

6 September 2019

Our Reference: CCF/466 DOC19/45122

Dr Gillian Miles
Chief Executive Office
National Transport Commission
Level 3, 600 Bourke Street
MELBOURNE VIC 3000

Dear Dr Miles 

I refer to the recent consultation Regulatory Impact Statement (RIS) on considering *In-service safety for automated vehicles* released by the National Transport Commission (NTC).

Connected and autonomous vehicles (CAVs) are potentially transformative technology advancements for the road freight industry. With the potential to not only dramatically improve road safety but also deliver notable productivity improvements, the National Heavy Vehicle Regulator (NHVR) has a keen interest in ensuring the regulation of CAVs gives the best opportunity to allow these benefits to be realised.


I am pleased to provide a submission to the consultation RIS, which is attached. I apologise for the delay in providing this submission.

Overall, the NHVR is of the opinion that due to the size of our market, caution should be shown when regulating in this space until there is greater international certainty. Prematurely introducing regulatory obligations that do not align with global approaches, such as managing and assigning liability for in-service operation of a CAV, may be a significant barrier that could prevent this technology being brought to market in Australia.

The NHVR looks forward to continuing to work with the NTC and other relevant stakeholders to continue to develop a flexible and internationally aligned regulatory framework that will allow for the introduction and safe use of this transformative technology.

Should you require further information about the NHVR submission, please contact Mr Peter Austin, Manager (Vehicle Safety and Performance) on 07 3309 8561 or by email to peter.austin@nhvr.gov.au.

Yours sincerely



Sal Petrocchio
Chief Executive Officer

Enc(1): NHVR Submission - Consultation RIS: In-service safety for automated vehicles

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3. Problem statement and need for government intervention	1. To what extent has the consultation RIS fully and accurately described the problem to be addressed, including the in-service safety risks? Please provide detailed reasoning for your answer.	<p>Issues already exist in the in-service domain where vehicles that are supplied in lower volumes by smaller corporations face compliance issues and often cease operations in a short period of time.</p> <p>The RIS proposes that controls over corporations will provide some assurance for the in-service use of connected and autonomous vehicles (CAVs). Consideration should be given to the effectiveness of this approach for small corporations and when corporations cease.</p>
3. Problem statement and need for government intervention	1. To what extent has the consultation RIS fully and accurately described the problem to be addressed, including the in-service safety risks? Please provide detailed reasoning for your answer.	<p>One issue that is not canvassed in the RIS is the impact of an ADSE, which has a critical role in ensuring safety, ceasing operations.</p> <p>While this risk exists in the current vehicle market, should a safety issue be identified, it will in most cases be a mechanical or relatively simple electronic system that can be addressed by the use of replacement parts.</p> <p>Due to the intricate knowledge required of the design and programming of the ADS, the ability for any party other than the ADSE to remove or address a safety risk with a CAV, such as by software upgrades, is questionable.</p> <p>This issue could also have a notable impact on consumers, especially if the ADS is programmed to disable the vehicle should a safety issue occur and the ADSE is no longer in operation to resolve the issue.</p> <p>Two potential approaches that could be considered to address this are:</p> <ol style="list-style-type: none"> 1. The establishment of a contingency fund, managed by the Regulator, to allow critical safety updates for a discontinued ADS to be made. Consideration will need to be given to issues such as liability to the Regulator and the need for the Regulator to procure a necessary expert to understand the ADS programming, and develop and apply updates. 2. A requirement could be imposed when licensing or approving an ADSE that should the company cease operations, all intellectual

