TRUCK INDUSTRY COUNCIL
SAFER GREENER ESSENTIAL

9th July, 2018

The Automated Vehicle Team
National Transport Commission
Level 3, 600 Bourke Street,
Melbourne, VIC, 3000
Submissions to: www.ntc.gov.au

Subject: TIC submission to the National Transport Commission's – Safety Assurance System for Automated Vehicles Consultation Regulatory Impact Statement (RIS), released May 2018

The Truck Industry Council (TIC) is the peak industry body representing manufacturers and distributors of heavy commercial vehicles (that is, with Gross Vehicle Mass above 3.5 tonne) or trucks in Australia. TIC members are responsible for producing or importing and distributing 17 brands of truck for the Australian market, totalling more than 32,000 units sold each year. In 2017, TIC members supplied to market over ninety-nine (99) per cent of all new on-highway trucks above 4.5 tonne Gross Vehicle Mass (GVM) sold in Australia. Additionally, TIC members also included two dedicated engine manufacturer members and two dedicated driveline manufacturer members who supply major engine and driveline systems for both on highway and off highway truck applications.

In this submission TIC will respond only to issues that relate to heavy road transport vehicles (that is, with GVM above 3.5t), however TIC believes that a united and uniform approach must be taken for both light vehicle and heavy vehicle regulation for Automated Vehicles (AV's) and as such the details contained in this submission should apply for any on-road AV.

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

The TIC supports the previous and current work being undertaken by the NTC to develop a regulatory system for automated vehicles of (SAE) Levels 3, 4 or 5. A challenging task given the pace and variety of AV technologies and vehicles that are being developed globally. Any Australian AV regulations must capture vehicles supplied of the market via one of the pathways in the Motor Vehicle Standards Act (MVSA), as well as the modification/retrofitting of AV technology/features/systems to existing vehicles. Regulation must also cover the in-service operation of the vehicle including demonstration of initial and on-going compliance with standards, as well as "end of life" provisions for the AV system/features, or whole of vehicle.

TIC acknowledges that the Safety Assurance System (SAS) RIS is intended to address these issues and generally covers these topics, although TIC does note that "end of life" provisions for the AV's are not well covered in the RIS document and this issue requires further detailing. Also, the RIS does not clearly define if the SAS is to be applied to on-road (State registered) vehicles, or to all AV's that could operate/interact with other road users and/or the public in general (such as AV ground drones, low speed shuttle buses,

etc). TIC believes that the RIS should cover regulation for all AV's that could operate in a public environment.

For on-road vehicles, TIC believes that the SAS should build on existing vehicle compliance and regulatory systems, rather than create an additional vehicle certification system. For non-road vehicles a new regulatory system needs to be developed. TIC also acknowledges that there are in-service shortcomings, primarily associated with enforcement that exist within the current regulations that will need be addressed.

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

As well as the end of life provisions and the non-road AV issues detailed in TIC's response to Question 1 above, The SAS RIS must acknowledge and recognise Australia's international obligations to harmonise with international regulations and standards. In the case of on-road vehicles this means harmonisation with the United Nations Regulations (UN-ECE Regs) standards. To facilitate the adoption of on-road AV systems and vehicles, at the lowest cost and to minimise administrative burden for both industry and government, certification must be the responsibility of a single Federal Government Department, that being the incumbent, the Department of Infrastructure, Regional Development and Cities (DIRDC).

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

TIC does not consider that the RIS provides sufficient evidence that shows the current MVSA regulatory system for on-road vehicles does not/cannot deliver a safe AV certification outcome given the current and foreseeable deployment of AV technologies/vehicles in Australia. Further, it is questionable if the AV "crashes" detailed in Section 2 of the SAS RIS involved automated driving systems were of a type meeting Level 3, 4 or 5 definitions/requirements. In the specific case of the Telsa crash detailed in the RIS, the vehicle was not being operated in accordance with the vehicle manufacturers instructions. TIC also points out that the crashes detailed in the RIS were AV trials and not AV's sold and deployed commercially, hence this example is not directly relevant to the SAS that is proposed in the RIS, as the operating conditions and domain are fundamentally different.

