

Submission to the National Transport Commission

HVNL Review: Consultation Regulation Impact Statement: Assurance and Accreditation

20 November 2020

# Introduction

- The National Road Transport Association (NatRoad) is pleased to make comments on the *HVNL Review Consultation Regulation Impact Statement (CRIS)<sup>1</sup>* prepared by Frontier Economics and published by the National Transport Commission (NTC) on 25 June 2020. This is the ninth submission in a series of submissions.
- <sup>2.</sup> We also note the publication of the NTC document *HVNL 2.0 A Better Law Scenario.*<sup>2</sup> (Better Law) That document sets out one possible scenario for a future law.
- 3. NatRoad is Australia's largest national representative road freight transport operators' association. NatRoad represents road freight operators, from owner-drivers to large fleet operators, general freight, road trains, livestock, tippers, car carriers, as well as tankers and refrigerated freight operators.
- 4. This submission responds to the issues raised in Chapter 7 of the CRIS entitled *Assurance and Accreditation*. As was anticipated in earlier submissions, this subject is the last to be considered when assessing the CRIS.
- 5. As was indicated in the submission<sup>3</sup> that NatRoad made in this subject area in the earlier stages of the review (First Submission), accreditation should coalesce with the new regulatory regime. Once the framework for the revised HVNL is in place, NatRoad would recommend that the role of accreditation under the new legislative framework and the benefits of any scheme or schemes to operators be revisited. This is necessary also because of the lack of detail and in-depth discussion in Chapter 7 and because of the need to take into account recent Productivity Commission findings, discussed below.
- 6. Operators are unlikely to join an accreditation scheme if the costs are not offset by clear safety and productivity benefits, including through regulatory incentives and reduced on-road enforcement of accredited operators. Members are also calling for a reduction in the number of customer and other audits they now experience.
- 7. Chapter 7 contains material which traverses the subject of operator enrolment and licensing. The CRIS contains options for different enrolment and licencing schemes. The Australian Trucking Association (ATA) and NatRoad engaged Deloitte Access Economics (Deloitte) to provide an assessment of costs of implementation and compliance with four of the proposed regulatory options, discussed below. In that regard, a comprehensive report has been prepared and costs of compliance for operators and the regulator have been estimated for the four chosen sub options. The report (Deloitte Report) is attached as Attachment A.
- 8. NatRoad believes that the analysis shown in the Deloitte Report also stands as a marker for the way in which the options preferred by the NTC in going forward with the review should be costed. The Deloitte Report largely stands on its own terms, clearly demonstrating the unacceptable costs of the proposed options. A clear and distinct value proposition relating to each option is not present in the CRIS and, in light of the assessed costs in the Deloitte

<sup>&</sup>lt;sup>1</sup> <u>https://s3.ap-southeast-2.amazonaws.com/hdp.au.prod.app.ntc-</u> hvlawreview.files/5715/9304/9833/HVNLR RIS 25 June.pdf

<sup>&</sup>lt;sup>2</sup> https://www.ntc.gov.au/sites/default/files/assets/files/HVNL-2.0.pdf

<sup>&</sup>lt;sup>3</sup> https://www.ntc.gov.au/submission\_data/693

Report (summarised in table A.2 of Attachment A), NatRoad rejects the options in 7.1 of Chapter 7, as elaborated below. It should be noted that the Deloitte Report does not assess potential benefits from the options. In addition, we have reservations about all of the options expressed in Chapter 7, also discussed below, with a rationale for those reservations.

# **Productivity Commission findings**

9. The Productivity Commission's recently released report on transport regulation<sup>4</sup> discusses the subject of assurance and related issues. The Productivity Commission recommends that there be a tiered system of regulation under a revised HVNL. The pertinent recommendation is Recommendation 10.1 which is, in part, as follows, with the last quoted paragraph being of particular relevance to the current subject:

The Heavy Vehicle National Law (HVNL) should be amended to provide the National Heavy Vehicle Regulator (NHVR) with sufficient powers to give effect to a tiered system, in which relatively prescriptive regulation operates alongside outcomes-based options. The amendments should establish clear roles and responsibilities for the NHVR, including adequate discretion, decision-making frameworks, and requirements for monitoring, compliance and enforcement activity. The system would need to reflect the varied preferences and capabilities of businesses, such that: • businesses seeking certainty or simplicity can rely on prescriptive regulation (to be streamlined as per recommendation 9.1) • businesses seeking flexibility to operate outside of prescriptive regulation, while meeting agreed safety outcomes, can seek assurance from the regulator.

The NHVR should expand its use of assurance model/s to allow businesses to seek flexibility on individual aspects of their operations or more substantially across their operations. The design should recognise that some businesses will be able to design comprehensive safety management systems, while others will benefit from pre-approved 'off-the-shelf' solutions. To the extent possible, the assurance model/s should avoid subjecting businesses to duplicative audit processes.<sup>5</sup>

10. The Productivity Commission also looked at the relationship between safety and accreditation. It published a finding on that relationship which reinforces the need for better data to be available before definitive decisions are made. The relevant finding and some of the relevant commentary is as follows:

The evidence base for assessing the relationship between accreditation schemes and safety outcomes is outdated and incomplete. The most thorough study of the NHVAS and TruckSafe, carried out by Austroads, used crash data from 2003–2005. The accreditation schemes, heavy vehicle safety regulation, technology and the road network have changed significantly since then, making the results of the study less relevant. More recent studies have focused on indicators of risk, including vehicle defects, rather than crash rates.

Another examination of the relationship between heavy vehicle crash rates and accreditation schemes is overdue. The Commission has been unable to conduct this research itself because the datasets that it was able to access did not indicate whether a heavy vehicle was accredited. Such analysis would provide assurance that the regulatory concessions that are available under the NHVAS are not leading to worse safety outcomes.

<sup>&</sup>lt;sup>4</sup> https://www.pc.gov.au/inquiries/completed/transport/report/transport.pdf

<sup>&</sup>lt;sup>5</sup> Id at p302

FINDING 6.4 – THE EFFECTS OF HEAVY VEHICLE ACCREDITATION ON SAFETY ARE UNCLEAR Heavy vehicle accreditation schemes create opportunities for operators to implement flexible approaches to some aspects of their business. However, evidence of the safety effects of heavy vehicle accreditation schemes is incomplete. Improving the range and type of data collected is important for effective risk-based regulation and enforcement.<sup>6</sup>

- 11. This finding is not good news for evidence based decision-making. The deficiency in the data means that NatRoad is cautious about proposing firm recommendations regarding accreditation and the re-shaping of this area of the law without a proper evidentiary base being established. We bring that perspective to bear in this submission.
- 12. The NTC should, we suggest, jointly with the NHVR, undertake or commission work in this area so that a more solid evidentiary base on which to make decisions and recommendations is put in place. We also note that there is a direct contradiction here between the Productivity Commission finding and the CRIS finding as follows (noting that NatRoad prefers the Productivity Commission analysis):

Evidence from a range of published reports suggests accredited operators are safer. There is anecdotal evidence from operators that accreditation improves their efficiency and productivity.<sup>7</sup>

13. The Productivity Commission analysis is also important because the findings on multiple audits being imposed on operators undermines the basis for assurance schemes as outlined in the CRIS as follows:

Assurance schemes set out procedures that, if followed, should lead regulated parties to behave consistently with the principles of the law. They give the regulator, operators, suppliers and other parties greater confidence with respect to capacity to manage risk and comply with the law. Assurance schemes can help give operators and others confidence that they are more capable of managing risks and complying with the primary duty.<sup>8</sup>

14. In contrast the Productivity Commission pointed to a problem that NatRoad highlighted in the First Submission and found:

Even when operators are accredited under regulatory and industry schemes these mechanisms are failing to provide the level of confidence needed by customers and other stakeholders. Accredited heavy vehicle operators are often required to undertake customer-specific audits which often involve the same onsite auditing that is carried out for the accreditation schemes. As noted by participants to this inquiry, the frequency and intensity of customer audits has increased significantly since COR laws were introduced on 1 October 2018 (chapter 6).<sup>9</sup>

- 15. One of NatRoad's foundational concerns in the current context is solving the problem of members being asked to fulfil the requirements of multiple customer and other audits. Some of these audits are extremely intrusive and potentially breach privacy laws. Some audits appear to be motivated so as to consolidate market power rather than to enhance safety or other beneficial industry outcomes.
- 16. The Productivity Commission addressed one finding and one recommendation to help with a solution to the problem of multiple customer audits as follows:

<sup>&</sup>lt;sup>6</sup> Id at p156

<sup>&</sup>lt;sup>7</sup> Above note 1 at p76

<sup>&</sup>lt;sup>8</sup> Above note 1 at p75

<sup>&</sup>lt;sup>9</sup> Above note 4 at p301

FINDING 6.3 – UNCERTAINTY ABOUT CHAIN OF RESPONSIBILITY OBLIGATIONS Many heavy vehicle operators, customers and other supply chain participants are uncertain about their obligations under Chain of Responsibility laws. Some contracting parties are imposing unnecessary and costly requirements on transport operators to minimise their potential liability. These additional requirements may also provide opportunities for large transport purchasers to exercise market power in ways that could reduce competition in the market for transport services.

RECOMMENDATION 6.2 – CLARIFYING HEAVY VEHICLE CHAIN OF RESPONSIBILITY OBLIGATIONS The Council of Australian Governments should endorse amendments to the Heavy Vehicle National Law to clarify the obligations of regulated parties under Chain of Responsibility laws. The amendments to the Heavy Vehicle National Law should empower the National Heavy Vehicle Regulator to: • publish 'acceptable means of compliance' with Chain of Responsibility laws for transport operators and other parties in the supply chain • accredit other approaches to compliance, with the costs of accreditation to be borne by the regulated parties.<sup>10</sup>

17. NatRoad supports the publication of "acceptable means of compliance" requirements in particular. That material should be shaped so as to reinforce that private audits would not be required and those audits should be proscribed when published standards have been met by members.

# **Operator Enrolment or Licensing: Disconnection?**

- 18. The problem statement in the CRIS that leads into the discussion of operator enrolment and licensing in Chapter 7 indicates that the National Heavy Vehicle Regulator (NHVR) has "limited awareness of who it is regulating."<sup>11</sup> Yet the potential for data to be harvested from registration particulars currently exists, as opposed to establishing an entirely new regulatory structure for an industry already over-regulated.
- 19. There should be a great deal of data that is available to the regulator from heavy vehicle registration details. Following discussions with the NHVR earlier this year, NatRoad became aware that the constraints on information are not about its availability to NHVR but relate to publication of data and its disaggregation in a useful form. We made a submission to the NHVR where, amongst other things, we said:

Because of NHVR's current contractual arrangements with Austroads (who supply vehicle registration data on behalf of the jurisdictions), NVHR is not in a legal position to on-share information. We were and remain concerned about the fact that this information is not able to be released. We ask that you make representations to the jurisdictions and Austroads to enable the NHVR to share data and insights that will benefit industry.<sup>12</sup>

- 20. NTC should recommend that registration data is not only provided by the jurisdictions to NHVR but that its analysis and subsequent publication be used to benefit both the regulator and industry. There are a myriad of questions that could be answered by reference to registration data which is already accessible on an individual basis currently through the NHVR registration portal.<sup>13</sup>
- 21. Further, we are aware that camera data throughout the HVNL jurisdictions is available to the NHVR through the Automated National Plate Recognition (ANPR) system. NatRoad has already indicated in prior submissions that camera systems provide ample feedback to

<sup>&</sup>lt;sup>10</sup> Id at p153

<sup>&</sup>lt;sup>11</sup> Above note 1 at p77

<sup>&</sup>lt;sup>12</sup> NatRoad letter dated 14 February 2020 to NHVR

<sup>&</sup>lt;sup>13</sup> https://www.nhvr.gov.au/road-access/registration/nhvr-portal-registration-services-module

regulators and assist with targeting compliance (although consistent technology and transparent regulation of cameras is needed, as we have argued in prior submissions during the course of this review.)

22. Obviously, from these statements we reject the rationale in the CRIS that there is a systemic disconnect between the NHVR and heavy vehicle operators. The issue of operators "making themselves known" to the regulator in the ways proposed in the CRIS is opposed, as the following discussion shows. Better visibility of operators to the NHVR adds nothing to the problems of the industry, especially as there is no indication how those in the supply chain other than operators (who are also regulated by the HVNL) will be better brought to account under any of the options in the CRIS. The CRIS is not sufficiently focused on those further up the supply chain from operators.

