Austroads

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# Consultation RIS – National Heavy Vehicle Driver Competency Framework

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# Contents

## Tables

## Figures



## Boxes

# Executive summary

## Introduction

The National Heavy Vehicle Driver Competency Framework (NHVDCF) was developed collaboratively by governments to establish minimum competency and assessment standards for heavy vehicle drivers across Australia. It is intended to provide a framework that is adopted by all jurisdictions in their heavy vehicle licensing regimes to ensure a nationally consistent approach to heavy vehicle driver training and competency assessment. Together the NHVDCF and the existing heavy vehicle licensing regimes exist to help protect all road users by ensuring heavy vehicle drivers are sufficiently competent to safely drive the vehicle they are seeking to operate.

At the request of transport ministers, Austroads has been undertaking an extensive program of work to review and improve the NHVDCF. In January 2022 ministers and National Cabinet also sought Austroads to include within this program of work, a competency-based licensing framework for heavy vehicle licence class progression.

This Consultation Regulation Impact Statement (Consultation RIS) is the next phase of that review. It focuses on identifying the incremental costs and benefits of reform options identified by Austroads.

The purpose of this Consultation RIS is to identify and assess whether there are ways to make the NHVDCF better, and specifically to seek feedback and comment from stakeholders on the problems identified, the options considered and the preliminary assessment of these options.

**Objectives of the reform**

The proposed reforms to the NHVDCF considered in this Consultation RIS are aimed at achieving the following objectives:

- delivering improved road safety outcomes with respect to heavy vehicles
- not compromising the availability of heavy vehicle drivers and supporting the use of high productivity vehicles
- providing reasonable access to heavy vehicle licences for social and personal benefit.

## Reform options being considered to make heavy vehicle driver licensing more focused on key risks

Heavy vehicle licensing regimes that focus on the most critical risk factors will help minimise the risk of heavy vehicle crashes and hence improve road safety outcomes. They will also help to minimise the regulatory burden borne by drivers, industry and government entities.

Industry input and research has identified the following as being key factors that influence the risk of a heavy vehicle driver crashing, and that are not currently adequately considered in the NHVDCF and in jurisdictional heavy vehicle licensing arrangements.

- *Experience*: The more experience a heavy vehicle driver has the less likely they are to crash, all other things being equal. However, the current licence progression system is based on tenure. Tenure does not guarantee that a person has had any, or substantive, behind-the-wheel experience. Instead, this places an arbitrary time-based barrier on a driver's ability to take on employment involving more complex heavy vehicles, which may exacerbate issues around driver shortages at higher licensing classes without delivering improvements in safety. In addition, there is evidence and industry support for increased focus on behind-the-wheel training and supervision as part of pre-, and potentially post-, licensing programs. There is also evidence to support the need for greater light vehicle experience for young drivers before they commence driving most heavy vehicles.
- *Past driving behaviour and offences*: Modelling undertaken in Victoria has found that heavy vehicle drivers with a past history of serious offences have a significantly higher risk of crashing. This risk factor is not considered in the heavy vehicle licensing regime.
- *Other knowledge and skills*: Some factors now understood to be important to improving the road safety awareness of heavy vehicle drivers are not currently covered or tested by the NHVDCF. These include hazard awareness and other core skills and knowledge necessary to safely drive a heavy vehicle such as how to secure loads, reverse, couple and uncouple trailers.

A summary of the reform options being considered to better account for these key risk factors is set out in the table below.

Each option builds upon the previous options. In other words Option 3 incorporates all the elements in Option 1 and 2 plus additional measures. It is important to note that the packaging of the proposed elements into three options does not imply that elements need to be introduced as a package. Therefore, it is possible that individual elements could be selected for introduction in the final agreed approach. Further detail on each reform option can be found in Section 5 of this document.

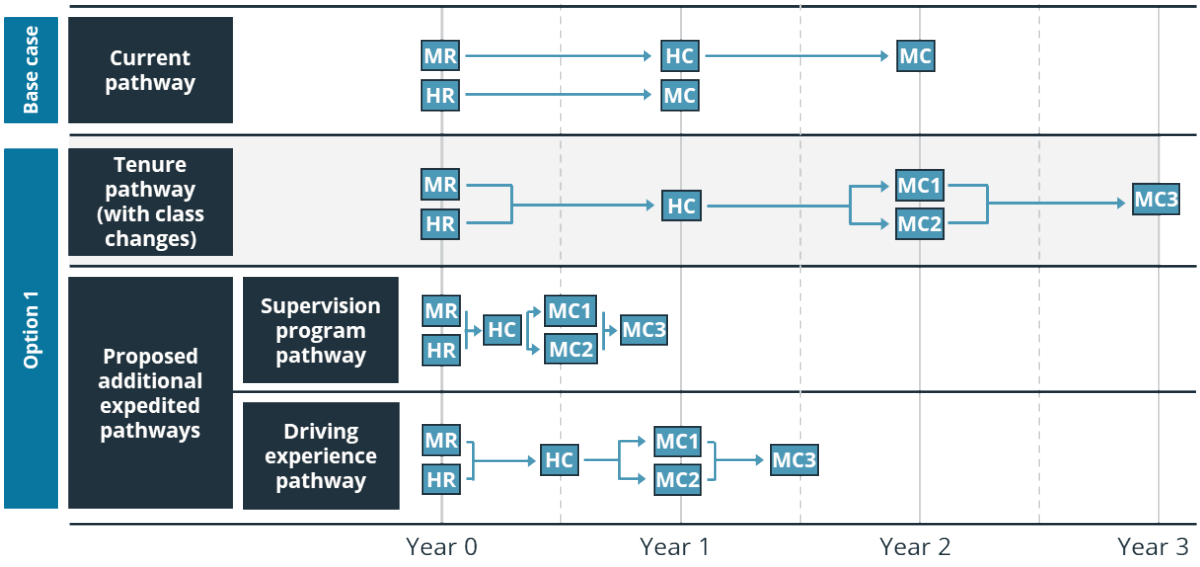
**Figure 1**: Overview of reform options to address Problem 1

| Option 1: Competency refresh | Option 2: Competency refresh plus eligibility criteria | Option 3: Competency refresh, eligibility criteria plus supervised driving |
|---|---|---|
| 1. Introduction of enhanced competencies<br>2. Online delivery of competencies and assessment<br>3. Introduction of new sub-classes for MC licence<br>4. Amendments to progressive licensing requirements<br>5. No skipping of HC class | Option 1 *plus*:<br>6. Applicants to demonstrate low-risk driving history<br>7. Applicants to hold an open/unrestricted C class licence to obtain a rigid licence | Option 2 *plus:*<br>8. Minimum requirements for post-licence supervised behind-the-wheel driving |

*Source: Austroads*

The introduction of two additional alternate progression approaches (under Option 1), which will operate in parallel with the current tenure-based criteria, provides the opportunity for drivers to take experience-based pathways to progress to higher vehicle classes more quickly. The impact of the new progression pathways, along with policy changes related to a requirement to hold an HC licence before progressing to an MC licence, and the introduction of three MC sub-classes, is shown in the figure below.

**Figure 2**: Time involved in moving through progression pathways under current tenure arrangements compared to new policy settings and pathways




*Source: Frontier Economics*

The results of the initial impact analysis for these reforms are summarised in the table below. As each option builds additional requirements on the preceding option, the cost increases correspondingly. This is reflected in the breakeven crash improvement increasing with each option.

**Table 1:** Summary of initial impact analysis

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| HV crash reduction required to make the reform net beneficial | 2–3% | 2–3% | 4–5% |
| Expected impact on driver availability and productivity outcomes | Positive | Unclear | Unclear |
| Providing access to heavy vehicle licences for social and personal benefit | Positive | Neutral | Neutral to negative |

*Source: Frontier Economics*

The key costs are incurred by licence applicants and industry, and relate to the introduction of the additional requirements that lengthen training courses and introduce additional supervised

driving. The benefits of reduced crashes accrue to both industry and society as a whole. Benefits to industry are expected to include reduced delays, improved productivity and reduced insurance premiums. Society more generally would also benefit from fewer lives being lost, avoided injuries and reduced on-road delays as a result of fewer heavy vehicle crashes.

The breakeven figures presented are based on initial single-point estimates of the costs of the reforms which will be subject to revision following feedback on the Consultation RIS. These figures should be considered indicative and subject to change. Through this Consultation RIS, we are seeking additional data or evidence that would help support or better understand the benefits and costs of each option.

**Box 1:** Approach and methodology used to assess the impacts of proposed reforms

For this Consultation RIS, an initial cost–benefit analysis (CBA) has been developed. The analysis looks to identify additional costs and benefits over and above a base case (business as usual).

The main benefit categories considered in this analysis relate to anticipated reductions in heavy vehicle crashes and improvements in industry productivity. The key cost categories include additional training and assessment costs for prospective drivers, supervised driving costs for industry, and implementation costs for governments.

A challenge for this assessment is that there is limited quantifiable evidence linking proposed policy changes with heavy vehicle crash-risk-reduction benefits. While data is available on the costs imposed by road accidents, there is much less certainty around the extent to which different driver competency-related policies contribute to the likelihood of an accident (for example the limitations of the MUARC research are detailed in Appendix G). This impacts on the estimation of how the different options might reduce this risk.

Given this uncertainty, the initial CBA is presented in the form of a breakeven analysis. This describes the level of heavy vehicle–related crash risk reductions which would be required in order for the option to deliver benefits which exceed the costs of the reform. Under this approach, stakeholders should focus on the reasonableness of the 'crash risk reduction assumptions' that would be needed to make a reform beneficial — i.e., in order for total benefits to outweigh total expected costs, resulting in a net benefit.

## Arrangements governing heavy vehicle training and assessment are affecting the quality of driver training

The practice and standards of approving heavy vehicle trainers and assessors varies between jurisdictions. Most jurisdictions have had issues with fraud, malpractice or poor standard of delivery by some training and assessment providers. Independent heavy vehicle driver trainers and assessors also face commercial pressures which are inconsistent with achieving socially optimal levels of driver competency. In addition, there is no feedback loop between training providers and operators on the competency of heavy vehicle drivers. These factors mean that heavy vehicle licences may be granted to drivers who do not meet the level of competency required to achieve the desired safety outcomes.

Reforms are also being considered to improve the quality of heavy vehicle driver training and assessment. The package of reforms includes the following three elements:

- Austroads to develop driver training and assessment material.
- Austroads to develop tools and materials to support a more consistent national approach to management of outsourced training provision.
- Introduction of minimum training hours including behind-the-wheel time.

Given the specifics of this reform package are still being finalised the impacts have not yet been assessed. However, they have be flagged in the Consultation RIS in order to elicit feedback.

It is expected that some degree of improvement in the quality of training and assessment should flow from this option. It is also anticipated there will be additional costs for Austroads to develop the driver training and assessment material and associated tools. In addition, licensing authorities and training providers will incur some costs with initial upskilling and introducing the new material. The introduction of minimum training hours including behind-the-wheel time will potentially impose costs on both training providers and licence applicants depending on how this relates to existing course lengths.

These impacts and implementation issues will be developed and further considered.

## Next steps

Austroads will undertake an extensive public consultation process in relation to the proposals and options explored in this Consultation RIS. The objective of this process is to gather additional evidence and data on the extent of the problem and to seek views on the benefits, costs and implementation challenges associated with the options outlined.

A range of material is available on the Austroads website at https://austroads.info/c-ris to assist industry in understanding what has been proposed (e.g., fact sheets, videos and frequently asked questions). The consultation and engagement process will include:

- a formal written submission process
- short questions on key elements of the proposed changes which can be used by people who only wish to provide comments on some aspects
- information updates as part of existing jurisdictional and other industry forums
- a webinar to be held approximately two weeks after RIS release which will be recorded and loaded on the Austroads website. Attendees can register for the webinar at https://austroads.info/c-ris-webinar.

**Formal submissions on the Consultation RIS and any responses to the short questions are requested by 28 October. Submissions and responses can be made through the Austroads website https://austroads.info/c-ris.**

For ease of reference, stakeholders are encouraged to refer to the relevant focus questions by number in their submissions. Where possible, responders are encouraged to provide case studies, data and evidence to support their views.

# 1 Introduction

## 1.1 Background

The heavy vehicle fleet comprises a range of vehicle types (trucks, buses and special purpose vehicles). Vehicles are used for a variety of purposes including for freight and passenger movement as well as ancillary support for a variety of business and community purposes.

General growth in population and the economy have driven an increase in the heavy vehicle fleet over time. In particular, the road freight task has increased markedly, growing at a compounding rate of 2.6% per annum over the last 20 years (when considering gross tonne-kilometres).[1] This has necessitated growth in both the heavy vehicle fleet and the number of heavy vehicle drivers.

With more heavy vehicles on the road it is important to ensure the drivers of these vehicles are able to safely operate them in order to minimise the number and severity of crashes.

Heavy vehicle driver licensing is one mechanism for doing this and is the responsibility of jurisdictional governments. The National Heavy Vehicle Driver Competency Framework (NHVDCF) was developed collaboratively by governments to establish minimum competency and assessment standards for heavy vehicle drivers across Australia.

## 1.2 The NHVDCF

The NHVDCF was endorsed in 2011 by the Standing Committee on Transport as part of a set of national road safety laws and guidelines.[2]

The scope of the NHVDCF is specified as follows: [3]

- *The set of training and competency assessment requirements that an applicant must satisfy for a Licensing Authority (LA) to deem the applicant competent to be issued with a heavy vehicle driver licence (HVDL); and*
- *The regulatory, policy and administrative arrangements to support the training and competency assessment process.*

While the NHVDCF states that it applies 'across all Australian jurisdictions,' [4] the framework has (to date) only been implemented in four jurisdictions: New South Wales, Tasmania, Victoria and the Northern Territory. As stated in Austroads 2018 review of the NHVDCF, 'despite substantive efforts to achieve harmonisation, much of which has been successful and is to be acknowledged, there remains considerable variation in jurisdictional practice with regard to heavy vehicle licensing.' [5] This includes variation between jurisdictions that have implemented the NHVDCF.

1 From 139 billion tonne-kilometres in 2000–01 to 230.1 billion tonne-kilometres in 2020–21. BITRE, *Australian infrastructure and transport statistics yearbook 2021*, December 2021.

2 Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.1.

3 Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.49.

4 Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.49.

5 Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.3.

The NHVDCF, and potential options to make changes to the framework, is the subject of this Consultation Regulation Impact Statement.

## 1.3 About this Regulation Impact Statement

The development of a Regulation Impact Statement (RIS) is a 2-stage process comprising the preparation of:

- a draft RIS for consultation (Consultation RIS)
- a final RIS to inform the decision-making body (Decision RIS).

This Consultation RIS focuses on the first four questions outlined below in Box 2. In other words, it seeks to articulate the policy problem and why government action is needed, outlines some policy options being considered to address these problems, and identifies the likely net benefit of each of these options. The Consultation RIS also seeks evidence to assist with further developing the options and their assessment.

Based on feedback received on the Consultation RIS and further consultation as outlined in Section 1.4, a Decision RIS will be prepared which responds to all seven questions. The Decision RIS provides an evidence base and recommendations for consideration in decision-making around the NHVDCF.

**Box 2:** Overview of the purpose and content of a Regulation Impact Statement

Guidance for undertaking a Regulation Impact Statement is provided by the Office of Best Practice and Regulation, with the regulatory impact analysis guide for ministers' meetings and national standard setting bodies[6] being a key point of reference for this RIS. The guidelines contain the following descriptions of the purpose and content of a RIS.

**Why regulatory impact analysis matters?**

Regulation is an essential part of running a well-functioning economy and society but it must be carefully designed so as not to have unintended or distortionary effects, such as imposing unnecessarily onerous costs on those affected by the regulations or restricting competition. Assessing the impact of regulation, including analysing the costs and benefits, is therefore important to ensure that it delivers the intended objective without unduly causing adverse effects.

Put simply, a major decision cannot be – and should not be – made without a RIS.

Regulation impact analysis is important because it helps policymakers focus on the potential impact of major decisions: in other words, the nature and extent of the impact on the community (including businesses, community organisations and individuals).

**The seven RIS questions**

One instructive section of this guidance distils the requirements for a Regulation Impact Statement down to seven key questions:

[6] Commonwealth of Australia, Department of the Prime Minister and Cabinet, *Regulatory impact analysis guide for ministers' meetings and national standard setting bodies*, May 2021.

1. What is the policy problem you are trying to solve?
2. Why is government action needed?
3. What policy options are to be considered?
4. What is the likely net benefit of each option?
5. Who was consulted and how was their feedback incorporated?
6. What is the best option from those considered?
7. How will the chosen option be implemented and evaluated?

*Source: Excerpts from the Office of Best Practice Regulation guidance. Commonwealth of Australia, Department of the Prime Minister and Cabinet, 'Regulatory impact analysis guide for ministers' meetings and national standard setting bodies' May 2021.*

## 1.4 Consultation and past analysis informing this RIS

At the request of transport ministers in 2017, Austroads has been undertaking an extensive program of work to review and improve the NHVDCF. The work has also been informed by the findings of the Senate Rural and Regional Affairs and Transport References Committee – Aspects of Road Safety Final Report published in 2017.

This work has been undertaken in three stages:

- Stage 1 provided a comprehensive review of heavy vehicle licensing in Australia.
- Stage 2 investigated best practice overseas experience and available research.
- Stage 3, which is nearing completion, has used evidence from research and industry to develop strengthened licence training and assessment standards based in a more comprehensive heavy vehicle driver preparation framework. This has included a review of licensing arrangements more broadly including consideration of licence class eligibility and progression.

The heavy vehicle industry, driver training industry, and licensing authorities have been engaged throughout all stages of this review work.

In January 2022, ministers and National Cabinet also sought agreement from Austroads to include within this program of work, a competency-based licensing framework for heavy vehicle licence class progression.

## 1.5 Structure of this RIS

The remaining sections of this Consultation RIS set out the following:

- Section 2 outlines the problems with the current NHVDCF.
- Section 3 makes the case for government action.
- Section 4 summarises the current heavy vehicle competency and licensing arrangements.
- Section 5 sets out the options to make the NHVDCF more risk focused (Problem 1).
- Section 6 set out the options to address quality of training and assessment (Problem 2).

- Section 7 sets out a cost–benefit analysis of the proposed options.
- Section 8 details the approach to consultation and next steps.

## 1.6 How to make a submission

Submissions can be made in two ways:

- a formal submission answering questions posed in the RIS. This can be made by emailing driver@austroads.com.au [please clearly indicate if you do not want your submission to be made public].
- by answering one or more questions about specific policy reform initiatives at https://austroads.info/c-ris-survey.

# 2 What is the problem

## 2.1 Overview and context

A key component of an RIS process is starting from a clearly defined, and appropriately evidenced, set of problems. This provides a clear underpinning for the development of reform options and an important frame of reference for the assessment of options.

Heavy vehicles are over-represented in casualty crashes particularly those involving a fatality. While making up approximately 5% of the total vehicle fleet, they are involved in 16% of road crash fatalities and 4% of injuries.[7] This should come as no surprise given the distances travelled, and their relative weight and size.

Hence the NHVDCF and existing heavy vehicle licensing regimes exist to help protect all road users by ensuring heavy vehicle drivers are sufficiently competent to safely drive the vehicle they are seeking to operate. These existing regulatory regimes are intended to reduce the number and severity of crashes involving heavy vehicles and hence the costs for society associated with these crashes (see Section 3 for further discussion of this).

However, risk mitigation is not costless. If existing heavy vehicle driver licensing arrangements focus on the wrong risk factors, have not kept pace with new learnings, or are inefficiently implemented, administered or enforced, then these regulations and policies may not be as effective or efficient as possible. This could:

- reduce the extent to which the risk of heavy vehicle crashes is minimised and hence the NHVDCF effectiveness in improving road safety outcomes.
- unnecessarily increase regulatory burden – the costs borne by drivers and industry and government entities, which could, in turn, discourage potential drivers from entering the industry and worsen driver availability issues already being experienced in the sector.

Therefore, this Consultation RIS focuses on whether there are ways to make the NHVDCF better by improving its effectiveness and efficiency. For the purpose of this Consultation RIS, three key regulatory failures, related to the NHVDCF, have been identified, based on current knowledge and the latest evidence:

- **Problem 1:** Heavy vehicle driver licensing is not sufficiently focused on key risks based on latest data and analysis.
- **Problem 2:** Arrangements governing heavy vehicle training and assessment are affecting the quality of driver training.
- **Problem 3:** Heavy vehicle driver licensing is applied inconsistently even across jurisdictions which have adopted the NHVDCF.

Each of these problems is discussed further below.

[7] BITRE, *Heavy truck safety: crash analysis and trend*, July 2016, p.1.

## 2.2 Problem 1: Heavy vehicle licensing not sufficiently focused on key risks

### Knowledge and skills taught and assessed

There have been advances is our understanding of key driver skills and competencies important for safely operating a heavy vehicle. As a result, the NHVDCF could be improved to ensure it is sufficiently linked to key safety risks related to a driver's competency in operating a specific heavy vehicle.

Some factors now understood to be important to improving the road safety awareness of heavy vehicle drivers are not currently covered or tested by the NHVDCF. Some notable factors known to improve driver competency, that are not adequately accounted for or assessed under the NHVDCF include:

- **Hazard awareness/perception** – Work completed as part of the NHVDCF review concluded that hazard perception testing would improve the safety of heavy vehicle drivers operating in the road environment. Literature suggests a correlation between a potential driver's degree of hazard perception and the risk of being involved in a crash. Furthermore, the research also suggests that hazard perception training can have positive impacts in reducing crash involvement (see Section 7.2.1 for further details). Currently no hazard perception tests depicting real-world footage and visible hazards from the heavy vehicle perspective are used within the existing licence frameworks.
- **Experience** – Recent analysis by MUARC identified various factors associated with a lack of driving experience pre-licensing as being correlated with higher heavy vehicle crash rates (see Box 4). This is backed up by research showing that learner drivers (of light vehicles) who undertook mandated hours of supervised driving had significantly less traffic offending and a reduced risk of crashing (see Section 5.4 for further details). Industry feedback has consistently pointed to the benefits of behind-the-wheel experience, and reflects this in their industry-based training programs and in supervised driving with newly engaged employees. There are currently no minimum driving time requirements in pre-licensing training, and the current tenure-based progression model is based on time served rather than experience.
- **Other core skills and knowledge** necessary to safely drive a heavy vehicle such as how to secure loads, reverse, couple and uncouple trailers. The need to increase exposure to skill development has been a focus of coroner's findings and recommendations from the Senate Rural and Regional Affairs and Transport References Committee's Aspects of Road Safety Final Report. While the current NHVDCF spells out the 15 core areas for assessment and training, there is no standardised training material, and the short length of some courses means it would be very difficult for learners to become competent in the breadth of knowledge and skills identified. See Box 3 below for further details.

**Box 3:** Some critical driver skills and knowledge not considered within the NHVDCF

Licensing of heavy vehicle drivers is intended to ensure that people have the base skills to safely drive vehicles of the relevant class. While drivers will almost always need induction and upskilling to perform the specific duties of their job, industry is concerned that some drivers are gaining a licence without the requisite core skills for driving a heavy vehicle safely. The following are examples of skill-related issues that have been reported by industry in prospective or newly employed drivers:

- missed synchro uphill gear changes
- rollovers within first few weeks of employment
- persistent hitting of shopfront eaves in narrow laneways
- lack of knowledge about coupling and uncoupling dollies and trailers
- inability to safely and confidently reverse into loading bays
- lack of confidence in steering semi-automatic triple and quad road trains

These observed deficits in licensed drivers support the need to strengthen skill and knowledge building as part of licence training and assessment.

When industry cannot rely on driver training and licensing to put the necessary focus on building driver capability in these competencies, then the cost of doing this falls on industry and society more generally where inadequate capabilities lead to an increase in the risk of crashes.

*Source: Austroads*

### Past driving behaviour and offences

Currently, eligibility to hold a heavy vehicle licence is based on age, evidence of period on a lower class licence and completion of required assessment (which may also include a training component). Past driving behaviour is not taken into account in assessing eligibility or in the heavy vehicle licensing regime more generally.

Safety modelling undertaken by MUARC in Victoria suggests that there is a higher crash risk for heavy vehicle drivers with:

- a lack of driving experience
- a significant history of traffic offences or a serious offence
- prior crash involvement in a heavy vehicle.

