

**SUBMISSION TO:** Department of Infrastructure, Regional Development and Cities

**TITLE:** Inquiry into the National Road Safety Strategy 2011-2020

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## 1. About the Australian Trucking Association

The Australian Trucking Association (ATA) is the peak body representing trucking operators. Its members include state and sector associations, some of Australia's major logistics companies and businesses with leading expertise in truck technology. Through its members, the ATA represents many thousands of trucking businesses, ranging from owner drivers to large fleets.

## 2. Summary of Recommendations

### Recommendation 1

The Australian Government should require the fitting of ESC for all new trucks and trailers with only a narrow range of exemptions.

### Recommendation 2

The Transport and Infrastructure Council should, as a priority, update the Australian Transport Assessment and Planning guidelines to only use willingness to pay for estimating the cost of deaths and injuries in road crashes.

### Recommendation 3

For the assessment of transport appraisals, Infrastructure Australia should require willingness to pay for estimating the cost of deaths and injuries in road crashes, until the ATAP guidelines are updated to reflect this approach.

### Recommendation 4

The NRSS should encourage the adoption of comprehensive safety and risk truck accreditation systems by extending NHVAS inspection exemptions to TruckSafe operators and other similarly robust systems.

### Recommendation 5

To ensure the highest safety standards Governments should require that all infrastructure project construction contracts:

- require project subcontractors to hold TruckSafe accreditation, or have other similarly robust safety systems (this requirement should be inclusive of privatised projects and infrastructure).

### Recommendation 6

The review recommend the implementation of an ambitious five year national road safety strategy that inspires urgent completion of actions.

### Recommendation 7

That the Government's future national road safety strategy adopts a Towards Zero philosophy and sets a long term target for zero deaths and serious injury on our roads.

### Recommendation 8

The role of the Australian Transport Safety Bureau should be extended to provide independent, no-blame, safety investigations for road accidents involving heavy vehicles.

**Recommendation 9**

Governments should strongly consider the creation of an independent, statutory National Road Safety Commission to provide independent road safety policy advice, policy reviews, monitor the National Road Safety Strategy, and provide funding of non-infrastructure projects for improving road safety.

**Recommendation 10**

That the Australian Government's Office of Best Practice Regulation issues supplementary guidance material for regulatory impact statements involving public safety, requiring recommended policies to be based on a SFAIRP analysis as well as a BCA using willingness to pay values.

**Recommendation 11**

Road investment should be targeted at improving the safety outcomes of the road network, guided by road crash investigation findings and the need to upgrade road safety standards.

**Recommendation 12**

The Government should commence a proper review and consideration of establishing an independent and hypothecated road fund, to improve the effective targeting of building productive road infrastructure.

**Recommendation 13**

Governments should undertake research to investigate why Western Australia's more flexible fatigue laws are delivering better fatigue outcomes.

**Recommendation 14**

Governments should amend fatigue laws to include flexibility and realistic compliance tolerances.

**Recommendation 15**

Governments must take action to increase the quantity, capacity and quality of driver rest areas.

**Recommendation 16**

Governments ensure that the introduction of automated vehicle technologies only occurs when they can deliver significantly safer outcomes for road users.

**Recommendation 17**

Government ensure improved education of learner drivers on how to safely share the road with heavy vehicles.

**Recommendation 18**

Governments invest in well targeted communication campaigns on how to share the road safely with trucks.

**Recommendation 19**

Austrroads should release the review of the National Heavy Vehicle Competency Standards, and prioritise the implementation of reforms to improve the quality and consistency of heavy vehicle driver training and assessment.

### 3. Introduction

In 2017, 1,225 people died on Australia's roads.

That's the equivalent of seven passenger jet crashes in a single year.

Australians wouldn't accept this number of deaths if they occurred on planes or trains. There would be royal commissions, ministerial resignations and the restructuring of entire government departments.

Yet Australia goes on, year by year, accepting these deaths and an untold number of serious injuries and disabilities.

The National Road Safety Strategy 2011 – 2020 was developed as a tool to lead national road safety action. The Strategy promised government commitment and ownership of the responsibility to move towards eliminating death and serious injury on our roads.

Progress towards key targets in the strategy in some areas is poor including the objectives to reduce fatalities and serious injury by 30%.

On 8 September 2017 the Australian Government announced its commencement of an inquiry into the National Road Safety Strategy 2011–2020.

In this submission the ATA identifies a number of issues and priorities for consideration in Australia's next national road safety strategy and recommendations for inclusion in a 2018-2020 action plan.

### 4. Completing the 2011 – 2020 National Road Safety Strategy

The National Road Safety Action Plan 2015 – 2017 prioritises improvement in the safety of Australia's vehicle fleet via *Action 8. Mandate electronic stability control (ESC) for new heavy vehicles*. This Action was due to be completed by the end of 2017.

#### ***Mandating ESC for heavy vehicles***

The Australian Government has released a Regulation Impact Statement (RIS) on draft Australian Design Rules (ADRs) for mandating ESC for heavy trucks and buses and RSC for heavy trailers.

The ATA supports the fitting of ESC for all new trucks and trailers with a narrow range of exemptions. This will prioritise safety and the imperative to reduce the road toll over higher economic benefit offered by other options in the Australian Government's RIS on mandating ESC and Roll Stability Control.

In its submission, the ATA recommends Option 6a be adopted – Mandatory standards under the Motor Vehicle Standards Act 1989 (Australian Design Rule).