# **Operator Enrolment**

- 23. The CRIS commences the discussion of operators' possible obligations with Option 7.1a, voluntary enrolment. Here, operators would elect to enrol with the NHVR. They would "identify themselves and provide a high-level picture of their operations."<sup>14</sup> Enrolees would not have to demonstrate performance against safety standards. Yet the option would be a prerequisite for assurance certification or accessing some provisions of the HVNL, such as access permits and applying for a new PBS vehicle certification.
- 24. As is evident from page 10 of the Deloitte Report, the "voluntary" aspect of this option is taken away for:
  - operators with assurance certification; and
  - operators with access permits (a subset of Restricted Access Vehicles (RAVs)<sup>15,</sup>, which are vehicles for which there is a requirement to hold a permit or notice to operate on the HVNL road network).
- 25. The Deloitte Report estimates that a small percentage of operators (11% per table 3.1 in Attachment A) would become enrolled and that the cost would be \$25.9 million in the period up to 2050 per table 3.4. The costs seem excessive for a highly speculative benefit. This is in part because the assessment of the benefits of the option are aggregated rather than dealt with per each sub-option. The benefit of the NHVR getting better "awareness and understanding of operators"<sup>16</sup> through the proposed mechanism is questionable, especially having regard to the current options of analysis of registration data and feedback from the national camera system mentioned earlier. Those currently available options would not impose costs on operators, save where they increased regulator costs which are funded by industry.
- 26. Option 7.1b is a variant of 7.1a, with enrolment mandatory for operators of RAVs including those operating under notice. Table 3.1 in the Deloitte Report shows that 41% of all operators would be affected at a total cost of \$58.4 million. This is obviously a higher cost than for the first sub option but again without a clear benefit justifying this cost.

<sup>&</sup>lt;sup>14</sup> Above note 1 at p78

<sup>&</sup>lt;sup>15</sup> <u>https://www.nhvr.gov.au/files/201706-0172-ce1-restricted-access-vehicles.pdf</u>

<sup>&</sup>lt;sup>16</sup> Id at p85

27. Both of these so-called enrolment options are rejected by NatRoad on the basis that the costs shown in the Deloitte Report are not offset by any benefit that is available to the industry.

# **Operator Licensing**

- 28. NatRoad is careful in its consideration of the topic of operator licensing. In the past, NatRoad has not outright opposed the notion of the introduction of operator licensing. To be clear, operator licensing involves a government (at whatever level) authorising a business to undertake its operations. That is why mandated accreditation is viewed as the same as operator licensing. However, the way any licence conditions were to be established and imposed affects whether any scheme would be supported or opposed by NatRoad.
- 29. The NatRoad Board has determined that any licensing scheme, in order to represent a fair and consistent framework for the licensing of transport operators, should exhibit characteristics which do not unduly add costs to the industry, which establish appropriate safety and/or demonstrated productivity benefits and which are transparent and the subject of detailed cost/benefit analysis. Hence, in this latter regard, the analysis in the Deloitte Report guides NatRoad's stance in the current context of considering the CRIS's options.
- 30. Before considering those options further, NatRoad wants to be clear about the problem that needs to be addressed, covered in the First Submission<sup>17</sup> as follows:

NatRoad members report that appropriate training standards and barriers to entry of untrained operatives entering the industry are not in place. These developments are producing two undesirable outcomes. First, unskilled unsafe 'operators' are hindering the industry's drive towards increased safety objectives and public respect. Secondly, ease of entry is allowing an oversupply of unskilled operators who are not adept at proper costing. This factor is lowering revenue levels to below sustainability for many skilled and compliant operators, particularly those who baulk at accepting unfair contract terms...<sup>18</sup>

- 31. Accordingly, NatRoad is open to appropriately balanced policy considerations that would assist to eliminate these problems but, as has been emphasised throughout the review, we believe reform of the unfair contract laws to be a particular priority to ameliorate the second problem. The NTC should consider an examination of the occurrence of this growing malaise in the industry with a view to reinforcing other laws which will make the task of transport operators more efficient and more profitable.
- 32. The CRIS first expresses Option 7.1c as covering operator licensing for all operators and then indicates that a specific target could be isolated "i.e. those operating under hire-and-reward business models and operating a heavy vehicle 8 tonnes GVM or greater."<sup>19</sup> Because of this division in focus and the general uncertainty of the proposal in the CRIS, we note the assumptions that have been applied in the Deloitte Report as detailed at page 10 of Attachment A. Of particular importance is that operators would be required to demonstrate capability against safety standards in a Safety Management System (SMS) in order to be licensed. This distinction has also led Deloittes to cost the broader cohort as well as the

<sup>&</sup>lt;sup>17</sup> Above note 3

<sup>&</sup>lt;sup>18</sup> Id at para 21

<sup>&</sup>lt;sup>19</sup> Above note 1 at p 78

targeted operators i.e. treated the somewhat off hand making of a distinction in the chosen manner as requiring a sub option to be considered.

- 33. In the Deloitte Report this distinction is expressed as option 7.1c(i) and 7.1c(ii). The first sub option would cover 100% of operators in all sectors and cost over \$6.5 billion in total. The second sub option is estimated to cover 36% of all operators at a cost of over \$2.1 billion. The benefits described in the CRIS are as for the enrolment option together with the observation that "licensing would enable the regulator to cancel or withdraw an operator's licence."<sup>20</sup> The conditions under which this would occur are not clear. Further the CRIS itself remarks that" It is unclear whether the ability to cancel an operator's licence would be more effective in driving compliance compared to relying on penalties currently enable through the HVNL." To say the least, there is an unconvincing articulation of benefits from the relevant options in the CRIS sufficient to justify the estimated very large costs.
- 34. That observation also applies to consideration of Option 7.1(d). This option would be mandatory for operators that the CRIS assumes to be higher-risk but without a statistical analysis, for example, of those sectors of road transport which may in fact be higher risk as reflected in relevant data, something NatRoad touches on in the submission to the review on the roadworthiness chapter of the CRIS. The CRIS says that high risk includes transport of dangerous goods, RAV operations or passenger transport which, by virtue of transporting people, creates a high risk to human life. Empirical data to verify these assumptions (which we challenge) would have been useful.
- 35. Again because of the uncertainty surrounding the articulation of the option, the Deloitte Report brings to bear certain assumptions. In the Deloitte Report it is assumed that Option 7.1(d) would apply to a subset of operators from Option 7.1(c) with the subset defined according to whether an operator undertakes transport of dangerous goods or RAV operations. There are accordingly two costings associated with this further distinction.
- 36. In respect of the dangerous goods cohort (7.1d(i)) the Deloitte Report estimates that 2% of operators will be covered at a cost of just under \$175 million. For sub option 7.1d(ii) the coverage is 41% of operators for a total cost of just over \$3.2 billion. These costs when compared to the benefits set out in the CRIS cannot be justified. NatRoad therefore cannot support any of the options expressed in 7.1 of the CRIS.

# **Option 7.2 - No operator assurance framework**

37. Option 7.2 is described as follows:

Option 7.2 removes the NHVAS assurance framework and replaces many of the prescriptive standards in the HVNL with performance-based standards (particularly for mass, vehicle maintenance and fatigue management). The HVNL and associated regulations would continue to identify the risks and the standard to which they are treated, but the risk treatments would be described in terms of performance standards (with specific guidance on prescriptions to meet the performance standards).<sup>21</sup>

<sup>&</sup>lt;sup>20</sup> Id at p85

<sup>&</sup>lt;sup>21</sup> Above note 1 at p 88

- 38. NatRoad supports a system which is risk based. The revised HVNL should permit operators to meet performance based standards. For those operators that did not wish to devise their own systems to meet those standards, they could rely on prescriptive standards, for example as established in recognised Codes of Practice. So, this option fits in with other submissions made by NatRoad that accords with the proposed manner of restructuring the HVNL and it is generally supported. But we would recommend, as a related reform, the ability of the regulator to approve operator specific requirements for meeting the requisite standards, particularly in the manner we set out in the NatRoad submission on fatigue.<sup>22</sup>
- 39. Accordingly, until the final shape of the HVNL and the extent of these foundational changes is known, we recommend that consideration of this option be deferred. That deferral would also enable the proposed work to establish the utility of schemes such as the NHVAS, mentioned in paragraph 12 above, to be undertaken. Again, we contrast the findings of the Productivity Commission with the CRIS's assertion that "There is both anecdotal and quantitative evidence that accreditation improves an operator's risk management."<sup>23</sup> When that evidence as presented in Box 16 of the CRIS<sup>24</sup> is examined, the plethora of assumptions reinforces rather than counters the Productivity Commission findings. The data is outdated and inadequate, as found by the Productivity Commission.

# Option 7.3 -Enhanced single opt-in regulatory certification scheme

40. This option proposes a revamp of the NHVAS rather than its abolition per the prior discussed option. The CRIS says that this is based on benefiting operators and is described thus:

The proposed changes are intended to enhance the benefits operators would receive from being certified under the NHVAS by: • clarifying the link between certification and compliance with the primary duty and CoR obligations • providing NHVAS accredited operators with greater access to expanded and better-linked modules which should improve operators' flexibility in compliance options.<sup>25</sup>

- 41. Clarifying the link between certification and COR compliance accords with the Productivity Commission's recommendation 6.2 set out at paragraph 16 of this submission. It is an aim supported by NatRoad. How that would occur and the extent to which it would alleviate some of the pressure on operators to undergo multiple compliance audits are, however, open questions which would need to be re-assessed once the shape of the substantive provisions of the revised HVNL were known.
- 42. The discussion of how a reduction in intrusive audits would occur is expressed by reference to matters that would be assured and therefore would not encompass all transport activities. This is the explanation in the CRIS:

(Where) an assurance scheme provides for a matter linking to an obligation under the HVNL, and an operator is certified under that scheme, then - another person is entitled to rely on

<sup>&</sup>lt;sup>22</sup> <u>https://www.ntc.gov.au/submission\_data/935</u> esp paras 35 and 36

<sup>&</sup>lt;sup>23</sup> Above note 1 p 79

<sup>&</sup>lt;sup>24</sup> Ibid

<sup>&</sup>lt;sup>25</sup> Above note 1 p89

that accreditation as part of meeting their obligations relating to the conduct of that person (for example, a customer with obligations relating to the conduct of that person).<sup>26</sup>

43. NatRoad tentatively supports a provision of this kind but we would want to see much greater detail about how this would work in practice before offering firm support and a clarification of how" entitlement to reliance" as expressed in the extract quoted in the prior paragraph would necessarily stop other means of assurance from being required.

# **Option 7.4 - Enable multiple regulatory certification schemes**

- 44. As is acknowledged in the CRIS, currently there is no mechanism in the HVNL to recognise assurance schemes other than the NHVAS. This issue has been under consideration by the NHVR through its commissioning of the Medlock Review, commencing with an analysis of all heavy vehicle accreditation schemes in Australia.<sup>27</sup>
- 45. Since the publication of the CRIS, the final report from the Medlock review process has been published. <sup>28</sup> NatRoad was part of the Working Group which assisted in the formulation of the final report's recommendations. The report includes consideration of a potential model of permitting multiple schemes, including private sector schemes, to operate under an accreditation framework prescribed by the NHVR. This accords with the basis of Option 7.4 which is that the NHVR would focus on how schemes "will ensure certified operators meet the required standards, rather than assessing operator compliance directly."<sup>29</sup>
- 46. Elements of the proposal from the final report are noteworthy including that the regulator would develop and implement an assurance framework by setting standards for schemes to apply with respect to both the elements of an SMS and the auditing requirements against those standards. The costs of such an audit have not been measured in the CRIS, although alluded to and remain an area which would need further costing dependent on the final recommendation chosen in this subject area.
- 47. The regulator would approve schemes to offer certification services to industry and monitor their performance through the assurance framework. Any costs associated with this step would need to be assessed in the manner demonstrated in the Deloitte Report for other options.
- 48. More complex elements of the proposal from the Medlock final report would be that the NHVR would not manage a scheme itself, except as a certifier of last resort (e.g. to ensure operators' accreditations stay current if an existing certifier scheme winds up). A scheme manager (certifier) would develop specific business rules for the scheme and certify operators against the regulator's SMS requirements and they would need to be suitable for each scheme so certified. The regulator would consider the operator's certification, along

<sup>&</sup>lt;sup>26</sup> Above note 1 p 83

 <sup>&</sup>lt;sup>27</sup> https://www.nhvr.gov.au/consultation/2018/02/01/review-of-heavy-vehicle-accreditation-systems
 <sup>28</sup> <u>https://www.nhvr.gov.au/files/202010-1176-final-report-of-the-heavy-vehicle-accreditation-working-group-june2020.pdf</u>

<sup>&</sup>lt;sup>29</sup> Above note 1 at p84

with other regulatory criteria/intelligence in making regulatory decisions, e.g. to grant an exemption from prescriptive elements of the revised HVNL. How that would work in practice is not clear and would need a great deal of further development.

