



Att: Automated Vehicle Team
National Transport Commission
Level 3, 600 Bourke Street
Melbourne VIC 3000

9 July 2018

Dear Automated Vehicle Team

Consultation Regulation Impact Statement for Safety Assurance for Automated Driving Systems

Thank you for the opportunity to provide a submission in relation to the Consultation Regulation Impact Statement for Safety Assurance for Automated Driving Systems.

Consistent with our earlier submission on regulatory options to assure automated vehicle safety in Australia, we concur with the NTC's preference to regulate automated vehicle safety by way of a legislative safety assurance system based on mandatory self-certification and the imposition of a primary safety duty on the Australian importer/supplier of the automated driving system (the **ADS entity** or **ADSE**).

We are also pleased to see the NTC is proposing that the supplier/importer should be required to demonstrate, before it can supply the ADS in Australia, that it has the financial capacity or insurance arrangements to meet reasonable potential liabilities arising out of any defects in the vehicle's automated driving system.

Given we concur with the NTC's proposed recommendation, we won't respond to each of your consultation questions and will instead limit this submission to a number of discrete issues.

We will also limit this submission to legal and commercial issues. We have not considered the adequacy of the proposed safety criteria that the ADS entity will be need to self-certify against. We agree with the NTC's suggestion that the privacy of personal information collected by an ADS should be addressed outside the safety assurance system.

Timing of proposed legislative reforms

The Transport and Infrastructure Counsel is aiming to have end-to-end regulation in place by 2020 to support the safe deployment of automated vehicles. We understand this timeframe is based on the NTC's expectation that new vehicles with high levels of automation will arrive on our roads from 2020. The NTC also intends, however, that the safety assurance system will apply to ADSs that are

PricewaterhouseCoopers, ABN 52 780 433 757
One International Towers Sydney, Watermans Quay, Barangaroo NSW 2000,
GPO BOX 2650 Sydney NSW 2001
www.pwcactuarial.com
T: +61 2 8266 0000, F: +61 2 8266 9999, www.pwc.com.au

Liability limited by a scheme approved under Professional Standards Legislation.

“responsible for the dynamic driving task”, i.e. SAE Level 3 and above (page 11 of Consultation RIS).

Figure 7 on page 115 of the Consultation RIS indicates that Audi expects to release a Level 3 vehicle in June 2018. It also indicates that Tesla expects to release a Level 5 vehicle in January 2019, which suggest that Tesla will release a Level 3 and/or a Level 4 vehicle in 2018.

Whether a new safety assurance system is needed for SAE Level 3 vehicles is debateable, as these vehicles can only operate in L3 mode with a fallback-ready driver, who would need to hold a valid driver's licence. As such, the safety assurance that is currently provided via driver licencing requirements will apply to SAE Level 3 vehicles in the same way that it applies to existing vehicles with SAE Level 1 and/or SAE Level 2 automated driving systems. That said, if the fallback-ready driver is allowed to take his or her eyes off the road for sustained periods of time, then it makes sense for government to satisfy itself that the ADS is capable of safety performing the Object and Event Detection and Response (OEDR) task before permitting the ADS to be sold in Australia.

If the Transport and Infrastructure Counsel wants a safety assurance system to be in place to assure the safety of SAE Level 3 vehicles, then it seems likely that the safety assurance system will need to be in place before January 2020.

The safety assurance system is being developed in conjunction with the changing driving laws reform project which, among other things, will specify the situations in which an ADS may drive a vehicle in place of a human driver. Page 10 of the Consultation RIS states that driving laws will only be changed to allow this “when the approach to safety is clear”.

The proposed changes to driving laws to allow an ADS to perform the entire dynamic driving task (including OEDR) should also be expedited so that they are in place by the time SAE Level 3 vehicles become available.

Options to address the problem

We do not consider option 1 to be a viable option, so we will not discuss it further. In our view, option 2 is the minimum viable option.

Option 2 requires the ADSE to self-certify against principles-based safety criteria.

Option 3 adds offences and compliance and enforcement tools that are specific to safety assurance.

Option 4 adds a legislative duty on the ADSE to ensure safety (the “primary safety duty”).

Offences and compliance and enforcement measures

The proposed offences and compliance and enforcement measures that would be incorporated in legislation for options 3 and 4 are described on page 30 of the Consultation RIS as including, but not being limited to:

- Failure to lodge a Statement of Compliance to the relevant Government agency prior to introducing an ADS to market.

- False or misleading information provided in the Statement of Compliance.
- Failure to lodge a Statement Compliance to the relevant agency of an in-service modification that results in a vehicle operating at a higher level of automation.
- Failure to inform the relevant agency of a significant safety risk or issue related to the ADS.
- Failure to follow a legal direction of the relevant agency in relation to the ADS.
- Failure to maintain ongoing adherence to the Statement of Compliance.
- Failure to provide data or meet reporting requirements.

