FCAI Submission to NTC On-road enforcement for Automated Vehicles in Australia

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Summary

The FCAI welcomes the opportunity to respond to the NTC's discussion paper on "On-road enforcement for automated vehicles" in Australia. This response builds on our previous submissions. The points below summarise our views which are further expanded on in the following pages.

- Complex Automated vehicles (AV) technologies are often developed across numerous locations according to global standards and typically AV products will be initially deployed to markets that align to these global regulations. On-road enforcement will also need to consider how this technology is being globally developed and will need to principally align to these principles. Unique requirements for individual markets are not helpful and should be avoided should Australia wish to adopt the benefits that AVs will offer Australian society. Australia needs to develop laws and regulations that are largely harmonised internationally and therefore needs to remain flexible in how we prepare for and implement our approach to avoid the risk of any inconsistencies impeding the introduction of AVs in Australia.

- For global automotive manufacturers to make AVs available for Australia's small (by world standards) population they need:
    - Clarity of the laws and regulations that will apply,
    - Consistency of laws regulations across Australia as well as with those being developed internationally,
    - Certainty of regulation and the legal environment surrounding their introduction and deployment.
- FCAI recommends that the In-Service Safety Regulator needs to develop a "No fault – crash investigation" capability to support State and Territory crash investigators.

- New processes will need to be adopted to institute road rule changes in a nationally consistent manner that considers a public consultation process that appropriately considers the cost benefit analysis. Of course, where changes are required, appropriate timeframes to implement hardware and software changes and cost allocations should be determined. Should rule changes be implemented that render an ADS inoperable, indemnification of the supplier will need to be applied.

- A new State and Territory policing philosophy will need to apply where ADS vehicles contravene road rules. The focus should not be punitive, it needs to be focused on the primary causal factors. This will require a complete rethink of the way local jurisdiction policing is undertaken.

- FCAI acknowledges that AV development is still underway. Therefore, whilst standards are being developed through international processes such as the UN working Party 29, it is difficult to contemplate specific law enforcement requirements in Australia and the associated legal changes required until these are finalised.

- FCAI recommends that as the AV standards are developed the NTC consider proposing an ongoing collaborative process between law enforcement and registration authorities with vehicle manufacturers / importers and other potential ADSEs. As the regulations are developed then the collaborative approach might assist with what laws are specifically required going forward.

INTRODUCTION

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 in 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.

It is the development of Advanced Driver Assistance Systems (ADAS) progressing to the increasing levels of automation that can reduce and ultimately eliminate driver error from the driving task. As a result, this can contribute substantially to driver support, and where necessary or desired, take control with the ultimate aim of improving road safety.

FCAI notes that AV technology development is still at the nascent stage with many overseas jurisdictions considering and debating the various regulatory options to manage these technologies with several different approaches being considered and, in some cases, commencing to be implemented. Enforcement rules will likely differ or require development depending on the level of technological maturity of AVs deployed on public roads. For example, the rules regulating AVs operating at SAE level 3 (conditional autonomy) or SAE level 4 (high autonomy) likely need to capture the role and responsibilities of the fallback ready user who may be able to (or required) take control of a vehicle or respond to enforcement directions. This will presumably no longer be a requirement when regulating SAE level 5 fully autonomous vehicle, although it may be appropriate for the human passenger (if any present) to have responsibilities to respond. This would also depend on technological capabilities of the AV - for instance, if there is an overriding ability of a passenger to stop the vehicle and when this is appropriate to use.

It is vitally important that as Australia progresses to develop regulatory options that close attention is paid to international developments and that Australia remains flexible in our regulatory approach enabling us to take advantage of these beneficial global developments. If Australia's regulatory approach diverges significantly from international norms there is a risk that our members' ability to effectively supply AVs to the Australian market will be hampered. This would deprive Australian consumers of the benefits of cutting-edge technological developments. FCAI welcomes the attention

that the NTC's report has paid to certain international standards and norms being developed and urges the commitment to continue.

The FCAI will respond to certain elements of the discussion paper, principally those that relate or interact with the development and introduction of AVs into the Australian market.

