the NHVAS audits was made by the Australian Trucking Association in its submission (27 March 2015) on the Consultation RIS:

The RIS also proposes that robust accreditation schemes should include inspections on a sample basis (page 35). It should be noted that NHVAS Maintenance does not currently meet this robustness requirement... Vehicles in robust accreditation schemes should not be subject to mandatory scheduled inspections as well. The design of the sampling system should provide adequate assurance that vehicles are roadworthy.

Australian Trucking Association

As the NHVAS processes currently do not include any requirement for any periodic inspections other than that they may be part of the maintenance schedule undertaken by the operator, this mandatory inspection on a random sample of vehicles would provide a control and reporting function for evaluating the state of mechanical repair for the NHVAS-nominated vehicles and would significantly improve the integrity of the scheme.

The RIS recommends that sample inspections be required as part of re-entry into the NHVAS.

7. Conclusion and recommended option

Options 1, 2, 3, 4 and the composite option cover the range of feasible and implementable options available, from a baseline option that represents the status quo to options with increasing levels of quasi-regulatory and regulatory measures.

Overall, the analysis shows there would be no change under the baseline option 1, while the cost to implement option 4 would exceed any potential benefits.

Options 2, 3 and the composite option are expected to deliver net benefits.

The comparative ranking of the options was assessed in the cost–benefit analysis undertaken by Frontier Economics (Appendix B), and is outlined in Table 12.

This assessment identified that the composite option was likely to deliver the greatest net benefits among the options assessed (elements of options 1, 2, 3, 4 and the composite option are compared in Table 12):

- The net benefits associated with the composite option are expected to be greater than for option 3 because:
 - The costs of the composite option are expected to be the same as the costs for option 3. This is because the major cost drivers are the same – primarily the development and implementation of national consistency initiatives and the risk-based approach to scheduled inspections.
 - The benefits of the composite option are expected to be potentially greater than for option 3. This is because the elements of difference – namely the guidance approach to national consistency and the primary CoR duty in the composite option are expected to better integrate with industry and service providers to manage roadworthiness.
- Of options 2 and the composite option, the composite option will deliver the higher net benefits provided it is implemented in the most effective way. It could deliver administrative cost savings to operators and reduce regulatory administrative costs, while delivering direct and indirect crash reduction benefits.

Accordingly, the option recommended for adoption is the composite option. It is important to note, however, that the net benefits expected from the composite option are sensitive to how the risk-based approach to scheduled inspections is ultimately implemented. The benefits are reliant on there being no material increase in the number of inspections conducted overall, and on increased flexibility allowing for better targeting of existing inspection resources, leading to higher levels of compliance.

The recommendation for the composite option is a recommendation for the elements that underlie this option:

- The option for providing guidance to promote national consistency in roadworthiness management, without necessarily referencing or prescribing these documents in HVNL, is recommended. Future decisions to incorporate these documents into law could be made once the material is available, if jurisdictions agree it is necessary. The material that provides guidance or direction on how to administer or comply with the law supports existing good practice in regulation. This will create the basis on which good practice can be applied across Australia. It proposes a standard categorisation of inspection practices and procedures that will deliver consistent and predictable outcomes.

- The option to pursue a risk-based approach to scheduled heavy vehicle inspections is recommended. In order for this to be adopted, the basis for inspection (i.e. the risk-based criteria) would need to be robust and accepted by jurisdictions. A risk-based approach to scheduled inspections allows for the most efficient deployment of existing resources to areas of greatest risk. This will not necessarily result in large increases in scheduled inspections and compliance cost. Rather, it would enable existing resources to be redeployed and retargeted. This means the recommended composite option would also need to be implemented, so as not to result in a significantly increased number of scheduled inspections. In essence, the reduction in the level of social harm associated with current levels of heavy vehicle roadworthiness (crashes and breakdowns causing traffic delay) needs to be higher than any additional expenditures on compliance (either by government or industry). Any reduction in the levels of heavy vehicle defects resulting from the re-deployment of existing resources through the measures described in the composite option would meet these criteria. It is recommended that a decision to implement a risk-based model for scheduled heavy vehicle inspections not be made until the necessary additional data has been gathered and risk criteria based on that data have been considered and approved.
- The option to improve compliance through the strongest measures considered, a primary CoR duty on operators, employers and prime contractors, as well as enforceable undertakings, is recommended. These directly affect the incentives for these parties to manage the roadworthiness of their heavy vehicles.

Table 12: Costs and benefits of the recommended composite option

Cost type	Option 1	Option 2	Option 3	Option 4	Recommended composite option
Cost to operators of rectifying non-compliance	baseline	baseline	-	--	-
Operator administrative costs	baseline	+	++ / - (Ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)	--- (\$5.3b)	++ / - (Ranges from \$3.3b in benefits to \$1.3b in costs, depending on implementation)
Regulatory administrative costs	baseline	~0 (\$15.8m)	~0 (Ranges from \$135m in benefits to \$77m in costs, depending on implementation)	-- (\$253m)	~0 (Ranges from \$135m in benefits to \$77m in costs, depending on implementation)
Crash risk reduction benefits	baseline	+	++	++++	+++
Likely to deliver net benefits	No change	YES	YES (depending on implementation)	NO	YES (depending on implementation)

0 = negligible, - means costs increase, + means benefits accrue, figures are for the 10-year period (NPV)

Summary of the recommended composite option and its benefits:

National consistency

A package of measures focused on supporting more effective and efficient roadworthiness compliance practices, within the scope of existing legislative powers, would include:

- review of the NHVIM
- standardising heavy vehicle inspection types and procedures
- developing competency standards for heavy vehicle inspectors
- classifying defects and associated procedures for rectifying them
- developing national criteria for roadworthiness
- developing a national authorised vehicle examiner scheme
- education and training of inspectors.

Key benefits of the national consistency measures would be more nationally uniform roadworthiness compliance standards and regulatory practices, greater transparency and reduced compliance costs for heavy vehicle industry members.

Inspections

Develop amendments to the HVNL, authorising the NHVR to implement a national regime of risk-based inspections of heavy vehicles, under which:

- the nature and frequency of inspections (risk-based criteria) be made commensurate with the assessed risk of a given heavy vehicle or class of vehicle the risk-based framework proposed by the NHVR will be agreed by ministers before being implemented
- a heavy vehicle can only be registered or have its registration renewed if it receives a satisfactory result for an applicable risk-based inspection.

Key benefits of a system of risk-based inspections are:

- better targeting of scheduled inspections – creating a stronger deterrent against operators neglecting to manage the roadworthiness of their fleet
- better sharing of the inspection task and associated costs between states and territories, supporting a more nationally uniform approach to regulating heavy vehicles' roadworthiness
- reduced incentive for heavy vehicle operators to engage in 'registration shopping' – i.e. registering their heavy vehicles in states with no scheduled inspection scheme.

Improving compliance

This measure aims to introduce a number of measures aimed to improve compliance with roadworthiness requirements.

Chain of responsibility:

Develop amendments to the HVNL, to introduce a primary CoR duty of care on operators, prime contractors and employers to ensure, so far as reasonably practicable, the safety of their road transport operations. This duty would include maintaining heavy vehicles in a safe condition (as per existing heavy vehicle roadworthiness and standards requirements).

In order to implement this, it will be necessary to

- a) amend the HVNL, to introduce a primary duty of care on operators, prime contractors and employers to ensure, so far as reasonably practicable, the safety of their road transport operations.
- b) The primary duty of care on operators, prime contractors and employers to also include an obligation to ensure against the specific safety risks posed to road transport operations by breaches of select elements of the HVNL – including vehicle standards and roadworthiness.
- c) The amendments to be submitted to Ministers for approval.

Enforceable undertakings:

Introduce a power in the HVNL for the NHVR to enter into enforceable undertakings with regulated parties who agree to be bound to take specified steps to address identified shortfalls in their managing of roadworthiness. Enforceable undertakings would be an alternative to prosecution, while still holding the regulated party to commensurate penalties for breaching the undertaking.

In order to implement this, it will be necessary for NTC to prepare amendments to the HVNL and submit them to Ministers for approval.

Formal warnings:

It is recommended that the circumstances under which formal warnings may be issued be broadened – for example, for minor defects that may not warrant issuing a formal defect notice and the associated mandatory clearance steps. Key benefits of the improved compliance measures would be greater powers to regulate roadworthiness in a more efficient, responsive, pro-active manner – providing a greater incentive for key decision makers (regulated parties) to manage roadworthiness requirements.

In order to implement this, it will be necessary for NTC to prepare amendments to the HVNL through the NTC's legislative maintenance program and submit them to Ministers for approval.

NHVAS improvements

This measure aims to strengthen the audit function of the NHVAS maintenance module by requiring accredited parties to submit a sample of their heavy vehicle fleet for inspection before their accreditation is renewed. The sample will be determined by the NHVR, based based on the relevant Australian Standard AS 1199.1-2003 *Sampling Procedures for Inspection by Attribute*. This measure also includes a number of improvements to strengthen accreditation standards and auditing procedures (previously approved by ministers) that do not require amending the HVNL. A key benefit would be greater assurance to governments and the public of the quality with which accredited operators were managing the roadworthiness of their heavy vehicles.

No amendments to the HVNL are required.

The elements of the recommended composite option and how they were arrived at from the original four options are set out in the following table:

Elements of recommended composite option

Theme	Measures	Option 1: Status Quo	Option 2: Non regulatory package	Option 3: regulatory and quasi-regulatory measures	Option 4: regulatory standardisation	Recommended composite option
National consistency	<i>Standardised inspection types¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	As guidance. At an appropriate time after implementation, a review of the effectiveness of these measures will be conducted for the purpose of assessing the need to reference them under the HVNL
	<i>Standardised defect clearing process¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	
	<i>Criteria for assessing major or minor defects¹</i>	No change	As guidance	Referenced in the HVNL	Prescribed in the HVNL	
	<i>Information and training package</i>	No change	Consistent guidance material			
Inspections	<i>National Roadworthiness Data Strategy¹</i>	No change	To be developed by NHVR	To be developed by NHVR	To be developed by NHVR	To be developed by NHVR to inform development of criteria for risk
	<i>Scheduled inspections required for registration</i>	No change	No change	Risk-based requirement	Mandatory for all	Implementation of requirement for scheduled inspections before registration of vehicle identified through risk-based criteria, subject to the ministers approving the risk criteria developed by the NHVR as part of the implementation of the National Roadworthiness Data Strategy
Improving compliance	<i>Chain of responsibility</i>	No change	No change	Specific duty on business practice for operators, employers and prime contractors	A primary CoR duty, extending beyond the operator, employer and prime contractor to a wider chain	Inserting a primary duty on operators, employers and prime contractors in the HVNL to address vehicle safety, including heavy vehicle roadworthiness and vehicle standards
	<i>Enforceable undertakings</i>	No change	No change	Introduce new provision in the HVNL		Introduce new provision in the HVNL
	<i>Formal warnings</i>	No change	No change	Review of current HVNL provisions		Review of current HVNL provisions
NHVAS improvements	<i>Operational changes</i>	No change	No change	Accreditation and auditing improvements		Accreditation and auditing improvements
	<i>Governance changes</i>	No change	No change			
	<i>Education</i>	No change	No change			
	<i>Inspections of a sample of the accredited vehicles</i>	No change	No change	At the renewal of accreditation	At the renewal of accreditation	Inspections on a sample of the operator's fleet of nominated vehicles at the renewal of accreditation.



1: Part of NHVR's accelerated roadworthiness program approved by the ministers in November 2014.

8. Implementation and review

This section proposes and describes the major steps for implementing the measures described in this Final RIS for the recommended composite option described in Section 7.

The recommended composite option has emerged from the assessment of a range of options with the common objective of strengthening the regulation and the overall level of heavy vehicle roadworthiness. Ministers will receive the RIS and recommendations in July 2015.

Although the National Heavy Vehicle Roadworthiness Program (the subject of this RIS) is being jointly undertaken by the NHVR and NTC, the NHVR will have most of the responsibility for implementation.

This section sets out a sequential path for policy change that is expected to allow sufficient time for working with the jurisdictions to consider the practicalities of implementation. The broad approach to implementation also provides for a number of decision points at which to ensure that the expected data and analysis provides a robust basis for acceptance by jurisdictions.

If approved by ministers, implementation of the recommended composite option will require:

- amendments to the HVNL or subordinate regulations – to the effect that the NTC leads the development of a RIS and accompanying amendments
- changes or new processes for how the NHVR and police administer the HVNL – to the effect that those agencies develop and implement them.

The process for legislative implementation is as follows. Once the legislative amendments are approved by the Transport and Infrastructure Council, they must be made into law (the HVNL) by the host state of Queensland. Once passed by Queensland Parliament and proclaimed, the amendments will become law in all participating jurisdictions due to the nature of the applied law that exists in those participating states and territories.

The discussion of implementation in this section is presented along the themes of the recommended composite option, namely:

- national consistency (section 8.1)
- NHVAS (section 8.2)
- inspections (section 8.3)
- improved compliance (section 8.4).

The section concludes with a discussion of the review requirements.

8.1 National consistency

The recommendation of this RIS is to update the NHVIM and provide other material that provides guidance or direction on how to administer or comply with the law on heavy vehicle roadworthiness.

In November 2014, ministers endorsed accelerated activities to deliver or support significant long-term improvements to the safety of Australia's road transport system, including:

- revising the NHVIM
- developing national criteria for roadworthiness to be followed when issuing defect notices or formal warnings

- developing nationally consistent categories of inspection requirements (including an agreed list of items to check, inspection methodology and technology to use)
- developing a nationally consistent approach to the management and clearance of heavy vehicle defects following receipt of a major or minor defect notice
- developing a method to collect data to enable a nationally consistent risk-based approach to the targeting of heavy vehicles, including for roadside/unscheduled roadworthiness inspections
- developing nationally consistent competency standards for heavy vehicle inspectors and third-party service providers.

The work program to deliver the above activities is being developed, with timelines established:

- Review of NHVIM – currently under way
- Standardising inspection types – scheduled for 2015 start
- Standardising defect classification – scheduled for 2015 start
- Standardising defect clearance – scheduled for 2015 start
- Developing a National Compliance and Surveillance strategy – to be delivered as a specific Roadworthiness Data Strategy. Scoping work is currently under way for work to start in 2015–16, subject to funding
- Nationally consistent competency standards for inspectors – scheduled for commencement in 2016
- Nationally consistent competency standards for heavy vehicle repairers and maintainers – scheduled for commencement in 2016.

