MUNICIPAL ASSOCIATION OF VICTORIA

National Transport Commission

Safety Assurance For Automated Driving Systems Consultation

Regulation Impact Statement

MAV Submission

July 2018

Submission

Submission has been prepared by the Municipal Association of Victoria (MAV) on the National Transport Commission Safety Assurance For Automated Driving Systems Consultation Regulation Impact Statement.

The MAV is the statutory peak body for local government in Victoria. The MAV engaged with councils across Victoria to assist the Association undertake this work. The MAV would also like to acknowledge the contribution of those who provided their comments and advice during this project.

While this paper aims to broadly reflect the views of local government in Victoria, it does not purport to reflect the exact views of individual councils.

MUNICIPAL ASSOCIATION OF VICTORIA

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1 Executive summary

The Municipal Association of Victoria (MAV) welcomes the opportunity to provide input to the National Transport Commission's (NTC) *Safety Assurance For Automated Driving Systems Consultation Regulation Impact Statement*. The MAV previously contributed to the NTC discussion paper *Changing Driving Laws To Support Automated Vehicles* in 2017.

As road authorities, infrastructure providers, fleet managers and representatives of their local communities, Victorian councils have a strong interest in supporting a smooth transition to automated vehicles (AVs). The MAV supports option 4, but highlights the need for further consideration of a range of potential social costs and benefits, the differing infrastructure needs of roads within the Australian environment, and the level of mandatory self-certification requirements outlined for ADSEs.

Victorian councils recognise the need for the Commonwealth Government to ensure the development of a high quality safety assurance scheme to accommodate the introduction of AVs onto the road network.

2 Introduction

The Municipal Association of Victoria is the peak representative and advocacy body for Victoria's 79 councils. The MAV was formed in 1879 and the *Municipal Association Act* 1907 appointed the MAV the official voice of local government in Victoria.

Today, the MAV is a driving and influential force behind a strong and strategically positioned local government sector. Our role is to represent and advocate the interests of local government; raise the sector's profile; ensure its long-term security; facilitate effective networks; support councillors; provide policy and strategic advice; capacity building programs; and insurance services to local government.

Automated Vehicles that do not require human driver input into the driving task for at least part of the journey are expected to arrive on Victorian roads from around 2020, following a piloting period of activity. Currently there is no explicit regulation covering the safety of these automated driving functions, so this target is very ambitious.

With automated vehicles already having a significant impact on markets, public policy and the community, it is important to clarify what is required for the different levels of automated vehicles to safely operate across Australia, and within local communities to support innovation, investment and community confidence.

As advances in transport technology continue, and trials become more extensive, it is critical that councils are consulted on the implications, particularly as the MAV consultation exercise has highlighted the differences between rural and metropolitan council road needs for trials to be run. It is vital that councils are able to shape outcomes and take up the opportunities offered by future transport through the use of autonomous vehicles.

Due to the relatively new policy space occupied by autonomous vehicles, it should be appreciated by the NTC that there are likely to be differing levels of knowledge and views of automated vehicles across the local government sector.

3. Responses To Consultation Questions

Some of the questions posed in the NTC Safety Assurance consultation are not directly relevant to Victorian councils. The MAV has responded to questions of greatest relevance to local government, as well as using this opportunity to present some additional matters of concern to councils.

3.1 Consultation Question 1 – *to what extent has the consultation RIS fully and accurately described the problem to be addressed? Please provide detailed reasoning for your answer:*

Key points of uncertainty highlighted within the consultation paper which are of most relevance to local councils include:

- **Broad social costs such as traffic congestion, other road users' pain and road asset damage**: a recurring high level comment from councils is that the proposed social, environmental and economic benefits of AV cannot be assumed without a balanced consideration of potential negative impacts.

  Many current discussions on how autonomous vehicles will impact transport and society are based on the capacity for the technology to deliver these improvements, with less focus on what might eventuate based on human factors.

  A range of issues may increase congestion and create other unintended outcomes, including a dramatic increase in who can use an autonomous vehicle if there are no licensing requirements, and whether Australians are willing to relinquish individual car ownership. These potential unknowns need to be given consideration when measuring benefits in a local context.

  Some examples of practical issues and considerations councils have linked to traffic congestion and other road users can be split into benefits and costs. Councils would need to carefully consider the potential balance between them in deciding the best way forward. Some examples of costs include:

- potential adjustments to roads, such as reducing lane width.
- adjust traffic signal locations due to altered travel patterns.
- some councils are already considering drop off and pick up implications of autonomous vehicles, and the potential conversion of on-street parking and taxi zones.
- councils will need to consider where parking and taxi zones are allocated to align with mode share targets and ensure there is no conflict with priority bike networks or public transport routes.
- Electric Vehicle charging infrastructure may also need to be considered if this will be utilised by autonomous vehicles.