Further detail is available in the ATA's submission to the Australian Government's consultation RIS on mandating ESC and Roll Stability Control<sup>1</sup>.

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<sup>1</sup> [ATA submission to the Australian Government's consultation RIS on mandating ESC and Roll Stability Control](#)

This option is underpinned by Australia's work health and safety (WH&S) legislation and safety risk management generally. Australia's work health and safety laws require businesses to eliminate or minimise risk to far as reasonably practicable. The HVNL will include a comparable requirement from mid-2018.<sup>2</sup>

The ATA has made this recommendation because it is the option that would save the greatest number of lives and avoid the greatest number of accidents, and would do so at reasonable cost.

This Action 8 outcome: *Adoption of an Australian Design Rule (subject to RIS outcomes)* should be completed without delay.

### **Recommendation 1**

The Australian Government should require the fitting of ESC for all new trucks and trailers with only a narrow range of exemptions.

### **Assessment of infrastructure projects**

The National Road Safety Action Plan 2015 – 2017 *Action 5. Apply national willingness to pay values infrastructure for investment and other road safety project appraisals*, was to be implemented by the end of 2017. Governments agreed in the 2011-2020 National Road Safety Strategy to use the willingness to pay approach to valuing the cost of deaths and injuries in road crashes.

The safety benefits of implementing this approach are significant. The Department of Infrastructure and Regional Development Regulatory Impact Statement (RIS) on improving the stability control of heavy vehicles estimates the cost of a serious injury at \$271,012 in 2016 dollar terms,<sup>3</sup> based on a BITRE research report.<sup>4</sup>

The report uses a hybrid human capital approach to reach the estimate. The approach sums 11 economic and non-economic costs together, such as workplace and household losses, hospital and medical costs and the cost of workplace disruption and replacement.<sup>5</sup>

The alternative approach to calculating a statistical cost for deaths and injuries is - willingness to pay. This approach generates its values by asking individuals how much they are willing to pay for gains such as a certain improvement in health or the reduction in risk of a crash.<sup>6</sup>

Willingness to pay estimates of the cost of road crashes are markedly higher than human capital estimates: people are risk averse and are prepared to pay a premium for not being killed or injured. According to BITRE, a willingness to pay valuation of the cost of serious injury would generate values 45 per cent higher than those generated using its human capital approach.<sup>7</sup>

<sup>2</sup> Heavy Vehicle National Law and Other Legislation Amendment Act 2016, s 10.

<sup>3</sup> DIRD, 2017, table 75, 142.

<sup>4</sup> BITRE, [Cost of road crashes in Australia 2006](#). Report 118. BITRE, Canberra, 2009.

<sup>5</sup> BITRE, 25.

<sup>6</sup> Abelson, 5.

<sup>7</sup> BITRE, table T7.10, Cost of injury and disability, 91.

For the appraisal of transport related projects, Infrastructure Australia recommends the Australian Transport Assessment and Planning (ATAP) guidelines as the default guidance for almost all aspects of the appraisal process, with some limited departures from the guidelines relating to vehicle occupancy rates and vehicle operating costs<sup>8</sup>

The ATAP Guidelines provide the estimation of average cost of crashes per crash severity by either the human capital or willingness to pay approaches<sup>9</sup> This ultimately fails to implement the long standing commitment to apply willingness to pay for the assessment of road projects.

Implementing willingness to pay, in both the ATAP guidelines and Infrastructure Australia assessments, would increase the value placed on improving safety outcomes when road project business cases are assessed by governments. This would increase the funding priority placed on achieving road safety infrastructure upgrades.

### **Recommendation 2**

The Transport and Infrastructure Council should, as a priority, update the Australian Transport Assessment and Planning guidelines to only use willingness to pay for estimating the cost of deaths and injuries in road crashes.

### **Recommendation 3**

For the assessment of transport appraisals, Infrastructure Australia should require willingness to pay for estimating the cost of deaths and injuries in road crashes, until the ATAP guidelines are updated to reflect this approach.

### ***Truck safety accreditation programs***

The National Road Safety Action Plan 2015 – 2017 includes *Action 11. Implement measures to improve heavy vehicles roadworthiness*. This action, due for completion by end 2017, has not been completed.

Safety accreditation programs, with independent auditing and comprehensive safety standards, encourage high safety standards in the trucking industry.

The ATA operates TruckSafe, an industry led solution adapted over 20 years, which provides operators with an accreditation program that has strong safety standards.

Businesses accredited under TruckSafe are required to meet five key standards. Livestock transporters are also required to comply with a sixth standard, which comprises the strongest animal welfare rules in Australia.

TruckSafe members are audited regularly by independent, qualified auditors. Ten of the twelve auditors are based in regional Australia. TruckSafe has assisted more than 820 businesses since it was first established, and has 94 current NSW based trucking operators.

TruckSafe introduced upgraded standards from 1 January 2017 and operators are now being audited against them. Under the new standards:

<sup>8</sup> Infrastructure Australia, June 2017, [Assessment Framework](#), 105.

<sup>9</sup> ATAP, Parameter Values – [Crash Costs](#).

- Operators must develop, implement and maintain procedures to ensure that all speed limiters work correctly.
- Personnel involved in TruckSafe must have refresher training every three years, including a practical driving verification for drivers.
- Operators must regularly review their MDLR, speed and fatigue procedures using a system based on ISO31000.