We should also note that a significant body of work still needs to be undertaken to align State and Territory Road laws and signage. We acknowledge the previous work of the NTC in this regard, there is still a lack of standardisation and inclusion of AV specific requirements to give practical effect to current enforcement provisions, which has been discussed in previous FCAI submissions. An ideal situation would be to finalise the development of National Road Laws that were fully implemented by States and Territories where derogations do not exist. A couple of examples of laws that are not uniform are as follows:

- U-Turn laws
- Passing an emergency vehicle with lights flashing
- School zone requirements
- Increasing introduction of non – ISO standard speed limit signs.
- Enforcement powers, such as who is authorised to stop vehicles

2. Providing directions to automated vehicles

Q2: WILL EITHER OF THE OPTIONS PROPOSED – THAT IS, THE PROVISION OF GUIDANCE DOCUMENTATION OR THE ADDITION OF DIRECTIONS TO THE ROAD RULES – BEST OFFER A PATHWAY FOR GIVING AN ADSE INFORMATION ON HOW TO BUILD THE CAPABILITY OF THEIR TECHNOLOGY?

FCAI has a preference for Option 2 namely, specifying the type and method for giving directions in road rules.
Option 2 has the mutual benefit of ensuring that an ADSE maintains compliance whilst at the same time ensuring that new road rules developed are undertaken at the Australian Road Rule level which can then filter through to State and Territory Road rules (given that each State and Territory generally adopts the rules into their own legislation). Development of regulations at the Australian Road Rule level ensures that a rigorous process exists for evaluating proposed road rules and that clear implementation guidelines exist that can consider the international best practice as well as both the software and hardware requirements to cater for such road rule changes. In addition, Option 2 also has the benefit of facilitating legal certainty with regard compliance with regulations around giving directions to AVs as it will set clear legal requirements for industry (provided State and Territory Governments codify the Australian Road Rules into domestic legislation).

Whilst the industry's preference is for Option 2, there may still be role for some guidance material to complement amendments to the Australian Road Rules, noting that development in this area is continuing.

Q3: IF GUIDANCE DOCUMENTATION IS PREFERRED, WHERE WOULD THE GUIDANCE DOCUMENTATION BE BEST PLACED?

FCAI's preferred option is option 2, however there still may be a requirement for guidance material. Where this is found to be necessary, then FCAI strongly believes it must be centrally located and would suggest that the newly established "In Service Vehicle Regulator" would be able to have provision for the supply and maintenance of such a facility. It has been acknowledged both by FCAI and a range of NTC reports that both clarity and consistency around the regulation and enforcement protocols for AVs will be a determining factor in the decision of importers and manufacturers to expand into the Australian market. In turn, this will influence the accessibility of AV for Australian consumers, which can have a long terms impact on the public acceptance and adoption of AVs. Therefore, having rigour around what can be posted to the AV guidance environment would be beneficial for all participants as it will act as a single source of fact that ADSEs can confidently rely upon, which enables ADSEs to comply with jurisdictional requirements and any remaining jurisdiction specific nuances more easily. This approach may also reduce the enforcement required, especially during the initial market entry phase, due to a greater understanding of the regulations and foster a more transparent approach, which will likely assist the In-Service Vehicle Regulator in undertaking their role more effectively. Additionally, such an approach allows the In-Service Vehicle Regulator to have oversight of this area, make meaningful additions to the available guidance based on key learnings during the initial roll-out, and accurately inform future decision making.

3. Disabling an automated driving system

Q5: IN WHAT INSTANCES MIGHT AN ADS NEED TO BE DISABLED BY AN ENFORCEMENT OFFICER TO ENSURE SAFE OUTCOMES?

At this stage there is no international consensus on this requirement being necessary, FCAI recommends that at this stage there is no new power necessary for enforcement officers to disable an ADS at the roadside themselves. This is in large part because the need to disable ADS is most prevalent when regulating level 4 and level 5 ADS where a fall-back driver is not used, and the passengers (if any) may not have access to any of the AV's controls. Given both level 4 and level 5 ADS still require a significant amount of development and testing prior to being introduced to Australian roads, the most appropriate approach is to wait for international guidance before proceeding with regulations to disable ADS. Additionally, the use and difficulties that may arise after the integration of level 3 ADS, both in Australia and internationally, will provide key lessons that should be used to inform future regulations.
As Australia will, at this stage, be an importer only (and not manufacturer) of CAVs then it is important to ensure that regulations are not out of step with international development and would impede public deployment. That said, the Australian Government should continue to monitor international developments and review whether a power or design requirement (or both) is required for disabling an ADS remotely, if international consensus emerges or if this technology emerges within the industry. Further, while Australia should remain enlivened to the safety benefits of disabling ADS this needs to be balanced with appropriate training and understanding of AV capabilities (which are not currently known). For example, this is critical to avoid the situation that an enforcement officer, unfamiliar with

AV technology, prematurely disables an AV which could of itself create a safety risk. Restrictions on how an AV is disabled would also need to be considered in light of cybersecurity risks (for example, to minimise the risk a third-party entity can disable or otherwise take control of an AV).

