HEAVY VEHICLE
INDUSTRY AUSTRALIA

Response to NTC Paper:

In-service safety for Automated Vehicle

August 2019

Heavy Vehicle Industry Australia
Represents and advances the interests of manufacturers and suppliers of heavy vehicles and their components, equipment and technology.

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1) Background

NTC has released the latest in a series of papers looking at establishing a regulatory framework for the regulation of Autonomous Vehicles. This paper is entitled: In-Service Safety for Autonomous Vehicles (July 2019).

2) About HVIA

Heavy Vehicle Industry Australia (HVIA) represents and advances the interests of the entire industry involved in the design, manufacture, importation, distribution, modification, sale service and repair of on-road vehicles with a gross vehicle mass or aggregate trailer mass over 3.5 tonnes as well as their components equipment and technology. The industry directly employs over 36,000 people and provides some of the world's most efficient, safe, innovative and technologically advanced vehicles. HVIA seeks to work with government and industry stakeholders to promote an innovative and prosperous industry that supports a safe and productive heavy vehicle fleet operating for the benefit of all Australians.

3) Response to Question 3

HVIA would like to make a submission in relation to question 3 in the report.

Q3 Have we accurately assessed each party's influence on the in-service safety of automated vehicles? If not, please provide details.

HVIA is concerned that the proposed regulatory framework for automated vehicles is not appropriate for Heavy Vehicles because it does not give sufficient emphasis on the operator's role in influencing in service safety.

The greatest risk for safety of autonomous heavy vehicles is incompatibility of the setup parameters for the ADS and the actual vehicle configuration and transport task the vehicles are undertaking.

The main concern is that the insistence that control of the initial supply to market is the best strategy to ensure ongoing vehicle safety. The proposed approach assumes that the ADSE can anticipate the operational design domain for the vehicle prior supplying the ADS to market. For many heavy vehicles this is not a reasonable assumption.

Many heavy vehicles are applied to changing transport tasks which cannot be reliably predicted at the time of supply to market. In particular, the payload, configuration (eg semi trailer, B double, b triple or road train) and conditions of operation cannot necessarily be defined at the time of supply to market and the ADS may need to be configured after initial supply to accommodate the transport tasks being undertaken. This may even be required on a trip by trip basis for oversized/over mass vehicles operating under permit. The permit may apply conditions to the operation of the vehicle which could not have been considered at the time the vehicle was supplied to market. In these circumstances, the role of the vehicle operator becomes critical in ensuring the vehicle and the driving system are correctly matched.

In addition, older heavy vehicles often have second or third lives where they have significantly different work cycles than they had in their first life. In these circumstances the role of the vehicle operator in making sure the vehicle operates safely is also paramount.

In HVIA's view, for heavy vehicles, the vehicle operator is the major entity having an influence over the in-service safety of the heavy vehicle. The operator is the entity that chooses which vehicles to use for the task; which ADS is chosen for the vehicles, and the environment in which the vehicles operate. The operator is also responsible for load restraint which may have a significant impact on the performance of the vehicle and for choosing the repairers and modifiers. Therefore, the operator has the primary responsibility for the safety of the autonomous vehicle. The report suggests that commercial operators only have a minor influence on the safety of the operation. This is clearly not correct.

While it is true that the commercial operator may require technical advice to ensure that there is a match between the task and the ADS, if the operator is not accurate in the advice they provide to the ADSE or other technical expert on the conditions under which the vehicle will be used the vehicle will not be correctly configured and may present a significant safety risk.

The proposed approach appears to try and force the primary responsibility onto the supplier of the ADS when most of the decisions about how the vehicle operates are under the control of the operator. If this happens the result may be to dissuade ADSE's from entering the heavy vehicle market because they would wear risks over which they have no control.