Some examples of benefits include:

Reducing lane width could increase the capacity of roads to:
- provide additional space for bike lanes.
- improve walkability.
- alter (reduce) speed limits.

- reduce parking - this assumes the demand for parking (on and off-street) may be unnecessary due to the potential for lower private vehicle ownership.

  MAV supports permit trials before full commercial deployment to research potential issues across different road environments in Victoria. Automation could reduce the costs of motoring making transport as a whole cheaper. Whilst this would be a welcome development in some regards, it could lead to a massive increase in the number of journeys taken. A corresponding increase in congestion, and the need for councils and their road infrastructure to manage a significant increase in traffic could result.

  One of the main transport objectives for some councils is to achieve a shift away from car use towards sustainable transport modes. Councils would be unlikely to support measures which reduce pedestrian and cyclist access and be resistant to pressure to change a locality to accommodate private vehicles, even shared ones.

- **Risk of market failure to deliver a socially desirable level of safety risk management that communities will be happy with**: local councils play a key advocacy role with the local communities they serve, and can help to mitigate public concerns and influence public attitude. A key safety risk communities currently question around AV is the reliability of the computer and software operating the vehicle. A few seconds delay or malfunction could cause a high safety risk given the proximity of a vehicle to other vehicles, pedestrians and cyclists in a road environment.

  As communities start to look for more opportunities to input their feedback and views around the uptake of autonomous vehicles, local councils will be sensitive to this. The potential benefits such as saved lives, increased road safety and less congestion could be promoted to communities by their local councils. At the appropriate time, the development of consistent communication guidelines should be developed with the input of local councils.

- **Existing regulations to manage safety risk**: MAV supports the points made in the problem statement, particularly the view that the current regulatory barriers are insufficient to manage these risks. As advocates for their communities, councils want to see sufficient safeguards put in place, particularly in the early stages of commercial use of AVs while there is low community awareness about how they will operate, and broad concerns about vehicle safety.

  The risk highlighted in the consultation document that a lack of consumer confidence in ADS safety may reduce or delay their uptake, is a potential problem that early engagement with local council road managers could help mitigate.

  The MAV supports the designation of an independent authority at the national level to mitigate some of the safety risk scenarios described in the consultation document (page 19) - including scenario 5 based on localised and systemic road traffic law breaches.

  The MAV also supports a second level of safety assurances such as those proposed in Victoria by the automated driving system (ADS) permit regime. VicRoads can grant permits to individuals or organisations wanting to conduct on road trials of AV under changes to the Road Safety Act passed in February 2018. Under the proposed Victorian

ADS permit regime, state authorities (police and VicRoads) would have a role dealing with scenario 5 outlined above. Councils could play a role in assessing the risks associated with a trial through knowledge of proposed routes and being best placed to identify localised concerns.

3.2 Consultation Question 2 – *what other factors should be considered in the problem statement:*

Currently the problem statement does not give consideration to the fact that there is inadequate infrastructure to support the operation of AVs, and the need to upgrade road infrastructure in a systematic way across the road network (and off-road where relevant) – 85 percent of which is managed by councils.

Local councils do not have the capacity to upgrade existing infrastructure to the requirements of autonomous vehicles including updating line markings and traffic signage. Autonomous vehicles need clear lane markings to navigate road networks and stay within the confines of a single lane. These road markings are not present on the majority of the local road network.

The level of service required on rural council country roads to upgrade their road network to cater for the safety needs of autonomous vehicles could be particularly significant. It should be noted that some concerns from rural councils are likely to be quite different to those from more populated metropolitan councils, including the different character of their roads. Many rural municipalities have a majority of unsealed roads. Even sealed country roads can often be narrow in width (single lane) with gravel shoulders. Conditions on these roads are changeable and often unpredictable, and drivers require a high degree of situational awareness. The MAV would like further consideration given to these environments as part of the development of the safety assurance systems.

Furthermore, a large city CBD area is fundamentally different to the rest of the metropolitan city given the density of people and traffic. Autonomous vehicles may be poorly suited to supporting mobility in busy urban centres.

There is currently no clarity around who would be responsible for overseeing and paying for upgrading existing road infrastructure which may need to be factored into councils' future Road Asset Management Plans (RAMPS), or similar policies. Section 40(2) of Victoria's Road Management Act specifically provides that there is no duty on road authorities to upgrade a road or to maintain a road to a higher standard than the standard to which the road is constructed. There is good reason for this provision given the limited resources of councils in comparison to the size of the road network.

Electric vehicle charging should also be considered within the problem statement. Councils may seek to encourage charging to be off street where there is excess parking, not on the street which should be prioritised for footpaths, bike lanes and trees.