Q7: WHICH IS YOUR PREFERRED OPTION FOR ENFORCEMENT OFFICERS DISABLING AN ADS AT THE ROADSIDE? WHY?

Given that there is no international consensus on the requirement for ADS disablement, industries' view is that the best approach is to adopt the 'No change, with review' option outlined in the NTC report (page 39). However, if there is consensus on the need for a disablement requirement then we make the following comments:

- NTC notes that States and Territories have some of the most adaptable powers in being able to remove a vehicle from the roadway due to a danger or obstruction to traffic. Additionally, it is noted that in some jurisdictions there are some preconditions required prior to exercising this power. Should this be the case then we recommend that the limiting pre-conditions (such as the definition of 'driver' being confined to humans) be removed or amended from the current legislation allowing them to apply to AVs based on the judgement of law enforcement officers. As such, there is no need for State and Territory Governments to introduce specific powers for law enforcement to disable the ADS as existing laws will suffice, subject to minor amendments to broaden the scope of the legislation to capture AVs.

- FCAI recommends that enforcement officers rely on existing danger / obstruction to traffic provisions noting that some of the pre-conditions may have to be amended or removed to cater for AVs (such as broadening the definition of 'driver'). This would be the simplest approach allowing law enforcement to apply a considered approach to what constitutes a danger or obstruction to traffic depending on the circumstances (which is a normal function of discharging their duties). For the purpose of national and international consistency and clarity, this position should be regularly reviewed in light of international developments. Naturally Government should review international developments with the view to international alignment methodologies based on vehicle functions and requirements.

4. Overview of enforcement needs and access to automated vehicle data

Background

As stated in previous submissions to the NTC, FCAI acknowledges the need for law enforcement to access data for crash investigations but highlights the need for a measured approach that limits the data provided to information that is necessary to complete the investigation.

Importantly, FCAI maintains the position that the desire for law enforcement to obtain information cannot extinguish the consideration of both consumer trust and privacy law requirements. FCAI has flagged that, by their very nature, AVs will collect a wide array of data, much of which is not going to be linked to any crash investigation and will likely be considered personal information for the purpose of

privacy law, such as video recordings from inside the AVs. Given this, when access to data is being examined, consideration should be given to distinguishing amongst the different types of data collected, for example Event Data Recorders (EDRs) and Data Storage System for Automated Driving (DSSAD).

Event Data Recorders

It is important to consider that many modern vehicles collect and store data regardless of whether they are automated vehicles or not. The systems that are used are called EDRs and typically these can include but are not limited to the following attributes that are temporarily stored at the time of a not inconsequential traffic accident usually involving airbag deployment:

- Vehicle speed
- Engine speed in RPM's
- Percent of throttle applied
- Brake status (on or off)
- State of driver's seat belt (buckled or not buckled)
- State of airbag warning lamp
- Occupant classification details
- Time from vehicle impact to air bag deployments
- Number of ignition cycles at time of impact
- Number of ignition cycles at time of investigation
- Time between crash events
- Delta-V (change in velocity) experienced
- Steering input in degrees
- Anti-lock brake activation (on or off)
- Transmission status
- Diagnostic fault codes present at start of event
- Stability control (engaged or non-engage)
- VIN as programmed or learned by the module
- Vehicle configuration data

The system will record the status of the vehicle as per above for a period (a few seconds prior to) the accident and a short period (a few seconds) following the accident.

Data Storage System for Automated Driving (DSSAD)

In automated vehicles there is an additional system called the DSSAD, specifically being designed for automated vehicles according to the following design principles:

> *"The automated/autonomous vehicles should have the function that collects and records the necessary data related to the system status, occurrence of malfunctions, degradations or failures in a way that can be used to establish the cause of any crash and to identify the status of the automated/autonomous driving system and the status of the driver."*

The identification of differences between EDR and DSSAD are still to be determined.

The initial automated system requirements being considered are for Lane Keeping Systems and it is expected that as further automated vehicle system standards are developed that further requirements will be added internationally. FCAI considers that it is the data generated by the DSSAD that is primarily relevant to the NTC's discussion paper and not data from the EDR.