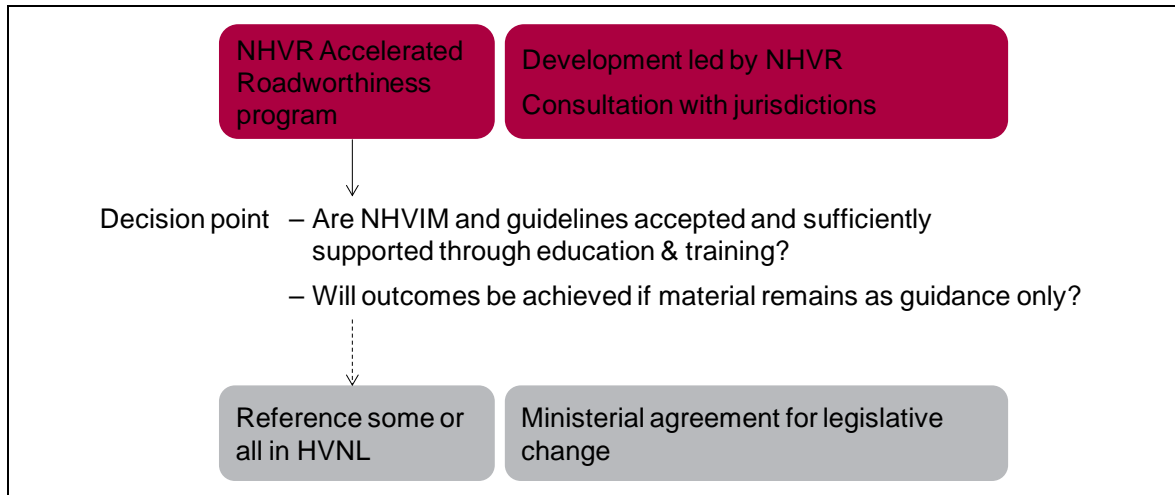
The NHVR has identified interdependencies between the above elements and the NHVR Accelerated Roadworthiness Program. Accordingly, sequencing is planned to mitigate the dependencies and ensure the NHVR, jurisdictions (service providers) and police agencies are able to accommodate the change-management processes that will be required.

The NHVR has also identified that the considerable amount of stakeholder consultation, engagement and communication components, which is required to facilitate agreement and consensus regarding implementation of the changes required to deliver the objectives, poses high-level risks to delivery. For example, agreement is essential on the NHVIM technical parameters, roadworthiness criteria and to ensure that jurisdictions have the specified equipment in place so that vehicles do not require secondary clearance inspections. There are significant risks associated with the necessity for government and third-party providers to tool-up to achieve consistent equipment requirements.

To manage consultation, engagement and communication, an overarching consultation and engagement plan will be required, as well as specific plans for each individual element. The overarching plan will ensure that consistent messaging is delivered throughout the project.

Figure 13 sets out the implementation steps for achieving national consistency. Once the NHVIM is updated and accompanying material that provides guidance or direction on how to administer or comply with the law is prepared and adopted, a review of the effectiveness of these materials on achieving consistent best practice will be needed. This will consider if additional steps such as referencing the guidance material in the HVNL are warranted and necessary. In the consultation for this RIS, there was broad support from HVNL jurisdictions for referencing the NHVIM and associated guidance material. However, South Australia submitted concerns that the changes would limit police discretion, given that such referencing would require authorised officers to have regard to the NHVIM in assessing a heavy vehicle's roadworthiness.

Figure 13: National consistency: implementation steps



8.1.1 Standardised roadworthiness procedures

As set out in Section 7 above, the recommendation is to establish standardised levels for inspection scope/depth, ranging from Level 1 (focusing on key safety features) to Level 3 (a full inspection). Roadside interceptions by police are not intended to be covered by these levels.

Submissions provided extensive positive feedback for standardisation of roadworthiness inspection procedures.

The implementation of this standardisation of roadworthiness inspection procedures will require standardised training, in addition to the NHVR material that provides guidance or direction on how to administer or comply with the law. Table 13 lists the existing and proposed training regime for each jurisdiction. While the current approach to training varies between jurisdictions, the basis of the training material is relatively common:

- The ACT and NT use the NHVIM.
- NSW uses the Roads and Maritime Services *Heavy Vehicle Inspection Station* procedure and several other guidelines.
- Queensland uses its Department of Transport Roads and Main Roads *Vehicle Inspection Guidelines*.
- South Australia uses the NHVIM and the South Australian Code of Practice for B-Doubles and B-Triples.
- Tasmania uses the NHVIM and the *Heavy Vehicle Approved Inspection Station Procedures Manual*.
- Victoria uses the NHVIM and *Vehicle Standards Bulletin 26*.

- Western Australia uses the NHVIM and several Department of Transport and Western Australia Police training publications.

Standardised training will be aided when the NHVR updates the NHVIM.

Table 13: Existing and proposed training regimes

Jurisdiction	Existing training regime	Proposed
ACT	On the job training + 170 hrs @ CIT and obtain Certificate on Heavy Vehicle Inspection AUR05	Standardised prerequisites, training requirements and competency standards. These requirements to be developed by the NHVR.
NSW	6-month induction (periodic inspections after 3 months) leading to Cert IV in Government (Road Transport Compliance)	
VIC	No formal training	
QLD	Covered as part of the Transport Inspectors Recruitment Course (TIRC), but must have mechanical experience/qualifications	
TAS	Complete 10 in-house training modules that are associated with vehicle compliance.	
SA	1-week classroom course + up to 8 months teamed up with mentor. Obtain Certificate IV in Compliance and Investigation	
NT	On-the-job training by internal staff members	
WA	Initial training over six months involving theory and hands-on	

8.2 National Heavy Vehicle Accreditation Scheme

The recommended composite option includes introducing inspections of a representative sample of NHVAS-accredited operators' fleets upon re-entry to the NHVAS. The introduction of sampling of the fleet of accredited operators (under the NHVAS) for Level 2 roadworthiness inspections would require changes to the NHVAS Business Rules. This is considered to have low implementation risk as such a change could be undertaken as part of the NHVR's current work program on the NHVAS Business Rules (see Box 7) and is based on pre-defined sampling procedures (AS 1199.1-2003 *Sampling procedures for inspection by attribute*). However, the changes to the NHVAS will increase the ongoing costs of operation of the scheme.

As part of approval of other aspects of the work program, Business Rules changes to implement sample inspections would be put to ministers for approval in November 2016 and, if approved, would be expected to come into effect in March 2017.

Box 7: NHVR work program on NHVAS Business Rules

Some operational improvements to the NHVAS have also already been approved by responsible ministers on 7 November 2014, including:

- Gazette Business Rules – complete
- Finalise auditor registration procedures – complete
- Deliver technical training to auditors – under way
- Revise AFM Business Rules (AFM – Advanced Fatigue Management) and align with the NHVAS Business Rules – to be put to ministers for approval in November 2015
- Revise Audit Framework, Matrix and Report Template – under way; expected to be complete in July 2015
- Develop auditor code of conduct – part of the revision of the Audit Framework; under way
- Review and revise the Maintenance Management Standards and Guideline to emphasise risk management steps – expected to commence in July 2015 and be complete by December 2015
- review of Mass Management module – to be reviewed by the ministers; NHVR expects it to commence in July 2016 and be complete by December 2017

8.3 Inspections

As set out in Section 7, pursuing a risk-based approach to heavy vehicle inspections is recommended. The concept of a risk-based approach to inspections received broad support from jurisdictions and submissions emphasised the need for jurisdictional involvement to progress its implementation. For example:

- Queensland Transport and Main Roads (TMR) *'supports and wishes to be involved in development of a targeted risk management approach where inspections are linked to formalised risk profiles, as opposed to time based intervals. Such an approach would mean enforcement resources are more effectively utilised'*.
- South Australia noted that the list of risk-based criteria *'would trigger the need for a heavy vehicle to be inspected, [and] this list should be subject to further deliberation with SA and other jurisdictions, as part of the process of developing the criteria for selection and frequency/nature of inspections approved by Ministers'*.

Consultation and jurisdictional feedback has identified a number of issues that need to be satisfactorily resolved before this implementation can occur. These are summarised in Table 14.

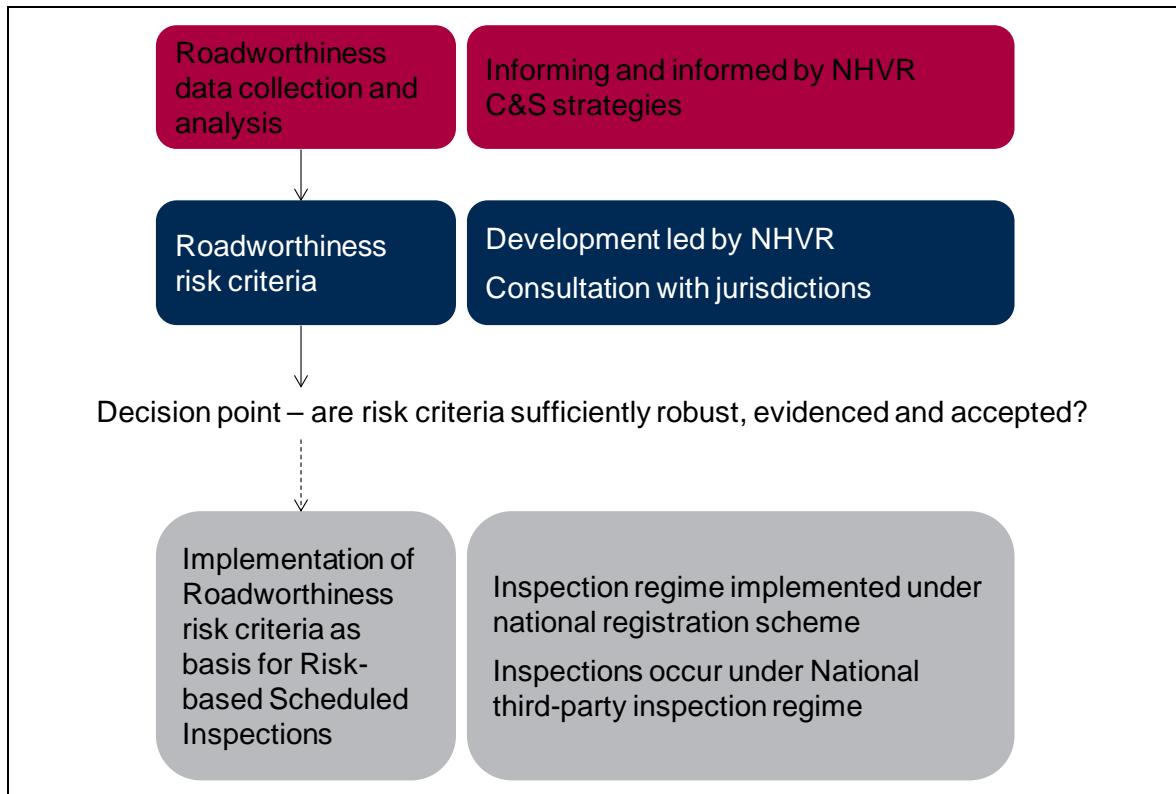
Table 14: Inspection implementation issues

Identified issue	Implementation comments
<p>A limitation of a risk-based scheduled inspection regime includes the practical difficulties in developing and implementing an accurate and objective means of assessing an operator’s or vehicle’s roadworthiness risk</p>	<p>Information requirements would be informed by the Roadworthiness Data Strategy. Ministers have agreed that state and territory road authorities are to make data available to the NHVR for this purpose.</p> <p>Before a risk-based inspection system could commence, ministers would need to agree on the roadworthiness risk criteria generated from the yet-to-be-developed NHVR roadworthiness data collection and analysis process.</p>
<p>A national system of risk-based inspections would be most efficiently implemented as part of the commencement of national heavy vehicle registration.</p>	<p>National HVNL (Chapter 2) will come into effect on 1 July 2018.</p> <p>Risk-based inspections would require providing the NHVR with the authority to require heavy vehicles to be inspected at a frequency commensurate to the risk they pose in respect of critical safety defects. The inspection would be a condition of the NHVR renewing a given vehicle’s registration.</p>

Ultimately, for a risk-based approach to heavy vehicle inspections to proceed to implementation, the approach would need to be accepted by jurisdictions as robust and practical. Figure 14 sets out the implementation steps for inspections.

The resources necessary to deliver the required inspections in each of the jurisdictions (i.e. available vehicle inspectors) is a further implementation risk. This risk is expected to be limited by the NHVR’s establishment of a national third-party inspection regime. Further, implementation would only occur post-2018 and could involve a phase-in period, allowing further time for industry adjustment.

Figure 14: Inspections: implementation steps



8.4 Improved compliance

The recommended composite option includes two key proposals to improve compliance with existing roadworthiness standards, namely:

- CoR duty
- enforceable undertakings.

8.4.1 Chain of responsibility duty

Implementation of this aspect of the recommended composite option requires pursuing a primary duty for heavy vehicle safety. This would apply to employers, principal contractors and operators. The implementation of this CoR duty is beyond the scope of this RIS and the development of the primary duties will be carried forward by the NTC Chain of Responsibility Duties Review. Subject to ministerial agreement of the detailed CoR duties policy recommendations in November 2015, draft legislation will be submitted to ministers in May 2016. All timeframes are subject to advice from the Office of Best Practice Regulation (OBPR) on RIS requirements.

8.4.2 Enforceable undertakings

Implementing enforceable undertakings would require changes to the HVNL to provide for an enforceable undertaking and corresponding powers of enforcement. Enforceable undertakings link to the CoR changes identified above because the HVNL would include a provision to allow an operator who has not met the CoR requirements to enter into an enforceable undertaking with the NHVR. For this reason, the required changes to the HVNL to implement enforceable undertakings would be pursued together with the NTC Chain of Responsibility Duties Review and in coordination with the required changes to the HVNL to implement the primary duties.

Once implemented, if the regulator were to decide an enforceable undertaking is the preferable approach to address a roadworthiness issue, it would prepare a draft agreement. An operator would provide input to ensure it is practical, can be complied with and that it is effective in the business context. Once an enforceable undertaking is agreed to, the regulator would be able to apply to a court to enforce the terms of the agreement.

The introduction of this duty is expected to pose limited implementation risk because of its broad acceptance by HVNL jurisdictional submissions. Of all submissions received, only the Victorian Farmers Federation and Toll Logistics expressed concerns about enforceable undertakings. Toll Logistics put forward the opinion that other legal provisions are available to achieve the same end.

8.5 Review requirements

Each year the NTC publishes a national transport reform implementation monitoring report. This reports on the progress of implementing agreed reforms by the Transport and Infrastructure Council. The monitoring report that NTC will publish in December 2016 will include the implementation progress of the Council's approval recommendations (to be made in November 2015) from this roadworthiness review.

Appendix A: Explanation of heavy vehicle inspection and defect data

Appendix A addresses how heavy vehicle data referred to in this RIS has been categorised and described.