It is unclear from the consultation RIS whether these same offences and compliance and enforcement measures would apply in the case of option 4. There is no suggestion in the description of option 4 in section 3.5 of the Consultation RIS that the offences and compliance and enforcement measures for option 4 would be any different to those proposed for option 3.

However, the discussion of the different options in section 7.3 of the Consultation RIS suggests otherwise. In particular, it states:

- “option 3 is... unlikely to provide sufficiently flexible enforcement and compliance mechanisms and risks resulting in overly complex legislation aimed at covering all possible risks [that] frequently needs updating to cover new identified safety risks”; and
- “compared with option 3, option 4 may result in simpler legislation because a primary safety duty reduces the need to anticipate all risks and provide targeting sanctions for actions that lead to the risk. It may also reduce the need for frequent legislative amendment to cover newly identified safety risks”.

In our view, the specific offences that you mention on page 31 of the Consultation RIS would apply equally to options 3 and 4. It is not clear to us what additional targeted offences and sanctions would be required for option 3, that would not be required for option 4. We suggest you clarify this point in your Decision RIS.

Primary safety duty

As mentioned above, we concur with the NTC’s recommendation that the legislative safety assurance system should impose a general safety duty on the ADSE to ensure the safety of the ADS so far as reasonably practicable. As mentioned in our previous submission, we consider the duty should require the ADSE to:

- a) ensure, so far as is reasonably practicable, that the ADS is safe if it is used for a purpose for which it was supplied;
- b) ensure, so far as is reasonably practicable, that such testing and examination of the ADS as may be necessary for compliance with the above duty is carried out; and

- c) take such action as is necessary to ensure, so far as is reasonably practicable, that there will be available in connection with the use of the ADS adequate information about –
 - (i) the use for which the ADS is supplied; and
 - (ii) the results of any testing or examination referred to in paragraph (b); and
 - (iii) any conditions necessary to ensure, so far as is reasonably practicable, that the ADS is safe if it is used for a purpose for which it was supplied.

The purpose for which an ADS is supplied would be defined, in part, by reference to the operational design domain of the ADS.

As suggested by the NTC, this duty should be a continuing duty, which extends beyond the point of first sale. Doing so will require the ADSE to take necessary steps (eg ensure that software updates are provided) if deficiencies in the ADS become apparent. It will also provide a 'catch all' in the event safety risks not captured by the self-certification criteria are discovered at a later date, perhaps as a result of rapid advancements in ADS technology. A continuing primary safety duty will further encourage the ADSE to avoid liability by taking proactive measures to detect and address safety concerns before they result in harm to vehicle users.

Whether a legislated primary safety duty is needed to capture these benefits is debatable. We say this because the primary safety duty will largely replicate the duty which would be owed in tort by the ADSE to those who could foreseeably be harmed if the ADS is not safe. Its inclusion in the safety assurance reforms will, however, enable the government regulator to take action against the ADSE in the event the duty is breached – which is consistent with community expectations.

For the same reasons, we don't think the imposition of a primary safety duty on the supplier/importer will impose significant additional costs on the supplier/importer, as the supplier/importer would need to have incurred similar costs in order to discharge its duty of care in tort.

As noted in our previous submission, if the primary safety duty is imposed on the entity that applies for approval to import and sell the vehicle in Australia then we don't think it is necessary to also impose a primary safety duty on the manufacturer or designer of the ADS.

In our view, the NTC should give further consideration to whether a primary safety duty should be imposed on vehicle repairers/maintainers and/or vehicle modifiers, especially given a primary safety duty will not be imposed on the registered operator/owner. We accept that a statutory safety duty would replicate the common law duty of care in tort owed by repairers, maintainers and modifiers, and so is arguably not necessary. But a statutory duty would allow the government regulator, in addition to those to whom the duty is owed, to take action if the duty is breached, which could be useful.

We note the primary safety duty imposed on a rail transport operator under the Rail Safety National Law extends to ensuring maintenance, repairs and modifications are done in a way that ensures the safety of the railway operations.



We don't think it is necessary or appropriate to impose a broad primary safety duty on the registered operator/owner of the vehicle, as many/most operators/owners don't have the technical competence to discharge such a duty.

Perhaps there is a case for imposing an obligation on registered operators/owners to ensure that maintenance, repairs and modifications are carried out by an appropriately qualified person. Alternatively, the NTC might consider it preferable for the ADSE's primary safety duty to expressly include ensuring maintenance, repairs and modifications are done in a way that ensures the safety of the is safe.

Either way, we think there is also a case for imposing a duty on persons that carry out maintenance, repairs and modifications to an ADS to ensure that such maintenance, repairs and modifications are done in a way that ensure the use of the ADS for the purpose for which it was supplied or modified will be safe.

We hope you find this submission helpful. We would welcome the opportunity to discuss it with you.

Yours faithfully

A handwritten signature in blue ink, appearing to read "Owen Hayford", written over a horizontal line.

Owen Hayford
Partner
Tax & Legal