However, despite the comprehensive safety standards of TruckSafe, government policy and regulation effectively encourages operators to join the National Heavy Vehicle Accreditation Scheme (NHVAS), which is not as comprehensive as TruckSafe.

TruckSafe maintenance standards are substantially the same as the NHVAS standards, but have the following additional requirements:

- TruckSafe maintenance standard B.10 requires operators to develop, implement and maintain procedures to ensure all truck speed limiters work correctly. NHVAS does not include this requirement.
- TruckSafe maintenance standard B.4 requires operators to assess the roadworthiness of their vehicles each year. These assessments are not required under NHVAS.

In addition to the differences between the TruckSafe and NHVAS maintenance standards, TruckSafe has additional features that make it more rigorous than NHVAS:

- TruckSafe is an all-in system. Operators in TruckSafe must comply with all five of its mandatory standards and must include all their vehicles in their TruckSafe system. Operators in NHVAS can pick and choose from the NHVAS modules and can choose to nominate only some of their vehicles under NHVAS maintenance.
- The TruckSafe on-road compliance module requires operators to review their safety and compliance risks using a system based on ISO31000. NHVAS does not include this requirement.
- Under NHVAS, operators can select their own external auditor from those approved by the NHVR. TruckSafe assigns auditors to operators and reviews their audit reports in detail. The TruckSafe approach continues to be more rigorous than NHVAS, despite the changes to the government scheme in 2015.
- The TruckSafe Industry Accreditation Council (TIAC), an independent expert panel, reviews and approves applications for accreditation, reviews and approves audit reports undertaken of operator's systems, and reviews and makes recommendations to the TruckSafe Board for the improvement of the TruckSafe standards and audit methodologies. This approach is consistent with international best practice.

Operators accredited under NHVAS receive a number of regulatory and competitive advantages, which are not available to operators accredited under TruckSafe. These reduce the cost of doing business, and can include extra mass, exemptions from inspection requirements and longer working hours for drivers. In NSW, NHVAS operators receive inspection exemptions which are not available to TruckSafe operators.

Following advocacy by the ATA, an independent review by Peter Medlock was instigated into truck safety accreditation schemes. The review findings are expected to be released shortly.

**Recommendation 4**

The NRSS should encourage the adoption of comprehensive safety and risk truck accreditation systems by extending NHVAS inspection exemptions to TruckSafe operators and other similarly robust systems.

**Recommendation 5**

To ensure the highest safety standards Governments should require that all infrastructure project construction contracts:

- require project subcontractors to hold TruckSafe accreditation, or have other similarly robust safety systems (this requirement should be inclusive of privatised projects and infrastructure).

**5. Future National Road Safety Strategy design*****Future National Road Safety Strategy***

Australia's next National Road Safety Strategy should move to implement an ambitious Towards Zero safety culture. The philosophy of this approach promotes a shared safety responsibility and utilises the Safe System approach to road safety.

The key principals that underpin a Towards Zero (also referred to as Vision Zero or Sustainable Safety) philosophy are:

- As humans, we will all inevitably make mistakes
- As humans, we are vulnerable - our unprotected bodies can only withstand forces equivalent to an impact speed of 30km/h before the risk of death significantly increases
- Road safety is a shared responsibility between everyone in the community.

A Towards Zero approach requires a safe road system that can accommodate people's mistakes and vulnerability. As per the safe systems approach it incorporates developments in safe roads, safe vehicles, safe speeds and safe people.

This philosophy promotes that the only acceptable road safety target to reach for, when it comes to the number of people being killed or seriously injured on our roads, is zero<sup>10</sup>. The National Road Safety Strategy should set a long term target of zero deaths or serious injuries on our roads, with interim 5 year targets towards this goal.

The ATA supports the implementation of a five year strategy instead of the more typical approach by Governments to implement strategies over a 10 year period. A five year strategy denotes urgency, is more aspirational and has better potential for political buy-in.

Targets are key in the management of a Towards Zero strategy. A five year plan will ensure currency of planned actions and offer more flexibility to respond to new or emerging trends and issues.

**Recommendation 6**

The review recommend the implementation of an ambitious five year national road safety strategy that inspires urgent completion of actions.

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<sup>10</sup> [Vision Zero Sweden](#)

**Recommendation 7**

That the Government's future national road safety strategy adopts a Towards Zero philosophy and sets a long term target for zero deaths and serious injury on our roads.

***Independent crash investigation***

Reducing road crashes involving heavy vehicles requires a commitment to understanding the causes of crashes, and to take action on reducing these causes.

Presently road accidents are investigated by police and/or the coronial system. Whilst this system may meet the needs of the legal and insurance systems, it is not achieving the reduction in road crashes that Governments should be seeking.

The existing investigation system is not suitable to the need to investigate the causes of the accident with relevant experts, including where technology and software needs investigation. This will be an increasing issue as the level of automation in vehicles increases.

In contrast, the Australian Transport Safety Bureau (ATSB) conducts independent investigation of transport crashes and other safety occurrences in the aviation, marine and rail modes of transport. Lessons arising from ATSB investigations are used to reduce the risk of future accidents and incidents through the implementation of safety action by industry and the Government.

The ATSB also seeks to improve safety and public confidence in those transport modes by pursuing excellence in safety data and research and fostering safety awareness, in addition to independent investigation of accidents.

The ATSB is an independent statutory agency that is separated from transport regulators, policy makers and service providers. It is not a function of the ATSB to apportion blame or to provide a means for determining liability.

