Queensland
Government

Office of the
Director-General

Department of
Transport and Main Roads

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Mr Paul Retter AM
Chief Executive and Commissioner
National Transport Commission
Level 3, 600 Bourke Street
MELBOURNE VIC 3000

Dear Mr Retter Paul

Thank you for the opportunity to provide a response to the National Transport Commission's (NTC) Safety Assurance for Automated Driving Systems Consultation Regulatory Impact Statement (RIS).

The Queensland Department of Transport and Roads (TMR) would like to thank NTC for developing RIS, and providing a vital leadership role in national policy development for automated vehicles. RIS is a critical step in fulfilling the commitment to having an end-to-end regulatory framework for automated vehicles in place by 2020.

Queensland is supportive of a new national Safety Assurance System for automated vehicles and remains committed to contributing to the development of this system to support the safe introduction of this new technology into Australia.

Please find enclosed the Queensland Government's response to RIS.

If you have any queries on the content or require additional information please contact Ms Melissa Cummins, Director (Registration and Licensing), Transport Regulation Branch, TMR, by telephone on (07) 3066 2217 or email at melissa.j.cummins@tmr.qld.gov.au.

I trust this information is of assistance.

Yours sincerely

Neil

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QUEENSLAND GOVERNMENT RESPONSE TO THE NATIONAL TRANSPORT COMMISSION REGULATORY IMPACT STATEMENT ON THE SAFETY ASSURANCE SYSTEM FOR AUTOMATED DRIVING SYSTEMS

Introduction

The introduction of automated vehicles (AVs) into the Australian market represents a significant change for regulators across all jurisdictions. The current laws relating to road access and use do not adequately provide for AVs. As reflected by the program of work being undertaken by the National Transport Commission (NTC), there is a need to address the implications for vehicle supply to market, vehicle safety, driving laws, insurance and enforcement. The Safety Assurance System (SAS) for automated driving systems, as considered in the NTC's Regulatory Impact Statement (RIS), is the cornerstone of this work.

It is critical that Australian governments take a unified approach to deliver the agreed target of having an end-to-end regulatory framework for AVs in place by 2020. It is inevitable that there will be a need for some changes to the existing regulatory framework, and consequential changes to the roles and responsibilities of jurisdictions. These structural, organisational and regulatory changes must balance the imperatives of ensuring on road safety of AVs whilst also supporting their commercial deployment.

The Queensland Government has given careful consideration to the RIS, and acknowledges the significant work of the NTC to reach this point. The Queensland Government supports the conclusion of the NTC that there should be a legislative SAS based on mandatory self-certification along with a primary safety duty on Automated Driving System Entities (ADSEs) (Option 4).

The cornerstone to the mandatory self-certification approach are the proposed safety criteria as listed in the RIS. These are currently described as a set of principles and will require considerable refinement over time to assure public safety outcomes. This will be informed through learnings from overseas regulatory approaches to safety complemented by the Department of Transport and Main Roads' Co-operative and Automated Vehicle Initiative research program with the Queensland University of Technology and the French consortium Vedecom. It is anticipated that as the safety criteria mature they will be outcome based. Further there must be measures in place to ensure the ADSE demonstrates they have suitably tested compliance with the safety criteria rather than relying solely on self-declaration. Governance of the self-certification model is necessary and a compliance and auditing framework will need to be considered. A complimentary offence framework dealing with and ADSE providing fraudulent or misleading information also needs to be included

Consideration has also been given to addressing each of the consultation questions.

Preferred Option

The Queensland Government considers that Option 4 in the RIS is the most appropriate approach. This option appropriately delivers against the community expectation that government will regulate for the safety of AVs at the point of first supply to the market and in-

service. The inclusion of a primary safety duty in addition to the introduction of a SAS is essential in this regard. Furthermore, the self-certification approach is a relatively flexible, low-impost approach, compared with other regulatory options previously considered by the NTC, including a formal government approval process or industry accreditation and auditing. The primary safety duty also minimises the need for reactive and prescriptive regulation as safety risks associated with an ADS are identified.

Whilst institutional arrangements and legislative details are still to be determined, Option 4 will deliver an appropriate basis for the establishment of a national regulatory regime that facilitates an active relationship between ADSEs and government throughout the life of the AV. This relationship would be an appropriate interface for transport and enforcement agencies, to respond to safety issues associated with the vehicle as well as the management of the data that will be integral to the operation of the SAS.

