FCAI response to:

DITRDCA – C-ITS Principles
Draft for Industry Consultation
January 2023

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10th February 2023

1.0 INTRODUCTION

The Federal Chamber of Automotive Industries (FCAI) welcomes the opportunity to provide feedback on the Draft Principles for a National Approach to Co-operative Intelligent Transport Systems (C-ITS) in Australia.

We understand that the outcomes of this round of consultation aims at supporting principles-based decision making by federal and state governments on preparing Australia for new transport technologies, and at informing the development of actions for the next (2024-2027) National Land Transport Technology Action Plan.

The FCAI is the peak Australian industry organisation representing over 60 global automotive brands who design, manufacture, and sell light duty passenger vehicles, light commercial vehicles, and motorcycles in Australia.

FCAI member organisations, their parent entities and related supply chain partners are at the cutting edge of innovation. According to IHS Markit's 2021 Automotive R&D survey, in 2020 global vehicle manufacturers and their suppliers invested more than US$110 billion on automotive research and development in areas including safety, low emissions, connected vehicles and autonomy. This investment compares favourably with estimated US$22 billion invested in the aerospace and defence industries. It is this level of investment globally that continues to, amongst other priorities, significantly contribute towards the development of increasing levels of automation and communications in and between vehicles as well as other road safety technologies.

According to Boston Consulting's 2021 Top Fifty Most Innovative Companies report, five (5) global vehicle manufacturers and tier 1 suppliers are included in the top fifty. This is a clear demonstration of the commitment to innovation through continuous R&D expenditure to achieve great consumer and societal advances and outcomes in a highly competitive industry.

Technology solutions such as C-ITS (also referred to as V2V – Vehicle-to-Vehicle / V2I – Vehicle-to-Infrastructure / V2N – Vehicle-to-Network / V2X – Vehicle-to-everything communications) can deliver significant safety benefits for all road users, provide valuable data insights for the management and planning of the road and broader transport infrastructure, and also improve the overall vehicle drivers' experience.

FCAI notes that C-ITS has been the subject of global research and investment from OEMs, governments, and many other industry participants over the last 10-15 years. Close collaboration between these various entities is key to ensure an efficient and effective deployment in Australia, with close attention paid to international developments and the evolution of the Australian automotive sector in terms of where vehicles are imported from.

As such, FCAI supports the Department's objectives towards national consistency and inter-operability, alignment with international standards, and government leadership and direction in the development of C-ITS, as presented in these Draft Principles.

The following section provides feedback from FCAI and its members, based on the key questions that frame this round of consultation.

2.0 FEEDBACK

1. **Are principles for a national approach to C-ITS in Australia necessary? And if so, are the draft principles, as articulated, sufficient to inform investment by industry in C-ITS?**

The draft principles provide a valuable framework to invigorate the effective collaboration between governments, OEMs and other industry stakeholders towards C-ITS deployment. They also signal to industry the governments interest in C-ITS which will need to be backed up by a national action plan, investment and alignment with other infrastructure plans (e.g. national road safety action plan, Infrastructure Australia's infrastructure roadmap recommendations.

FCAI and its members consider that a national approach to C-ITS in Australia is necessary noting the importance of national consistency in terms of:

a) *standardisation & interoperability with other geographies*
As Australian Design Rules (ADR) follow UNECE regulations and as the ANCAP assessment rating is linked to the Euro NCAP, FCAI agrees with proposed principle #4 on the importance to follow the upcoming EU regulation for ITS short-range communications (C V2X and ITS G5) in the future.
In addition, OEMs' R&D efforts are planned and managed in consideration of the global market in which Australia represents approx. 1%. As such, Australian-specific requirements should be limited to those use cases of vital importance to the community or specific environmental conditions so not to constrain access to the broader benefits C-ITS can provide. C-ITS trials and deployments undertaken in other markets that Australia is aligning with in terms of standards should be leveraged off as much as possible with R&D efforts targeted at addressing Australian specific requirements.

b) *pace, scope (i.e. C-ITS use cases) and scale of deployments across the different state and territory jurisdictions.*
Supporting a seamless experience for road users as they travel across states and territories, as stated in the paper, is paramount. In relation to proposed Principle #1, a lack of consistency of C-ITS functionalities between states and territories would negatively impact road safety and drivers' experience, and could also lead to a perceived responsibility on OEMs when the responsibility will most likely lie with the state and territory road agencies' ability to provide the necessary roadside C-ITS infrastructure across their jurisdictions.

OEM investment will be informed by the proposed principles. However, a clearly defined and committed national C-ITS action plan – backed by state and / or federal funding for the deployment of the necessary C-ITS public infrastructure – will be needed to encourage and support the import of new connected vehicle technology solutions. FCAI and its members would welcome the opportunity to input into such action plan with consideration of their own global R&D efforts and C-ITS deployments.