Working Party 29 Safety Vision

Working Party 29 (WP.29) recognises that for automated/autonomous vehicles to fulfil their potential in particular to improve road transport, then they must be placed on the market in a way that reassures road users of their safety. If automated/autonomous vehicles confuse users, disrupt road traffic, or otherwise perform poorly then they will fail. WP.29 seeks to avoid this outcome by creating the framework to help deliver safe and secure road vehicles in a consistent manner, and to promote collaboration and communication amongst those involved in their development and oversight.

The level of safety to be ensured by automated/autonomous vehicles implies that "an automated/autonomous vehicle shall not cause any non-tolerable risk", meaning that automated/autonomous vehicle systems, under their automated mode (Operational Design Domain (ODD) or Operational Domain (OD)), shall not cause any traffic accidents resulting in injury or death that are reasonably foreseeable and preventable. Based on this principle, this framework sets out a series of vehicle safety topics to be considered to ensure safety.

FCAI Comment

FCAI notes that it is important to distinguish between what data is being referred to in NTC's discussion paper, which seems to reference automated vehicle data as all data that an automated vehicle may record regardless of whether it is related to automated vehicle operations or not. FCAI has the view that such references are too high level and encapsulate a range of data that should be protected, both due to privacy law and to meet consumer expectations, unless an exception applies.

We also note the preference by "Stakeholders" (which we gather to be law enforcement stakeholders) to gain immediate and unfettered access to all data that the vehicle may record.

The industry is developing technological capabilities to ensure that automated vehicles are as safe as possible in line with the WP.29 Safety Vision, this can include in vehicle monitoring systems as well as external vehicle monitoring systems along with a large range of recording systems for various purposes. Whilst these systems are being introduced, they are intended to be used for system management and future development to improve road safety. Even at WP.29 there is acknowledgement that these systems are not intended to be made available as a "mobile law enforcement" and that there are many elements that need to have privacy rights considered and would require informed owner consent.
Of course, the risks with providing law enforcement with broad sweeping powers to access all of the data under any circumstances would raise a number of privacy law issues under the Australian *Privacy Act 1988* (Cth) (**Privacy Act**) and may result in public backlash if not managed correctly and could detract from the obvious road safety benefits and mobility benefits that automated vehicles will undoubtedly create. Additionally, the increasing volume and sophistication of cyber-attacks warrants limits on the volume of data collected, stored and disseminated.

Q 10: IS THERE ADDITIONAL AUTOMATED VEHICLE DATA THAT LAW ENFORCEMENT OFFICERS NEED IN ORDER TO RESPOND TO THE ROAD SAFETY RISKS OF AUTOMATED VEHICLES?

Considering the above, and in line with WP .29, NTC should continue to follow international developments in DSSAD performance elements for ADS that are scheduled for June 2024.
EDR performance elements guidelines are scheduled for November 2022.
EDR Step 2: Consideration of additional technical requirements to current UN Regulation regarding Trucks and Buses is scheduled for March 2023.
Finally, there needs to be a robust discussion on law enforcement access in line with the international privacy principles and alignment to Australia's Privacy Principles in the Privacy Act before any additional powers are made available to law enforcement.

By way of example, the FCAI refers to the Act Amending the Road Traffic Act and the Compulsory Insurance Act (**Autonomous Driving Act**) which entered into force in Germany on 28 July 2021 and enables autonomous vehicles up to SAE level 4 to operate in appropriate areas. The Autonomous Driving Act requires that the registered keeper must store and save certain information for the evaluation of accidents and near-accident scenarios. For instance, this includes number and times of use as well as activation and deactivation of the autonomous driving function. The act will be reviewed by the German Federal Ministry of Transport and Digital Infrastructure in 2023.

Q 11: WHAT IS YOUR VIEW ON WHETHER THE LAW SHOULD EXPLICITLY STATE A TIME LIMIT ON PROVIDING LAW ENFORCEMENT WITH ACCESS TO AUTOMATED VEHICLE DATA?

It is the express intention of WP.29 to ensure that the DSSAD contains all the necessary data so that the "automated/autonomous vehicles collect and record the necessary data related to the system status, occurrence of malfunctions, degradations or failures in a way that can be used to establish the cause of any crash and to identify the status of the automated/autonomous driving system and the status of the driver."
On this basis and subject to further consideration and consultation on privacy law considerations, DSSAD data should be available to law enforcement as soon as is reasonably practicable considering that it is likely that storage of the DSSAD data may not always be contained on-board the vehicle.
Whilst a time limit implies a minimum time from request to supply, it is important to understand that should the vehicle be repaired and operated post a crash, the DSSAD data will not be retained over the longer period and therefore the system will be limited in its capability to comply with a delayed request.