Option 1 (baseline) does not represent a viable approach. It does not provide a nationally consistent approach for the regulation of AVs. States and territories would bear a significant burden in administering the system, and adequate enforcement mechanisms would not be established. Furthermore, this option does not adequately manage the safety risks associated with their introduction into the Australian market. Whilst the Australian Design Rules may go some way to managing AV safety, as they align with international standards, this is an inherently slow approach. The lack of responsiveness inherent in this option would serve as a barrier to technology adoption.

Option 2 proposes a SAS that relies on existing legislation without specific sanctions and penalties for AVs. This option involves Australian Government, states and territories using existing frameworks, such as conditional registration, to manage the first supply and in-service management of the ADS. States and territories would bear a significant administrative burden in determining what vehicles are safe to be registered. This approach is not only unsustainable, but it would also lead to inconsistent approaches and consequentially, uncertainty for the market. Insufficient tools would be in place to manage the in-service safety of the vehicle, including appropriate enforcement mechanisms. This would likely result in states and territories unilaterally making their own regulatory changes to manage these on-road risks.

In Queensland, the conditional registration system was designed for non-standard vehicles that do not meet ADRs and have a genuine need for limited access to the road network within a jurisdiction. Automated vehicles do not fit within the conditional registration scheme because automated vehicles will require unrestricted access to the road network across borders. Furthermore, automated vehicles will predominantly be standard vehicles with additional capability.

Option 3 goes some way to delivering an appropriate framework for the management of AV safety. A nationally consistent approach would be achieved, underpinned by legislation that also imposes appropriate penalties. This approach is less burdensome for states and territories and also minimises the regulatory barrier to technology adoption. However, it is considered that this option does not go far enough to manage all of the safety risks of AVs that are in-service. Reliance on existing mechanisms to resolve vehicle safety issues, such as vehicle recalls or registration cancellation, is considered inadequate given the potential road safety impacts of Automated Driving System (ADS) failures.

Response to Consultation Questions

1. To what extent has the consultation RIS fully and accurately described the problem to be addressed? Please provide detailed reasoning for your answer.

Queensland considers the consultation RIS has largely articulated the problem to be addressed and the need for government intervention. Note that some further factors for consideration in the problem statement are suggested in response to Question 2 below.

Governments currently regulate road access to deliver safety outcomes. This is achieved through the provision of vehicle standards and roadworthiness, controls on road access through vehicle registration, and licensing of drivers. General consumer and product liability laws provide additional consumer protections.

The introduction of AVs to the market is a significant technological disruption for the sector, with the potential to have far reaching consequences for road regulation. Governments must continue to provide a framework that focusses on road safety. However, the mechanisms currently used to control road access and vehicle safety are not adequate to deal with AVs.

As detailed in the RIS, there is a need to manage the safety of AVs, throughout their life, in a different way to the approach taken for existing vehicles. The current road safety approach places significant reliance on the human driver to deliver safety outcomes. Whereas in the future, there will be a stronger emphasis on vehicle safety. Furthermore, the capability of AVs on our roads will be constantly evolving via software updates, as well as be exposed to risk of malfunction through acts such as having minor repairs conducted. That is, an AV's functionality and safety will be a constant variable that needs to be managed in real time. However, there is a need to establish a benchmark for safety outcomes for AVs so that it can be readily understood what will and won't be allowed into the market.

There is also a need to design an approach that does not present a barrier to innovation, vehicle importation and commercial deployment of the new technology. Such difficulties would rapidly emerge if states and territories are left to develop their own regulatory response to AVs for their jurisdictions in terms of inconsistent requirements and responses to emerging issues. There is a further need to recognise that the technology is relatively immature, and as a result, the regulatory framework needs to be responsive to technology advances and increased understanding of its practical operation.

2. What other factors should be considered in the problem statement?

Whilst comprehensive, the problem statement needs to consider the difficulties associated with making the necessary institutional and regulatory changes to facilitate a timely response to the introduction of AVs. Introducing a regulatory framework impacts multiple government agencies at federal, state and local levels. To deliver an end to end framework by 2020 across all of these levels of government in each state and territory will not be without complexities. There is also a risk that governments may not be able to access or develop the requisite technical capability to ensure that the regulatory response is appropriately informed or administered, and responsiveness to technology advances. There is a further risk that introduction of administrative complexity in association with the SAS would add to any barrier to technology uptake posed by the SAS. Whilst these issues are not at the core of the problem being

addressed by the RIS, they will need to be considered as the focus turns to implementation of the preferred solution.