To note, OEM investment will also be dependent on the commercial model for C-ITS deployment in vehicles, including considerations of the cost impact this investment would have on the end

consumers and the financial incentives that may be contemplated to support C-ITS penetration in the Australian vehicle fleet.

2. **Over the next 5 years, to what extent does your organisation anticipate moving into a C-ITS role or increasing its involvement in C-ITS?**

Over the next five years, FCAI members will continue their global R&D efforts in C-ITS (and other vehicle technologies) including involvement in international standards development, trials and at-scale deployments.

FCAI will continue to monitor these technical developments as well as any related international standards and policy developments. FCAI established a Director Emerging Technologies since 2019 to assess and voice what the implications of vehicle technology solutions such as C-ITS may be on the Australian automotive sector and to support the coordination between OEMs and government.

3. **How might C-ITS impact other vehicle connectivity systems in Australia, including vehicle/OEM connectivity, vehicle/cloud connectivity, heavy vehicle telematics systems, mapping systems, etc?**

Long- and short-range communications are complementary technologies with each solution bringing its own benefits, constraints, and costs and serving specific use cases.

Most OEMs are already offering connectivity services on their new vehicles while short-range communications are still at a definition / planning stage and are partly dependent on the availability of significant C-ITS public infrastructure (i.e. roadside stations). As no dedicated public infrastructure is needed for vehicle / cloud connectivity, these are likely to provide earlier benefits.

Advances in vehicle connectivity (as well as road agencies' open data sharing) should help narrow down the priority use cases that short-range C-ITS targets, especially with regards to Vehicle-to-Infrastructure use cases. C-ITS use cases leveraging off Vehicle-to-Vehicle communications should also consider functionalities provided by Advanced Driver Assistance Systems (ADAS) and look to complement them rather than replace them.

4. **The draft Principles include a focus on cooperation across industry, government, the research sector, and the community: what structures would be necessary to support the development of an Australian C-ITS system?**

A C-ITS planning group gathering OEMs, road agencies and other industry stakeholders (e.g. designers, developers and providers of C-ITS infrastructure) could be established and convened by DITRDCA's Office of Future Transport Technology to facilitate the planning of C-ITS deployment, starting from the development of a national C-ITS action plan.

5. **After the Principles, what next steps do you think would be most productive?**

After the Principles, FCAI and its members would welcome further consultation on the development of a national C-ITS action plan that:

- Defines the priority use cases and no-regrets investments of most relevance to the Australian road environment and the community (with consideration of the use cases best addressed by other technology solutions such as vehicle / cloud connectivity, data sharing and ADAS)
- Plans for their definition, testing and deployment across the state and territory jurisdictions, with committed investment plans and clear path towards scaling up of the selected C-ITS use cases
- Ensures effective knowledge sharing between state and territory agencies from their trials and deployments to reduce scope overlap and consequently speed up deployment;
- Continues to advocate for the radio frequency spectrum reserved for C-ITS to be maintained and that the adjacent shoulder frequencies are limited and managed to avoid any interference with C-ITS applications.
- Includes public communications to raise awareness and appetite for C-ITS in the community (once actions for C-ITS deployment have been committed)
- Leverages off existing collaboration forums where relevant, e.g. NTC Automated Vehicle program, Austroads Future Vehicles & Technology program, Standards Australia and its IT-023 committee, iMove CRC, and other industry associations (e.g. ITS Australia, Centre for Connected and Automated Transport – CCAT)

6. **Additional feedback**

In addition to the above responses, please note the following additional comments in relation to the draft C-ITS principles:

- In relation to Principle #2.a, government may not have any legislative or technical influence with regard to the devices used by pedestrians or cyclists and that could take part in V2X communications. This influence may be limited to specifying the communications standards vehicle and roadside equipment are to comply with to enable use cases involving vulnerable road users. Also in relation to Principle #2.a, motorcycles should be specifically included in vulnerable road users.
- In relation to Principles #2.a & b, the concept of trusted sources should not be limited to road agencies. It is understood that all on-board vehicle units and roadside stations would form part of a digital security and trust C-ITS infrastructure.
- In relation to Principle #2.c, C-ITS communications are not designed for broad vehicle-generated data to be collected outside of the purpose of the agreed use cases. It would be useful to clarify what is meant by “C-ITS optimisation” in this context.
- The ongoing European Commission work to develop spectrum sharing and/or coexistence arrangements to enable both C V2X and ITS G5 to operate in the 5.9 GHz spectrum should be followed closely by the ITS industry. In this context, we strongly recommend that ACMA continues to be involved in future discussions about C-ITS and vehicle connectivity.

END OF FCAI SUBMISSION