NHVR
National Heavy Vehicle Regulator

Inquiry into Transport Technology

Submission to the Queensland Parliament Transport and Public Works Committee

9 October 2018

Terms of reference

The inquiry will consider in detail the challenges and opportunities which technology will bring to the transport sector in coming years including:

a) identifying trends and changes in fuel type usage in the sectors of personal transport, freight transport and public transport, such as the increasing uptake of hybrid and electric vehicles

b) examining the readiness of the transport network for increasing electrification of vehicles in coming years

c) identifying other emerging technological factors which will impact on transport networks into the future, such as driver aid technology and 'driverless car' technologies

d) examining how technology is affecting employment arrangements in the transport industry, particularly in the food delivery area.

Introduction:

The NHVR is Australia's dedicated, independent statutory regulator for heavy vehicles and pursues improvements to safety, productivity and efficiency outcomes across the heavy vehicle transport sector and the Australian economy.

Technology and data collection is a critical part of delivering improved road freight outcomes and the NHVR has placed significant priority on positioning itself to adopt and adapt to new technologies alongside the heavy vehicle industry.

The NHVR's submission to the inquiry considers the challenges and opportunities in relation to technology and the heavy vehicle sector and focuses on the importance of partnering with industry and jurisdictions on the collection and sharing of data to achieve better regulatory outcomes.

NHVR key priorities and recommendations:

PRIORITY ONE: Utilise data and technology to deliver positive business and safety improvements for the heavy vehicle industry

Recommendation 1.1: *Encourage increased data sharing across government (through a single common point of contact) to enable delivery of a truly integrated national 'one stop shop'.*

Recommendation 1.2: *Recognise use of technology by providing a supportive regulatory framework to encourage its adoption and deliver improved safety and efficiency outcomes.*

PRIORITY TWO: Develop a co-design approach with industry to better utilise technology (including telematics) information to improve safety and efficiency

Recommendation 2.1: *Develop a national co-regulatory best-practice model for technology (including telematics) with industry based on performance standards.*

PRIORITY THREE: Better recognising vehicles with increased safety and productivity performance outcomes

Recommendation 3.1: *Increase access to the freight network for Performance Based Standards vehicles.*

PRIORITY ONE: Utilise data and technology to deliver positive business and safety improvements for the heavy vehicle industry

Recommendation 1.1: *Encourage increased data sharing across government (through a single common point of contact) to enable delivery of a truly integrated national 'one stop shop'.*

1. The NHVR has made a significant investment in ensuring it can adopt and adapt to new technologies to better meet the ever changing needs of the freight task and its customers, the heavy vehicle industry. The NHVR is working towards delivering a truly integrated national 'one stop shop', to provide customers with the ability to access information and assistance in a simple and efficient way.
2. The NHVR started delivering on this commitment through development of the *NHVR Portal – Access Module* in August 2016, which reduces the time it takes to lodge and process heavy vehicle road access applications by having one single portal that can be accessed by customers and road managers. The Portal provides a transparent view of the application process, enabling customers to track applications from lodgement to the access decision.
3. The *NHVR Portal – Access Module* information is held in a cloud platform known as the *NHVR's Safety and Compliance Regulatory Platform*, and is complemented by the *Registration Module*. The Platform will soon integrate further inputs, such as the *Performance Based Standards Module*, *National Heavy Vehicle Accreditation Scheme Module* and other relevant inputs as they become available.
4. In general terms, the Platform takes raw pieces of data through modules (access approvals, registration details, accreditation status, defect clearance history) and integrates it to produce a comprehensive output of heavy vehicle operator details.
5. In July 2018, the NHVR started integrating (for the first time) heavy vehicle registration data from seven different states and territories, which is stored in the *Registration Module* of the Platform.
6. The *Registration Module* currently enables transport operators to view their entire registered heavy vehicle fleet from one location regardless of where a heavy vehicle is registered, as opposed to having to contact state authorities separately. Operators can confirm registration details are correct and up to date, check registration transfers and changes, and download vehicle records to provide to other parties in their supply chain. The NHVR will continue working with operators to refine the system to deliver increased improvements and integrate with other module inputs.
7. The Platform will also assist in enabling the NHVR to deliver a risk-based approach to heavy vehicle compliance by providing a profile of the national heavy vehicle fleet. This enables enforcement efforts to be focused at operators that pose the greatest safety risk and rewards good companies through fewer intercepts, allowing them to get on with doing their business.
8. The NHVR has and continues to work closely with jurisdictions on the reciprocal sharing of data, which is fundamental to delivering meaningful results from the Platform. The collaborative approach and centralised model used for the collection of registration information has demonstrated great value in having a single and common point of contact for all heavy vehicle related data sharing activities across jurisdictions.
9. One of the NHVR's key safety objectives is to develop a national and understandable dashboard of heavy vehicle safety data with risk factors and blackspots identified and addressed in a strategic and coordinated approach. Through increased data sharing and having the ability to easily include additional inputs (modules) in the Platform, the NHVR has the ability to use this information to make a real and meaningful positive change to heavy vehicle safety on a national scale.

