

Submission to	NTC's 'Changing driving laws to support automated vehicles' Discussion Paper October 2017
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**1. Do you agree that reform to existing driving laws is required to:**

**i. allow an ADS to perform the dynamic driving task when it is engaged?**

- Yes.
- Consideration should be given as to whether any reforms should specify that an ADS should only be able to legally perform those dynamic driving tasks within its operational design domain.

**ii. ensure a legal entity (ADSE) is responsible for the actions of the vehicle when the ADS is engaged?**

- Yes, and ideally, such reforms should be nationally consistent across all jurisdictions.
- 'Responsible' in this context should mean imposing an absolute liability on the ADSE, irrespective of whether
  - in a criminal context, any *mens rea* requirements such as intention or reckless can be proved, and
  - in a civil context, any negligence or other failure to take reasonable or due care can be proved
- Any reforms should take into account the approach in s.7 of the *Australian Consumer Law* [ACL] to identifying a 'manufacturer'.
  - S.7 sets out a broad definition of 'manufacturer' which includes, amongst others, persons who permit their brand or mark to be applied to the goods, and persons who import the goods into Australia.
  - Potential therefore exists for the following entities to come within the ACL's definition of 'manufacturer':
    - Mobility-as-a-service operators or any other entity who affixes their brand or mark to the vehicle
    - Fleets operators or Motor vehicle dealers who import vehicles into Australia
 even though it may not be appropriate to impose legal responsibility on them as an ADSE.
- In light of this extended ACL definition of 'manufacturer', consideration should be given in any reforms as whether it is appropriate for the entities discussed above to be regarded as the ADSE or to be responsible for the actions of the vehicle.
- In addition, any reforms take into account how any responsibility imposed would interact with the 'chain of responsibility' obligations under the *Heavy Vehicle National Law* [HVNL].
  - It is unlikely to be practicable to expect all parties in the chain of responsibility

to be in a position to exercise control or influence over the effective operation of the ADS, and therefore it is unlikely to be appropriate to impose legal responsibility on them as an ADSE.

- If all parties in the HVNL chain are regarded as an ADSE then this has potential to discourage use of vehicles with ADS for commercial purposes, particularly where vehicles of high or full automation are used as transport-as-a service providers.
- Where no person or property is injured, it may be appropriate to impose responsibility for the actions of the ADS for breaches of traffic laws more narrowly (e.g. restricting responsibility to a 'manufacturer' defined similarly to the proposed California regulations Article 3.7 Testing of Autonomous vehicles 227.02(h) – who produces an autonomous vehicles from raw materials or new basic components and/or who modifies any vehicles by installing autonomous technology) and not adopting the broader ACL definition of manufacturer or the HVNL chain of responsibility)
- Where injury or damage is caused or safety is specifically threatened, then consideration could be given to imposing responsibility more broadly and in line with the ACL and the HVNL.

**2. Do you agree that if the ADS is engaged, legislation should provide that the ADS is in control of the vehicle at conditional, high and full levels of automation?**

- Yes

**If not, do you think a human in the vehicle should be considered in control of the vehicle, and at what levels?**

- Transparent data sharing and access should be encouraged to simplify identification of whether a human or the ADS system was directing the vehicle.
- If legislation provided that the ADS was in control, then consideration could be given to including a rebuttable presumption to cover situations where, for example, it could be proved that an ADS system in a vehicle with conditional or high automation had signaled for the human occupant to take control and the human either responded unreasonably, too slowly or did not respond at all.
  - If such a presumption was rebutted then, the human in the vehicle with responsibility to take back control would be considered to be in control of the vehicle.
  - However, proving the facts required to rebut the presumption is likely to be complex and costly especially for the first disputed matters to come before the courts.
- The possibility that human occupants may be held legally responsible for the operation of an ADS system in a vehicle with conditional or high automation may adversely impact community support and adoption.
  - This is especially likely to be the case where human users are uncertain about when, where or how to resume control due to either lack of training or experience in using the vehicle.