Categorising heavy vehicle defects as major and minor

The analysis of heavy vehicle defects – particularly as found in the problem statement of this RIS (see Executive Summary and Section 2) – refers to minor and major heavy vehicle defects. A major defect is defined as a defect posing an ‘imminent and serious safety risk’, while a minor defect poses a lesser safety risk. The analysis focuses on major defects because minor defects should not pose an imminent and serious safety risk. Western Australia, Queensland and South Australia may appear to have a high percentage of major defects, but the way jurisdictions classify defects varies significantly. While some jurisdictions base defect classification on the NHVIM, other jurisdictions use different approaches, as follows:

- The Northern Territory does not classify defects as ‘major’ or ‘minor’.
- South Australia noted that the classification of a defect as major or minor may depend on circumstances. For example, a heavy vehicle with windscreen wipers that do not operate is regarded as a major defect if it is raining at the time (imminent and serious safety risk), but otherwise may be regarded as minor. South Australia also suggested that vehicles that are required to be presented for a ‘recheck’ or second inspection can be considered to have major defects.
- Western Australia considers any issue that results in a work order to be a major defect. Based on the information supplied, explicit consideration of the nature of the safety risk is not part of defect classification.
- The Australian Capital Territory has not identified a single major defect in the past three years, which may reflect the defect classification or recording process employed rather than a true absence of major defects.
- Victoria identified a high proportion of defects during Operation Trishula but did not supply detailed statistics for other inspection types. An average major defect rate of 3 per cent was supplied for all other inspections.

Appendix B: Cost–benefit analysis

See separate attachment *Economic assessment of options for ensuring compliance with heavy vehicle roadworthiness standards*. Frontier Economics 2015.

Appendix C: Current HVNL approach to holding executive officers liable

Although the HVNL registration and vehicle standards chapters do not contain positive duties specifically covering executive officers, liability is nonetheless extended to these parties for particular offences under section 636.

If a corporation commits a breach (for example, as an operator operating as a corporation) of particular registration and vehicle standards offences listed in Schedule 4,²³ then the executive officer is also liable if they:

- knowingly authorised or permitted conduct constituting the offence [accessorial liability under section 636(1)]; or
- knew or ought reasonably to have known of (a) the conduct constituting the offence; or (b) that there was a substantial risk that the offence would be committed [modified type 3 liability under section 636(2)].

Under section 636(3), the executive officer would have a defence if they could prove that their business practices did not contribute to the breach. For example, a ‘reasonable steps’ defence may constitute the executive officer showing that appropriate practices for the scheduling and resourcing of vehicle maintenance were in place, appropriate budgets and resources were allocated and appropriate training for relevant employees was provided. Holding executive officers liable through section 636 therefore places a positive obligation on executive officers to ensure that these practices are in place within the corporation. If new duties were included in the HVNL, then these would need to satisfy the elements of the ‘COAG Principles and Guidelines – Personal Liability for Corporate Fault’, in order to be included in Schedule 4.

The particular HVNL registration and vehicle standards-related offences that currently extend liability to the executive officer for a breach by a corporation are set out in Table C-1.

Table C-1: HVNL registration and vehicle standard-related offences that currently extend liability to executive officers

Chapter 2: Registration	Liability
30(1) Registration requirement – A person must not use, or permit to be used, on a road – (a) an unregistered heavy vehicle; or (b) a heavy vehicle whose registration is suspended under the national regulations.	636(1) & (2)
50(1) Obtaining registration or registration items by false statements – A person must not attempt to have a heavy vehicle registered, or to have the registration of a heavy vehicle renewed or transferred, or to be issued with an unregistered heavy vehicle permit, under this Law (a) by making a statement or representation the person knows is false or misleading in a material particular; or (b) in another dishonest way. 50(2) Obtaining registration or registration items by false statements – A person must not, without a reasonable excuse, possess a registration item obtained (a) by making a statement or representation the person knows is false or misleading in a material particular; or (b) in another dishonest way.	636(1)

²³ Refer to Table 1 of the Schedule.

Chapter 3: Vehicle Operations – standards and safety	Liability
60(1)(a) Compliance with heavy vehicle standards – 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.*	636(1) & (2)
60(1)(b) Compliance with heavy vehicle standards – 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.*	636(1) & (2)
79(2) Return of permit – The person must comply with the notice within 7 days after the notice is given to the person or, if a longer period is stated in the notice, within the longer period.	636(1) & (2)
81(1) Contravening condition of vehicle standards exemption – A person must not contravene a condition of a vehicle standards exemption.* 81(2) Contravening condition of vehicle standards exemption – A person must not use, or permit to be used, on a road a heavy vehicle that contravenes a condition of a vehicle standards exemption applying to the vehicle.* 81(3) Contravening condition of vehicle standards – A person must not use a heavy vehicle, or permit a heavy vehicle to be used, on a road in a way that contravenes a condition of a vehicle standards exemption.*	636(1) & (2)
85(1) Modifying heavy vehicle requires approval – A person must not modify a heavy vehicle unless the modification has been approved by – (a) an approved vehicle examiner under section 86; or (b) the Regulator under section 87.* 85(2) Modifying heavy vehicle requires approval – A person must not use, or permit to be used, on a road a heavy vehicle that has been modified unless the modification has been approved by – (a) an approved vehicle examiner under section 86; or (b) the Regulator under section 87.*	636(1) & (2)**
89(1) Safety requirement – A person must not use, or permit to be used, on a road a heavy vehicle that is unsafe.	636(1) & (2)
93(1) Person must not tamper with speed limiter fitted to heavy vehicle – A person must not tamper with a speed limiter that is required under an Australian road law or by order of an Australian court to be, and is, fitted to a heavy vehicle.	636(1) & (2)
Chapter 4: Vehicle Operations – mass, dimension and loading	Liability
185(1) Requirements about coupling trailers – A person commits an offence if – the person uses, or permits to be used, on a road a heavy combination; and a trailer in the combination is not securely coupled to the vehicle in front of it.* 185(2) Requirements about coupling trailers – A person commits an offence if – the person uses, or permits to be used, on a road a heavy combination; and the components of a coupling used between vehicles in the heavy combination are not compatible with, or properly connected to, each other.*	636(1) & (2)
Chapter 9: Enforcement	Liability
528(2) Defective vehicle labels – A person must not remove, deface or otherwise interfere with a defective vehicle label attached to a heavy vehicle under subsection (1).	636(1)
529 Using defective heavy vehicles contrary to defect vehicle notice – A person must not use, or permit to be used, on a road a heavy vehicle in contravention of a vehicle defect notice.*	636(1) & (2)

* As part of the NTC project to review the HVNL executive officer liability provisions, it has been agreed that these 10 offences will be assessed for appropriateness in line with any recommendations of the Heavy Vehicle Roadworthiness Review.

** Liability under 636(2) extends to 85(2) only.

National Transport Commission Duties Review

The NTC is currently undertaking a comprehensive review of the HVNL CoR regime. This review considers issues concerning:

- the current approach to CoR
- potential options for improvement
- the parties to which CoR should apply
- any flow-on effects that may result from preferred approaches.

As part of the first stage of the review, a discussion paper was released presenting the following four options. These options are not exhaustive, or mutually exclusive. A combination of various options is potentially the most appropriate way forward.

Option 1: Primary duty of care – an overarching duty applicable across the HVNL and to all parties in the chain

Option 2: Chapter-based duties – the placement of an overarching duty applicable to all chain parties within the relevant chapters

Option 3: Additional specific obligations – duties applicable to identified and defined chain parties (similar to what currently exists within the HVNL)

Option 4: No legislative change; focus to be on operational and policy components

Findings from the first stage of the review were reported to ministers in May 2015. Further work on refining the recommended option is continuing.

Appendix D: Summary of current jurisdictional heavy vehicle inspection standards

Table D-1: Comparison between jurisdictions for roadworthiness inspections

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
NT	<p>In general, inspectors will work their way from the front of the vehicle to the back, inspecting as they go.</p> <ul style="list-style-type: none"> • Steering & suspension • Brakes • Tyres & wheels • Lighting & electrical • Body & driveline • Occupant safety 	<p>NT HV inspection manual. This is based on the NHVIM. The manual is used as a guide, along with the following principles:</p> <ul style="list-style-type: none"> • Equipment required to be part of a vehicle must be present and must work properly. • Equipment which is essential for the safe operation of a vehicle must be kept in good condition. 	<p><u>Pass/Fail Criteria :</u> As set out in NHVIM <u>Critical safety items</u>²⁸</p> <p>Lights Brakes Steering Suspension Tyres Axle/wheel-ends Couplings Frame/chassis</p>	<p><i>Motor Vehicles Act (NT) and Motor Vehicles Regulations (NT).</i> Other relevant legislation includes the <i>Traffic Act (NT)</i> and <i>Traffic Regulations (NT)</i>.</p>	<p>It is assumed that the current administrative arrangements for HV AIS will continue.</p>	89	2	3

²⁴ Depth of inspection is determined by location, equipment and level of inspector expertise.

²⁵ Minimum requirements. Not all HV AIS will currently have the minimum equipment proposed.

²⁶ Impact refers to the existing resources used for the administration of HV Authorised Inspection Stations. Note that a National HV Inspection Manual is expected to be adopted in November 2015.

²⁷ Number of people employed in administering HV AIS. Some of the staff may have other tasks and shared duties with government-owned inspection stations.

²⁸ Safety-critical elements as determined by the HV roadworthiness Technical Working Group.

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum) <i>Equipment</i> ²⁹ :	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
		<ul style="list-style-type: none"> • Non-essential equipment does not have to function as long as it does not interfere with compulsory equipment that is required. • Manufacturer recommendations relevant to the safety of particular vehicle parts or to the control of emissions must be considered. • Test methods or other conditions have not been specified except where they are necessary to determine whether criteria are met. • Equipment is used as available (for example, roller brake tester or portable decelerometer depending on the location). 	Brake performance testing equipment (e.g. brake roller, skid plates). Light transmitter meter. Headlight aim tester. Decelerometer (remote areas)... ³⁰					

²⁹ Equipment must be able to be calibrated regularly.

³⁰ Remote areas will likely not have brake performance testers and other equipment as recommended.

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
WA	<p>Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back.</p> <ul style="list-style-type: none"> • Driveline – check mountings and connections. Visually inspect hoses, belts and fluid leaks. • Electrical – check that battery, wiring looms and connectors are secured and in good condition. Check condition of all lights and reflectors, windscreen wipers and washers. • Body work – check floor pan, chassis, and door pillars for rust and cracks. Check seats, seatbelts for fitment, and windcreens and windows for cracks, chips and other damage. • Suspension – check components and shock absorbers for wear. • Steering – check for missing split pins, free play. • Brakes – check for correct operation and fluid leaks. • Tyres and rims – check wheel nuts and rims for damage. Check tyres for tread depth. 	<ul style="list-style-type: none"> • WA HV inspection manual. • Examiners' instructions. • DOT have approximately 30 modularised booklets, used in training and available to inspectors, covering individual systems for inspection. 		<p><i>Road Traffic Act 1974 (WA)</i> and the <i>Road Traffic (Licensing) Regulations 1975 (WA)</i>. The legislation in Western Australia is subject to review and is expected to be remade soon. It should be noted that in Western Australia the term 'registration' is not used for vehicles and instead they are 'licensed'.</p>	<p>Equipment at government sites will need upgrading or procurement. Some HV AIS do not have RBTs or skid plates. It is assumed that the current administrative arrangements for HV AIS will continue.</p>	123	2	12

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
QLD	<p>Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back.</p> <p>Note: Vehicles over 16t are inspected by TMR; vehicles under 16t can be inspected by HV AIS.</p> <ul style="list-style-type: none"> • Examine the vehicle exterior. • Check all doors, windows and bodywork. • Sit in the driver's seat and test all the driving controls. • Check seats, seat belts, mirrors, sun visors, glazing and forward vision through the windscreen. • Check the operation of steering linkages and all lights, including the aim of the headlights. (Another person may be required to assist with the inspection of steering and some lights.) • Open the bonnet and check the engine, battery and any other items listed in the inspection guide. • Check the operation of all steering linkages, all road wheels and their fastenings, check the tyres. • Raise the vehicle and check the suspension, wheel bearings and steering components. • Check the underbody, chassis, subframes, engine and drive train, suspension systems, exhaust and braking system components. If it is necessary, remove wheels and drums to effectively examine braking components. • Road test the vehicle. • Test the service brake and parking/hand brake. Record the results. • Make sure the odometer and speedometer are operating and check the vehicle for poor handling, pulling to either side, or undue vibrations. 	<ul style="list-style-type: none"> • QLD HV inspection manual. • Equipment is used as available (for example, roller brake tester or portable decelerometer). • Inspectors are trained as part of the Transport Inspectors Recruitment Course and must have mechanical experience/qualifications. • QLD has been using the NHVIM since 1 October 2014. • The NHVIM is based on the following principles: <ul style="list-style-type: none"> ○ Equipment required to be part of a vehicle must be present and work properly. ○ Equipment which is essential for the safe operation of a vehicle must be kept in good condition. ○ Non-essential equipment does not have to function as long as it does not interfere with compulsory equipment. ○ Manufacturer recommendations relevant to the safety of particular vehicle parts or to the control of emissions must be considered. ○ Test methods or other conditions have not been specified except where necessary to determine whether criteria are met. 	<p><i>Transport Operations (Road Use Management) Act 1995 (Qld) and the Transport Operations (Road Use Management – Vehicle Registration) Regulation 1999 (Qld).</i></p>	<p>It is assumed that the current administrative arrangements for HV AIS will continue.</p>	<p>H Vehicle 736</p> <p>H Trailers 490</p>	21	20	

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
TAS	<p>Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back.</p> <p>Approved Inspection Station Inspection checklist:</p> <ul style="list-style-type: none"> • Brakes • Steering • Suspension • Chassis • Wheels/tyres • Exhaust • Oil/fuel leaks • Head/tail lights • Signal lights • Brake lights • Horn • Windscreen • Wipers/washers • Mirrors • Seatbelts • Body work 	<p>TAS HV inspection manual.</p> <p>The manual provides information on the minimum roadworthiness and safety standards for vehicles used on Tasmanian roads.</p> <p>Equipment may vary depending on location (remote areas for example).</p>		<p><i>Vehicle and Traffic Act 1999 (Tas)</i> and the <i>Vehicle and Traffic (Driver Licensing and Vehicle Registration) Regulations 2000 (Tas)</i>.</p>	<p>It is assumed that the current administrative arrangements for HV AIS will continue.</p>	8	0	3

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
NSW	<p>Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back.</p> <ul style="list-style-type: none"> • Check the engine and other items in the engine bay. • Check the seats/seat belts, sit in the driver's seat and check driver vision. • Test all driving controls, mirrors, wipers, washers, etc. • Examine the vehicle exterior and check all doors, windows, bodywork and trailer coupling (if fitted). • Test the operation of all lamps; check the aim of the headlamps, driving/fog lamps and optional headlamps. • Check the suspension, wheel bearings and steering components. • Check the vehicle underbody, chassis, sub-frame, transmission, exhaust and braking system components. • Check all road wheels and tyres. • Check the braking system operation. 	<ul style="list-style-type: none"> • An authorised officer determines the level of inspection, either visual only or detailed depending on the circumstances. • For accredited inspectors, vehicle inspections must be conducted as per Business Rules and vehicle standards and be compliant with NSW Registration Regulation. • The following guidelines are used as applicable: <ul style="list-style-type: none"> ○ RMS HVIS Procedure 1.0 (2003). ○ Australian Design Rules. ○ Australian Standards. ○ NSW Registration Regulations. ○ HVNL. ○ RMS vehicle standards publications, VSIs, VIBs. ○ HVAIS Safety Check Rules. ○ RMS Urgent Notices. ○ RMS procedures. ○ Compliance Enforcement Notices. 		<p><i>Road Transport (Vehicle Registration) Act 1997 (NSW) and the Road Transport (Vehicle Registration) Regulation 2007 (NSW).</i></p>	<p>It is assumed that the current administrative arrangements for HV AIS will continue.</p>	989	160	>20