5. Access to data at the roadside and more broadly

Background

As stated previously the purpose of the DSSAD is quite clear from a WP .29 perspective and the data contained should be reasonably and easily made available to law enforcement officers in accordance with the reasonable provisos to account for privacy law obligations, such as the purpose for which the data can be accessed and what disclosure limitations apply. We note that NTC desire a clear definition of

what ADS operational data is relevant to law enforcement. FCAI contends that data generated by the DSSAD would provide an appropriate means of defining and limiting the relevant data.

From a local law enforcement perspective, there is a strong need to be able to ascertain:

- which party was in control of the vehicle at a particular point in time;
- the level of automation engaged any transition requests or prompts to the human user; and
- factors causing or contributing to a breach of a road traffic law or crash.

The DSSAD is designed to fulfill this function allowing local law enforcement to be able to understand who was in control and critically what hand over requests were made. As a result, where local law enforcement determine that the vehicle is under human control, then normal road traffic law and driver licensing principles should apply.

Where local law enforcement determine that the vehicle was under ADSE control, then a new process involving the Automated Vehicle In-Service Regulator is required and the focus of this regulator should be on identifying the root cause of the incident in question – not dissimilar to the No-Fault investigations undertaken by the Australian Transport Safety Bureau (ATSB). The primary purpose of these investigations is to identify the underlying causes with the intention to improve system safety at a holistic level.

It is important to understand that when a vehicle is under ADS control, liability for relatively minor traffic offences is an inappropriate concept. FCAI discussed this aspect in some detail in our last submission to NTC "The regulatory framework for automated vehicles in Australia".

It is expected that there will be a range of approaches from ADSEs and manufacturers as to how the data will be stored both on and off the vehicle and the methods for retrieval. No matter which methods are employed, the data will be made available to local law enforcement as required and once these decisions are made through global forums such as WP.29 and then the AV standards are developed through bodies such as the International Standards Organisation (ISO) or Society of Automotive Engineers (SAE).

In general, FCAI notes that the purpose of the DSSAD as stated earlier is primarily designed to support law enforcement and the powers to access this data needs to be defined in State and Territory laws (taking into account privacy law obligations). However, if States and Territories wish to gain access to other forms of Vehicle Generated Data (VGD) or stored consumer data (which we believe is superfluous to the requirements of law enforcement), then there will be significant legal and commercial barriers and limitations associated with this approach, including:

- privacy law issues;
- consumer backlash / lack of acceptance; and
- criminal law issues such as chain of evidence, rights to a fair trial and the vehicle acting as a mobile law enforcement instrument.

FCAI agrees that clear and consistent guidelines require development across all States and Territories that fall in line with international guidelines developed through WP.29. It is likely that the specifics of

these requirements will require updating over time or made generic to accommodate the changes that are internationally determined and are expected to be incorporated into DSSAD specifications. As mentioned, developing unique Australian requirements that are out of 'lock-step' with international regulations will limit AVs being introduced into the Australian market. However, regard should always be had for the Australian standard and the impact of any change on the ADSEs to preserve the consistency and clarity amongst the industry.

Government and Industry integration
Automated vehicle requirements and regulations are still in the development stage. On this basis it is extremely difficult without having these standards in place and finalised to determine the exact requirements of law enforcement. On this basis, FCAI supports developing a collaborative relationship approach would be the most productive method to progress the development of AVs and the regulatory environment required to enable these products to the Australian market.

Q16: COULD ALIGNING ADS OPERATIONAL DATA WITH THE DESCRIPTION OF RECORDED DATA IN A (FINALISED) ADR 90/01 CAUSE ANY ISSUES?

It would be more appropriate to align ADS operational data with the data required for DSSAD, given the purpose of the DSSAD previously described. The DSSAD requirements for Lane Keep Systems have all but been finalised. However, DSSAD requirements for other automated vehicle driving systems have not yet been finalised and will most likely be added to over time. The ADS operational data needs to consider future developments and needs to be structured appropriately.

6. Additional data availability and access considerations

Visual Indicators as a requirement in Australia
FCAI recommends monitoring international developments in this area and align with internationally adopted regulations.