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		<p>property relating to the coding and programming of the ADS must be transferred to the Regulator. Should the company cease operating non-voluntarily and the ADS operations are not taken on by a new corporation, the relevant law should provide that the ADS IP transfers to the Regulator. Liability of the Regulator would also need to be considered under this approach.</p> <p>The NHVR notes that elements of both suggestions above may be required.</p>
<p>4. Parties with an influence on the in-service safety of automated vehicles</p>	<p>2. Have we correctly identified the parties with an influence on the in-service safety of automated vehicles and accurately described their role? If you identify additional parties, please explain what their role is.</p>	<p>The RIS identified Repairers as a party that has a major influence on CAV safety but it is unclear if this is also intended to apply to those who service and maintain vehicles. As there is a brief reference to this in section 4.3.7, the NHVR is of the opinion that maintenance and service providers are intended to be covered.</p> <p>One critical part of operating any vehicle is routine maintenance that ensures the vehicle continues to operate as intended. This includes minor tasks such as replacing and replenishing fluids, through to replacement of consumable components and the adjustment of components to ensure alignment.</p> <p>These activities are distinctly separate from repairs and are carried out by an even broader spectrum of parties than repairs and for the most part are unregulated in states and territories.</p>
<p>4. Parties with an influence on the in-service safety of automated vehicles</p>	<p>2. Have we correctly identified the parties with an influence on the in-service safety of automated vehicles and accurately described their role? If you identify additional parties, please explain what their role is.</p>	<p>The RIS does not consider the influence that those who load vehicles will have on the safe operation of CAVs. This is an important element for any load carrying vehicle, regardless of the vehicles gross vehicle mass, but is more relevant for heavy vehicles due to the size and mass of loads carried.</p> <p>In some cases, an ADSE may design a vehicle so that compliance with loading and load restraint requirements will be within the ODD for a CAV. In this situation, the ADSE should be taken as responsible for compliance with loading requirements.</p> <p>In the alternate situation however where loading and load restraint falls outside the ODD, the existing obligations to ensure safe loading</p>

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		<p>will need to be maintained. For a heavy vehicle loading obligations under the chain of responsibility are likely to provide adequate regulation, however there is no equivalent requirement for a light vehicle.</p>
<p>4. Parties with an influence on the in-service safety of automated vehicles</p>	<p>2. Have we correctly identified the parties with an influence on the in-service safety of automated vehicles and accurately described their role? If you identify additional parties, please explain what their role is.</p>	<p>A fallback-ready user or a passenger has the ability to observe a malfunction or damage to a CAV and may take steps to prevent the CAV from operating.</p> <p>As an example, if a CAV is involved in an accident and a sensor or camera on the front of the vehicle is knocked out of alignment, that damage has the ability to affect the safe operation of the vehicles by the ADS. If the fallback-ready user or a passenger in the vehicle observes the damage, but does nothing to prevent the vehicle from operating, despite observing the damage, this could have an adverse safety outcome.</p> <p>The NHVR understands this is a contentious issue, however consideration to whether an obligation should be placed on these persons to intervene is required.</p>
<p>4. Parties with an influence on the in-service safety of automated vehicles</p>	<p>3. Have we accurately assessed each party's influence on the in-service safety of automated vehicles? If not, please provide details.</p>	<p>The assessment of those who carry out modifications makes a number of assumptions about how modifications will be undertaken in a very uncertain future.</p> <p>Generally, the role and function of repairers, service and maintenance providers, and modifiers all share a common thread – experts who are engaged to undertake technical work on a vehicle.</p> <p>Rather than separate these into two distinct parties (modifiers and repairers), it is strongly suggested they are amalgamated into a single influencer.</p>
<p>5. Regulatory frameworks for in-service safety of automated vehicles</p>	<p>4. Have we accurately described the regulation that already applies to relevant parties that would help ensure the in-service safety of automated vehicles?</p>	<p>This chapter draws on the requirements of the Australian Consumer Law (ACL) in multiple sections, suggesting it contributes to the oversight of CAVs being fit for purpose.</p> <p>Based on previous issues relating to vehicle recalls, regulators are acutely aware of the limitation of the ACL in applying to road vehicles,</p>