49. These proposals have the potential for reducing industry administration costs by removing or reducing customer and other audits. But in order to meet that objective, there would also need to be in place rules which stopped particular large customers from erecting their own accreditation schemes, that is using a potential market system to exert their market power in the way that members are experiencing at present. Having market competition between schemes may develop robust systems. But that element of Option 7.4 is unable to be assessed on current evidence. To be clear, what NatRoad members do not want is a large number of customer certification schemes to be in place, under each of which members would be contractually obliged to enrol so that they could obtain work from that firm. Governance or other rules to prevent that outcome would need to be put in place if this option were to be pursued further.

## Conclusion

- 50. This subject area is worthy of revision following the bedding down of further substantive reform options and following the conduct of the work recommended in paragraph 12 of this submission.
- 51. Th Deloitte Report stands as a model of the sort of cost/benefit analysis that should be applied to all the final chosen options for reforming the HVNL.

# **Deloitte.**



# HVNL reform assurance and accreditation models

Australian Trucking Association and NatRoad October 2020

Deloitte Access Economics

Commercial-in-confidence

# Contents

Gloss	ary		ii
Execu	itive si	ummary	iii
1	Introd	duction	7
	1.1	Background	7
	1.1.1	The HVNL Review and Consultation Regulation Impact Statement	7
	1.2 1.3	Scope and structure of this report Options in RIS	7 8
	1.3.2	Defining types of assurance schemes	10
	1.4	Defining affected operators	10
2	Metho	odology	12
	2.2	Estimating operator numbers	12
	2.2.1 2.2.2 2.2.3 2.2.4 2.2.5 2.2.6 2.2.7	Total number of operators by size and hire and reward/ancillary RAVs Hire and reward and >8t Dangerous goods Forecasting operator numbers Estimating the number of operators that will be affected Estimating operator take-up for enrolment options	12 13 14 14 14 14 16
	2.3	Estimating costs	17
	2.3.1 2.3.2	Regulator costs Operator costs	17 18
3	Key fi	ndings	23
	3.1 3.2 3.3 3.4 3.4.1	Number of operators affected by option Total costs by option Hire and reward and ancillary operator costs by option Impact on individual operators by option Compliance costs	23 25 27 29 29
	3.4.2	Registration charges	29
Apper	ndix A	Costs for a 10-year period	33
	A.1. A.2.	Total costs by option Hire and reward and ancillary operator costs by option	34 35
Endno	otes		36
Limita	ation o	f our work	39
	Gener	ral use restriction	39

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# Glossary

Acronym	Full name
ABS	Australian Bureau of Statistics
ARTSA	Australian Road Transport Suppliers Association
ATA	Australian Trucking Association
ATO	Australian Taxation Office
BITRE	Bureau of Infrastructure, Transport and Regional Economics
EWD	Electronic Work Diaries
FTE	Full-Time Equivalent
GVM	Gross Vehicle Mass
HML	Higher Mass Limits
HVNL	Heavy Vehicle National Law
NatRoad	National Road Transport Association
NHVR	National Heavy Vehicle Regulator
NTC	National Transport Commission
NTK	Net Tonne Kilometres
NVHAS	National Heavy Vehicle Accreditation Scheme
PBS	Performance-Based Standards
RAV	Restricted Access Vehicle
RIS	Regulation Impact Statement
SCRP	Safety and Compliance Regulatory Platform
SMS	Safety Management System
TEU	Twenty Foot Equivalent Unit
VKT	Vehicle Kilometres Travelled
WAHVAS	Western Australian Heavy Vehicle Accreditation Scheme

# Executive summary

In November 2018, Ministers asked the National Transport Commission (NTC) to lead a review of the Heavy Vehicle National Law (HVNL) and its supporting regulations. As part of this review, the NTC has published a Consultation Regulation Impact Statement (RIS).

One component of the RIS looks at enrolment and licencing schemes for heavy vehicle operators. These schemes aim to give the National Heavy Vehicle Regulator (NHVR) greater visibility of the industry. Although the mechanism isn't fully explored, the goal of this reform would be to enhance safety outcomes.

There are six sub options for different enrolment and licencing schemes (listed under Option 7.1 in the Consultation RIS). The Australian Trucking Association (ATA) and the National Road Transport Association (NatRoad) have engaged Deloitte Access Economics to provide an assessment of costs of implementation and compliance with four of the proposed regulatory options, namely:

- 7.1(a) voluntary enrolment of operators
- 7.1(b) mandatory enrolment
- 7.1(c) operator licensing of all operators
- 7.1(d) operator licensing of operators that the RIS assumes to be high risk.<sup>1</sup>

The options differ based on who they apply to, the type of assurance scheme, the use of performance standards and the use of penalties or incentives to encourage participation. To account for the different sets of operators that may be affected under Options 7.1 (c)-(d), these options were both split into sub-options (i) and (ii) based on affected operators. Further detail on each option is provided in the body of the report.

This assessment is of a similar nature to what would be undertaken in a RIS but does not have the benefit of access to information from the NHVR or other industry organisations and so is focussed on providing indicative costs, rather than detailed assessment. These indicative costs should still be useful to industry and Government to help guide which option, if any, should be pursued.

To quantify the costs, a range of publicly available data from organisations such as the Australian Bureau of Statistics (ABS), NHVR, NTC and the Bureau of Infrastructure, Transport and Regional Economics (BITRE) has been accessed as well as bringing in parameter values used in previous, similar, RISs. Finally, in order to better understand the practicalities of compliance, consultation was undertaken with Deloitte's Risk Advisory team that is responsible for establishing safety management systems (SMSs) with clients.

The approach to calculating costs involves estimating the number of operators in the industry; identifying which operators are affected under different options; setting out the compliance tasks per operator (e.g. staff hours, inspections and audits) and then applying unit costs. The likely implementation and ongoing costs for the regulator have also been considered.

In undertaking the analysis, Deloitte has presented costs for the whole of Australia as well as the existing HVNL states (NSW, Victoria, Queensland, South Australia, Tasmania and the ACT). National estimates are presented to enable the costs of each option to be compared against other national-level initiatives. Deloitte recognises that Western Australia and the NT are free to join, or not join, the HVNL.

The analysis includes costs for the Hire and Reward trucking industry as well as for Ancillary operators have been included. Hire and Reward operators are businesses that offer trucking services on contract to other businesses while ancillary operators maintain 'in-house' trucks operated by their businesses. The inclusion of ancillary operators is critical as they are responsible

<sup>&</sup>lt;sup>1</sup> There is no data analysis or risk assessment that leads to the allocation of operators into the 'high-risk' category.

for the majority of road freight in Australia and can also fall under other similar regulatory schemes such as the Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS).

Costs of compliance for operators and the regulator have been estimated and are presented in Table i and Table ii.



Table i Total cost by each option, Australia (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Operator cost	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	18.8	7.1	25.9
7.1 (b)	All	RAVs	49.4	8.9	58.4
7.1 (c) (i)	NA	All	6,461.4	38.9	6,500.3
7.1 (c) (ii)	NA	H&R & >8t	2,109.6	18.0	2,127.7
7.1 (d) (i)	NA	Dangerous goods	167.6	7.1	174.7
7.1 (d) (ii)	NA	RAVs	3,200.5	19.5	3,220.0

Source: Deloitte Access Economics (2020).

Table ii Total cost by each option, HVNL States (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Operator cost	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	16.7	7.0	23.7
7.1 (b)	All	RAVs	44.1	8.7	52.8
7.1 (c) (i)	NA	All	5,763.0	35.5	5,798.5
7.1 (c) (ii)	NA	H&R & >8t	1,932.4	16.8	1,949.2
7.1 (d) (i)	NA	Dangerous goods	150.1	7.0	157.1
7.1 (d) (ii)	NA	RAVs	2,804.4	18.2	2,822.5

Note: Costs for the HVNL states are calculated based on the difference between the total cost for Australia and the cost for Western Australia and the Northern Territory. Regulator costs for the HVNL States and Western Australia and the Northern Territory do not sum to the regulator costs for Australia, due to the presence of fixed regulator costs regardless of geographies. Source: Deloitte Access Economics (2020).

There is significant variation between the options with total costs of compliance over the next 30 years ranging from \$26 million up to \$6.5 billion. The costs over the next 10 years, for comparison with other costs in the RIS, range in total from \$15 million to \$3.6 billion and are presented in Appendix A.

The lowest costs are for voluntary enrolment schemes which essentially only require minimal compliance activities for operators and a relatively minor technology investment from the regulator.

The compulsory options under 7.1(c)-(d) involve significantly higher compliance costs due to the need for auditing and inspections. It has been assumed that operators are responsible for paying these additional auditing costs directly and so this creates significant costs for the industry. The costs for the regulator are also higher due to the increased need for administrative management.

An important finding of this analysis is that, although the options give the appearance of covering significantly different parts of the industry (All vehicles, >8t vehicles and Restricted Access Vehicles (RAVs)), it is likely that most operators will, at some point, operate a vehicle >8t or a RAV and so there is little distinction between these proposed classifications.

Option 7.1(d)(i) has relatively low costs as it only covers operators who carry dangerous goods, a small part of the market. Dangerous goods are also already separately covered by specific legislation, codes and regulations and this cost should be seen as additional to existing regulatory costs for that portion of the industry, which have not been assessed.

Bringing these total compliance costs for operators down to a per operator level (Table iii) indicates that enrolment costs are relatively modest, but licencing can impose significant financial burdens. This is because enrolment options mostly include staff time, while licensing options require operators to introduce safety systems and undertake audits.

	Licensing
556	39,538
1,112	100,170
2,224	656,512
	556 1,112 2,224

Table iii Operator costs by size (\$2020, millions, NPV 2021 to 2050)

Source: Deloitte Access Economics (2020).

In practice, costs for the regulator will be passed back to industry as part of registration charges. The current funding model is for the National Heavy Vehicle Regulator to receive from the States and Territories a proportion of heavy vehicle registration charges that represent a regulatory component of those charges.

To analyse this cost flow back, version 2.3 of the PAYGO model provided by the NTC is used to estimate how increases in regulator costs in 2021 would affect the overall registration costs for industry. Regulatory costs in 2021 reflect the costs to the regulator of getting systems up and running and so will likely be the highest cost year for the regulator under the proposed reforms. These fixed system costs are the same under each option.

The expected changes to registration costs are shown in Table iv (changes shown in brackets are relative to figures in the PAYGO model). The table indicates that all assurance options would lead to modest increases in registration charges with the largest increases seen for articulated trucks. This result reinforces the finding that the majority of costs for operators would be felt directly through compliance and auditing costs.

The impact on registration here is just for the proposed regulatory changes specifically analysed. These are just one component of the regulatory changes proposed in the consultation RIS. In practice, the changes discussed in this report would be accompanied by other changes that would also likely increase registration charges.