3.3 Consultation Question 3 - *has the consultation RIS provided sufficient evidence to support the case for government intervention? What else should be considered and why?*

3.4 Consultation Question 4 - *to what extent have the community and industry expectations of a regulatory response been accurately covered?*

Communities will expect effective safeguards to be in place when a complex new technology is potentially going to be operating on local roads. The majority of communities would expect the Government to provide this safety assurance and for independent oversight, and not rely on self-certification or self-regulation.

3.5 Consultation Question 5 - *are the four options clearly described? If not, please elaborate.*

3.6 Consultation Question 6 – *are the proposed safety criteria and obligations on ADSEs sufficient, appropriate and proportionate to manage the safety risk:*

MAV supports the proposed safety criteria, although some may be more appropriately addressed at the State Government level.

MAV would like to raise a question around the level of mandatory self-certification requirements outlined for ADSEs in a Statement of Compliance. MAV understands the ADSE will be responsible for safety criteria initially and on an ongoing basis throughout their operation. MAV would raise the issue that reliance on the ADSE would not be sufficient, and suggests the need for an additional and separate independent supplementary certification, issued by a skilled authority to ensure compliance and strategic oversight.

Of the eleven safety criteria proposed by the NTC that will require the applicant to demonstrate their processes for managing safety risks, those of most significance to local councils would include:

- compliance with relevant road traffic laws in each state.

- on-road behavioral competency and how the ADS will appropriately respond to forseeable and unusual conditions that may affect safe operation e.g. road works on a local road.

- testing for the Australian road environment e.g. interaction with road signs in a local area, and testing on different types of roads.

- data recording and sharing for example, real-time monitoring of driving performance and incidents including event data records in the lead up to any crash or near-miss that identifies which party was in control of the vehicle at the relevant time. This could help councils educate and encourage community acceptance of AVs assuming the data reflected improved road safety.

As mentioned in consultation question 1, MAV has been working with the Victorian State Government and VicRoads to support the implementation of permit trials, enabled by legislative changes to the Road Safety Act. More recently MAV has been consulted on the development of the administration of the ADS Permit Scheme which will be administered by VicRoads. MAV

have contributed to providing a high-level overview of the way ADS permits will be granted and how relevant stakeholders, including local councils, will be consulted under the proposed Victorian regime.

3.7 Consultation Question 7 - *are there any additional criteria or other obligations that should be included and why?*

As outlined in consultation question 2, it will be important for AV safety assurance to ensure the appropriate infrastructure is in place on local roads to manage potential increases in congestion. This will range from the need for councils and their road infrastructure to manage a significant increase in traffic, to investment in increased road signage and road markings.

3.8 *Consultation Question 8 - do you agree with the impact categories and assessment criteria? If not, what additional impact categories or assessment criteria should be included?*

MAV is broadly supportive of the five impact categories and assessment criteria included in the NTC multi-criteria analysis approach to assess the options for a safety assurance system. MAV suggests the impact category of road safety should be given a much higher weighting than the other impact categories which are of secondary importance.

3.9 Consultation Question 9 – *has the consultation RIS captured the relevant individuals or groups who may be significantly affected by each of the options? Who else would you include and why?*

NTC selected five impact categories for the multi-criteria analysis – with consideration to affected individuals and groups:

Road safety

MAV strongly supports the inclusion of road safety as an impact category, particularly the focus given to vulnerable road users such as cyclists and pedestrians. Under the ADS permit scheme in Victoria, trialling organisations will need to consider how their trial may impact on existing infrastructure, the risks the trial may pose, and how they plan to address these risks.

Vulnerable road users will need to be considered carefully as part of the safety management of all trials taking place on public roads.

Pedestrians are a key priority for councils and automated vehicles must be proven to have the ability to respond effectively to human behaviour. The risk responses such as fencing off roads and reducing permeability of streets in a locality is substantial.

As an example, within the Victorian Road Safety Road Rules 2017, legal crossing of the road 20m from a signalled crossing – councils support this law in its current form to enable greater freedom of movement for pedestrians, but this might make considerations more complicated for automated vehicles.

Regulatory costs to government

MAV suggests that the costs to local government be considered further, for example the potential requirement for additional staff and training requirements for existing road managers.

Flexibility and responsiveness

MAV would highlight the future infrastructure requirements which will develop as the technology requirements of automated vehicles evolves which will also impact on road managers.