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

TIC believes that community expectations have not been addressed as the RIS does not specifically consider the regulation of non-road AV's that could interact with the public and other road users.

The RIS also falls short of adequately covering industry expectations as the RIS does not accurately cover the current on-road vehicle certification processes as governed by the MVSA, instead proposing an alternate certification process for AV homologation that is not aligned with current Australian practices, nor the practices of the United Nations that Australia is obliged, by international treaty (the 1958 Agreement), to align with.

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

Option 1: Current approach; does not introduce a SAS and uses the existing regulatory processes to manage the safety of automated vehicles.

TIC does not believe that the RIS clearly describes Option 1 because the current vehicle certification (Type Approval) process, as controlled by DRIDC under the MVSA regulation, has not been accurately detailed nor properly considered with respect to AV functions/vehicles.

While currently there is no ADR for an AV systems that would be required for Level 3, 4 and 5 automation, DIRD has developed and will soon implement ADR90/00. This ADR will set the scene for the future certification of automated driving systems/functions. Further, DIRDC has developed a draft of ADR90/01 – Steering Systems that will allow the certification (via the current Type Approval system) of vehicles with AV features/systems to UN-ECE regulations. TIC believes that it is DIRDC's intention to introduce this new ADR within 2018, well before 2020, the timeline indicated in the NTC's SAS RIS. ADR90/01 will include:

- Appendix A – UN R79/02 – Uniform provisions concerning the approval of vehicles with regard to steering equipment
- Appendix B – Statement of Compliance Safety Criteria Requirements

At this point in time a vehicle fitted with an Automated Driving System (ADS) will need to be certified to ADR 90/01 by either:

1. Meeting requirements of Appendix A, i.e. UN R79/02, or
2. Submitting a self-certification "Statement of Compliance Safety Criteria Requirements" (for those systems where a R79/02 does not apply as outlined in Section 1.2 of R79/02)

ADR90/01 will allow a vehicle with AV features/functionality to receive a full volume type approval under the current certification process.

Option 2: Administrative safety assurance system; introduces a SAS using administrative arrangements under the existing regulation. It requires an ADSE to self-certify against principles-based safety criteria.

TIC does not consider that Option 2 has been correctly described.

As outlined above, the RIS does not recognise the current work that has been undertaken by DIRDC and the pending release of ADR90/00 and ADR90/01. Once implemented, an exemption from ADR's would not be required, as detailed current by Option 2 in the RIS. The vehicle manufacturer, and/or ADSE, in the case of a component or system approval, will be able to provide self-certification for Level 3, 4 or 5 automated driving systems that are outside the scope of the UN R79/02 regulation that will form the bias for ADR 90/00 and 90/01.

The existing mechanism for new vehicle certification, state/territory registration processes and in-service roadworthiness would be available/apply. The penalties for a non-complying ADSE would then be the same as those that currently exists for supplying a vehicle (or an aftermarket vehicle product/component/s) to the market and providing on-going support for the vehicle or aftermarket product/component/s. There will be no need to establish a new national body to certify the ADS.

Option 3: Legislative safety assurance system; introduces a SAS with a dedicated national agency for automated vehicle safety, with specific offences and compliance and enforcement tools.

TIC does not support the introduction of another "dedicated national agency" for automated vehicle safety.

DIRDC are well underway with plans to introduce regulations that will use the existing on-road vehicle regulatory system to certify ADS and/or ADSE. TIC acknowledges that there are compliance and enforcement shortcomings with the existing state/territory system and these shortfalls need to be addressed. TIC notes that the new Road Vehicle Standards Act will provide greater flexibility and legal powers for federal government compliance and enforcement. TIC also notes that non-road ADS and/or ADSE's are not included/covered by the current MVSA and may not be included/covered by the new RVSA.

Option 4: Legislative safety assurance system with a primary safety duty; in addition to the elements of Option 3, includes a primary safety duty on ADSE's.

Option 4 proposes the introducing of a non-prescriptive "primary safety duty" and allows "more proactive enforcement". Such a system has the potential to discourage innovation and introduction of new technology. Most (all?) vehicle manufacturers will not introduce new automated driving systems into Australia without more definitive guidance on the standards the systems must meet.