Table iv Registration charges for a sample of vehicle classes under Options 7.1 (a) – (d), 1 July 2020 to 30 June 2021

Vehicle class	Charge
Rigid trucks: 2 axles: no trailer: 4.5 < GVM $\leq$ 7.0 t	624 (+4)
Rigid trucks: 2 axles: no trailer: $7.0 < \text{GVM} \le 12.0 \text{ t}$	624 (+4)
Rigid trucks: 2 axles: no trailer: GVM > 12.0 t	1001 (+5)
Rigid trucks: 2 axles: with trailer: GCM $\leq$ 42.5 t	2,025 (+5)
Rigid trucks: 3 axles: no trailer: $4.5 < \text{GVM} \le 18.0 \text{ t}$	1,018 (+5)
Rigid trucks: 3 axles: no trailer: GVM > 18.0 t	1,170 (+6)
Rigid trucks: 3 axles: with trailer: GCM $\leq$ 42.5 t	3,132 (+7)
Rigid trucks: 4 axles: no trailer: $4.5 < \text{GVM} \le 25.0 \text{ t}$	1,041 (+6)
Rigid trucks: 4 axle: no trailer: GVM > 25.0 t	1,198 (+7)
Rigid trucks: 4 axles: with trailer: GCM $\leq$ 42.5 t	4,039 (+7)
Rigid trucks: 3,4+ axles: with trailer: GCM > 42.5 t	12,035 (+12)
Articulated trucks: single trailer: 3 axle rig	1,811 (+9)
Articulated trucks: single trailer: 4 axle rig	2,779 (+9)
Articulated trucks: single 3 axle trailer: 5 axle rig	2,884 (+9)
Articulated trucks: single 2 axle trailer: 5 axle rig	6,252 (+9)
Articulated trucks: single trailer: 6 axle rig	6,357 (+9)
Articulated trucks: B-double: < 9 axle rig	14,971 (+20)
Articulated trucks: B-double: $\geq$ 9 axle rig	15,076 (+20)
Articulated trucks: B-triple	16,831 (+20)
Articulated trucks: Road train: 2 trailers	15,131 (+20)
Articulated trucks: Road train: 3 trailers	16,941 (+20)
Articulated trucks: single trailer: > 6 axle rig	6,357 (+9)
Other trucks	1,360 (+4)

Note: figures in brackets represent the dollar change in registration charge relative to the current charges. Source: National Transport Commission (2020) and Deloitte Access Economics (2020).<sup>1</sup>

#### **Deloitte Access Economics**

# 1 Introduction

# 1.1 Background

Assurance schemes set out procedures that, if followed, should help regulated parties to behave consistently with the law. They give the regulator, operators, suppliers and other parties greater confidence with respect to capacity to manage risk and comply with the law. Assurance schemes can help give operators and others confidence that they are more capable of managing risks and complying with the primary duty under the Heavy Vehicle National Law (HVNL) than if not subject to the relevant assurance regime.

The National Heavy Vehicle Accreditation Scheme (NHVAS) was offered to the industry in 1999. It was initially run by the state transport agencies, before being transferred to the National Heavy Vehicle Regulator (NHVR) in 2013.

## 1.1.1 The HVNL Review and Consultation Regulation Impact Statement

In November 2018, Ministers asked the National Transport Commission (NTC) to lead a review of the HVNL and its supporting regulations. Under the review, the NTC will aim to deliver a performance-based and outcomes-focused regulation that:

- improves safety for all road users
- supports increased economic productivity and innovation
- simplifies administration and enforcement of the law
- supports the use of new technologies and methods of operation
- provides flexible, outcome-focused compliance options.<sup>ii</sup>

To date, the NTC has been engaging in industry and stakeholder consultation. The Consultation Regulation Impact Statement (RIS), published in June 2020, is qualitative in nature and is focused on identifying the incremental costs and benefits of reform options identified by the NTC, including those related to assurance and accreditation.

The Consultation RIS notes that the NHVR faces information constraints in its ability to assess and build the risk profiles of regulated parties. The Regulator also has insufficient information from its Safety and Compliance Regulatory Platform, leading to an inability to adopt a risk-based approach to regulation. For these reasons, the Consultation RIS proposes several assurance and accreditation models.

# **1.2** Scope and structure of this report

The Consultation RIS sets out a number of options where operators would enrol with the NHVR or become licensed, thereby enabling the NHVR to have greater visibility of the industry. There are six sub-options under Option 7.1 (Operator enrolment or licensing) in the Consultation RIS, four of which are in scope for this engagement ('the options'):

- 7.1(a) voluntary enrolment of operators
- 7.1(b) mandatory enrolment
- 7.1(c) operator licensing of all operators
- 7.1(d) operator licensing of purportedly high risk operators.<sup>iii</sup>

The Australian Trucking Association (ATA) and the National Road Transport Association (NatRoad) have engaged Deloitte Access Economics to provide an assessment of costs of implementation and compliance with the four proposed regulatory options outlined above.

The assessment is of a similar nature to what would be undertaken in a RIS but does not have the benefit of access to information from the NHVR or other industry organisations and so is focussed on providing indicative costs, rather than detailed assessment. Nonetheless, it provides a quantification of some qualitative analysis in the RIS and could form a useful basis for decision making.

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This report is structured as follows:

- Section 1.3 provides more detail on the four options of interest in the RIS, including the interpretation of enrolment and licensing schemes used throughout this report
- Section 1.4 defines the affected operators under each option, based on Deloitte Access Economics' interpretation of the RIS in consultation with ATA and NatRoad
- Chapter 2 outlines the methodology used in this report, including the approach to estimating operator numbers and operator and regulator costs
- Chapter 3 presents the key findings of this report
- Appendix A presents supplementary findings for this report.

# **1.3 Options in RIS**

The assurance options in the RIS are depicted in Figure 1.1 below. The options for consideration in this report are options 7.1(a) - 7.1(d).



Figure 1.1 Assurance options in the RIS

#### Source: Frontier Economics (2020).<sup>iv</sup>

The options differ based on who they apply to (the affected operators), the type of assurance scheme, the use of performance standards and the use of penalties or incentives to encourage participation. This is summarised in Table 1.1. The main areas that require interpretation of the RIS are – affected operators (Section 1.4) and the type of assurance scheme (Section 1.3.2).

Table 1.1 Options 7.1(a) - 7.1(d) in the RIS

Option	Affected operators	Type of assurance scheme	Performance standards	Penalties or incentives to encourage participation
7.1 (a) Voluntary enrolment	Not compulsory for any operator. However, enrolment would be a prerequisite for operators under certain schemes: "assurance certification or accessing certain provisions of the law, such as access permits and applying for a new Performance-Based Standards (PBS) vehicle certification."	Operators "enrol" – register with the NHVR to provide and maintain operator details, including reasons for operation and scale of operations. "most basic level of assurance"	No auditing or need to meet performance standards.	Prerequisite for assurance certification or accessing some provisions of the law. Incentives "could be created" to encourage enrolment.

Option	Affected operators	Type of assurance scheme	Performance standards	Penalties or incentives to encourage participation
7.1 (b) Mandatory enrolment (for some operators)	Compulsory for operators of Restricted Access Vehicles (RAVs). Other operators choose to enrol.	Same as above.	Same as above.	Same as above. In addition, penalties may encourage meaningful enrolment information, for example "receiving a penalty for failure to enrol or providing false or misleading information."
7.1 (c) Operator licensing (all operators)	Compulsory for all operators OR targeted "in some way (i.e. those operating under hire-and- reward business models and operating a heavy vehicle 8 tonnes Gross Vehicle Mass (GVM) or greater)."	Operators gain a license by proving capability and responsibility to conduct operations, based on a regulator-approved basic safety management system (SMS). Without a license, operators cannot engage in transport activities.	Licensing would be based on standards in a SMS.	Penalties to those engaging in transport activities without a license. NHVR able to suspend or cancel licenses.
7.1 (d) Operator licensing (higher risk operators only)	Compulsory for a subset of operators with purportedly higher-risk operations "such as transport of dangerous goods, RAV operations or passenger transport which, by virtue of transporting people, creates a high risk to human life."	Same as above.	Same as above.	Same as above.

Source: Frontier Economics (2020).<sup>v</sup>

#### **1.3.2** Defining types of assurance schemes

The assurance schemes proposed in the RIS are enrolment and operator licensing.

# Enrolment – options 7.1 (a) and 7.1 (b)

Enrolment options mean that the operators provide and maintain registration information with the regulator, but do not have to demonstrate performance against safety standards. The enrolment options are intended to assist with the NHVR's lack of awareness of operators.

It is assumed that under the enrolment options:

- operators who elect to enrol must register details with the NHVR and keep them up to date
- all operators may experience a rise in registration fees to cover the NHVR's costs of maintaining the database.

## Licensing – options 7.1 (c) and 7.1 (d)

Operator licensing options require operators to demonstrate capability against safety standards in an SMS in order to be licensed. Some current regulator and industry accreditation schemes such as the NHVAS and TruckSafe are voluntary, providing incentives for participation. In contrast, under the Western Australian Heavy Vehicle Accreditation Scheme (WAHVAS), it is compulsory for certain vehicle types such as RAVs to be accredited.<sup>vi</sup> This is similar to the licensing options under the RIS where licensing is mandatory for either all or a subset of operators and there are penalties for failing to be licensed.

It is assumed that under the licensing options:

- operators who require a license must develop a regulator-approved SMS
  - for smaller or lower risk operators the SMS may be relatively simple and developed in industry workshops, based on industry templates or similar
- operators who require a license must be audited by a third-party to verify compliance against the SMS
  - in line with NHVAS audits, all licensed operators would have their paperwork and systems (including SMS) audited regardless of size
  - this would occur at the same frequency as NHVAS audits (every two years)
- operators who require a license must undergo vehicle inspections for each vehicle owned
  - in line with assumptions used in box 19 of the RIS, all licensed operators would undertake vehicle inspections regardless of size, and all vehicles would be audited
    this would occur annually
- all operators may experience a rise in registration fees to cover the NHVR's costs of maintaining the licensing system.

# **1.4 Defining affected operators**

Each of the options apply to different subsets of operators.

## Option 7.1 (a)

This option is voluntary for all operators. However, the option would be a prerequisite for "assurance certification or accessing certain provisions of the law, such as access permits and applying for a new PBS vehicle certification." When applying to be part of the PBS scheme, operators must apply for a new PBS vehicle certification and then apply for a PBS vehicle access permit.<sup>vii</sup> Therefore, operators that apply for a new PBS vehicle certification are assumed to be a subset of operators applying for access permits.

It is accordingly assumed there are two groups of operators that must enrol under this option:

- operators with assurance certification
- operators with access permits (a subset of RAVs, which are vehicles for which there is a requirement to hold a permit or notice to operate on the HVNL road network).<sup>viii</sup>

There will also be a set of operators that voluntarily enrol to "better collaborate with the regulator on their shared goals of productivity and safety."

# Option 7.1 (b)

This option is compulsory for operators of RAVs, including those operating under notice, and voluntary for all other operators.

# Option 7.1 (c)

This option is compulsory for all operators or targeted 'in some way', with the RIS indicating that this targeting would be for those operating under hire-and-reward business models and operating a heavy vehicle 8 tonnes GVM or greater.

It is accordingly assumed that there are two sub-options in this option:

- (i) all operators both hire-and-reward operators and ancillary operators
- (ii) those operating under hire and reward business models and operating at least one heavy vehicle 8 tonnes GVM or greater.

## Option 7.1 (d)

This option is compulsory for operators that the RIS assumes are higher-risk, with the RIS indicating that this could include transport of dangerous goods, RAV operations or passenger transport which, by virtue of transporting people, creates a high risk to human life.

The RIS does not present any evidence or risk assessment to identify what type of operators are likely to be 'higher-risk'.

It is assumed that this option will apply to a subset of operators from Option 7.1(c) with the subset defined according to whether an operator undertakes:

- (i) transport of dangerous goods
- (ii) RAV operations

Passenger transport (buses) is not included in this analysis, as this report is solely focussed on the trucking industry rather than buses.

# 2 Methodology

The total cost of each assurance option in the RIS is comprised of:

- the cost to the regulator of implementing and administering the option
- the cost to operators of complying with the option.

This requires an estimation of the regulator costs associated with implementation, the per operator costs associated with compliance, and the number of operators that will be affected by each option. Figure 2.1 demonstrates how the total cost to operators is calculated for each option, including an example of the inputs needed to estimate the cost of audits to operators under Option 7 (d) (ii).

Figure 2.1 Representation of the calculation for estimating operator cost of assurance options



Source: Deloitte Access Economics (2020).

# 2.2 Estimating operator numbers

This section outlines how the estimates of the number of relevant operators under the different categories identified in the RIS options (such as RAVs) was undertaken. This is important because the proposed regulations apply to operators (not drivers or trucks) but data that splits the number of operators into different groups is not directly available. This is not surprising and is one of the reasons the NHVR is considering introducing mechanisms that improve its awareness of the operators it is regulating.<sup>Ix</sup> It is particularly problematic to source data on ancillary operators, as these are not standalone trucking businesses in the heavy vehicle industry.