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		<p>which, for some parts of the ACL, are limited by product value and the intended use of the vehicle (load carrying or passenger carrying). This has the effect of excluding some parts of the ACL from applying to certain road vehicles.</p> <p>Given these limitations, the NHVR is of the opinion that detailed analysis of the ACL and the protections it may provide will need to be conducted.</p>
<p>5. Regulatory frameworks for in-service safety of automated vehicles</p>	<p>4. Have we accurately described the regulation that already applies to relevant parties that would help ensure the in-service safety of automated vehicles?</p>	<p>As has been highlighted during recent high profile recalls, the provisions of the ACL place responsibility on the manufacturer or supplier to recall their product. However there is limited obligation on the user or consumer to comply with that recall. This approach will be continued under the <i>Road Vehicle Standards Act 2018</i> (Cth).</p> <p>The NHVR notes that section 5.5.1 considers the ability to manage this issue through vehicle registration. It should be noted that where this has been done there are potentially long lead times to remove the vehicle from service. This could be up to a full registration period (max 14 months in some jurisdictions) if the action is linked to denying registration renewal. If the proposed action is to cancel registration, natural justice would, in most instances, require a show cause process to be followed. This is a process that takes at least 28 days and is ineffective in managing a vehicle safety risk.</p> <p>Consideration needs to be given to whether an obligation should be imposed on the user or owner of a CAV to comply with a recall within a prescribed time.</p>
<p>5. Regulatory frameworks for in-service safety of automated vehicles</p>	<p>4. Have we accurately described the regulation that already applies to relevant parties that would help ensure the in-service safety of automated vehicles?</p>	<p>The role of loaders and other parties in the chain of responsibility under the HVNL has not been considered. Similarly, whether other CAV specific parties, such as the ADSE, should be a party in the chain has not been considered.</p> <p>The RIS has also not considered how heavy vehicle fatigue obligations will apply to fallback-ready drivers and remote drivers.</p>

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5. Regulatory frameworks for in-service safety of automated vehicles	5. Do you think there are any new risks posed by second-hand ADS components, aftermarket modifications or the transfer of ownership of automated vehicles, which may not be adequately addressed by existing regulation designed for conventional vehicles?	<p>The use of second hand parts and aftermarket modifications is an issue already well-known to in-service regulators.</p> <p>In relation to aftermarket modifications to heavy vehicles, existing regulatory frameworks are likely to remain current and applicable, but notable policy work would be required to ensure that those assessing modifications have the appropriate technical expertise regarding CAVs. The technical standards set by the Regulator would also need to be developed.</p> <p>With respect to the use of second hand parts, this is again an issue that already faces the heavy vehicle industry, but may become more of a safety critical issue when the proper and safe functioning of an ADS relies on its ability to ascertain the condition of critical vehicle components, such as brakes. Regulators will need to monitor the development of ADS technology to determine whether regulation is required.</p>
5. Regulatory frameworks for in-service safety of automated vehicles	6. Do you think the parties with an influence on in-service safety are sufficiently covered by Australia's current legal frameworks?	<p>The NHVR is of the opinion prescriptive requirements will be required for those who carry out technical work on CAVs (repairers, modifiers and service/maintenance personnel). This would ensure the applicable regulator is able to take action against a specific discrete breach. General duties and obligations under workplace health and safety and Australian Consumer Law are complex and may be arduous to enforce in specific cases of single breach.</p> <p>Much like the general safety duty imposed under the HVNL, it is important that prescriptive offence provisions and the general duty are both available to the relevant regulator.</p>
6. Regulating to ensure automated vehicles operate safely	7. Do you think that a general safety duty to ensure the safe operation of the ADS 'so far as reasonably practicable' is appropriate to address the safety risks?	<p>In the NHVR's view, a general safety duty alone cannot ensure the in-service safety of CAVs. The safety duty must form part of a comprehensive regulatory approach that includes prescriptive and performance based requirements.</p> <p>This comprehensive approach is already used in heavy vehicle regulation and works effectively for the industry.</p>

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		<p>In relation to CAVs, the NHVR supports the approach identified by the NTC in that:</p> <ul style="list-style-type: none"> - Clear definitive requirements have been identified that must be addressed by prescriptive requirements, such as blood alcohol and drug driving provisions for fallback-ready users. - Broad issues have been identified that need to be included as a foundation of an ADS, outlined in the safety criteria. These are generally performance-based requirements intended to allow technology to develop without unnecessary interference from regulation, while still ensuring safety. Over time, the NHVR expects that the current safety criteria will be expanded and refined as the CAV domain matures. - Finally, due to the uncertain nature of what CAVs will look like in the future, it is difficult to articulate many of the aspects around how CAVs will operate in-service. While some prescriptive limits will be required, a broader general safety duty is an appropriate and flexible policy tool. Such an approach will allow a wide range of factors to be considered and a custom operational model/practice adopted that achieves the safety outcome desired.
<p>6. Regulating to ensure automated vehicles operate safely</p>	<p>8. If a general safety duty were introduced, which parties should it apply to?</p>	<p>An in-service general safety duty must apply to any entity that has the ability to have a major or moderate influence on the safety of the operation of the CAV.</p>
<p>6. Regulating to ensure automated vehicles operate safely</p>	<p>9. If a general safety duty were introduced, should it apply on public and private land (such as residential driveways)?</p>	<p>It is a long held concept that transport legislation only applies to the use of a vehicle on a road or road related area. Unless a broader reform of all transport law to expand its scope the areas beyond roads and road related areas, CAVs should follow the existing approach.</p> <p>In saying that, the NHVR strongly supports a general safety duty applying to the ADSE for the operation of the ADS anywhere it is engaged, including non-road and off-road operations through the appropriate regulator and legislation.</p>