This research is summarised in Box 4 below.

**Box 4:** Summary of findings into heavy vehicle licensing risk factors

A recent MUARC analysis into Victorian heavy vehicle drivers and crash rates identified and evaluated the relationship between pre-licensing risk factors and heavy vehicle safety outcomes. The study included drivers who have obtained a heavy vehicle licence endorsement for the first time in the period 2006–2019, broken into two groups:

- Group A: drivers who have gained an MR or HR licence from a car or LR licence
- Group B: drivers who have gained an HC licence from an MR or LR licence.

The study identified a range of possible pre-licensing risk factors and then assessed the extent to which they were predictors of future heavy vehicle crash outcomes in these two groups. The study found that the following factors are statistically related to higher heavy vehicle crash rates.

For Group A – those upgrading from a car or LR licence to a MR or HR licence:

- Lack of driving experience
  - MR or HR endorsement gained when on a provisional (P1 or P2) licence
  - < 1 year of car driving experience prior to an MR or HR endorsement
  - Did not achieve 120 hours supervised learning experience for a car licence
- Committing a large number of traffic offences or a serious offence
  - Court-issued penalty for a motorcycle offence
  - Receiving a licence ban or suspension
  - High demerit point accumulation
  - Serious offence committed – intersection or signal on motorcycle, speeding in a heavy vehicle, lane change, lane keep or distraction, drug and alcohol offence in heavy vehicle.
- Prior crash involvement in a heavy vehicle, particularly with an illegal BAC.

For Group B – those upgrading from an MR or HR licence to an HC licence:

- Lack of driving experience
  - HC endorsement within two years of gaining a full car licence
  - Did not achieve 120 hours supervised learning experience for a car licence
- Committing a large number of traffic offences or a serious offence
  - Prior interlock or zero BAC requirement
  - More than three prior traffic offences, particularly speeding in heavy vehicle and licensing or registration offences
  - Heavy vehicle offences resulting in court-issued penalties
  - Receiving a licence ban
  - Multiple demerit points
  - Court offences for high risk behaviours, particularly in a heavy vehicle

- Prior crash involvement in a heavy vehicle, particularly those associated with an offence

The study suggests potential road safety benefits from reforms that target these factors. There are some limitations to the study including the inability to identify who was at fault for a crash, and the number of kilometres travelled by individual licence holders (instead BITRE data on average kilometres was utilised to take into account driving exposure). Further details regarding the methodology used and limitations of the study are contained in Appendix G.

*Source: MUARC, 'Pre-heavy vehicle licensing factors predicting poor heavy vehicle driver safety outcomes', April 2022*

Austroads has engaged MUARC to replicate the Victorian analysis in Queensland. The aim is to establish if the Victorian findings will be the same or different in another state which has varied driving conditions (e.g., more long-distance driving and more use of higher productivity vehicles) as well as different licensing rules (e.g., younger age of car licensing). The combined research findings from both the Victorian and Queensland studies will be considered in any final policy decision-making.

**Questions on Consultation RIS**

2.1. Do you have any evidence or are you aware of any additional research that could provide additional insights into the key risk factors affecting driver competency?

2.2. Are there any other key risk factors, other than those discussed in this section and outlined in Box 4 that should be further considered? If so, please explain what they are and how they affect the risk of heavy vehicle crashes and consider providing evidence to support your view.

### Licence tenure requirements

Current licensing arrangements require a heavy vehicle driver to hold a lower class heavy vehicle licence for a minimum of one year before being eligible to apply to progress to a higher licence class. While these requirements were intended to promote progressive skills development, they do not guarantee that a person has had any, or substantive, behind-the-wheel experience and therefore do not guarantee competency.

Rather than focusing on skill and experience, this approach places an arbitrary time-based barrier on a driver's ability to take on employment involving more complex vehicles. This may exacerbate issues around driver shortages at higher licensing tiers.

This is a problem because increasingly more of the road task is being done by larger combination vehicles and this trend is expected to continue. Over the last five years, the stock of newer high productivity vehicles (approved under the NHVR's Performance Based Standards (PBS) scheme)

increased at a compounding rate of almost 25% per annum.[8] Unsurprisingly, demand for multi-combination (MC) licences has also increased at a relatively higher rate when compared to other licence categories. MC licences grew by 4.7% pa over the 24-month period to October 2021, while overall heavy vehicle licence numbers grew by only 2%.

More generally, industry reports substantial shortfalls (e.g., 1,000 to 2,000 drivers per jurisdiction) in the availability of drivers. Hence, they are seeking to be able to progress competent and experienced drivers through the licensing system more rapidly.

Arrangements which unnecessarily delay drivers from operating higher productivity vehicles may reduce driver supply and prevent these vehicles from being utilised to their full potential.

## 2.3 Problem 2: Arrangements governing heavy vehicle training and assessment are affecting the quality of driver training

Jurisdictions each manage their own approval process for heavy vehicle driver trainers and assessors. The practices and standards of this approval process vary between jurisdictions. In addition, most jurisdictions have anecdotally had issues with fraud, malpractice or poor standard of delivery by some training and assessment providers.[9] This means that heavy vehicle licences may be granted to drivers who do not meet the level of competency required to achieve the desired safety outcomes.

Independent heavy vehicle driver trainers and assessors also face commercial pressures which are inconsistent with achieving socially optimal levels of driver competency. The NHVDCF does not specify minimum training course or assessment durations.[10] Therefore, organisations may be able to reduce costs (and so increase profitability) by shortening training and assessment courses.

Building on this, industry does not know which training provider a heavy vehicle driver received their training from as this is not recorded on the licence documentation. This means that there is no feedback loop between training providers and operators on the competency of heavy vehicle drivers. It also means that operators cannot account for differences in quality in their hiring decisions and their approach to on-the-job training for drivers.

This creates a competitive environment where providers of higher quality heavy vehicle driver training lose their competitive advantage.

## 2.4 Problem 3: Driver licensing is inconsistently applied across jurisdictions

As stated in Section 1.2, the NHVDCF has been implemented in four jurisdictions (i.e., New South Wales, Tasmania, Victoria and the Northern Territory). As stated in Austroads 2018 review of the NHVDCF, 'despite substantive efforts to achieve harmonisation, much of which has been

8 Austroads (2020) *SRL6259 National heavy vehicle licensing framework : Theme 2A – Licence class progression, Internal report – Milestone 3 report.*

9 These issues are discussed in ICAC South Australia's 2022 report *Failing the corruption road test: Corruption risks in South Australia's driver training industry* (available here: https://www.icac.sa.gov.au/documents/Failing-the-Corruption-Road-Test_report.pdf).

10 NSW mandates 5 to 8 hours for assessment dependent on licence class.

successful and is to be acknowledged, there remains considerable variation in jurisdictional practice with regard to heavy vehicle licensing.'[11] This includes variation between jurisdictions that have implemented the NHVDCF.

The lack of consistency in licensing practices across jurisdictions means that different standards are used to assess driver competency across jurisdictions.

A driver who receives their heavy vehicle licence in one jurisdiction is permitted to drive that class of heavy vehicle in another jurisdiction. This applies even if the second jurisdiction has a higher standard or more stringent criteria for assessing driver competency than the jurisdiction in which the licence was granted. This creates an incentive for heavy vehicle candidates to seek a licence in the least stringent jurisdiction. Since competency assessments differ across jurisdictions, there is a risk that interstate drivers may not meet the socially acceptable level of competency for all jurisdictions they operate in.

This situation arises as a flow-on from problems 1 and 2.

**Questions on Consultation RIS**

2.3. Do you agree with the problems as they have been characterised in this section? If not, can you please describe or provide evidence to demonstrate how the problem is mis-specified?

2.4. Are there any other problems with heavy vehicle driver licensing arrangements relevant to the scope of this Consultation RIS? If so, please provide evidence of these problems.

[11] Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.3.

# 3 Why is government action needed?

## 3.1 The impetus for government involvement in heavy vehicle driver licensing remains unchanged

There are a number of reasons why governments are, and should continue to be, involved in licensing heavy vehicle drivers.

First, governments have a responsibility to attempt to protect road users. As previously outlined, heavy vehicles are over-represented in serious and fatal road incidents. This should come as no surprise given heavy vehicles are heavier and larger and therefore crashes are more likely to result in fatalities and casualties. Data from the Bureau of Infrastructure and Transport Research Economics shows that heavy trucks were involved in 15% of fatal crashes in the year to December 2020.[12] Data from the Australian Bureau of Statistics suggests that for the 12 months to June 2020 heavy trucks comprised 9% of total vehicle kilometres travelled.[13] The implication of this data is that heavy trucks are over-represented in fatal crashes by a factor of two-thirds when compared to their share of road kilometres travelled.

Some proportion of the crashes involving a heavy vehicle will be attributable to heavy vehicle driver error which could potentially be improved through reforms to the NHVDCF and existing heavy vehicle driver licensing regimes. Available evidence suggests driver error could contribute to 20% of fatal crashes involving a heavy vehicle.[14] However, it is worth noting that assignment of fault is not necessarily feasible for all crashes. Insurance data suggests around 60% of non-fatal crashes and 20% of fatal crashes are attributed to heavy vehicle driver error. This includes crashes that result from inappropriate driving (e.g., poor vehicle positioning), inattention or distraction, speeding and fatigue. It is worth noting that this is based on insurance data and therefore attributions determined for this purpose, rather than as a result of police investigation.[15]

Second, crashes create externalities. An externality is a cost (or benefit) that affects a third party who was not involved in the action or activity. In the case of crashes involving heavy vehicles, operators and drivers do not bear the full social costs of crashes.[16] These include:

- costs associated with death and rehabilitation of people injured or killed in crashes
- property damage costs (i.e., costs to repair or replace other vehicles)
- costs associated with damage caused to road infrastructure (where applicable)

12 Bureau of Infrastructure and Transport Research Economics, *Road deaths in crashes involving heavy vehicles – Quarterly bulletin*. October to December 2021.

13 Australian Bureau of Statistics, *Survey of motor vehicle use*, Australia 12 Months ended 30 June 2020.

14 BITRE, *Heavy truck safety: crash analysis and trend*, December 2016, p.1.

15 Insurance data suggests that in 64.5% of non-fatal crashes and 21.7% of fatal crashes involving a heavy vehicle and a light vehicle, the heavy vehicle was deemed to be at-fault party. National Transport Insurance, *National truck accident research centre (NTARC) Major accident investigation report*, 2021, p.17.

16 Noting some of these costs are incurred indirectly through insurance costs.

- productivity costs from delayed or lost freight
- costs on other road users from resulting delays/disruption to their journeys.

Some of these costs will be internalised through insurance regimes. However, these externalities still mean that some individual heavy vehicle operators and drivers may not sufficiently invest in mitigating road safety risks (including by investing in ensuring driver competency). This creates the risk that without government involvement the industry may not deliver road safety outcomes that would be valuable to society.

Driver licensing remains a key lever that government has at its disposal to influence whether heavy vehicle drivers are able to safely operate their vehicles.

## 3.2 Policy objectives

The proposed reforms to the NHVDCF considered in this Consultation RIS are aimed at achieving the following objective:

- **Delivering improved road safety outcomes among heavy vehicles** – For this Consultation RIS, an improvement in safety outcomes refers to a reduction in the number and/or severity of accidents involving heavy vehicles. Safety outcomes can be measured by metrics that reflect the incidence of heavy vehicle crashes at different levels of severity, (e.g., for a given year, the number of heavy vehicle crashes per kilometre travelled occasioning death, or serious injury, or property damage only).

There are also a couple of secondary objectives of this framework:

- **Not compromising the availability of heavy vehicle drivers and supporting use of high productivity vehicles** – For this Consultation RIS, ensuring the availability of heavy vehicle drivers means ensuring that there are a sufficient number of licensed drivers to meet the heavy vehicle driving task for each type of heavy vehicle or licence class. Supporting driver progression through the licence classes to allow driving of higher productivity vehicles, which carry greater freight, will enable an overall productivity benefit. Availability can be measured by metrics that relate to the number of heavy vehicle drivers at each licence class relative to the fleet, or more specifically to the demand for drivers of particular classes of heavy vehicle. Productivity can be measured by volume-based metrics.
- **Providing reasonable access to heavy vehicle licences for social and personal benefit –** For this Consultation RIS, providing reasonable access to licensing pathways supports individuals to pursue personal and career goals and to engage in a range of community and volunteer activities which require a heavy vehicle licence. This can be measured by maintaining or growing levels of licensing across all classes.

While the primary function of driver licensing is safety, the licensing system should not create unnecessary barriers to the efficient and effective operation of the heavy vehicle industry and entities that rely on heavy vehicles. While there are approximately three times as many heavy vehicle licence holders as there are powered heavy vehicles, industry reports significant shortages of professional drivers. There are a large number of factors that contribute to current industry driver shortages and most of these are outside the influence of licensing authorities (e.g., overall economic factors, personal lifestyle choices, perceived career paths within the sector and relative financial returns). While the key focus of the reforms under consideration is promoting skilled, capable and safe heavy vehicle drivers, opportunities to provide safe expedited pathways for people seeking to have a career in heavy vehicle driving have been considered as part of this reform package.

**Questions on Consultation RIS**

3.1. Do you agree that there is a good case for government action?

3.2. Do you agree with the policy objectives set out in this Consultation RIS?

# 4 Overview of current arrangements

## 4.1 Licence classes

Heavy vehicle licence classes are nationally agreed and fall into two main groups:

- **Rigids** – light rigid (LR), medium rigid (MR) and heavy rigid (HR)
- **Articulated/combinations** – heavy combination (HC) and multi-combination (MC).

The definition of these classes is largely standardised across jurisdictions, although there are some limited variations.

## 4.2 Eligibility

Each jurisdiction has a set of criteria which an applicant must meet before they may be issued with a heavy vehicle driver licence – the 'eligibility criteria'. The current eligibility criteria are similar, but not always identical, across jurisdictions and variously include, but are not limited to, matters such as:

- the age of the applicant
- period of holding a lower class driver licence (licence tenure)
- medical requirements
- training requirements
- written or oral knowledge test
- practical driving assessment.

## 4.3 Competency

Eligible applicants are required to demonstrate their knowledge and competency to drive a heavy vehicle. The NHVDCF outlines 15 criteria for assessing heavy vehicle competency (see Table 2**)**.

**Table 2:** The current NHVDCF criteria for assessing competency

| NHVDCF criteria | |
|---|---|
| Pre-drive<br>• Pre-operational check<br>• Cabin drill | Low-risk driving behaviours<br>• Create and maintain crash avoidance space<br>• Protect crash avoidance space |
| Vehicle operation and control<br>• Staff off, move off, shut down and secure<br>• Manages steering<br>• Manages gears<br>• Manages brakes<br>• Manages accelerator | Additional risk management<br>• Reverse<br>• Hill stop/start<br>• Load securing<br>• Coupling/uncoupling<br>• Bus stop procedure |
| Compliance<br>• Road rules and directions | |

*Source: NHVDCF*

While the NHVDCF states that it applies 'across all Australian jurisdictions,' [17] the framework has only been implemented in four jurisdictions: New South Wales, Tasmania, Victoria and the Northern Territory. Even within these jurisdictions, there are variations in how the NHVDCF has been implemented.

## 4.4 Licence progression

### Licence progression is based on tenure at lower licence classes

In general, licence progression is based on time served on a lower licence class. That is, in order for a heavy vehicle driver to be eligible to apply to progress to a higher licence class, the driver must hold a licence for a lighter vehicle class for a minimum period of one year.

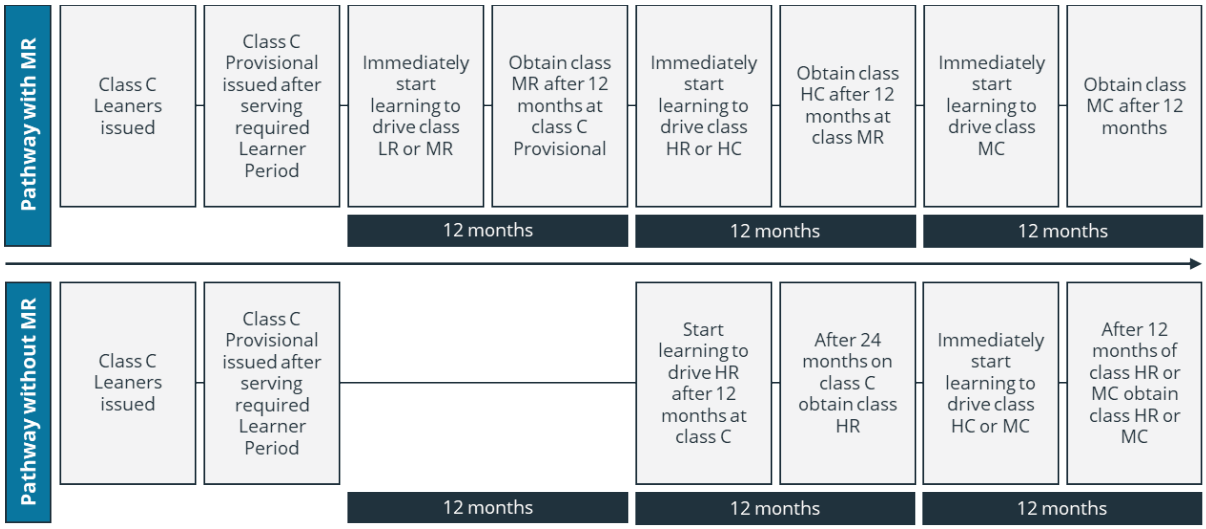
The imposition of minimum time periods before progression is based on the assumption of paced skill development with the aim of maximising safety outcomes. However, licence tenure requirements are simply a requirement to hold a licence for a period of time and there is no guarantee of how much, if any, behind-the-wheel experience a person has had during the period.

### The tenure system increases the time required to obtain higher tier licences

The concept of minimum periods for progression (or tenure) is central to the current licensing regime. Figure 3 shows two possible pathways for licence holders to progress from class C to class MC. In both cases, the minimum period for this progression is 36 months. At present, apart from testing to secure the next class in the progression, licence holders are not required to gain specified or evidenced on-road driving experience.

[17] Austroads, *Review of the national heavy vehicle driver competency framework*, 2018, p.49.

**Figure 3**: Pathways for licence holders to progress from class C to class MC




*Source: Austroads*

The minimum age at which an individual can hold a provisional car licence determines the minimum age at which they can hold licences for categories of heavy vehicles. As a result of these requirements and the heavy vehicle licence progression system, in most jurisdictions the earliest that an individual could apply for an HC licence is age 19 years, and for an MC licence is 20 years.

### There are limited exemptions from the licence tenure requirements

All jurisdictions have the regulatory capacity to make exemptions from their standard graduated scheme to allow for accelerated licence progression in certain circumstances. Jurisdictions have different arrangements for these accelerated models and there is no national consistency.

The circumstances under which exemptions can be granted include particular employment needs including for the agriculture sector, personal/ family hardship, remote operation, or membership of the defence force. In addition, South Australia operates a Training In Lieu of Experience (TILE) program under the exemption framework. When an exemption is granted, it may be conditional upon factors such as driving history, participation in driver training and continued employment with the same employer. Exemptions are in many cases only available to people with certain attributes such as age or Australian driving experience.

## 4.5 Training

### Driver training is typically provided by the VET sector

Driver training is not a precursor to assessment and licensing in all jurisdictions. In jurisdictions where driver training is mandated, this is typically delivered through one of two vocational education and training (VET) sector programs – *Drive a Heavy Vehicle* units and the *Licence to Drive a Heavy Vehicle* units (see Table 3 below). Appendix A provides further details in relation to these arrangements.

**Table 3:** Driver training units

| Unit code | Pre-framework units | Unit code | Framework-related units |
|---|---|---|---|
| TLIC 2002 | Drive a Light Rigid Vehicle | TLILIC 2014 | Licence to Drive a Light Rigid Vehicle |
| TLIC 3003 | Drive a Medium Rigid Vehicle | TLILIC 2015 | Licence to Drive a Medium Rigid Vehicle |
| TLIC 3004 | Drive a Heavy Rigid Vehicle | TLILIC 2016 | Licence to Drive a Heavy Rigid Vehicle |
| TLIC 3005 | Drive a Heavy Combination Vehicle | TLILIC 3017 | Licence to Drive a Heavy Combination Vehicle |
| TLIC 4006 | Drive a Multi-Combination Vehicle | TLILIC 3018 | Licence to Drive a Multi-Combination Vehicle |

*Source: Austroads.*

These training courses are provided by outsourced organisations. In some but not all jurisdictions training providers are required to be registered training organisations (RTOs). These are training providers registered by the Australian Skills Quality Authority (ASQA) or state-based VET regulators. The two courses are only a sub-set of the available heavy vehicle-related, approved VET offerings. There are over 4,000 RTOs in Australia, of which about 200–250 are registered to deliver some aspect of heavy vehicle driver training, ranging from full certificate courses (such as the TLI31216 *Certificate III in Driving Operations*) to individual units of competency (such as TLILIC2016 *Licence to Drive a Heavy Rigid Vehicle*). Training requirements differ across jurisdictions

The *Drive a Heavy Vehicle* training units pre-existed the *Licence to Drive* training units and are still largely used by jurisdictions that have not adopted the NHVDCF. The *Licence to Drive* units were developed to align with the NHVDCF and are mostly utilised by jurisdictions that have adopted the NHVDCF, as well as some other jurisdictions that have also nominated these units.

Key features of note:

- **NHVDCF jurisdictions:** Victoria and the Northern Territory offer NHVDCF-based options only. New South Wales offers NHVDCF as the main path and a non-NHVDCF path for those with special needs or in remote areas, however training is not mandated even under NHVDCF pathways. Tasmania offers primarily NHVDCF options however has alternate arrangements resulting in a restricted licence for residents of King and Flinders islands and bus drivers for metropolitan Tasmania.
- **Non-NHVDCF jurisdictions:** For LR to HC classes, there are a number of options including: practical test with a departmental officer, practical test with an external approved provider, and training and assessment (TLIC *Drive a Heavy Vehicle* or TLILC *Licence to Drive a Heavy Vehicle* dependent on the jurisdiction). For the MC class, there are also a number of options including: training and assessment (TLIC *Drive a Heavy Vehicle* or TLILC *Licence to Drive a Heavy Vehicle* dependent on the jurisdiction), log book hours only, and practical test with an external approved provider.

Further information on jurisdictional requirements for training and assessment is provided in Appendix A.

### There are differences in the training programs offered

Competency-based training programs assess students against agreed industry standards. Progression through a competency-based training program is determined by the student demonstrating that they have met the competency standards, and is not linked to the time spent in training. Nationally recognised qualifications in the VET sector all have a volume of learning range (minimum – maximum) which is intended to provide guidance on the time that a qualification will take to obtain. However, these learning ranges are not mandatory.

There are large differences in the depth and breadth of heavy vehicle driver training offered by different training providers. One reason for this is the lack of a nationally agreed set of learning and assessment materials to support training and assessment activity. The duration of training also differs, noting the NHVDCF does not mandate minimum training and assessment durations.

### Limited regulatory oversight of training

While there is existing regulatory oversight of RTOs, this oversight is not focused on the subject matter or the quality or suitability of the training itself. Existing VET regulators (such as the ASQA) monitor RTO performance against the *Standards for Registered Training Organisations* – but they do not develop or approve training content.[18]

While VET regulators provide a level of assurance and oversight, they are not aware of, nor focused on, licensing risks and issues. They are not subject matter experts with respect to heavy vehicles, and are unable to assess whether the training package is 'fit for purpose'.

## 4.6 Assessment

### Assessment of driver competency varies across jurisdictions

The process for assessing the competency of licence applicants is a mixture of VET assessment against the licensing units of competency and transport regulators' jurisdictionally developed assessment processes and instruments.

Currently in New South Wales, Queensland, South Australia and Western Australia assessment is undertaken by jurisdictional agencies although in some cases this may be restricted (e.g., only in remote locations) (see Appendix A for further details).

[18] The ASQA is the national regulator for Australia's VET sector. ASQA regulates courses and training providers in QLD, NSW, ACT, TAS, SA and NT to ensure nationally approved quality standards are met. The ASQA also has regulatory oversight of training offered by VIC and WA RTOs where courses are offered across state and territory boundaries. The Victorian Registration and Qualifications Authority and the Western Australian Training Accreditation Council regulate RTOs in these states that are not under ASQA regulation.