Access to data from in-vehicle cameras
Not all AVs are proposed to have in-vehicle camera systems. The in-vehicle cameras are not being installed for law enforcement purposes and allowing law enforcement access to this data may be inappropriate given Australian privacy law obligations. In-vehicle cameras are developed for monitoring the fall-back ready user for attentiveness and actions to determine continued AV operation and therefore whether the vehicle decides to enact a Minimum Risk Manoeuvre (MRM). Additionally, recordings are likely to be short and overwritten by later data.

General comment on data dissemination
There is a wide breadth of data that may be considered vehicle generated data, including location, destinations, phone data and information about the use of the vehicle (speed, braking, etc).
FCAI has previously raised that vehicle generated data will likely be of interest to a range of third parties including law enforcement, insurance companies and search engine operators. We note the industry has launched the Voluntary Code of Conduct – Automotive Data Privacy Protection but maintain the

position that additional controls around third-party data sharing (including sharing information between Government departments), use, storage and destruction is necessary. This should include strict limitations on who can obtain this data and how the data is to be used, and when it must be stored and erased, as well as the relevant enforcement mechanisms and oversight structures. Data protection requirements will play a key role in the integration of AVs into the Australian market both from consumer trust and manufacturer cost perspectives.

Q20: DO YOU AGREE WITH THE PROPOSED APPROACH TO ENFORCEMENT OFFICERS HAVING THE PRACTICAL ABILITY TO ACCESS DATA FROM IN-VEHICLE CAMERAS?

Any access by law enforcement to data from in-vehicle cameras would threaten the privacy rights of individuals and would most likely limit AV introduction into the Australian environment given the likely public sentiment/backlash associated with such an intrusion. FCAI does not support this law enforcement request. FCAI reiterates that law enforcement should only have access to data generated by the DSSAD. The DSSAD is primarily provided for the purposes of:
"The automated/autonomous vehicles should have the function that collects and records the necessary data related to the system status, occurrence of malfunctions, degradations or failures in a way that can be used to establish the cause of any crash and to identify the status of the automated/autonomous driving system and the status of the driver."

Therefore, access to in-vehicle monitoring systems is a significant overreach and completely unnecessary.

Q22: WHAT ARE THE CURRENT CHALLENGES IN USING VEHICLE DATA AS EVIDENCE?

Event Data Recorders (EDRs) have been installed in many vehicles for some years and the data has been used in legal situations for about the same period with varying levels of success.
The data that is contained within these systems is raw data and does require analysis and interpretation to understand how the various elements interact as well as applying the data sets to the physical environment of the situation being analysed.
The vehicle will record several parameters as previously described over a period. The accuracy of the data will be impacted by several factors such as whether the vehicle has been modified away from manufacturers specifications e.g., whether the wheels and tyres are the correct size.
There are several companies in the Australian market who have the skills to examine and interpret EDR Data and the FCAI considers that this industry is naturally expected to increase their skills to encompass DSSAD information.
Some of the additional challenges can sometimes be the requirements for manufacturers to certify within the legal system that they must be present in court proceedings to certify that the data extracted was obtained from components associated with particular vehicles as well as to the accuracy of the data obtained. This has the effect of inappropriately tying up manufacturer / importer management resources.

In summary, the actual data intended to be used as evidence in court needs to be admissible under Australian laws of evidence.

The data obtained requires interpretation by an expert trained in EDR & DSSAD crash data analysis coupled with a good understanding of the physical crash event environment using all sources of information to compile a detailed image of the crash event.
We note that the physical crash environment will play an enhanced role in understanding the root causes of any AV accident. These vehicles are programmed to ascertain many aspects of the driving environment so issues such as road sign placement, signage and line marking readability, reflectivity, roadworks management will be increasingly important.