**3. Do you agree that the proper control offence should not apply to the ADS, provided**

**there are appropriate ways to hold the ADSE to account for the proper operation of its ADS?**

- Yes

**4. Do you agree that if a safety assurance system is approved that requires an ADSE to identify itself, the identified ADSE should be responsible for the actions of the vehicle while the ADS is engaged?**

- Yes
- All vehicles with capacity to engage an ADS should be required to formally identify an ADSE either at or prior to registration of that vehicle for use on the road.
- However, consideration will need to be given to how an identified ADSE is defined, and in particular how any definition of ADSE as a manufacturer interacts with the ACL and then HVNL as discussed in point 1 above.
- Even if safety assurance assessment happens only initially at import or registration of the vehicle, this approach could encourage an ADSE to ensure vehicles will not be able to operate unless and until applicable all hardware, software and other technology updates have been correctly applied.
- If a vehicle is operated outside of its operational design domain, then an identified ADSE should still be responsible, unless the ADSE can prove that some other person or entity was responsible for inappropriately or incorrectly engaging the ADS or allowing the ADS to remain engaged outside of the operational design domain.

**5. Do you agree that when the ADS is engaged:**

- i. an ADSE should be responsible for compliance with dynamic driving task obligations?**
  - Yes
- ii. obligations that are part of the dynamic driving task that the ADS cannot perform should be modified where appropriate, or the ADS exempted from the obligation?**
  - Yes
- iii. an ADSE should not be responsible for existing driver duties and obligations that are not part of the dynamic driving task?**
  - Yes, in most circumstances.
  - The ACL's broad definition of 'manufacturer', which includes persons who affix their brand or mark to the vehicle, may be relevant here, especially if the manufacturer is nominated as the ADSE.
  - If such an ADSE is using the vehicle to carry out business (such as make deliveries, transport secured or unsecured loads, etc), and where that business model requires vehicles to carry or secure loads etc, then it may be appropriate to hold the ADSE responsible for those duties or obligations to be carried out. This would be consistent with the current HVNL chain of responsibility approach

**6. How should legislation recognize an ADS and an ADSE? In assessing the options in section 5.6, please consider the following factors:**

- i. **legislative efficiency**
- ii. **timeliness**
- iii. **impact on compliance and enforcement**
- iv. **impacts on other schemes such as compulsory third-party insurance**

- Approach 3 presents the opportunity for starting afresh and minimizing confusion. It also presents an opportunity for a uniform law that could then be accepted by all states and territories (cf ACL).
- If Approach 3 was adopted, then it also could be used subsequently as a platform to work towards a uniform nationally consistent no-fault compensation scheme for persons sustaining personal injury as a result of the use of autonomous vehicles.

**7. Are there other options that you prefer? Please provide details of how it would work.**

**8. Do you agree that driver obligations need to be assessed to ensure there are no obligations that cannot be fulfilled if an ADS is in control? If gaps are identified, should other appropriate entities—such as fallback-ready users, other vehicle occupants, registered operators and operators—be made responsible for the obligation?**

- Yes, in principle.
- If imposing liability on fallback-ready users requires fault to be proved, then this is likely depend on whether their response to the vehicle's signals and/or resuming control was timely, appropriate or reasonable.
- However, the longer an ADS assumes control during a journey, and as the ADS technology improves over time, it is likely that even reasonable fallback-ready users will potentially become less vigilant, and more reliant on the ADS. This may mean that it becomes harder for fallback-ready users to resume control in a timely or alert way, and skill levels of those users may decrease over time as those skills are used less often.
- If fault by a fallback-ready user is required to be proved to impose legal responsibility on those users, this may be very difficult to do, and the first cases to come before the courts are likely to be very complex and costly.
- This could be overcome by working towards a uniform nationally consistent no-fault compensation scheme for persons sustaining personal injury as a result of the use of autonomous vehicles.

**8. Do you agree that obligations on a fallback-ready user of a vehicle with conditional automation, who will be required to take over driving if requested by the ADS should include:**

- i. **sufficient vigilance to acknowledge warnings and regain control of the vehicle without undue delay, when required?**

- Yes
- However, as discussed above re question 7, determining whether a fallback-user has met the legal standard for 'sufficient vigilance' or 'without undue delay', or whether it can be proved that they have breached the standard of care required of a reasonable fallback ready user, is likely to be complex and costly.