Varying models for ADS deployment into the market also need to be contemplated. The RIS appears focussed on a market model that involves pre-import approval of an ADS that is supplied by a discrete number of commercial entities that are linked to vehicle manufacturers. Whilst this is relatable to the current commercial model, the SAS should be designed to support innovation and market competition. This may include domestic ADS development, separate from vehicle manufacturing, including where ADS fitment may be to in-service vehicles. In this regard, clarity around whether multiple ADS's in a vehicle are being contemplated, or how different providers of hardware and software will be dealt with. In this context, joint responsibility and liability would need to be accommodated.

Consideration also needs to be given to the implications of a SAS for the regulatory framework for heavy vehicles. The Chain of Responsibility under the Heavy Vehicle National Law may be an appropriate model for addressing extended liability issues in the regulation of the ADS and ADSEs. Heavy vehicle specific issues will also need to be considered. For instance, the use of an ADS may have implications for fatigue management. Heavy vehicle drivers must comply with fatigue management requirements in the interests of road safety. An ADS may serve to reduce fatigue. However monitoring the operation of a vehicle whilst in automated mode also has the potential to contribute to fatigue. Fatigue management laws also apply to non-drivers who are responsible for heavy vehicle operations. This will also need to be taken into account.

Further consideration should also be given to accessibility and functionality for user groups such as those with disabilities which prevent them from driving a vehicle. Consideration is also required of on road interactions between the automated vehicle and vulnerable road user groups such as pedestrians, cyclists, mobility devices and motorcyclists. The SAS must ensure the needs of all road users are accommodated, particularly for fully automated vehicles entering the market.

The RIS also views the safety of the vehicle in isolation. There are broader impacts for government and society. Transport modelling indicates that only a small or very large number of AV results in a decrease in congestion and crashes because of the way that they are used. Further thought may also need to be given to how connected and co-operative vehicles fit within the safety assurance concept. The risks associated with these vehicles to not appear to have been addressed, and it is unclear whether the SAS is being designed support the introduction of this technology.

It should also be noted that Australia's current IT infrastructure will not support AVs operating in rural and remote areas. This is of significant relevance for Queensland given its geographical diversity. The future safety of AVs is likely to be dependent on this infrastructure, and as such, should be considered as part of the SAS. A failure to do so could result in inequity in AV uptake based on geography.

The RIS also eludes to the emissions reduction potential of AVs, but it is not clear to what extent AVs will reduce emissions. As such, there may be value in considering these potential benefits of AVs as part of the cost-benefit analysis for the SAS. Conceivably, those options that present less barrier to AV technology uptake could have the added benefit of reducing emissions.

Finally, the RIS appears to focus on the positive safety benefits of AVs. Other models have indicated that AVs can have a negative impact on road safety, however this is not reflected in

the RIS. The potential for 'bad actors' also needs to be factored into the design of the SAS and associated regulatory interventions. It may be necessary to establish separate regulatory offences that deal with high risk elements, such as malicious tampering with an ADS, in addition to the adoption of a SAS.

3. Has the consultation RIS provided sufficient evidence to support the case for government intervention? What else should be considered and why?

Queensland considers the RIS has provided sufficient evidence to support the case for government intervention. It is agreed that the public expect that governments will make appropriate provision for the safe introduction of automated vehicles into the country.

Queensland further reiterates that a nationally consistent approach, through coordinated and unified action, is a fundamental requirement. As reflected in the RIS, Australia is a vehicle importer and represents a small percentage of global vehicle sales. As such, the absence of a nationally consistent approach, could prove a barrier to AVs being imported into the country.

4. To what extent have the community and industry expectations of a regulatory response been accurately covered?

There is a need for greater exploration of general community and industry expectations to inform the regulatory response to AVs. Such engagement can also serve to improve community and industry understanding of the national approach to AVs to support their preparation for adoption of the technology.

