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MEMBER OF



**Mr Paul Retter**

Chief Executive and Commissioner  
National Transport Commission  
Level 3/600 Bourke Street  
MELBOURNE VIC 3000

28 July 2017

Dear Mr Retter

I write in response to the discussion paper *Regulatory options to assure automated vehicle safety in Australia*. The Australian Automobile Association (AAA) strongly supports the National Transport Commission (NTC) developing options for a safety assurance system for automated vehicle technology.

The AAA supports the NTC's initial assessment of the regulatory options which suggests that there are significant disadvantages associated with not developing a safety assurance system and continuing with the current approach, largely due to safety risks being sufficiently high or unknown to warrant some level of regulatory oversight and government involvement.

However, the AAA considers that there is also a risk that a nationally-agreed approach will be inconsistent with international standards, conventions and practices. This could be a significant barrier to introducing automated vehicles in Australia, given that the automotive industry is globally integrated and Australia currently takes up less than 1.5 per cent of global vehicle sales. In line with the AAA's other submissions on this issue, we need to ensure, wherever practical, that we are aligned with international developments<sup>1</sup>.

To balance government oversight and industry self-regulation the AAA considers that self-certification (option 2) should be implemented in the short term with a staged, hybrid approach developed in the longer term as international standards and best practice is further developed.

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<sup>1</sup> The AAA has provided submissions to the NTC's previous consultation processes including the *Regulatory options for automated vehicles* issues paper and discussion paper released last year, the *National guidelines for automated vehicle trials* discussion paper and the *Clarifying control of automated vehicles* discussion paper.

For further detail on the AAA's position please find attached responses to the consultation questions outlined in the discussion paper.

The AAA thanks the NTC for the opportunity to comment on the discussion paper and looks forward to progressing this important policy matter into the future.

Yours sincerely

A handwritten signature in blue ink, appearing to be 'M. Bradley', written over a light blue grid background.

**MICHAEL BRADLEY**  
Chief Executive

Attachment: Regulatory options to assure automated vehicle safety in Australia – consultation questions

# Regulatory options to assure automated vehicle safety in Australia – consultation questions

## 1. Should government have a role in assessing the safety of automated vehicles or can industry and the existing regulatory framework manage this? What do you think the role of government should be in the safety assurance of automated vehicles?

The community has a strong expectation that government will continue to ensure new vehicles meet safety standards and this expectation will not change with the introduction of increasingly automated vehicles.

However, given the small size of the Australian new vehicle market and the fact that Australia will soon be a 100 per cent importer of new vehicles, government regulation needs to be carefully balanced with the need to encourage innovation and technology take-up. So, while regulation will have an important role to play in managing and enforcing what vehicles will be accepted, it should be up to the manufacturer to warrant that the vehicle has been designed and manufactured to deliver safe and efficient automated transport in line with relevant international standards and best practice.

## 2. Should governments be aiming for a safety outcome that is as safe as, or significantly safer than, conventional vehicles and drivers? If so, what metrics or approach should be used?

The Australian Government should always be working towards making the vehicle fleet safer, this is a fundamental consideration taken into account when developing new or revised design standards. However, much like the current process, changes to design standards need to be subject to a regulatory impact statement that would take into consideration safety as well as other potential benefits and costs. At the very least, automated vehicles must be as safe as conventional vehicles.

The AAA understands that the NTC is seeking feedback on the *“approach proposed by Nova Systems, whereby safety is defined and measured according to the rate of technical failure and incidents that result in harm to people, rather than agreed metrics of safety based on crash rates, or both”*.

In relation to performance measures, the AAA is broadly supportive of the metrics included in the discussion paper, however greater weight should be added to metrics that track road trauma.

Attention should also be paid to any crashes where automated vehicles contributed to the crash occurrence or severity through inappropriate action.

Performance measures should also track the probability of technical failure as this may be a more accurate reflection of automated vehicle safety, noting that automated vehicles could also reduce the severity of crashes when they do occur.

Lastly, when developing and applying performance metrics the AAA strongly suggests that Australian governments closely follow international developments, such as, progress towards reaching consensus on a definition of safety or if a safety target is adopted by other governments or manufacturers, so that Australia remains in line with international best practice.

### **3. Should the onus be placed on the automated driving system entity to demonstrate the methods they have adopted to identify and mitigate safety risks?**

The AAA notes that a government role to test and validate safety would only be necessary if the safety assurance system was based on a government enforced pre-market approval model. Government testing of evolving technology may delay the arrival of AVs, as such the AAA supports a self-certification system at this stage (i.e. option 3). Under this model the onus would be placed on the automated driving system entity to demonstrate the methods they have adopted to identify and mitigate safety risks.

Manufacturers will have incentives to ensure that any claim in relation to safety is upheld through current consumer law protections. If they misrepresent these claims significant penalties should be applied.

The AAA noted that this position is consistent with the United States Federal Automated Vehicle Policy which suggests that the US Department of Transportation will adopt an approach similar to option 3, with the onus of safety evaluation and validation placed on the manufacturer responsible for the automated vehicle.