As stated by the ATSB, no blame does not mean no responsibility. It means that disciplinary action and criminal or liability assessment are not part of an ATSB safety investigation and should, if necessary, be progressed through separate parallel processes. Introducing ATSB investigations of heavy vehicle road crashes would not replace the existing police and/or coronial system.

Currently, the ATSB functions to improve safety and public confidence in Australia's transport system, except for roads, which impacts the daily lives and safety of the wider community. A heavy vehicle crash on a railway level crossing would potentially trigger an ATSB investigation, but one 10 metres down the road would not.

**Recommendation 8**

The role of the Australian Transport Safety Bureau should be extended to provide independent, no-blame, safety investigations for road accidents involving heavy vehicles.

***Independent road safety policy advice***

In its submission to Treasury on the 2018-19 Budget, the ATA called for an independent, statutory agency at national level to provide independent policy advice on road safety to strengthen the national focus on improving road safety.

The ATA submission proposed that such an agency should:

- Monitor and report against the National Road Safety Strategy (NRSS).
- Be able to self-initiate policy reviews.
- Have stable funding to administer practical, non-infrastructure safety measures such as educational and behavioural change projects.

The ATA 2018-19 Budget submission recommended that the Australian Government should strongly **consider** the creation of a National Road Safety Commission (NRSC) to bring this into effect.

A NRSC would likely require:

- Potential COAG agreement, especially with relation to establishing responsibility for monitoring the NRSS.
- Establishing legislation through the Australian Parliament.
- Appointment of an independent board, with suitably qualified directors.
- Appointment of an appropriate CEO and staff.
- Funding of agency costs, including salaries, office accommodation, and other operational costs.

The NRSC would potentially be modelled on the National Mental Health Commission (NMHC). The creation of the NMHC in 2012 was to provide independent reports and advice to the community and government on the effectiveness of mental health services and programmes across Federal, state and territory governments, and private and non-government sectors. The NMHC is tasked with providing a leadership role to drive change.

The NMHC does not provide grants, funding or services, which differs from the ATA recommendation that a NRSC should provide stable funding for road safety projects.

A NRSC could provide strong focus for providing leadership to drive change on Australia's roads.

Other options for re-establishing national leadership of road safety would include re-establishing the Federal Office of Road Safety (FORS) or returning the responsibility to the ATSB.

The ATA considers that the national body must be able to make independent reports on progress, which would rule out housing it within a department. Its function would be a diversion from the ATSB's crash investigation responsibility and ethos. The ATA does not support these options, maintaining that the preferred approach is the creation of a National Road Safety Commission (NRSC).

**Recommendation 9**

Governments should strongly consider the creation of an independent, statutory National Road Safety Commission to provide independent road safety policy advice, policy reviews, monitor the National Road Safety Strategy, and provide funding of non-infrastructure projects for improving road safety.

**Safety analysis and road investment**

*UK Treasury approach*

In 2005, the UK Treasury issued guidance to UK Government policy makers about how to assess proposals that affect public safety. The guidance supplemented the Treasury Green Book, the UK equivalent of the *Australian Government Guide to Regulation*.

UK Government policy makers are advised to avoid, prevent or reduce high risks virtually whatever the cost implications. Very low risks should be mitigated further if the costs are justified. In the intermediate range, risks should be reduced as low as reasonably practicable.<sup>11</sup>

Table 5 summarises the UK Treasury’s practical interpretation of this framework, based on work done by the UK Health and Safety Executive.<sup>12,13</sup>

**Table 5: HM Treasury risk tolerance categories**

Risk category	Action required	Risk of death
Intolerable	Extremely reluctance to accept any argument for not doing more	Workers: 1 in 1000 per year General public: 1 in 10,000 per year
Tolerable if as low as reasonably practicable	Case specific ALARP demonstration required	Risk level between ‘intolerable’ and ‘broadly acceptable’
Broadly acceptable	No case specific demonstration required	Workers and general public: 1 in 1,000,000 per year

Sources: HM Treasury, HSE.

In line with UK practice the Office of Best Practice Regulation (OBPR) should issue supplementary guidance material about how to conduct regulatory impact statements involving public safety. The guidance should require that recommended policies be based on a so far as is reasonably practical (SFAIRP)/ as low as reasonably practical (ALARP) analysis as well as a conventional benefit cost analysis using willingness to pay values.

*Infrastructure projects*

Investing in better roads is also critical for improving road safety. Austroads has reported that “in-depth crash studies have also shown that the road is a causation factor in about 30% of all crashes, while it is known to be a factor in the severity outcome of 100% of crashes.”<sup>14</sup> Safe roads are also central to the National Road Safety Strategy and the safe system approach that has been adopted by the Australian, state and territory governments. With the right, targeted, road investments there is the real prospect for “a substantial reduction in

<sup>11</sup> HM Treasury, [Managing risks to the public: appraisal guidance](#). June 2005, 26.

<sup>12</sup> HM Treasury, 27.

<sup>13</sup> Health and Safety Executive (HSE), [Reducing risks: protecting people: HSE’s decision-making process](#). 2001. 44-49.

