Draft Principles for National Approach to Cooperative Intelligent Transport Systems

Intelematics Australia – Input into the Draft Principles

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This submission can be published.

Introduction

Intelematics Australia (Intelematics) is pleased to provide input into the Draft Principles for a National Approach to Cooperative Intelligent Transport Systems (C-ITS).

Intelematics has pioneered the adoption of vehicle telematics services and real-time driver information in Australia in partnership with vehicle manufacturers (OEMs) and in conjunction with government instrumentalities, network providers and device manufacturers. Through these partnerships, millions of Australian drivers have had access to our ITS-based services over the past two decades. These services have demonstrably improved road safety, kept vehicles secure and provided access to real time traffic when it is needed most, when drivers are utilising the road network.

Intelematics agrees that C-ITS is critical to contributing to improved outcomes for a diverse range of scenarios including traffic, freight, public transport, transport safety and accessibility, emergency services accessibility, congestion alleviation, pedestrian safety and environmental sustainability.

It is with this level of experience and contribution to ITS standards and practices that Intelematics provides input into these draft principles.

As requested, Intelematics will frame its input around the questions provided.

Draft principles for a national approach

National consistency

Enabling environment

Cooperation

Harmonisation

Improving safety, productivity, sustainability, and reducing emissions

Security and privacy

1. Australian governments will work together, and with industry, towards a **nationally consistent C-ITS environment** with the aim of supporting a **seamless experience for road users** as they travel across states and territories.

   a. Individual jurisdictions should continue to decide the pace and scale of their respective investments but should commit to national consistency

2. **Maximising the benefits of C-ITS** requires an environment where:

   a. all C-ITS enabled vehicles can communicate with each other, and with C-ITS enabled equipment (including devices used by pedestrians, cyclists, and other road users) and infrastructure, irrespective of make/model;

   b. information is able to be transmitted to all C-ITS enabled vehicles, equipment and infrastructure from trusted sources; and

   c. all road network agencies will be able to collect and share data with the objective of supporting C-ITS optimisation across Australian jurisdictions.

3. **Cooperation is key** and this work should be agreed by governments in consultation with industry, and include participation by community and research stakeholders.

4. **Harmonising with international approaches**, including in relation to spectrum for C-ITS use, helps maximise consumer choice and vehicle availability. As Australia currently bases vehicle safety regulations upon the United Nations Economic Commission for Europe (UNECE) World Forum for the Harmonisation of Vehicle Regulations (Working Party 29) model law, it should **look to harmonise with European approaches** in C-ITS.

5. The focus on uptake of C-ITS in Australia should be on **improving road safety, transport productivity, sustainability and reducing emissions**, including to support the development of new transport technologies including connected and automated vehicles.

6. Given the cybersecurity and privacy issues in sharing road and vehicle data, Australia must ensure it has effective and timely solutions to managing the **security of systems and messaging and privacy of data** in C-ITS.

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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?

Intelematics strongly supports a national approach to C-ITS in Australia. In our experience, without national consistency, initiatives with little to no alignment in purpose or approach will be created based on the siloed interests of individual commercial entities or within geographically based jurisdictional boundaries. A national approach will, at a minimum, assist the development of C-ITS in Australia with some level of interoperability and scalability across both geography and industry. Whilst it will not solve all the problems of a very complex solution set, localised priorities and commercial motives, it will provide a set of common tools and language by which initiatives and solutions can be formed.

The draft principles are, by their nature, high level and broad to cover the breadth of this complex topic. So as a first step, this approach has already brought together industry, government, and agencies across multiple jurisdictions. To truly inform investment by industry in C-ITS, some level of detail surrounding each of the principles and how these principles are likely to be adopted will be required.

The WSP Report – Advice on Strategies to support C-ITS in Australia, lists a comprehensive set of findings and Principles for a National Approach that Intelematics supports. Progress towards these will be key in securing the confidence of industry to invest in C-ITS in a coordinated way.

The breadth of possibilities also speaks to Government's ability to resource responses to market opportunities arising from C-ITS, which usually have timeframes based on vehicle model releases, new market entrants (often international) and emerging technologies in the

form of connectivity, phones, watches and other enabled IOT devices. Industry will require Government decision making, participation (smart cities, fleets, emergency services) and, in some instances, investment to be able to reflect market requirements in this broad area.