As a result, the analysis discussed in this report adopts other approaches to estimate the number of affected operators, including business counts, vehicle stock, and tonnes carried. Operators are categorised into 'small', 'medium' and 'large' businesses. This was done to enable an adjustment of compliance costs with the size of operators, as large operators are likely to pay significantly more under the options than small businesses.

# 2.2.1 Total number of operators by size and hire and reward/ancillary

The total number of heavy vehicle operators is determined using Australian Bureau of Statistics (ABS) Business Count data for road freight businesses (Industry 4610). ABS road freight businesses are assumed to reflect hire and reward businesses only, as the ABS definition of road freight businesses aligns with that of hire and reward businesses and not ancillary businesses.<sup>×</sup>

The total number of 'hire and reward' operators is split into small, medium and large categories using the different turnover brackets used in the ABS data, as shown in Table 2.2. These categories were selected to also align with current and historical classifications of business size by the Australian Taxation Office (ATO).

Table 2.1 Hire and reward heavy vehicle businesses: classification by size

Hire and reward business size	Annual turnover range
Small	Less than \$2 million
Medium	\$2 million to \$10 million
Large	\$10 million or more

Source: ABS (2020).xi

There is no apparent data source on the number of ancillary heavy vehicle operators. Rather, the figure has been estimated by determining the share of value-added in the transport industry that is in-house (ancillary) relative to for-hire (hire and reward). The ABS Transport Satellite Account indicates that, from 2011 to 2016, the average share of value-added attributed to:

- in-house transport output is 62%; and
- for-hire transport output is 38%.xii

This is reasonably consistent with National Transport Insurance's estimate that hire and reward operators represent 45% of the total number of operators.<sup>xiii</sup> These shares are applied to the number of hire and reward operators to determine the number of ancillary operators.

The method described above was used to estimate the number of Australian operators as well as the number of operators by State and Territory, as the ABS Business Count data includes a jurisdiction breakdown. The following approaches to determine the number of operators in areas of interest (including RAVs and dangerous goods) were applied in the same way to the dataset of all operators in Australia as to datasets with certain State and Territory groupings.

#### 2.2.2 RAVs

According to the regulator, a RAV is a "Class 1, 2 or 3 vehicle that operates under a notice or permit and vehicles operating under higher mass limits (HML) that can generally only access certain parts of the road network (a vehicle that is not a general access vehicle)."xiv Options 7.1 (b) and 7.1 (d) (ii) refer to operators that undertake RAV operations. This is defined in this report as operators that own at least one RAV.

Previous work by Deloitte Access Economics on a sample of 324 port freight operators was used to gain some insight on the number of small, medium and large operators with at least one RAV. Operators were classified into a size category based on total Twenty Foot Equivalent Unit (TEU) and a RAV was defined as a vehicle that can hold at least three TEU. This approach was used to define the share of operators by size with at least one RAV, to be applied to both hire and reward and ancillary operators (shares shown in Table 2.2).

Operator size	Share of operators with at least one RAV
Small	37%
Medium	88%
Large	100%

Table 2.2 Operators with at least one RAV by size

Source: Deloitte Access Economics (2020).

# 2.2.3 Hire and reward and >8t

Option 7.1 (c) refers to operators with hire-and-reward business models and operating a heavy vehicle 8 tonnes GVM or greater. This report used two datasets to determine the number of hire and reward operators with at least one heavy vehicle 8 tonnes GVM or greater.

Firstly, the ABS Survey of Motor Vehicle Use provides data on the tonne kilometres travelled by rigid and articulated trucks by gross vehicle/combination mass.<sup>xv</sup> This indicates that 94% of total tonne kilometres relates to trucks carrying over 8 tonnes.

Secondly, previous work by Deloitte Access Economics estimated the share of total vehicles in Australia associated with different truck types, including number of axles. This also found that 94% of vehicles are 3-axle rigid trucks or larger. This aligns with driving licence classes, where Heavy Rigid vehicles are defined as 3 or more axles and a GVM of more than 8 tonnes.<sup>xvi</sup>

This analysis described in the report assumes that 94% of 'hire and reward' operators (small, medium and large) own at least one vehicle 8 tonnes GVM or greater.

# 2.2.4 Dangerous goods

The number of operators carrying dangerous goods was estimated using ABS data on tonnes carried by commodity and vehicle type.<sup>xvii</sup> Based on the NTC's list of dangerous goods,<sup>xviii</sup> it is assumed that the commodities in the ABS categorisation that can be classified as "dangerous" are chemicals and related products, and mineral fuels, lubricants and related materials. This approach is necessarily an approximation and won't capture details such as diesel being excluded from the dangerous goods category or the inclusion of infectious substances in the dangerous goods category. Further, medium and large operators are assumed to carry chemicals and fuels, while small operators to only carry chemicals.

The shares of tonnes carried by these commodities for rigid and articulated trucks were applied to operator numbers to estimate that:

- 6% of medium and large operators carry dangerous goods; and
- 2% of small operators carry dangerous goods.

## 2.2.5 Forecasting operator numbers

The approaches identified in Sections 2.2.1 through 2.2.4 were used to estimate the number of operators by different categories in 2019. To determine the number of operators over time, forecast overall growth in freight was applied to the number of operators in 2019.

The growth in freight is based on a model of forecast net tonne kilometres (NTK). This relies on projections in vehicle kilometres travelled (VKT) and payloads. VKT was forecast by projecting historical VTK data from the Bureau of Infrastructure, Transport and Regional Economics (BITRE) and assuming that the historical relationship between freight and GDP per capita continues into the future.<sup>xix</sup> Historical data on NTK is taken from the ABS Survey of Motor Vehicle Use and then projected into the future by applying the per annum growth in forecast VKT.<sup>xx</sup>

This results in a forecast average growth rate of circa 1.9% per year in the number of operators.

## 2.2.6 Estimating the number of operators that will be affected

For each of the assurance options in the RIS, it is necessary to determine the number of operators that will be affected. This is because some of the operators defined in an option will already be accredited or already be subjected to annual vehicle inspections. Including these operators in the calculation will therefore overestimate the additional cost of the option.

## 2.2.6.1 Operators already accredited

To determine the additional cost associated with the assurance schemes outlined in the RIS, the number of operators currently enrolled under existing accreditation schemes was accounted for – the NHVAS, TruckSafe and WAHVAS.

The RIS identifies that there are 7,260 operators under NHVAS, 4,500 under WAHVAS and 207 under TruckSafe.<sup>xxi</sup> It is assumed that all operators under NHVAS and TruckSafe are hire and reward businesses, as these schemes are voluntary and unlikely to hold the same incentives for

#### Commercial-in-confidence

ancillary operators. The WAHVAS is mandatory for most operators in Western Australia, including those who 'perform transport tasks for hire or reward' and those requiring a permit or notice.<sup>xxii</sup> This suggests that the 4,500 WAHVAS operators are more likely to be hire and reward operators, but that ancillary operators will also be covered. It is assumed that 4,000 (nearly 90%) of WAHVAS operators are hire and reward. This assumption is made to roughly align the various data sources available – in particular the data on WAHVAS, business counts and ancillary share of industry are sourced from three different data sets and do not agree. For example, the number of hire and reward businesses in Western Australia (defined as described in Section 2.2.1) is greater than 5,200.

There is significant overlap between operators accredited under the different schemes. To determine the number of uniquely accredited operators, data from the ATA and the NHVR was used alongside some further assumptions. The ATA's submission to the HVNL review for Issues Paper 6 (Figure 1) shows the number of TruckSafe members in multiple accreditation schemes.<sup>xxiii</sup> The NHVR Annual Report also indicates that 12 Western Australian operators are accredited by the NHVAS.<sup>xxiv</sup> It is assumed that these 12 operators are also accredited under the WAHVAS. Together, this implies that:

- 8% of all operators are accredited (this calculation is also used for options focusing on RAV operators); and
- 21% of all 'hire and reward' operators are accredited (this calculation is also used for options focusing on operators carrying dangerous goods).

Further, to facilitate the analysis for different jurisdictions, the above calculations were made for Western Australia and the Northern Territory. Based on the NHVR annual report, 30 NHVAS operators are from the NT. Due to the compulsory nature of WAHVAS, fewer operators will be affected by new licensing schemes, and it is estimated that:

- 31% of all operators in Western Australia and the Northern Territory are accredited; and
- 73% of all 'hire and reward' operators in Western Australia and the Northern Territory are accredited.<sup>2</sup>

#### 2.2.6.2 Operators already subject to inspections

As well as accreditation, some operators are also subject to inspections based on state requirements. In particular, annual inspections are required with registration renewal for all heavy vehicles in NSW, the Northern Territory and Queensland.<sup>xxv</sup> For other states, inspections are required under different conditions, such as change of ownership for old vehicles (South Australia), or when a vehicle is re-registered, sold, transferred to a new owner, or is cleared for defect notices (Victoria).<sup>xxvi</sup> A simplifying assumption is made that, for these remaining states (Victoria, South Australia, Tasmania, the ACT and Western Australia), 20% of registered vehicles undergo an inspection each year. This leads to the following assumptions:

- 38% of vehicles in Australia will be affected by inspection requirements, as they are not currently subject to annual vehicle inspections
- 74% of vehicles in Western Australia and the Northern Territory will be affected by inspection requirements, as they are not currently subject to annual vehicle inspections.

<sup>&</sup>lt;sup>2</sup> As noted above, data on WAHVAS operators does not align with ABS data on road freight businesses (which are assumed to be hire and reward operators). As a result, only 73% of all 'hire and reward' operators in Western Australia and the Northern Territory are assumed to be accredited, while it would be expected that all 'hire and reward' operators in Western Australia are accredited.

#### 2.2.7 Estimating operator take-up for enrolment options

As noted in Section 1.4, voluntary enrolment under Option 7.1 (a) would be a prerequisite for certain operators, and Options 7.1 (a) and (b) would also include voluntary enrolment for other operators.

The number of operators with assurance certification is assumed to be the number of operators under the NHVAS. The number of operators with access permits is assumed to represent a share of operators with at least one RAV. To determine this share, for small, medium and large operators, the following steps were taken:

- using Table 9 in the RIS and vehicle data from the NTC, it is estimated that there are approximately 0.09 permits per vehicle per year, on average<sup>xxvii</sup>
- assuming permits are randomly allocated among vehicles, the probability of being an operator with a permit is calculated for different operator sizes using the following formula: (1-0.09)^(number of vehicles per operator).

This implies that the probability of a small, medium and large operator having a permit is respectively, 14%, 60% and 100%. These probabilities were checked against available data sources and appear to be reasonable. These shares were applied to RAV operator numbers to determine the number of operators with access permits. It was then assumed that 50% of NHVAS operators have access permits, as there is likely to be significant overlap between these schemes. Also, assuming that NHVAS operators are all 'hire and reward' operators, this analysis estimates prerequisite enrolment numbers as shown in Table 2.3.

Operator size	Hire and reward operators	Ancillary operators
Small	10%	5%
Medium	79%	53%
Large	100%	100%

Table 2.3 Operator enrolment based on prerequisite conditions for Option 7.1 (a)

Source: Deloitte Access Economics (2020).

Beyond this, the options stipulate that further voluntary enrolment could occur for operators aiming to improve productivity and safety in the industry. To determine this share, this analysis uses a take-up assumption from the Cost Benefit Analysis of Electronic Work Diaries (EWDs) conducted for NSW Roads and Maritime Services.<sup>xxviii</sup> The EWD study used a range of assumptions to determine take-up of EWDs (see Table 12), and it is considered that Assumption 2 is most applicable for this report, for hire and reward operators. Ancillary operators are assumed to voluntarily enrol at a lower rate than the level of hire and reward operators, as they are likely to have lower incentives to do so. These figures are presented in Table 2.4.

Table 2.4 Operator voluntary enrolment for Options 7.1 (a) and (b)

Operator size	Hire and reward operators	Ancillary operators
Small	0.0%	0.0%
Medium	3.0%	1.5%
Large	10.0%	5.0%

Source: NSW Roads and Maritime Services (2013) and Deloitte Access Economics (2020).xxix

Commercial-in-confidence

# 2.3 Estimating costs

This section outlines the sources for the costs used to inform the analysis, at the regulator and operator level. For operators, costs were identified at a unit level to then be multiplied by the number of operators in determining total cost.

