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National Transport Commission
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RACQ Submission to “On-road enforcement of automated vehicles”

Dear National Transport Commission,

The Royal Automobile Club of Queensland (RACQ) thanks the National Transport Commission for the opportunity to provide this submission to the “*On-road enforcement of automated vehicles*” discussion paper. As Queensland’s peak motoring organisation, the RACQ has a vital interest and stake in the future of Queensland’s transport network. On behalf of RACQ’s nearly 1.8 million members, we advocate to ensure Queensland’s transport system maximises safety, affordability, and sustainability.

As a peak advisory body and owner of a highly automated shuttle (EasyMile EZ10 Gen 2) RACQ is uniquely positioned to not only advocate for its members and the public but also provide insights from deploying an autonomous shuttle. RACQ supports the proposal of establishing a nationally consistent approach to enforcement legislation, it is suggested that this commonwealth law be of a significantly high standard so as states and territories are not required to apply supplementary legislation.

As outlined in earlier submissions to the NTC Autonomous Vehicles hold great promise for a range of reasons, not the least of which is their potential road safety benefit, though this benefit is yet to be proven.

Should you need to discuss any of the items raised in this letter, you can contact Tim Mitchell, Transport Planning and Infrastructure Advisor, M. 0448 983 271 or email Tim.Mitchell@racq.com.au

Yours sincerely

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RACQ Submission to NTC


On-road enforcement of automated vehicles

Overview of consultation

On-road enforcement for automated vehicles

Have your say

On-road operation of automated vehicles will create unique challenges for enforcement. The NTC is examining whether state and territory law enforcement officers have sufficient powers to interact with and respond to the road safety risks of automated vehicles. In our discussion paper we also consider the practical aspects of enforcement officers interacting with automated vehicles.



Providing on-road directions to automated vehicles

Enforcement officers may need additional powers to stop, intervene and give directions to an ADS.

Disabling an ADS

Enforcement officers may need additional powers to be able to disable an ADS remotely and at the roadside.

Data needs and enforcement access to automated vehicles

Enforcement officers will need to access data to respond to automated vehicle road safety risks but may need additional powers to do so.

Interaction with the in-service regulator, ADSEs and registered owners

Enforcement officers may need new powers to disclose data and information to other entities for the purpose of running investigations and reporting incidents.

Operational impacts on enforcement roles, responsibilities and resources

States and territories need to consider the potential operational impacts within their jurisdictions to allow for adequate training and investment in infrastructure.

Response to Consultation Questions

Question 1: Do you support amending enforcement powers to ensure enforcement officers can legally provide directions?

There is general support for the proposal of amending enforcement powers to ensure enforcement officers have the legal ability and capability to provide directions.

Question 2: 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 ADSEs information on how to build the capability of their technology

Option 1 will provide broad guidance to ADSE's as to what is required for enforcement interaction protocols. This approach should be adequate to ensure there are no inconsistencies with international approaches.

In relation to the process of complying with guidance within the ADR, once a vehicle is in the market, there should be an expectation that an ADSE is able to update a vehicle's enforcement protocol if there are significant updates to the guidance material. Given the broad based approach in providing this guidance material there should be an expectation that existing vehicles are able to have software/programming updated if applicable. This would then offer confidence to industry, enforcement officers and the in-service regulator regarding vehicle compliance.



Question 3: If guidance documentation is preferred, where would the guidance documentation be best placed?

Given the longer timeframes to amend legislation, it is considered any guidance documentation is best placed with a specified authorised statutory officer to ensure ability to amend in a timely manner.

Question 4: Are there any powers not covered in this paper that may need to be amended to ensure enforcement officers have sufficient powers to use intervention or pursuit tactics?

Remote supervision of autonomous vehicles – vehicles operating as a public transport service will presumably have someone supervising the operation from a remote location. Specific authority to direct a vehicle supervisor or control centre may be worth including.

Consideration may wish to be given to whether enforcement officers have right to access an ADSE's API, in particular it's positioning software. This would be an interesting concept as it is presumed that whenever an automated vehicle is travelling on the road, it will be so for a dedicated trip (i.e. start and end). If Enforcement officers have access to ADSE's API, they will know the destination of a vehicle and subsequently decide whether they need to immediately stop the vehicle or if it is more appropriate to "meet" the vehicle at its destination. For non-urgent matters, this option may be preferable.

In addition to enforcement officers having powers to disable a vehicle's ADS, it is important that any legislation does not prevent incident response units or vehicle recovery crews also having the powers to disable an ADS when attending to an automated vehicle. RACQ's experience as a roadside assistance provider suggests that often incident response units or recovery vehicles are the first to arrive at the scene.

Question 5: In what instances might an ADS need to be disabled by an enforcement officer to ensure safe outcomes?

