



Iā Ara Aotearoa Transporting New Zealand

submission to

Te Manatū Waka (Ministry of Transport)

on

**The impact of automated vehicles operating on
Aotearoa New Zealand roads**

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Ia Ara Aotearoa Transporting New Zealand submission on Te Manatū Waka (Ministry of Transport) consultation document on: The impact of automated vehicles operating on Aotearoa New Zealand roads, Long-term insights briefing.

1. Representation

- 1.1 Ia Ara Aotearoa Transporting New Zealand (Transporting New Zealand) is made up of several regional trucking associations for which Transporting New Zealand provides unified national representation. It is the peak body and authoritative voice of New Zealand's road freight transport industry which employs 32,868 people (1.2% of the workforce), and has a gross annual turnover in the order of \$6 billion. This is part of a wider transport sector that employs 108,000 people, or 4 percent of the country's workforce and contributes 4.8 percent of New Zealand's GDP¹.
- 1.2 Transporting New Zealand members are predominately involved in the operation of commercial freight transport services, both urban and inter-regional. These services are entirely based on the deployment of trucks both as single units for urban delivery and as multi-unit combinations that may have one or more trailers supporting rural or inter-regional transport.
- 1.3 According to Ministry of Transport (MOT) research (National Freight Demands Study 2018) road freight transport accounts for 93% of the total tonnage of freight moved in New Zealand.

2. Introduction

- 2.1 Transporting New Zealand provides sector leadership and believes we all need to operate in an environment where the following must be managed and co-exist:
 - The safety and wellbeing of our drivers and other road users, our drivers are our most valuable asset
 - The impacts of transport on our environment
 - The transport of goods by road is economically feasible and viable and it contributes the best way it can to benefit our economy.
- 2.2 Transporting New Zealand has followed the progress of automated vehicles (AVs) for a considerable period and with strong interest given the significant potential for major benefits to moving freight. The potential impacts are wide ranging and with no intent of providing a complete and exhaustive list include, the heavy vehicle driver shortage, more effective use of the road network with potentially reduced headways, safety exposure to other road users, and environment.
- 2.3 Typically, the DNA of Transporting New Zealand is to be proactive and as much as possible take an optimistic and realistic outlook. Over the last couple of

¹ [Transport factsheet \(mbie.govt.nz\)](https://mbie.govt.nz)

decades we have seen a number of examples of AVs operating successfully in relatively simple, short, and tightly controlled environments, for example, airport shuttles or freight loading. However, in our view, as to whether fully automated vehicles, that is SAE Level 5, will be developed and be able to operate on our 90,000 km of “normal” public roads (state highways, urban and rural road), there is great uncertainty. That uncertainty is both in terms of the future technical feasibility and viability of the actual vehicles and secondly, the infrastructure required to support them.

- 2.4 The support infrastructure we refer to in paragraph 2.3 above encompasses the direct road infrastructure, which includes aspects such as lane markings and posted signs; and related infrastructure such as 5G communication networks to enable vehicle to infrastructure (V2I), vehicle to vehicle (V2V) and vehicle to other (V2X) communications.
- 2.5 Transporting New Zealand welcomes the opportunity to comment on the MOT document: The impact of automated vehicles operating on Aotearoa New Zealand roads, Long-term Insights Briefing (the Briefing). Our comments in this short submission will be confined to specific aspects or topic areas of the Briefing relating to impacts on the commercial freight sector and general operation of heavy transport service licenced (TSL) freight vehicles.

3. General comments on the Briefing

- 3.1 The Briefing provides a very broad overview of the evolution of technology in transport and the substantive content regards the potential impact. Bearing in mind the description “Long-term Insights Briefing” is used, and the role of MOT is to consider the impacts of the emerging challenges and this is MOTs investigation into the impacts of AVs operating on Aotearoa New Zealand roads (page 7 of the Briefing refers), we anticipated reading these insights and getting an accurate and deeper understanding of what AVs could be and what they could do.
- 3.2 We are somewhat disappointed that rather than identify, contextualise and prioritise the impacts of AVs the Briefing is very vague and non-committal. For example, page 7 of the Briefing refers: “AVs could potentially impact all users of the transport system in Aotearoa.....Businesses could benefit greatly from the introduction of AVs.....The wider transport sector could be significantly disrupted by the introduction of AVs into the fleet.” We have underlined the “could” to illustrate the lack of additional quality information this Briefing has brought.
- 3.3 Further to paragraph 3.2, another example of this information that is true, but not in our view very helpful or insightful is the first insight developed on page 40 of the Briefing: “AVs might not improve access for all in an unregulated market environment”. We are not aware of any technology development or innovation that has improved things for all (everyone), and therefore we have difficulty understanding how this investigation has further progressed our understanding of the impacts of AVs or the potential introduction of them into our fleet.
- 3.4 Similarly is the insight on page 43 of the Briefing that says “AVs could reduce DSI, but this will be over the longer term.”. We challenge MOT to justify that it has taken an investigation such as this to draw such a simple conclusion. We are