### **4. Are the proposed assessment criteria sufficient to decide on the best safety assurance option? If not, what other assessment criteria should be used for the design of the safety assurance system?**

The AAA is comfortable with the proposed assessment criteria for the design of the safety assurance system however some criteria should receive higher weightings for example:

- Management of safety risks; and
- Supporting consistency and alignment with international best practice.

**5. Should governments adopt a transitional approach to the development of a safety assurance system? If so, how would this work?**

The AAA acknowledges that regulators in other countries are in the process of developing safety standards, tools and capabilities to assess and validate safety, as such, an internationally agreed and adopted consensus may be some years away. This uncertainty is compounded by the fact that vehicle manufacturers and technology developers are exploring different applications and mixes of sensor and mapping technologies making it difficult for regulators to develop safety assessments and validation approaches.

Once the technology is more settled, a transitional or 'hybrid' system could be adopted. For example, initially the current system would continue, incorporating some levels of self-certification from manufacturers to manage safety risks, while also allowing some flexibility to support innovation and maximise efficiency. In the longer term, the system could develop into a Pre-market Approval and/or Accreditation model where there may be some elements of self-certification, but which results in more legal accountability and probity and may be more in line with larger international markets.

**6. Is continuing the current approach to regulating vehicle safety the best option for the safety assurance of automated vehicle functions? If so, why?**

The AAA agrees with the NTC's initial assessment of the regulatory options, which suggests there are significant disadvantages associated with not developing a safety assurance system and continuing with the current approach, largely due to safety risks being sufficiently high or unknown to warrant some level of regulatory oversight and government involvement. However, there is also a risk that a nationally-agreed approach will be inconsistent with international standards, conventions and practices.

Inconsistent standards could result in a significant barrier to introducing automated vehicles in Australia, given that the automotive industry is globally integrated and Australia currently takes up less than 1.5 per cent of global vehicle sales. In line with the AAA's other submissions on this issue, we need to ensure, wherever practical, that we are aligned with international developments.

Consequently, the AAA proposes that in the very short term, the existing approach is maintained with elements of self-certification to manage safety risk, before moving to a 'hybrid' model outlined in question 5.

A staged, hybrid system may maximise the protective function of the current system while still allowing some agility that supports innovation. Any initial 'teething' problems could be mitigated by falling back on current, proven systems and processes.

**7. Is self-certification the best approach to regulating automated vehicle safety? If so, should this approach be voluntary or mandatory? Should self-certification be supported by a primary safety duty to ensure automated vehicle safety?**

As noted previously, the AAA supports self-certification as an approach to regulating automated vehicle safety until an internationally agreed approach is formalized. Self-certification has a benefit in helping to promote flexibility and support innovation, and will likely be an efficient approach that could be implemented quickly, but it needs to be supported by more formal requirements as the technology and relevant risks mature.

**8. Is pre-market approval the best approach to regulating automated vehicle safety? If so, what regulatory option would be the most effective to support pre-market approval?**

As noted previously, pre-market approval could stifle innovation and unnecessarily delay the arrival of AVs into Australia. It also has disadvantages in terms of speed of implementation, efficiency, and flexibility. As the technology and standards progress at an international level this may be a model for consideration given its strong approach from a safety, consistency and accountability perspective.

**9. Is accreditation the best approach to regulating automated vehicle safety? If so, why?**

As noted previously, self-certification is supported rather than accreditation at this stage, however this model may be the most appropriate approach in the longer term. Accreditation has safety, flexibility, accountability and evaluation advantages, and so should be considered as an element to any selected model in the longer term.

**10. Based on the option for safety assurance of automated vehicle functions, what institutional arrangements should support this option? Why?**

Institutional arrangements will depend wholly on the model selected to regulate automated vehicle safety. However, in the short term, option 1: *the Commonwealth manages automated vehicle safety assurance* could be utilised given the role the Commonwealth Government currently plays in regulating vehicle standards. This would also ensure a consistent approach is applied across Australian states and territories. If states and territories were inclined to manage the process themselves in the short term (option 4) then the AAA would support a mutual recognition approach. Option 2 and option 5 (i.e. new entities) could be beneficial as the safety assurance system moves to a higher level of maturity in the longer term.

**11. How should governments manage access to the road network by automated vehicles? Do you agree with a national approach that does not require additional approval by a registration authority or road manager?**

A national approach would result in higher levels of consistency across Australia and given our relatively small global market share for new vehicles this is important. If a vehicle is approved for use in one state or territory it should be able to be used in another jurisdiction with similar operating conditions i.e. as noted in question 10, a mutual recognition arrangement could be developed. The current inconsistency is a constant source of concern and confusion for many motoring club members across Australia.

Road authorities also need to ensure that the future planning of their road networks includes the use of self-driving vehicles to ensure such vehicles do not have underused or disabled technologies because of incompatible road network infrastructure. If Australia doesn't keep up with the changes in technology in infrastructure to accompany new vehicle technologies, it could result in a form of technological or safety feature de-specification. As such, while it is important that governments manage access to the road network, they also need to ensure that they look at the whole system not just the vehicles by themselves.

**12. How should governments ensure compliance with the safety assurance system?**

Ensuring compliance would largely depend on the model chosen. However, the AAA would expect that compliance would be managed through monitoring and enforcement in line with current systems and processes.