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 mass-production 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.

There is currently large investment in the development and delivery of major transport infrastructure across Australia which ITS Australia strongly supports. We also agree there is an imperative to ensure both the design and construction of these major roads, rail networks, and light rail systems, and other transport developments be built for the future.

The inclusion of key technology components is necessary from the early planning and design stages through to construction, implementation, maintenance and operation of these assets. Intelligent Transport Systems need to be built into all stages of transport infrastructure delivery to ensure we build for the networks of tomorrow. This includes the physical and digital infrastructure, to enable emerging and future technologies for safety, security, connectivity and multi-modality.

Whilst some of the specific technology choices are as yet undetermined there are important elements that require national architecture and development to enable “no regrets” investment that are platform agnostic. These include, but are not limited to:

- Suitable communications
- High precision mapping
- Highly accurate positioning capability
- Cyber Security Capability for handling large volumes of data with capacity to share in real time
- Digital twin for virtual asset management
- Edge devices

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.