It is assumed that the community expects:

- governments to ensure the safety of AVs as they become available in Australia – including their safe interaction with standard vehicles (non-AVs) and vulnerable road user groups;
- governments will ensure the ongoing safety of AVs by monitoring and auditing safety compliance and taking appropriate action against non-compliance;
- governments will ensure accessibility and functionality of AVs for all consumers, particularly for road user groups who cannot drive vehicles;
- to have clarity about who is responsible for the operation of a vehicle when it is operated in automated mode;
- governments ensure appropriate human factors are considered, realistic and assessed in any hand back from an ADS to a human driver;
- that in the event an AV used in automated mode crashes causing injury to people or damage to property, that the party legally responsible for the AV will have a presence in Australia, be capable of being sued, and be sufficiently insured to meet potential claims resulting from the crash; and
- that appropriate enforcement action will be taken against the responsible party if an AV is found to be operating in an unsafe manner.

It is important that these assumed expectations are validated before significant government investment in the SAS is made.

In terms of industry expectations, it is considered that a clear pathway for vehicle supply into the market would be expected. As with the community, it is anticipated that industry will expect to understand what they are accountable for, and how they can fulfil their accountabilities. This includes an understanding of what level of safety is expected in order to be compliant with government requirements; the RIS is relatively silent in this regard. Consideration of 'what is safe' is an inherently vexed issue, particularly when comparisons to current road safety are made. Governments will however have a critical role in communicating to the community about how the safety of AVs is measured (see discussion about the proposed safety criteria below).

It is also assumed that the reference to industry in this context relates to the vehicle manufacturing and AV technology sector. However, broader industry impacts and expectations will need to be considered in the near future, particularly if the proposed SAS has implications for the way in which they interact with regulators or if their operations are likely to be impacted by the changes.

5. Are the four options clearly described? If not, please elaborate.

Queensland considers that the four options have been clearly described.

Queensland would however like to raise additional issues for consideration by the NTC. Firstly, in terms of how the primary safety duty would be administered, the practicality of how a national body will respond to safety incidents will need to be explored. The interaction with state and territory authorities and appropriate resourcing for meaningful investigation (including technical capability) is relevant. There is also an issue of timeliness that requires thought. If a critical road safety issue is identified, a rapid escalation of response will be necessary.

Queensland also seeks clarification on what role (if any) the national body will take in assessing liability in the event an AV is involved in a crash? How will the liability be allocated among the parties such as the ASDE, the owner, the manufacturer or passengers? Data availability to enforcement agencies, other government authorities and insurers also needs to be considered, along with privacy protections for AV users. Comment on these issues is provided below in response to Question 7. It is noted that the NTC is progressing other projects looking at this issue, however these issues are likely to become critical as the SAS is implemented.

It is also noted that the NTC is seeking to apply the primary safety duty to the ADSE only. Whilst it may not be immediately necessary to expand this obligation to other parties, it should be recognised that other parties may be appropriate for inclusion in the future as safety risks of AVs are more fully understood. As noted in the RIS, these parties could include vehicle manufacturers, commercial operators, individual operators and vehicle repairers.

6. Are the proposed safety criteria and obligations on ADSEs (detailed in chapter 4 and Appendix C) sufficient, appropriate and proportionate to manage the safety risk?

The Queensland Government notes the intent to validate the proposed principles of the safety criteria before further developing their contents. However, the importance of sufficient detail cannot be understated and for the criteria to have a meaningful impact further granularity is required. Queensland understands and supports the proposed SAS self-certification model but notes that this support relies on there being rigour in the self-assessment process. There must be measures in place to ensure the ADSE demonstrates they have suitably tested compliance with the safety criteria rather than relying solely on self-declaration. Governance of the self-

certification model is necessary and a compliance and auditing framework will need to be considered. A complimentary offence framework dealing with and ADSE providing fraudulent or misleading information also needs to be included.

While the proposed safety criteria and obligations on the ADSEs provide a solid starting point towards ensuring AV safety, Queensland considers that a greater focus is needed on policy development for in-service requirements. In particular, further consideration is needed in terms of how the safety criteria will apply and be monitored throughout the life of the vehicle. The interaction with this framework, and the existing vehicle safety system, needs to be explored in detail so that the ADSE and relevant government agencies have clear understanding of their respective responsibilities.

Commentary on the specific safety criteria and associated obligations is provided in response to Question 7.

