



NATIONAL ROAD TRANSPORT ASSOCIATION

**Submission to the Transport and Public Works Committee**

**Inquiry into Transport Technology**

**28 August 2018**

## Introduction

1. The National Road Transport Association (NatRoad) is pleased to make a submission to the Transport and Public Works Committee (the Committee) inquiry on transport technology.
2. NatRoad is Australia's largest national representative road freight transport operators' association. NatRoad represents road freight operators, from owner-drivers to large fleet operators, general freight, road trains, livestock, tippers, express car carriers, as well as tankers and refrigerated freight operators.
3. This submission focuses on the terms of reference as they relate to heavy vehicles.

## Other Relevant Inquiries

4. NatRoad notes that there has been a recent inquiry into this subject undertaken in New South Wales (NSW) as it relates to heavy vehicles.<sup>1</sup> The Joint Standing Committee on Road Safety of the Parliament of New South Wales issued a report on heavy vehicle safety and the use of technology to improve road safety in May this year (the NSW Report).<sup>2</sup> NatRoad made a submission to that inquiry.<sup>3</sup> We commend that submission to the Committee as well as the findings in the NSW Report. The submission and the relevant findings impinge on the Committee's consideration of challenges to road safety that can be addressed via technology.
5. In addition, the March 2018 Report *Inquiry into National Freight and Supply Chain Priorities*<sup>4</sup> (Priorities Report) is relevant to the Committee's inquiry.
6. One of the findings of the Priorities Report is that over the next 20 years, the advances in technology and data availability will be a major driver of productivity growth in the freight sector in areas such as automation, data processes and product delivery. These include the use of automated vehicles, telemetry, drones and big data, supported by international data standards.<sup>5</sup>
7. We note that on 18 May 2018, the Council of Australian Governments' Transport and Infrastructure Council agreed a framework for developing a 20-year national Freight and Supply Chain Strategy (the Strategy). The aim is for the Strategy to be implemented from 2019.<sup>6</sup> The Queensland Government is involved with the development of the Strategy which will encompass a consideration of the impacts of technology.
8. The Priorities Report underpins the work on the Strategy. We commend to the current inquiry the work undertaken by the Centre for Supply Chain and Logistics (CSCL) at Deakin University, as part of the work done for the Priorities Report. CSCL prepared four scenarios that identify potential drivers of change in freight and supply chains in Australia, based on a time horizon of 20 years. A full report of CSCL's scenario planning exercise is useful for the Committee's current considerations.<sup>7</sup>

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<sup>1</sup> <https://www.parliament.nsw.gov.au/ladocs/inquiries/2467/Final%20Report.pdf>

<sup>2</sup> Ibid

<sup>3</sup> <https://www.parliament.nsw.gov.au/ladocs/submissions/59783/Submission%203.PDF>

<sup>4</sup> [https://infrastructure.gov.au/transport/freight/freight-supply-chain-priorities/files/Inquiry\\_Report.pdf](https://infrastructure.gov.au/transport/freight/freight-supply-chain-priorities/files/Inquiry_Report.pdf)

<sup>5</sup> Id at p 28

<sup>6</sup> <https://infrastructure.gov.au/transport/freight/national-strategy-faq.aspx>

<sup>7</sup> [https://infrastructure.gov.au/transport/freight/freight-supply-chain-priorities/research-papers/files/Scenario\\_planning\\_report.pdf](https://infrastructure.gov.au/transport/freight/freight-supply-chain-priorities/research-papers/files/Scenario_planning_report.pdf)

9. In the context that the current inquiry is examining how technology is affecting employment arrangements in the transport industry, a current federal Senate Committee inquiry is relevant. On 19 October 2017 the Senate established the Select Committee on the Future of Work and Workers to inquire and report on the impact of technological and other change on the future of work and workers in Australia. The committee was originally to report on or before 21 June 2018, but that date has been extended to 12 September 2018.<sup>8</sup> NatRoad made a submission to that inquiry<sup>9</sup> and we commend it to the Committee as useful in the current inquiry.
10. Given the extent of other inquiries in relation to the subject matter of the Committee's terms of reference, this submission next addresses each of the specific terms of reference.