The costs were identified from publicly available data and information. As such, the costs represent robust estimates based on the most relevant information that could be found but are not as precise as what would be possible in a complete RIS, based on the more detailed information available to NHVR and NTC.

#### 2.3.1 Regulator costs

Table 2.5 presents the cost categories assumed to be incurred by the regulator in implementing the enrolment and licensing options in the RIS.

Table 2.5 Start-up and ongoing cost categories for the regulator

Cost category	Unit cost (\$2020)
Start-up costs (one-off)	
Capital investment costs for any new systems or upgrade of old systems	2,000,000
Administration costs of developing a register of operators or licensees	179,360
Education/marketing costs related to more proactive engagement with industry	763,487
Ongoing costs (annual)	
Staff and administration costs of maintaining/updating registers	179,360
Ongoing education/marketing costs	134,520 per year & \$3 materials costs per operator
Administration costs related to audits *	\$25 per audited operator

Note: \* applies to licensing options only. Source: Deloitte Access Economics (2020).

## 2.3.1.2 Start-up costs

The **capital investment cost** for the NHVR of establishing an enrolment or licensing regime is estimated at \$2 million. In 2019-20, the NHVR spent \$5 million on the development of the Safety and Compliance Regulatory Platform (SCRP).<sup>xxx</sup> The SCRP links operator information such as registration information, accreditation status and intercept information. It is assumed that the development of a database that collects further detail on operators, such as the nature and scale of operations, could be an upgrade to the SCRP rather than a new system. As such, the capital investment cost related to enrolment and licensing options would be lower than \$5 million.

In Frontier Economics' 2016 cost-benefit analysis of options for ensuring compliance with heavy vehicle roadworthiness standards under the HVNL, \$1.2 million is estimated as the cost for data collection and analysis to enable risk criteria.<sup>xxxi</sup> This is an estimate provided by the NHVR and provides a lower bound for the capital costs associated with collecting and analysing operator data under the assurance options in the RIS.

Based on these two estimates, it has been assumed that \$2 million would be needed by the NHVR to upgrade the SCRP to enable additional capability for enrolment and licensing schemes.

The NHVR will also require **administration time to develop a register of enrolees or licensees**. Frontier Economics' 2016 analysis of heavy vehicle schemes estimated that two additional staff per year would be needed to develop operational improvements to the NHVAS, at a cost of \$127,000, or 1.5 Full-Time Equivalent (FTE), per year.<sup>xxxii</sup>

It is assumed that developing a register would take a similar but slightly higher amount of staff time for the first year of operation. Converting the above figure to two FTE and inflating to current dollars equates to a cost of \$179,360.

**Education and marketing costs** will also be incurred to enable more proactive engagement with the industry, as outlined in the RIS (see footnote 86).<sup>xxxiii</sup> It is likely that this will comprise an communications campaign to ensure that operators are aware of the changes, for example through road shows, social media marketing and communications materials such as mailouts.

It is assumed that 1.5 FTE will be required to market the new system in its first year of operation, costed at \$134,520 using the FTE method outlined above. Based on internal information from previous work done by Deloitte Access Economics, physical education and marketing costs such as sending mailouts are estimated to average around five times the cost of staff time. This represents \$628,967 in non-staff costs, leading to a total of \$763,487 in upfront marketing costs.

#### 2.3.1.3 Ongoing costs

Following the development of a register of operators, the NHVR will need to incur **staff and administration costs to maintain and update the register**. It is assumed that this will also require two FTE at a cost of \$179,360 per year.

Similarly, the NHVR is likely to incur **ongoing education and marketing costs** to ensure that operators are engaged with the chosen assurance scheme. This is assumed to require 1.5 FTE per year, at an annual cost of \$134,520, as well as ongoing materials costs assumed to be \$3 per operator.

The final ongoing cost for the NHVR is annual administration costs associated with **audits**. This cost is applicable only for the licensing options and refers to the costs incurred in collecting and analysing data from audits. This is assumed to require 30 minutes of staff time per audit. Based on the FTE method used for other regulator costs, 30 minutes of staff time costs the regulator \$25 per audit.

To determine the annualised cost of analysing audits, the frequency of audits also needs to be derived. Under the NHVAS and TruckSafe, accreditation periods (and therefore the time between audits) typically last for two years, while accreditation under the WAHVAS is annual.<sup>xxxiv</sup> Therefore, operators are expected to be audited every two years under licensing options in the RIS, leading to an annualised audit analysis cost to the regulator of \$12 per operator.

#### 2.3.2 Operator costs

Table 2.6 presents the cost categories assumed to be incurred by operators involved in the enrolment and licensing options. Each of the costs reflect the cost per operator and are differentiated based on the size of the operator.

#### Commercial-in-confidence

Table 2.6 Start-up and ongoing cost categories for operators

Cost category	Operator Size	Unit cost (\$2020)
Start-up costs (one-off)		
Cost of initial creation, review or upgrade of a SMS	Small	10,000
	Medium	15,000
	Large	25,000
Staff and administration costs of enrolling or applying	Small	83
for a license	Medium	167
	Large	333
License fee *	Small	283
	Medium	567
	Large	933
Ongoing costs (annual)		
Administration costs of updating enrolment details	Small	42
	Medium	83
	Large	167
Administration costs of updating license details and	Small	142
payment of license fee *	Medium	283
	Large	467
Audit cost *	Small	1,917
	Medium	3,750
	Large	5,000
Inspection cost *	Small	550
	Medium	3,429
	Large	49,636

Note: \* applies to licensing options only.

Source: Deloitte Access Economics (2020).

## 2.3.2.2 Start-up costs

The RIS states that under the licensing options, operators would be required to use a regulator-approved **Safety Management System**, as part of an 'enhanced NHVAS' with a greater number of modules. Advice from the Deloitte Risk Advisory team, who manage implementation of SMSs for many clients, indicated that the cost of an SMS is typically between \$10,000 and \$15,000. These figures were tested and verified against other publicly available information. In particular, Frontier Economics estimated the one-off compliance cost related to 'developing and implementing compliant vehicle maintenance processes and procedures' to be \$25,000, noting that this would vary based on operator size and other factors.<sup>xxxv</sup>

Using these estimates, it is assumed that to create a new SMS would cost:

- \$10,000 for a small operator
- \$15,000 for a medium operator
- \$25,000 for a large operator.

SMSs are already implemented by some operators to manage safety risks in their businesses. The NHVR recently surveyed nearly 4,000 operators to find that 62% of the industry have a basic SMS.

#### Commercial-in-confidence

This is relatively consistent across different groups, for example with 66% of operators in a heavy vehicle accreditation scheme having a basic SMS.<sup>xxxvi</sup>

It is likely that a basic SMS will be regulator-approved for small operators. However, medium and large operators are likely to need a more comprehensive system to comply with new regulations, requiring those with an existing SMS to update it under the licensing options in the RIS. The NHVR survey also found that a slightly lower share of the sample of responding large operators reported having a basic SMS compared to the sample of large and small operators (56% of businesses with 101 to 200 vehicles).<sup>xxxvii</sup>

Therefore, the analysis presented in the report assumed 62% of small operators have a basic SMS and incur half the cost of a new SMS to upgrade their current system. The remaining 38% pay the full \$10,000. Further, nearly all medium and large operators incur the full cost of a new SMS, as it assumed that those currently with an SMS would require an overhaul to comply with the new system. A small share of medium and large operators is excluded from this cost – those that are accredited under TruckSafe, which are required to have an SMS.

Operators will also incur upfront **staff and administration costs of enrolling or applying for a license**. This is assumed to require time from administration staff and a compliance officer, with more time required for larger businesses, as presented in Table 2.7.

Operator size	Administration time	Compliance officer
Small	2	1
Medium	4	2
Large	8	4

Table 2.7 Staff time to enrol or apply for a license by operator size

Source: Deloitte Access Economics (2020).

Staff time was monetised using salary assumptions from Houston Kemp's report for the NHVR on the economic benefits of heavy vehicle regulatory reform.<sup>xxxviii</sup>

Under licensing options, operators are assumed to pay an upfront **license fee**. This is estimated in this report based on the license fees under current accreditation programs. The WAHVAS requires an accreditation fee of \$225, while the upfront cost of accreditation in each of the four NHVAS modules is \$398 (excluding the per vehicle costs).<sup>xxxix</sup> Using these estimates as a range, and given that the NHVAS fee would be higher when including the per vehicle costs for large operators, this report assumes that the license fee is:

- \$200 for small operators
- \$400 for medium operators
- \$600 for large operators.

#### 2.3.2.3 Ongoing costs

Operators are expected to **update and maintain registration information** in the enrolment and licensing options. This is likely to be less than the initial cost of providing this information to the regulator. It is assumed that the annual administration cost of updating enrolment or license details is half the cost of applying for enrolment or a license.

**Payments of license fees** are assumed to occur at the frequency of current accreditation periods, which are typically two years. The annual cost of repayment is therefore calculated as one-half of the upfront license fee.

Operators under licensing are assumed to be subject to **audits**. Audits can impose a significant cost burden on operators in terms of preparing for audits, closing out any actions arising from the audit and paying the auditor.

#### Commercial-in-confidence

To determine the cost of preparing for and closing audits, this report uses a case study of an operator provided by the NTC in its eighth Issues Paper for the review of the HVNL, which indicated that preparation for each audit can require 'two or more office staff for two to three days.'<sup>xl</sup> Using this example, The assumptions used in this analysis for the amount of staff time and days required to prepare for an audit are presented in Table 2.8. It is assumed that the same amount of time is required to close an audit. Staff time is then monetised using the estimated salary of administration staff described in Section 2.3.2.2.

Table 2.8 Staff numbers and time to prepare for an audit

Operator size	Administration staff time	Days	
Small	2	2	
Medium	3	2.5	
Large	4	3	

Source: National Transport Commission (2018) and Deloitte Access Economics (2020).

The cost of paying for the auditor is based on consultation with Deloitte's Risk Advisory team, which indicated that a large operator would pay around \$6,000 in audit costs. It is assumed that a medium operator would pay \$5,000 and a small operator \$2,500.

Adding these costs together, the annual per operator cost of complying with audit requirements is multiplied by the share of operators not currently subject to audits through accreditation schemes, as described in Section 2.2.6.1. Audits are also expected to occur every two years for each operator, as discussed in Section 2.3.1.3.

**Inspections** are also assumed to be part of licensing options. To calculate the cost of compliance with annual inspections, the number of relevant operators in each option was first multiplied by the share of operators that are not currently subject to inspections (discussed in 2.2.6.2).

Second, it is assumed that vehicle inspections are incurred every year and for every vehicle. This is consistent with state requirements, requirements under the NHVAS, and the assumptions used in Box 19 in the RIS.<sup>xii</sup> This requires an estimate of the typical number of vehicles per operator, by size.

Using vehicle fleet data from NatRoad, NSW Roads and Maritime Services estimated that small operators own 1.7 powered vehicles on average, medium operators own 10.6 powered vehicles on average, and large operators own 258.8 powered vehicles on average.<sup>xlii</sup> Given that this is a NSW estimate that is likely to reflect only hire and reward operators, the powered vehicles per operator figure for large operators was adjusted to be consistent with the total number of rigid and articulated vehicles reported in the ABS Survey of Motor Vehicle Use.<sup>xliii</sup> The results are shown in Table 2.9.

Table 2.9 Average number of vehicles per operator by operator size

Operator size	Average number of powered vehicles per operator
Small	1.7
Medium	10.6
Large	153.5

Source: NSW Roads and Maritime Services (2013) and Deloitte Access Economics (2020).xliv

The estimates in Table 2.9 reflect powered vehicles only. It is highly likely that trailers owned by heavy vehicle operators would also be inspected under licensing options. Therefore, this report also estimates the number of trailers per operator by using the best publicly available information on trailer numbers in Australia. The Australian Road Transport Suppliers Association's (ARTSA)

latest report provides information on new trailer and truck registrations from 2014 to 2020. This data shows that, on average, there is one trailer registration for every two powered vehicles (this includes rigid truck and prime mover registrations). This is accounted for in this report by multiplying the figures in Table 2.9 by 1.5, to estimate the number of vehicles (powered plus trailers) per operator, on average. It is acknowledged that the ratio for trailers to power vehicles would be higher for operators who operate only articulated trucks. However, this approach will produce estimates that are accurate when looking at the industry as a whole.