<sup>14</sup> Austroads, *Road Geometry Study for Improved Rural Safety*, 2015, 1.

serious casualties due to run-off-road, head-on and intersection crashes” as a result of improved design and construction of roads.<sup>15</sup>

The Australian Road Assessment Program (AusRAP) has previously examined almost 22,000 kilometres of national highway, and awarded star ratings (between 1 (low) to 5 (high)) based on their level of safety. Their 2013 assessment reported that the national highways had the following star ratings in NSW<sup>16</sup>:

Star Rating	Proportion of national highways (per cent)
1	9
2	42
3	46
4	2
5	0

The evaluation also included safety upgrade proposals estimated at \$1.9 billion in NSW, which would improve the star ratings of the national highways to be:

Star Rating	Proportion of national highways (per cent)	Change in percentage
1	0	Reduction of 9
2	2	Reduction of 40
3	54	Increase of 8
4	26	Increase of 24
5	17	Increase of 17

Whilst this assessment does not capture the impact of infrastructure investments since 2013, it also does not capture the safety standard of the extensive local and state road networks.

In addition to the ratings used by AusRAP and their proposed safety countermeasures, strong safety standards on our highways should also include the provision of sufficient rest areas, especially for heavy vehicles.

The goal of a safe road network and eliminating road trauma will remain hard to achieve as long as such large proportions of the Australian road network have a low safety star rating and standard.

### **Recommendation 10**

That the Australian Government’s Office of Best Practice Regulation issues supplementary guidance material for regulatory impact statements involving public safety, requiring recommended policies to be based on a SFAIRP analysis as well as a BCA using willingness to pay values.

### **Recommendation 11**

Road investment should be targeted at improving the safety outcomes of the road network, guided by road crash investigation findings and the need to upgrade road safety standards.

<sup>15</sup> National Road Safety Strategy, *Directions – what the strategy aims to achieve by 2020*, <http://roadsafety.gov.au/nrss/directions.aspx>

<sup>16</sup> Australian Automobile Association, 2013, [AusRAP Star Ratings Report](#), 15.

**Recommendation 12**

The Government should commence a proper review and consideration of establishing an independent and hypothecated road fund, to improve the effective targeting of building productive road infrastructure.

***Fatigue management***

The most recent NTI Major Accident Investigation Report by NTARC says that we have seen no improvement in the fatigue result since 2009<sup>17</sup>. The report questions the effectiveness of prescriptive driver hours when compared to the benefits of astute driver management that includes a focus on driver fitness for duty. Our current system of fatigue management does not properly incorporate what is known about the science of sleep. Fatigue must be considered as a biological condition and all drivers as individuals.

The perception that fatigue crashes occur because of long distance driving is simply not reflected in statistical analysis. NTARC crash data demonstrates that outward journeys from the home base (within 500 km) contribute to two out of three reported large losses. Most of these incidents occur on Mondays and Tuesdays (41.1% of major incidents).

This raises a clear need for fatigue management systems to incorporate more comprehensive driver management including monitoring of an individual driver's fitness for duty.

NTARC crash data also demonstrates that the state with the lowest heavy vehicle fatigue crash rates in Australia at only 6.75% is Western Australia (WA). In WA and the Northern Territory (NT) legislation identifies heavy vehicle driver fatigue as a work place hazard.

The *WA Occupational Safety and Health Act 1984* (the Act) places certain duties on employers, employees, self-employed people, manufacturers, designers, importers and suppliers. It also places emphasis on the prevention of accidents and injury. The legislation is supported by regulations, together with a lower tier non-statutory *Code of Practice – Fatigue management for commercial vehicle drivers 2004*<sup>18</sup>. Under the Act heavy vehicle driver fatigue is identified as a work place hazard, which gives greater scope of power to address other issues related to the fatigue state such as quality of rest, rest area availability, and the fitness of drivers for duty. The Heavy Vehicle National Law (HVNL) is currently more limited in dealing with contributing factors outside of driving hours, although the introduction of general safety duties under the *Heavy Vehicle National Law and Other Legislation Amendment Act 2016* (Qld) for all chain participants will address this.

The HVNL relies on the enforcement of prescriptive and complex work and rest hours that are difficult for drivers to comply with. Compliance is problematic not only because of difficulties in interpretation of the laws by drivers, but also because of a lack of infrastructure to support the laws, including a lack of heavy vehicle driver rest areas. The lack of any flexibility in the prescribed work and rest hours means that compliance is difficult to achieve.

Last year the Cooperative Research Centre for Alertness, Safety and Productivity (Alertness CRC), in partnership with the National Transport Commission (NTC), began field research to analyse the impacts of the Heavy Vehicle National Law (HVNL) on work and rest hours on heavy vehicle driver fatigue. The research will use alertness and sleep monitoring devices,

<sup>17</sup> NTI, NTARC [2017 Major Accident and Investigation Report](#)

<sup>18</sup> [Code of Practice – Fatigue management for commercial vehicle drivers](#)

as well as driving impairment indicators, to measure sleeping patterns, driver drowsiness and driving performance both on the road during real-world work shifts and off the road in a laboratory setting.

The research will objectively measure drivers' alertness across a work schedule, to monitor driving impairment indicators, and to measure the quality and quantity of drivers' sleep during minimum rest periods, so enabling us to provide quality data and evidenced guidance in support of any future reforms.

This research should also inform any future reforms of the HVNL fatigue laws and further development or adoption of technologies.

### **Recommendation 13**

Governments should undertake research to investigate why Western Australia's more flexible fatigue laws are delivering better fatigue outcomes.

### **Recommendation 14**

Governments should amend fatigue laws to include flexibility and realistic compliance tolerances.

### **Recommendation 15**

Governments must take action to increase the quantity, capacity and quality of driver rest areas.