**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**

11. The freight sector is currently heavily reliant on diesel fuel. The Australian Alliance for Energy Productivity (AAEP) estimates that diesel currently fuels 99% of trucks and around 50% of light commercial vehicles.<sup>10</sup>
12. Other fuel types may substitute for diesel, including electric-powered heavy vehicles.<sup>11</sup>
13. Elgas, one of NatRoad's members, has been trialling dual-fuel technology in Rivet trucks that substitute diesel with LPG. The current operation has allowed further validation of the technology installed in Volvo 540 trucks and Kenworth vehicles. The system has the advantage of maintaining engine power and torque, while remaining within the engine's designed operating performance. Elgas reports that initial analysis of the telemetry data shows positive operational and environmental results with an 18-23% energy saving and a 60% reduction in particulate matter. Elgas has been working with NHVR to establish a certification process for this technology which is expected to be released soon.
14. There are, however, several barriers to adoption of alternatively fuelled vehicles, not the least of which for electric vehicles is the lack of infrastructure especially for long haul vehicles and the current and projected length of "down time" for re-charging. The barriers to moving to alternative fuels have been summarised thus:
 

*It is not without good reason that diesel enjoys a virtual monopoly in fuelling heavy freight vehicles. Most alternative fuels involve one or more economic or operational compromises – such as lower energy density, higher price, reduced driving range (or payload penalty), lower thermal efficiency, or limited availability (of trucks, fuel, or refuelling facilities).<sup>12</sup>*
15. To accommodate any shift to alternative fuelled vehicles, infrastructure planning will be vital. The first step is to get the Strategy right. NatRoad supports a move to cost-reflective road pricing which, if properly designed, would support greater network efficiency through

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[https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Future\\_of\\_Work\\_and\\_Workers/Future\\_ofWork](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Future_of_Work_and_Workers/Future_ofWork)

9

[https://www.aph.gov.au/Parliamentary\\_Business/Committees/Senate/Future\\_of\\_Work\\_and\\_Workers/Future\\_ofWork/Submissions](https://www.aph.gov.au/Parliamentary_Business/Committees/Senate/Future_of_Work_and_Workers/Future_ofWork/Submissions) submission 85

<sup>10</sup> The Australian Alliance for Energy Productivity *A Roadmap to double energy productivity in Freight Transport by 2030* [https://a2se.org.au/files/2xEP\\_Freight\\_transport\\_roadmap\\_v3\\_0\\_170212.pdf](https://a2se.org.au/files/2xEP_Freight_transport_roadmap_v3_0_170212.pdf)

<sup>11</sup> See article by Heid et al *What's sparking electric vehicle adoption in the truck industry* (2017)

<https://www.mckinsey.com/industries/automotive-and-assembly/our-insights/whats-sparking-electric-vehicle-adoption-in-the-truck-industry>

<sup>12</sup> Above note 10 at p17

reduced congestion, greater access and better funding of road maintenance. Optimally, expansion of road network capacity linked to market demand and pre-determined routes for heavy vehicles rather than reliance on an outmoded permit system will be part and parcel of the Strategy's application.

16. Infrastructure that better reflects the needs of the road freight industry would also be a desirable outcome from current heavy vehicle reform proposals. The extent to which those infrastructure plans accommodate a move by light vehicle manufacturers to electric or hybrid vehicles is a separate question to the adoption of electric or other alternative fuelled vehicles by the freight industry. The freight industry is likely to be a late adopter of alternatively fuelled vehicles.
17. Many of the advanced technologies and systems being adopted in overseas markets are yet to become available in this country. This applies in many areas of technology because of adaptation costs for Australia's relatively small market and higher prices for on-road vehicles. Many products or innovative models developed overseas are not marketed in Australia because of the cost of adaptation for local conditions (heat, dust, larger mass requirements, and road conditions in particular). On this basis, NatRoad presages that Australia will be a late adopter of alternatively fuelled heavy vehicles and only once overseas prototypes are sufficiently tested for Australian conditions.

#### **Examining the readiness of the transport network for increasing electrification of vehicles in coming years**

18. In the submission NatRoad provided to the Senate Select Committee on the Future of Work and Workers, we were sceptical about the imminent increased use of technology (which would include utilisation of electric heavy vehicles) because of the poor state of Australian roads. For example, as noted in the Priorities Report "The Local Government Association of the Northern Territory advised that 85% of the NT roads are unsealed, with many impassable in the wet season."<sup>13</sup>
19. It is for this reason that NatRoad supports the preparation of the Strategy and the objectives set out in paragraphs 14 and 15 of this submission.