Since assessment tools used by state and territory licensing authorities differ, it is likely that a driver licensed in one jurisdiction will not have demonstrated exactly the same set of competencies as a driver licensed in the neighbouring jurisdiction. The NHVDCF allows for two paths to demonstrate competency:

- progressive assessment (linked to training provision) and then a final competency assessment (FCA), including on-road assessment
- a competency test (CT), which is available for rigid classes only.

Importantly, the FCA does not include a final assessment of an applicant's ability to perform *all* competency criteria.[19] As a result, there is a risk that shortcuts are being taken when training criteria that is not included in the FCA. This includes critical skills such as securing a load, reversing, coupling and uncoupling of trailers.

Further information on jurisdictional requirements for assessment are provided in Appendix A.

### Required qualifications for assessors varies across jurisdictions

The requirements for approving assessors similarly varies across jurisdictions. Most, but not all, jurisdictions require approved assessors to also be approved as driving instructors under relevant legislation. The qualifications and additional characteristics required of heavy vehicle driver trainers and assessors reflect interaction between:

- the mandated professional qualifications as prescribed by the RTO Standards and therefore as conditions for the registration of a training organisation
- the requirements and conditions imposed by jurisdictional transport authorities for approval/authorisation of instructors, assessing organisations and/or individual assessors
- the requirements of individual RTOs.

Further information on jurisdictional requirements for approving assessors is in Appendix A.

[19] This is not the case in the Northern Territory where all competencies are assessed in the FCA.

# 5 Options to make the NHVDCF more risk focused (Problem 1)

## 5.1 Overview

A summary of the reform options being considered to address Problem 1 is set out below.

These options were developed by packaging together various proposed reform elements into what was expected to represent 'do minimum,' 'central,' and 'do maximum' packages based on a preliminary assessment of the magnitude of expected costs and benefits associated with implementing each option. Each package of options has been compared to a business-as-usual base case.

For the purpose of the assessment these options build upon one another. In other words Option 3 incorporates all the elements in Option 1 and Option 2 plus additional measures. It is important to note that the packaging of the proposed elements into three options does not imply that elements need to be introduced as a package. Therefore, it is possible that individual elements could be selected for introduction in the final agreed approach.

Options to address Problem 2 are described in Section 6 and these could be implemented in concert, or in isolation, from the options described in this section. It is considered that Problem 3 will be addressed by virtue of implementing reforms to solve Problem 1 and Problem 2 and therefore separate options to address Problem 3 are not required.

**Table 4:** Overview of reform options to address Problem 1

| No. | Reform option |
|---|---|
| **Option 1: Competency refresh** | |
| 1 | Introduction of enhanced competencies |
| 2 | Online delivery of competencies and assessment |
| 3 | Introduce new sub-classes of MC licence |
| 4 | Amendments to progressive licensing requirements |
| 5 | No skipping of HC classes |
| **Option 2: Eligibility criteria plus competency refresh** | |
| 6 | Applicants to demonstrate low-risk driving history |
| 7 | Applicants to hold an open/unrestricted C class licence to obtain a rigid licence |

| Option 3: Supervised driving, eligibility criteria and competency refresh |
|---|
| 8 Minimum requirements for post-licence supervised behind-the-wheel driving |

*Source: Austroads*

## 5.2 Option 1 – Competency refresh

Option 1 consists of five key features designed to enhance the standard of driver training and assessment. It also includes elements aimed at reducing regulatory burden, namely moving to online training and assessment of some competencies, and amending the current licence progression framework.

### 5.2.1 Introduction of enhanced competencies

Under this option the list of competencies that are assessed under the NHVDCF will be expanded to cover a wider set of knowledge and skills that are necessary to drive a heavy vehicle safely. While the 15 modules of the current NHVDCF are essentially sound, they provided insufficient specificity to ensure the full suite of required skills and knowledge were covered. The overall new proposed competency program includes 184 elements (see Appendix B). These were developed based on research, industry input, a review of overseas approaches, and coronial reports.

In addition to focusing on skills and knowledge they also include, for the first time, some elements focused on a driver's attitudes and approach to the driving task which are intended to:

- raise awareness of relevant road safety issues (e.g., fatigue)
- challenge a drivers' key beliefs regarding unsafe behaviour (e.g., sharing the road environment)
- motivate drivers to generate strategies to avoid situations that may place themselves and others at risk on the road (e.g., show courtesy when driving).

Research supports the effectiveness of training programs which address motivational and psychological aspects of driving performance.[20] These approaches develop higher order cognitive skills, in addition to vehicle handling and driver knowledge, producing better safety outcomes.

The competencies and training and assessment approach have been based on research and adult learning principles. More detail about the learning framework is provided in Appendix C. Based on the learning framework, the method of delivery and assessment for each individual element has been identified and broken into three instructional methods:

- online (discussed more extensively in Section 5.2.2)
- face-to-face classroom

[20] Examples of relevant research include:

• Ludwig TD and Geller SE (2000) 'Intervening to improve the safety of occupational drivers: A behaviour-change model and review of empirical evidence', *Journal of Organizational Behavior Management* (19):1–123.

• Newnam S, Lewis I and Warmerdam A (2014) 'Modifying behaviour to reduce over-speeding in work-related drivers: An objective approach', *Accident Analysis and Prevention* (64):23–29.

• Salminen S (2008) 'Two interventions for the prevention of work-related road crashes', *Accident Analysis and Prevention* (46):545–550.

- in the yard and around the vehicle and behind the wheel.

Online content is about building foundational knowledge across all the competency elements and must be completed ahead of classroom and in-yard/driving experience. Foundational knowledge built through online learning will be reinforced through classroom learning and further embedded through practical application while driving and working around the vehicle.

Online content can be undertaken at a pace to suit the learner driver and is seen to be the most efficient way to deliver knowledge-based content, reserving classroom and practical work for more complex integration and application-focused learning. The following table identifies the approximate breakup of time per instructional method by licence class.

**Table 5:** Breakdown of instructional method by licence class

| | LR | MR | HR | HC | HC – MC1 | HC – MC2 | MC1/2 – MC3 |
|---|---|---|---|---|---|---|---|
| Online | 40% | 40% | 40% | 10% | 35% | 35% | 5% |
| Driving and yard | 35% | 35% | 35% | 60% | 45% | 45% | 70% |
| Classroom | 25% | 25% | 25% | 30% | 20% | 20% | 25% |
| Total | 100% | 100% | 100% | 100% | 100% | 100% | 100% |

*Source: Austroads*

The breakdown of the current MC class into three separate MC classes is discussed in Section 5.2.3.

Industry reports that drivers are often not job ready and that additional investment is required by employers to bring them up to standard. The enhancement and strengthening of competencies could improve the safety-related skills of new drivers and so address an element of this concern.

### 5.2.2 Online delivery of competencies and assessment

This option involves introducing mandatory online modules for training and assessment of some of the existing and proposed competencies. Importantly it also includes the introduction of a hazard perception test (HPT). Research has found a strong connection between hazard perception testing results and real-world crashes.[21] Research has also found that hazard perception training can improve safe on-road driving. Light vehicle licensing already includes an HPT and is being introduced for motorcycle licensing in some jurisdictions. It is anticipated that one to two heavy vehicle HPTs will be developed – one required when first obtaining a rigid licence and potentially a further one when obtaining a combination licence.

Online training and assessment materials will be developed by Austroads and used by jurisdictions as part of their licensing requirements. Online content is expected to build driver knowledge which will be assessed using methods such as multiple choice and scenario building

[21] See references cited in Section 7.2.1.

(e.g., what is next). Knowledge is the foundation on which skill is developed and will be a precursor to face-to-face learning. Online delivery is expected to provide a cost-effective and flexible approach to training and assessment.

### 5.2.3 Introduce new sub-classes of MC licence

As discussed in Section 2.2, there has been a substantial increase in the number of higher productivity vehicles over the last five years[22] and the range of vehicles covered under the MC class is substantially increased from when it was first introduced. The MC licence class currently includes all vehicles with more than one trailer, including triple and quad combinations with different couplings. These vehicles have very different operational characteristics and increasingly more complex vehicle dynamics. Hence the knowledge and skills required to drive each type of MC vehicle varies considerably. Industry has highlighted that drivers who move from driving B-doubles to more complex MC vehicles struggle to make the transition, and may resign their jobs in a short space of time because they are not adequately skilled.

The following table highlights the difference in crash rates between vehicles covered within the current MC class.

**Table 6:** Major crash rates for MC licensed vehicles 2009–2019[23]

| Level | Vehicle type | Crash rate /100m kms[24] | Crash rate /10K vehicles |
|---|---|---|---|
| 1a | B-double | 9.6 | 141.5 |
| 1b | B-triple* (PBS B-coupled only) | 3.8 | 77.0 |
| 2a | Road train (type 1) single dolly | 23.0 | 286.8 |
| 2b | A-double* (PBS road train) single dolly | 11.4 | 149.1 |
| 2a | Triple road train (type 2) | 23.9 | 296.4 |
| 3a | Quad road train (non PBS) | 41.6** | 493.1** |

*Notes: *A PBS class of vehicle. **Referenced publications plus tow-truck operator data 2022 (averaged).*
*Source: Austroads 2014, NTC 2017, NHVR 2021 (averaged)*

To address the significant difference in vehicle characteristics and required driving skills, this option proposes splitting the MC licence class into separate licence sub-classes:

- MC1 – B-doubles or B-triples with B-couplings only (configurations with no dollies)
- MC2 – Double and triple road train type 1 and 2 (configurations with one or two dollies)

22 There are currently approximately 220,000 MC class vehicles (8% of the registered heavy vehicle fleet).

23 Data drawn from studies undertaken by Austroads, NTC and NHVR.

24 By way of example, every 100 million kilometres travelled by B-doubles there will be 9.6 major crashes.

- MC3 – Configurations with four of more trailers.

**Table 7:** Examples of the types of vehicles that fall into each MC class

| Class | Sample configuration | |
|---|---|---|
| MC1 | B-double |  |
| | B-triple |  |
| MC2 | Double road train |  |
| | Triple road train |  |
| MC3 | Quad road train |  |

*Source: Austroads, images supplied by the NHVR.*

The splitting of the current single MC class into three will allow driver training and assessment to be better targeted to the considerable difference in driving and handling techniques between vehicles with no dollies, double and triple road trains, and the quad road train configuration. This includes the implications for turning circles, stopping distances, and skills in connecting and disconnecting the power and hydraulic leads on trailers.

While there are three proposed MC licence classes there are only two training and assessment steps:

1. From HC → MC1 or MC2
2. From MC1 or MC2 → MC3.

A person would need to first hold either an MC1 or MC2 licence before being eligible to apply for an MC3 in line with the progressive licensing requirements outlined in Section 5.2.4 below. Under tenure arrangements this would require a driver to hold an MC1 or MC2 licence for a period of one year before being eligible to progress to an MC3 licence. However, it is anticipated that most heavy vehicle drivers would take one of the alternative progression pathways (as outlined in the section below) such that the time to progress would more likely be between 16 weeks and 6 months.

Heavy vehicle drivers would be permitted to drive a vehicle of a lower licence class, i.e., a driver with an MC2 licence would be able to drive both MC1 and MC2 vehicles.

It should be noted that an approach to management of existing licence holders will need to be developed. This will be considered in detailed implementation planning should this proposal progress.

### 5.2.4 Amendments to progressive licensing requirements

As noted in Section 4.4, at present drivers must hold a licence for a particular heavy vehicle class for a minimum period of one year before being eligible to progress to the next higher heavy vehicle class. To address the concerns of industry as well as the direction of National Cabinet, two experience-based pathways have been developed and are proposed to operate in conjunction with the existing tenure pathway. These new pathways will allow a driver to progress more rapidly to a higher heavy vehicle class than is possible currently. These two additional pathways will enable career heavy vehicle drivers who wish to move into more productive heavy vehicles to do so after demonstrating that they have gained experience in lower class vehicles.

It is important to note that these three pathways will coexist in parallel. Therefore a driver will be able to choose which pathway suits them. Further, they may choose a different pathway at various points in their progression up the heavy vehicle licence classes (e.g., via tenure when going from MR to HR and driving experience when going from HR to HC).

The three proposed pathways are:

1. *Tenure alone*, as per current arrangements where a driver is required to hold a licence for a minimum of 12 months.
2. Evidence of a *minimum of heavy vehicle driving experience* as outlined in Table 8 — The minimum amount of total driving experience varies by class.
3. Participation in a *supervision program* over a minimum period as outlined in Table 8 — The supervision program will comprise a minimum number of total work hours and supervised behind-the-wheel driving. The duration of the supervision program will vary depending on the licence class.

A summary of the proposed additional expedited pathways for licence progression is provided in Table 8.[25]

[25] There is currently no requirement to hold an LR licence before obtaining an HR or MR licence. This remains unchanged for current practice, so there is no specific pathway for LR licences outlined.

**Table 8:** Proposed additional expedited pathways for licence progression

| Progression | Supervision program pathway | Driving experience pathway |
|---|---|---|
| MR or HR to HC | • Minimum 420 hours of work experience in an MR or HR vehicle<br>• Minimum 6 x 2-hour blocks of supervised behind-the-wheel driving as well as mentoring support<br>• Minimum period of 12 weeks. | • Evidence of 600 hours of driving in MR or HR class vehicles over a minimum of 6 months |
| HC to MC1/MC2 | • Minimum 490 hours of work experience in an HC vehicle<br>• Minimum 6 x 2-hour blocks of supervised behind-the-wheel driving as well as mentoring support<br>• Minimum period of 16 weeks. | • Evidence of 700 hours of driving in HC class vehicles over a minimum of 6 months |
| MC1/MC2 to MC3 | • Minimum 560 hours of work experience in an MC1/MC2 vehicle<br>• Minimum 8 x 2-hour blocks of supervised behind-the-wheel driving as well as mentoring support<br>• Minimum period of 14 weeks. | • Evidence of 600 hours of driving in MC1 or MC2 class vehicles over a minimum of 6 months |

*Source: Austroads.*

### Tenure pathway

Experienced-based pathways are preferred over the tenure pathway because they ensure that drivers have built their competence on lower class vehicles before progressing to heavier vehicles. However, the tenure pathway has been retained so as not to close off opportunities for people who have limited access to a vehicle.

### Supervision program pathway

Drivers who provide evidence of completion of the supervision program will be eligible to move up to the next heavy vehicle class in 3–4 months rather than the current 12 months.

The program would be delivered by an authorised supervisor. It is anticipated that this will generally be someone nominated by the driver's employer, however it will also be possible for an external third party to be a supervisor.

To be an authorised supervisor, a person will need an appropriate approval or certification. It is proposed that this certification will be a combination of the following:

- have held a heavy vehicle licence of the relevant class for at least five years
- have completed a specific credential (to be developed by Austroads) which will be delivered either online or face to face. Estimated time to undertake the training and assessment will be less than one day.

The supervision program would involve a series of documented discussions and identification of learning goals which would be expected to involve the following key steps:

1. an initial accompanied driving session and also any non-driving related tasks which would include completion of a record such as the sample provided at Appendix D
2. a discussion between supervisor and driver about areas where competency could be improved or where specific driving or non-driving experience is required
3. a record of the discussion and agreement such as in a journal or check list
4. a period of solo driving and non-driving tasks with the driver recording notes or evidence of experience in the journal or check list
5. a discussion between driver and supervisor about the learnings and experience since the last session which may or may not also involve some practical demonstration of competence via an accompanied drive, an update of the journal or checklist
6. repeat of steps 3–5 until the supervisor is satisfied that the driver has achieved sufficient breadth and depth of competence.

It is expected that this pathway will be particularly attractive to industry organisations that have already invested in driver supervision programs.

#### Driving experience pathway

Individuals who provide evidence of completion of the minimum driving hours will be eligible to upgrade to the next highest heavy vehicle class in 6 months rather than the current 12 months.

This approach provides an experience-based pathway that requires little or no additional overhead to the driver or the employer. This ensures that sole, small and medium-size operators will also have access to an expedited pathway without investing in a supervision program.

All that will be required is evidence of completion of driving hours. The practical mechanisms for establishing this will need to be worked through in conjunction with industry as part of implementation planning, however it could include options such as:

- in-vehicle telematics data or another technology-based approach
- work rosters and work diaries – it is noted that these records include both driving and non-driving time and options such as standard assumptions around the split of driving and non-driving time could be explored.

### 5.2.5 No skipping of HC classes

Currently some jurisdictions allow applicants to move directly from an HR licence to an MC licence, therefore skipping the HC class. It is proposed that all applicants for an MC licence will

have first had a period on an HC licence to enable them to build their capability and skills in driving less complex combination vehicles before moving to an MC licence.

Under existing tenure arrangements this would imply it would take an additional year for a heavy vehicle driver to progress from HR to an MC1 or MC2 licence. However, it is anticipated that most heavy vehicle drivers in this position would take one of the alternative progression pathways (as outlined in the section above) such that the time to progress would likely be between 14 weeks and 6 months.

### 5.2.6 Combined impact on progression

The implications of the proposed changes in Option 1 on the pathways for licence holders to progress from the rigid classes (MR and HR) to the HC and MC classes are shown in Table 9 and Figure 4 below.

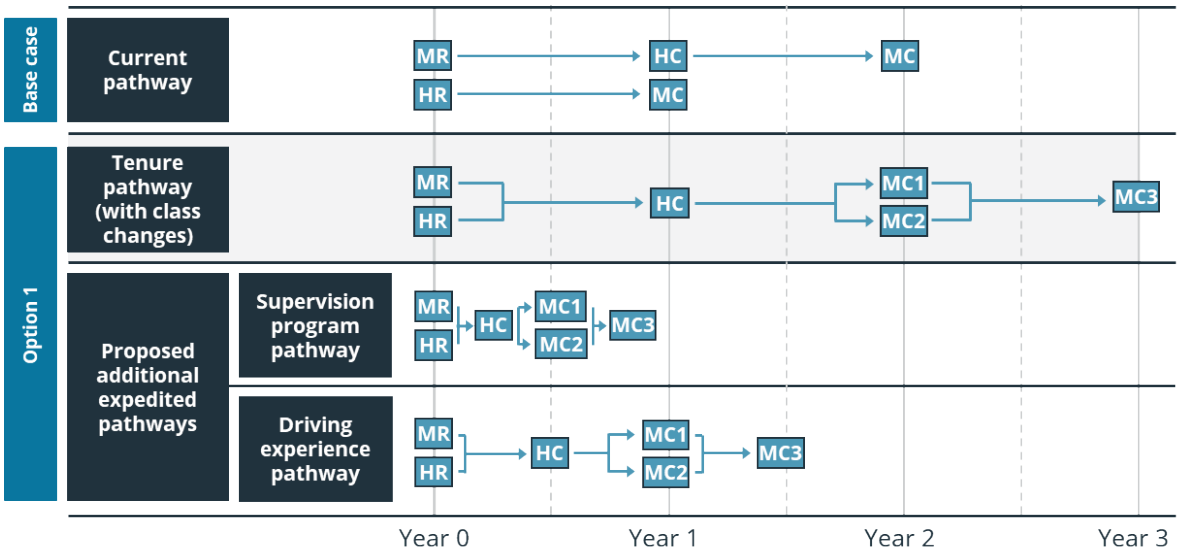
**Table 9:** Pathways for licence holders to progress from the rigid classes (MR and HR) to MC classes

| | Minimum timeframes under current arrangements | Minimum timeframes with access to alternative pathways |
|---|---|---|
| MR or HR to HC | 12 months | 12 weeks – 12 months |
| MR to MC1/MC2 | 24 months | 28 weeks – 24 months |
| HR to MC1/MC2 | 12 months | 28 weeks – 24 months |
| MR to MC3* | 24 months | 42 weeks – 36 months |
| HR to MC3* | 12 months | 42 weeks – 36 months |

**Note: licence category does not exist under current arrangements*

*Source: Frontier Economics*

**Figure 4**: Time involved in moving through progression pathways under current tenure arrangements and under Option 1 with additional pathways




*Source: Frontier Economics*

The introduction of the requirement to hold an HC licence before progressing to an MC licence and the splitting of the MC class may, for some drivers, extend the time required to drive the most complex of vehicles. This would only be the case if drivers took the tenure pathway. However, it is important to recognise that Option 1 introduces new pathways to progression that are faster or equal in timeframe to current arrangements:

- The *supervision program pathway* delivers:
  - an MC1/MC2 licence in approximately 6 months instead of the current 12 or 24 months from an MR or HR licence
  - an MC3 licence 3 months faster than is available under the current fastest progression pathway (HR direct to MC) and over 12 months faster from an MR licence.
- The *driving experience pathway* delivers an MC1/MC2 licence:
  - in the same timeframe as the existing HR to MC pathway
  - one year faster than the current MR to HC to MC pathway.

Under Option 1, the only groups who will have an extended heavy vehicle licensing pathway are those drivers progressing to an MC licence who choose:

- to remain on the tenure pathway and would previously have taken the HR direct to MC class route.
- the driving experience pathway and wish to drive MC3 class vehicles.

It is expected that most, if not all, heavy vehicle drivers will take the experience and/or supervision-based pathways to obtain an MC licence (including an MC3 licence) meaning they will be able to achieve this in the same or less time than is possible under the current pathways.

The following table outlines the step differences in vehicle combinations between HR and MC3 vehicles, highlighting both:

- the significant jump in vehicle complexity between HR and MC class vehicles, supporting the requirement to have a period on an HC licence before moving to an MC licence
- the significant increase in complexity in vehicle types and driving tasks within the MC class, supporting the rationale for separation of this class into three.

It further demonstrates that only four of the twelve possible pathways are of a longer duration than existing arrangements.

**Table 10:** Proposed progression pathways by licence class

| Licence classes | | Sample configurations (indicative only) | | | Fastest progression time from HR | | | |
|---|---|---|---|---|---|---|---|---|
| | | | | | | Proposed pathways | | |
| Current | Proposed | Image | Max length | Max mass (GML) | Current | Tenure | Driving experience | Supervision program |
| HR | |  | 12.5 m | 30.0 t | – | – | – | – |
| HC | |  | 19.0 m | 42.5 t | 12 months | 12 months | 6 months | 12 weeks |
| MC | MC1 |  | 26.0 m | 62.5 t | 12 months | 24 months | 12 months | 28 weeks |
| | MC2 |  | 36.5 m | 102.5 t | 12 months | 24 months | 12 months | 28 weeks |
| | MC3 |  | 53.5 m | 122.5 t | 12 months | 36 months | 18 months | 42 weeks |

| Shade | Comparison to fastest progression under current pathway |
|---|---|
| | No change |
| | Shorter |
| | Longer |

*Source: Frontier Economics, Austroads, images supplied by the NHVR.*

**Questions on Consultation RIS**

5.1. Do you consider that the components of the 'competency refresh' option (strengthened competencies and assessment; online delivery including an HPT; requirement to hold an HC licence before an MC licence; new MC classes; alternate pathways for progression) will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.2. Do you agree with the proposal to require a driver to have first held an HC licence before going to an MC licence?

5.3. Are you aware of any implementation challenges associated with any of the components of this 'competency refresh' option? What type of transitional arrangements would be required to implement the components of the option?

5.4. Are there any unintended consequences associated with any of the components of the 'competency refresh' option?

5.5. Do you consider that any components of the 'competency refresh' option should not be pursued, or are there any additional components that should be added?

## 5.3 Option 2 – Eligibility criteria plus competency refresh

Option 2 (the 'central' option) consists of Option 1 plus new **eligibility requirements**. The new eligibility requirements comprise two separate elements:

1. Unrestricted/open C class licence required to obtain an MR or HR licence.
2. Applicants will be required to demonstrate low-risk driving history.

### 5.3.1 Open C class licence to obtain an MR or HR licence

This option would require applicants to hold an unrestricted (open) driver's licence before they can apply for an MR or HR licence. This is again supported by the MUARC research cited in Box 4, which found that heavy vehicle crash risk was greater for drivers endorsed for an MR or HR licence while still on a P2 car licence. Drivers with an open car licence are likely to have greater behind-the-wheel experience (by virtue of the minimum period of time that drivers are required to hold a provisional licence) and are less likely to engage in unsafe driving practices.

This change would prevent applicants with a provisional (P1 or P2) car licence from applying for an MR or HR licence. All Australian states and territories impose age restrictions on when a driver can apply for a provisional car licence and minimum periods of time that a driver must hold a provisional licence before being issued an open licence. As a result, this change would have the effect of increasing the earliest age at which an applicant would be permitted to apply for an MR or HR licence.