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6. Regulating to ensure automated vehicles operate safely	10. Should people injured by breaches of the duty have a cause of action, or should the ability to enforce a general safety duty be limited to a regulator?	<p>Any claim for injury caused by a CAV should be pursued through the current insurance/civil avenues, such as action for negligence, rather than through the general safety duty.</p> <p>The regulator would have responsibility for investigating any breach of the safety duty that lead to the injury or loss and for imposing sanctions or prosecuting the ADSE and other parties.</p>
7. Regulating the dynamic driving task for automated vehicles	11. Do you think there should be specific driving rules for ADSs like the Australian Road Rules, or would it be sufficient to simply require them to 'drive safely'?	<p>The NHVR considers that it is important there are specific, prescriptive road rules rather than just a general safety duty.</p> <p>As there will be a mix of automated vehicles and human drivers on the roads for the feasible future, predictability and consistency of behaviour will be critical.</p>
7. Regulating the dynamic driving task for automated vehicles	12. What approach to regulating the dynamic driving task for ADSs most efficiently achieves safe outcomes? Please provide reasons.	<p>The NHVR strongly supports approaches 1 and 4 due to the national consistency of both options and the significant impact that any variation in dynamic driving rules will have on the uptake of CAV technology.</p> <p>Approach 4 if adopted, would represent a departure from the current approach to transport regulation as it would see the Commonwealth enter the in-service domain. While this is not a barrier, it does represent a notable shift in the regulation where in-service matters are dealt with by the states and territories.</p>
8. Governance arrangements for the in-service safety of automated vehicles	<p>15. Have we accurately captured the benefits of the regulator being:</p> <p>a. a government body or an independent body?</p> <p>b. a national body or state and territory bodies?</p> <p>c. an existing body or a new body?</p>	<p>Due to the limited size of the Australian vehicle market and the commercial barrier that any variation within or between markets will pose the NHVR is of the opinion that preference should be given to any approach that removes or reduces variation.</p>
9. Legislative implementation models	18. Do you think there are any transitional or constitutional issues that could arise when	<p>The NHVR is of the opinion that the majority of CAV regulation could be established at a federal level. However, it must be noted that there</p>

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	<p>Australia establishes a national law for automated vehicles? If so, please explain what the issues are, and if they differ depending on the legislative implementation model used.</p>	<p>may be some matters relating to individuals who may fall outside the constitutional reach of the Commonwealth.</p> <p>The NHVR is supportive of a single national regulator approach to in-service CAV regulation and considers that the above is not a barrier to achieving this.</p>
<p>10. Options to address the problem</p>	<p>20. Which option most effectively addresses the problem statement? Please consider your answer in conjunction with the PwC cost-benefit analysis.</p>	<p>Consistent with the outcomes of the cost-benefit analysis, the NHVR supports the single Commonwealth regulator approach proposed in option 3.</p> <p>While option 4 is considered to be equivalent in terms of cost-benefit, the NHVR is of the opinion that this model may not provide the national consistency and certainty that will be required by ADSEs, due to the ability for states and territories to introduce derogations. In addition, regulation which relies on the unanimous agreement of several jurisdictions is unlikely to be able to respond quickly enough to and keep abreast of what will almost certainly be a rapidly evolving market. In addition, having a single Minister and parliamentary jurisdiction responsible for policy decisions relating to CAVs will provide simpler decision making and improved certainty. It makes sense that this single jurisdiction is the Commonwealth given the significance and role of global policy and decision-making in this space and because of their role in representing Australia at United Nations Working Parties 1 and 29.</p>