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

20. The National Transport Commission (NTC) has several projects currently underway that examine the challenges facing governments, policymakers, regulators and the road freight industry in planning ahead for semi-autonomous and fully autonomous vehicles.<sup>14</sup> NatRoad is providing input into this process through our submissions to the NTC discussion papers and industry consultation forums.
21. The NTC's task is particularly challenging when the pace of technology has far outstripped the concomitant investment in infrastructure to accommodate adoption of emerging technology.
22. For example, while automated heavy vehicles have the potential to deliver improvements in safety, we have doubts about the ability of Australia's current infrastructure to support high levels of automation. For example, Lane Keeping Assist systems<sup>15</sup> have the greatest

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<sup>13</sup> Above note 6 at p57

<sup>14</sup> See by way of example <https://www.ntc.gov.au/current-projects/safety-assurance-system-for-automated-vehicles/>

<sup>15</sup> See item 15 of the following publication for a simple explanation of a lane departure warning system <http://roadsafety.transport.nsw.gov.au/downloads/safety-technologies-heavy-vehicles.pdf>

potential for preventing deaths and serious injury but are unlikely to function on roads without highly visible lane markings (poorly maintained or unsealed roads).<sup>16</sup>

23. In all our communications NatRoad stresses that there is a significant amount of anxiety amongst smaller operators that the introduction of automated heavy vehicles will put members out of work. The impact on jobs in the transport industry must be integral to any policy relating to the introduction of automated heavy vehicles. Governments must work with the industry on the issue of how jobs are expected to transition in an automated environment. Yet, ironically, one of the immediate constraints on growth that members have reported to NatRoad is the declining number of skilled workers in the industry particularly truck drivers.
24. One in five working drivers are at retirement age and Australia Bureau of Statistics Survey data suggests nearly half of the current workforce in the industry will be aged over 65 by 2026.<sup>17</sup>
25. NatRoad submits that sensible interventions in the market and Government action to correct any identified market failures are warranted when examining the introduction of autonomous vehicles. Those interventions should exhibit the following characteristics:
  - be consistently adopted by all states and territories;
  - operate less prescriptively than current HVNL rules;
  - be principles-based and technology-neutral;
  - support road safety outcomes;
  - support innovation;
  - be updated and kept relevant as the capability of automated vehicles develops;
  - have regard to all levels of driving automation;
  - assist road transport agencies when considering the consequences of granting exemptions from traffic laws; and
  - not affect current rules for drivers of non-automated vehicles.

#### **Examining how technology is affecting employment arrangements in the transport industry, particularly in the food delivery area**

26. The discussion at paragraphs 22 and 23 of this submission informs this term of reference.
27. This term of reference requires NatRoad to communicate that we oppose so-called safe rates.
28. The Transport Workers Union (TWU) has an ongoing campaign to reintroduce the flawed concept known as safe rates.<sup>18</sup> The TWU has a view that, inter alia, the intermediaries, platforms and employers at the top of the transport supply chain must be made more accountable. Yet the TWU has not supported the very positive steps that governments have taken to increase responsibility for heavy vehicle safety along the supply chain and which will facilitate the accountability that the TWU advocates.

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<sup>16</sup> *Safety Benefits of Cooperative ITS and Automated Driving in Australia and New Zealand*, Austroads Research Report, 2017

<sup>17</sup> Discussed with examples in <https://www.countrynews.com.au/@news/2018/04/11/103700/truck-driver-shortage-is-looming-1>

<sup>18</sup> <http://www.twu.com.au/home/campaigns/safe-rates/>

29. Amendments to the Heavy Vehicle National Law (HVNL) imposing new obligations along the chain were passed in the Queensland Parliament in December 2016 and are to commence from 1 October 2018 in all jurisdictions that have adopted the HVNL.
30. The changes involve a new chapter of regulation directed at chain of responsibility parties and the principle of shared responsibility. They include a proactive primary duty on chain of responsibility parties to ensure the safety of transport activities.<sup>19</sup>
31. This primary duty supplements the current provisions where parties are only liable once breaches are detected. The new provisions also include a 'due diligence' obligation on executive officers of entities with a primary duty and prohibit requests and contracts that would cause a driver or chain of responsibility party to breach fatigue requirements or speed limits.
32. Although we fully support the changes that are being introduced, NatRoad is advocating for further amendments to the HVNL to ensure *all* parties in the chain of responsibility who have influence or control over the transport task are captured by the safety duties, including online platforms facilitating the engagement of contractors. This measure would also reinforce that so-called safe rates are a defunct and inappropriate response to increasing the protection of owner drivers and other industry participants.

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<sup>19</sup> A detailed explanation of the laws appears here: <https://www.nhvr.gov.au/safety-accreditation-compliance/chain-of-responsibility/about-the-chain-of-responsibility>