7. Are there any additional criteria or other obligations that should be included?

Whilst acknowledging that the NTC has noted that the safety criteria in the RIS require further development, Queensland requests that the following comments on the safety criteria and ADSE obligations be given further consideration during the next phase of policy development.

It is noted that the safety criteria are most valuable when they continue to apply throughout the life of the ADS. This can only be achieved if a primary safety duty is applied to the ADSE.

Safe system design and validation processes

Queensland seeks clarification on whether more than one ADS in a vehicle has been considered, and if so, how the responsibilities of the ADSEs in this context will be managed. Furthermore, it is understood that the ADS refers to both the hardware and the software required to deliver automated functionality to a vehicle. Under the SAS, the ADSE responsible for the ADS will have an ongoing responsibility to manage ADS safety. However, if the hardware integrated into the construction of the vehicle (sensors, LIDAR etc.) is the domain of one legal entity, and the software component of the ADS is the domain of another, how will the obligations under the SAS be appropriately directed? This is particularly relevant for enforcement purposes, and potential scenarios where the relevant parties disagree as to their responsibility and therefore liability.

There is also a need for clarity if the ADS will be assessed against the SAS criteria in isolation from the vehicle(s) in which it could be deployed. Alternatively, is the assessment specific to the ADS in a particular vehicle type, on the assumption that the operating characteristics of the ADS may vary when interacting with the hardware of various vehicle models?

It is unclear whether the safety criteria have been developed to address heavy vehicle safety. As such, it may be necessary to consider where specific ADS safety criteria are required for the sector. Monitoring loads and management of loading/unloading tasks could be relevant. Similarly, safe management of dangerous goods transportation will eventually need to be considered, including the taking of emergency action in response to an incident.

Queensland also considers it appropriate that jurisdictions adopt a national policy position on the transition of SAS safety criteria into the ADRs, once relevant technology elements become standardised and are recognised under international standards.

Human-machine interface

A high standard is required for this criteria. The Human-Machine Interface (HMI) must provide adequate notice to the driver that they need to take control of the vehicle. This notice should allow for the evidence based time that it takes for a driver to respond. The HMI should also be designed with driver safety in mind, it should be able to take evasive action or stop safely should the driver not respond. That is, an ADS should achieve a 'fail safe' outcome. Evidence from overseas is that humans can be over reliant on the automated system therefore the ADS needs to be designed to accommodate this redundancy. As such, the requirements for the Statement of Compliance do not go far enough.

There may also be a need for the HMI to be externally facing, to enable communication with other road users. This type of capability has the potential to minimise road safety risks to vulnerable road users.

Interaction with enforcement and other emergency services.

The opportunity to include additional criteria for enforcement and emergency services vehicles should be explored. Emergency service vehicles will need to interact with AVs in a safe manner, and as noted in the RIS, this will require the ADS to have the capability to receive and appropriately respond to messages from emergency vehicles. Consideration should also be given to enabling emergency service vehicles to directly control AVs (for example, to make AVs pull over or move out of the way, or to disable them in the instance of a crash) when they are attending incidents. The ability for enforcement agencies to disable an AV or direct the movement of an AV that is being used to facilitate crime may also be appropriate. The ability for AVs to receive safety messages for example, road crashes or child safety alerts should also be considered. Including this in the safety criteria could potentially revolutionise enforcement and emergency response capability.

Installation of System Upgrades

Consideration may need to be given to a distinction between safety critical updates and those that do not have a material impact on the safe operation of the vehicle. It may be appropriate to require that the ADS monitor the installation of safety critical updates and for the automated features of the vehicle to become inactive if such updates are not adopted.

Cybersecurity

More objective criteria for cybersecurity will be required, as 'best practice' is ill defined. This may be best achieved by describing the cybersecurity outcome that is to be achieved. This should extend to protecting against emerging cybersecurity threats whilst the vehicle is in-service. It is likely that an obligation will need to be placed on the ADS to monitor and assess such threats, and take appropriate action such as disabling automated functionality.

Education and Training

The RIS highlights the need for and ADSE to provide education and training regarding an ADS. This appears focussed on the use of the vehicle, and in particular, the human interaction with the ADS. However, it will also be important for the ADSE to provide detailed information at the point of sale to ensure that consumers understand what level of automation they are purchasing, its operational design domain, use limitations, and any restrictions on after-market modifications (e.g. tow bars for trailer use). Ensuring that consumers are provided with detailed information regarding an AV will complement the other education and training proposed to minimise safety risks.