TIC strongly believes that Option 4 would discourage the uptake of automated vehicles in Australia as the ADSE's responsibilities will not be clearly defined, yet the ADSE will be legally responsible for the ADS functionality and control at all times and in all conditions (both those that are foreseen and unforeseen). Simply out, the legal obligation/responsibility will be too great to make ADS deployment a commercial proposition.

Question 6. ***Are the proposed safety criteria and obligations on ADSE's (detailed in Chapter 4 and Appendix C) sufficient, appropriate and proportionate to manage the safety risk?***

TIC does not support Option 4. Further, TIC notes that the proposed safety criteria and obligations for the ADSE are fundamentally aligned with USA Government (non-mandatory) ADS guidelines. These is no equivalent UN-ECE criteria and obligations, therefore certifying a European ADS using this proposed US based unique Australian criteria is not appropriate, nor is this supported by TIC, given Australia's international obligations to the 1958 Agreement.

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

Please refer to TIC's response to Question 6 above. TIC has no additions to the RIS's proposed ADSE criteria or obligations.

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

TIC believes the following should be included in the relevant impact categories:

- Road Safety – ADS and/or vehicle end of life provisions
- Road Safety – inclusion of ADS for non-road vehicles that could interact with the public and/or other road users
- Regulatory Costs to Industry – International harmonisation with UN-ECE ADS regulations to minimise the cost to the automotive industry and fulfill Australia's international obligations

TIC believes that the following assessment criteria should be removed from the relevant impact categories for on-road vehicles:

- Flexibility and Responsiveness – Allows for regulation of the ADS separate from the vehicle

Question 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?***

TIC believes that vehicle (light and heavy) manufacturers should be included as relevant groups in the following impact categories:

- Road Safety
- Uptake of Automated Vehicles
- Flexibility and Responsiveness

Question 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.***

TIC does not believe that the RIS analysis accurately assess the road safety benefits in the following areas:

- Assessment Criteria A: Covers ADS safety over the vehicle lifecycle, including at first supply to market and in -service, hence Options 1 & 2 need to be revised to "green" as the existing legislation covers ADS safety in-service.

- Assessment Criteria B: Covers persons/organisations that have not sought approval under the safety assurance system, but who would be an ADSE if they sought approval. Hence Options 2, 3 & 4 should all have equal status (i.e. "green"), as they all would provide the same safety outcome.

- Assessment Criteria C: Ensures that there is always a clearly recognised legal entity responsible for risks associated with automated vehicles: Hence Options 2 & 3 should be "green" as they ensure there is a clearly recognised legal entity responsible for risks associated with automated vehicles. And Option 4 should be "amber", as with the introduction of a non-prescriptive "primary safety duty" there would be uncertainty around the Entities legal responsibilities.

- Assessment Criteria D: Ensures that responsibility sits with the party best able to manage the risk. Therefore Options 2 & 3 should be "green" as they ensure there is a clearly recognised legal entity responsible for risks associated with a vehicle equipped with an ADS. Also, Option 4 should be "amber", as with the introduction of a non-prescriptive "primary safety duty" there would be doubt around the Entities legal responsibilities.

- Assessment Criteria E: Addresses safety risks that may not have been specifically considered when the AV/ADS was first supplied to market. Hence Option 2 should also be "green" as existing legislation and regulatory instruments are designed to address similar current safety risks that may not have been specifically considered at the time of first supply to market.

- Assessment Criteria F: Addresses potential emerging ADS risks before a safety event eventuates. Therefore Options 1 & 2 should also be "green" as the existing processes used by vehicle manufacturers identify and address risks before the safety issue eventuates (service actions, voluntary recalls, etc).

- Assessment Criteria G: Supports the introduction of targeted compliance and enforcement options, including sanctions and penalties for non-compliance. TIC notes that all options listed would have compliance and enforcement options. Also, that the existing regulatory environment, including in-service regulations, have penalties and sanctions for non-compliance. And the new RVSA will introduce targeted compliance and enforcement options, including sanctions and penalties for non-compliance similar to those proposed in the "primary safety duty". These new powers will encompass commercial heavy vehicles that currently fall outside of Australian Consumer Law (ACL).