concerned at the value and return on public money being invested in further work like this.

- 3.5 In regard to the concern we raise in paragraph 3.2 above, there is nothing in the Briefing that we dispute. We concur with MOT that if AVs can be developed to a level that makes driverless operation viable and feasible then there could be a range of benefits. Our main issue with the Briefing is that we contend we have known these potential impacts for the last four decades therefore the value add of this information is very limited.
- 3.6 We do not want our comments to be taken as criticising MOT, and we don't envy anyone trying to plan for the future in this regard however, we suggest an alternative approach is to consider that we are largely a technology taker so we could leverage off overseas experience and let the early adopters take this risk. Figure 1 below shows the well accepted five (5) phases of technology adoption.

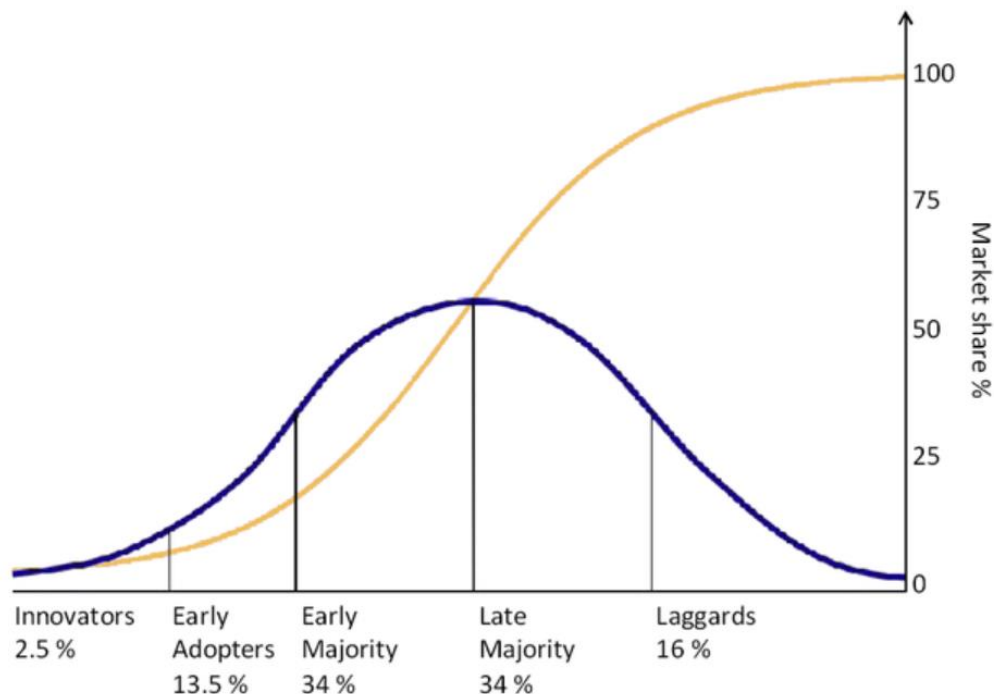


Figure 1: The 5 phases of technology adoption

- 3.7 We contend that a safer policy approach is to delay development work in the area of AVs and wait, watch and learn from the “Innovators” and “Early Adopters” and have a strategy of getting involved in AVs in the “Early Majority” phase.
- 3.8 A demonstration of the risk we believe we could avoid is on page 28 of the Briefing which refers “Questions the transport sector want answered ...if we are to understand the potential impact of AVs on businesses operating in the transport sector, we need to start by considering the key questions businesses will want answered.”. We contend there is so much uncertainty regarding what AVs may or may not be able to do, instead of wearing the inherent risks of speculating on something that is so uncertain, we let the innovators and early adopters do that.