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
ACT	<p>Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back.</p> <p>Checklist includes:</p> <ul style="list-style-type: none"> • Exhaust • Steering • Suspension • Drive Train • Body/Chassis • Fuel Seats • Noise • Glass • Wipers • Lighting/Electrical • Brakes • Emissions • ADR Checks • LPG/NGV 	<p>HV inspection manual. The NHVIM is based on the following principles:</p> <ul style="list-style-type: none"> ○ Equipment required to be part of a vehicle must be present and work properly. ○ Equipment which is essential for the safe operation of a vehicle must be kept in good condition. ○ Non-essential equipment does not have to function as long as it does not interfere with compulsory equipment that is required. ○ Manufacturer recommendations relevant to the safety of particular vehicle parts or to the control of emissions must be considered. ○ Test methods or other conditions have not been specified except where they are necessary to determine whether criteria are met. 		<p><i>Road Transport (Vehicle Registration) Act 1999 (ACT)</i> and the <i>Road Transport (Vehicle Registration) Regulation 2000 (ACT)</i>.</p>	<p>It is assumed that the current administrative arrangements for HV inspections will continue.</p>	0	1	0

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
VIC	<p>Inspectors check vehicles using their experience and knowledge, supported by the training they undertake in order to be accredited. Testers are required to test/inspect vehicles in accordance with further criteria and list as set out in the training manual provided during their accreditation training.</p> <ul style="list-style-type: none"> •Wheels and tyres – ensure that tyres' tread depth is within limits and that all rims are free from cracks and not out of shape. •Steering and suspension – no excessive wear and play must exist on steering systems. Check for fluid leaks. Suspension systems must not be out of shape, cracked or leaking. •All brakes components must be not be out of shape and must be mounted correctly – no cracks or leaks. Braking systems must operational. •Seat and seatbelts must be fitted as per manufacturer or ADR compliance. No fraying or modifications are permitted. •Lamps, signals, reflectors and other illumination equipment should work as intended. •Exhaust system must not leak into the cabin and must be free of cracks, holes and be properly secured to the vehicle. •Windscreen and widows must not have any cracks/chips/scratches. Tinting must comply with requirements of registration. •Windscreen wipers, washers and demisters must operate as intended. •Body and chassis must be sound and free from cracks, damage, faulty repairs or modifications, rust or distortion. •Towing couplings must be fitted properly and free from defects. Fittings connecting two vehicles must be in good condition. •Engine and driveline must be free of defects or distortion and free from excessive wear and vibration. •Electrical wiring must be properly supported every 600 mm, insulated and free from defects. 	<ul style="list-style-type: none"> •All vehicles in Victoria must conform to construction standards ensuring vehicles provide drivers and passengers with a minimum level of safety. •These standards are complemented by the ADRs and the AVSRs. •VSI26 details the roadworthiness requirements for vehicles – more exhaustive check than what is done in other jurisdictions (also it costs more). •The roadworthiness standards set out in VIS 26 details the inspections carried out by licensed testers for the purpose of issuing certificates of roadworthiness. •The inspections listed in VIS 26 aim at detecting any wear, deterioration or alterations that could adversely affect the safety of the vehicle, its compliance with the Standards for Registration, and the ADRs. 	<p><i>Road Safety Act 1986 (Vic)</i> and the <i>Road Safety (Vehicles) Regulations 1999 (Vic)</i>.</p>	<p>It is assumed that the current administrative arrangements for HV AIS will continue.</p>	270	0	20	

Jurisdiction	What is inspected ²⁴	Method	Proposed ²⁵ (minimum)	Applicable legislation – Registration	Impact ²⁶	HV AIS	HV AIS – Government	FTE ²⁷
SA	Inspectors check vehicles using their experience and knowledge, from the front of the vehicle to the back. 'DPTI Vehicle Inspectors do not use checklists for vehicle inspections. They conduct a full roadworthy inspection on all vehicles presented using their experience and knowledge as qualified motor mechanics.'	<ul style="list-style-type: none"> • NTC Heavy Vehicle Inspection Guidelines 2006. • NHVIM. • Codes of Practice for Road Trains, B-Doubles and B-Triples. • Inspectors use discretion, which is an element of officer training and varies with experience and tenure. 		<i>Motor Vehicles Act 1959 (SA) and the Motor Vehicles Regulations 1999 (SA).</i>	<p>SA does not have a third party scheme for HV inspections, unlike other jurisdictions.</p> <p>All HV inspections are provided directly by government-authorized officers, using government-operated facilities.</p> <p>In regional areas, suitable facilities are also leased for such purposes.</p> <p>As a consequence, the impact for SA will be significant in establishing any third party scheme, based on the need to develop specific accreditation, audit systems.</p>	NO THIRD PARTY HV AIS IN SA	2	16 (SA Govt. only)

Table D-2: Workshop equipment required for approved roadworthiness testing

Proposed equipment	WA	TAS	NT	VIC	NSW	SA ⁽¹⁾	QLD	ACT
Inspection pit and pit-mounted jacking system, or hoist, or other suitable equipment to enable a thorough inspection underneath the vehicle	A fixed ramp, pit or hoist suitable for heavy vehicle under-body inspection.	Facility must contain a pit or hoist capable of inspecting vehicles.		Inspection pit, hoists (20 tonnes capacity).		Inspection pit to enable a thorough inspection of a heavy vehicle.	Inspection pit and pit-mounted jacking system, or hoist, ramps, chassis stands or suitable equipment to enable inspection of underside of vehicle.	ACT does not have Heavy Vehicle Authorised Inspection Stations
Adequate lighting equipment and systems for full inspection								
Shaker for suspension testing						⁽²⁾ see note at end of table.		
Brake testing equipment such as mechanical or electronic decelerometer, or roller brake testing machine, skid plate or other equipment suitable for conducting brake testing to the required standards	A brake-testing machine or an area suitable for road testing including a safe area in which to test brakes.	Brake efficiency tester that can weigh a vehicle and meets required Australian standards. Remote areas can use a decelerometer or similar device.		Either a roller brake-testing machine or a decelerometer with printout capability and/or ability to store on a computer. Brake testing plates that comply with AS or international standards.	Portable brake-testing decelerometer, skid plate brake testing or roller brake testing machine.	Roller for brake testing.	Brake-testing equipment such as mechanical or electronic decelerometer or roller brake testing machine, skid plate or suitable equipment to conduct brake testing to required standards.	

Proposed equipment	WA	TAS	NT	VIC	NSW	SA ⁽¹⁾	QLD	ACT
Light transmission meter	Window tint tester capable of testing fixed glass.	Facility must have suitable testing equipment, including tint-tester.		Either a headlight testing bay or headlight testing machine.	Light transmittance meter.	Light transmission meter.	Light transmission meter.	ACT does not have Heavy Vehicle Authorised Inspection Stations
Headlight testing bay, or headlight testing machine	Headlight aiming equipment (minimum requirement is an approved screen).				Headlight aim tester or headlight testing screen.		Headlight testing bay or headlight testing machine.	
Suitable vehicle jacks	Trolley jack suitable for raising heavy vehicles.					Suitable vehicle jacks.		
Suitable general tools	All other material, equipment or things reasonably required to conduct vehicle inspections such as measuring tapes, cleaning materials and portable lighting.		Must have access to all technical data and workshop manuals and equipment necessary to perform an inspection.			Suitable general tools and other equipment to perform a roadworthy inspection.	Suitable general tools.	
Trailer light and brake-testing equipment via trailer plug or socket.							Trailer light and brake-testing equipment via trailer plug or socket.	

¹ SA workshop equipment relates to HV AIS (government), not third-party AIS facilities; HV inspection facilities leased in regional areas usually only have a pit and transportable general inspection. Equipment such as light transmission meters, jacks etc. are carried in the vehicle inspector's vehicle.

² A portable trailer (known locally as the shaker) is used to test HV brakes and suspension during specific on-road operations; it is *not* used in SA during a scheduled roadworthy inspection, only as part of a random roadside check during such operations.

Appendix E: Sub-options for periodic heavy vehicle inspection under option 3

This Appendix provides more detail on the five sub-options to option 3 described in section 5.6.2.

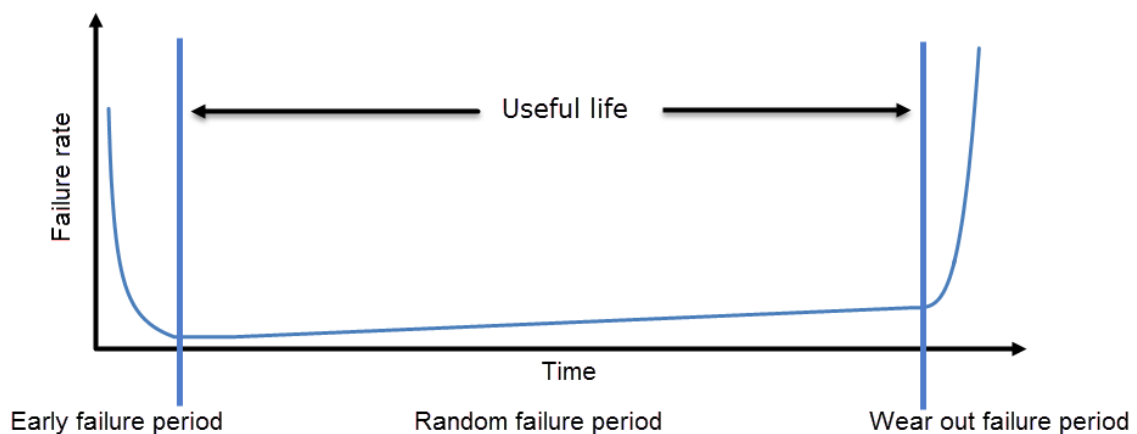
Inspection sub-options A and B: Heavy vehicle age

This sub-option is to vary the frequency of inspections depending on the age of the vehicle. Vehicle age has been identified as a risk factor associated with roadworthiness; that is, the older the vehicle, the more likely it is to develop defects. While it is only one of a number of risk factors that may form part of the criteria for determining which heavy vehicles become subject to periodic inspections, vehicle age serves as perhaps the most immediately available and practicable criterion.

A heavy vehicle is a complex mechanical system in which many components interact with each other for the vehicle to operate safely. One of the major reasons why heavy vehicle components degrade or fail is wear due to use. This becomes more likely as the vehicle and its components age.

All failure modes have time as a common element. The concept of 'mean time between failures' (MTBF), as represented in Figure E-1 below, has been used extensively in industry for many years.

Figure E-1: Mean time between failures (MTBF)



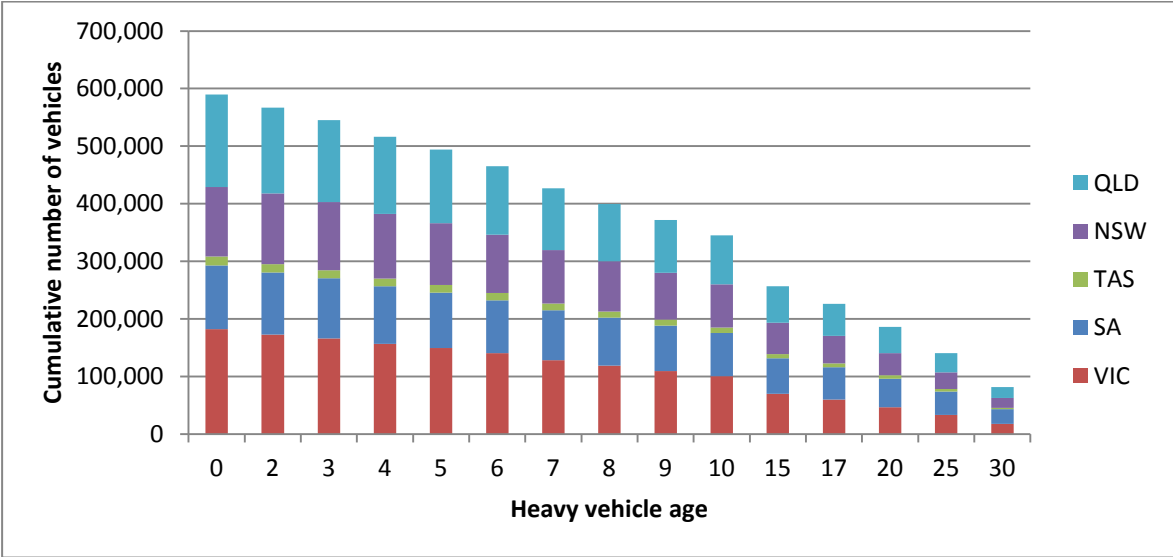
The early failure period tends to be characterised by faulty component installation and construction failure, and covered by manufacturer warranties. As the vehicle ages, the failure rate increases, mostly as a result of wear, so activities like vehicle checks and maintenance become more important.

Figure E-2 shows the numbers of heavy vehicles and their distribution by age for five of the Australian states. Each of the columns indicates the number of heavy vehicles registered in those states built more than a given number of years ago (as indicated on the horizontal axis). If scheduled inspections were required for all heavy vehicles above a specified age, Figure E-2 shows the number of required inspections and how they would vary with the nominal vehicle age threshold.

For example, interpretation of Figure E 2: Distribution and numbers for heavy vehicle fleet, by age of vehicle, for five Australian states shows that:

- If all heavy vehicles built more than 20 years ago were to be inspected, this would mean about 30 per cent of the fleet (sub-option A).
- If all heavy vehicles built more than 15 years ago are inspected, this would mean about 60 per cent of the fleet (sub-option B).

Figure E-2: Distribution and numbers for heavy vehicle fleet, by age of vehicle, for five Australian states



Source: National Exchange of Vehicle and Driver Information System (NEVDIS) (unpublished).

