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Inquiry Secretary
Standing Committee on Infrastructure, Transport and Cities
PO Box 6021
Parliament House
Canberra
ACT 2600

5 December 2018

BY EMAIL

Dear Sir/Madam

Re: Parliamentary Inquiry into automated mass transit

Thank you for the opportunity to submit to this inquiry.

iMOVE is the national centre for transport and mobility collaborative R&D. It is an independent not-for-profit entity that works with industry, government and research partners to deliver better movement of people and freight using technology and data.

We welcome this inquiry as an important step in understanding how Australia can best benefit from the technological changes that are becoming available in the mass transit sector, and also to plan for the future. Automation is already happening. We need to ensure that we harness it for maximum benefit.

We are pleased to provide the following perspectives to the inquiry.

- The automation of vehicles of all sizes offers Australia the opportunity to create more flexible, efficient and economical transport options. Equally importantly, it will also have a significant impact on safety. iMOVE therefore supports thoughtful automation of transport systems and is currently working with its partners to understand the impact of such technologies. The points below expand on the concept of 'thoughtful' implementation:
 - Although commonly referenced together, automation and connectivity are not the same thing, Connectivity needs to happen alongside automation to extract maximum benefits. Automated vehicles of any kind would benefit from 'speaking'

to the vehicles in their vicinity to increase their responsiveness to the environment. Efficient traffic systems are created by cooperation on our roads. Level crossing and Intersection safety would be improved if cars could communicate with adjacent trams, trains and buses. While an automated vehicle can be programmed to behave cooperatively, a connected vehicle is able to share information with other vehicles and infrastructure, which in turn enables cooperation. Connected driving could also accelerate the introduction of automation on our roads by providing collective learning opportunities for automated vehicles to have appropriate responses to the wide range of scenarios they encounter on the road.

Any discussion about automation should therefore also include consideration of connectivity.

- Transport is shifting its focus towards a person-centric perspective - it is about what the traveller needs or wants, rather than the vehicle that gets them there. Automation of transport needs to happen in a way that supports this process. Rather than simply replacing our existing transport options with an automated version, we need to develop new ones that really benefit from automation and that help solve issues like 'last mile' transit. In this instance automation could enable large and small vehicles to work cooperatively to get travellers to their final destination.

We should revisit our concept of existing mass transit with a view to adopting a more personalised approach as we automate.

- The Commonwealth government is already investing in advancing transport technology through iMOVE CRC and other initiatives such as the recently announced Office for Future Transport Technologies. This is positive, but we believe more should be done. We believe that the best outcomes from existing and further funding will be achieved by leveraging the capability and networks of entities such as iMOVE to enable neutral collaboration across states, government at all levels, industry and the research community.

Government should continue to invest in transport automation whilst using existing mechanisms to ensure a coordinated national effort and effective knowledge sharing.

- There needs to be regulation across all states that drives innovation in transport R&D, including automation. The *Guidelines for Trials of Automated Vehicles* developed by the National Transport Commission and Austroads details a consistent approach to trials. It is important that relevant guidelines and legislation (Including the Australian Design Rules) are regularly reviewed and updated to remove any barriers to AV innovation.



Government needs to ensure there is supportive regulation for automation R&D efforts.

- While fuels and energy sources are not strictly within the remit of iMOVE, we observe that automation/connectivity and new fuels / propulsion methods appear to be driving innovation in each other. Together, through efficiency and cleaner vehicles they will provide transport systems that reduce our impact on the environment.

Please feel free to contact me if you require further information.

Yours Faithfully,

Ian Christensen
Managing Director
iMOVE Australia