Data recording and sharing

Data requirements and flow to other agencies, including state and territory road agencies and enforcement agencies is of significant importance and needs careful consideration. Queensland suggests that broader engagement with stakeholders and industry is required to assist in determining data requirements and access arrangements.

It is increasingly apparent that data retention and sharing will be a critical element in the success of the SAS approach. It is foreseeable that in addition to the ADSE, the owner of the vehicle, and government authorities such as police and road agencies, many third parties will have a legitimate need to access data about ADS operation. Insurers, lawyers and vehicle service providers are some examples. A requirement to make this data available in a consumable format may need to be captured by the SAS criteria.

In addition to outlining how the data will be recorded and shared, consideration should be given to including a mandatory obligation in the SAS that requires the ADSE to report any incident involving an AV being used in automated mode. Without mandatory reporting, there is risk that unreported incidents particularly those deemed as not serious, could lead to defects or errors being undiagnosed.

Furthermore, as with current road safety statistics, it will be important to monitor the rate and nature of AV related injuries and fatalities over time. This data will provide an evidence base to evaluate the impact of AVs, the effectiveness of the SAS, and inform the need for further regulatory interventions. The SAS may need to require such data to be recorded and then released by the ADSE.

Privacy implications also need to be explored fully, as referred to in other parts of this response. Whilst the criteria may be primarily designed to assure the safety of the vehicle, they are also the mechanism by which critical features of the ADS and the ADSE are assessed before acceptability is determined. That is, before an ADS is allowed to enter the market, the ability of the ADS and ADSE to manage privacy need to be considered.

As outlined in the RIS, the safety criteria will require ADSEs to collect and disclose data to relevant parties including road and enforcement agencies. The data collected will include whether the ADS or the human driver was in control at the relevant time. It is Queensland's view that the collection of such data means ADSEs will be subject to Australian Privacy Principles in the *Privacy Act 1988*.

Queensland has concerns that the proposed collection, storage and disclosure of personal information does not provide sufficient privacy safeguards for AV users. The proposed collection and disclosure should be authorised by statute or with consent of the AV user rather than only as a requirement of self-certification. Queensland therefore requires further information about how it is proposed for data to be collected and disclosed while also ensuring that the privacy of individuals is appropriately protected.

Minimum financial requirements

Queensland agrees that it is important that the ADSE should have a corporate presence in Australia. However, prescribing a minimal financial requirement may pose a barrier for industry and discourage some companies from introducing their product to Australia. Queensland considers that protection for AV owners/operators against an ADSE going into insolvency is of greater significance and that prescribing a minimum liability insurance may be of greater relevance.

8. **Do you agree with the impact categories and assessment criteria? If not, what additional impact categories or assessment criteria should be included?**

Queensland agrees with the impact categories and assessment criteria for the purposes of the RIS.

As stated previously however, it appears that the RIS has focussed on the implications for the vehicle manufacturing and AV technology industries. Costs and potential impacts on the broader transport sector will need to be considered in the future.

9. **Has the consultation RIS captured the relevant individuals or groups who may be significantly affected by each of the options? Who else would you include and why?**

Queensland agrees that the individuals and groups identified in the RIS may be significantly affected by each of the options. Additionally, the automotive service provider industry such as mechanics, modifiers of in-service vehicles, auto body technicians, tyre fitters and auto electricians may be disadvantaged by the uptake of automated vehicles. This impact is difficult to assess at this time, however it is presumed that if an obligation is placed on the ADSE to maintain in-service vehicle safety, the ADSE's may overtly place restrictions on who can interact with the vehicle and in what manner. They may also covertly do so by restricting access to available data. This could have the effect of imposing market barriers on service providers.

People injured or who suffer property damage in motor vehicle accidents should also be included as a relevant group of stakeholders who may be affected by each of the options, separate to the general public. Obligations placed upon ADSEs who seek to access the Australian market will have a direct impact upon the rate and extent of injuries and fatalities on the road. This has a subsequent impact on compensation and rehabilitation schemes.

10. **Does our analysis accurately assess the road safety benefits for each reform option? Please provide any further information or data that may help to clearly describe or quantify the road safety benefits.**

Queensland agrees that the analysis accurately assesses the road safety benefits for each reform option, noting this is the primary focus of the SAS.

