

ConnectEast Response to the “NTC In-service Safety for Automated Vehicles Consultation Documents July 2019

The following is the response of ConnectEast (EastLink Toll Road) to the document package and referenced document Ref. - “Guide to In-service Safety for Automated Vehicles – Consultation Regulation Impact Statement - July 2019.

Doc. Ref.	Document Name	Agent	
1	“Guide to In-service Safety for Automated Vehicles – Consultation Regulation Impact Statement - July 2019	NTC	
2	In-service Safety for Automated Vehicles - July 2019	NTC	
3	Appendix. A – Safety Criteria and Obligations	NTC	
4	Regulation of AV when in service – Cost Benefit Analysis.	NTC	

For additional questions and/or further information on any of the attached, please contact:

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ConnectEast Response to the Selected questions.

A. Have we correctly identified the parties with an influence on the in-service safety of automated vehicles and accurately described their role? If you identify additional parties, please explain what their role is.

ConnectEast Response: Ref. Fig.1

The questions raised from this are:

- **“Modifiers”** not correctly explained satisfactorily, our belief is that if any approved vehicle is modified it requires full assessment and approval of the ADS/ADSE again. Reasons shown as part of “B”.
- **“Moderate Influence”** Both the “Registered Owners and “Road Managers” can have a Major Influence on the in-service safety of AV’s. Reasons shown as part of “B”.

B. Have we accurately assessed each party’s influence on the in-service safety of automated vehicles? If not, please provide details.

ConnectEast Response – As identified in part.2 of Response. “A” above the following points are raised:

- “Registered Owners” – They depending on their actions can have significant impact in worst case scenarios. Regulation should cover enforcing that the latest software

updates are installed for both operational, Safety and Security operations or the vehicle has the potential to be non-compliant to the ADS/ADSE certification. I.e. The vehicle may also be considered functionally unroadworthy.

- “Road Managers” In the information currently supplied the interaction between the ADS and/or the ADSE does not require interaction with the Road Operators supplying the ODD.

ConnectEast has concerns regarding the References to Operational Design Domain (ODD) –

CE Risk – The proposal does not provide clarity on the obligations that lay with a “Road Operator” after ADS approvals. Figure.1 in the Guide indicates only a Moderate risk, but as a Road Operator the costs and implied compliances can be very expensive and possible compliance issues.

As described, the key issue is the lack of traceability for responsibility/requirements flow-on for the Operational Design Domain (ODD), which is primarily the complete roadway including all operational equipment’s, signage, lighting line marking, communications, etc.

A road operator requires to understand what environment/conditions the “Automated Driving System” (ADS) has been configured and approved to operate in, using certain “Assumptions”. These are then “Approved” by the Automated Driving System Entity (ADSE). The “Assumptions used by the ADS/ADSE will impact on general road environment, pavement, water drainage, signage, ITS and communications including possibly EMC compliances, line-marking, work site and/or traffic notifications, general warnings/alerts. *Refer to Doc Ref. 1 in the Table for more detail.*

This should also require clarification as to whether CE are required to provide the additional services to facilitate a “Safe/Approved driving environment” as possibly covered in the ADS/ADSE Approvals, these may include:

- Roadside and Tunnel DSRC or G5 communications network to provide links to vehicles and/or services, including links to Road Operator Control Room.
- Availability of high resolution data of road compatible with the vehicle GPS/guidance system.
- Changes to signage and/or line-marking.
- The above would require new Design/Operational mandatory rules to be applied by each of the State Road Authorities. Preference is for a Federal Approach providing consistency between States.
- There should also be mandatory discussions between the ADS/ADSE and the ODD (State and/or Federal) to ensure the compliance “Assumptions” are based on real world roads and environments, this is not proposed at this point in time.

Key Sections of document “Appendix. A – Safety Criteria and Obligations”,

4.5.9 Telecommunications service providers – from Overview document the ConnectEast Issue - What, if any responsibilities are incumbent on the Operator of the ODD to ensure that there is a safe environment for the vehicle communications. I.e. If the communications are in the form of V2X/V2I some components of the network may need to link to the ODD Traffic Control Room for road alerts/warning. Does the ODD have any restraints in regards to EMC compliances other than normal ACMA compliance? I.e. It is a Tollroad operating 5.8Ghz DSRC and ITS operating at 5.9Ghz. There are also other accidental operational issues that may cause interference on the RF bands.

C. Do you think that a general safety duty to ensure the safe operation of the ADS 'so far as reasonably practicable' is appropriate to address the safety risks?

D. If a general safety duty were introduced, which parties should it apply to?

E. Do you think there are any new risks posed by second-hand ADS components, after-market modifications or the transfer of ownership of automated vehicles, which may not be adequately addressed by existing regulation designed for conventional vehicles?

CE Response – Yes, this could be risky. Use of second hand components would require Re-certification of the vehicle if certain control/sensor parts were replaced. Incorrectly programmed or slightly damaged control or sensor elements may compromise the vehicle safety.

F. Do you think there should be specific driving rules for ADSs like the Australian Road Rules, or would it be sufficient to simply require them to 'drive safely'?

CE Response - From the testing currently carried out on available Semi-autonomous vehicles, we believe there should be as a minimum both practical and theoretical training to ensure the operator of a Level.4 vehicle can operate the vehicle safely.

G. Which option most effectively addresses the problem statement?

CE Response - Risk as a road operator (ODD) – The issue here is that a State based approach will mean AV/CAV that may be compliant in one state can cross the border and be non-compliant in Victoria, this means CE may not provide a “safe operating environment” based on the ADS/ADSE approvals.

- Of the four Options proposed CE should really only recommend either Options 3 or 4 (my preference is Option.4)

H. Is there another option or combination of options which could more effectively address the problem statement?