- If drivers are not required to be attentive or alert over an extended period of time then required taking over a driving task without undue delay may be an unrealistic and dangerous expectation.
- As ADS capabilities improve, and human drivers drive less, and rely more on the ADS, humans will lack driving experience, and become deskilled in driving capacity and may not be able to perform adequately in such a situation.
  - Training drivers in their use and interaction with ADS will be very important, and may be a continuous process, rather than passing a once-off licensing test initially. If ADS differ between OEMs, there may also need to be a requirement to be trained on a specific make of vehicle

**ii. holding the appropriate license for the vehicle type?**

- Yes, this is the most efficient and effective way to monitor driving capacity in conjunction with potential driving responsibilities in the conditional vehicles. If ADS differ between OEMs, there may also need to be a requirement to be trained on a specific make of vehicle.
- Persons with mobility or cognitive impairments could be granted a limited licence for specific levels of automation or makes of vehicles depending on their capacity and the capabilities of the ADS.
- Training drivers in their use and interaction with ADS will be very important, and may be a continuous process, rather than passing a once-off licensing test initially.

**iii. complying with drug, alcohol and fatigue driver obligations?**

- Yes.
- Even tasks such as starting up the ADSE or route planning could be significantly hindered, posing a safety threat, if the human user was under the influence of drugs, alcohol or was fatigued.

**Do you agree that the fallback-ready user should be allowed to perform secondary activities?**

- No, except for fully automated vehicles.
- Allowing fallback ready users of conditional or highly automated vehicles to perform secondary activities poses the risk that they will not be in a position to take back control appropriately when required, or that if liability is in issue, that they will be judged to have been in breach of the standard of care required of the reasonable user of an ADS who knows that there is a possibility that they may be required to take back control and who ought to know that performing secondary activities could compromise their capacity to effectively resume control.

**9. Do you think it is necessary to impose readiness-to-drive obligations on humans who will take over driving when a vehicle with high automation that includes manual controls reaches the limit of its operational design domain?**

- Yes

**10. Do you agree that no readiness-to-drive obligations should be placed on passengers in dedicated automated vehicles (designed to be 'driverless')?**

- Yes

**11. Should exemptions from the drink- and drug-driving offences concerning starting a vehicle and being in charge of a vehicle be provided to a person who is starting, or who is a passenger in, a dedicated automated vehicle?**

- Initially no. It may be that future developments in technology can ensure that no one can tamper with the operation of a dedicated automated vehicle. If this does become the case, then it may be appropriate to apply exemptions.

**12. Should exemptions from the drink- and drug- driving offences concerning starting a vehicle and being in charge of a vehicle be provided to a person who is starting a vehicle with high or full automation that includes manual controls?**

- No

**13. How do you think road traffic penalties should apply to ADSEs?**

- Corporate multipliers should be applied with a sliding scale depending on the number of similar breaches by that ADS, ADSE or OEM.
- Any reform should consider whether human users could or should be held liable for the traffic offence if they do not prevent the ADS vehicle from committing an infringement which the human user could have reasonably prevented?
- Careful consideration would need to be given as to what if any *mens rea* requirement would need to be proved if criminal liability was sought to be imposed on a human user
- Potentially an ADSE or OEM on whom criminal liability has been imposed may seek to recover from the human user, presumably in negligence (with the loss suffered being the penalty imposed) or on the basis of a contractual liability.
  - Very careful thought would then need to be given to whether liability of human users is limited, and by what and to what.
  - Careful consideration should also be given to what would amount to a reasonable precaution to prevent the ADS from infringing the traffic rules.

**14. Do you think obligations and penalties on ADSEs in the safety assurance system should complement, or be an alternative to, road traffic offences?**

- Complement road traffic offences.
- If an ADSE breaches road traffic rules then penalties should apply as discussed in Point 13, and the Safety Assurance regulator should be automatically notified of the infringement so it can consider whether further penalties should be imposed under the safety assurance system.