There currently exists a lack of a framework around law enforcement access to data where there is a minor accident or traffic infringement (without an accident) by either the ADS or the driver. This issue relates strongly to consumer privacy concerns, specifically in relation to drivers being monitored and therefore held to a higher standard than drivers without ADS. Additionally, whilst it might be appropriate to provide data to a third party in the event of a significant accident requiring investigation, the framework in its current form uses the term 'accident' liberally which could result in even a minor accident triggering the data sharing requirements. This is the case in both Queensland and South Australia whereby, as noted in the NTC report (page 39), there is a low threshold for the activation of the crash investigation powers. Not only does this create a significant task for ADSE's, but it will likely degrade consumer trust and reduce uptake, especially during the market entry phase given that:

1. AVs are not expected to proliferate the market in large numbers initially, they will initially enter the market at the premium level offering or potentially where there are potential labour savings to be made in some fleet applications.
2. Traditional manufacturers take their safety responsibilities extremely seriously and will only introduce AVs to the market following extensive testing both overseas and in the domestic market.
3. AVs are expected to be the next step change in road safety, whilst under ADSE control, the vehicles will not suffer from many of the issues associated with human driver control such as:
    a. Deciding to wantonly disobey road rules
    b. Inattentive to the needs at hand
    c. Drowsiness
    d. Driver distraction
    e. Physical impairment e.g., drugs / alcohol etc. (not suggesting that the fallback driver won't be so affected)

This means that the volume of AVs will be limited to begin with and that the expected number of incidents is likely to be lower than experienced with human drivers today.

7. Interactions with the in-service regulator, ADSEs and registered owners

As a general view, FCAI is currently concerned with the current inability of some States and Territories to share existing registration data with manufacturers / importers when safety recall issues are identified. The FCAI has for some time sought increased data sharing through the National Exchange Vehicle and Driver Information Service (NEVDIS) with limited success even when road safety is compromised (we can provide more detail about recent industry experience on this aspect separately if requested). Under this

backdrop we consider it vital that national exchange systems are developed and implemented uniformly across all State and Territories including:

- Agreed ADS operational data
- Data relevant to offences as described under 7.1
- Whilst NEVDIS could be the repository for who has ADSE responsibility for any given vehicle, there are more options available in a public private partnership arrangement that may be more useful to consider.

Q25: WHAT ARE YOUR THOUGHTS ON THE PROPOSED APPROACH TO ENFORCEMENT OFFICERS SHARING DATA WITH THE IN-SERVICE REGULATOR?

The in-service regulator should be charged with assessing whether systemic safety breaches exist. To enable this the in-service regulator should be the recipient of safety breach notifications.
Again, we point out that that traditional vehicle manufacturers take a responsible approach to vehicle safety and welcome a national incident reporting regime as required under ADR90/01 when they become aware of a safety incident.

However, should such a reporting scheme be implemented ADSEs would require some controls and assurances in place over public disclosure. Vehicle manufacturers are concerned about the media's propensity to report every individual case of an AV incident which is disproportionate to the volume of accidents occurring on Australian roads every day and more importantly the lives lost, and people seriously injured that you would struggle to find any news item report on unless the accident encompassed unusual circumstances. Building public trust when introducing a technology like an AV with the potential to fundamentally change everyday activities is essential to its success.

FCAI acknowledges that AV technology is being held to a higher standard than the current human driver practices. In order to successfully integrate AVs into the Australian market, this practical reality cannot be dismissed by either manufacturers or regulators. Regulators and ADSEs must be able to share information in a way which fosters transparency while protects confidentiality. While FCAI recognises the importance of keeping the public informed, it would be inappropriate for every actual or potential incident involving an AV to be the subject of public reporting.

FCAI believes that a collaborative approach to develop data sharing arrangements would be beneficial to AV incident reporting and additionally to bi-directional reporting that allows for numerous aspects of road safety to be dealt with. Some automotive companies have advised that they are looking for road accident statistics relative to their brand so that they can undertake actions that fall in line with their global road safety objectives.

Q29: DO YOU THINK THAT THE IN-SERVICE REGULATOR SHOULD ESTABLISH A TIME WINDOW WITHIN WHICH AN ADSE MUST PROVIDE DATA?

The industry believes that Key Performance Indicators should be developed between industry and the in-service regulator and that these performance indicators should apply in consideration of technological capabilities. Specifically, the limitations and financial impact of data storage and

extraction, jurisdictional requirements governing information sharing practices and the resource allocation required from the ADSE to ensure data retrieval should all be considered when developing any Key Performance Indicators. Additionally, given the data will often be stored within the vehicle and manually extracted, as opposed to an automatic upload to the ADSE's database, there is potential for the information storage facility within the vehicle to be damaged in an accident. This may result in the data becoming irretrievable, which should be contemplated within both the development of Key Performance Indicators and any data sharing requirements with law enforcements.

Again, the industry suggests that as global development continues, we should monitor these developments and determine what would be feasible, cost efficient and realistic performance standards for data requests and data sharing.