- Assessment Criteria H: Allows the national body responsible for the ADS to monitor and respond to in-service ADS safety. In this case all these options should be "red", because to allow a national body to monitor and respond to in-service ADS safety will require significant investment in systems/resources and may also require state/territory governments to transfer some of their legal responsibility. Whereas under current regulations and ADR90/01, the commercial sale and deployment of vehicles fitted with an ADS, the state/territory road and traffic laws have jurisdiction for in-service vehicle use and safety.

Question 11. ***What additional safety risks do you consider the "primary safety duty" in Option 4 would address compared with Option 3?***

TIC does not support Option 4 and TIC does not see that a non-prescriptive "primary safety duty" will address ADS safety risks.

There may be benefit for non-road vehicles and aftermarket ADS products. However, TIC and its members do not support the fitment of aftermarket, non-approved/supported, products to their vehicles that would

introduce a Level 3, 4 or 5 ADS into a vehicle that was not provide to market with these systems by the vehicle manufacturer. To allow such modifications would be a substantial safety risk.

Question 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.***

TIC does not believe that the RIS analysis accurately assess the road safety benefits in the following:

- Assessment Criteria A: Provides community assurance that automated vehicle safety risks have been comprehensively addressed. In this case Option 1 should be "amber", or possibly "green", as the current ADR process provides community assurance that vehicle safety risks have been comprehensively addressed. This will be further strengthened with the introduction of ADR90/00 and 90/01) that will include UN-ECE regulations for automated driving systems.
- Assessment Criteria B: Provides clear and consistent regulatory expectations to facilitate market entry, including national consistency and alignment with international requirements. Given this, Option 4 should be "amber", as without a clearly defined "primary safety duty", the regulatory and legal expectations are not clear nor consistent.

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

TIC does not believe that the RIS analysis accurately assess the regulatory costs to industry in the following:

- Assessment Criteria A: Results in low upfront and ongoing compliance, administrative and delay costs. Hence Option 1 should be "green". With no change to the current certification process there will be no increase in costs for vehicle manufacturers. While Option 4 should be "red". The administrative costs are not explored/detailed in the RIS, but are due to be higher than all other options if the ADSE is to be involved in any form of crash investigation as part of the ADSE's "primary safety duty". Also, the introduction of a non-prescriptive "primary safety duty" will delay the commercial deployment of highly automated vehicles by vehicle manufacturers who will be in uncharted legal territory with unique Australian regulation.

- Assessment Criteria B: Provides clear and consistent regulatory expectations to industry about its responsibility and what is required to comply. In this case Option 1 should be "green", as with the current approach to vehicle regulation, vehicle manufacturers have a clear and consistent expectation of their responsibility and what compliance is required.

- Assessment criteria C: Supports an approach that is consistent across all jurisdictions and is aligned with international requirements. Option 1 should be "green", as the current approach to vehicle compliance has provided a consistent approach across all jurisdictions. Also, the current approach is consistent with international requirements as the relevant ADR's such as ADR90/00 and 90/01 will be aligned with UN-ECE regulations for ADS. However, Option 4 should be "amber", as without a clearly defined "primary safety duty" there may be inconsistent application of legal proceedings across the jurisdictions. Finally, TIC does not believe that Option 4 is consistent Australia's international commitments (a signatory to the 1958 Agreement).

Question 14. ***Are there any specific regulatory costs to industry that we have not considered?***

TIC provides the following comments on the cost assumptions made in the RIS:

- TIC does not agree that under Option 1 the ongoing administrative and delay costs are uncertain and potentially higher than the other options. Vehicle manufacturers have worked within the current regulatory system since the inception of the Motor Vehicle Standards Act and are well

aware of the administrative procedures, expectations, timings and cost structure. The introduction of additional non-prescriptive "primary safety duty" administrative procedures, especially if these are to be assessed by "another national body" (as in proposed in Options 3 and 4) will introduce higher administrative costs and uncertainties around certification procedures and timings than exist under the current system.