MUARC's research found no increased crash risk for people who moved from a car licence to an LR licence, and it is therefore intended that current provisions, which allow for a person to apply for an LR licence while on a P2 licence, will continue.

It is recognised that this may have a negative impact on young persons entering the heavy vehicle industry, however this change is being proposed because of the evidence of the safety risk associated with these younger drivers.

While there are likely to be a range of factors that influence young people's views about the attractiveness of the heavy vehicle industry as a career, it is recognised that regulatory restrictions will be a contributing factor. In response to these concerns, Austroads is considering trialling a young heavy vehicle drivers program (see Box 5).

**Box 5:** Trialling a young drivers heavy vehicle program

While there have been significant reductions in young driver involvement in fatal and serious road incidents over the past 10 years (BITRE, 2020), young drivers continue to be over-represented. This risk associated with young drivers is recognised by the heavy vehicle insurance industry with considerable financial penalties and restrictions (e.g., carrying of certain commodities) placed on drivers under 25 years. It is also reflected in legislative provisions which restrict a person from gaining a heavy vehicle licence until they have held a car licence for at least one year.

Industry is seeking to attract younger people to a career as a heavy vehicle operator and has been supported by government in this endeavour through initiatives such as cadetship and apprenticeship schemes. While these schemes focus broadly on the range of duties and responsibilities in the heavy vehicle industry, driving is a part of that overall landscape and some industry members are wanting to explore opportunities to introduce young drivers to heavy vehicle driving at an earlier age. These proposals typically include elements such as intensive training, mentoring and supervised driving, as well as restrictions such as types of vehicles that can be driven and limitation to driving with the nominated participating employer.

While there have been a number of small-scale trials overseas, there has been no comprehensively evaluated program that has assessed whether it is possible to mitigate the risk posed by younger drivers. Some jurisdictions have previously considered programs to enable younger people to commence driving heavy vehicles at an earlier age, but these have not progressed. While not under active consideration as part of the options proposed in this RIS, views are sought on whether formal development and evaluation of a younger drivers heavy vehicle pilot trial would be supported.

*Source: Austroads*

### 5.3.2 Applicants to demonstrate low-risk driving history

Safety modelling analysis undertaken on Victorian heavy vehicle licence holders found a higher crash risk for drivers with a recent history of serious traffic offences and involvement in heavy vehicle crashes (see Box 4). This option, which has been developed based on these research findings, would involve the addition of new eligibility criteria related to an applicant's driving history. A person with 'high risk' history would not be able to apply for their first rigid licence or upgrade to a higher heavy vehicle licence class.

The offence history that would prevent a person from gaining or upgrading a heavy vehicle licence requires further consideration, however the following are indicative of the profiles that would exclude a driver:

- had a licence suspension or disqualification in preceding two years, or
- had a drink or drug driving offence in the preceding two years, or
- had committed a high speed driving offence (> 25 kms over the limit) in the preceding two years, or
- had a high risk court offence (such as careless or dangerous driving) in the preceding two years.

Crash involvement on its own is not a strong predictor of future heavy vehicle crash risk, however the relationship is stronger where it is linked with an offence (therefore an offence was issued based on the crash). There are considerable implementation issues associated with the use of past crash history as an eligibility criterion, and these issues are discussed in Section 7.

**Questions on Consultation RIS**

5.6. Do you consider that the components of this option (eligibility criteria based on offence and/or crash history; requirement to hold an open car licence before obtaining an MR or HR licence) will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.7. Are you aware of any implementation challenges associated with any of the components of the 'eligibility criteria plus refresh' option? What type of transitional arrangements would be required to implement the option?

5.8. Do you consider that any components of the 'eligibility criteria plus refresh' option should not be pursued, or are there any additional components that should be added?

5.9. Are you concerned that requiring an applicant to hold an unrestricted (open) driver's licence before they can apply for an MR or HR licence will impact on driver availability? Why or why not? Can you think of any options for addressing any concerns you may hold?

5.10. Are you concerned that the application of an eligibility criteria based on a serious offence history and/or a past crash history linked with an offence will impact driver availability or be considered unreasonably harsh? Why or why not? Can you think of any options for addressing any concerns you may hold?

5.10. Can you think of any alternative ways or approaches for mitigating the risks intended to be addressed through the eligibility criteria?

5.12. Are there any unintended consequences associated with the 'eligibility criteria plus refresh' option?

5.13. Do you support trialling a young heavy vehicle drivers program? How should this program operate? What are the costs and benefits associated with this program?

## 5.4 Option 3 – Supervised driving, eligibility and refresh

Option 3 (the 'supervised driving, eligibility and refresh' option) consists of Option 2 plus **minimum requirements for post-licence supervised behind-the-wheel driving**.

There is strong industry support for increased behind-the-wheel driving experience for novice heavy vehicle drivers. A number of industry associations already have, or are progressing implementation of, voluntary programs which have a strong focus on behind-the-wheel components. A number of these programs have integrated employer support as part of the program with wider mentoring and skill development. In addition, most larger transport operators already have in place new employee programs that include supervised driving.

This proposal involves imposing a *post-licence condition* on drivers which requires a minimum number of supervised driving hours after they have obtained or upgraded their heavy vehicle licence. The proposed requirements are as follows:

- **MR or HR licence**[26] – within the first three months of obtaining an MR or HR licence, the person would need to undertake a minimum of four hours of supervised behind-the-wheel driving.
- **HC licence** – within the first three months of obtaining an HC licence, the person would need to undertake a minimum of six hours of supervision covering:
  - behind-the-wheel driving
  - reversing skill development
  - coupling and uncoupling skill development.
- **MC licence** – within the first three months of obtaining an MC licence, the person would need to undertake a minimum of eight hours of supervision covering:
  - behind-the-wheel driving
  - reversing skill development
  - coupling and uncoupling skill development.

The minimum number of hours of supervised driving increases with licence class, reflecting the relatively higher safety risk imposed by larger vehicles and the additional skills in reversing and trailer management required in higher class vehicles. Drivers would need to complete their supervised driving hours in a heavy vehicle that belongs to their new/current licence class. Drivers that fail to reach the threshold of supervised driving hours would have the relevant newly obtained heavy vehicle licence class suspended until the threshold is reached.

Supervised driving would be delivered by an authorised supervisor. To be an authorised supervisor, a person will need an appropriate approval or certification. It is proposed that this certification will be a combination of the following:

- have held a heavy vehicle licence of the relevant class for at least five years
- have completed a specific credential (to be developed by Austroads) which will be delivered either online or face to face. Estimated time to undertake the training and assessment will be less than one day.

[26] There are no proposed supervised driving requirements associated with an LR licence.

It is recognised that a significant proportion of heavy vehicle drivers do not work for transport operators, or work for small to medium entities who have limited capacity to support post-licence supervised driving. In these instances supervised driving could be undertaken with a non-employer-based authorised supervisor.

Special purpose vehicles such as cranes and similar do not have a second seat and therefore it is not possible to undertake supervised driving. It is conceivable that a person could obtain a heavy vehicle licence for the purpose of driving such a vehicle. Exemptions may need to be considered in these specific circumstances.

An alternate approach to increase behind-the-wheel experience and overall job readiness would be to put in place increased minimum hours of supervised driving as part of pre-licence training. This would increase the cost to licence applicants.

**Questions on Consultation RIS**

5.14. Do you consider that the post-licence supervised driving proposal under the 'supervised driving, eligibility and refresh' option will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.15. Are you aware of any implementation challenges associated with the 'supervised driving, eligibility and refresh' option? What type of transitional arrangements would be required to implement this option?

5.16. Are there any unintended consequences associated with the 'supervised driving, eligibility and refresh' option?

5.17. Do you consider that any components of the 'supervised driving, eligibility and refresh' option should not be pursued, or are there any additional components that should be added?

5.18. What are your views on the relative benefits of pre-licence supervised behind-the-wheel time over post-licence supervised driving and the role of the licensing system in mandating minimum hours?

# 6 Options to address quality of training and assessment (Problem 2)

## 6.1 Overview

There are three reform elements being considered to address Problem 2:

1. Austroads to develop driver training and assessment material.
2. Austroads to develop tools and materials to support a more consistent national approach to management of outsourced training provision.
3. Introduction of minimum training hours including behind-the-wheel time.

We have packaged these three reform elements together into a single intervention option which has been compared to a business-as-usual base case. This assessment is undertaken separate to the analysis of options for Problem 1, given differences in the outcome and objectives of the options.

## 6.2 Element 1 – Austroads to develop driver training and assessment material

It is proposed that Austroads develop and maintain training and assessment material for all classes of heavy vehicle licence to meet the competencies set out in the NHVDCF. Standardisation of training and assessment material will help to promote a best practice approach and assist in ensuring that interstate drivers meet the required level of competency in all the jurisdictions in which they operate.

In particular, Austroads will establish a standard framework for training applicants to meet the NHVDCF competencies, including online and face-to-face training modules. In addition, Austroads will develop a standard framework for assessing applicants against the NHVDCF competencies, including online and face-to-face assessment modules.

The way jurisdictions use this material will vary for online and face-to-face modules:

- **Online**: National online training and assessment modules are expected to be adopted by all jurisdictions. That is, jurisdictions would agree to use these modules as a part of their heavy vehicle licensing requirements.
- **Face to face:** Austroads will provide the face-to-face training and assessment modules to jurisdictions that can modify them to meet local requirements. Jurisdictions will decide whether to mandate the use of this material.

The training and assessment material would be subject to an agreed review cycle by Austroads. Initially, it is proposed that a review would be conducted on a short cycle (e.g., 6 to 12 months after their initial release). Following this, reviews would be undertaken less frequently and would align with a periodic review of the competency criteria in the NHVDCF.

Current 'Licence to Drive' training and assessment programs are delivered under the VET umbrella and are subject to the standard approval and oversight functions of this sector. There

are varying views about whether heavy vehicle licensing programs should be managed directly by licensing authorities or continue to be managed through the VET sector. Licensing authorities are aware of the benefits which come from licensing programs being part of this sector, including the availability of government funding which is generally restricted to VET sector approved courses. However, there are also concerns that the current regulatory oversight arrangements do not focus on the quality of training delivery including whether the program aligns with the standard expected by licensing regulators.

As part of implementation planning, discussions will be held with the VET sector regulators and training providers to determine how increased standards, including potential introduction of mandatory minimum training times (which have been imposed by other regulators), could be achieved within a VET sector arrangement if this continues to be preferred.

As is currently the case, jurisdictions will continue to decide whether training and assessment is insourced or outsourced.

## 6.3 Element 2 – Austroads to develop tools and materials to support a more consistent approach to management of outsourced training provision

It is proposed that Austroads develop material to support consistent jurisdictional management of heavy vehicle training and assessment providers. This includes:

- training provider approval framework (key eligibility criteria)
- standards covering delivery, reporting and non-compliance for inclusion in contracts
- skills/qualifications/experience required for trainer/assessors including any ongoing professional development
- a template audit (compliance monitoring) tool
- skills/qualifications/experience required of auditors (compliance officers).

The above tools and materials will be provided to jurisdictions who may modify them for local use.

## 6.4 Element 3 – Introduction of minimum training and behind-the-wheel time

Where training is a mandated part of jurisdictional licensing arrangements, one of two VET sector nationally recognised qualifications are generally required:

- Licence to Drive
- Drive a Heavy Vehicle.

Progression through a competency-based training program is determined by the student demonstrating that they have met the competency standards through the training program and related work, not by time spent in training. Nationally recognised qualifications in the VET sector all have a volume of learning range (minimum – maximum) which is intended to provide guidance on the time that a qualification will take to obtain. However, these learning ranges are not mandatory. There are a number of providers who offer heavy vehicle training and

assessment programs which are below the minimum recommended learning range. This raises concerns about whether graduates of these particularly short programs are competent.

To ensure an adequate standard which meets licensing regulator requirements, Austroads is proposing the NHVDCF introduce minimum training and assessment periods. Indicatively these are proposed as:

- rigids: 16–24 hours (including time behind the wheel)
- combinations: 20–28 hours (including time behind the wheel).

Industry has provided consistent feedback about the importance of behind-the-wheel experience, and industry-sponsored training programs place considerable focus on this aspect of learning and skill development. In response to this feedback, Austroads is proposing the following minimum behind-the-wheel periods as part of the overall training program.

- rigids: 6–8 hours devoted to behind the wheel
- combinations: 8–10 hours devoted to behind the wheel.

**Questions on Consultation RIS**

6.1. Do you consider that the components of this option (standardised training and assessment material; increased consistency in management of outsourced providers; minimum mandated training and behind-the-wheel time) will address Problem 2 as described in this Consultation RIS? Please provide evidence to support your view.

6.2. Are you aware of any implementation challenges associated with this option? What type of transitional arrangements would be required to implement this option?

6.3. Are there any unintended consequences associated with this option?

6.4. Do you consider that any components of this option should not be pursued, or are there any additional components that should be added?

# 7 Impact assessment

## 7.1 Overview of assessment approach

A Consultation RIS should set out how each policy option will lead to incremental changes in the benefits and costs for industry, government and the community.

For this Consultation RIS an initial qualitative cost–benefit analysis (CBA) has been prepared to inform the impact assessment.

The main benefit categories considered in this analysis relate to anticipated reductions in heavy vehicle crashes and improvements in industry productivity. The key cost categories include additional training and assessment costs for prospective drivers, supervised driving costs for industry and implementation costs for governments.

The purpose of this assessment is to get an initial view on the likely order of magnitude of different impacts. In Appendix E we have transparently disclosed the initial inputs and data assumptions used in the analysis. Any evidence or data provided by stakeholders as part of responses to the Consultation RIS will be used to refine the analysis for the Decision RIS.

### 7.1.1 Overview of cost–benefit analysis

CBA is an assessment tool which compares the costs associated with a potential intervention with the benefits from society's point of view. It is typically used to compare options to identify a preferred option.

The analysis is incremental meaning it looks to identify additional costs and benefits over and above a base case (the absence of an intervention).

The key steps for undertaking the CBA include:

- defining the base case and options (see Sections 4 to 6)
- identifying impacts
- seeking data to value impacts
- undertaking CBA
- distributional analysis
- qualitative assessment of impacts that cannot be valued.

Costs and benefits tend to be incurred over a number of years. Therefore to directly compare the costs and benefits of different options over time, these impacts must be profiled over time based on the best available information for the period over which they are expected to occur. To enable comparison of these costs and benefits over time they need to be converted into a present value. This involves discounting these future costs and benefits. The discount rate applied to do this reflects the time–value of money, society's preference for a dollar of benefit today rather than a dollar of benefit in a year's time. The Office of Best Practice Regulation recommends using a 7% per annum (real) discount rate.

Once the cost and benefits have been profiled and discounted, the key results of the CBA emerge. The two key results are the benefit–cost ratio and the net present value.

- **Benefit–cost ratio** is the total present value of benefits divided by the total present value of costs.
- **Net present value** is the total present value of benefits minus the total present value of costs.

An option with a benefit–cost ratio greater than one and a positive net present value is net beneficial to society, i.e., the benefits of the option outweigh the costs. At this stage the option with the highest net present value should typically be the preferred option.

The broad CBA process is represented in Figure 5.

**Figure 5:** CBA overview


### 7.1.2 Breakeven analysis

For the Consultation RIS, an initial draft CBA has been undertaken.

A challenge for this assessment is that there is limited quantifiable evidence linking proposed policy changes with heavy vehicle crash-risk reduction benefits. While data is available on the costs imposed by road accidents (see Appendix F), there is much less certainty around the extent to which different licensing policies contribute to the likelihood of an accident. This impacts on the estimation of how the different options might reduce this risk.

Given this uncertainty we have presented the initial CBA in the form of a breakeven analysis. The breakeven analysis builds up a midpoint estimate of the incremental costs of the policy options and then determines the level of crash benefit which would be required in order for the option to deliver benefits in line with costs (i.e., have a benefit–cost ratio of one and a net present value of zero).

Under this approach stakeholders should focus on the reasonableness of the 'crash risk–reduction assumptions' that would be needed to make a reform beneficial – i.e., in order for total benefits to outweigh total expected costs, resulting in a net benefit.

The breakeven figures presented are based on initial single-point estimates of the costs of the reforms, which will be subject to revision following feedback on the Consultation RIS. These figures should be considered indicative and subject to change.

### 7.1.3 Impacts considered

In order to undertake an impact assessment, it is first necessary to understand the impacts themselves. Considering impacts qualitatively can help ensure that outcomes are identified rather than intermediate implications. It can also avoid other issues such as double counting (where the same impact is captured in two different ways within the same analysis).

Under the base case (business as usual) costs are already incurred. Namely:

- Prospective drivers incur costs in seeking a licence.
- State and territory governments/licensing authorities incur costs in maintaining (and in some cases operating) heavy vehicle driver training and assessment arrangements.
- Outsourced training providers incur costs in providing heavy vehicle driver training and assessment.
- Society incurs costs associated with heavy vehicle crashes caused by driver competency issues.

The various features of the options being considered will change the nature and extent of these costs. In particular they may change:

- **government/authority implementation and ongoing administration costs** – associated with developing and implementing legislation and policy, new training content and systems or integrating revised licensing conditions into existing systems (i.e., IT system change)
- **driver and licence applicant's costs** – associated with any additional time required to undertake the required training or assessment
- **industry costs** – associated with any additional supervised driving requirements and the hours associated with this
- **trainer and assessor costs** – associated with any additional time and effort required to provide the training or assessment.

Of course, the options being considered will also reduce some costs incurred or drive additional benefit relative to the base case. Namely they may result in:

- **improved road safety outcomes or reduced costs for society as a result of a reduction in heavy vehicle crashes** – This benefit would be the result of improving the competency of drivers either as a result of improvements in driver training (through improved, more targeted competencies and more supervised driving) and/or a reduction in the number of higher risk heavy vehicle drivers on the road due to eligibility criteria. Further details on our approach to valuing this benefit are described in Appendix F.
- **benefit for industry and society as a result of improvements in productivity** – It is possible that, in the absence of the reforms, productivity benefits may be forgone if prospective drivers are delayed or discouraged from seeking a higher class heavy vehicle licence that would enable them to drive larger, more productive vehicles. If the use of more productive vehicles is constrained by driver availability, then the reforms may potentially enable greater productivity in the industry.

It should be noted that the impact of the options on both heavy vehicle driver availability and ultimately heavy vehicle productivity are not directly captured in the CBA. Instead we have considered these impacts qualitatively in relation to each option.

**Box 6:** Transfers and CBA

CBA is evaluated from the point of view of society. As such, any impact which makes one party better off but another party equally worse off is not a real impact from the point of view of society. Such impacts are called transfers and should not be included within a cost–benefit analysis. In the case of the NHVDCF, an example of a transfer would be if there were a change in assessment fees.

While transfers are excluded from CBA, the distributional analysis considers the instance of impacts across user groups and would pick up impacts such as user charges.

**Questions on Consultation RIS**

7.1. Are there impacts which you feel have been missed? If so, can you provide evidence of these impacts?

## 7.2 Initial impact analysis

The initial draft CBA has been developed to be consistent with the Australian Government Guide to Regulatory Analysis[27] and the Office of Best Practice Regulation's cost–benefit analysis guidance note.[28] Key assumptions and parameters are provided in Table 23 in Appendix E.

The impacts included in the analysis are those outlined in Section 7.1.3. As previously stated, CBA is an incremental analysis and thus looks at the difference in impacts relative to the base case.

This analysis draws on a broad range of data and makes a number of assumptions. For transparency, Appendix E provides details of all input values assumed. The costs included in the initial CBA were estimated on a bottom-up basis from these inputs.

These data and input assumptions are drafts with the intention being that they are amended and calibrated for the Decision RIS. As part of the Consultation RIS process, feedback is sought on these input values.

**Questions on Consultation RIS**

7.2. Do you have any comments on the key assumptions and input values described in Appendix E? Do you have any data or evidence to support the determination of these assumptions?

27 Commonwealth or Australia, *Australian government guide to regulatory analysis*, 2020.

28 Office of Best Practice Regulation, *Cost–benefit analysis: guidance note*, 2020.

For the Consultation RIS we have focused on articulating the order of magnitude of costs and the level of crash benefit required to equal these costs. Rather than presenting the initial cost estimates (which can cause anchoring to results which are subject to change), the results presented in Table 12 to Table 14 are colour coded to reflect the order of magnitude of the impacts. These order of magnitude categories are defined in Table 11.

**Table 11**: Order of magnitude cost key

| Impact | Description |
|---|---|
| | Cost with present value of $100 million or greater |
| | Cost with present value of $10 million to $100 million |
| | Cost with present value in range of $1 million to $10 million |
| | Cost with a present value of less than $1 million |

### 7.2.1 Impacts of Option 1 – Competency refresh

#### Costs

While there has been general support (from the industry, training providers and licensing authorities) for the strengthening of competencies to support job readiness and to improve the standard of capability of heavy vehicle novice drivers, there will be a number of costs expected in implementing this reform.

Option 1 comprises a series of **transitional costs for jurisdictional governments and agencies** which are largely in the millions of dollars, with some elements expected to be in the tens of millions of dollars. These include costs associated with the introduction of enhanced NHVDCF competencies and the creation of a common assessment standard which is expected to create additional costs:

- associated with developing and implementing the new training content – including in particular online training elements. While some jurisdictions have moved into digital delivery, including in provision of quite sophisticated learning programs, not all are in the same situation, and this will require investment and ongoing management.
- for licensing authorities – there will also be costs associated with modifying infrastructure and building capability to assess licensees against the revised requirements. In particular there are expected to be costs associated with integrating online training with existing assessment systems. For example, it will be necessary to ensure that the person who completes the online material is actually the licence applicant, to ensure integrity. This process, known as proctoring, is expected to require system investment.

There would also be an overarching transition project management cost for both the jurisdictions and Austroads. This would be required to coordinate the various workstreams and to ensure alignment between jurisdictions. In addition, jurisdictions would need to produce and distribute communication material to provide detail of the changes to stakeholders.

However, the **largest cost is the additional training and assessment costs** associated with the increased training time required to meet the enhanced NHVDCF which are estimated to be hundreds of millions of dollars.

This includes additional costs:

- for licence applicants associated with any additional time required to undertake the training. We note there may also be challenges that will need to be overcome for some licence applicants who are not computer literate or do not have computer and internet access given some assessment will move online. We expect other approaches will have to be made available for this cohort.
- for the training industry associated with any additional time required to provide the face-to-face training. Some upskilling of trainers and assessors will be required. These costs will, in many cases, be transferred to licence applicants through higher fees.

These training and assessment costs are somewhat moderated by the fact the option seeks to move some elements of training and assessment online. This is expected to provide an efficient way in which to deliver training and assessment, albeit that it drives upfront investment by licensing authorities to support this arrangement. While many licence applicants are expected to embrace the approach, not all will.

**Box 7:** Implementation challenges relating to the strengthening of competencies

The heavy vehicle driver training industry is currently facing trainer shortages in a number of locations. In smaller jurisdictions, such as Tasmania and Northern Territory, there are a small number of providers, and licence applicants already need to travel some distance to access training and assessment. In most states and territories, licence applicants are experiencing longer delays accessing training and assessment programs than was the case several years ago.

In this environment there is concern that strengthening competency and assessment requirements and governance arrangements overall may result in some providers deciding to withdraw from service provision. While in some locations alternate providers will be available, this will not always be the case.

*Source: Austroads early consultation*

Other elements of the option also have the potential to add additional administrative costs for jurisdictional governments. Namely we expect:

- The amendments to the progressive licensing requirements may impose additional costs on licensing authorities. In particular it is expected that system changes will be required. For example, a mechanism to provide evidence of logged work hours and completion of a supervision program will need to be developed. Dependent on the solution this may result in increased administrative overhead and a requirement to introduce a compliance program. Other implementation challenges are described in Box 8.
- The introduction of a new sub-class of MC licence will create costs for jurisdictional governments associated with integrating this into existing licensing arrangements. This will require system changes and for some states and territories this will be quite complex. There

may also be implications for training providers although these have not been incorporated directly into the CBA (see Box 8).

**Box 8:** Implementation challenges relating to the introduction of new sub-classes of MC licence

Early consultation to date has suggested varying levels of support for this element of Option 1. In some parts of the country, where there is extensive use of more complex combination vehicles, there is some industry support for the provision of more targeted skills development in very large vehicles. Others are of the view that existing arrangements, particularly when coupled with accreditation schemes, are sufficient.