- 3.9 Granted our approach means there is an inherent lag in receiving the potential benefits of AVs however, we believe this lag is almost certain to happen anyway particularly because we are largely a vehicle technology taker and mainstream AVs will almost certainly be supplied to us by international manufacturers. Exacerbating that lag is we are a relatively small market therefore supply lines to larger markets get priority.
- 3.10 Given where we are on this journey, we believe we can learn enough from overseas experience. Transporting New Zealand rejects the MOT's notion on page 30 of the Briefing that New Zealand cannot rely solely on international experience in these formative years.
- 3.11 In our view, the risk that the future development of mainstream AVs faces is well summed up on page 19 of the Briefing by Michael Hafner, Head of Automated Driving at Mercedes Benz, "*Taking the first few meters from the base station to the summit seems easy. But the closer you come to the goal, the thinner the air around you becomes, the more strength is required for each further step, and the more complex become the challenges you have to resolve.*".

4. Comments on what MOT thinks needs to be done

- 4.1 MOT proposes on page 10 of the Briefing that the next three pieces of work that need to be done are:
- Within the next two years, government needs to clarify its goals and objectives for AVs, including consideration of how government could best deploy AVs to meet its transport outcomes. This requires discussions with industry, councils, regional transport bodies and groups in the community.
 - A structured research programme, supporting the development of an evidence base for future AV investment decision-making, should be established across agencies and academic institutes. This programme of work should also take a broader focus beyond transport and consider the long-term aspirations for Aotearoa, including for housing, urban development, social welfare, and investment in innovation at the national level.
 - The gaps in New Zealand's current regulatory framework for AVs will need to be identified to support the safe deployment and management of AVs on New Zealand roads. A high level of engagement with regulatory agencies in other countries will be key to developing this. Scenarios should also be developed to test assumptions and shape Aotearoa's preferred future.
- 4.2 In regard to the first suggested piece of work, we disagree that Government needs to clarify its goals and objectives for AVs. In our view there is so much uncertainty on the future development and capability of AVs that expending effort at this stage is not justified. Granted a scenario-based approach could be taken however, given these are relatively extraordinary times with pressures on the vast majority of supply chains, particularly due to the impact of Covid and geo-political tensions in Europe, we contend that rather than Government departments and agencies spending further time, effort and money on exploring hypotheses to test

possible the impacts of emerging challenges and opportunities beyond its immediate work, Government should be applying some acute economic austerity on its advisors.

- 4.3 For similar reasons we disagree with MOT's second proposed piece of work, namely to establish a structured research programme. As we refer to in paragraphs 3.6 and 3.7 above, we contend that a safer policy approach is to delay development work in the area of AVs and wait, watch and learn from the "Innovators" and "Early Adopters" and have a strategy of getting involved in AVs in the "Early Majority" phase. We do not believe that the substantive issues being faced by other international jurisdictions where AVs implementation is much more advanced are that different and we would be better off leveraging off the learnings from those jurisdictions rather than developing our own research programme.
- 4.4 With a major caveat, Transporting New Zealand supports the third area of work proposed regarding our regulatory framework.
- 4.5 Our caveat is that rather than that work be focused on identifying gaps to support the safe deployment and management of AVs on New Zealand roads, the effort be put into making our regulatory framework more agile and accommodating in terms of managing change to allow new technology of any type.
- 4.6 The rationale for our recommendation in paragraph 4.5 above, is that in our experience the rules process has become extraordinarily bureaucratic and cumbersome. This was most recently demonstrated during Covid when, for good reasons, vehicle inspections were unable to be undertaken during lock-down. It took several months for a regulatory concession to be delivered even though our nation was in crisis.
- 4.7 We see time and again that despite our vehicle standards framework being primarily based largely on acceptance of the rules from Australia, United States of America, Europe and Japan, an extraordinary effort and amount of time is required to change them. As a consequence, safety and environmental benefits of fleets in the above countries is deployed much earlier and our fleet typically lags several years behind.
- 4.8 Further development of AVs technology is uncertain, however transforming our regulatory framework to one that is agile and adaptive will benefit any new technology. For heavy vehicles, there is considerable development in making vehicles more fuel efficient and reducing harmful emission output, although the latter is in the area of diminishing returns. Another area of emerging technology is steering axles which could bring significant productivity and consequential safety benefits.
- 4.9 Transporting New Zealand fear that the MOT and Waka Kotahi's considerable focus on AVs to date has had low return on investment and the associated opportunity cost is not being given due consideration and we urge MOT to reconsider its proposed approach.

END