Australia has other challenges that will need direct and demonstrable progress to secure investment by industry, that talks to Principles 1, 2 and 5 predominantly. Network (and therefore coverage and required latency of C-ITS services), particularly in rural and remote areas remains a concern for all parties who participate in ITS programs. The principles talk to seamless services access across jurisdictions in terms of a consistent deployment, however, the coverage challenge remains and will need proactive approaches to resolve.

Principle 1 regarding national consistency speaks to a seamless experience for road users travelling between jurisdictions. This point appears solely focused on accommodating geographic boundaries. To ensure optimum efficiency and effectiveness of the C-ITS system, consideration should also be extended to the user experience within and between digitised environments, not just geographic ones.

This leads into principle 2a where the desire to create an environment where C-ITS enabled devices of all kinds can communicate effectively is not then limited by poor or complex user experiences that impact adoption and outcomes, particularly for vulnerable or disadvantaged road and transport users or smaller industry participants.

Intelematics envisages an evolution of these principles to create an environment where policies and reforms encourage Public Private Partnerships (PPPs). These PPPs will encourage participation and facilitate adoption of C-ITS solutions.

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?

Intelematics has been an innovator and active participant in C-ITS and intends to continue its involvement into the future. Indeed, we are working to increase and evolve our position in the industry as the requirements of our customers and partners for leading solutions continues to grow. Our investment and commitment in C-ITS is driven by both delivering on our customers' C-ITS requirements and also innovation funding from our parent company RACV.

As one of the few locally owned and domiciled ITS companies supporting global OEMs, Intelematics is unique in the industry. We are working with OEMs locally on telematics-based safety and security services to hundreds of thousands of vehicles. As the prevalence of vehicles being connected continues to grow, we expect these services to scale accordingly, particularly given the challenges OEMs are experiencing while trying to deploy global platforms and services. We also expect the breadth of services being provided to those connected vehicles to expand to create new and improved driving and ownership experience for drivers and operators. A number of road safety benefits will arise as part of almost-instantaneous sharing of accident-related information between vehicles and emergency service providers.

Our activity in the Mobility sector, particularly in Mobility as a Service (MaaS) has strong alignment to services that will be deployed through C-ITS to vehicles, including:

- Safe vehicle usage and protection of vulnerable road users (vehicle and non-vehicle)
- Convenience services to assist with fuel, charging, parking and navigation
- Vehicle utilisation and alternatives
- Multi modal travel services that include personal automobiles
- The progression to autonomous driving and the requirement to understand what is occurring on the network

Similarly, our traffic and incident data are already being utilised to assist with planning and development of new transport corridors and real-time data is available through our API services. We expect these services to play key roles in assisting C-ITS services with what is happening out on the transport networks.

Intelematics also envisions the work that we are doing with freight and heavy vehicle providers, emergency services providers (real-time access to accident-based information) and road assistance and tow-truck service providers (attendance at breakdowns affecting traffic) to be the cornerstone of some of the early C-ITS programs in which latency requirements may be less stringent. Existing and widespread infrastructure (e.g. SCATS) also exists for the capture of vehicle, emergency services and pedestrian-based information.

Intelematics has based its real-time traffic and telematics programs on widely used international standards and continues to liaise with international standards bodies and contribute to these standards (data, communications, service).

We will continue to expand this activity as we expect an alignment with proven standards and methods over the next few years. This requirement is called out in the principles and it is something we agree with.

Based on these real-time traffic services, Intelematics sees its experience in broadcast and the use of innovative AI-driven technologies to source and interpret data from multiple sources as being further utilised through C-ITS. This is particularly the case for natural disasters and emergency events which are dynamic in nature and impact both safety and the ability to travel in affected locations (fire, flooding, road closures, exclusion / evacuation areas).

Over our 20 years of operating in the sector, we have seen technologies rise and retire. We have also been at the forefront of new technologies that have failed to deliver on their promised benefits and outcomes due to lack of consumer take up and/or appropriate funding levels. Some caution should be given to the proposed investment ratio of 1-7% government and the balance by industry over the time frame proposed. Private enterprise investment cycles and decisioning may greatly hinder the target state envisioned by the government over the coming decade. Government investment frameworks should accommodate and manage the risk of private investment stalling and government investment in infrastructure being underutilised at best, and redundant at worst.

