

The Hon Peter Dutton MP
Minister for Home Affairs
PO Box 6022
Parliament House
Canberra ACT 2600

1 November 2019

Australia's 2020 Cyber Security Strategy – ITS Australia Submission

To The Hon Peter Dutton MP

ITS Australia sincerely appreciates the opportunity the federal government has provided to make a submission on this important and timely issue. As a peak body representing industry in the transport and technology sector we concur with the determination in the 2020 Cyber Security Strategy Discussion Paper that the threat environment has changed significantly since 2016 and industry and government need to adapt and consider a range of approaches to prepare and secure against these threats.

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 connected and cooperative Intelligent Transport Systems and automated vehicle technology are the key safety initiatives to achieving that ambitious goal. These potentially life-saving technologies though also come with additional challenges to consider.

Our transportation networks are national critical infrastructure and we concur with the government's position that the most impactful threats are those against our essential services and networks, including energy, water, telecommunications and transport. While recognising that an impenetrable and perfectly safe system or network is an unobtainable though aspirational goal, security by design and a clear-eyed assessments of our threat models is key. Governments role in this should be to ensure all approaches to establish our cyber security foundations be a national one that also acknowledges the role both domestic and foreign actors may play.

While our transportation network operates within Australian borders our digital network and the channels through which our increasingly connected vehicle fleet communicate and cooperate may not be in Australia.

IHS Markit are suggesting 90 percent of vehicles will be internet connected by 2023. There are potentially significant safety and congestion benefits from these vehicles, as well as the cooperative vehicles. More than 11.2 million light vehicles equipped with some form of Vehicle-to-Everything (V2X) system will be produced globally in 2024, representing 12 percent of the light vehicle fleet. It is expected that production of light vehicles equipped with V2X systems will be just under 15,000 units in 2019 and will grow at a compound annual growth rate (CAGR) of 277.5 percent in 2024¹.

¹ <https://news.ihsmarket.com/press-release/automotive/more-112-million-vehicles-will-be-equipped-v2x-communications-2024-ihs-mark>

Telematics systems are a major factor in changing the automobile from a collection of analogue control systems to a fully networked and connected digital car, where software-defined functionality can be remotely changed, corrected and updated. Telematics systems also add connectivity-based applications that make the average vehicle safer and more fuel efficient, as well as help to correct common driver errors. As a result, telematics can bring many benefits to various parties including consumers, auto manufacturers, dealers, communities and more. As the telematics market grows, the automotive industry is facing new challenges and issues that need to be solved.

Cybersecurity is one of the most important issues in the connected vehicle era. Since the role of telematics increases in importance as connectivity becomes essential for V2X and automated vehicles in the future, the automotive industry is working to find and develop solutions to protect its telematics systems from cyber-attacks in the future, and must continue these efforts as technologies continue to advance.

ITS Australia supports the Governments position that security built in 'by-design' is a foundational principle and a transparent, open, competitive and trusted market of secure technologies, products, services and professionals is critical for improving cyber security outcomes.

It is critical that Governments establish very clear regulations which are performance based, to ensure that the increased deployment of connectivity in vehicles is guided to improve the safety and quality of life of the community.

As a peak body that represents national and international organisations, we strongly support an approach that works towards harmonisation and cross-jurisdictional considerations and we are keen to be involved in these ongoing discussions.

Conclusion

The safety of our citizens is paramount, and ITS and driver assistance technologies are clearly saving lives on our roads now. Emerging and future technologies will in our view provide enhanced in-vehicle and network safety, however the deployment of these technologies needs government consideration and oversight.

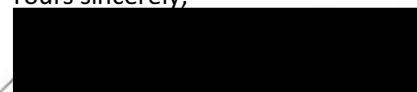
Industry is keen to work with government to best deliver these life-saving technologies, and ITS Australia is well placed to facilitate these discussions. ITS Australia commends the Federal Government and the Office of Home Affairs in continuing the important work of better understanding Australia's cybersecurity challenges and engaging with industry and the community in the development of this strategy.

This work is crucial in planning for the future of transport and producing the policy and regulatory frameworks in which they operate. Importantly, this needs to be carried out in consultation with industry and the community to build understanding and consensus on these exciting opportunities.

As a peak body that represents national and international ITS organisations, we strongly support an approach that works towards harmonisation and cross-jurisdictional considerations. This includes factoring in the importance of standards and their potential impacts, particularly relevant are ISO and European standards which will at the very least have some elements of security for adoption.

For your consideration we have also attached the ITS Australia Statement on Connected and Automated Vehicles.

Yours sincerely,



Susan Harris
Chief Executive Officer



ITS Australia Background

ITS Australia is the peak group representing over 120 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.



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.

This integrated development of digital engineering is necessary from the early planning and design stages through to construction and implementation of effective asset management systems. 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 as part of the current physical infrastructure projects and building some of the “digital components” that are platform agnostic. These include, but are not limited to:

- Suitable communications
- Highly accurate mapping
- Highly accurate positioning capability
- Security by design
- 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.