Finally, the number of powered and trailer vehicles for each operator size is multiplied by the cost of an inspection. The per vehicle inspection cost for an operator is based on a survey of operators and found to be approximately \$211 in current dollars.<sup>xiv</sup>

# 3 Key findings

# 3.1 Number of operators affected by option

The number of hire and reward operators, ancillary operators and both types of operators that will be affected in some way by the enrolment and licensing options in the RIS is presented in Table 3.1. Not all operators listed below will have to incur additional costs related to RIS assurance schemes, for example operators that are already accredited will not have to incur additional audit costs under licensing schemes.

The data in the table indicates that Option 7.1 (c) will affect every operator in the industry, while 7.1 (d) (i) would affect the smallest number of operators. Options 7.1 (b) and 7.1 (d) (ii) both affect approximately 41% of all operators. This is similar to the share affected by 7.1 (c) (ii), as the majority of hire and reward operators are 8 tonnes and greater.

The number of affected operators for the HVNL States (Queensland, New South Wales, Australian Capital Territory, Victoria, Tasmania, and South Australia), and Western Australia and the Northern Territory are presented in Table 3.2 and Table 3.3, respectively. As expected, the majority of operators are represented in the HVNL States. Western Australian and Northern Territory operators would only be affected if their respective state governments chose to join the HVNL, or if they needed to travel into HVNL jurisdictions.

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#### Table 3.1 Total number of operators affected by each option, Australia (2021)

Option	Voluntary	Compulsory	Hire & reward operators	Ancillary operators	All operators
7.1 (a)	All	None, but prerequisites	8,549	8,226	16,775 (11%)
7.1 (b)	All	RAVs	22,827	36,972	59,799 (41%)
7.1 (c) (i)	NA	All	55,936	90,926	146,862 (100%)
7.1 (c) (ii)	NA	H&R & >8t	52,712	-	52,712 (36%)
7.1 (d) (i)	NA	Dangerous goods	1,261	2,049	3,310 (2%)
7.1 (d) (ii)	NA	RAVs	22,662	36,838	59,500 (41%)

Source: Deloitte Access Economics (2020).



Table 3.2 Total number of operators affected by each option, HVNL States (2021)

Option	Voluntary	Compulsory	Hire & reward operators	Ancillary operators	All operators
7.1 (a)	All	None, but prerequisites	7,633	7,330	14,963 (11%)
7.1 (b)	All	RAVs	20,430	33,092	53,523 (41%)
7.1 (c) (i)	NA	All	50,116	81,466	131,581 (100%)
7.1 (c) (ii)	NA	H&R & >8t	47,227	-	47,227 (36%)
7.1 (d) (i)	NA	Dangerous goods	1,128	1,834	2,963 (2%)
7.1 (d) (ii)	NA	RAVs	20,285	32,974	53,259 (40%)

Source: Deloitte Access Economics (2020).



Table 3.3 Total number of operators affected by each option, Western Australia and Northern Territory (2021)

Option	Voluntary	Compulsory	Hire & reward operators	Ancillary operators	All operators
7.1 (a)	All	None, but prerequisites	916	896	1,812 (12%)
7.1 (b)	All	RAVs	2,396	3,879	6,276 (41%)
7.1 (c) (i)	NA	All	5,820	9,461	15,281 (100%)
7.1 (c) (ii)	NA	H&R & >8t	5,485	-	5,485 (36%)
7.1 (d) (i)	NA	Dangerous goods	132	215	348 (2%)
7.1 (d) (ii)	NA	RAVs	2,377	3,864	6,240 (41%)

Source: Deloitte Access Economics (2020).

# **3.2 Total costs by option**

This section presents the total costs of each option, as NPVs using a 7% real discount rate from 2021 to 2050.

The cost of different options varies significantly, as shown in Table 3.4. Enrolment options are very low cost relative to other options, and even when applying to a large share of operators as in Option 7.1 (b), are much less expensive for industry due to the much smaller burden on individual operators associated with enrolment. In contrast, Option 7.1 (c) (i) costs \$6.5 billion over the period 2021 to 2050, driven by the significant costs to operators of implementing SMSs and undertaking audits and vehicle inspections.

Table 3.5 presents the cost of the assurance options in the RIS for the HVNL states. The results are similar for all of Australia, demonstrating that the costliest options are the licensing options that cover a large number of operators. In contrast, enrolment options and options that reflect a subset of industry, such as Option 7.1 (d) (i), are relatively inexpensive.

Chart 3.1 compares the total cost of the four licensing sub-options for the HVNL States, split by operator and regulator cost. This illustrates the significant cost for operators associated with Options 7.1 (c) (i) and 7.1 (d) (ii), which cover a high share of the industry.



Chart 3.1 Total cost for licensing options, HVNL States (\$2020, millions, NPV 2021 to 2050)

Source: Deloitte Access Economics (2020).

Costs for Western Australia and Northern Territory are outlined in Table 3.6.

Appendix A presents the costs in Table 3.4 to Table 3.6 for the 10-year period from 2021 to 2030, for comparison with other cost estimates in the RIS. This shows that, for example, the total cost for all Australian operators of Option 7.1 (a) is \$15 million over a 10-year period rather than \$26 million over a 30-year period. The 10-year estimate is more than one-third of the 30-year estimate due to fixed costs for the regulator and operators.

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Table 3.4 Total cost by each option, Australia (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Operator cost	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	18.8	7.1	25.9
7.1 (b)	All	RAVs	49.4	8.9	58.4
7.1 (c) (i)	NA	All	6,461.4	38.9	6,500.3
7.1 (c) (ii)	NA	H&R & >8t	2,109.6	18.0	2,127.7
7.1 (d) (i)	NA	Dangerous goods	167.6	7.1	174.7
7.1 (d) (ii)	NA	RAVs	3,200.5	19.5	3,220.0

Source: Deloitte Access Economics (2020).

Table 3.5 Total cost by each option, HVNL States (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	<b>Operator cost</b>	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	16.7	7.0	23.7
7.1 (b)	All	RAVs	44.1	8.7	52.8
7.1 (c) (i)	NA	All	5,763.0	35.5	5,798.5
7.1 (c) (ii)	NA	H&R & >8t	1,932.4	16.8	1,949.2
7.1 (d) (i)	NA	Dangerous goods	150.1	7.0	157.1
7.1 (d) (ii)	NA	RAVs	2,804.4	18.2	2,822.5

Note: Costs for the HVNL states are calculated based on the difference between the total cost for Australia and the cost for Western Australia and the Northern Territory. Regulator costs for the HVNL States and Western Australia and the Northern Territory do not sum to the regulator costs for Australia, due to the presence of fixed regulator costs regardless of geographies.

Source: Deloitte Access Economics (2020).



Table 3.6 Total cost by each option, Western Australia and Northern Territory (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	<b>Operator cost</b>	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	2.1	6.4	8.5
7.1 (b)	All	RAVs	5.3	6.6	11.9
7.1 (c) (i)	NA	All	495.0	9.7	504.7
7.1 (c) (ii)	NA	H&R & >8t	148.3	7.6	155.9
7.1 (d) (i)	NA	Dangerous goods	15.4	6.4	21.9
7.1 (d) (ii)	NA	RAVs	305.5	7.7	313.3

Note: Regulator costs for the HVNL States and Western Australia and the Northern Territory do not sum to the regulator costs for Australia, due to the presence of fixed regulator costs regardless of geographies. Source: Deloitte Access Economics (2020).

# 3.3 Hire and reward and ancillary operator costs by option

Operator costs for Australian operators are split by hire and reward operators and ancillary operators in Table 3.7. Due to the smaller share of hire and reward operators in the industry, costs for ancillary operators are higher than costs of hire and reward operators.

Table 3.8 splits operator costs by operator type for the HVNL states, presenting a similar pattern to that in Table 3.7. Chart 3.2 presents the split in operator costs for the HVNL states by hire and reward operators and ancillary operators. A higher share of costs is attributed to ancillary operators for most licensing options, as ancillary operators represent a higher share of operator numbers. There are no costs for ancillary operators under Option 7.1 (c) (ii), as this option targets hire and reward operators only.

#### Operator costs for Western Australia and the Northern Territory are presented in Table 3.9.



Chart 3.2 Operator costs for licensing options, HVNL States (\$2020, millions, NPV 2021 to 2050)

Source: Deloitte Access Economics (2020).

The results in the following tables are presented over a 10-year period in Appendix A.

#### Commercial-in-confidence



#### Table 3.7 Operator costs by each option, Australia (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	9.0	9.8	18.8
7.1 (b)	All	RAVs	18.9	30.5	49.4
7.1 (c) (i)	NA	All	2,461.0	4,000.4	6,461.4
7.1 (c) (ii)	NA	H&R & >8t	2,109.6	-	2,109.6
7.1 (d) (i)	NA	Dangerous goods	63.8	103.7	167.6
7.1 (d) (ii)	NA	RAVs	1,219.0	1,981.5	3,200.5

Source: Deloitte Access Economics (2020).

Table 3.8 Operator costs by each option, HVNL States (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	8.0	8.7	16.7
7.1 (b)	All	RAVs	16.9	27.2	44.1
7.1 (c) (i)	NA	All	2,195.0	3,568.0	5,763.0
7.1 (c) (ii)	NA	H&R & >8t	1,932.4	-	1,932.4
7.1 (d) (i)	NA	Dangerous goods	57.2	92.9	150.1
7.1 (d) (ii)	NA	RAVs	1,068.1	1,736.3	2,804.4

Source: Deloitte Access Economics (2020).



Table 3.9 Operator costs by each option, Western Australia and Northern Territory (\$2020, millions, NPV 2021 to 2050)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	1.0	1.1	2.1
7.1 (b)	All	RAVs	2.0	3.3	5.3
7.1 (c) (i)	NA	All	266.0	432.4	698.4
7.1 (c) (ii)	NA	H&R & >8t	177.2	-	177.2
7.1 (d) (i)	NA	Dangerous goods	6.7	10.8	17.5
7.1 (d) (ii)	NA	RAVs	150.9	245.2	396.1

Source: Deloitte Access Economics (2020).

# 3.4 Impact on individual operators by option

The assurance options in the RIS will have two main cost impacts on individual operators:

- the introduction of, or increase in, compliance costs as discussed in this report; and
- increased NHVR registration charges.

#### 3.4.1 Compliance costs

The impact on individual operators by size and type of assurance model is presented in Table 3.10. These estimates include both start-up and ongoing costs and are estimated for the period 2021 to 2050, as above. Enrolment options mostly include staff time, while licensing options require operators to introduce safety systems and undertake audits and inspections, leading to significantly higher costs related to licensing. Large operators are particularly affected by licensing options, as these are associated with significant per vehicle inspection costs.

Table 3.10 Operator costs by size (\$2020, millions, NPV 2021 to 2050)

Operator Type	Enrolment	Licensing	
Small	556	39,538	
Medium	1,112	100,170	
Large	2,224	656,512	

Source: Deloitte Access Economics (2020).