## ***Automated vehicle technologies***

The National Transport Commission (NTC) is working on a number of reforms to prepare Australia for automated vehicles. The ATA has provided input into through submissions to NTC discussion papers and industry consultation forums. Most recently the ATA has responded to the NTC regarding clarifying control of automated vehicles<sup>19</sup>, regulatory options to assure automated vehicle safety in Australia<sup>20</sup> and changing driving laws to support automated vehicles<sup>21</sup>.

Automated heavy vehicles have the potential to greatly reduce road crashes and increase productivity. However, the introduction of these vehicles is complex and multi-layered.

This is breaking technology that is yet to be fully trialled, there is no hard data to inform decisions and still many unknowns with regard to legislation, laws and timelines.

The ultimate outcome of the introduction of automated vehicles should be a safer road system. Therefore, government should be aiming for safety outcomes that are significantly safer than conventional vehicles and drivers.

The safe transition to increased automation is of vital importance. A robust safety assurance system along with legislation and laws to support the use and ongoing compliance of automated vehicles, Automated Driving System Entities (ADSEs) and their users is essential.

<sup>19</sup> [ATA Submission Clarifying control of automated vehicles, June 2017](#)

<sup>20</sup> [ATA Submission Options to assure automated vehicle safety in Australia, July 2017](#)

<sup>21</sup> [ATA Submission Changing driving laws to support automated vehicles, December 2017](#)

This is a critical point if the objective is to improve the safety of the road system, as opposed to introduce a new technology. Where automated technologies can reduce the risk caused by human drivers, such as with emergency braking or lane departure warnings, they should be encouraged. But automated driving systems should not be pursued if they increase fatigue related crashes. The ability of the human driver to remain unfatigued, when not engaged with the driving task, has not been demonstrated.

There is already increasing concern in the community and industry about rising distraction for drivers and its ability to contribute to road crashes. It is extremely unlikely that human drivers would not face increased risks of distraction with a vehicle engaged in a conditional automated driving task, again limiting the ability of the human driver to assume proper control of the vehicle. For professional drivers, the prospect of reduced job interest and increased boredom whilst a vehicle is engaged in a conditional automation driving task also raises serious questions about distraction and possible increased risks of fatigue.

The ATA is also concerned about the potential loss of driving skills. The less a skill is utilised the more likely it is to disappear. There is a need to consider how to maintain driving skills, where human drivers remain ultimately in control of a vehicle, if conditional automation driving systems are likely to reduce the utilisation and practice of these skills. There are already significant concerns in the community, and amongst driving trainers and industry, about the loss of quality driving skills.

### **Recommendation 16**

Governments ensure that the introduction of automated vehicle technologies only occurs when they can deliver significantly safer outcomes for road users.

### ***Education and safety communication***

#### *Education of light vehicle drivers*

Road safety statistics show that in over 80%<sup>22</sup> of fatal multi-vehicle crashes involving heavy vehicles the fault is not assigned to the heavy vehicle. Despite these statistics, learning to share the road with trucks is not a significant consideration in Australian light vehicle driver education.

Learner information and test material currently available to learners that specifically relates to sharing the road with heavy vehicles. In NSW for example RMS the Road user's handbook<sup>23</sup> includes a section titled "Sharing the road with trucks and buses" (58), which outlines a number of safety points including heavy vehicle stopping distances, the extra lane width required through roundabouts and diagram explaining the sign "Do not overtake turning vehicle."

VicRoads provides a Learner driver handbook<sup>24</sup> which provides drivers with safety information regarding heavy vehicle blind spots, stopping distance, oversize vehicles. It explains the "Do not overtake turning vehicle" sign but does not use appropriate diagrams. It does not explain the danger of failing to heed this rule.

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<sup>22</sup> [BITRE Heavy truck safety: crash analysis and trends](#)

<sup>23</sup> [NSW Road Users' Handbook](#)

<sup>24</sup> VicRoads, [Your learner handbooks](#), 141-143.

The Queensland Government publishes a “Driver Handbook”<sup>25</sup> that briefly covers safe following distances, overtaking, and additionally displays a diagram explaining the “Do not overtake turning vehicle” sign. Further examples can be found at *Appendix 1*.

In 2014, the US National Surface Transportation Safety Center for Excellence (NSTSCE) project evaluated light vehicle driver education programs targeting sharing the road with heavy vehicles.<sup>26</sup>

The researchers compared the effectiveness of training based on textbooks with the effectiveness of textbook training plus two extra components: an instructional DVD and a hands-on truck experience program. The truck experience program used in the research was comparable to a Volvo ATA Safety Truck secondary school presentation: students were allowed to sit in the cab of the truck, walk around it and learn five sharing the road tips.

Students who participated in the truck experience program showed a statistically significant improvement in their recall of the safe no-zone distance ahead of trucks.

A 2011 meta-analysis of 67 road safety campaign evaluation studies concluded that including personal communication in a campaign resulted in a six percentage point improvement – from 10 per cent to 16 per cent – in the reduction in accidents associated with the campaign.<sup>27</sup>

The meta-analysis defined personal communication as lessons or seminars delivered in person, two-way discussions with a teacher, peer, safety expert or distributor of campaign media, group discussions or personally addressed letters.

This research supports that road safety gains can be achieved through the delivery of targeted, well designed educational and behavioural change projects. Education and information about how to share the road safely with trucks must be a funding priority for governments, particularly as young drivers enter the licensing system.