- TIC agrees that Option 4 will introduce additional administrative costs relating to the ADSE's role as duty holder under a "primary safety duty" system. These have been outlined in the dot point directly above. The introduction of excessive costs will be a disincentive for vehicle manufacturers to introduce highly automated vehicles in Australia.
- TIC agrees that Options 2, 3 & 4 all will lead to higher costs for vehicle manufacturers to meet regulatory requirements. TIC believes that these costs can be most effectively contained by the adoption of Option 2, an extension of the current on-road vehicle approval process.
- TIC agrees that Options 2 and 3 are likely to result in a consistent approach across all jurisdictions, while Option 4 is likely to have inconsistent application and/or interpretation of a non-prescribed "primary safety duty".
- TIC does not agree that Options 3 and 4 are aligned with international requirements, nor meet Australia's obligations as a signatory to the 1958 Agreement. These two options are consistent with the (voluntary) approach being undertaken in the USA, however it is not consistent with other major markets including the EU and Japan (these two markets providing more than 85 percent of all new trucks sold in Australia in 2017 above 3.5t GVM).

Question 15. ***Does our analysis accurately assess the costs 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.***

TIC makes no comment with regard to the costs to government, other than to point out that any additional cost born by government involving the ADS/ADSE regulation or certification will be passed to the vehicle manufacturer, or ADSE. History has shown that government will not absorb these costs.

Question 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.***

TIC makes the following comments on the assessment of the flexibility and responsiveness for each of the four reform option proposed:

- Assessment Criteria A: Can be implemented by 2020. Option 4 should be "red". If was the preferred option agreed to by Ministers in November 2018, this would leave just over 12 months to achieve implementation by 2020. Based the history development of such significant regulatory change this is not achievable.
- Assessment Criteria B: Allows for transition as international approaches evolve. TIC agrees That this should be "green" for all options.
- Assessment Criteria C: Allows flexibility for industry by focusing on safety outcomes, minimising prescriptive requirements, remaining technology-neutral and allowing innovative solutions. Options 1 and 2 should also be shown as "green". The regulated standards for automated driving systems that Australia will adopt as they are developed (UN-ECE regulations) are and will continue to be, performance based, non-prescriptive and therefore technology-neutral.
- Assessment Criteria D: Allows flexibility for government in addressing emerging safety risks. Options 1 and 2 should be shown as "green". Government already has the necessary regulatory tools to address emerging safety risks. Additional flexibility in compliance and enforcement powers will be provided under the new RVSA.
- Assessment Criteria E: Allows for regulation of the ADS separate to the vehicle. TIC does not agree that the ADS needs be regulated separatly from the vehicle. TIC considers that such an approach

may introduces additional safety risks as it would provide a specific pathway for the retrofitting of ADS technology/systems to an existing vehicle, TIC does not support such actions. That said, current federal and state processes and legislation could allow the certification and fitment of aftermarket/retrofitted ADS technology via the ADR Component Approval Scheme and State and National Heavy Vehicle Regulator (NHVR) based vehicle modification schemes. Finally, Option 2 with the introduction of ADR90/00 and 90/01 will identify the ADSE as the vehicle type approval holder, or potentially the component approval holder if required. Hence Option 2 should be shown as "green".

Question 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?***

TIC's position and comments are as follows:

Option 1:
TIC agrees with the statements made in the RIS.

Option 2:

RIS*: It is appropriate to take a cautious, incremental approach to regulation because of the uncertainty about the future including international regulatory approaches.* TIC agrees with this statement.

RIS: *A more robust Australian regulatory regime could be perceived as a disincentive for suppliers/operators to enter the market.* TIC agrees with this statement.

RIS: *The ability to recall or deregister vehicles is sufficient to mitigate uncertain future risks, at least initially.* TIC agrees with this statement.

RIS: *A self-certification system that does not include specific sanctions and penalties and does not cover in-service safety would be successful to achieve an acceptable level of safety, at least initially*. TIC does not agree with this statement. TIC comment - The certification system under the MVSA vehicle type approval process already includes sanctions and penalties.

