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House Standing Committee on Infrastructure, Transport and
Cities Parliamentary Inquiry on Automated Mass Transit
– ITS Australia Submission

The Hon. Alan Tudge, Minister for Cities, Urban Infrastructure and Population

We commend the Federal Government in considering this important topic and appreciate the opportunity for ITS Australia to make a submission to this parliamentary initiative, particularly with regards to the potential transport technology offers to Australia's safety, productivity, economic and employment opportunities.

We support the inquiry's focus on road and rail mass transit systems, as well as point-to-point transport using automated vehicles to resolve first and last mile challenges. We also support the Committee's interest in the role of new energy sources in the transport sector and are particularly pleased to see a focus on the Commonwealth's role and responsibilities in the development of these technologies.

With more than 1,200 people dying and over 30,000 people being seriously injured each year on Australia's roads, the only long-term goal we can have is for zero fatal and serious injuries. To that end, we believe we will only work towards that vital and ambitious goal through transport technologies, including C-ITS and automated vehicle technology.

Safety needs to be the foundation on which any deployment of C-ITS and development of Connected and Automated Vehicles (CAV) and other transport technologies rests and we are optimistic about the innovation and expertise in our industry and the functionality that will be available to the wider community.

ITS Australia supports the advancement of C-ITS and connected and automated vehicle and mass transit technology and see the appropriate deployment of the technology as a pathway to provide safer, more efficient and more sustainable transport.

An important contribution to this will be the development of more efficient and effective mass transit through the application of existing and emerging transport technologies. Modal shift from private vehicles to mass transit is the key to a more productive and efficient network, and importantly being safer and more sustainable, particularly in our growing cities.

Real-time information, integrated smart ticketing systems, multi-modal trip planning, and other innovations offering improved customer experience rests on transport technologies that need to be consistently developed and deployed to enable the opportunities they offer to benefit all Australians.

There's much discussion these days about once-in-a-generation change; digital disruption, major demographic and societal shifts, and mega-projects offering improvements unimagined by our grandparents or sometimes even parents. What has not been seen before though is the kind of unprecedented potential for change in transport we are currently experiencing.

In undertaking a research project into Mobility as a Service in Australia, ITS Australia conducted interviews with more than 80 leaders in the transport and technology sectors, across government, industry and academia and a strong theme emerged; that not since the mass-production of private vehicles c1920 has there been such potential for revolutionary change in the transport sector.

Transport innovation like 'Mobility as a Service' (MaaS) offers the potential to drastically improve customer choices, reduce travel costs, increase network capacity and transport sustainability while improving social and environmental outcomes. This will only be achieved through appropriate and effective application of transport technology.

While the mass-production of private vehicles obviously had a stunning impact on society and the built environment, the advent of connected and automated vehicles and other revolutionary transport technologies offer the potential for even greater levels of disruption. Concepts like MaaS and evolving our mass transport networks are ways we can adapt to and positively leverage societal and technological disruption.

A key consideration that was agreed across experts interviewed was the need for collaboration and cross-jurisdictional standards, policy frameworks, and a national approach. To support that goal, ITS Australia and our research project partners across government and industry have formed a MaaS National Reference Committee to better understand and deliver Mobility as a Service for Australians.

A strong government role will be critical to ensure that the deployment of these technologies is guided to improve the quality of life for citizens. Governments need to provide regulatory oversight to give the public confidence in testing and deployment as well as support collaboration across industry and the community.

To that end we are strongly supportive of existing and emerging pilots and trials underway and proposed around the country, building a collaborative and transparent understanding of the challenges and opportunities these technologies offer, and ensuring that public safety is always the key consideration. Government should also play a key role in working with the private sector to facilitate deployment and remove unnecessary regulatory barriers to enhance the widespread deployment of proven technologies.

Customer expectations for transport are growing and with increasing access to personal technologies that enable individuals and communities to tailor products and applications to their needs we are also seeing an increase in this expectation in the transport sector.

We see automation and other transport technologies as a way to resolve some of our previously intractable problem areas, notable in first and last mile transport solutions and improving access to real-time information offering massively improved decision-making options to customers. We particularly encourage the investigation of last mile connections to improve the convenience of and access to mass transit.

We strongly support the investigation of alternative fuel sources to enhance the sustainability of our transport network, this includes the increasing role electric vehicles will play on our transport networks.

Intelligent Transport Systems improve outcomes across the whole transport network, and include; integrated public transport ticketing, managed motorways technology, vehicle detection technologies, high definition digital mapping, high accuracy positioning systems, traveller information systems and more.

There is a need for Governments to adopt longer-term multi-modal transport strategies and plans at both a state and national level, and these technologies will offer governments and communities extraordinary opportunities to enhance the role of and use of mass transit options. This shift will need to include behavioural change programs through incentives and a better understanding of the economics of transport pricing models and network allocations.

Customer and community expectations are high and these technologies will offer the chance for the public and private sectors to better design and deploy products and services that measure up to and even outstrip those expectations.

Conclusion

ITS Australia commends the Federal Government and Standing Committee on Infrastructure, Transport and Cities in looking to gain a better understanding of these important once-in-a-generation opportunities and are keenly interested in supporting any efforts to acquire information from industry that will support the on-going planning for these technologies and initiatives that will drive safer and more efficient transport networks in Australia.

Multi-modal transport coordination can be dramatically improved through the application of existing and emerging technologies, while the transport fleet and infrastructure assets are of course vitally important, with a growing population and increasing pressures on our cities and regional centres we encourage government at all levels to look to the important opportunities offered by emerging technologies to change the face of mobility in Australia.