Inspection sub-option C: Default annual inspections

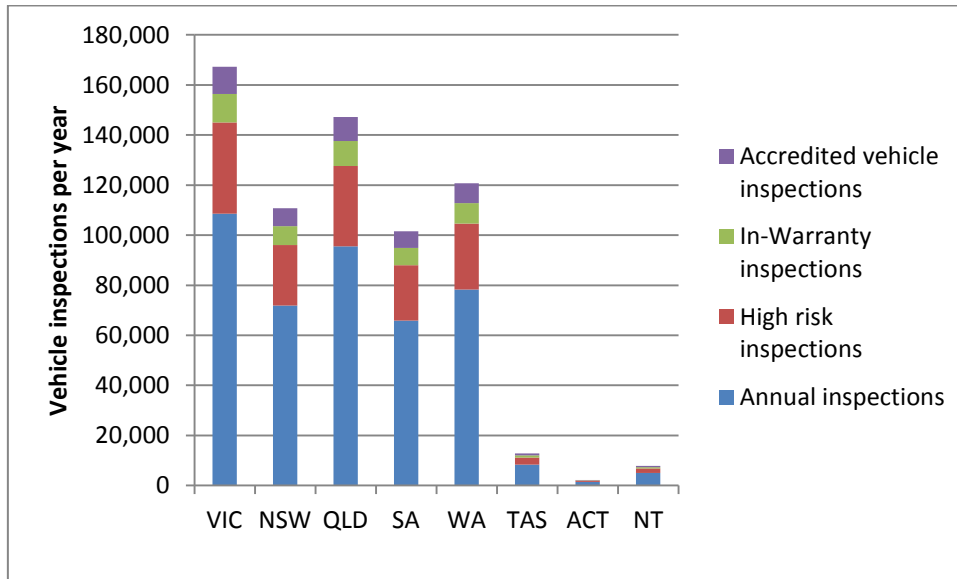
Sub-option C is to make scheduled inspections a default requirement and grant partial exemptions based on risk-reducing factors, and increased inspection frequency based on risk-increasing factors. For example:

- a default annual inspection for heavy vehicles (excluding buses, which are subject to inspections under state-based bus accreditation schemes)
- more frequent (6-monthly) inspections for higher-risk vehicles or operators assessed as posing an elevated risk (estimated here to number 10% of the heavy vehicle fleet, excluding buses)
- less frequent inspections for vehicles assessed as posing a reduced risk, as follows:
 - every 2 years for new vehicles under scheduled maintenance by manufacturer (estimated to be all heavy vehicles under 4 years old, excluding buses)
 - every 3 years for vehicles in a robust accreditation scheme (that is, one that includes sample inspection in its audit process – estimated to be 20% of all heavy vehicles, less buses and those deemed high-risk).

An estimate of the implications for the number of inspections that would be required (per annum) under sub-option C are shown in Figure E-3: Estimated annual number of inspections and inspection types, by state and territory, under sub-option C

The aggregate number of inspections is of a similar order of magnitude to the fleet size, but would be marginally increased or reduced – depending on how risk factors are assessed and applied.

Figure E-3: Estimated annual number of inspections and inspection types, by state and territory, under sub-option C

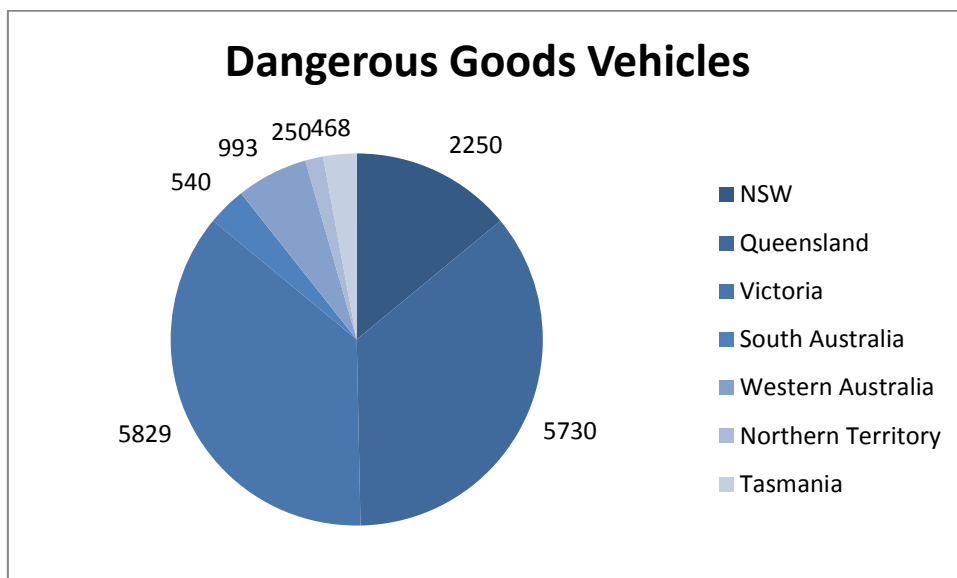


Source: National Exchange of Vehicle and Driver Information System (NEVDIS) (unpublished).

Inspection sub-option D: Dangerous goods vehicles

Sub-option D is to require all vehicles licensed to carry dangerous goods to undergo annual inspection. Figure E-4 shows the numbers of vehicles (trailers and tankers) licensed to transport dangerous goods. If all these vehicles became subject to scheduled inspections, the total would be about 16,000. This is a substantially lower number of inspections than the scenarios presented by age of vehicle (sub-option C, Figure E 3: Estimated annual number of inspections and inspection types, by state and territory, under sub-option C)

Figure E-4: Licensed dangerous goods heavy vehicle numbers, by state and territory



Source: Victorian Workcover Authority. Note: ACT data unavailable.

Inspection sub-option E: Inspections only for heavy vehicles with a demonstrated risk

Sub-option E is to require scheduled inspections only for heavy vehicles that:

- are licensed to transport dangerous goods – as these vehicles pose inherent risks to safety that would be magnified with unroadworthy vehicle operation; or
- do not transport dangerous goods but have been assessed as posing a significant risk of being operated in an unroadworthy condition.

Under the first criterion, all licensed dangerous goods heavy vehicles would be inspected every six months. However, a further option (not assessed here) could be to assess the risk posed by dangerous goods heavy vehicles in a graduated manner, for example according to the magnitude of risk posed by the particular type or class of dangerous good transported by a specific heavy vehicle.

Under the second criterion, scheduled inspections differ from how they are applied under other options discussed in this section (5.6.2). Scheduled inspections would be required only where the NHVR has evidence that a specific heavy vehicle poses an elevated risk of being operated in an unroadworthy condition.

The NHVR would establish transparent, consistent criteria on how such assessments are conducted. For example, criteria would logically include an operator's track record of operating a specific heavy vehicle or specific vehicles in an unroadworthy condition.

Where evidence would be used to require heavy vehicles to submit to scheduled inspections, it would also be used to disapply them. For instance, where a given heavy vehicle previously assessed as posing a risk sufficient to require it submitting to scheduled inspections was later assessed as posing a reduced risk, the NHVR may then disapply the requirement. The objective is to ensure as far as practicable that only those heavy vehicles assessed as posing an elevated risk at a given point in time are required to submit to scheduled inspections.

Appendix F: Consultation meetings and submissions

Table F-1: NTC meetings on the Consultation Regulatory Impact Statement

Organisation
Western Australia Department of Main Roads
Western Australia Police
Western Australia Road Transport Association.
Motor Traders Association of Western Australia
Western Australia Livestock and Road Train Association
Transport for New South Wales
Roads and Maritime Services New South Wales
Centre for Road Safety New South Wales
VicRoads
Victoria Police
Australia New Zealand Police Advisory Agency
Rod Hannifey (road transport safety advocate)
National Heavy Vehicle Regulator
Queensland Department of Transport and Main Roads
Commonwealth Department of Infrastructure
Australian Logistics Council
Australian Livestock and Road Train Association
Australian Capital Territory Government
Australian Trucking Association
NatRoad
Bus Industry Confederation
South Australia Department of Planning, Transport and Infrastructure
South Australia Police
Commercial Vehicle Industry Association Queensland

Table F-2: Summary of submissions on the Consultation RIS

Submitter	Brief Summary of Comments
States and Territories	
<p>Western Australia (Main Roads, Department of Transport, WA Police and Department of Mines and Petroleum)</p>	<ol style="list-style-type: none"> 1. Any measures that are over ambitious which cannot be administered properly due to lack of resources will not be supported. 2. Does not support mandatory annual inspections. 3. Supportive of the plan to collect more data including data on infringements – agrees there is currently a lack of good data. 4. Standardisation of inspections is supported but it should take into consideration remote areas' circumstances. 5. Supports CoR changes to cover RW, however WA just introduced CoR legislation so WA needs to settle the introduction of CoR first. 6. WA is not a signatory to the HVNL but will work with NTC/NHVR to harmonise its processes. 7. WA will consider alignment with the national legislation where a clear benefit can be demonstrated for the state. 8. WA already operates a risk-based inspection scheme with a limited number of vehicle classes, and will not expand the number of inspected vehicle classes at this stage. 9. WA's preference is to adopt option 2 with an incremental approach to improving systems, with a high degree of consultation among jurisdictions, NTC and HNVR.
<p>Tasmania (Department of State Growth)</p>	<p>Supports option 3, however:</p> <ol style="list-style-type: none"> 10. States that there is no evidence of significant roadworthiness concerns for heavy vehicles that operate in Tasmania. 11. Tasmanian research indicates that bringing vehicles in for inspection once a year does not address how the vehicle is used or maintained for the rest of the year and what parts may wear out or become faulty in that time, such as brakes, tyres or lights.

Submitter	Brief Summary of Comments
<p>New South Wales (Transport for NSW)</p>	<ol style="list-style-type: none"> 12. NSW supports scheduled inspections for all heavy vehicles at prescribed intervals. Option 4 best fits with the current practice in NSW. 13. NSW is open to reviewing different roadworthiness processes, however maintains that roadworthiness levels should not be reduced, and that minimum levels of compliance and enforcement need to be assured under whichever option is chosen. NSW will lend support to a proposal that improves the use of available resources (targeted, evidence based, data driven). There a great deal of community support for yearly heavy vehicle inspections in NSW. 14. NSW identified that significant effort would be required to analyse the legal impact of removing periodic roadworthiness inspections. 15. The risk-based approach proposed within option 3C (annual inspections with some exemptions) is worthy of further development as a means of directing regulatory resources where they will have maximum impact on outcomes. 16. Strongly supports standardised approaches to inspection procedures and clearing defect notices, and supports referencing them in the HVNL. NSW does not support such procedures/process being embedded in the HVNL, but does support the NHVIM being referenced in the HVNL. 17. Cost–benefit analysis could be updated to include scenario analysis for each of the options based on whether or not Western Australia and the Northern Territory participate in the reform. 18. NSW believes that an identification of the baseline of current roadworthiness in each jurisdiction is needed. Supports a national roadworthiness survey similar to the TfNSW HV compliance survey. 19. If a more comprehensive risk-based approach is to be implemented, NSW would recommend the following risk criteria in the DRIVES system currently used for targeting: age (blunt indicator of roadworthiness), shape, mass, configuration, type of load, customer type, compliance history. 20. Supports overarching duty for all parties in CoR. 21. NSW believes that the RIS and the associated decision making should be based upon ‘the greatest net benefit to the community’. 22. NSW suggest that due to the extensive differences between jurisdictions on this matter, the development of a roadmap to achieve consistency should be a priority.

Submitter	Brief Summary of Comments
<p>Queensland (Department of Transport and Main Roads)</p>	<p>23. It is TMR's view that the NHVAS's effectiveness as a compliance management tool should not be diluted by forcing poor performing operators to participate. Other mechanisms, such as enforceable undertakings and supervised intervention orders, could apply similar requirements and would be more appropriate in these circumstances. High-risk non-compliant operators should not obtain the benefits and concessions provided by NHVAS accreditation.</p> <p>24. TMR wishes to start with annual inspections as the baseline approach, but once development of the National Compliance and Surveillance Strategy is complete, this strategy could potentially provide criteria to arrive at a more targeted inspection regime to improve overall fleet performance. The age of vehicle, type of vehicle, environment of operation and history of operator should all be factors that are considered.</p> <p>25. The RIS suggests option 3 is heavily reliant on the NHVR building a dataset that would enable development of a risk profile to identify 'at-risk vehicles' for inspection. However, TMR believes it is not necessary for the NHVR to build a national database before targeted inspections can commence. TMR currently has data available to conduct risk-based profiling and targeting for heavy vehicle inspections</p> <p>26. TMR supports the concept of standardised inspection types and practices and defect clearance processes with regulatory recognition.</p> <p>27. TMR supports the inclusion of CoR-specific duties but does not support reliance on any other agency (workplace health & safety) to enforce compliance with the HVNL.</p>
<p>Australian Capital Territory</p>	<p>28. Support for option 3, but do not want to increase frequency of inspection above current level of once every two years.</p>

Submitter	Brief Summary of Comments
<p>Victoria (VicRoads)</p>	<p>29. VicRoads does not have any current plans to make changes to its system. VicRoads is opposed to measures which have financial implications, on the grounds that any increase in funding from Victoria to implement national heavy vehicle roadworthiness reform would be extremely difficult to justify, regardless of whether this is required to fund new initiatives directly or to support increased activity by the NHVR.</p> <p>30. No conclusive link has been established between increasing heavy vehicle roadworthiness inspection beyond current practice, reduced vehicle defects and reduced heavy vehicle crashes. On this basis VicRoads doubts that the cost-to-benefit ratios of the proposals could be fully realised in practice.</p> <p>31. VicRoads continues to maintain the view that annual scheduled roadworthiness inspections cannot be justified due to the additional costs that would be imposed by annual inspection systems on top of the existing systems employed by industry – as was found by the 2001 Victorian Parliamentary Road Safety Committee Inquiry into roadworthiness.</p> <p>32. VicRoads is also concerned that officer discretion when issuing a defect notice will be compromised if defect criteria are to be recognised under regulation.</p> <p>33. VicRoads supports standardised inspections; however it may impact Licensed Vehicle Testers (LVTs) in country Victoria. Option 3 proposes an increase in inspections rather than better targeting of high-risk vehicles and there is little evidence provided to support the case for an increase in inspections.</p> <p>34. The consultation RIS does not identify a specific option for implementation so it is not possible to estimate order of magnitude implementation costs for this reform.</p> <p>35. VicRoads does not support NHVAS maintenance management accreditation being a pre-requisite for NHVAS mass management, however VicRoads supports the concept that maintenance management accreditation could be made mandatory for some classes of vehicles or classes of operator based on risk.</p> <p>36. Victoria continues to express in-principle support for the extension of CoR to vehicle standards. This proposal should be examined as part of the CoR duties review.</p> <p>37. Victoria supports in principle the proposal to add enforceable undertakings to the HVNL.</p>