11. **What additional safety risks do you consider the primary safety duty in option 4 would address compared to option 3?**

It is considered that the primary safety duty will provide an overriding incentive for the ADSE to ensure that the ADS is designed to monitor vehicle performance and safety, and to take corrective action if issues are identified over the lifecycle of the ADS.

12. **Does our analysis accurately assess the uptake benefits for each reform option? Please provide any further information or data that may help to clearly describe or quantify the uptake benefits.**

Queensland considers that the analysis has broadly assessed the benefits for each option.

13. Does our analysis accurately assess the regulatory costs (impacts) to industry for each reform option? Please provide any further information or data that may help to clearly describe or quantify the regulatory costs.

As noted with the respect to the problem statement above (Question 2), there is also a need to better understand the implications for the heavy vehicle sector. The adoption of a SAS is expected to have some implications for Heavy Vehicle National Law, including driver fatigue arrangements.

Examination of the implications for infrastructure requirements is also required, including digital infrastructure on the assumption that vehicle safety will rely on network connectivity. If vehicle safety is also dependent on physical road infrastructure, then implications for planners, local governments and road management agencies also need to be incorporated.

It also noted that any additional costs incurred by industry to comply with regulatory requirements are likely to be passed on to customers. It is however acknowledged that the scale of this impost is difficult to assess at this time. As noted above, in response to Question 9, there are other parties in the supply chain and the broader community that are likely to be affected by the RIS options. The impacts on these parties should be incorporated into the assessment of regulatory costs.

14. Are there any specific regulatory costs (impacts) to industry that we have not considered?

No additional regulatory costs to industry have been identified, aside from those explored in response to question 13.

15. Does our analysis accurately assess the costs (impacts) to government for each reform option? Please provide any further information or data that may help to clearly describe or quantify the costs to government.

Queensland questions the assessment that Option 2 supports efficient ongoing administrative processes. Queensland's view is that this approach would be increasingly burdensome for states and territories as AV adoption increased.

The RIS accurately acknowledges that the costs to government are uncertain. However, there is a high likelihood that governments will have to meet the costs of business process and technical system change. This may extend to new technology solutions to support enforcement, so that officers may access ADS related data. Additional training is likely to be required for enforcement officers. There is also a likelihood that governments will have to procure or develop a level of in-house expertise about AV technology to appropriately support the administration of the regulatory framework.

As noted previously there needs to be broad consideration of the implications for the heavy vehicle sector. This extends to impacts and costs for government, including the need for regulatory reform.

The RIS makes reference to the potential for governments to recover costs through fees and charges. This may be true for the national body tasked with administering the SAS, and thus applications for approval under that system. However, it is unlikely to be true for states and

territories where costs are likely to be significant, without an obvious mechanism for cost recovery.

There may however be benefit in emphasising the benefits to government that may be realised over time in terms of reduced social costs associated with road safety. The expected societal benefits of AVs are identified in the RIS, but are not acknowledged in the options assessment.

It is noted that the RIS is largely silent on the impacts for local governments. Engagement with this level of government is required.

16. Does our analysis accurately assess the flexibility and responsiveness for each reform option? Please provide any further information or data that may help to clearly describe or quantify the flexibility and responsiveness of the options.

Queensland considers that the RIS accurately assesses the relative flexibility and responsiveness for each reform option.

17. Do you consider the relevant factors and conditions for government in choosing an option to be valid? Are there any factors and conditions you do not agree with?

Queensland considers that all relevant factors and conditions for government in choosing an option, as reflected in the RIS, are valid.

18. Do you agree with our view on the relevant factors and conditions for government in choosing an option?

As described previously, Queensland considers that the RIS adequately reflects the relevant factors and conditions for government in choosing an option for the SAS.

19. Has the consultation RIS used an appropriate analytical method for assessing the benefits and costs of the options? What else should be considered?

Queensland considers that the analytical method adopted by the NTC for the RIS options is appropriate. No other considerations have been identified.

20. On balance, do you agree that the preferred option best addresses the identified problem? If not, which option do you support?

Queensland supports the NTC's view that Option 4 is preferred.

21. How does your choice of option better address the problem than the preferred option?

Queensland supports the preferred option as detailed above.