RIS: *There would be sufficient time to implement additional regulatory measures (for example, Options 3 or 4) if need is shown once the technology is introduced into the Australian market*. TIC agrees with this statement.

RIS: *The public will accept this regime as providing sufficient reassurance about the safety of automated vehicles so as not to undermine the uptake of the technology.* TIC agrees with this statement.

Option 3:
RIS*: Self-certification on its own is insufficient to achieve an acceptable level of safety.* TIC does not agree with this statement. TIC comment - As part of ADR 90/01 the certification of an ADS will be included in the vehicle type approval.

RIS: *The deregistration or recall powers under Option 2 are inadequate because they have the potential to punish the wrong party (end consumers).* TIC does not agree with this statement. TIC comment - The new Road Vehicle Standards Act will include recall provisions for commercial heavy vehicles, these provisions will cover both vehicle manufacturers/distributors, as well as the vehicle owner.

RIS: C*onsumer law is insufficient to ensure ADSE's are held to account for safety failures without additional offences and penalties being imposed.* TIC agrees with this statement as currently applies to commercial heavy vehicles. TIC comment – However, the new Road Vehicle Standards Act will include recall provisions for commercial heavy vehicles, these provisions will cover all safety and potential safety failures.

RIS: *A suite of appropriately targeted sanctions and penalties would be a sufficient additional factor to change the behaviour of ADSE's to achieve acceptable safety outcomes*. TIC agrees with this statement. TIC

comment - The new Road Vehicle Standards Act has been designed to provide greater flexibility for the government's compliance and enforcement regime and has included recall provisions. No further sanctions and penalties should need to be applied.

RIS: *The additional cost, both in terms of government administration and compliance costs imposed on ADSE's are outweighed by the additional safety benefits achieved*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - The NTC has not provided any cost analysis in the RIS to justify this statement.

RIS: *It is possible to formulate requirements, offences and penalties so they do not require ongoing revision and updating as ADS technology and the market for it evolve*. TIC agrees with this statement.

RIS: *Implementing penalties to supplement the self-certification system if the need arises would be too slow and unduly risk safety either because technology may evolve very rapidly or because it would take a long time for governments to implement penalties as an incremental regulatory step above Option 2*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - As part of ADR 90/01 the certification of an ADS will be included in the vehicle type approval and ADR90/xx will ensure that Australian ADS regulation is aligned with the latest ADS regulation developed by the UN-ECE.

RIS: *Additional costs of implementing this regime are likely to be low because it will only need positive action by governments if ADSE's breach legal requirements*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - The NTC has not provided any cost analysis in the RIS to justify this statement.

RIS: *It is broadly in line with regulatory regimes in key international markets and would not discourage potential suppliers from entering the Australian market*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment – The NTC has not provided any evidence in the RIS that details how Option 3 aligns with UN-ECE ADS regulation.

RIS: *It is likely to lead to greater uptake of automated vehicles than Option 2 because the public view it as providing better assurance about the safety of automated vehicles.*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - The has provide no evidence in the that support this statement.

Option 4:

RIS*: The potential and unknown safety risks associated with ADS are so significant that a primary safety duty is required to provide ADSE's with an additional incentive (over and above Options 2 and 3) to manage the safety of the products and services they provide.* TIC does not agree with this statement. TIC comment - Any potential and unknown safety risks with commercial deployment of vehicles fitted with ADS will be best managed via the existing vehicle regulatory system.

RIS: *A proactive regulator is required to deal with potential issues as they arise*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - The new Road Vehicle Standards Act has been designed to provide greater flexibility for the government's compliance and enforcement regime that will included recall provisions.

RIS: *Options 2 and 3 cannot cover all foreseeable future safety risks, and the broad nature and flexibility of a primary safety duty is needed to manage these.* TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - Any potential safety risks with commercial deployment of vehicles fitted with ADS will be best managed via the existing vehicle regulatory system.

RIS*: They only have one chance at implementing a complete regulatory regime, and an incremental approach is not a feasible option.* TIC does not agree with this statement. TIC comment - The existing vehicle regulatory regime caters for introduction of new technology by an incremental introduction of new vehicle regulatory standards as a need is identified and the standard is developed. This is the fundamental

functionality of the Australian ADR process, the Australian regulation process and the UN-ECE vehicle standards that Australia is committed to align with.