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

Intelematics views other commercial vehicle-based connectivity services in Australia as enablers for a successful evolution of C-ITS in Australia. Whilst the OEMs, cloud and mapping providers will be able to talk more specifically to the direct impacts, Intelematics can talk authoritatively to the service delivery aspects associated with C-ITS.

Our position is that C-ITS is already underway in the Australian market, and that the adoption of connected and mobility services is quickly increasing in scale and complexity. For a cooperative and aligned approach outlined by the draft standard to exist, C-ITS will need to support and enhance vehicle connectivity systems, that is, impact them in a positive way that promotes their evolution and adoption.

Data transfer, sharing and security are significant considerations and are addressed by the principles. These service 'enablers' will need to be aligned and trusted across all players in a C-ITS ecosystem. An Intelematics senior executive co-chairs ITS Australia's National Transport Data Community of Practice (COP). Based on our experience dealing with data from public and private entities, and what is discussed at the COP, this data alignment is significantly lacking. Fundamentals such as privacy, appropriate use, jurisdiction, compensation for investment in data and of course structures and standards are still to play out. Whilst there is no easy solution, a cooperative approach will need to be actively promoted and supported for the draft Principles to progress. The alternative would be to expect the connected services providers to develop their own co-ordinated approaches to data availability, content, and structure.

C-ITS will impact the vehicle connectivity systems in a positive sense by providing the basis for expanded services across a wider network of vehicles. We expect this expansion to align well with organisational plans to grow their services in predictive, diagnostic and real-time information provision to assist both road user safety and convenience and road network infrastructure repair. Increased connectivity will support new services and business models and provide greater interaction between the OEMs and their customers – drivers, fleet owners, freight companies and micromobility users.

Funding models and the inherent cost to introduce C-ITS capability across vehicles, infrastructure, micro mobility and the cost of running networks has long been a discussion point for the wider adoption of these services. Part of adopting the Principles and having the connectivity systems across the industries listed will be the presence of a viable business model and funding solutions aimed at reducing the technology cost-curve and the removal of duplicated investment and infrastructure.

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?

Intelematics, as a member of the iMove CRC has confidence that the type of approach detailed above works well for promoting the research and creation of innovative solutions and could be readily scaled as required for development of an Australian C-ITS system.

There are existing structures that have shown to bring together industry and agencies in the creation and management centralised systems for enabling C-ITS. For example, Intelematics has strong relationships with the state-based Road and Transport authorities, whereby we ingest and synthesise road and incident data nationally, creating services used by OEMs, governments and other private industry players. To reduce capital investment required and better manage risk, it's important that existing public and private capability is understood and leveraged, not recreated or disbanded.

Intelematics, in its experience in developing constructive and collaborative partnerships with government agencies, network managers and device suppliers understands that these types of partnerships carry a number of considerations that need to be addressed including:

- IP ownership and assignment
- Recognition of value of what each party brings to the partnership and the division of cost and revenue for future developments.
- Access to markets
- Ability to commercialise resultant services.

These and other considerations would need to form part of any agreement.

Intelematics would recommend that some early and lower-risk projects be established to prove out the approach.

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

Intelematics believes a positive and productive next step would be to establish a governance structure that actively supported the adoption of C-ITS by clearing the path for its development and adoption. This could take the form of a governing body with oversight of enabled working groups made up of government agencies and industry. Central to this would be the setting of achievable milestones and allocation of funding and decision-making capability to stay on track.

Intelematics would also like to see opportunities taken to put the Principles into action via existing in-market solutions and capabilities. For example, ITS Australia and Intelematics have presented the concept of replicating the European requirement that mandates the availability of e-Call in all new vehicles in Australia. We support this initiative for the safety benefits it has proven to provide to the travelling public, and the ability to scale existing services in a public and private partnership model.

This program would address each of the C-ITS principles, working with OEMs, emergency services and telematics providers utilising Government endorsed data and service processes. This is the type of contained program that can demonstrate to the wider C-ITS community the benefits of adopting the principles.

Another step would be to look at plans for extending the reach of the test bed studies and the wider adoption of C-ITS spectrum to prove out the scalability of each.

Version Date	Version Number	Notes
02/02/2023	V 1.0	Version approved for submission