It is possible that this element of Option 1 will have a number of implications for training providers not incorporated directly into the CBA.

Firstly, there are limited routes on which very heavy combination vehicles can operate. As a consequence a number of existing MC licence training providers will be unable to offer services for the proposed MC2 and MC3 licences. This may mean applicants need to travel to access an approved training provider with some states expected to have no providers available in MC3 classes and possibly also MC2. This would require those states to consider recognition of training and assessment credentials gained in another state or territory.

Secondly, this change may require investment in additional vehicles (or introduction of models such as 'bring your own vehicle').

Some stakeholders have suggested that there is a risk that training providers may withdraw from the market if the revised competencies and training requirements are viewed as onerous, which may in some states and territories lead to there being insufficient supply to meet demand.

*Source: Austroads early consultation*

**Table 12:** Breakeven analysis result – Option 1: Competency refresh

| Costs | | Order of magnitude |
|---|---|---|
| Government | Overarching reform transition costs for Austroads and jurisdictions | $10m–$100m |
| | Engagement with RTOs on enhanced competencies in the NHVDCF | $1–$10m |
| | Developing online training content | $1–$10m |
| | Integrating online training with existing systems | $1–$10m |
| | Implementing amendments to the progressive licensing requirements | $1–$10m |
| | Introducing a new sub-class of MC licence | $10m–$100m |
| | Training governance | $10m–$100m |
| Industry | Additional training and assessment costs for licence applicants and RTOs | >$100m |
| Society | Indicative breakeven heavy vehicle crash improvement | **2–3%*** |

*Note: * The breakeven figures presented are based on initial single-point estimates of the costs of the reforms which will be subject to revision following feedback on the Consultation RIS. These figures should be considered indicative and subject to change.*

*Source: Frontier Economics*

### Benefits

The breakeven crash improvement required to balance out these costs is a 2–3% reduction in all crashes involving heavy vehicles.[29]

If we assume that 20% of all HV crashes are caused by HV driver error,[30] and that it is this subgroup of crashes that can be reduced by reforms to the NHVDCF, this implies the Option 1 reforms would need to reduce crashes related to HV driver error by 10–15%.

Further details on our approach to valuing any crash risk reduction are provided in Appendix F.

In terms of the likelihood of a 2–3% crash improvement being realised under Option 1, it is worth going back to the component parts of the option itself.

Option 1 involves a number of changes to the specific NHVDCF competencies, a requirement to hold an HC licence before progressing to an MC licence, and the introduction of MC sub-classes. These changes are intended to enhance skill and competency development, including focusing

[29] This means this option would generate net benefits if it resulted in 4 fewer fatal crashes, 36 fewer crashes involving a hospitalisation and 336 fewer non-hospitalisation and property damage only crashes per year.

[30] See BITRE data cited in Section 3.1.

heavy vehicle driver training and assessment on key risks for different vehicle types. These changes are presumed likely to reduce the heavy vehicle crash risk. However, we are unaware of any evidence that can be used to support the degree to which the crash risk might reduce.

**There is evidence that hazard perception training would reduce the risk of crashes.**

Option 1 involves the introduction of hazard perception training/testing (HPT) for heavy vehicle drivers under the refreshed NHVDCF. Academic literature suggests that HPT should reduce the crash risk for light vehicle drivers.[31] And the evidence available from evaluations (albeit limited) indicates that there are crash risk–reduction benefits for young drivers who have recently received their driver's licence. For example:

- The inclusion of a hazard perception test in the UK light vehicle driver licensing process was estimated to reduce drivers' non-low speed public-road crash rates by 11.3% in the year following their test.[32, 33]
- Similarly, a trial of the impact of 17 minutes of hazard perception training on drivers who just passed their on-road driving test in California found that, in the year following the intervention, trained male drivers overall (though not female drivers) had a crash rate 23.7% lower than the untrained males.[34]

It is not known to what extent learnings from training of light vehicle drivers are transferable to heavy vehicle drivers. Further, the extent to which drivers develop general hazard perception skills, which are broadly transferable regardless of the type of vehicle driven, has not been established. However, it seems reasonable to assume that HPT focused on key heavy vehicle hazards would be beneficial to new heavy vehicle drivers.

A key area of uncertainty is the degree to which any crash risk reduction from HPT persists in the years following a heavy vehicle driver undergoing the hazard perception training/test. It is possible that, with an increase in time since involvement in the training program, the benefit diminishes, although this will be compensated by increased driver experience.

Based on the UK evidence described above it seems reasonable to suggest the introduction of heavy vehicle–specific HPT could result in a crash risk reduction of around 10% for newly licensed heavy vehicle drivers. Approximately 25% of major accidents involve heavy vehicle drivers with less than five years' experience.[35] If we assumed that half of these crashes (i.e., 12.5% of total crashes) occur in the first one to two years after receiving a licence and that the risk of these

31 See, for instance, Horswill MS (2016) 'Hazard perception in driving', *Current Directions in Psychological Science* (25, 6):425–430.

32 Wells P, Tong S, Sexton B, Grayson G and Jones E (2008) 'Cohort II: A study of learner and new drivers', *Road safety research report no. 81*:169. Report commissioned by the UK Department for Transport.

33 The Department of Transport has noted that the introduction of hazard perception tests in the Victorian light vehicle driver licensing process as part of the introduction of the graduated licensing system (GLS) may have contributed to a 20% reduction in the rate of fatal and serious crashes involving drivers aged 18 to 20 years. However it is difficult to separate out the impact of the hazard perception testing from the broader changes associated with the GLS such as supervised driving (Victorian Department of Transport, *Media release – Hazard perception test now available online*, available here: https://transport.vic.gov.au/about/transport-news/news-archive/hazard-perception-test-now-available-online).

34 Thomas FD, Blomberg RD, Peck RC and Korbelak KT (2016) *Evaluation of the safety benefits of the risk awareness and perception training program for novice teen drivers*, Report commissioned by the National Highway Traffic Safety Administration.

35 Austroads (2022) *SRL6259 National heavy vehicle licensing framework: Theme 2A – Licence class progression,* Internal Report:55.

crashes can be reduced by 10% then the introduction of HPT in the NHVDCF would result in a **1.25%** reduction in the total number of heavy vehicle crashes.

**The additional alternative pathways to progression would also generate benefits.**

The impact of the other proposed element of this option – namely the amendments to the current, tenure-based, progressive licensing requirements – on the risk of heavy vehicle crashes is uncertain. It is not clear whether offering participation in a supervision program or minimum driving experience, as an alternative to a required 12-month tenure, will reduce or increase the crash risk. Our current working assumption in that this reform element will not affect safety outcomes.

However, it may result in:

- **Greater heavy vehicle driver availability** – Amendments to progressive licensing requirements in Option 1, even noting the introduction of the requirement to hold an HC licence before gaining an MC licence and the splitting of the MC class, should improve driver supply in higher licence classes. On balance, Option 1 would increase driver availability if drivers are able to get licences for heavier and more complex vehicles more quickly. This will depend on the extent to which prospective drivers access the alternative pathways to progression.
- **Improvements in productivity** – Following on from the impact above, if drivers are able to get licences for heavier and more complex vehicles more quickly, this should enable greater use of high productivity vehicles and increase productivity in the industry by enabling freight to be moved at lower cost.

**Box 9:** Likely impact on heavy vehicle driver availability for MC class vehicles

Industry has indicated some support for the introduction a more rapid progression pathway through the heavy vehicle classes. The two options proposed are participation in a supervision program and driving experience.

There is concern that a supervision program will not be viable for smaller operators to offer. There have also been concerns expressed by some industry members about the skills of potential supervising drivers and the possibility that they may pass on poor rather than good driving practices. For heavy vehicle operators it is expected that amendments to progressive licensing arrangements could impose costs in terms of offering the supervision program and in identifying, supporting and accrediting suitable supervising drivers. However, relative to the base case, it is only expected that this will be undertaken where the benefits of the supervision program outweigh the costs, given this change is optional and not mandated. The initial CBA does not include these impacts.

The driving experience pathway is expected to be particularly attractive to smaller operators and owner drivers as there is limited additional overhead in this option. There will need to be a mechanism for recording driving hours, however this is not expected to be onerous for most drivers.

This makes it challenging to identify impacts on driver availability as it is not clear whether, and to what extent, licence applicants will have the option or interest in taking up the alternative expedited progression paths.

Added to this, Option 1 includes a requirement that prevents applicants from skipping the HC class. Currently a relatively high proportion of upgrading heavy vehicle licence holders (approximately 75% in some jurisdictions) move directly from an HR to an MC licence. Therefore, this change would be likely to reduce the supply of MC licence holders when the change is first introduced. This would likely delay employment opportunities in MC class vehicles for some drivers.

*Source: Austroads early consultation feedback.*

**Questions on Consultation RIS**

7.3. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'competency refresh' option?

7.4. What impact do you consider the 'competency refresh' option will have on driver availability, particularly in respect to drivers holding MC licences? Do you have any data or evidence that would help support or better understand this?

7.5. Do you think that all elements/components of the 'competency refresh' option should be progressed? If not, why not?

### 7.2.2 Option 2 – Eligibility criteria plus competency refresh

#### Costs

Option 2 includes all the costs included in Option 1 plus some additional costs. These additional costs relating to the introduction of new eligibility criteria **would be incurred by licensing authorities, would cost tens of millions of dollars**, and are expected to comprise:

- setup costs related to developing legislation, policy and systems to be able to assess eligibility criteria for licence applications (estimated to be in the tens of millions of dollars), and the ongoing costs in the hundreds of thousands of dollars range.
- ongoing costs associated with managing reviews and appeals of rejections against eligibility criteria.

There is a risk under this option that licence applicants may incur cost and time in undertaking training, but subsequently be denied a licence or licence upgrade based on recent offence or crash history. This should be able to be mitigated with clear upfront communication of eligibility criteria by training providers. As such, impacts of this nature have not been included in this analysis.

As detailed in Section 5.3.1 in Box 5, Austroads is considering trialling a young heavy vehicle drivers program. This is not currently a core element of this option and hence is included in this analysis.

**Table 13:** Breakeven analysis result – Option 2: Eligibility criteria plus competency refresh

| Costs | | Order of magnitude |
|---|---|---|
| Option 1 elements | Government costs associated with reform elements also included in Option 1 | $10m–$100m |
| | Industry costs associated with reform elements also included in Option 1 | >$100m |
| Government | Eligibility criteria setup costs | $10m–$100m |
| | Eligibility criteria ongoing costs | $1–$10m |
| Industry | | - |
| Society | Indicative breakeven heavy vehicle crash improvement | **2–3%*** |

*Note: * The breakeven figures presented are based on initial single-point estimates of the costs of the reforms which will be subject to revision following feedback on the Consultation RIS. These figures should be considered indicative and subject to change. The point estimate value for Option 2 will be slightly higher than for Option 1 due to some additional marginal costs.*

*Source: Frontier Economics.*

### Benefits

Given that the additional costs in Option 2 (for jurisdictions associated with introducing eligibility criteria) compared to Option 1 are relatively modest, it follows that the breakeven crash improvement required is likely to be only slightly higher than Option 1.

In terms of the likelihood of this crash improvement being realised, improved safety outcomes are expected relative to the base case and Option 1 given there would be improvements in driver competency from both the Option 1 measures and as a result of the stricter eligibility criteria reducing the number of higher risk heavy vehicle drivers on the road.

**There is evidence that the eligibility requirements relating to driving history reduce the risk of crashes.**

The findings of the Victorian-based research found that drivers with a recent serious offence history and a crash history linked to an offence, have a higher future crash risk. Removing drivers who have a recent serious offence history could be expected to reduce heavy vehicle crashes by 2–5%.[36]

As outlined in Box 10 there are challenges associated with the introduction of eligibility criteria linked to a serious offence history and a crash history linked with an offence.

**The impact of Option 2 on heavy vehicle driver availability and productivity in the sector is ambiguous.**

The additional requirement to hold an open/unconditional C class licence to obtain a rigid licence increases the earliest age at which an applicant would be permitted to apply for a heavy vehicle driver's licence. This would delay a young person's ability to become a heavy vehicle driver by a year in most jurisdictions,[37] which may negatively impact driver availability if young people move into, and remain in, other industries. It is not clear whether the impact of this element on driver availability would outweigh the improvements in driver availability expected from the introduction of accelerated progression pathways under Option 1.

Some segments of industry are seeking to encourage greater entry of young persons to a heavy vehicle–based career path, and view this as an additional barrier which will have a negative impact on driver availability.

[36] This range is based on analysis contained in the MUARC study. It will be further refined in analysis undertaken for the Decision RIS. Estimates will ultimately depend on the specific penalties and/or offences that would deem an applicant ineligible for a heavy vehicle licence.

[37] Periods on a P1 and P2 licence vary across states and territories.

**Box 10:** Implementation challenges for eligibility criteria relating to driving history

Licensing authorities have indicated that there may be some significant system and administrative issues in equitably implementing this proposal. These challenges include:

- Offence information can take 12 months or more to be made available from courts, and offences can at times be bundled rather than separated.
- Appeal and review processes can delay the finalisation of offences.
- The quality and timeliness (e.g., delays of up to a year) of data entered into crash databases varies and this will impact the ability to apply eligibility rules which rely on crash history.
- Licensing systems do not currently interact with crash databases and costs will be incurred to integrate or interrogate across systems.
- If the impacts of offences and crashes in other states and territories are to be taken into account, there will be a need for standardisation and exchange of offence data and access to interstate crash records.

*Source: Austroads early consultation feedback.*

**Questions on Consultation RIS**

7.6. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'eligibility criteria plus refresh' option?

7.7. Do you have any concerns or envisage any other challenges associated with introducing eligibility criteria relating to either a licence applicant's history of serious driving offences and/or crash history linked to an offence?

7.8. What impact do you consider the 'eligibility criteria plus refresh' option will have on driver availability, particularly in respect to the impact of:

- the additional requirement to hold an open/unconditional C class licence
- the introduction of new eligibility criteria?

Do you have any data or evidence that would help support or better understand this?

7.9. Do you think that all elements/components of the 'competency refresh' option should be progressed? If not, why not?

### 7.2.3 Option 3 – Supervised driving plus eligibility plus competencies

#### Costs

The initial draft CBA for Option 3 builds on Option 2 and hence includes all the Option 2 costs. On top of this **the addition of supervised driving adds hundreds of millions of dollars of additional costs.** These additional costs comprise:

- system costs – there would be system changes licensing authorities need to make to be able to monitor and enforce adherence to supervised driving requirements. In some jurisdictions, these changes are expected to be quite complex.
- ongoing costs – licensing authorities would also incur additional administrative burden in monitoring and managing completion of supervised driving requirements and ensuring the integrity of records submitted.
- costs of additional supervised driving – there would be additional costs to both the heavy vehicle industry and licence applicants.

For those employers who do not currently have supervised driving programs in place, additional cost will be incurred (see Box 12).

There will be some administrative cost in providing evidence of completion of supervised driving and in identifying, supporting and accrediting supervising drivers.

Finally, there would also be costs associated with the time of the licence applicant and supervisor, and vehicle costs associated with the additional supervised driving itself.

**There could be a negative impost for community and volunteer groups**

Not all heavy vehicles are used for commercial purposes, with a number utilised by community and not-for-profit groups (e.g., community transport buses; volunteer fire organisations). Some of the vehicles used by these groups can be driven on an LR class licence, and would not be subject to post-licence supervised driving requirements. However, some vehicle types require an MR licence which would, under this proposal, require a recently licensed person to undertake a period of supervised driving. Dependent on the operations of the organisation and availability of qualified persons to undertake supervision, there may be difficulty in completion of supervised driving requirements.

**Box 11:** Implementation challenges for supervised driving requirements

There have been concerns expressed by some industry members about the skills of potential supervising drivers and the possibility that they may pass on poor rather than good driving practices. Licensing authorities support increased behind-the-wheel experience, but largely consider that post-licence supervision should be managed by an employer and is part of wider workplace health and safety and chain of responsibility requirements.

Those drivers who were unable to secure supervised driving experience from an employer would incur costs in seeking this through an alternate source or lose their recently obtained heavy vehicle licence.

*Source: Austroads early consultation feedback.*

**Box 12:** Case study of one organisation's approach to onboarding including supervised driving

With respect to costs of additional supervised driving, larger operators report already undertaking significant induction and supervision activities with new employees and what is proposed is less than some operators currently undertake (i.e., in these instances there would not be an incremental change relative to the base case). However, these sorts of supervision programs are generally less prevalent with smaller transport operators and in ancillary industries. As detailed in Appendix C, an assumption has been made in the analysis around the extent to which additional supervised driving costs are included in the base case.

The following is an example of one organisation's approach to onboarding and competency assessment using mentoring and supervised driving.

The organisation does a licence check and undertakes a 5-year driver history report. The organisation prefers 12 months experience in licence class, however given the driver shortage, they will accept less experience. To assess driver competency prior to allowing them to undertake solo driving they undertake a supervised driving assessment covering:

- mandatory core competencies (e.g., braking, and stopping distances, executing corners)
- skill set required for particular vehicles (e.g., dynamic load for concrete agitator and tippers).

In addition, the new employee is assigned a mentor and the worker leverages knowledge of mentors for:

- vehicle operational requirements of the vehicle
- operational environment knowledge such as requirements with delivering loads to different worksites (e.g., construction and building sites).

The organisation's assessment is that the benefit of supervised driving are:

- greater roadcraft knowledge, in particular, when the worker does not have the minimum 12 months experience
- greater operational environment knowledge, in particular, when the worker already has the minimum 12 experience.

*Source: Austroads.*

**Table 14:** Breakeven analysis result – Option 3: Supervised driving plus eligibility criteria plus competency refresh

| Costs | | Order of magnitude |
|---|---|---|
| Option 2 elements | Government costs associated with reform elements included in Option 2 | $10m–$100m |
| | Industry costs associated with reform elements included in Option 2 | >$100m |
| Industry | | - |
| Industry | Additional supervised driving costs | >$100m |
| Society | Indicative breakeven heavy vehicle crash improvement | **4-5%*** |

*Note: * The breakeven figures presented are based on initial single-point estimates of the costs of the reforms which will be subject to revision following feedback on the Consultation RIS. These figures should be considered indicative and subject to change.*

*Source: Frontier Economics.*

### Benefits

The initial draft CBA for Option 3 builds on Option 2. Improved safety outcomes are therefore expected as a result of improved competency requirements and from a reduction in the number of higher risk, heavy vehicle drivers on the road due to stricter eligibility criteria relating to driver history.

The addition of post-licence supervised driving requirements adds hundreds of millions of dollars of additional cost. This increases the breakeven crash improvement required to 4–5%.[38] If we assume that 20% of all heavy vehicle crashes are caused by heavy vehicle driver error[39] and conservatively that it is only this subgroup of crashes that can be reduced by reforms to the NHVDCF, this implies these reforms would need to reduce crashes related to heavy vehicle driver error by 20–25%.

There is evidence that suggests increasing supervised driving requirements by 8–12 hours might reasonably reduce heavy vehicle crash risk, particularly for inexperienced heavy vehicle drivers. Evidence from evaluations of the impact of minimum hours of driving practice on light vehicle safety suggests crash risk reductions of around 20% for newly licensed drivers (see Box 13). Given approximately 25% of major accidents involve heavy vehicle drivers with less than five years' experience,[40] if their risk of crashes was reduced by 20% this would equate to a **5%** reduction in

38 This means per year this option would need to result in around seven fewer fatal crashes, 65 fewer crashes resulting in a hospitalisation and 613 fewer non-hospitalisation and property damage only crashes in order to be of net benefit.

39 See BITRE data quoted in Section 3.1

40 Austroads (2022) *SRL6259 National heavy vehicle licensing framework: Theme 2A – Licence class progression*, Internal report:55.

all heavy vehicle–related crashes per annum – a figure above the indicative breakeven heavy vehicle crash improvement required to make Option 3 net beneficial.

This is in line with industry sentiment. A small survey of 10 industry stakeholders, who were asked their opinions on the benefit from introducing supervised driving requirements of between 4 and 96 hours, indicated that they believed an additional 8–12 hours of supervised driving may reduce crash risks by 10–12%.

It would be expected that the supervised driving benefits would be additional to the benefits from eligibility criteria in Option 2 and thus it appears possible that the benefits would outweigh costs in this option.

In terms of the impact of Option 3 on driver availability and productivity, these impacts would be expected to be the same as those described from Option 2.

**Box 13:** Effectiveness of minimum training to obtain a light vehicle licence and the effectiveness of supervised driving

Studies have found support for the effectiveness of mandating minimum hours of driving practice requirements on reducing serious injury and fatal crashes. For example, one study found an 18% reduction in fatal crashes within jurisdictions in the USA where the minimum mandated hours was above 30 hours, compared to those with lower or no requirements.[41] Using insurance claims as the outcome, a different study found that an increase of 40 hours of supervised driving practice reduced insurance claims among drivers aged 16 by 14%.[42]

Evaluations conducted after the introduction of learner driver graduated licensing systems (GLS) in various Australian jurisdictions have also highlighted the benefits of increasing the number of hours of supervised practice that a learner driver must complete.

- An evaluation of Victoria's GLS (which requires a learner to achieve a minimum 120 hours on-road supervised driving) found that for drivers aged 18 to 23 years at licence in their first year of driving, crash involvement rates for casualty and fatal or serious incident crash dropped significantly by 18.7% and 19.4% respectively.[43]
- A study of Queensland's GLS (which required learner drivers to complete 100 hours of supervised training) found that traffic offending was significantly less for drivers in the new system (0.6% offending in the follow-up period) compared with drivers in the old system (4.7% offending in the follow-up period) .[44]

41 Chen L-H, Baker S and Li G (2018) 'Graduated driver licensing programs and fatal crashes of 16-year-old drivers: a national evaluation', *Paediatrics* (118, 1):56 –62.

42 Trempel R (2009) *Graduated driver licensing laws and insurance collision claim frequencies of teenage drivers.* Highway Loss Data Institute.

43 Healy D, Imberger K and Catchpole J (2017) *The Victorian graduated licensing system, outcome evaluation*, published by VicRoads.

44 Scott-Parker B, Bates L, Watson B, King M and Hyde M (2011) 'The impact of changes to the graduated driver licensing program in Queensland, Australia on the experiences on learner drivers', *Accident Analysis and Prevention* (43, 4):1301 –1308.

**Questions on Consultation RIS**

7.10. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'supervised driving, eligibility and refresh' option?

7.11. Do you expect the 'supervised driving, eligibility and refresh' option to be any different to the 'eligibility criteria plus refresh' option in terms of driver availability? Do you have any data or evidence that would help support or better understand this?

## 7.3 Summary of results

The results of the initial impact analysis are summarised in Table 15. As each option builds additional requirements on to the preceding option, the cost increases correspondingly. This means the reduction in heavy vehicle crashes required to make the reform beneficial (the breakeven crash improvement) also increases with each option.

**Table 15:** Summary of initial impact analysis

| | Option 1 | Option 2 | Option 3 |
|---|---|---|---|
| Magnitude of costs | >$100m | >$100m | >$100m |
| Breakeven crash improvement | 2–3% | 2–3% | 4–5% |
| Expected impact on driver availability and productivity outcomes | Positive | Unclear | Unclear |
| Providing access to heavy vehicle licences for social and personal benefit | Positive | Neutral | Neutral to negative |

*Source: Frontier Economics.*

Further feedback on the expected crash reduction benefit by option, and the likely net impact on driver availability and productivity, is required to be able to directly compare options and establish a preferred option.

That said, there is some evidence to suggest that all options could be of net benefit.

There is some, albeit limited, evidence that the competency refresh reforms included in Option 1 could be of net benefit particularly in relation to the addition of hazard perception testing into licensing regimes. It is also expected that Option 1, by providing additional alternative pathways to progression, would also improve heavy vehicle driver availability and productivity in the industry – assuming drivers take the new alternative progression pathways in order to get licences for more complex vehicles more quickly – although industry feedback is needed to clarify whether this is likely to be the case.

The additional reform elements included in Option 2 are expected to be of net benefit, Namely:

- the introduction of eligibility criteria based on recent past driving history
- a requirement for applicants to hold an unrestricted (open) driver's licence before they can apply for an MR or HR licence.