We encourage the investigation of last mile and MaaS platform solutions to improve the convenience and customer experience of mass transit. Last and first mile connections in transport have long been a near intractable challenge in mass transit and these emerging technologies; including on-demand transport, Mobility as a Service, and automated vehicles offer extremely promising potential solutions.

Lastly we encourage the Federal Govt to play a role in:

- Funding to support trials and early deployments of the technology
- Harmonisation and cross-border considerations
- Facilitating information sharing and collaboration amongst the states

As noted, we have recently published a comprehensive report '[Mobility as a Service in Australia: Customer insights and opportunities](#)' and we would be very keen offer you a more detailed briefing of our findings and other matters that could be of interest to Standing Committee, Federal Government and Department of Infrastructure, Regional Development and Cities.

For your consideration we have also attached the ITS Australia Statement on Connected and Automated Vehicles following the page showcasing our members across the breadth of the transport and technology sectors. As a peak body that represents national and international organisations we strongly support an approach that works towards harmonisation and cross-jurisdictional considerations and are keen to be involved in these ongoing discussions.

Yours sincerely,

Susan Harris
Chief Executive Officer

ITS Australia Background

ITS Australia is the peak group representing over 100 public and private organisations delivering on transport solutions and technology improving Australia’s road and transport networks and promotes the development and deployment of advanced technologies to deliver safer, more efficient and sustainable transport across all public and private modes – air, sea, road and rail.

Established in 1992, ITS Australia is an independent not-for-profit incorporated membership organisation representing ITS suppliers, government authorities, academia and transport businesses and users. Affiliated with peak ITS organisations around the world, ITS Australia is a major contributor to the development of the industry.

As set out in the Strategic Plan 2018-2021 our vision is to shape future transport to be safe, efficient and environmentally sustainable through the implementation of Intelligent Transport Systems. Our mission is to:

- Advocate for, and inform discussion about, ITS;
- Facilitate collaboration and partnering amongst industry, government and researchers;
- Support research, development and the deployment of ITS technologies;
- Influence and guide the successful development of the ITS industry.

PLATINUM MEMBERS



GOLD MEMBERS



SILVER MEMBERS





ITS Australia Statement on Connected and Automated Vehicles

ITS Australia supports the advancement of connected and automated vehicle technology and see the appropriate deployment of the technology as a pathway to provide safer, more efficient and more sustainable transport.

Safety needs to be the foundation on which any development of Connected and Automated Vehicles

(CAV) rests. We are optimistic about the innovation and expertise in our industry and the functionality that will be available to the wider community.

These technologies have the potential to revolutionise transport in a way not seen since the massproduction of the private vehicle more than 100 years ago and to save thousands of lives.

It is critical that Governments establish very clear regulations which are performance based, to ensure that the deployment of CAV's is guided to improve the safety and quality of life of the community. Governments need to provide regulatory oversight to give the public confidence in CAV testing and deployment, as well as data sharing.

To that end we are strongly supportive of existing and emerging pilots and trials underway and proposed around the country, building a collaborative and transparent understanding of the challenges and opportunities these technologies offer, and ensuring that public safety is always the key consideration.

It is vital that these controlled pilots are proven before large scaled deployment occurs. Government should also play a key role in working with the private sector to facilitate deployment and remove unnecessary regulatory barriers to enhance the widespread deployment of proven technologies. While ensuring all elements are safely assessed and fully tested in controlled pilots and trials before publicly deployed.

ITS Australia is a membership based peak body representing Australian industry, government and research organisations in promoting Intelligent Transport Systems initiatives. We are a Not for Profit association and serve the interests of our members in Australia and globally. We represent the Australian ITS sector within Australia and Australian ITS interests internationally.

As such we recognise the importance of these technologies and work with our members and the wider community to ensure safe and responsible development and deployment of these potentially life-changing transport innovations.

To build understanding, and collaborative approaches, and work towards broad community consensus we support the following key messages, while appreciating that our position will evolve as these technologies and the market mature.



Key messages:

- 1. More than 1,200 people die and over 30,000 people are seriously injured each year on Australia's roads. The only long-term goal we can have is for zero fatal and serious injuries.**
 - We believe we will only get to zero fatalities and serious injuries through CAV technology.
- 2. Technology can save lives today.**
 - We support the early adoption of advance driver assistance technologies— lane keeping, blind spot warning, adaptive cruise control, automatic braking — should be on all new vehicles.
- 3. Performance based regulation with safety systems validated by manufacturers is essential.**
 - New technologies must be evaluated in real-world conditions, but only after they have been fully tested in off-the-road environments. We support controlled and transparent pilots and trials, with government oversight, of tried technologies.
- 4. Cooperative systems achieved through communication between vehicles, infrastructure, and other users will provide an enhanced layer of safety and must be pursued.**
 - This ability to communicate will be essential for extending the range of vehicle-based sensing and delivering maximum safety benefits with high levels of automation.
 - Initially additional research and testing is needed concerning the driver's ability to remain vigilant and take over the driving task when required with the current levels of new technologies which have low levels of automation.
 - As increasing levels of automation are achieved these systems will fully automate the driving task under most conditions, but do not preclude the vehicle being operated by a human driver in unusual or emergency situations.

Acknowledgement

ITS Australia would like to acknowledge that this statement builds on the work of the Institute of Transportation Engineers, adopted for the Australian context.