RIS*: Additional costs associated with this option are likely to be relatively low due to the primary safety duty applying to ADSE's only.* TIC does not agree with this statement. TIC comment - Additional costs are likely to be high due to legal interpretations of a non-prescriptive primary safety duty. The NTC and provide on evidence in the RIS to support this statement.

RIS: *This option would not be significantly more onerous than regulatory approaches in key international markets and would not discourage potential suppliers from entering the Australian market*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - Mainstream vehicle manufacturers will be unlikely to introduce new ADS technology into Australia on a widespread commercial basis without clearly defined standards that are aligned to international standards, in particular UN-ECE regulations.

RIS: *This option would significantly enhance the public's confidence in automated vehicles (over and above 0ptions 2 and 3), and this enhanced confidence would potentially translate into higher uptake rates*. TIC believes that the NTC must provide further justification of the stated RIS position. TIC comment - Mainstream vehicle manufacturers will be unlikely to introduce new ADS technology into Australia on a widespread commercial basis without clearly defined standards that are aligned to international standards, in particular UN-ECE regulations. Therefore, without ADS vehicles being offered to the market, this option is likely to result in the lowest uptake of this technology.

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

TIC does not agree with the NTC's view on the relevant factors and conditions for choosing Option 4. Specifically TIC does not agree with the NTC's analysis and views that:

- Option 2 may not provide adequate means of ensuring that ADSE's ensure safety
- The use of targeted sanctions and penalties alone in Option 3 is also unlikely to result in sufficient safety outcomes because they do not provide sufficient incentive to ADSE's to address emerging safety risks.

As detailed elsewhere in this submission, TIC considers that the existing regulatory processes provides an adequate means of ensuring that vehicle manufacturers and/or ADSE's ensure safety and there are sufficient sanctions and penalties to provide an incentive to ADSE's to address emerging safety risks. These sanctions and penalties will be further reinforced by the new RVSA that has been designed to provide greater flexibility and powers for government's compliance and enforcement regime.

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

The analysis of the costs and benefits of the options considered in the RIS is subjective and in many cases not justified. TIC does not believe that the costing in the RIS has been developed using government "best practice" guidelines. TIC does not support the costing provided in the RIS.

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

TICdoes NOT support the NTC's preferred Option 4.

TIC supports a slightly revised Option 2, where ADS approval for on-road vehicles is incorporated into the existing Australian vehicle type approval system as governed by the MVSA and administered by DIRDC. Whereby Australian ADS regulations are aligned with UN-ECE regulations via the ADR development and

approval process. This would include the timely introduction of ADR90/00 and ADR90/01. This would include a self-certification statement of compliance, submitted to DIRDC, for Levels 3, 4 or 5 automated driving systems that are not covered the UN R79 regulation called-up by ADR 90/00 or 90/01.

Existing state transport and traffic legislation (e.g. vehicle standards rules, heavy vehicle national law, etc) and the strengthened recall and enforcement provisions that will be introduced with the new RVSA will ensure ADS are supported in the market, while defining the owner/operator's responsibility to maintain the vehicle.

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

Option 2, builds on the existing vehicle regulatory and certification systems and framework and therefore provides the necessary community assurances for the safe operation of highly automated vehicles at the lowest cost to both industry and government. This option is fully aligned with Australia's obligations as a signatory to the 1958 Agreement and ensures continued alignment with international UN-ECE regulations.

This option avoids unnecessary duplication of regulations and certification practices that would lead to increased costs for both government and industry. Utilising the existing MVSA vehicle type approval system and DIRDC's proposed ADR90/00 and 90/01 will introduce sufficient flexibility to continue to set standards for new ADS technology as it is developed globally.

I trust that you find TIC's submission acceptable and that the issues that have been raised in this document will be considered in the review and formulation regulations and road laws to support higher levels of Automated Road Vehicles in Australia.
Please contact the undersigned, on 0408 225212 or m.hammond@truck-industry-council.org for any questions about this submission.

Yours faithfully,

Mark Hammond
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