### **Recommendation 17**

Government ensure improved education of learner drivers on how to safely share the road with heavy vehicles.

### **Recommendation 18**

Governments invest in well targeted communication campaigns on how to share the road safely with trucks.

### ***Quality driver training and assessment***

The quality and consistency of driver training and assessment is of vital safety importance for the heavy vehicle industry.

<sup>25</sup> Queensland Government, [Your keys to driving in Queensland](#), 94,132

<sup>26</sup> Baker, S. et al. [Evaluation of light vehicle driver education programs targeting sharing the road with heavy vehicles](#). NTSCE report 14-UM-029, 2014.

<sup>27</sup> Phillips, R. et al. “Meta-analysis of the effect of road safety campaigns on accidents,” *Accident Analysis and Prevention* 43(2011) 1204-1218. 1207.

Whilst there are many excellent trainers, some train to a price and can be more focused on how long a course will take, and not on the level of competency attained. This contributes to a highly variable quality of training and assessment of truck drivers.

Training needs to incorporate not only the skills that relate to the driving task but the non-driving tasks as well particularly knowledge and skills relating to chain of responsibility, load restraint, fatigue management and work health and safety and use of new vehicle safety technologies.

Austrroads have recently completed a review of the National Heavy Vehicle Competency Standards. The report is yet to be released to industry.

**Recommendation 19**

Austrroads should release the review of the National Heavy Vehicle Competency Standards, and prioritise the implementation of reforms to improve the quality and consistency of heavy vehicle driver training and assessment.

## 6. What Governments should not consider

### ***Operator licensing***

The prospect of introducing operator licensing for road transport companies is the subject of growing debate in Australia. The ATA is strongly opposed to operator licensing.

#### *International experience*

The existence of operator licensing in other advanced economies is sometimes referred to by proponents of introducing a similar scheme in Australia, so consideration of international operator licensing schemes is directly relevant to the debate.

In the United Kingdom, applications for a goods vehicle license may be objected to by industry associations, trade unions, local councils and planning authorities. Approval is also needed for the location of a depot or operating centre – even if the site already has local government approval. The system also requires that operators maintain financial reserves, at all times, to meet the financial standing requirements of the system.

Closer to home in New Zealand, operator licensing has its roots in the *Transport Licensing Act 1931*, which was designed to protect government owned railways from competition, including limits on the distance that freight could be moved by road. Removal of most of these restrictions was part of an economic reform agenda by the NZ Government in the 1980s.

The New Zealand system also introduces another layer of regulation with license holders focused on individuals within a company resulting in the practical outcome that different trucks in the same operation may be run of different licenses, and the requirement for yet another label that must be displayed on trucks, much like a registration label.

#### *Chain of responsibility*

In 2003 the National Road Transport Commission (NTC) compared what was then a new approach to compliance – chain of responsibility – to operator licensing. The NTC rejected operator licensing in favour of chain of responsibility, concluding that operator licensing was anti-competitive and heavy handed.

The ATA has supported amendments to the Heavy Vehicle National Law to impose a general safety duty on all chain parties, including consignors and consignees, and to extend chain of responsibility to cover maintenance and repairs. Amendments to chain of responsibility are due to come into effect later in mid-2018.

### ***Fixed payment rates***

Despite the industry's improving safety record it has been asserted – most notably in the debate about the *Road Safety Remuneration Act (Cth)* – that fixed rates would improve safety by ensuring that drivers do not have remuneration related incentives to work in an unsafe manner.<sup>28</sup>

In reality, the link between fixed rates and safety outcomes is not so clear, because:

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<sup>28</sup> *Road Safety Remuneration Act 2012 (Cth)*, s 3.

- truck drivers and trucking businesses work in an environment where many safety hazards are out of their control.

In its 2017 major accident investigation report, for example, Australia's leading truck insurer, NTI, concluded that other vehicles were at fault in 93 per cent of the fatal multi-vehicle accidents in its sample.<sup>29</sup>

On another front, the intergovernmental road research agency, Austroads, has concluded that the road is a causation factor in about 30 per cent of all crashes, and is known to be a factor in the severity outcome of 100 per cent of crashes.<sup>30</sup>

- the relationship between work hours, fatigue and accidents is complex. NTI's 2017 major accident research, for example, showed that more than 64 per cent of crashes it examined occurred within 250 km of the point of departure.<sup>31</sup>

The National Transport Commission (NTC) and the CRC for Alertness, Safety and Productivity are now collaborating on a research project to evaluate scientifically the impact of the current HVNL fatigue laws.

Against the complexity of the asserted link between fixed rates and safety, PricewaterhouseCoopers found in 2016 that the Commonwealth road safety remuneration system had an overall **BCR of only 0.38, with a net cost of \$2.3 billion in NPV terms over 15 years from 2012.**<sup>32</sup>

In other words, the road safety remuneration system cost resources that could have been used for other purposes, including practical, evidence-based road safety measures that would have been more effective.

PwC pointed to submissions to the Road Safety Remuneration Tribunal finding that its payments order would increase costs by 20-30 per cent, making owner drivers uncompetitive.<sup>33</sup>

The PwC also noted practical concerns about setting fixed rates, particularly in relation to backloading and split loads.<sup>34</sup>

It should be noted that the review deliberately sought to maximise the number of accidents imputed to heavy vehicle drivers in its analysis, to allow a generous estimation of the benefits attributable to the road safety remuneration system.<sup>35</sup>

<sup>29</sup> National Transport Insurance, *2017 major accident investigation report*, NTI, Brisbane, 2017, 7. [Link](#).