This is because these reform elements prevent relatively more risky drivers from applying for a heavy vehicle licence and they do this at a cost to government of between $10 million and $100 million. These reforms do not affect a heavy vehicle licence applicant's training costs. However, these reforms would presumably have some impact on the pool of individuals who can apply to be a heavy vehicle driver. Further work is needed to clarify the impact of these elements on heavy vehicle driver availability.

There is also some evidence that adding minimum requirements for post-licence supervised behind-the-wheel driving (as per Option 3) could be of net benefit. However, the available evidence comes from a small number of evaluations of similar schemes introduced for light vehicles. And for these studies it is difficult to unbundle the impact of the additional supervised driving from other elements of the licensing reforms that were implemented at the same time. The key area of uncertainty, in respect to impacts of Option 3, relates to uncertainty around whether, and to what extent, industry is already providing new heavy vehicle drivers with post-licensing supervised driving time as part of their induction processes. This option is likely to particularly impact small entities, those for whom a heavy vehicle is a small ancillary part of their core business, and community-based organisations.

## 7.4 Distributional analysis

CBA is evaluated from the point of view of society. This is useful for reaching an overarching view on the relative merits of an option but misses consideration of the stakeholder groups that incur costs and benefits.

The transition and implementation costs – which largely fall on jurisdictional licensing authorities – are non-trivial. However, these are mostly one-off costs and, given their relative size, the impact analysis and results described in Section 7.3 are not overly sensitive to these estimates.

The key costs are those incurred by licence applicants and industry and are associated with the introduction of the additional requirements that lengthen training courses and introduce additional supervised driving. The scale of these costs is affected by underlying assumptions about the extent of training and supervised driving that is occurring currently. Post-licence supervised driving would have particular impacts for smaller entities, not-for-profit and community groups, and those employers who run a business which utilises a heavy vehicle as a minor ancillary part of their key operations.

However, it is important to recognise that industry and licence applicants are also significant beneficiaries of the reforms. Essentially, the benefits of any reduction in heavy vehicle crashes resulting from these reforms, accrue to both industry and society as a whole. Benefits to industry would include reduced delays, improved productivity and reduced insurance premiums. Society more generally would also benefit from fewer lives being lost, avoided injuries and reduced on-road delays as a result of fewer heavy vehicle crashes. These benefits to heavy vehicle drivers, their families, the industry and wider society are incorporated into the crash-related benefits and have been considered in estimating the reduction in heavy vehicle crashes required to make the reforms beneficial (the breakeven crash improvement).

Dependent on the licensing pathway chosen, some of the reform elements (no skipping of HC class and introduction of new MC sub-classes) would increase the length of the overall licensing

process. This may impact driver availability for the industry but also the career choices of drivers and prospective drivers. However, the introduction of new licensing progression options provides expedited pathways that may increase driver availability for industry and bring forward job opportunities for prospective licence applicants.

This distribution of impacts is largely consistent across options.

**Questions on Consultation RIS**

7.12. Is this analysis of the distribution of costs and benefits reasonable or are there any elements that you disagree with? If so, can you provide evidence to support your point(s)?

## 7.5 Impact of training and assessment governance option

The focus of the impact assessment presented in the preceding sections is on the options intended to make the NHVDCF more risk focused (Problem 1).

In terms of the option intended to address the quality of training and assessment (Problem 2), the precise nature of these impacts is somewhat unclear at this stage as the reform options are still being finalised.

While, logically, increased quality of training and assessment should flow from the options, the degree to which this will occur will depend on the precise nature of the final option assessed.

In relation to the proposed training and assessment governance option, Austroads will incur potential costs associated with developing driver training and assessment material and associated tools.

It is anticipated there will be additional costs for Austroads to develop the standard training and assessment material to promote consistent and minimum quality delivery.

In addition, licensing authorities will incur some costs in assisting in the transition.

Training providers will also incur some costs associated with initial upskilling and introducing the new material. It is possible that the availability of standard material may make it more attractive to some to enter the industry.

It will be important that changes are not too onerous. For example, standards will need to be realistically achievable and any increase in data provision and auditing requirements needs to be carefully considered, otherwise they may result in some leaving the industry, and potentially impacting the licence accessibility.

Otherwise the introduction of minimum training hours including behind-the-wheel time will potentially impose costs on both training providers and licence applicants, depending on how this relates to existing course lengths.

These impacts and implementation issues will be developed and further considered.

**Questions on Consultation RIS**

7.13. Can you describe how the changes to training and assessment governance would impact on you or your organisation? Do you have any data or evidence that would help support or better understand the benefits and costs of the training and assessment governance option?

7.14. Do you have any suggestions or comments on how to ensure changes to training and assessment governance are not too onerous?

7.15. Do you think the described reforms to training and assessment governance adequately address the relevant problem (Problem 2) as defined in the Consultation RIS? If not, why not?

# 8 Consultation and next steps

## 8.1 Consultation

There has already been extensive consultation with industry and regulators during the development of the policy proposals outlined in this document, including with:

- trucking associations
- bus associations
- other heavy vehicle–related industry associations
- heavy vehicle operators
- training providers
- heavy vehicle insurers
- licensing authorities
- state and national regulators.

This open and engaged approach to seeking input will be continued through the public consultation process. The objective is to gather additional evidence and data on the extent of the problem and to seek views on the benefits, costs and implementation challenges associated with the options outlined. All members of the public will be able to provide input on the RIS, however promotion will be targeted at the heavy vehicle and driver training industries as those most impacted. The consultation approach includes:

- notification of the release of the RIS and requests for input publicised through the following channels:
  - media release including targeted distribution to heavy vehicle focused media outlets
  - Austroads news subscribers
  - Austroads social media channels including LinkedIn, Twitter and Facebook
  - Austroads monthly newsletter
  - advice to heavy vehicle and driver training associations.
- an interactive webinar scheduled for approximately two weeks after the Consultation RIS's release. Registration for the webinar can be made at https://austroads.info/c-ris-webinar.
- attendance at industry briefings where requested.

In addition to the consultation activities outlined above, there is user support material available on the Austroads website at https://austroads.info/c-ris which includes FAQ, fact sheets and videos.

Input can be provided in the form of:

- a formal submission which provides commentary on all or many of the questions posed in the Consultation RIS by emailing driver@austroads.com.au [please clearly indicate if you do not want your submission to be made public]

- short comments on key policy proposals which is particularly targeted at individuals and small businesses who want to provide input on only some key aspects by completing the survey https://austroads.info/c-ris-survey.

All submissions to the consultation process will be published on the Austroads website, unless authors have indicated that they would like all or part of their submission to remain in confidence.

We request that formal submissions and comments be provided to Austroads in the forms described above by **28 October 2022.**

## 8.2 Responding to the questions

The questions in each chapter of this Consultation RIS are repeated in the box that follows. For ease of reference, stakeholders are encouraged to refer to the relevant focus questions by number in their submissions.

Austroads is not expecting stakeholders to respond to all questions. Where possible, Austroads encourages stakeholders to provide case studies, data and evidence to support their views.

Austroads is also happy to receive general feedback on the RIS options, impacts and assessments. This may involve consideration of the high level questions below.

- Have we covered the issues with the current NHVDCF accurately and comprehensively? If not, what do we need to know?
- Are there any other policy options or refinements to these policy options which you think should be considered? If so, please explain what they are, and the advantages and disadvantages.
- Are there any unintended consequences associated with any of the options identified?
- What option/s do you prefer and why?
- Are there any other costs or benefits that we should consider in the impact assessment?
- Are you aware of any data that may assist us in quantifying the magnitude of any of the costs or benefits associated the options presented?

## 8.3 Next steps

### 8.3.1 Finalising the impact assessment and identifying the preferred reform options

Once this consultation process has concluded feedback will be considered and a decision made as to which elements of reform will be progressed for further analysis, implementation planning and costing. A Decision RIS will be produced which will draw on the evidence that has been gathered to identify the preferred policy option(s) or elements of these options.

Specific questions may arise from this consultation paper which may not have been considered at the time of drafting and Austroads may undertake further targeted consultation with key stakeholders if necessary.

Both this Consultation RIS and the Decision RIS will be published on the OBPR website.

### 8.3.2 Future work

#### Finalising the specifics of proposed reforms to training and governance

Section 6 describes proposed reforms to address Problem 2 identified in this RIS. This includes the development of driver training and assessment material and tools to support a more consistent, higher quality, national approach to management of outsourced training provision. It also includes a proposal to introduce minimum training hours for courses including behind-the-wheel time.

As flagged in Section 7.5 the specifics of these proposed reforms along with their likely impacts will be more fully assessed in the Decision RIS.

#### Young drivers trial

As discussed in Section 5.3.1, while not under active consideration as part of the options proposed in this RIS, views are sought on whether formal development and evaluation of a younger drivers heavy vehicle pilot trial would be supported.

Should a trial be progressed, it would be the subject of detailed planning which would involve industry and licensing authorities. Development of a rigorous evaluation program would be a key component of any trial and would be expected to monitor the program itself as well as the safety outcomes over a number of years before any findings, and potential implications for broader change, if supported by the evaluation, would be possible.

#### Approach to implementation of preferred package of reforms

Post the consideration of consultation feedback there will be refinement of the potential package of reform elements. For those elements remaining under consideration, there will be more detailed assessment of implementation issues and associated costs and benefits to support the Decision RIS. Austroads will lead this implementation assessment in conjunction with licensing authorities. Input will also be sought from the heavy vehicle and training industries.

It is possible that reform elements may be introduced in discrete packages over time. Some aspects of the proposals, such as changes to the MC class, would need to be implemented in a coordinated manner across states and territories. Other elements, such as changes to training governance arrangements, could be more readily implemented to suit local timeframes.

After the Decision RIS and ministerial consideration, which is expected in 2023, implementation timings and programs will be further developed.

**Questions on Consultation RIS**

2.1. Do you agree that there is a good case for government action?

2.2. Do you agree with the policy objectives set out in this Consultation RIS?

2.3. Do you agree with the problems as they have been characterised in this section? If not, can you please describe or provide evidence to demonstrate how the problem is mis-specified?

2.4. Are there any other problems with heavy vehicle driver licensing arrangements relevant to the scope of this Consultation RIS? If so, please provide evidence of these problems.

3.1. Do you agree that there is a good case for government action?

3.2. Do you agree with the policy objectives set out in this Consultation RIS?

5.1. Do you consider that the components of the 'competency refresh' option (strengthened competencies and assessment; online delivery including an HPT; requirement to hold an HC licence before an MC licence; new MC classes; alternate pathways for progression) will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.2. Do you agree with the proposal to require a driver to have first held an HC licence before going to an MC licence?

5.3. Are you aware of any implementation challenges associated with any of the components of this 'competency refresh' option? What type of transitional arrangements would be required to implement the components of the option?

5.4. Are there any unintended consequences associated with any of the components of the 'competency refresh' option?

5.5. Do you consider that any components of the 'competency refresh' option should not be pursued, or are there any additional components that should be added?

5.6. Do you consider that the components of this option (eligibility criteria based on offence and/or crash history; requirement to hold an open car licence before obtaining an MR or HR licence) will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.7. Are you aware of any implementation challenges associated with any of the components of the 'eligibility criteria plus refresh' option? What type of transitional arrangements would be required to implement the option?

5.8. Do you consider that any components of the 'eligibility criteria plus refresh' option should not be pursued, or are there any additional components that should be added?

5.9. Are you concerned that requiring an applicant to hold an unrestricted (open) driver's licence before they can apply for an MR or HR licence will impact on driver

availability? Why or why not? Can you think of any options for addressing any concerns you may hold?

5.10. Are you concerned that the application of an eligibility criteria based on a serious offence history and/or a past crash history linked with an offence will impact driver availability or be considered unreasonably harsh? Why or why not? Can you think of any options for addressing any concerns you may hold?

5.11. Can you think of any alternative ways or approaches for mitigating the risks intended to be addressed through the eligibility criteria?

5.12. Are there any unintended consequences associated with the 'eligibility criteria plus refresh' option?

5.13. Do you support trialling a young heavy vehicle drivers program? How should this program operate? What are the costs and benefits associated with this program?

5.14. Do you consider that the post-licence supervised driving proposal under the 'supervised driving, eligibility and refresh' option will address Problem 1 as described in this Consultation RIS? Please provide evidence to support your view.

5.15. Are you aware of any implementation challenges associated with the 'supervised driving, eligibility and refresh' option? What type of transitional arrangements would be required to implement this option?

5.16. Are there any unintended consequences associated with the 'supervised driving, eligibility and refresh' option?

5.17. Do you consider that any components of the 'supervised driving, eligibility and refresh' option should not be pursued, or are there any additional components that should be added?

5.18. What are your views on the relative benefits of pre-licence supervised behind-the-wheel time over post-licence supervised driving and the role of the licensing system in mandating minimum hours?

6.1. Do you consider that the components of this option (standardised training and assessment material; increased consistency in management of outsourced providers; minimum mandated training and behind-the-wheel time) will address Problem 2 as described in this Consultation RIS? Please provide evidence to support your view.

6.2. Are you aware of any implementation challenges associated with this option? What type of transitional arrangements would be required to implement this option?

6.3. Are there any unintended consequences associated with this option?

6.4. Do you consider that any components of this option should not be pursued, or are there any additional components that should be added?

7.1. Are there impacts which you feel have been missed? If so, can you provide evidence of these impacts?

7.2. Do you have any comments on the key assumptions and input values described in Appendix E? Do you have any data or evidence to support the determination of these assumptions?

7.3. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'competency refresh' option?

7.4. What impact do you consider the 'competency refresh' option will have on driver availability, particularly in respect to drivers holding MC licences? Do you have any data or evidence that would help support or better understand this?

7.5. Do you think that all elements/components of the 'competency refresh' option should be progressed? If not, why not?

7.6. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'eligibility criteria plus refresh' option?

7.7. Do you have any concerns or envisage any other challenges associated with introducing eligibility criteria relating to either a licence applicant's history of serious driving offences and/or crash history linked to an offence?

7.8. What impact do you consider the 'eligibility criteria plus refresh' option will have on driver availability, particularly in respect to the impact of:

- the additional requirement to hold an open/unconditional C class licence
- the introduction of new eligibility criteria?

Do you have any data or evidence that would help support or better understand this?

7.9. Do you think that all elements/components of 'competency refresh' option should be progressed? If not, why not?

7.10. Do you have any data or evidence that would help support or better understand the benefits and costs of the 'supervised driving, eligibility and refresh' option?

7.11. Do you expect the 'supervised driving, eligibility and refresh' option to be any different to the 'eligibility criteria plus refresh' option in terms of driver availability? Do you have any data or evidence that would help support or better understand this?

7.12. Is this analysis of the distribution of costs and benefits reasonable or are there any elements that you disagree with? If so, can you provide evidence to support your point(s)?

7.13. Can you describe how the changes to training and assessment governance would impact on you or your organisation? Do you have any data or evidence that would help support or better understand the benefits and costs of the training and assessment governance option?

7.14. Do you have any suggestions or comments on how to ensure changes to training and assessment governance are not too onerous?

7.15. Do you think the described reforms to training and assessment governance adequately address the relevant problem (Problem 2) as defined in the Consultation RIS? If not, why not?

# A Jurisdictional training and assessment requirements

## Jurisdictional training requirements

Table 16 outlines our understanding of the current jurisdictional position with respect to training as a path to obtaining a heavy vehicle licence, as well as the required training course.

**Table 16:** Driver training courses and assessment/testing options adopted by jurisdictions

| | Light rigid | Medium rigid | Heavy rigid | Heavy combination | Multi-combination |
|---|---|---|---|---|---|
| ACT | *Drive Heavy Vehicle* unit | *Drive Heavy Vehicle* unit | *Drive Heavy Vehicle* unit | *Drive Heavy Vehicle* unit | *Licence To Drive* unit |
| NSW | *Licence To Drive* unit and Internal departmentally delivered assessment | *Licence To Drive* unit and Internal departmentally delivered assessment | *Licence To Drive* unit and Internal departmentally delivered assessment | *Licence To Drive* unit and Internal departmentally delivered assessment | *Licence To Drive* unit |
| NT | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit | *Licence To Drive* unit |
| Qld | Internal departmentally delivered assessment | Internal departmentally delivered assessment | Internal departmentally delivered assessment | Internal departmentally delivered assessment | *Drive Heavy Vehicle* unit |
| SA | Outsourced assessment (VORT) or competency-based training and assessment | Outsourced assessment (VORT) or competency-based training and assessment | Outsourced assessment (VORT) or competency-based training and assessment | Outsourced competency-based training and assessment (Pilot fast track scheme also offered) Training in lieu of experience available (car to HC) | Competency-based training and assessment (Pilot fast track scheme also offered) |
| Tas | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit or outsourced CT | *Licence To Drive* unit | *Licence To Drive* unit |
| Vic | *Licence To Drive* unit | *Licence To Drive* unit | *Licence To Drive* unit | *Licence To Drive* unit | *Licence To Drive* unit |
| WA | Internal departmentally delivered assessment | Internal departmentally delivered assessment | *Drive A Heavy Vehicle* unit | *Drive a Heavy Vehicle* unit | *Drive A Heavy Vehicle* unit |

Mandated as only option
One option available
Training not linked to competency assessment

*Source: Austroads.*

## Jurisdictional assessment requirements

Table 17 and Table 18 summarise how heavy vehicle driver competency assessments for rigid, HC and MC licence classes vary across jurisdictions.

**Table 17:** Competency assessment options for light rigid to heavy combination vehicle classes

| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA |
|---|---|---|---|---|---|---|---|---|
| Theoretical tests | | | | | | | | |
| Departmental knowledge test | | | | | | | | |
| Competency/practical assessment | | | | | | | | |
| Heavy vehicle driver competency framework | | | | | | | | |
| Training course | | | | | | | | |
| Progressive/final competency assessment | | | | | | | | |
| Competency test | | LR–HR | | | | | | |
| Non-HVDCF | | | | | | | | |
| Approved training course and related assessment | | | | | | | | |
| Practical test with departmental staff | | LR–HR | | | | | | |
| Practical test with approved provider | | | | | | | | |

| |
|---|
| Available (in the case of theoretical test – is required) |
| Available with restriction or condition (in the case of a theoretical test – is sometimes required) |
| Not available |

*Source: Austroads, 'Review of the national heavy vehicle driver competency framework', 2018, p.6.*

**Table 18:** Competency assessment options for multiple combination vehicle class

| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA |
|---|---|---|---|---|---|---|---|---|
| Theoretical tests | | | | | | | | |
| Departmental knowledge test | | | | | | | | |
| Service provider knowledge test | | | | | | | | |
| Heavy vehicle driver competency framework | | | | | | | | |
| Competency/practical assessment | | | | | | | | |
| Progressive/final competency assessment | | PCA only | | | | | | |
| Non-HVDCF | | | | | | | | |
| Completion of supervised log book hours only (no test) | | | | HC licence holders only | | | | |
| Approved training course and related assessment | | | | | | | | |
| Practical test with approved provider | | | | | | | | |

| |
|---|
| Available (in the case of theoretical test – is required) |
| Available with restriction or condition (in the case of a theoretical test – is sometimes required) |
| Not Available |

*Note: Where there are multiple options shown for a jurisdiction – this indicates that the licence applicant can chose one of several alternate paths*

*Source: Austroads, 'Review of the national heavy vehicle driver competency framework', 2018, p.6. Note: PCA means final competency assessment.*

## Jurisdictional requirements for approving assessors

Table 19 outlines how requirements for approving assessors varies across jurisdictions.

All trainers and assessors delivering nationally recognised training must hold appropriate training and assessment qualifications. Jurisdictions currently require assessors to have some or all of the following:

- TAE40116 Certificate IV in Training and Assessment or specified units of this course – in a number of cases only two or three units of this certificate level course are mandated
- TLI41316 Certificate IV in Transport and Logistics (Road Transport – Heavy Vehicle Driving Instruction).

For those jurisdictions that have adopted the framework, there is a consistent move to licensing regulator development of specific training material for instructors/assessors in the competency assessment guideline. This training material, while still under development in some cases, is quite extensive and for durations up to five days. This focus on ensuring assessors are skilled is supported by the research undertaken for this project. However, this material is specifically

focused on the heavy vehicle assessment guidelines and process. They are in addition to the mandated certificate qualifications outlined above, which provide foundation capabilities not related to the content of specific heavy vehicle assessment activities.

**Table 19:** Information sought in determining assessor suitability

| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA |
|---|---|---|---|---|---|---|---|---|
| Personal characteristics and evidences | | | | | | | | |
| Engagement by RTO | | | | | | | | |
| Licence class equal to that of testing and minimum tenure | | | | | | | | |
| Heavy vehicle experience | | | | | | | | |
| Police check | | | | | | | | |
| Traffic offence history | | | | | | | | |
| Medical fitness | | | | | | | | |
| Fit and proper person | | | | | | | | |
| Approval as a driving instructor | | | | | | | | |
| Names of past students | | | | | | | | |
| Training and assessment requirements | | | | | | | | |
| Dept code of conduct training | | | | | | | | |
| Dept determined training course in heavy vehicle competency assessment | | | | | | | | |
| Service provider training course as approved by the dept | | | | | | | | |
| Driving Instructor Skills Set TLISS00162 | | | | | | | | |
| Certificate IV – Heavy Vehicle Driver Instruction – TLI41321 | | | | | | | | |
| Certificate IV in Training and Assessment – TAE40116 | | | | | Some units only | | | Some units only |
| First aid certificate | | | | | | | | |
| Dept road rules test | | | | | | | | |
| Theory test on the dept heavy vehicle assessment manual | | | | | | | | |
| On-road vehicle test | | | | | | | | |
| HVCBA as student and then assess under supervision | | | | | | | | |

Mandatory | Applicable in some circumstances

Some but not all jurisdictions have requirements to maintain capability of approved assessors as outlined in the table below.

**Table 20:** Requirements for assessors to maintain capability

| | ACT | NSW | NT | Qld | SA | Tas | Vic | WA |
|---|---|---|---|---|---|---|---|---|
| Undertaken by service provider | | | | | | | | |
| Refresher training | | | | | | | | |
| Full course as per when first approved | | | | | | | | |
| Practical competency test | | | | | | | | |
| Theory test | | | | | | | | |
| Undertake current version of Cert IV Heavy Vehicle Driver Instruction on upgrade to a higher class of heavy vehicle licence assessor approval | | | | | | | | |
| Minimum number of assessments per month | | | | | | | | |

Mandatory | Applicable in some circumstances

# B Proposed NHVDCF competencies

The table below outlines the proposed 184 elements and indicates:

- which element is applicable to each licence class
- the method of delivery.