RACQ considers that it is foreseeable that the following circumstances would require an enforcement officer to disable the ADS:

- In case of Fire Services attending the scene – vehicle could be involved in an incident and there's a risk of fire.
- Collisions involving numerous vehicles and the ADS is disabled to avoid vehicle from leaving the scene or posing a risk to the safety of responders and other road users.
- There's a person of interest inside the vehicle or there is reason to believe a crime has been committed inside the vehicle.

Question 6: If enforcement officers should have a power to disable an ADS, in what circumstances should this power be used? For example, should it only be used where the ADS poses an imminent risk to road safety unless it is disabled, or are there other reasons?

It is reasonable for an enforcement officer to disable an ADS where there is an imminent risk to road safety or the safety of surrounding people/infrastructure/etc. However, to prevent inconsistency RACQ recommends that criteria is developed which clearly defines the parameters for when and how ADS can be disabled at the roadside.

As highly automated vehicles (when operating autonomously) utilise a series of sensors (i.e., UHD cameras and LiDARs) to navigate its route and detect objects (and avoid collisions), a reasonable method for preventing an automated vehicle from 'driving away' would be to park their vehicle or place an object to obstruct its path. The naturally conservative programming of automated vehicles to avoid collisions, would mean that if it was unable to safely manoeuvre around an object it would be unable to move.



Question 7: Which is your preferred option for enforcement officers disabling an ADS at the roadside? Why?

Option 2 appears to be the most practical as it will give specific power to enforcement officers as well as keeping Australia in line with international progress.

Question 8: Do you agree with the proposed approach to enforcement officers disabling an ADS remotely?

Yes, support the proposed approach in relation to disabling an ADS remotely. From a practical perspective there are too many potential security and safety issues that can arise if there's an ability to remotely disable an ADS.

Question 9: Which is your preferred option for the powers and processes for enforcement officers after an ADS is disabled? Why is this your preferred option

Option 2A – if occupants can safely drive a vehicle then they should be allowed to do so (or have sufficient time for another person to attend site to drive the vehicle away), i.e., a responsible guardian. Unless the vehicle is creating an obstruction or danger to other road users it is difficult to understand why it should be towed. This is also assuming if it was the subject of a police investigation, there are other regulations and powers available to remove the vehicle from site.

Question 10: Is there additional automated vehicle data that law enforcement officers need to respond to the road safety risks of automated vehicles?

Consideration of existing legal right frameworks to access data should be applied.

There needs to be clear and unequivocal guidelines to protect privacy when drafting provisions for vehicle data.

Question 11: What is your view on whether the law should explicitly state a time limit on providing enforcement with access to automated vehicle data?

RACQ suggests that as a principle statement a time limit for providing access to automated vehicle data should be “as soon as practicable” and for clarity, specific timeframes should be identified for particular circumstances or scenarios.

Clarification for NTC:

- Will information sent directly to an ADSE repository that is based overseas be applicable to these timeframes?
- When discussing timeframes, has the concept of a sunset clause been considered – meaning that beyond a designated set of time, an ADSE would no longer be required to provide data to enforcement officers.

Question 12: What new powers would be required for enforcement officers to access ADS operational data at the roadside?

RACQ supports the proposition of creating nationally consistent powers regarding access to ADS operational data at the roadside by enforcement agencies.

Question 13: Do you agree that there could be greater integration between government and industry as expertise on the emerging technology develops? How practical is this?

There are examples where government and industry have collaborated to test the capability of emerging technology (i.e., RACQ Automated Vehicle Research Program or Transport for New South Wales Regional Automated Vehicle Trials). Undoubtedly greater integration and engagement between



government and industry will result in a higher likelihood of new technologies being brought and tested in Australia, which will benefit several corresponding industries.

Question 14: How could industry grow and develop relationships with government and law enforcement agencies?

An initiative which could assist with developing greater relationships between industry, government and enforcement agencies will be to establish:

- University-industry research programs
- regular events, which provide an environment where all parties come together to share knowledge.
- programs where industry is invited to engage with government and enforcement agencies to develop specific solutions to a problem or workshop policy or guidance material.

Question 15: What new powers do enforcement officers need to access ADS or other automated vehicles' operational data more broadly than at the roadside?

Support the introduction of nationally consistent powers for enforcement officers to access ADS data. It might also be relevant to define data requirements based on the level of automation of a particular ADS.

Question 16: Could aligning ADS operational data with the description of recorded data in a (finalised) ADR 90/01 cause any issues?

It is likely that there would be barriers for ADSEs to come into Australian market if ADR 90/01 is significantly different from rest of the world.

Question 17: Will enforcement officers have sufficient powers to investigate crashes involving automated vehicles?