Submitter	Brief Summary of Comments
<p>South Australia (Department of Planning, Transport and Infrastructure, incl. South Australian Police)</p>	<p>38. Mandatory annual inspections for all heavy vehicles on a national basis would come at a significant cost whether undertaken by government and/or through third party inspection arrangements, but an increase in the number of inspections of vehicles is needed.</p> <p>39. DPTI endorses risk-based scheduled inspections for nominated vehicles and classes of vehicles. The triggers for risk-based scheduled inspections should be subject to further deliberation among jurisdictions as part of a process of developing the criteria for selection and frequency/nature of inspections approved by ministers.</p> <p>40. Option 4 discusses vehicle or component manufacturers as possible additional parties in the CoR general duties requirement - DPTI queries the appropriateness of their inclusion, given the potential for issues regarding demarcation between the Commonwealth Motor Vehicles Standards Act 1989 and the HVNL.</p> <p>41. DPTI supports amending the HVNL to include those duties in advance of the final outcomes of the Duties Review. This could be achieved without pre-empting the outcomes of the Duties Review by developing both a general duty and a business practices duty for roadworthiness / vehicle standards based on current fatigue duties in Chapter 6 of the HVNL.</p> <p>42. Both DPTI and SAPOL would not want to preclude either authorised officers or police from examining a heavy vehicle for general roadworthiness, including for possible defects, because of prescribed limitations associated with the actual examination site or the lack of specialised equipment, etc.</p> <p>43. Having one standardised process for heavy vehicle defects and a separate local process for light vehicle defects could prove impractical for jurisdictions.</p> <p>44. It is not clear whether the proposal is that compliance with such guidelines – (NHVIM) – are to constitute a legal requirement or whether they are to merely be documents to which parties are required to have regard.</p> <p>45. DPTI and SAPOL would be greatly concerned if standardisation of procedures resulted in a lower standard or quality of inspections. A related issue is that there needs to be consistency in the duration of inspections.</p> <p>46. DPTI and SAPOL do not support roadworthiness criteria being subject to regulatory recognition, including being called up in regulation.</p> <p>47. SAPOL would be concerned if its officers were expected to undertake specialist training in order to be able to issue heavy vehicle defect notices.</p> <p>48. DPTI supports enforceable undertakings, subject to clarification as to the interaction, relationship and/or distinction between enforceable undertakings and improvement notices.</p> <p>49. The requirement to mandate maintenance management as a prerequisite to mass maintenance may be unduly onerous for operators who are ‘good performers’ from a roadworthiness perspective and are applying for mass management accreditation.</p> <p>50. Access to and exchange of data regarding roadworthiness issues needs to take account of WA and NT being non-participating jurisdictions. This is a particular concern for SA given it borders both of those jurisdictions.</p>

Submitter	Brief Summary of Comments
<p>Northern Territory (Department of Transport)</p>	<p>51. The Northern Territory is supportive of nationally consistent approach to addressing heavy vehicle roadworthiness, which is flexible enough to take into account the varying operational environments across the nation.</p> <p>52. Consideration must be given to remote areas in the development of training and education packages as well as the standardisation of inspections processes.</p> <p>53. The adoption of risk-based scheduled inspections appear at this point in time (2015) to be difficult and possibly cost prohibitive.</p> <p>54. The Northern Territory sees the incorporation of administrative measures (such as defect clearance procedures and inspection types) into the HVNL as unnecessary. These measures should be best left in guidelines which can be readily updated and approved/endorsed as required administratively.</p> <p>55. Cautious about risk-based approach; changes to systems would be required to allow a full compliance history to be recorded and there would be challenges in managing different inspections timings for various operators.</p> <p>56. The Northern Territory supports updating the NHVIM.</p> <p>57. Operators in the Northern Territory are keen to see processes streamlined and the recognition of various maintenance regimes and obligations required for accreditation, for example dangerous goods, fuel distribution, NHVAS and Truck Safe.</p> <p>58. Believes that risk-based approach would require national registration scheme that contains compliance history to enable jurisdictions to determine the level of risk for each operator.</p> <p>59. The Northern Territory believes that the NHVR may achieve positive results by focusing on those operators with a poor compliance record and working with those operators to improve their management and compliance.</p>

Submitter	Brief Summary of Comments
Enforcement	
National Heavy Vehicle Regulator	<p>60. NHVR supports strengthening of the administrative practices and, where necessary, legislative provision to improve the safety of the HV fleet in Australia.</p> <p>61. The NHVR has commenced some work on: reviewing HVIM, developing standard inspection types, clear and precise criteria for major and minor defects, the development of national defect clearance procedures and the development of a national compliance and surveillance strategy.</p> <p>62. The NHVR supports the development of a risk-based approach to scheduled inspections, which is an approach followed in other regulatory frameworks found in safety-based regimes.</p> <p>63. The NHVR expects that the establishment of a data strategy will take some years before it can be fully utilised. The NHVR notes that a risk-based inspection regime (criteria) should not require ministerial approval since the regime must be agile enough to accommodate changes in circumstances, but understand that justification is required.</p> <p>64. The NHVR believes that mandating maintenance management for mass management requires further investigation.</p> <p>65. The NHVR also believes that the introduction of positive duties needs to be accompanied by a review of enforcement powers to ensure that the HVNL contains an appropriate framework for ensuring compliance and enforcement.</p> <p>66. The NHVR notes that it has no control over how other enforcement agencies, rather than agencies covered by service agreements, deal with the application of guidelines and standards.</p> <p>67. It also notes that any changes to the regulatory framework with respect to defect notices need to ensure that they are not so overly prescriptive as to require Authorised Officers to identify the exact cause of a defect.</p> <p>68. NHVR also states that there will be cost impacts on the NHVR and jurisdictions.</p>

Submitter	Brief Summary of Comments
<p>Australia New Zealand Policing Advisory Agency (ANZPAA)</p>	<p>69. The RIS overlooks one of the most crucial factors in increasing roadworthiness: holding operators and responsible parties in the heavy vehicle industry to proper account. The emphasis must be directed at encouraging self-regulation and ensuring the heavy vehicle industry complies with the law.</p> <p>70. From a policing perspective, problems arise within companies – not among enforcement – and therefore they must be addressed at their root cause. Improved operator accountability, through meaningful legislative, regulatory and accreditation reform is central to raising the standard of roadworthiness among the industry.</p> <p>71. Police are acutely aware of industry concerns surrounding defect notices allegedly being issued in circumstances where a defect notice should not have been issued, however, most of these allegations are often unable to be substantiated when requested.</p> <p>72. A key feature of option 1 is that the operational variations across jurisdictions would be retained. In the absence of evidence that any jurisdictional differences contribute to the degradation of roadworthiness, a problem has not clearly been identified which warrants regulatory or legislative intervention.</p> <p>73. ANZPAA states that option 1 with the addition of chain of responsibility (CoR) maintenance (also capturing auditors) is considered by police to be a possibly viable proposal.</p> <p>74. The NTC anticipates that developing nationally standardised procedures will eliminate inconsistencies across jurisdictions. Yet police have not seen evidence to demonstrate how 'standardising' inspections would prevent the likelihood of a heavy vehicle either a) becoming defective, b) being contracted for use or actually used while defective, or c) crashing as a result of a defect.</p> <p>75. Police have experienced cases where a defect notice issued in one jurisdiction has been cleared in another state, which raises a number of questions. It is the view of police that without an evidence base demonstrating that defect notices are being issued incorrectly or in a way which degrades roadworthiness levels, regulatory or legislative amendment is not warranted.</p> <p>76. Police have concerns that if a system was introduced that required Authorised Officers (AO) to complete compulsory training courses before they were able to issue defect notices to heavy vehicles, this would severely limit the number of police who would be able to inspect and issue defects to heavy vehicles</p> <p>77. The ANZPAA Heavy Vehicle Reference Group (AHVRG) does not support option 4. The approach is considered too prescriptive and it appears this option would eliminate the exercise of police discretion as part of the Office of the Constable.</p>

Submitter	Brief Summary of Comments
Victoria Police	<p>The Compliance Review identified six common reasons why non-compliance with heavy vehicle law occurs:</p> <p>78. No or limited understanding of the law and the obligations it imposes, lack of ability to comply with the law, lack of willingness to comply with the law, economic imperative, opportunism, determined recidivism. Despite these six reasons being squarely attributable to industry attitudes, system approaches and problems, in developing solutions for the roadworthiness RIS, the NTC has instead sought to introduce reforms largely targeting enforcement roadside, training and inspection processes.</p> <p>79. The NTC does not have evidence that there are anomalies in the way enforcement and inspection is undertaken under the HVNL, or that any perceived anomalies impact negatively on HV roadworthiness.</p> <p>80. The concept of a National Compliance and Surveillance Strategy is supported in principle. However, the reality of such a system being successfully implemented within Australia within the next 5-10 years should preclude the proposal being used as the basis of option 2.</p> <p>81. Option 3 is misguided in that it places the majority of the onus for roadworthiness upon regulators, rather than operators and vehicle owners. Aside from the introduction of CoR Maintenance, there is a lack of evidence or discussion linking the remaining option 3 proposals to increases in roadworthiness among heavy vehicles.</p> <p>82. A CoR duty for parties to ensure that business practices are in place to ensure that a heavy vehicle is not used on the road in a condition that is unsafe, unroadworthy or non-compliant with vehicle standards is supported.</p> <p>83. What is missing is meaningful, practical obligations for parties to proactively manage the maintenance of their fleet and prevent vehicles becoming defective/non-compliant and consequently used on the roads when defective/non-compliant.</p> <p>84. Option 4 is not supported</p> <p>85. Scheduled inspections would have the undesirable potential for HVs to only be at best roadworthiness at those times.</p> <p>86. The RIS does not discuss consequences such as suspension of persons who participate in NHVAS where they are found to be non-compliant. If CoR Maintenance is brought in, those found non-compliant or found to be flouting the law should have an immediate period of suspension from all aspects of NHVAS for a set period. The NTC should examine the potential for accredited operators to use an industry code of practice to provide a 'reasonable steps' defence to avoid penalty, and whether this ability supports improved roadworthiness. Auditors and repairers should be subject to the same sanctions under the NHVAS scheme.</p> <p>87. In Victoria Police's experience, owner-operators are considered 'high risk' operators as they tend to operate within lower project margins, are more cost sensitive and are more like to sacrifice maintenance in order to remain in operation.</p>

Submitter	Brief Summary of Comments
Transporters	
Sarah Jones Toll Group	<p>88. Supports options 2 and 3 (suboption 3E). However, they believe the RIS ought to have examined:</p> <ul style="list-style-type: none"> • operator licensing • vehicle/trailer system integration • new technologies and vehicle designs • driver behaviours, competencies and attitudes • better understanding of how business models and financing systems influence vehicle maintenance, and • the use of concessions and rewards to promote compliance. <p>89. More information on how the data supporting risk-based scheduled inspections is going to be gathered.</p> <p>90. The RIS is not explicit about whether the inspection options proposed will replace, or be in addition to, current state-based inspection regimes which are tied to registration.</p>
Allan Cannell Woolworths	<p>91. As a responsible heavy vehicle fleet operator which highly values safety, Woolworths supports this initiative to improve national roadworthiness. We currently operate in both states that require and states that do not require scheduled government inspections.</p> <p>92. By applying a consistent R&M process across our national fleet, reflecting the requirements of the Heavy Vehicle Inspection Manual, we achieve similar roadworthiness under both models. Accordingly, we regard external inspections of our fleet as unnecessary.</p> <p>93. We acknowledge that overall national roadworthiness could be improved by targeted mandatory inspection of those fleets that warrant it. If a net improvement could be achieved by redirecting existing resources, as estimated for option 3 in the RIS, we would support such changes.</p> <p>94. Having a standardised maintenance system across all those states, we believe we achieve consistent, roadworthy outcomes. Therefore, if our maintenance process works in some states without external inspections, why have them in other states, costing money and fleet downtime? The above just refers to our fleet performance, but we understand, from the RIS and other 'press', that there are operators whose performance would benefit from more external scrutiny.</p>
Researcher	
ARRB Group	<p>95. Support the general principle of requiring operators to implement maintenance systems, which, coupled with a robust auditing regime and current inspection practices, should address the issue of vehicles being unroadworthy.</p>

Submitter	Brief Summary of Comments
Vehicle inspectors and repairers	
Aldas Palubinskas Mobico/VTNZ/ DEKRA	96. Supports yearly inspections conducted by third party inspectors.
MAHA Aust.	97. Manufacturer of heavy vehicle safety testing equipment. Supports standardised measurement requirements for brake testing.
Track True Wheel Alignments	98. Any inspection/audit must include a physical inspection of vehicles, not merely a paper trail. 99. The system of scheduled inspections in QLD has the added benefit of picking up unregistered vehicles. Some of the options seem to be – wait until there’s an accident then we will check it out (e.g. ‘risk-based’). Near misses/lucky escapes won’t be included in the statistics.
Vehicle repairer associations	
Motor Traders Association	100. Our working knowledge of this subject gives us a confident perspective on its relevance to the Heavy Vehicle Roadworthiness Program options. In summary of the options discussed: 101. Doing nothing is not an option and therefore we oppose options one and 2. Option 1 maintains status quo and option 2 is largely informational. Option 2 measures are also included in options 3 and 4 anyway. 102. We would prefer option 4 because it provides for mandatory inspections. However it contains a clause relating to chain of responsibility which is unacceptable to the industry because it extends liability to the supply chain (5.7.1) for situations outside their control. Unless that clause is excised we have no choice but to oppose option 4 even though members support the mandatory component. If the clause is removed, option 4 is probably the best. In the absence of achieving the construction we would like in relation to option 4, we would support option 3, which provides for regulatory recognition as opposed to prescription. It enables a risk-management approach to be applied. Whilst not perfect, as any benefit is dependent on the manner in which the option is implemented, it is better than assuming the risks contained in option 4. 103. Option 3 amends the HVNL to allow the NHVR to require nominated heavy vehicles and classes of heavy vehicles to submit to scheduled inspections. This will lead to further steps in the process involving creation of criteria relating to the ‘which and when’ of inspections. These steps should also involve a consultation process as variations to targeting and frequency will result in very different outcomes (and vary between the states).