#### 3.4.2 Registration charges

As well as the compliance costs associated with a new assurance model, operators are likely to incur increased registration charges to fund the NHVR. Operators pay annual registration charges as well as fuel-based user charges, the former of which are split into a 'road component' and 'regulatory component'. The 'regulatory component' is provided to the NHVR and will increase if the NHVR experiences additional costs under the assurance options presented in the RIS.<sup>xlvi</sup>

Table 3.11 and Table 3.12 present the current total registration charge (as depicted in the NTC's PAYGO Model) for Division 1 and Division 2 respectively for July 2020 to June 2021, including both the road component and regulatory component. Table 3.13 depicts these charges for a sample of vehicle classes. These are based on the NTC's PAYGO Model, which is used by the commission to determine annual charges and incorporates an assumed NHVR budget.<sup>xlvii</sup>

Table 3.11 Current total registration charges: Division 1 – Load carrying vehicles, 1 July 2020 to 30 June 2021

Vehicle Type	2-axle	3-axle	4-axle	5-axle
Trucks				
Truck (type 1)	620	1,013	1,036	1,036
Truck (type 2)	996	1,164	1,192	1,192
Short combination truck	1,023	1,187	2,094	2,094
Medium combination truck	9,771	9,771	10,553	10,553
Long combination truck	13,508	13,508	13,508	13,508
Prime movers				
Short combination prime mover	1,120	4,593	4,909	4,909
Multi-combination prime mover	11,545	11,545	12,700	12,700

Source: National Transport Commission (2020).xIviii

#### Commercial-in-confidence

Table 3.12 Current total registration charges: Division 2 – Load carrying vehicles, 1 July 2020 to 30 June 2021

Trailer type (charges per axle)	Single	Tandem axle group	Tri-axle group	Quad-axle group and above
Pig trailer	683	655	646	641
Dog trailer	683	655	646	641
Semi trailer	683	825	585	439
B-double lead trailer and B-triple lead and middle trailers	683	825	585	439
Converter dolly or low loader dolly	55	28	18	14

Source: National Transport Commission (2020) and Deloitte Access Economics (2020).xlix

Table 3.13 Current total registration charges: Sample of vehicle classes, 1 July 2020 to 30 June 2021

Vehicle class	Charge
Rigid trucks: 2 axles: no trailer: $4.5 < \text{GVM} \le 7.0 \text{ t}$	620
Rigid trucks: 2 axles: no trailer: 7.0 < GVM $\leq$ 12.0 t	620
Rigid trucks: 2 axles: no trailer: GVM > 12.0 t	996
Rigid trucks: 2 axles: with trailer: GCM $\leq$ 42.5 t	2,019
Rigid trucks: 3 axles: no trailer: $4.5 < \text{GVM} \le 18.0 \text{ t}$	1,013
Rigid trucks: 3 axles: no trailer: GVM > 18.0 t	1,164
Rigid trucks: 3 axles: with trailer: GCM $\leq$ 42.5 t	3,125
Rigid trucks: 4 axles: no trailer: $4.5 < \text{GVM} \le 25.0 \text{ t}$	1,036
Rigid trucks: 4 axle: no trailer: GVM > 25.0 t	1,192
Rigid trucks: 4 axles: with trailer: GCM $\leq$ 42.5 t	4,033
Rigid trucks: 3,4+ axles: with trailer: GCM > 42.5 t	12,023
Articulated trucks: single trailer: 3 axle rig	1,802
Articulated trucks: single trailer: 4 axle rig	2,770
Articulated trucks: single 3 axle trailer: 5 axle rig	2,875
Articulated trucks: single 2 axle trailer: 5 axle rig	6,243
Articulated trucks: single trailer: 6 axle rig	6,348
Articulated trucks: B-double: < 9 axle rig	14,950
Articulated trucks: B-double: $\geq$ 9 axle rig	15,056
Articulated trucks: B-triple	16,811
Articulated trucks: Road train: 2 trailers	15,111
Articulated trucks: Road train: 3 trailers	16,921
Articulated trucks: single trailer: > 6 axle rig	6,348
Other trucks	1,356

Source: National Transport Commission (2020) and Deloitte Access Economics (2020).<sup>1</sup>

To demonstrate the increase in registration charges associated with the assurance options, the regulatory variable costs in 2021 for the HVNL States were added to the model to determine the change in the total charge. The regulatory costs in 2021 are fixed costs that are the same for each

model. Therefore, the following tables depict the increase in charges that could be incurred in 2021 regardless of which option is pursued.

The tables show that the increase in charges for each vehicle or trailer type (shown in brackets) is modest due to the small percentage increase in the regulatory budget. Table 3.16 indicates that articulated trucks with B-doubles, B-triples and road trains would experience the largest increase in registration charges.

Part of the reason for the small change in registration charges is the assumption that all audit costs (apart from analysis of audit data) would be directly paid by the trucking operators. This means that the bulk of the costs of the regulation are being directly paid by the industry.

Vehicle Type	2-axle	3-axle	4-axle	5-axle
Trucks				
Truck (type 1)	624 (+4)	1018 (+5)	1041 (+6)	1041 (+6)
Truck (type 2)	1001 (+5)	1170 (+6)	1198 (+7)	1198 (+7)
Short combination truck	1028 (+5)	1193 (+7)	2101 (+7)	2101 (+7)
Medium combination truck	9783 (+12)	9783 (+12)	10566 (+13)	10566 (+13)
Long combination truck	13525 (+17)	13525 (+17)	13525 (+17)	13525 (+17)
Prime movers				
Short combination prime mover	1128 (+9)	4602 (+9)	4918 (+9)	4918 (+9)
Multi-combination prime mover	11565 (+20)	11565 (+20)	12722 (+22)	12722 (+22)

Table 3.14 Division 1 – Load carrying vehicles under Options 7.1 (a) – (d), 1 July 2020 to 30 June 2021

Note: figures in brackets represent the dollar change in registration charge relative to the current charges. Source: National Transport Commission (2020) and Deloitte Access Economics (2020).<sup>II</sup>

Table 3.15 Division 2 – Load carrying vehicles under Options 7.1 (a) – (d), 1 July 2020 to 30 June 2021

Trailer type (charges per axle)	Single	Tandem axle group	Tri-axle group	Quad-axle group and above
Pig trailer	683 (+0)	655 (+0)	646 (+0)	641 (+0)
Dog trailer	683 (+0)	655 (+0)	646 (+0)	641 (+0)
Semi trailer	683 (+0)	825 (+0)	585 (+0)	439 (+0)
B-double lead trailer and B-triple lead and middle trailers	683 (+0)	825 (+0)	585 (+0)	439 (+0)
Converter dolly or low loader dolly	55 (+0)	28 (+0)	18 (+0)	14 (+0)

Note: figures in brackets represent the dollar change in registration charge relative to the current charges. Source: National Transport Commission (2020) and Deloitte Access Economics (2020).

Table 3.16 Sample of vehicle classes under Options 7.1 (a) - (d), 1 July 2020 to 30 June 2021

Vehicle class	Charge
Rigid trucks: 2 axles: no trailer: $4.5 < \text{GVM} \le 7.0 \text{ t}$	624 (+4)
Rigid trucks: 2 axles: no trailer: 7.0 < GVM $\leq$ 12.0 t	624 (+4)
Rigid trucks: 2 axles: no trailer: GVM > 12.0 t	1001 (+5)
Rigid trucks: 2 axles: with trailer: GCM $\leq$ 42.5 t	2,025 (+5)
Rigid trucks: 3 axles: no trailer: $4.5 < \text{GVM} \le 18.0 \text{ t}$	1,018 (+5)
Rigid trucks: 3 axles: no trailer: GVM > 18.0 t	1,170 (+6)
Rigid trucks: 3 axles: with trailer: GCM $\leq$ 42.5 t	3,132 (+7)
Rigid trucks: 4 axles: no trailer: $4.5 < \text{GVM} \le 25.0 \text{ t}$	1,041 (+6)
Rigid trucks: 4 axle: no trailer: GVM > 25.0 t	1,198 (+7)
Rigid trucks: 4 axles: with trailer: GCM $\leq$ 42.5 t	4,039 (+7)
Rigid trucks: 3,4+ axles: with trailer: GCM > 42.5 t	12,035 (+12)
Articulated trucks: single trailer: 3 axle rig	1,811 (+9)
Articulated trucks: single trailer: 4 axle rig	2,779 (+9)
Articulated trucks: single 3 axle trailer: 5 axle rig	2,884 (+9)
Articulated trucks: single 2 axle trailer: 5 axle rig	6,252 (+9)
Articulated trucks: single trailer: 6 axle rig	6,357 (+9)
Articulated trucks: B-double: < 9 axle rig	14,971 (+20)
Articulated trucks: B-double: $\geq$ 9 axle rig	15,076 (+20)
Articulated trucks: B-triple	16,831 (+20)
Articulated trucks: Road train: 2 trailers	15,131 (+20)
Articulated trucks: Road train: 3 trailers	16,941 (+20)
Articulated trucks: single trailer: > 6 axle rig	6,357 (+9)
Other trucks	1,360 (+4)

Note: figures in brackets represent the dollar change in registration charge relative to the current charges. Source: National Transport Commission (2020) and Deloitte Access Economics (2020).

# Appendix A Costs for a 10-year period

The costs presented in Chapter 3 are calculated as an NPV using a 7% real discount rate over a 30-year period from 2021 to 2050. For comparison with other costs in the RIS, this Appendix presents the main cost estimates as NPVs over the 10-year period from 2021 to 2030.

# A.1. Total costs by option

Table A.1 Total cost by each option, Australia (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	Operator cost	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	10.0	5.0	15.0
7.1 (b)	All	RAVs	26.3	5.9	32.2
7.1 (c) (i)	NA	All	3,610.7	20.0	3,630.7
7.1 (c) (ii)	NA	H&R & >8t	1,196.4	10.2	1,206.6
7.1 (d) (i)	NA	Dangerous goods	93.4	5.0	98.4
7.1 (d) (ii)	NA	RAVs	1,763.2	10.9	1,774.1

Source: Deloitte Access Economics (2020).

Table A.2 Total cost by each option, HVNL States (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	Operator cost	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	8.9	5.0	13.8
7.1 (b)	All	RAVs	23.5	5.7	29.2
7.1 (c) (i)	NA	All	3,222.7	18.4	3,241.1
7.1 (c) (ii)	NA	H&R & >8t	1,092.0	9.6	1,101.6
7.1 (d) (i)	NA	Dangerous goods	83.6	5.0	88.6
7.1 (d) (ii)	NA	RAVs	1,549.6	10.2	1,559.8

Note: Costs for the HVNL states are calculated based on the difference between the total cost for Australia and the cost for Western Australia and the Northern Territory. Regulator costs for the HVNL States and Western Australia and the Northern Territory do not sum to the regulator costs for Australia, due to the presence of fixed regulator costs regardless of geographies.

Source: Deloitte Access Economics (2020).



Table A.3 Total cost by each option, Western Australia and Northern Territory (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	<b>Operator cost</b>	Regulator cost	Total cost
7.1 (a)	All	None, but prerequisites	1.1	4.7	5.8
7.1 (b)	All	RAVs	2.8	4.8	7.6
7.1 (c) (i)	NA	All	388.0	6.3	394.3
7.1 (c) (ii)	NA	H&R & >8t	104.4	5.2	109.6
7.1 (d) (i)	NA	Dangerous goods	9.7	4.7	14.4
7.1 (d) (ii)	NA	RAVs	213.7	5.3	219.0

Note: Regulator costs for the HVNL States and Western Australia and the Northern Territory do not sum to the regulator costs for Australia, due to the presence of fixed regulator costs regardless of geographies. Source: Deloitte Access Economics (2020).



# A.2. Hire and reward and ancillary operator costs by option

Table A.4 Operator costs by each option, Australia (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	4.8	5.2	10.0
7.1 (b)	All	RAVs	10.1	16.2	26.3
7.1 (c) (i)	NA	All	1,375.2	2,235.5	3,610.7
7.1 (c) (ii)	NA	H&R & >8t	1,196.4	-	1,196.4
7.1 (d) (i)	NA	Dangerous goods	35.6	57.8	93.4
7.1 (d) (ii)	NA	RAVs	671.6	1,091.7	1,763.2

Source: Deloitte Access Economics (2020).

Table A.5 Operator costs by each option, HVNL States (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	4.2	4.6	8.9
7.1 (b)	All	RAVs	9.0	14.5	23.5
7.1 (c) (i)	NA	All	1,227.4	1,995.2	3,222.7
7.1 (c) (ii)	NA	H&R & >8t	1,092.0	-	1,092.0
7.1 (d) (i)	NA	Dangerous goods	31.9	51.8	83.6
7.1 (d) (ii)	NA	RAVs	590.2	959.4	1,549.6

Source: Deloitte Access Economics (2020).



Table A.6 Operator costs by each option, Western Australia and Northern Territory (\$2020, millions, NPV 2021 to 2030)

Option	Voluntary	Compulsory	Hire and reward operators	Ancillary operators	Total operator cost
7.1 (a)	All	None, but prerequisites	0.5	0.6	1.1
7.1 (b)	All	RAVs	1.1	1.7	2.8
7.1 (c) (i)	NA	All	147.8	240.2	388.0
7.1 (c) (ii)	NA	H&R & >8t	104.4	-	104.4
7.1 (d) (i)	NA	Dangerous goods	3.7	6.0	9.7
7.1 (d) (ii)	NA	RAVs	81.4	132.3	213.7

Source: Deloitte Access Economics (2020).

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