The proposals outlined in this discussion paper provide sufficient powers (when enabled) to allow enforcement officers to investigate incidents involving automated vehicles. Two separate question needs to be clarified are:

- Will enforcement officers have sufficient technical capability to investigate and interpret data of autonomous vehicles involved in accidents?
- What additional resourcing is required to ensure enforcement officers can successfully investigate incidents with automated vehicles?

Question 18: What are your thoughts on the proposed approach to visual indicators on automated vehicles?

Generally, RACQ supports the concept to have visual indicators on automated vehicles. As a guiding principle, automated vehicles need to be able to be easily distinguishable – whether through visual indicators or other methods, in order for enforcement officers to identify and respond accordingly.

Question 19: What other relevant international or technological developments relating to visual indicators on automated vehicles are you aware of?

The RACQ Smart Shuttle (EasyMile EZ10 Gen 2) has an external indicator at the front and rear of the vehicle. This indicator light will be a certain colour showing if the vehicle is in manual, autonomous mode or if brakes are engaged. In addition to displaying the vehicle's operating mode, it is also used by operators when diagnosing vehicle issues.



Question 20: Do you agree with the proposed approach to enforcement officers having the practical ability to access data from in-vehicle cameras?

Yes, agree with the proposed approach to the extent a vehicle is involved in an incident or enforcement officers have reasonable suspicion that the occupants inside the vehicle are committing or have committed an offence. The key parameters to the use of in-vehicle cameras should include ensuring that privacy isn't unnecessarily impacted through the access of in-vehicle camera footage. Note that this approach doesn't require ADSEs to have in-vehicle cameras or store all in-vehicle camera footage.

Question 21: Do you agree that existing powers to obtain information from vehicle occupants do not need to be amended to accommodate automated vehicles?

Yes, agree that existing powers to obtain information from vehicle occupants does not need to be amended.

Question 22: What are the current challenges in using vehicle data as evidence? What are your views on whether automated vehicle data will be admissible in settling liability?

Data generated from automated vehicles, such as vehicle logs, can be used to recreate an incident involving an automated vehicle. For example, a level 4 automated vehicle will generate a large amount of information with great accuracy by using LiDARs, GPS and other sensors to localise and navigate the external environment. If this vehicle was involved in an incident, then this information can be used to understand how the vehicle was operating to high level of detail. In this example, it should be admissible to utilise automated vehicle data in determining liability, particularly if there were conflicting accounts.

Question 23: Which examples of current in-vehicle technology – particularly in heavy vehicles – would help in considering these issues?

No comment

Question 24: Are new standards or qualifications needed so people who currently give expert evidence can do so for automated vehicles?

Yes, new standards and qualifications are needed if there is an expectation for enforcement officers to undertake the analysis of automated vehicle data. Perhaps it's reasonable to require ADSEs be responsible for providing expert evidence on the functionality of their ADS in response to an enforcement issue. ADSEs would be best placed to retrieve, interpret and analyse all necessary ADS data.

Question 25: What are your thoughts on the proposed approach to enforcement officers sharing data with the in-service regulator?

Generally support the proposal for data sharing, because there could be circumstances where data acquired by enforcement officers is of relevance to the in-service regulator performing its roles and responsibilities.

Question 26: What other options for sharing data are there to consider?

RACQ suggests that further consideration is needed regarding the relationship of data sharing between ADSEs, in-service regulator, enforcement agencies as well as including insurance agencies. Is there provision for ADSEs/in-service regulator or insurance agencies to ensure all data sharing is included and shared amongst agencies as needed? Noting that not all insurance claims involve enforcement agencies.



Question 27: What other data may enforcement agencies need to share with the in-service regulator?

It is reasonable to assume that enforcement agencies would need to share fleet relevant data with the in-service regulator. Fleet relevant data could be important if there are consistent incidents involving a particular type of automated vehicle or ADS which may indicate broader issues with an ADSE.

Question 28: Do you agree with the proposed approach of drafting new powers specifying the types and purpose of vehicle data that can be disclosed?

It would be more practical presently to maintain broader provisions as there are a number of unknowns, and progressively develop more specific regulations once this information is known.

Question 29: Do you think the in-service regulator should establish a time window within which ADSEs must provide data?

Yes, it is reasonable for timeframes to be outlined in relation to the provision of data. It would also make sense for timeframes to vary depending on the complexity of the data request.

Question 30: What are your thoughts on the proposed approach to enforcement officers sharing data with ADSEs?

It's understandable that circumstances may arise when enforcement officers need to share data with ADSEs. It would be expected in these situations where data is shared between enforcement officers and ADSEs that the in-service regulator is kept informed and part of the communication.

Question 31: Do you agree a privacy impact assessment is required before introducing new data disclosure powers?

Yes, a robust impact assessment should be completed prior to introducing new disclosure powers. Presumably, this would also include the in-service regulator, to some extent, to ensure there is no contradictions or inconsistencies with proposed powers.