Submitter	Brief Summary of Comments
<p>Commercial Vehicle Industry Association of Queensland (CVIAQ)</p>	<p>104. CVIAQ believes that insurance data is the best data available on HV crashes.</p> <p>105. CVIAQ recognises and agrees that standardisation of the inspections and inspections systems is needed, noting that there is a variety of sources for HV (Europe, USA and Japan).</p> <p>106. CVIAQ feels that with an adequate phase-in period, industry would be ready to meet the demand and skills required for increased inspections.</p> <p>107. They believe that age as a criteria for risk-based scheduled inspections is not adequate since a new truck can do a lot of kilometres in a short period – more research is required.</p> <p>108. CVIAQ supports annual inspections.</p> <p>109. CVIAQ partially supports CoR (VS) as long as only primary parties are included, excluding manufacturing, sales, service, repairs and modifications.</p>
<p>Motor Traders Association of Western Australia (MTA WA)</p>	<p>110. The overarching position of the CVIA WA (and the wider MTA WA) is that all heavy vehicles (over 4.5 tonnes GVM), outside of an approved maintenance scheme such as the Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS), should be physically inspected on at least an annual basis.</p> <p>111. Within the WAHVAS, there should be a provision to physically inspect a random sampling of as many vehicles as practical over a structured period.</p> <p>112. With the exception of the last component – chain of responsibility (CoR) – the best fit for the position of the CVIA WA is option 4.</p> <p>113. CVIA WA cannot accept the inclusion of third party maintenance providers and vehicle or component manufacturers in the chain of responsibility.</p> <p>114. For simplicity, robustness and to keep the treatment of heavy vehicles on a common playing field, targeted inspections should only be seen as a stepping stone to a fully encompassing regime in jurisdictions where a comprehensive inspection regime is not currently in place.</p> <p>115. Longer term, given sufficient frameworks, resources and a sufficient phase-in period, the WA market could meet the needs of increased demand from those vehicles outside of any accredited schemes.</p> <p>116. MTA supports the submission made by CVIAQ, however they see option 3 as a path to option 4 (excluding CoR) to allow WA to resource up.</p>

Submitter	Brief Summary of Comments
Industry associations	
Victorian Farmers Federation (VFF)	<p>Argues that option 1 of the RIS, retaining the status quo, be adopted. On the basis that:</p> <p>117. Any increase to the frequency of roadworthy inspections, by moving away from the current state registration model, will place additional expense and burden on farmers. Such a burden is unnecessary, given the low use and low-risk profile of heavy vehicle operation in the farm sector.</p> <p>118. Mandating scheduled roadworthy checks for heavy vehicles does not change the current legal obligations to maintain their vehicle in a roadworthy condition.</p> <p>119. Police or VicRoads on-road checks, as are currently undertaken, are a far better approach to identifying what vehicles may be unroadworthy at any point in time.</p> <p>120. There is a clear differentiation between farm heavy-vehicle use and the commercial freight industry. Unlike the commercial freight industry, the pattern of heavy vehicle use by primary producers is low and in many cases seasonally based. For example, use is heavy during the harvest period, but then reverts to infrequent use when harvest is completed.</p> <p>121. Supportive of option 2. Believes there is some merit in the further development of appropriate support tools for both vehicle operators and authorised officers, to ensure that high standards of safety are being practiced.</p> <p>122. Not supportive of options 3 and 4, risk-based or mandatory roadworthy inspections, on the basis that heavy vehicles used by farm enterprises are seasonal and sporadic, and annual roadworthy inspections for farm vehicles will place unnecessary and substantial costs on primary producers who have a low profile of vehicle use on roads.</p>
Truck Industry Council (TIC)	<p>123. The Truck Industry Council has as one of its core values the stated belief that all heavy vehicles (trucks) should be maintained to the Original Equipment Manufacturer's (OEM) specifications at all times.</p> <p>124. Too often some accredited heavy vehicle roadworthiness schemes have been found wanting in their responsibilities and deliverables to ensure that trucks within their scheme are roadworthy.</p> <p>125. TIC believes that until risk-based scheduled inspections are proven to improve safety, annual inspections are the preferred option. Truck Industry Council supports the basic intent of option 4 of the HV Roadworthiness Program RIS.</p> <p>126. TIC supports standardisation of inspection methods and equipment, frequency penalties and training activities.</p> <p>127. TIC feels strongly about unregulated spare parts. In fact, the performance level of these unregulated parts means that the level of roadworthiness of a heavy vehicle is unknown. This is a potentially very dangerous situation and recommends UN ECE Regulation 90 as a starting point.</p>
Bus Association of Victoria (BusVIC)	<p>128. Supports mandatory scheduled inspections conducted by independent inspectors.</p> <p>129. BusVIC suggests that while they prefer a full inspection, they recommend that all heavy vehicles are submitted for an inspection that covers the major safety components of the vehicle – steering, suspension, brakes and driver controls – rather than a full roadworthy.</p>

Submitter	Brief Summary of Comments
Australian Logistics Council (ALC)	<p>130. Australian Logistics Council states that as a priority the following items should be implemented as priorities:</p> <ul style="list-style-type: none"> • national heavy vehicle compliance and surveillance strategy • greater standardisation in how inspections are conducted • clearer and more precise criteria for assessing defects as being of major or minor severity • greater standardisation requirements for clearing defects • a harmonised education and training package. <p>131. ALC does support making substantive changes to the Law until these initiatives are mature.</p> <p>132. ALC would like to see a mechanism by which regulators and industry work towards developing documents like the HVIM, Ind. audit framework, audit matrix and reporting templates. Also the same group should address the maintenance management accreditation guide, inspection selection criteria matrix, the development of a hierarchy of the documents used for determining roadworthiness (including OEM documentation) and the criteria used for enforceable undertakings.</p> <p>133. The NTC and the NHVR must ensure that regulations managed by those bodies are aware of, and do not duplicate, provisions contained in other enactments, including in particular Road Safety Remuneration Orders.</p> <p>134. Proposed heavy vehicle inspections should be a substitute for, and not additional to, the current laws.</p> <p>135. Recommends the NTC to adopt as a project the concept of the introduction of operator licensing in Australia.</p> <p>136. ALC believes that the case for the insertion of mandatory 'safety management systems' within the National Law has yet to be satisfactorily made.</p> <p>137. Any changes to the chain of responsibility laws should only be made through the general duties review process currently being managed by the NTC after an appropriate cost-benefit analysis is done.</p> <p>138. Enforceable undertakings should not be done until guidelines are developed for issuing enforceable undertakings.</p>

Submitter	Brief Summary of Comments
Gas Energy Australia	<p>139. A recent report 'Turning up the heat...' commissioned by Gas Energy Australia established that uniform regulation generates benefits that clearly exceed the costs that it imposes, however with a federation of eight state/territory jurisdictions there are significant areas of red tape that increase costs to business.</p> <p>140. Industry needs consistency and uniformity to function effectively, both operationally and economically. Stated in a practical context 'if a vehicle is inspected, the timing, process, procedure and outcome must be the same if it was carried out in any jurisdiction'.</p> <p>141. Gas Energy Australia supports the adoption by all states and territories of uniform assessment of the mechanical condition of heavy vehicles.</p> <p>142. Uniform assessment would be achieved by reviewing the National Heavy Vehicle Inspection Manual (NHVIM), to include the development of standard inspection procedures and testing equipment, and harmonisation of defect procedures, including criteria for declaring a vehicle unroadworthy and for issuing major and minor defects, inspection types, practices and defect clearance processes.</p> <p>143. Gas Energy Australia believes a comprehensive review of the NHVIM must include the development and delivery of accredited education and training (for Authorised Officers, operators and drivers) to accord with the Australian Qualifications Framework.</p> <p>144. To ensure uniformity this training and education should also be extended to the National Heavy Vehicle Accreditation Scheme (NHVAS) and audit training and certification.</p> <p>145. Gas Energy Australia recognises the need for an enhanced surveillance strategy targeting higher defect-risk-heavy vehicles.</p> <p>146. Gas Energy Australia supports a move away from scheduled inspections and recommends a suitable transition period for the dangerous goods industry to move to mandatory accreditation for maintenance under the NHVAS.</p> <p>147. Gas Energy Australia does not support any changes to chain of responsibility (CoR) as part of the changes proposed to the Heavy Vehicle Roadworthiness review program.</p>

Submitter	Brief Summary of Comments
<p>Australian Trucking Association (ATA)</p>	<p>148. The outcome of the national heavy vehicle roadworthiness review must include reforms leading to a uniform and consistent national approach to enforcement.</p> <p>149. The chain of responsibility concept should be extended to vehicle roadworthiness by implementing the recommendations in the ATA submission to the chain of responsibility duties review.</p> <p>150. Governments should fund a major case-control study to provide more information about the links between vehicle inspections, vehicle roadworthiness and accidents, to inform future decisions about the effectiveness of mandatory scheduled inspections.</p> <p>151. The NHVR should focus on establishing better systems for targeting operators through on-road and other enforcement measures to ensure vehicle roadworthiness 365 days a year, and to address the high level of defects found in broad industry enforcement campaigns.</p> <p>152. If the NTC adopts option 3 (sub-option c), and seeks to exempt new vehicles under OEM contract maintenance from regular inspections, the following approach should be adopted:</p> <ul style="list-style-type: none"> • The exemption should be available to all maintenance facilities providing maintenance in accordance with OEM service schedules. • Service schedules must be approved by the NHVR. <p>153. Vehicles in robust accreditation schemes should not be subject to mandatory scheduled inspections as well. The design of the sampling system should provide adequate assurance that vehicles are roadworthy. Small fleets should be protected from disproportionate costs arising from the sampling approach used in robust accreditation schemes.</p> <p>154. If vehicles in robust accreditation schemes are not subject to scheduled inspections, the exemption should be available to all accreditation schemes that are registered and that meet the robustness criteria.</p> <p>155. The exemption should not solely be available to vehicles in NHVAS Maintenance, if it is upgraded to meet the robustness criteria.</p> <p>156. Annual and other periodic inspections should be able to be undertaken by qualified third party providers.</p>

Submitter	Brief Summary of Comments
<p>Australian Livestock and Rural Transporter's Association (ALRTA)</p>	<p>157. Is a strong supporter of national uniformity in transport laws, vehicle standards, access rules, registration systems, driver licensing, compliance and enforcement.</p> <p>158. It is difficult to draw definitive conclusions about the existence of a causal link between vehicle defects, scheduled inspections and on-road safety outcomes in Australia because there are fundamental differences in inspection regimes across jurisdictions.</p> <p>159. The ALRTA believes that scheduled vehicle inspections, robust accreditation systems and on-road interceptions all have a complementary role to play in reducing the incidence of major defects. The ALRTA National Council strongly supports the establishment of a nationally uniform requirement for scheduled third party inspections for heavy vehicles – except for those accredited under an approved maintenance program (e.g. NHVAS or TruckSafe).</p> <p>160. Scheduled inspections and accreditation systems also need to be supported by fair and reasonable on-road inspections to provide a final layer of assurance that operators are maintaining their vehicles in a roadworthy condition.</p> <p>161. The NHVR should be required to put a compelling case to ministers before a decision on modifying the inspection burden is taken. Any proposal to increase checking in one area should be offset by decreased checking in another area. This will ensure that industry-wide benefits are maximised while costs are kept to a minimum.</p> <p>162. There must also be reasonable lead times to enable industry and governments to prepare for any new or modified inspection requirements.</p> <p>163. The ALRTA believes that conducting studies on the potential link between unroadworthy HV and accidents is not warranted because it is expensive and time consuming.</p> <p>164. Any new inspection regime should be closely supported by the NHVR's national compliance and enforcement strategy. Vehicle targeting should be undertaken on a complementary basis whether inspections are scheduled or random.</p> <p>165. The ALRTA believes that governments should be encouraging and facilitating the growth of recognised industry accreditation schemes rather than competing with them on an unfair basis. On NHVAS:</p> <ul style="list-style-type: none"> • Decouple NHVAS from the NHVR and operate it as an independent entity. • Empower NHVR to set minimum standards and to 'approve' compliant accreditation schemes. • Allow industry schemes to seek approval with NHVR and compete on the same basis as schemes like NHVAS. • Extend any regulatory benefits to all equivalent schemes.

Submitter	Brief Summary of Comments
NRMA	<p>166. Does not want government to adopt the lowest common denominator.</p> <p>167. Risk-based inspection regimes would potentially reduce the level of inspections in NSW. NRMA believes that Australia should adopt NSW's inspection practice.</p> <p>168. Any program which seeks to reduce or limit the quantum of inspections would be a source of concern for our members.</p> <p>169. Entry requirements for the NHVAS Maintenance modules must be raised and a clearly defined and enforced process for removing non-complying operators must be introduced. (nb: VICPOL has the same view.)</p>
Submissions from individuals (combined)	
	<p>170. Fatalities involving heavy vehicles are on a downward trend under the current system - is the massive cost going to fix a problem that appears to be fixing itself?</p> <p>171. States should come in line with the NSW and Queensland model of annual inspections or NHVAS/ Trucksafe Assurance schemes.</p> <p>172. All new trucks should come under an inspection-free threshold of three-four years (as cars do in NSW) to reward operators for purchasing new vehicles.</p> <p>173. Annual inspections need to be stricter. Government organisations need to inspect all trucks of any size and not use approved inspection stations.</p> <p>174. Self-clearing defects need to be abolished as they are open for abuse.</p>

Appendix G: Revisions to policy options from the Consultation RIS

Table G-1: Differences between Consultation RIS options and options in this RIS: option 3

Measures	Consultation RIS option 3	Revised option 3
Standardised inspection types	Referenced in the HVNL	No change
Standardised defect clearing process	Referenced in the HVNL	No change
Criteria for assessing major or minor defects	Referenced in the HVNL	No change
Information and training package	Harmonised guidance material	No change
NHVR Roadworthiness Data Strategy	To be developed by NHVR	No change
Scheduled inspections required for registration	Risk-based requirement	No change
Chain of responsibility	Provide a chapter-specific duty to require operators, employers or prime contractors to take all reasonable steps to ensure vehicles for which they are responsible are roadworthy and compliant with vehicle standards	No change
Enforceable undertakings	Introduce new provision in the HVNL	No change
Formal warnings	Review of current HVNL provisions	No change
Operational changes	Accreditation and auditing improvements	Accreditation and auditing improvements
Governance changes	NHVAS maintenance management module mandatory in some circumstances	It is no longer proposed that the NHVAS maintenance management module is mandatory in some circumstances
Education		
Inspections of a sample of the accredited vehicles	None	At the renewal of accreditation

Table G-2: Differences between Consultation RIS options and options in this RIS: option 4

Measures	Consultation RIS option 4	Revised option 4
Standardised inspection types	Prescribed in the HVNL	No change
Standardised defect clearing process	Prescribed in the HVNL	No change
Criteria for assessing major or minor defects	Prescribed in the HVNL	No change
Information and training package	Harmonised guidance material	No change
NHVR Roadworthiness Data Strategy	To be developed by NHVR	No change
Scheduled inspections required for registration	Mandatory for all	No change
Chain of responsibility	Use of a primary duty to take all reasonable steps to ensure that vehicles over which they have influence are roadworthy and compliant with vehicle standards, covering loaders, dispatchers, schedulers, consignors and consignees, employee or contractor maintenance providers, third party maintenance providers and vehicle or component manufacturers	A primary duty requiring parties including operators, prime contractors and employers to take all reasonable steps to ensure that vehicles over which they have influence are roadworthy and compliant with vehicle standards.
Enforceable undertakings	Introduce new provision in HVNL	No change
Formal warnings	Review of current HVNL provisions	No change
Operational changes	Accreditation and auditing improvements	Accreditation and auditing improvements
Governance changes	NHVAS maintenance management module mandatory in some circumstances	It is no longer proposed that the NHVAS maintenance management module is mandatory in some circumstances
Education		
Inspections of a sample of the accredited vehicles	None	At the renewal of accreditation

Appendix H: Summary of changes for each state and territory in composite option

Major changes will happen and impact states via the adoption of the national registration system, but the NHVR will drive the majority of these through its program of works. The changes for states and territories are summarised in the table below