Recommendation 1.2: *Recognise use of technology by providing a supportive regulatory framework to encourage its adoption and deliver improved safety and efficiency outcomes.*

10. Fatigue management is one of the key safety challenges facing heavy vehicle operators. It is estimated that between 10-15 per cent of all fatal crashes involving heavy vehicle/s in Australia is the result of driver fatigue.
11. While there are a number of factors that contribute to fatigue incidents, fatigue and distraction detection technology that has the ability to identify and address fatigue incidents before they occur, has the potential to deliver significant positive road safety improvements.
12. A growing number of transport companies are utilising detection technology in their businesses, which is providing valuable feedback on driver alertness and possible fatigue risks. However, how industry and governments manage and respond to this information to improve safety needs to be better understood.
13. The NHVR is investing $250,000 funding (*announced at the Australian Fatigue Safety Forum on 3 October 2018*), on a joint NHVR and industry safety initiative to identify ways to facilitate the successful adoption and use of fatigue/distraction management technology.
14. This initiative will consider the best ways to obtain value from the implementation of detection technologies to maximise safety benefits and minimise cost to industry.
15. Importantly, the initiative will consider how a regulatory framework can support the use of this technology. For many years, industry and governments have been faced with the challenge of how to address the subjective element of fatigue from a regulatory perspective—as fatigue is unique to the individual. Current regulatory frameworks focus almost exclusively on regulating hours of work in order to mitigate fatigue/distraction related risk.
16. Through adopting a supportive regulatory model with incentives for operators to use this technology, collectively we have the potential for the first time to really start tackling fatigue using a preventative approach.

PRIORITY TWO: Developing a co-design approach with industry to better utilise technology (including telematics) information to improve safety and efficiency

Recommendation 2.1: *Develop a national co-regulatory best-practice model for technology (including telematics) with industry based on performance standards.*

17. The untapped potential for technology (including telematics) is in the safety and efficiency outcomes it can provide for industry and governments, if it is set up and adopted properly.
18. For this reason, it is important that a focus is placed not on the framework for technology, but on a framework for the collection of information with industry, which may include telematics information.
19. Most medium to large road transport companies (with ten or more vehicles) already have telematics systems installed in their vehicles, which are designed to meet a range of complex business needs. As highlighted in the *NTC Review of Regulatory Telematics Report, March 2018,* close to 40,000 telematics units are installed in heavy vehicles across Australia. These systems vary considerably and usually involve a substantial investment to address specific tasks and/or customer needs in regards to efficiency and safety.
20. To date, few companies (approximately 4,000 out of the 40,000) have seen the value in investing in telematics devices that are mandated for certain regulatory purposes e.g. the Intelligent Access Program (IAP).
21. The preferred method (rather than simply seeking to impose a regulatory requirement) is to develop a cooperative model with industry in pursuing an agreed model for collection and use of information.