**Legend**

| | | | | | |
|---|---|---|---|---|---|
| O | Online only | OPC | All – online/practical/classroom | OC | Online and classroom |
| C | Classroom only | PC | Practical/classroom | | None |

**Table 21:** Proposed NHVDCF Competencies

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| **Pre-trip check** | | | | | | | | | |
| 1.1 | Tyres | Check tyres have a tread depth of at least 1.5mm | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.2 | Tyres | Check for severely under-inflated tyres | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.3 | Tyres | Check rear dual tyres are not touching on truck or trailers | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.4 | Lights | Check headlights and tail-lights and reflectors work | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.5 | Lights | Check that headlights and tail-lights are clean and that beam can be seen | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.6 | Bodywork | Check that there are no protrusions from the truck (or trailer) bodies | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.7 | Bodywork | Check that doors on truck (and rear door on trailer) open and close | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.8 | Air tank | Check that air tank is drained and does not contain water or oil fluids | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.9 | Wheels | Check wheels have full set of wheel nuts | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.10 | Wheels | Check wheels do not have cracked rims or hubs | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 1.11 | Mudflaps | Check there are no missing mud flaps on rear axle groups | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.12 | Leaks | Check that there are no fluid leaks from: water, fuel, cooling or lubricating systems etc. | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 1.13 | Registrations | Confirm that the training vehicle (and/or trailer) carries current registration | O | O | O | | O | O | |
| 1.14 | Signage | Truck has correct signage, e.g., dangerous goods diamonds, over dimensional, long load etc. | O | O | O | | O | O | |
| 1.15 | (Trailers) | Couple trailer(s) (and/or dollies) procedure: checking leads are connected | | | | OPC | OPC | OPC | OPC |
| 1.16 | Wheel chocks | Check that your truck carries a set of wheel chocks (if mandated) | O | O | O | | O | O | O |
| 1.18 | Safety equipment | Check that your truck carries reflector triangle, extinguisher, and/or witches hats | O | O | O | | O | O | O |
| 1.20 | Tilt | Note that there is no rigid truck or trailer tilt due to poor loading or load positioning | OPC | OPC | OPC | PC | OPC | OPC | OPC |
| **In-cab checks** | | | | | | | | | |
| 2.1 | Enter cab | Wear appropriate shoes, pull yourself into cab facing forward (3 points of contact entry) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.2 | Seats | Adjust driver seat so that feet can touch the floor and pedals, also adjust seat lumbar support | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.3 | Steering column | Adjust the steering column for height and angle to suit the driver | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.4 | Seatbelts | Check that seatbelts work, driver fastens and adjusts | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.5 | Mirrors | Check that mirrors are not cracked or broken and adjust for driver vision | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 2.6 | Wipers | Check that both windscreen wipers work at the various settings | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.7 | Gauges | Check that the panel lights and gauges are active | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.8 | Indicators | Check that the left/right indicators are working as well as hazard lights | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.9 | Brake controls | Locate and be familiar with the engine and trailer brake activation switches/levels | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.10 | Sun visors | Check that both visors work in the down and lift back positions | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.11 | Brakes | Check handbrake (and trailer brake) is on | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 2.12 | Gear | Check the truck is in gear (not in neutral gear) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **Moving off** | | | | | | | | | |
| 3.1 | Route | Driver has, in advance, selected the appropriate driving route | OC | OC | OC | C | OC | OC | C |
| 3.2 | Start | Turn on the engine (let run for 5 minutes if truck uses air brakes to build the air bank) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.3 | Observe | Check all gauges on the dashboard are working | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.4 | Turn on lights | Turn on truck lights (if night-time) or parking lights if it is trainer/company procedure | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.5 | Gears and unlock brakes | Put truck into gear, manual or AMT (not for automatic) and take off park brake (and trailer brake) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.6 | Brake active | Squeeze air brake to confirm it is active | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.7 | Drive | Engage clutch (if applicable) and move to yard or road entrance from training area (if in yard) | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 3.8 | Stop | Move to road entrance and brake to stop | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.9 | Observe | Look in the mirrors for oncoming directional traffic flows and check road is clear | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.10 | Indicate | Use left or right indicator to show the direction of entry to roadway | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.11 | Enter road | Accelerate smoothly onto road surface | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 3.12 | Hill start | As above: engage clutch, (press hill start button) (release trailer brake) indicate and move off | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **Driving** | | | | | | | | | |
| 4.1 | Initial entry | Enter nearest road lane and turn off indicator | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.2 | Straight driving | Gear change up synchromesh and accelerate or accelerate to flow speed (auto), observe gauges | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.3 | Straight driving | Check mirrors and adopt a correct road position | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.4 | Straight driving | Adopt a safe following distance | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.5 | Straight driving | Steer with two hands | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.6 | Lane positioning | Lane position selection unlaned (narrow road) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.7 | Lane positioning | Lane position selection unlaned (wide road) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.8 | Lane positioning | Lane selection – 2 lane with centre white line | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.9 | Lane positioning | Lane selection – 2 or more lanes with centre reservation (speed limit below 80 kmp/h) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.10 | Lane positioning | Lane selection – 2 or more lanes with centre reservation (speed limit above 80 kmp/h) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.11 | Speed | Speed selection – zone identification | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.12 | Speed | Speed selection hazard density | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 4.13 | Space distancing | Space cushion (forward 4–7 sec. min.) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.14 | Space distancing | Space cushion (left side) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.15 | Space distancing | Space cushion (right side) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.16 | Space distancing | Space cushion (behind with forward gap adjustment if required) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.17 | Left turn | 2 types: left-turn laned and laned to single or multi-lane: approach exit, signal, scan 180 degree, slow to a lower gear | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.18 | Right turn | 2 types: right-turn laned and laned to single or multi-lane: approach exit, signal, scan 180 degree, slow to a lower gear | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.19 | Left turn | Left turn slip lanes | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.20 | Left turn | Left turn traffic lights (no arrows) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.21 | Right turn | Right turn traffic lights (no arrows) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.22 | Right turn | Right turn traffic lights (controlled by arrows) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.23 | Turns | High and low aim steering techniques (during turns) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.24 | Turns | High and low aim steering techniques (mental schema's techniques) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.25 | Check blind spots | Blind spots in the eyes (head/chin position, technique to remove, mind-scanning techniques at intersections) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.26 | Blind spot hint | Removal of vision block out in the vehicle (A & B pillars and use body movement and leaning forward to increase mirror width) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.27 | Merging | Entering freeways – (speed selection, signal knowledge, body movement to remove blind spots, gap selection forward, rear and side) | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 4.28 | Merging | Freeway travel (speed scatter identification and adjustment, and lane selection and control of 360-degree space cushion protection) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.29 | Merging | Freeway exit (mirror use, route planning, speed selection on freeway and exit ramp, signal knowledge and space cushion protection) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.30 | Overtaking | Overtaking – following distance and road position selection to maximise 360-degree observation | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.31 | Overtaking | Overtaking – safe gap selection, decision based on legal speed, no single solid lines, no road blind spots, selection of appropriate gear, acceleration and torque of the vehicle appropriate to complete manoeuvre | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.32 | Overtaking | Overtaking – safe gap selection, use of horn if required, mirrors, signals, speed selection, vehicle and load stability, space cushion when overtaking, and safe gap selection for return | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.33 | Kerbs | Kerbside stops – safe position selection, safe approach speed, correct mirror use, signal knowledge, use of hazard lights and no striking trees, poles, kerb, signs or buildings | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.34 | Kerbs | Kerbside stops – exit, internal and external mirrors, legal signal requirements, removal of blind spots and safe gap selection, cancel of signal once diverging is completed. | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.35 | Roundabouts | Roundabout straight unlaned | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.36 | Roundabouts | Roundabout left-turn unlaned | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.37 | Roundabouts | Roundabout right-turn unlaned | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.38 | Roundabouts | Use of peripheral vision | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 4.39 | Roundabouts | Keep your eyes moving | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.40 | Roundabouts | Roundabout straight (multi-lane) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.41 | Roundabouts | Roundabout left-turn (single-lane to multi-lane) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.42 | Roundabouts | Roundabout left turn (multi-lane to multi-lane) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.43 | Roundabouts | Roundabout right-turn (single-lane to multi-lane) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.44 | Roundabouts | Demonstrate lane splitting (60–40 in 2 lanes to enable asset clearance and to block cars from creeping up on the inside of a turning vehicle. PCAS (preserve crash avoidance | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.45 | Inclines | Gear change down moderate incline (synchro) or double clutch (non-synchro) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.46 | Inclines | Use of 'diff lock', AWD for traction control and to prevent wheel slippage | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.47 | Declines | Gear change down moderate decline (synchro) or double clutch (non-synchro) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.48 | Inclines | Selection lanes incline – high-speed bends multi-lanes | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.49 | Declines | Steep hill decline – gear and speed selection and location before decline | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.50 | Declines | Steep hill decline – speed control down incline (brake overheating protection | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.51 | Inclines | Steep inclines – gear change down synchro split gear | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.52 | Inclines | Steep inclines – gear change down synchro full gear | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.53 | Inclines | Steep inclines – gear change down missed gear synchro (recovery technique) | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 4.54 | High-speed bends | High-speed cornering bend – sign, bend sharpness and camber identification (positive, negative or crown) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.55 | High-speed bends | High-speed cornering bend – speed and gear selection, approach, during and exit | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.56 | High-speed bends | High-speed cornering bend – cornering line, approach, during and exit including hand technique | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.57 | Gravel roads | Speed selection to avoid road skipping | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.58 | Gravel roads | Space cushion selection to maximise forward vision from dust and flying objects | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.59 | Gravel roads | Speed reduction and position selection to avoid oncoming vehicle accident on narrow roads | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.60 | Gravel roads | Cornering bend – sign, bend sharpness and camber identification (positive, negative or crown) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.61 | Gravel roads | Cornering bend – speed and gear selection, approach, during and exit | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.62 | Gravel roads | Cornering bend – cornering line, approach, during and exit including hand technique | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.63 | Special approaches | Approach crest of hills | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.64 | Special approaches | Approach to single-lane bridges | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.65 | Special approaches | Approach to narrow bridges with signalled entry | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.66 | Special approaches | Hazard height identification (trees, low bridges etc.) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.67 | Special approaches | Tram crossing, stop sign, construction zones, pedestrian crossings, school, and railway crossings | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 4.68 | Road surfaces | Exposure to different road surfaces e.g., gravel, different cambers and tight turns | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.69 | Road surfaces | Use of 'diff lock', AWD for traction control and to prevent wheel slippage – mud, ice, oil, heavy rain | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.70 | Instrumentation | Check while travelling that the truck instruments, gauges, and operations are in working order | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 4.71 | Affective state | Driver mental state and impacts on driver judgement and risk | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **Reversing** | | | | | | | | | |
| 5.1 | Reversing manoeuvres | Checks with mirrors that the area being reversed into is clear | OPC | OPC | OPC | PC | OPC | OPC | |
| 5.2 | Reversing manoeuvres | Places into reverse gear and adjusts steering to move into the selected area | OPC | OPC | OPC | PC | OPC | OPC | |
| 5.3 | Reversing manoeuvres | Reversing – straight line | OPC | OPC | OPC | PC | OPC | OPC | |
| 5.4 | Reversing manoeuvres | Reversing offset to the left | OPC | OPC | OPC | PC | OPC | OPC | |
| 5.5 | Reversing manoeuvres | Reversing offset to the right | OPC | OPC | OPC | PC | OPC | OPC | |
| 5.6 | Reversing manoeuvres | Reverse into a driveway to the right and one to the left | OPC | OPC | OPC | OPC | OPC | OPC | |
| 5.7 | Reversing manoeuvres | Reversing around corners (left corner) | OPC | OPC | OPC | OPC | OPC | OPC | |
| 5.8 | Reversing manoeuvres | Reverse into a loading dock | OPC | OPC | OPC | OPC | OPC | OPC | |
| **Parking** | | | | | | | | | |
| 6.1 | Select lane | Manoeuvre into the appropriate lane to undertake the change from straight direction | OPC | OPC | OPC | OPC | OPC | OPC | OPC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 6.2 | Indicate | Indicate the turn to park kerbside or into directed premises or yard | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.3 | Observe | Slow to appropriate gear and observe surrounding traffic for any hindrance to parking | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.4 | Begin to park | Manoeuvre vehicle (and trailers) into position using forward vision and mirrors | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.5 | Apply brakes | Apply park and trailer brakes | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.6 | Logbook | Fill out appropriate details in logbook or enter times into the electronic work diary at trip's end | OC | OC | OC | OC | OC | OC | C |
| 6.7 | Turn off engine | Idle down before turning off the engine | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.8 | Exit vehicle | Exit cabin using steps and grips | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.9 | Inspect | Check for load shift, tilt for rigid truck, or displaced load for trailers | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.10 | Other measures | If required place wheel chocks vehicle prime mover/trailer/ dollies. May need to click isolation switch | PC | PC | PC | OPC | OPC | OPC | OPC |
| 6.11 | Hill park | Manoeuvre vehicle slowly to park location, gear down and stop. Activate trailer brake, turn off engine | OPC | OPC | OPC | OPC | OPC | OPC | OPC |
| 6.12 | Trailers | Uncouple trailers from the dolly and/or the prime mover | | | | PC | PC | PC | PC |
| **Night driving: (Overview topic)** | | | | | | | | | |
| 7.1 | Lights and windscreen | Have a clean windscreen as well as clean headlights, indicator and trailer lights | O | O | O | O | | | |
| 7.2 | Lights | Turn on headlights (trailer lights come on automatically) | O | O | O | O | | | |
| 7.3 | Cabin | Dim cabin/dashboard lights, allows greater vision | O | O | O | O | | | |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 7.4 | Speed selection | Select speed to suit the level of illumination driver is comfortable with | O | O | O | O | | | |
| 7.5 | Length | Drive at a speed where you can stop within your truck's beam length | O | O | O | O | | | |
| 7.6 | High beam | Alternate your high beam between oncoming vehicles and lower when approaching hill crests | O | O | O | O | | | |
| 7.7 | Facing high beam | When facing high beam from oncoming traffic avert your gaze slightly to the left | O | O | O | O | | | |
| 7.8 | Facing high beam | When facing high beam from oncoming traffic avert your gaze slightly to the left white line | PC | PC | PC | PC | PC | PC | |
| 7.9 | Level crossings | Slow and/or stop to assess activity at a non-illuminated or non-gate controlled rail crossing | PC | PC | PC | PC | PC | PC | |
| 7.10 | Reversing | Turn on hazard lights when reversing, especially on multi-trailer combination at night | PC | PC | PC | PC | PC | PC | |
| 7.11 | Vulnerable entities | Be more vigilant to the presence of motorcycles, urban cyclists and pedestrians at night | PC | PC | PC | PC | PC | PC | |
| 7.12 | Reflections | Slow, and possibly take evasive action if animal eye reflection is seen before animal is in focus | PC | PC | PC | PC | PC | PC | |
| 7.13 | Night breakdown | Move to side of road, turn on hazard lights, place reflector triangles behind truck (or trailers) | PC | PC | PC | PC | PC | PC | |
| **Emergency - Encountering a hazard** | | | | | | | | | |
| 8.1 | Identification | Recognise the hazard: physical, caused by other road user or vehicle, or road surface related | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.2 | Evaluation | Determine what hazard procedure should be adopted (12 second forward planning) | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 8.3 | Truck placement | Ensure truck is in correct lane or road space travelling at an appropriate speed allowing for evasive action when approaching the hazard (4 second approach rule – cover brake) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.4 | Truck path | Driver will choose an appropriate/priority path for hazard avoidance | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.5 | Other vehicles | Driver will use mirrors and visuals to determine the proximity of other road users | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.6 | Preparation | Driver will choose an appropriate speed and gear with which to negotiate the hazard | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.7 | Alternatives | Driver will determine alternative bypass strategy if circumstance change when approaching or passing the hazard | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.8 | Alternatives | Identify your emergency escape route (Smith system – leave yourself an out) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 8.9 | Exiting | Driver accelerates to an appropriate speed when the hazard has been passed | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **Emergency situations – System decision-making** | | | | | | | | | |
| 9.1 | Emergency occurrence | Emergency braking – threshold technique | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 9.2 | Emergency occurrence | Low air – stopping safely (air brakes) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 9.3 | Emergency occurrence | 50% brake rule – proactive not reactive braking on hazards approach | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 9.4 | Emergency occurrence | Use of engine retarders – Jake brakes, gear or exhaust retarders | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 9.5 | Emergency occurrence | Leaving and re-entering the shoulder of the road (bitumen to gravel) | OPC | OPC | OPC | PC | OPC | OPC | PC |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 9.6 | Emergency occurrence | First responder actions | O | O | O | O | O | O | |
| 9.7 | Extreme conditions | Driving in heavy rain, snow, ice, fog, sandstorms, mud etc. taking greater notice of truck limitations | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **System of vehicle control** | | | | | | | | | |
| 10.1 | Advanced non-auto | Miss and recover gear flat roads (synchro) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.2 | Advanced non-auto | Miss and recover gear moderate incline (synchro) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.3 | Advanced non-auto | Miss and recover gear moderate decline (synchro) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.4 | Advanced | High-speed braking rapid deceleration focusing on stopping quickly (protecting passenger and/or load) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.5 | Advanced non-auto | Skip shifting (up gears) synchro or non-synchro (eco driving) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.6 | Advanced non-auto | Skip shifting (down gears) synchro or non-synchro (eco driving) | OPC | OPC | OPC | PC | OPC | OPC | PC |
| 10.7 | Advanced non-auto | Basic rollover knowledge: causes and avoidance | O | O | O | | O | O | |
| 10.8 | Steer tyre blowout | Do not brake, steer straight (can be difficult) slow down and slowly move to a flat off-road surface | O | O | O | | O | O | |
| 10.9 | Emergency response | Options to perform when faced with an emergency | OPC | OPC | OPC | PC | OPC | OPC | PC |
| **Regulatory considerations: (Overview topics)** | | | | | | | | | |
| 11.1 | Driving hours | The legal driving hours under HVNL or other relevant state-based legislation i.e., standard, BFM and AFM, what causes fatigue, how to alleviate it | O | O | O | | O | O | |
| 11.2 | Axle weights | What weight can an axle group carry? What is standard mass, CML and HML? | O | O | O | | O | O | |

| Ref | Element | | LR | MR | HR | HC | MC1 | MC2 | MC3 |
|---|---|---|---|---|---|---|---|---|---|
| 11.3 | Loading and restraint | Legal requirements, centre of gravity appreciation, restraint types and information sources | O | O | O | | O | O | |
| 11.4 | Manual handling | Acquisition of safe loading and unloading techniques | O | O | O | | O | O | |
| 11.5 | Road rules | Knowledge of road rules and what is an infringement notice and when do you get one | O | O | O | | O | O | |
| 11.6 | Chain of responsibility | What is CoR, how do you as a licencee fit? What can't you be directed to do? | O | O | O | | O | O | |
| 11.7 | Truck safety | Overview of truck safety in the industry: fatal, serious and major accidents | O | O | O | | O | O | |
| **Maintenance macro: (Overview topic)** | | | | | | | | | |
| 12.1 | Post-trip check | Pre- and post-trip check elements touch on maintenance, tyres, leaks, broken/defective lights etc. | OC | OC | OC | OC | OC | OC | OC |
| 12.2 | Basic maintenance | Changing tyres, greasing turntables, checking fluids and air tanks, changing bulbs | OC | OC | OC | OC | OC | OC | OC |
| 12.3 | Servicing | What is an A, B and C maintenance service and why a driver needs to know | OC | OC | OC | OC | OC | OC | OC |
| 12.4 | Technology update | Driver to keep up to date with vehicle technologies (not necessarily in the Licence to Drive unit) | OC | OC | OC | OC | OC | OC | OC |

*Source: Austroads*
*Notes:*
*In developing these revised draft competency elements consideration was given to:*

- *overseas training programs including Washington state; Vancouver; Mandatory Entry Level Training (MELT)*
- *Australian heavy vehicle driver training programs including the Army*
- *industry drivers and employers who have a particular interest in training.*

*Consideration was also given to coroner's findings in relation to driving skills on steep declines, including with trailers. Specifically, the following have been included:*

- *online familiarisation with steep declines*
- *classroom reinforcement of online learning*
- *graduated behind-the-wheel training on declines*
- *correct coupling of trailers to minimise the risk of separation when driving.*

# C Learning framework underpinning competency and assessment approach

**Table 22:** Learning framework underpinning competency and assessment approach

| Classification | Category | Learning constructs |
|---|---|---|
| Knowledge and knowledge acquisition | Verbal knowledge | Declarative knowledge: Storage of facts and information of task-relevant knowledge. Measurement focuses on assessing the amount of knowledge, accuracy of recall and accessibility of knowledge. |
| | Knowledge organisations | Mental models: Organisation of individual units of knowledge. Measurement focuses on assessing the similarity of answers to an 'exemplar' model of practice. |
| | Cognitive strategies | Metacognitive skills: Knowledge and regulation of mental activities. Measurement focuses on ability to plan, monitor and revise behaviour through self-regulation. |
| Skill development | Compilation | Proceduralisation: Building of small, discrete, controlled behaviours. Measurement focuses on the observation of discrete behaviours on knowledge-based (i.e., learned) tasks.<br>Composition: Grouping of several discrete, controlled behaviours into a single, fluid production. Measurement focuses on generalising new skills beyond the trained situation and when presented within a new environment. |
| | Automaticity | Automatic processing: Automatic processing of information which requires no conscious monitoring of information. Measurement focuses on assessing the level of cognitive effort required to complete a primary task (i.e., identifying hazards) while simultaneously completing a secondary task (i.e., driving a vehicle). |
| Affective state | Attitudinal–Motivational | Safety awareness and motivational state: Internal states that influences actions. Measurement focuses on the direction and strength of feeling towards the action, as well as the development of motivational states. |

*Source: Austroads*

# D Sample sheet – supervision program

The following is a recording tool which is used by an existing industry player as part of their driver assessment and induction program. It covers a range of areas which extend beyond what would be expected from a licensing perspective. It is presented as an indicative tool.

| Skills | | Observation & Assessment Criteria | Competency | Assessor Comments and Future Learning Goals |
|---|---|---|---|---|
| C = competent, NC = Not Competent, TR = Training required, NYC= Not Yet Competent (Needs Assessment) | | | | |
| Driver Ability | Trailer Uncoupling/ Coupling | Can Uncouple/Couple as per procedure, Visual inspection of Jaws-PIN, T/Table Height control, Airbag control, movement speed, No harsh impact. | | |
| | RoadCraft | Smooth Operation, Plans ahead, Traveling distance, Blends in with Traffic, Lane Position, Anticipates emerging difficulties, Adjusts speed and position. | | |
| | Speed Control | Down hill speed control, Speed advisory signs, right speed for the Situation, No Over speed, Adjusts speed before turns. Drive to the road conditions | | |
| | Reversing/Dock Procedures | Ensures Tailgate is down and correct position, Aligned with dock, Gentle | | |
| | Low Speed Manouvering | Identifies risks to vehicle/Property, Uses Mirrors, Avoids unsighted contact | | |
| Attitude & Behaviour | | | | |
| | Culture- Professionalism | Repeated Behaviours, High personel Standards, Positive reinforcement | | |
| | Phone Use | No Headphones (One BT only), No on the phone whilst unloading. | | |
| | Camera/Equipment Tampering | No unauthorised adjustments to Cameras or equipment. | | |
| | On Road Behaviour | Interaction with other road users, Anger Management, negotiates for space. | | |
| | NCR's | Understands Fatigue Mangement and the criteria for breaches | | |
| | Incidents | Minimum: Blame worthy incidents, Damage to property, Confrontations | | |
| | Represents the Company | Positive representation, Ideal Company Ambassador, No hyper critical complaining | | |
| | | | | |
| Paperwork | | | | |
| | Day-Sheet Completion | Dates, Mass Man, Times, Pre-trip, Clock times, Rest Breaks, Clear writing. | | |
| | Connote Completion | Completed correctly, Dates, Accurate pallet counts, Sign-offs | | |
| | Work Diary | All legal sections to be completed, home base, Neat, Hands sheets in every day | | |
| | Request For Repair | Accurate Identification/discription of Fault, equipment, circumstances | | |
| | | | | |
| Presentation | | | | |
| | Personel | Uniform Cleanliness, Body Odour, No offensive messages on Caps etc. | | |
| | The Five E's | Do not wear the five E's Beenies, trackys, bluey, Flannys and boardys | | |
| | Equipment | Inside Cab Cleaniness, Truck Cleanliness, Trailer cleaned for FOOD Transport | | |
| COR | Fatigue | Driver self Management of legally required breaks, communication to Supervisors | | |
| | Mass | Vehicle complies with axel, GVM, GCM legal limits, use weighbridge or scales | | |
| | Restraint | Proper legal use of Pogo sticks, gates, straps, chains to secure load movement | | |
| | Speed | Vehicle control and compliance to road law speed limits | | |
| | Mechanical | Vehicle standards and Safety | | |
| | Dimension | Length, Height, Width, Over Dimension routes. | | |
| | | | | |
| Driver Awareness | | | | |
| | Pre-Trip Inspection | Check of Basic Roadworthy Items as listed on Day-sheet | | |
| | Mechanical Smarts | Stop to investigate unusual equipment Visuals, Sounds or Smells. Basic understanding of Vehicle/trailer operations: Mechanical, Electrical, Pneumatic | | |
| | Route Planning | Navigate to stores, DC via Mud maps, Google Maps, GPS. Problem solve detours | | |
| | Hazard Perception | Over head obsticles, Road Obsticles/Changes, Other driver Behaviour | | |
| | Situational Observation | Constant vehicle adjustment to mitigate changing traffic circustances | | |

| Skills | | Observation & Assessment Criteria | Competency | Assessor Comments and Future Learning Goals |
|---|---|---|---|---|
| C = competent, NC = Not Competent, TR = Training required, NYC= Not Yet Competent (Needs Assessment) | | | | |
| Customer Service | Customer Interaction | Speak to the customers in a frendly, professional and respectful manner. | | |
| | Customer Paperwork | Ensure paperwork is correct, returns, con-notes etc | | |
| | Customer Returns | Picks up all store chep/loscam pallets with out fuss or excuses. | | |
| Communication | Essential communication | Understands and uses the Essential communication process effectivley | | |
| | Mobile app | Uses Mobile app during delivery process | | |
| | Incident Reports | Takes down all essential details (Date, Time, Rego, vehicle details, Photos location, witnesses, contact details, map, can fill out insurance form etc.) | | |
| | ToolBox Meetings | Attends Toolbox meetings, make positive contributions to the meeting. | | |
| Safety & Take 5 | Take 5, the 5 steps. | 1. Stop and think about the potential dangers associated with the job. | | |
| | | 2. Think about the hazards. | | |
| | | 3. Identify the risk. Consider any possible threats of damage or injury. | | |
| | | 4. Make the change. Implement suitable control measures to reduce risk. | | |
| | | 5. Proceed safely and complete the task. - Safely | | |
| | Saftey procedures | Has a safety mindset in all activities, reconises unsafe behaviour of others | | |
| | Inductions | Completes all inductions | | |
| | Manual Handling | Practice safe manual handling | | |

# E Input assumptions for the cost–benefit analysis

The initial draft cost–benefit analysis has been developed to be consistent with the Australian Government Guide to Regulatory Analysis[45] and the Office of Best Practice Regulation's cost–benefit analysis guidance note.[46] Key assumptions and parameters are provided in Table 23 while a detailed breakdown of the draft figures that informed the initial cost–benefit analysis are provided in Table 24.