Theme	Measures	Recommended composite option	QLD	NSW	ACT	VIC	SA	TAS	WA	NT
National consistency	<i>Standardised inspection types</i>	As guidance. At an appropriate time after implementation, a review of the effectiveness of these measures will be conducted for the purpose of assessing the need to reference them under the HVNL	Inspector training material will need updating New testing equipment may be required Length of inspection time may be increased	Inspector training material will need updating New testing equipment may be required. Length of inspection time may be increased	Inspector training material will need updating New testing equipment may be required Length of inspection time may be increased	Inspector training material will need updating New testing equipment may be required Length of inspection time may be <u>decreased</u>	Inspector training material will need updating Development of a new inspection regime will be required	Inspector training material will need updating New testing equipment may be required. Length of inspection time may be increased	Inspector training material will need updating New testing equipment may be required. Length of inspection time may be increased	Inspector training material will need updating New testing equipment may be required Length of inspection time may be increased
	<i>Standardised defect clearing process</i>		No changes to current systems until the implementation of the national registration scheme	No changes to current systems until the implementation of the national registration scheme	No changes to current systems until the implementation of the national registration scheme	No changes to current systems until the implementation of the national registration scheme	No changes to current systems until the implementation of the national registration scheme	No changes to current systems until the implementation of the national registration scheme	Inspector training material will need updating	Inspector training material will need updating
	<i>Criteria for assessing major or minor defects</i>		Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating
	<i>Information and training package</i>	Consistent guidance material	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating	Authorised Officer training material will need updating
Inspections	<i>National Roadworthiness Data Strategy</i>	To be developed by NHVR to inform development of criteria for risk	Data strategies already in place Develop mechanism to share with NHVR	Data strategies already in place Develop mechanism to share with NHVR	May need changes to data gathering and sharing protocols	May need changes to data gathering and sharing protocols	May need changes to data gathering and sharing protocols	May need changes to data gathering and sharing protocols	May need changes to data gathering and sharing protocols	May need changes to data gathering and sharing protocols

Theme	Measures	Recommended composite option	QLD	NSW	ACT	VIC	SA	TAS	WA	NT
	<i>Scheduled inspections required for registration</i>	Implement requirement for scheduled inspections before registration of vehicles identified through risk-based criteria, subject to the ministers approving the risk criteria developed by the NHVR as part of the implementation of the National Roadworthiness Data Strategy	Upgrade registration systems This would be part of the implementation of the national registration system. Reduced inspection numbers	Upgrade registration systems This would be part of the implementation of the national registration system. Reduced inspection numbers	Upgrade registration systems This would be part of the implementation of the national registration system. A proportion of high-risk HV fleet may require scheduled inspections	Upgrade registration systems This would be part of the implementation of the national registration system. Increased inspection numbers	Upgrade registration systems This would be part of the implementation of the national registration system. Increased inspection numbers	Upgrade registration systems This would be part of the implementation of the national registration system. A proportion of high-risk HV fleet may require scheduled inspections	Upgrade registration systems This would be part of the implementation of the national registration system. A proportion of high-risk HV fleet may require scheduled inspections	Upgrade registration systems This would be part of the implementation of the national registration system. Potential reduction in inspection numbers

Theme	Measures	Recommended composite option	QLD	NSW	ACT	VIC	SA	TAS	WA	NT
Improving compliance	<i>Chain of responsibility</i>	Insert a primary duty on operators, employers and prime contractors in the HVNL to address vehicle safety, including heavy vehicle roadworthiness and vehicle standards	Amend the HVNL to adopt these provisions Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	WA may need to amend WA legislation to adopt these provisions	NT may need to amend NT legislation to adopt these provisions
	<i>Enforceable undertakings</i>	Introduce new provision in the HVNL	Amend the HVNL to adopt these provisions Additional training of Authorised Officers (including police) on new provisions	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	Additional training of Authorised Officers (including police) on new provisions needed	WA may need to introduce new legislative changes Additional training of Authorised Officers (including police) on new provisions needed	NT may need to introduce new legislative changes Additional training of Authorised Officers (including police) on new provisions needed
	<i>Formal warnings</i>	Review current HVNL provisions	Amend the HVNL to adopt these provisions. Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	Approval of legislative changes required for this to take effect Additional training of Authorised Officers (including police) on new provisions needed	WA may require new legislative changes Additional training of Authorised Officers (including police) on new provisions needed

Theme	Measures	Recommended composite option	QLD	NSW	ACT	VIC	SA	TAS	WA	NT
NHVAS improvements	<i>Operational changes</i>	Accreditation and auditing improvements	Nil	Nil	Nil	Nil	Nil	Nil	If WA decides to align with NHVAS operational changes, amendment of the WA scheme & development and implementation of training may be necessary	Nil
	<i>Governance changes</i>		Nil	Nil	Nil	Nil	Nil	Nil	If WA decides to align with NHVAS operational changes, amendment of the WA scheme will be necessary	Nil
	<i>Education</i>		NHVR will develop and roll out any training and education material	NHVR will develop and roll out any training and education material	NHVR will develop and roll out any training and education material	NHVR will develop and roll out any training and education material	NHVR will develop and roll out any training and education material	NHVR will develop and roll out any training and education material	If WA decides to align with NHVAS operational changes, amendment of the WA scheme will be needed and & WA may need to develop and implement their own education material	NHVR will roll out any training and education material

Theme	Measures	Recommended composite option	QLD	NSW	ACT	VIC	SA	TAS	WA	NT
	<i>Inspections of a sample of the accredited vehicles</i>	Inspections of a sample of the participant's fleet of nominated vehicles at the renewal of accreditation	Nil	Nil	Nil	Nil	Nil	Nil	If WA decides to align with NHVAS operational changes, amendment of the WA scheme will be necessary	Nil

Acronyms, abbreviations

Acronym / abbreviation	Expanded term
ABS	Australian Bureau of Statistics
ACT	Australian Capital Territory
ADR	Australian Design Rules
AFM	Advanced Fatigue Management
AIS	Authorised Inspection Station
ANZPAA	Australia New Zealand Police Advisory Agency
AS	Australian Standards
ATA	Australian Trucking Association
AVSR	Australian Vehicle Standards Regulations
BITRE	Bureau of Infrastructure, Transport and Regional Economics
COAG	Council of Australian Governments
CoR	chain of responsibility
CVIAQ	Commercial Vehicle Industry Association Queensland
DoT (NT)	Department of Transport (Northern Territory)
DPTI (SA)	Department of Planning, Transport and Infrastructure (South Australia)
DSG (Tas)	Department of State Growth (Tasmania)
FTE	full-time equivalent
GVM	gross vehicle mass
HVAIS	heavy vehicle authorised inspection station
HVIS	heavy vehicle inspection station
HVNL	Heavy Vehicle National Law
LPG	liquefied petroleum gas
NEVDIS	National Exchange of Vehicle and Driver Information System
NGV	natural gas vehicle
NHVAS	National Heavy Vehicle Accreditation Scheme
NHVIM	National Heavy Vehicle Inspection Manual
NHVR	National Heavy Vehicle Regulator
NPV	net present value
NSW	New South Wales
NSW RMS	New South Wales Roads and Maritime Services

Acronym / abbreviation	Expanded term
NT	Northern Territory
NTC	National Transport Commission
OBPR	Office of Best Practice Regulation
QLD	Queensland
RBT	roller brake tester
RIS	Regulatory Impact Statement
RMS	(New South Wales) Roads and Maritime Services
SA	South Australia
TAS	Tasmania
TfNSW	Transport for New South Wales
tkm	tonne-kilometre
TMR	Queensland Transport and Main Roads
VIB	Vehicle Information Bulletin
VIC	Victoria
VSI	vehicle standards information
WA	Western Australia
WAHVAS	Western Australia Heavy Vehicle Accreditation Scheme

Glossary

accreditation scheme	Formal process for recognising operators who have robust safety and other management systems in place. Examples include NHVAS (National Heavy Vehicle Accreditation Scheme), WAHVAS (Western Australia Heavy Vehicle Accreditation Scheme), TruckSafe, and bus accreditation schemes.
ancillary operator	A heavy vehicle operator who uses heavy vehicles in conducting the main business activity, rather than the main business activity being heavy vehicle transport itself.
approved inspection station	A facility that is approved to conduct heavy vehicle inspections on behalf of the government/NHVR, for the purposes of renewal of registration or clearing a defect notice or undertaking a roadworthy inspection.
approved vehicle examiner	As defined under the HVNL, a person approved as a vehicle examiner by the NHVR.
authorised officer	As defined in the HVNL: (a) a police officer declared by a law of a participating jurisdiction to be an authorised officer for the purposes of the HVNL; or (b) a person who holds office under the HVNL as an authorised officer.
checking station	A dedicated facility, typically adjacent to a road, used by authorised officers to intercept and inspect heavy vehicles.
compliance inspection	Inspection by an authorised officer to confirm that a heavy vehicle complies with its roadworthiness requirements.
dangerous goods	Substances, mixtures or articles that, because of their physical, chemical (physicochemical) or acute toxicity properties, present an immediate hazard to people, property or the environment. Types of substances classified as dangerous goods include explosives, flammable liquids and gases, corrosives, chemically reactive or acutely (highly) toxic substances.
defect notice	A notice issued by an authorised officer to the driver or operator of a heavy vehicle that they have assessed as being in an unsafe condition or does not comply with the Heavy Vehicle (Vehicle Standards) National Regulation. Major defect notice: a notice stating the vehicle must not be used on a road after the notice is issued, other than to move it to a stated location in a stated way. Minor defect notice: a notice stating the vehicle must not be used on a road after a stated time, unless stated action required to stop the vehicle from being a defective heavy vehicle is taken.
enforceable undertaking	An alternative to prosecution, which involves a regulated party entering into a binding agreement with the NHVR to perform tasks designed to improve their compliance. An enforceable undertaking implements systemic change in a business, or by an individual, to prevent future breaches of the law.

formal written warnings for minor defects	A proposal to introduce into the HVNL an additional vehicle defect category that allows authorised officers to issue a formal written warning defect notice for a defective heavy vehicle to be remedied, provided that the defect does not constitute a safety risk.
primary duty	<p>Sometimes known as ‘general duties’ or ‘principle based duties’. These seek to reinforce the broad goals and intentions of a legislative regime. In basic terms, they are the principal or key duties imposed on holders by a particular Act.</p> <p>This type of duty requires parties to consider a wide range of hazards and risks without specifying how they can comply. Instead, it recognises that the steps parties can and should reasonably take to execute their duty may differ.</p>
heavy vehicle authorised inspection station	An approved inspection station operated by a private entity under NSW state (registration) law.
hire and reward operator	A heavy vehicle operator whose business is to transport goods on behalf of customers.
non-participating jurisdiction	A jurisdiction that has not adopted the HVNL (currently NT and WA)
participating jurisdiction	A jurisdiction that has adopted the HVNL (currently the ACT, Victoria, NSW, Queensland, Tasmania and South Australia).
random inspection	An inspection of a heavy vehicle (or vehicles) that is not scheduled or targeted and is usually conducted on the roadside. Vehicles for inspection are randomly intercepted without any enforcement intelligence.
risk-based scheduled inspection	Scheduled inspection of high-risk vehicles during renewal of registration, based on predetermined criteria that help identify high-risk vehicles.
safety management system	An explicit and comprehensive system for managing safety risks. It provides a systematic way to identify hazards and control risks on an ongoing basis. A safety management system should provide a means for planning and measuring performance. AS4804:2001 specifies the main components of a generic safety management system.
scheduled inspection	An inspection of a heavy vehicle that occurs at an approved or authorised inspection station on a regular basis or at predetermined intervals (for example, annually, bi-annually, or every two years) at the time of renewal of the registration.
targeted inspection	The inspection of a previously identified heavy vehicle (or vehicles) by authorised officers, based on enforcement intelligence.
vehicle standards	The standards with which a single heavy vehicle or heavy combination must comply for its use on a road, as prescribed in Schedules 1 to 3 of the Heavy Vehicle (Vehicle Standards) National Regulation.

References

- ABS, Australian Bureau of Statistics 2012, *Survey of Motor Vehicle Use*, Table Number: NTC_S12_N2J, Number of vehicles by business type, commodity carried, type of vehicle and state/territory of registration.
- ABS, Australian Bureau of Statistics 2014, *Motor Vehicle Census*, ABS 9309.0.
- ACIL Tasman 2004, *Trucking: Driving Australia's Growth and Prosperity: A Report Prepared for the Australian Trucking Association*, August 2004.
- AMR for Roads and Maritime Services September 2012, *Heavy Vehicle Compliance Survey 2012: Final Report*.
- BITRE, Bureau of Infrastructure Transport and Regional Economics 2013, *Yearbook 2013: Australian Infrastructure Statistics*.
- BITRE, Bureau of Infrastructure Transport and Regional Economics 2014, *Australian Road Freight Estimates: 2014 update*.
- BITRE, Bureau of Infrastructure Transport and Regional Economics 2015, *Road Trauma Involving Heavy Vehicles: Crash Statistics 2014*.
- EC & IRTU, European Commission and International Road Transport Union, [European Truck Accident Causation](#).
- IPA, Infrastructure Partnerships Australia 2009, *Meeting the 2050 Freight Challenge*, PricewaterhouseCoopers, Sydney, NSW.
- NSW RMS, New South Wales Roads and Maritime Services 2012, *Heavy Vehicle Compliance Survey 2012: Final Report*.
- NSW RMS, New South Wales Roads and Maritime Services 2014, enforcement data, as supplied to the NTC.
- NTARC, National Truck Accident Research Centre 2015, *Major Accident Investigation Report*.
- NTC & NHVR, National Transport Commission, National Heavy Vehicle Regulator July 2014, *Heavy Vehicle Roadworthiness Review Phase One – Report of Current Practice*, [www.ntc.gov.au/Media/Reports/\(FD3A1F57-32D9-40D9-A1B0-E81C411C47CD\).pdf](http://www.ntc.gov.au/Media/Reports/(FD3A1F57-32D9-40D9-A1B0-E81C411C47CD).pdf).
- NTC & NHVR, National Transport Commission, National Heavy Vehicle Regulator August 2014, *Phase Two – Integrity Review of the National Heavy Vehicle Roadworthiness System*, [www.ntc.gov.au/Media/Reports/\(7716FF46-37C8-4C66-A9E4-5DDBF21F79E0\).pdf](http://www.ntc.gov.au/Media/Reports/(7716FF46-37C8-4C66-A9E4-5DDBF21F79E0).pdf).
- NTC & NHVR January 2015, *Heavy Vehicle Roadworthiness Program: Consultation Regulatory Impact Statement*, [www.ntc.gov.au/Media/Reports/\(E2B1344D-489E-4002-93F8-F47272532AA2\).pdf](http://www.ntc.gov.au/Media/Reports/(E2B1344D-489E-4002-93F8-F47272532AA2).pdf).
- US DoT, United States Department of Transportation 2006, *Large Truck Causation Study: An Initial Overview*, www-nrd.nhtsa.dot.gov/Pubs/810646.pdf.