3.10 Consultation Question 10 - *does the NTC analysis accurately assess the road safety benefits for each reform option? Please provide any further information or data that may help to clearly describe or quantify the road safety benefits.*

3.11 Consultation Question 11 - *what additional safety risks do you consider the primary safety duty in option 4 would address compared to option 3?*

3.12 Consultation Question 12 - *does NTC's analysis accurately assess the uptake benefits for each reform option? Please provide any further information or data that may help to clearly describe or quantify the uptake benefits.*

3.13 Consultation Question 13 - *does NTC's analysis accurately assess the regulatory costs to industry for each reform option? Please provide any further information or data that may help to clearly describe or quantify the regulatory costs.*

3.14 Consultation Question 14 - *are there any specific regulatory costs to industry that NTC have not considered?*

3.15 Consultation Question 15 - *does NTC's analysis accurately assess the costs to government for each reform option? Please provide any further information or data that may help to clearly describe or quantify the costs to government.*

The regulatory costs to State Government associated with the safety assurance scheme should also consider councils, and their role in supporting state level road managers such as VicRoads. For example, the costs associated with administration costs including building necessary systems, capabilities and capacity to deliver ADS permit scheme pilots. Some fee and charge revenue may need to be shared with councils assisting trials.

3.16 Consultation Question 16 - *does NTC's analysis accurately assess the flexibility and responsiveness for each reform option? Please provide any further information or data that might help to clearly describe or quantify the flexibility and responsiveness of the options.*

3.17 Consultation Question 17 – *do you consider the relevant factors and conditions for government in choosing an option to be valid? Are there any factors and conditions you do not agree with?*

3.18 Consultation Question 18 - *do you agree with NTC's view on the relevant factors and conditions for government in choosing an option?*

MAV would highlight the most important factors for government in choosing an option as:

- self-certification on its own is insufficient to achieve an acceptable level of safety. MAV supports the consideration of a further independent body to oversee and issue certification to ensure compliance and strategic oversight which can sometimes lack within the self-certification process. MAV would support an additional layer of safety assurance.

- a proactive regulator is required to deal with potential issues as they arise.

- options 2 and 3 cannot cover all forseeable future safety risks, and the broad nature and flexibility of a primary safety duty is needed to manage these.

- an incremental approach to implement a complete regulatory regime is not a feasible option.

3.19 Consultation Question 19 - *has the consultation RIS used an appropriate analytical method for assessing the benefits and costs to the options? What else should be considered?*

MAV is broadly supportive of the method used but would suggest the inclusion of infrastructure in the Australian context, and the as yet unknown potential cost of upgrading roads to safely accommodate the needs of automated vehicles.

3.20 Consultation Question 20 - *on balance, do you agree that the preferred option best addresses the identified problem? If not, which option do you support?*

MAV is supportive of option 4 (further to the questions highlighted in consultation question 7) as there is currently so much uncertainty around the safety assurance of automated vehicles.

MAV is supportive of regulation of the safety assurance scheme at national level, but believe it is appropriate for individual state level government to drive the regulation of factors relating to the road environment such as signage, ADS permit scheme (Victoria is currently the only jurisdiction in Australia proposing a permit scheme), and to support the input local councils have at state level. Furthermore, it should be ensured that the approach of a safety assurance national body considers the importance of local checks and balances at council level, and does not become remote from user problems.

3.21 Consultation Question 21 - *how does your choice of options better address the problem than the preferred option?*

4. Conclusions

New laws and regulations will have a big influence on the introduction of AV, but working with councils can help to shape them for the benefit of local councils and their communities.

The rates and level of adoption will vary as will the type of technology, but this is something that councils may be able to influence through the services they provide, their purchasing power and through their community and economic leadership roles.

Councils will also have to take a view on whether to encourage the adoption of new technology through their decisions on infrastructure.

Whatever decisions councils take they will need to be confident that there are sufficiently strong and independent safety assurance in place for automated driving systems, to protect both their communities and road infrastructure investments.

5. Recommendations

- NTC should note the link between road safety and the uptake of autonomous vehicles impact categories, and the potential and significant infrastructure costs for local councils.

- NTC continues to give councils the opportunity to input on the implications of autonomous vehicles as technology, supporting policy and regulations evolve at national level.

- MAV recommends the impact category of road safety should be given a higher weighting than the other impact categories included as methods for assessing the four legislative options for safety assurance.

- The NTC notes the additional day to day responsibilities and considerations the introduction of AVs will mean for infrastructure managers within both rural and metropolitan municipalities, and acknowledges the different challenges in these different environments.

- NTC takes on board the views outlined in this consultation on behalf of local councils regarding planning at the national level towards safety assurance for automated driving systems, and the suggestion of a further independent self-certification authority.

- As the trialling of autonomous vehicles develops, councils will have to review trial results in line with other key responsibilities such as ensuring the safety and mobility of vulnerable road users, including pedestrian and cyclists.

- The NTC notes the significant role councils can play to foster community acceptance and mitigate public concern towards the introduction of autonomous vehicles across Australia.

- MAV will continue to provide input to national and state level consultations around autonomous vehicles.