**Table 23:** CBA key assumptions and parameters

| | | | Modelled |
|---|---|---|---|
| **General inputs** | | | |
| | Discount rate | *%* | 7% |
| **Timing assumptions** | | | |
| | Start date for transition | *Year* | 2024 |
| | Transition period | *Years* | 3 |
| | Policy changes implemented | *Year* | 2027 |
| | Appraisal period | *Years* | 20 |
| **Overarching inputs** | | | |
| | Number of states and territories transitioning | *#* | 8 |
| | Benchmark cost for jurisdiction and Austroads resource | *$/FTE* | 122,000 |
| | Hourly driver wage | *$/Hour* | $45 |
| **Inputs on heavy vehicle task** | | | |
| | Forecast annual growth rate in heavy vehicle kilometres | *%* | 1.38% |
| | Forecast annual growth rate in number of heavy vehicles | *%* | 1.38% |
| **Inputs on number of heavy vehicle crashes** | | | |
| | Deaths per fatal crash | *#* | 1.14 |
| | Fatal crash per million VKM | *# per mVKM* | 0.0091 |
| | Hospitalised injury crash per million VKM | *# per mVKM* | 0.0878 |

45 Commonwealth of Australia (2020), Australian Government Guide to Regulatory Analysis

46 Office of Best Practice Regulation (2020), Cost–benefit analysis: guidance note

| | | | |
|---|---|---|---|
| | Non-hospitalised injury crash per million VKM | *# per mVKM* | 0.1209 |
| | Property damage only crash per million VKM | *# per mVKM* | 0.7055 |
| | | | |
| | Proportion of VKM that receive safety benefits | *%* | 100% |
| | Crash benefits ramp up | *% per annum* | 20% |
| | Option 1 change in fatal crashes | *%* | 0% |
| | Option 1 change in non-fatal crashes | *%* | 0% |
| | Option 2 change in fatal crashes | *%* | 0.7% |
| | Option 2 change in non-fatal crashes | *%* | 0.4% |
| | Option 3 change in fatal crashes | *%* | 11.7% |
| | Option 3 change in fatal non-crashes | *%* | 11.4% |
| | | | |
| **Inputs on crash costs** | | | |
| | | | |
| | Statistical value of life | *$* | 5,194,850 |
| | Other fatal crash costs | *$/crash* | 387,005 |
| | Hospitalised injury crash cost | *$/crash* | 420,975 |
| | Non-hospitalised injury crash cost | *$/crash* | 21,243 |
| | Property damage only crash cost | *$/crash* | 14,352 |
| | | | |
| **Inputs on total licences by vehicle class** | | | |
| | LR | *# licences* | 327,691 |
| | MR | *# licences* | 524,592 |
| | HR | *# licences* | 1,204,674 |
| | Total rigid | *# licences* | 2,056,957 |
| | HC | *# licences* | 531,704 |
| | MC | *# licences* | 216,901 |
| | | | |
| **Inputs on annual number seeking a licence by vehicle class** | | | |
| | HR | *# licences per annum* | 24,093 |
| | Total rigid | *# licences per annum* | 41,139 |
| | HC | *# licences per annum* | 10,634 |
| | MC | *# licences per annum* | 4,338 |
| | | | |
| **Annual growth rate in number seeking licences** | | | |
| | Annual growth rate in number seeking licences | *% per annum* | 1% |
| | | | |

| | | | |
|---|---|---|---|
| **Overarching reform transition costs for Austroads and jurisdictions[47]** | | | |
| | State and territory transition resource requirement | *FTE* | 4.0 |
| | Communication material production | *$* | 500,000 |
| | Austroads transition resource requirement | *FTE* | 2.0 |
| | | | |
| **Enhanced competencies in NHVDCF** | | | |
| | Jurisdiction transition engagement with outsourced training industry and training of providers on the revised requirements | *FTE* | 2.0 |
| | | | |
| **Developing online training content** | | | |
| | Austroads costs to develop online content for HPT module | *$* | 1,500,000 |
| | Austroads costs to develop other elements of online content | *$* | 2,800,000 |
| | Update to NEVIDS to assist in the management of the online content | *$* | 500,000 |
| | | | |
| **Integrating online training with existing systems** | | | |
| | Jurisdictional system costs to support online training | *$* | 1,000,000 |
| | | | |
| **Training governance** | | | |
| | Austroads ongoing management of the framework | *FTE* | 0.25 |
| | Periodic update of online materials | *$ per annum* | 50,000 |
| | Periodic update of face-to-face training materials | *$ per annum* | 50,000 |
| | Ongoing increased jurisdictional auditing of providers per jurisdiction | *FTE* | 2.00 |
| | Development of master outsourced provider governance materials | *$* | 350,000 |
| | Jurisdictional update of outsourced provider agreements | *Resource, one year* | 1.00 |
| | | | |
| **Additional training and assessment requirement** | | | |
| | Number of states and territories setting up additional online training and assessment | *#* | 8 |
| | Estimate of number of trainers | *#* | 1,000 |
| | Estimate of number of providers | *#* | 90 |
| | Training per individual trainer in the new requirements and material | *Hours* | 16 |
| | Time for each training provider in setting up new practices and processes | *Hours* | 40 |
| | Additional hours of online training and assessment | | |
| | – Rigid | *Hours* | 3.20 |

[47] All jurisdictional costs are estimates per jurisdiction

| | | | |
|---|---|---|---|
| | – HC | *Hours* | 3.68 |
| | – MC | *Hours* | 3.55 |
| | Additional hours of face-to-face training and assessment | | |
| | – Rigid | *Hours* | 2.8 |
| | – HC | *Hours* | 5.4 |
| | – MC | *Hours* | 6.8 |
| | Additional hours of supervised driving | | |
| | – Rigid | *Hours* | 1.0 |
| | – HC | *Hours* | 1.0 |
| | – MC | *Hours* | 1.0 |
| | Cost of an assessor | *$/hour* | 33 |
| | | | |
| **Amending progressive licensing requirements** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 1 |
| | System changes | *$* | 1,000,000 |
| | NEVIDS changes | *$* | 150,000 |
| | | | |
| **Introduce new sub-class of MC licence** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 2 |
| | NEVIDS system changes | *$* | 500,000 |
| | Management of transition with existing MC licence holders | *Resource, one year* | 2 |
| | Management of transition with existing MC licence holders – communications costs | *$* | 30,000 |
| | NEVIDS update | *$* | 500,000 |
| | Jurisdictional system upgrades | *$* | 1,000,000 |
| | | | |
| **Eligibility criteria setup costs** | | | |
| | Policy and procedural changes and staff training | *Resource, 1.5 years* | 3 |
| | Jurisdictional system changes | *$* | 1,000,000 |
| | NEVIDS changes | *$* | 250,000 |
| | | | |
| **Eligibility criteria ongoing costs** | | | |
| | Resource for reviews and appeals | *FTE* | 0.25 |
| | | | |
| **Supervised driving costs** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 1.5 |
| | Jurisdictional system changes | *Resource, one year* | 2.00 |
| | Development of supporting governance for training and supporting supervisors | *Resource, two years* | 1.0 |

| | | | |
|---|---|---|---|
| | Ongoing jurisdictional authorisation and compliance of supervisors per jurisdiction | *FTE* | 1.5 |
| | Development of online training for supervisors | *$* | 100,000 |
| | Jurisdictional system changes | *$* | 500,000 |
| | NEVIDS changes | *$* | 250,000 |
| | | | |
| | Option 3 – supervised driver hours | | |
| | – HR | *Hours* | 8 |
| | – HC | *Hours* | 10 |
| | – MC | *Hours* | 12 |
| | | | |
| | Proportion of supervised driving which would occur in the base case | *%* | 25% |
| | | | |
| | Cost of a driver supervisor through commercial training organisations | | |
| | – HR | *$/hour* | 74.34 |
| | – HC | *$/hour* | 96.25 |
| | – MC | *$/hour* | 139.57 |

**Table 24**: Draft initial CBA detailed inputs

| | | | Modelled |
|---|---|---|---|
| | | | |
| **General inputs** | | | |
| | | | |
| | Discount rate | *%* | 7% |
| | | | |
| **Timing assumptions** | | | |
| | Start date for transition | *Year* | 2024 |
| | Transition period | *Years* | 3 |
| | Policy changes implemented | *Year* | 2027 |
| | Appraisal period | *Years* | 20 |
| | | | |
| **Overarching inputs** | | | |
| | Number of states and territories transitioning | *#* | 8 |
| | Benchmark cost for jurisdiction and Austroads resource | *$/FTE* | 122,000 |
| | Hourly driver wage | *$/Hour* | $45 |
| | | | |
| **Inputs on heavy vehicle task** | | | |
| | | | |
| | Forecast annual growth rate in heavy vehicle kilometres | *%* | 1.38% |
| | Forecast annual growth rate in number of heavy vehicles | *%* | 1.38% |
| | | | |
| **Inputs on number of heavy vehicle crashes** | | | |
| | | | |
| | Deaths per fatal crash | *#* | 1.14 |
| | | | |
| | Fatal crash per million VKM | *# per mVKM* | 0.0091 |
| | Hospitalised injury crash per million VKM | *# per mVKM* | 0.0878 |
| | Non-hospitalised injury crash per million VKM | *# per mVKM* | 0.1209 |
| | Property damage only crash per million VKM | *# per mVKM* | 0.7055 |
| | | | |
| | Proportion of VKM that receive safety benefits | *%* | 100% |
| | Crash benefits ramp up | *% per annum* | 20% |
| | Option 1 change in fatal crashes | *%* | 0% |
| | Option 1 change in non-fatal crashes | *%* | 0% |
| | Option 2 change in fatal crashes | *%* | 0.7% |
| | Option 2 change in non-fatal crashes | *%* | 0.4% |
| | Option 3 change in fatal crashes | *%* | 11.7% |
| | Option 3 change in fatal non-crashes | *%* | 11.4% |
| | | | |

| | | | |
|---|---|---|---|
| **Inputs on crash costs** | | | |
| | | | |
| | Statistical value of life | *$* | 5,152,530 |
| | Other fatal crash costs | *$/crash* | 378,884 |
| | Hospitalised injury crash cost | *$/crash* | 408,537 |
| | Non-hospitalised injury crash cost | *$/crash* | 20,798 |
| | Property damage only crash cost | *$/crash* | 14,039 |
| | | | |
| **Inputs on total licences by vehicle class** | | | |
| | LR | *# licences* | 327,691 |
| | MR | *# licences* | 524,592 |
| | HR | *# licences* | 1,204,674 |
| | Total rigid | *# licences* | 2,056,957 |
| | HC | *# licences* | 531,704 |
| | MC | *# licences* | 216,901 |
| | | | |
| **Inputs on annual number seeking a licence by vehicle class** | | | |
| | HR | *# licences per annum* | 24,093 |
| | Total rigid | *# licences per annum* | 41,139 |
| | HC | *# licences per annum* | 10,634 |
| | MC | *# licences per annum* | 4,338 |
| | | | |
| **Annual growth rate in number seeking licences** | | | |
| | Annual growth rate in number seeking licences | *% per annum* | 1% |
| | | | |
| **Overarching reform transition costs for Austroads and jurisdictions**[48] | | | |
| | State and territory transition resource requirement | *FTE* | 4.0 |
| | Communication material production | *$* | 500,000 |
| | Austroads transition resource requirement | *FTE* | 2.0 |
| | | | |
| **Enhanced competencies in NHVDCF** | | | |
| | Jurisdiction transition engagement with outsourced training industry and training of providers on the revised requirements | *FTE* | 2.0 |
| | | | |
| **Developing online training content** | | | |
| | Austroads costs to develop online content for HPT module | *$* | 1,500,000 |

[48] All jurisdictional costs are estimates per jurisdiction

| | | | |
|---|---|---|---|
| | Austroads costs to develop other elements of online content | *$* | 2,800,000 |
| | Update to NEVIDS to assist in the management of the online content | *$* | 500,000 |
| | | | |
| **Integrating online training with existing systems** | | | |
| | Jurisdictional system costs to support online training | *$* | 1,000,000 |
| | | | |
| **Training governance** | | | |
| | Austroads ongoing management of the framework | *FTE* | 0.25 |
| | Periodic update of online materials | *$ per annum* | 50,000 |
| | Periodic update of face-to-face training materials | *$ per annum* | 50,000 |
| | Development of master outsourced provider governance materials | *$* | 350,000 |
| | Jurisdictional update of outsourced provider agreements | *Resource, one year* | 1.00 |
| | | | |
| **Additional training and assessment requirement** | | | |
| | Number of states and territories setting up additional online training and assessment | *#* | 8 |
| | Additional hours of online training and assessment | | |
| | – Rigid | *Hours* | 3.20 |
| | – HC | *Hours* | 3.68 |
| | – MC | *Hours* | 3.55 |
| | Additional hours of face-to-face training and assessment | | |
| | – Rigid | *Hours* | 2.8 |
| | – HC | *Hours* | 5.4 |
| | – MC | *Hours* | 6.8 |
| | Additional hours of supervised driving | | |
| | – Rigid | *Hours* | 1.0 |
| | – HC | *Hours* | 1.0 |
| | – MC | *Hours* | 1.0 |
| | Cost of an assessor | *$/hour* | 33 |
| | | | |
| **Amending progressive licensing requirements** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 1 |
| | System changes | *$* | 1,000,000 |
| | NEVIDS changes | *$* | 150,000 |
| | | | |
| **Introduce new sub-class of MC licence** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 2 |
| | NEVIDS system changes | *$* | 500,000 |
| | Management of transition with existing MC licence holders | *Resource, one year* | 2 |

| | | | |
|---|---|---|---|
| | Management of transition with existing MC licence holders – communications costs | *$* | 30,000 |
| | NEVIDS update | *$* | 500,000 |
| | Jurisdictional system upgrades | *$* | 1,000,000 |
| | | | |
| **Eligibility criteria setup costs** | | | |
| | Policy and procedural changes and staff training | *Resource, 1.5 years* | 3 |
| | Jurisdictional system changes | *$* | 1,000,000 |
| | NEVIDS changes | *$* | 250,000 |
| | | | |
| **Eligibility criteria ongoing costs** | | | |
| | Resource for reviews and appeals | *FTE* | 0.25 |
| | | | |
| **Supervised driving costs** | | | |
| | Policy and procedural changes and staff training | *Resource, one year* | 1.5 |
| | Jurisdictional system changes | *Resource, one year* | 2.00 |
| | Development of supporting governance for training and supporting supervisors | *Resource, two years* | 1.0 |
| | Development of online training for supervisors | *$* | 100,000 |
| | Jurisdictional system changes | *$* | 500,000 |
| | NEVIDS changes | *$* | 250,000 |
| | | | |
| | Option 3 - supervised driver hours | | |
| | – HR | *Hours* | 8 |
| | – HC | *Hours* | 10 |
| | – MC | *Hours* | 12 |
| | | | |
| | Proportion of supervised driving which would occur in the base case | *%* | 25% |
| | | | |
| | Cost of a driver supervisor through commercial training organisations | | |
| | – HR | *$/hour* | 74.34 |
| | – HC | *$/hour* | 96.25 |
| | – MC | *$/hour* | 139.57 |

# F Crash costs

The key mechanism through which these reforms are expected to benefit society is by reducing the risk of heavy vehicle crashes.

This appendix outlines the approach taken to estimating the value of a reduction in crash risk. It also discusses evidence associated with the benefit society gains from a reduction in crash risk as a consequence of proposed reforms to the National Heavy Vehicle Driver Competency Framework (NHVDCF).

To assess this impact, we estimated the avoided cost to society from a reduction in heavy vehicle crashes that may arise from the reform. As shown in Figure 6, the benefit of a reduction in crash risk is equal to the percentage reduction in crash incidence multiplied by the cost borne by society from crashes involving heavy vehicles.

**Figure 6**: Social benefit from reduced crash risk


*Source: Frontier Economics*

## Costs associated with heavy vehicle crashes

Estimating the cost of crashes involving heavy vehicles requires estimating the value of human consequences of a crash (including any lives lost) as well as the other economic consequences. The Bureau of Infrastructure and Transport Research Economics (BITRE)[49] has the most current and comprehensive assessment of these costs for crashes involving all types of vehicles (not just heavy vehicles).

The cost of an individual crash will primarily depend on its severity. Therefore, consistent with BITRE's approach, our analysis separately considers avoided costs for four types of crashes:

- fatal crashes (value of life lost and other costs)
- hospitalised injury crashes
- non-hospitalised injury crashes
- property damage only crashes.

For each crash type, we estimated the number of crashes per million vehicle kilometres travelled (VKT) by heavy vehicles, based on historical VKT data from the Australian Bureau of Statistics

[49] Bureau of Infrastructure, Transport and Regional Economics [BITRE], 2009, Road crash costs in Australia 2006, Report 118, Canberra, November.

(ABS) and historical crash data from select jurisdictions.[50] We also estimated the number of deaths per fatal crash, based on Australia-wide data published by BITRE.

We applied these benchmarks to a forecast of VKT by heavy vehicles to obtain forecasts of the number of crashes by severity and the number of fatalities caused by heavy vehicles. To convert the crash numbers into costs, we have applied the cost estimates in Table 25**.**

**Table 25:** Estimates of cost per crash, 2022

| Type of cost | Unit of measure | Value of cost |
|---|---|---|
| Value of life | $/life | 5,194,850 |
| Other fatal crash costs | $/crash | 387,005 |
| Hospitalised injury crash cost | $/crash | 420,975 |
| Non-hospitalised injury crash cost | $/crash | 21,243 |
| Property damage only crash cost | $/crash | 14,352 |

*Source: (a) Department of Prime Minister and Cabinet, Best Practice Regulation Guidance Note: Value of statistical life, August 2019; (b) BITRE, Cost of road crashes in Australia 2006, December 2009. Note: All costs escalated to March 2022.*

Estimating the cost of crashes involving heavy vehicles requires estimating the value of human consequences of a crash (including any lives lost) as well as the other economic consequences. BITRE has the most current and comprehensive data to underpin this calculation.[51] Using data from BITRE, together with OBPR data on the value of a statistical life and ABS price indices, we have estimated the cost of crashes involving heavy vehicles.[52]

The estimated average cost of a fatal road crash is based on multiplying the average number of deaths per fatal crash (estimated as 1.14 based on average of Australia crash data from 2009 to 2018) with the costs per fatality and adding the estimates of the other costs associated with a fatal crash. This results in an **average cost per fatal crash of $6,252,768.**

50 We analysed crash data from QLD, NSW, VIC and TAS. Crash data for SA and ACT are publicly available, however they do not sufficiently distinguish between the severity of the crash to be used in this analysis.

51 Bureau of Infrastructure, Transport and Regional Economics, 2009, *Road crash costs in Australia 2006.*

52 Rather than use the BITRE estimate (based on a hybrid human capital approach to economic valuation of life), the OBPR prefers the willingness to pay approach (using the value of a statistical life) for measuring the benefits of regulations designed to reduce the risk of physical harm. Therefore, we have used this figure in preference to the BITRE figure for the value of a life lost (or saved), but use the BITRE estimates of the other costs of a fatal accident, and of the costs related to non-fatal accidents. The cost estimates from BITRE and OBPR are reported in the current dollars of the study year, being 2006 and 2008 respectively. These estimates have been escalated to current dollars using the CPI and WPI (ABS 6401.0).

# G MUARC study methodology

The Monash University Accident Research Centre (MUARC) examined a range of licensing-related factors (other than training) which can be used to indicate whether a driver should be granted an initial heavy vehicle licence, or alternatively, to progress to a higher endorsement level if they already hold a heavy vehicle licence.

## Variables considered

MUARC considered the following factors as predictors of crash involvement (which were measured at the time at which drivers were seeking to obtain heavy vehicle licence endorsement):

- **non-exposure factors** – These are factors that are not related to previous driving experience: sex, age at endorsement, urbanisation of residence, endorsement upgrade gained and level of proficiency at upgrade.
- **exposure factors** – Factors that provide information on prior driving experience. As is evident, these factors are directly relating to previous experience a driver has gained (i.e., licence class pathways and time-based rate of progression, transferral of licence or endorsement from interstate or overseas, meeting required hours as a learner, exemptions from graduated driver licensing systems and motorcycle licences).
- **licence conditions** (e.g., spectacles, automatic transmission, zero BAC requirements or requiring an alcohol interlock)
- **past high risk behaviour** – These are primarily factors that relate to violating traffic rules, but also extend to involvement in crashes (i.e., number of demerit points accumulated, periods where they have experienced bans, offences heard in court, bonds with associated licence conditions, vehicle type driven when an offence is committed, casualty crashes).

MUARC considered three different outcome variables:

- being involved in a **casualty crash** while driving a heavy vehicle within a 5-year period after receiving the licence endorsement
- being involved in a **serious casualty crash** while driving a heavy vehicle within a 5-year period after receiving the licence endorsement (a serious casualty crash referred to a crash where someone received an injury that required hospitalisation or resulted in death)
- **committing a high risk offence** within a 5-year period after receiving the licence endorsement (a high risk offence referred to: a) careless or dangerous driving offences; b) drug and alcohol driving offences; c) intersection and traffic signal offences; d) high range speeding offences; e) hooning and vehicle impounding offences.

## Study design

MUARC considered two different licensing pathways, for which it undertook separate analyses:

- **cohort A** – drivers who were gaining a medium rigid or heavy rigid endorsement for the first time and currently only held a car licence or light rigid endorsement
- **cohort B** – drivers who were advancing from a medium rigid or heavy rigid endorsement to a heavy combination endorsement.

It used an unmatched case-control study design to estimate relationships. This design compares exposure to risk factors for heavy vehicle drivers who have the outcome of interest (crash involvement or penalised for a serious offence) to those who do not. Definitions of cases and controls for the study were:

- **case** – heavy vehicle driver who is holder of target heavy vehicle type licence who was involved in a crash driving the target heavy vehicle type
  - medium or heavy rigid (in cohort A)
  - heavy articulated (in cohort B)
- **control** – heavy vehicle driver who is holder of target heavy vehicle type licence who has not been involved in a crash in the target heavy vehicle type.

Outcomes used for the analysis were those occurring in the most recent five years.

## Limitations

MUARC's research has a number of limitations:

- Crash data does not distinguish who was at fault or whether the accident was the result of driver error.
- There was no data on how many kilometres specific drivers had driven while on each licence endorsement class or by vehicle type driven. Instead BITRE data, which provides average kilometres for particular vehicle types by locale of travel (e.g., urban versus rural) was utilised. Therefore, while overall exposure by broad vehicle class was taken into account, it was averaged across all licensed drivers rather than driver specific.
- The study looked at Victorian registered drivers only and whether or not they crashed in Victoria. It did not include drivers licensed interstate who crashed in Victoria or Victorian licensed drivers who crashed interstate.

There may be other factors impacting risk which were not represented in the available data such as specific driver skills and competency, and specific type of heavy vehicle driven within a heavy vehicle class. The case-control study design used will account for these factors to some degree but may not completely eliminate bias.

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