<sup>30</sup> Austroads, *Road Geometry Study for Improved Rural Safety*, Technical report AP-T295-15, 2015, 1. [Link](#).

<sup>31</sup> NTI, 22.

<sup>32</sup> PricewaterhouseCoopers, *Review of the road safety remuneration system: final report*. January 2016. v. [Link](#).

<sup>33</sup> PwC, 50.

<sup>34</sup> PwC, 52.

<sup>35</sup> PwC, 84.

## Appendix 1

Learner information and test material currently available to learners that specifically relates to sharing the road with heavy vehicles:

## NSW

- NSW RMS provides three information handbooks throughout the process of an individual obtaining a full licence. The Road user's handbook<sup>36</sup> includes a section titled "Sharing the road with trucks and buses" (58), which outlines a number of safety points including heavy vehicle stopping distances, the extra lane width required through roundabouts and diagram explaining the sign "Do not overtake turning vehicle."
- A driver must pass a Driver knowledge test (DKT)<sup>37</sup> 21 involving 45 random questions. A question bank of 507 questions is published divided into 10 sections. One relates to sharing the road with trucks and buses, and is about overtaking a turning vehicle. Based on the test questions' content distribution, the probability of any given person being asked the question is 6.25 per cent (assuming the sections are tested equally)
- The Hazard perception handbook<sup>38</sup> covers the extra spacing required when following and overtaking heavy vehicles.
- The Driver qualification handbook<sup>39</sup> which is used for drivers to progress from a provisional to a full licence provides a section with information on how to drive safely around heavy vehicles.

## Victoria

- VicRoads provides a Learner driver handbook<sup>40</sup> which provides drivers with safety information regarding heavy vehicle blind spots, stopping distance, oversize vehicles. It explains the "Do not overtake turning vehicle" sign but does not use appropriate diagrams. It does not explain the danger of failing to heed this rule.
- VicRoads does not publish information about how it tests a driver's knowledge about heavy vehicles through the course of driving training.

## Queensland

- The Queensland Government publishes a "Driver Handbook"<sup>41</sup> that provides some information regarding sharing the road with heavy vehicles. The handbook briefly covers safe following distances, overtaking, and additionally displays a diagram explaining the "Do not overtake turning vehicle" sign.
- The Queensland Government does not publish information regarding the testing of heavy vehicle safety information through the course of driving training.

## South Australia

- The South Australian Government provides all road users with a "Drivers Handbook" that contains information on sharing the road with heavy vehicles. The handbook provides excellent diagrams and explanations about not overtaking turning vehicles, providing a number of scenarios which drivers may encounter. Furthermore the handbook details safety information on heavy vehicle blind spots, stopping distances,

<sup>36</sup> [NSW Road Users' Handbook](#)

<sup>37</sup> [NSW Driver knowledge test questions](#)

<sup>38</sup> [NSW Hazard perception handbook](#)

<sup>39</sup> [NSW Driver qualification handbook](#)

<sup>40</sup> VicRoads, [Your learner handbooks](#), 141-143.

<sup>41</sup> Queensland Government, [Your keys to driving in Queensland](#), 94,132

oversize loads and roundabouts, but fails to make use of appropriate diagrams to further illustrate the dangers.<sup>42</sup>

- The SA Government does not publish any information regarding the testing of heavy vehicle safety information through the course of driving training.

#### Western Australia

- The Western Australian Government's published driver handbook<sup>43</sup> provides very little information on sharing the road safely with heavy vehicles and does not use diagrams. The handbook outlines that heavy vehicles may need more room to turn around corners and roundabouts, but does not mention or illustrate the "Do not overtake turning vehicles" sign. The handbook briefly explains that heavy vehicles accelerate and decelerate slower than light vehicles.
- The WA Government does not publish any information regarding the testing of heavy vehicle safety information through the course of driving training.

#### Tasmania

- The Tasmanian road rules handbook provides very little information on sharing the road safely with heavy vehicles. The handbook does provide a brief illustration about not overtaking turning vehicles<sup>44</sup>.
- The Tasmanian Government publishes a question bank of 170 possible questions. 35 are tested in its driver knowledge test. Of the 170 questions only 1 (question 61) is focused on sharing the road safely with heavy vehicles. The probability of any given person being tested on that question is 20 per cent<sup>45</sup>.

#### Australian Capital Territory

- The Australian Capital Territory produces a road rules handbook from which material is taken to pass a theory driving test. The handbook makes use of a diagram to describe the "Do not overtake turning vehicle sign"<sup>46</sup> and how to interact with oversize vehicles.
- The ACT Government does not publish any information regarding the testing of heavy vehicle safety information through the course of driver training.

#### Northern Territory

- The Northern Territory government publishes a road user handbook<sup>47</sup> that details safety information on stopping distances, not to overtake turning vehicles, how to interact with heavy vehicles at roundabouts and overtaking safely.
- The NT Government does not publish any information regarding the testing of heavy vehicle safety information through the course of driving training.

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<sup>42</sup> [SA Driver Handbook](#), 35-36

<sup>43</sup> [Drive Safe](#), 78

<sup>44</sup> [Road rules handbook](#), 11

<sup>45</sup> [Tasmanian driver knowledge test question bank](#)

<sup>46</sup> [ACT Road Rules Handbook](#), 104

<sup>47</sup> [Road users' handbook](#), 49, 116