22. The NHVR is focused on how information can be used from a productivity perspective to move away from a prescriptive approach to regulation towards recognising the benefits of performance outcomes and then enabling increased access to freight networks for these vehicles.
23. The approach adopted for Electronic Work Diaries (EWD) endorses outcome based standards within which the EWD technology must operate and comply rather than setting prescriptive technological requirements.
24. Similarly, the Performance Based Standards (PBS) Scheme, which offers the heavy vehicle industry the potential to achieve higher safety and productivity, requires vehicles to meet safety and performance outcomes through innovative and optimised vehicle design, rather than prescribed vehicle dimensions to achieve increased productivity.
25. Through the *NTC's Review of Regulatory Telematics* and in particular the development of a *Best Practice Model* for technology (due to be submitted to ministers in November 2019), the NHVR is seeking a model that adopts performance standards, which are agreed through close collaboration with industry, the NHVR and governments.
26. The NHVR believes development of the *Best Practice Model* must include a similar approach adopted for Electronic Work Diaries, and should address four key principles (as listed below):
    1) Ensure relevant parties in the freight task (industry, state and local government, supply chain partners) agree the safety and productivity outcomes that technology can help achieve i.e. the problem and outcome must be identified before the solution is developed.
    2) Leverage and "share" benefits from the huge investment transport companies have already made by setting minimum standards, rather than mandating a prescriptive piece of technology or "black box".
    3) Establish appropriate national governance arrangements, including clear policies that articulate the purposes for which the data will be collected, consistent application of policies across the country, a relevant 'authority' to maintain the standards and requirements and ensuring unnecessary costs are not imposed on industry.
    4) Make appropriate changes to the Heavy Vehicle National Law to support the use of technology based on performance standards.
27. This approach would start enabling movement towards opening up more networks on an 'as of right' basis, with restrictions to specific parts of the network that can't withstand particular weights. Improved vehicle performance information will also help to reduce the need for the current burden of the permit system and enable it to be replaced with National Notices, providing significant potential improvements to the efficiency of the road freight sector, and in turn the national economy.

PRIORITY THREE: Better recognising vehicles with increased safety and productivity performance outcomes

Recommendation 3.1: *Increase access to the freight network for Performance Based Standards (PBS) vehicles.*

28. Performance Based Standards (PBS) vehicles are designed to perform their tasks as safely, productively and sustainably as possible and to operate on networks that are appropriate for their level of performance. The basic principle of PBS is matching the right vehicles to the right tasks. PBS vehicles are tested against 12 stringent safety standards and four infrastructure standards to ensure they are safe and fit the existing road network.
29. As part of a recent project, the National Transport Commission (NTC) undertook an analysis of the effectiveness of the current PBS vehicle fleet. This research found that:

a. Articulated PBS combinations are 60% safer in avoiding major impact crashes, whilst both rigid and articulated classes together are delivering 46% less major impact accidents than the existing conventional Australian trucking fleet.

b. During the years 2014 to 2016, PBS operations were estimated to have saved 440 million kilometres in truck travel and at least four lives. It is predicted that these figures will rise substantially over the period to 2034.

c. The research also forecast, based on the PBS fleet growing up to 8.5% per year, that by 2034 PBS vehicles could save between:

   i. 5.38 and 11.42 billion kilometres in truck travel (therefore reducing exposure),

   ii. 1.97 and 4.18 billion litres in fuel consumption reduction,

   iii. $9.5 and $22.2 billion in operating costs, and

   iv. 70 and 149 fatalities.

30. Despite the clear safety and productivity benefits that PBS vehicles deliver, obtaining road access approval from multiple layers of government and road owners is still a major hurdle to increased uptake. Inhibiting the real benefits that could be delivered to the Australian economy.

31. The NHVR strongly advocates the gazettal of the PBS network that state, territory and local government road managers provide to PBS vehicles will accelerate the significant safety benefits that PBS vehicles offer.

32. To provide the greatest level of certainty for vehicle operators, dedicated and gazetted networks that are classified in line with the PBS Network Classification Guidelines should be developed and implemented.

The NHVR appreciates the opportunity to provide a submission to the Queensland Parliament Transport and Public Works Committee and would be happy to provide any further information if required or provide the Committee with a demonstration of the work the NHVR is delivering.