Q30: WHAT IS YOUR VIEW ON THE PROPOSED APPROACH TO ENFORCEMENT OFFICERS SHARING DATA WITH AN ADSE?

The motor vehicle industry would prefer that the in-service data sharing would be managed by the in-service regulator except for DSSAD data. DSSAD data is necessary for law enforcement as previously described.

The new vehicle industry would request a nationally standardised approach that allows for information requests to be made and fulfilled in a systematic and standardised process.

Q31: DO YOU AGREE A PRIVACY IMPACT ASSESSMENT IS REQUIRED BEFORE INTRODUCING NEW DATA DISCLOSURE POWERS?

Yes, new vehicle manufacturers would absolutely request a privacy impact assessment before new data disclosure powers are introduced. This needs to be a thorough process and additionally there may need to be a Regulatory Impact Statement prepared to understand the costs of the new regulations being proposed.

8. Operational impacts on enforcement roles, responsibilities, and resources.

Modified role for enforcement officers

FCAI does not necessarily agree with the NTC's assessment of the modified roles for law enforcement officers. As acknowledged by the NTC, AVs have the potential to reduce the use of police to enforce traffic safety laws. The new vehicle industry agrees that there may be some additional training required for law enforcement.

However, under the above scenarios NTC conclude that States and Territories will need to plan for additional resources, whilst there will be a training role, we expect that the large role that AVs will play in driving road safety outcomes will more than compensate for additional skills development.

Implications of process to the infringement system

Again, we refer to our previous submission where we stated that the infringement system is not fit for purpose in an AV context.

Reference to previous submission "The Regulatory Framework for AVs in Australia"

"FCAI is concerned that insufficient consideration has been made within this document that addresses the changing roles of law enforcement at all levels of enforcement in respect of vehicles equipped with an ADS.

Current enforcement focuses on:

1. *Identification in the first instance of a vehicle not complying with the road laws that apply in the location of the transgression.*
2. *Road authorities then identify the driver who was in control.*
3. *Then a range of penalty actions are introduced which are designed to be punitive and primarily encourage drivers through these range of actions to modify the driver's behaviour.*
4. *The range of penalty actions are commonly:*
    a. *Fines*
    b. *Penalty points*
    c. *Entitlement to drive withdrawn*
    d. *Entitlement to register withdrawn*
    e. *Entitlement to freedom withdrawn*

In the case of ADS equipped vehicles under ADS control, the primary focus needs to change substantially as follows:

1. *Identification in the first instance of a vehicle not complying with the road laws that apply in the location of the transgression.*
2. *Road authorities then identify the driver who was in control.*
    a. *If the human driver was in control, the traditional system can apply.*
    b. *If the ADS was in control, then;*

Revised principles need to apply as follows:

1. *The primary function of the investigation should be to determine what was the "root cause" of the incident or what were the circumstances that contributed to the vehicle not complying with the road rules.*
    a. *Using the traditional penalty regime under these circumstances would be an inappropriate method to deal with these issues.*
2. *The focus should now be developing a full understanding of all the contributing factors:*
    a. *Vehicle design / programming / software or hardware status etc.*
    b. *Road conditions / infrastructure*
    c. *Other contributing factors*
    d. *The vehicle*
3. *Based on the root cause analysis, countermeasures can be developed to prevent recurrence*
4. *Depending on the countermeasures necessary, determine whether it is necessary to apply them to:*

    a. *Other vehicles.*
    b. *Other road conditions / infrastructure.*
    c. *Other factor implications as appropriate.*
5. *Naturally, there will need to be regime where both companies and responsible authorities are encouraged to undertake these remedial actions in a timely and appropriate manner – noting that this will not always be the responsibility of ADS equipped vehicle importer.*
6. *A national reporting system should also be developed that allows for cross sharing of information across all parties including the States and Territories to ensure that learnings in one case are shared across all jurisdictions. This would allow a shared understanding nationally to permit all participants to assess and evaluate the likelihood of occurrence in their spheres of influence."*

We are concerned to note that in this latest paper NTC propose:
"Authorities may need to first determine whether the ADS was engaged at the point of infringement and then determine whether the infringement notice is sent to the registered owner or the ADSE, or both."

ADSEs should not receive infringement notices, they should be advised of the contravention and in conjunction with the in-service regulator, undertake an investigation into the cause of the contravention in a root cause analysis process designed to correct non-conformance and determine whether the issue has systemic potential or not and if appropriate develop a remediation plan.

END OF SUBMISSION