

Toyota Motor Corporation Australia Limited
Submission to the NTC Consultation Regulation Impact Statement
Safety Assurance for Automated Driving Systems



Submission by
Toyota Australia
to the
**National Transport Commission
Consultation Regulation Impact
Statement**
Safety Assurance for Automated Driving Systems
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1. Key facts

Toyota Motor Corporation Australia Limited (Toyota Australia) operated as a fully integrated manufacturing, sales and distribution company for 54 years until the cessation of its manufacturing operations on 3 October 2017.

Toyota Australia has retained a significant local presence in Australia beyond the closure of local vehicle manufacturing, including import and distribution functions and a significant research and development division. Planning is also underway for the establishment of a Centre of Excellence at its former manufacturing site in Altona.

For the 15th consecutive year, Toyota Australia finished 2017 as the top selling automotive company in Australia, with Toyota HiLux taking the number one sales position for the second year in a row.

Toyota Australia continues to contribute to the development of vehicles that meet the needs of local and international markets. Its research focuses on vehicles powered by a range of alternative fuels and those with the potential for automated driving.

Toyota Australia continues to work towards vehicles that are safe and maintain the standards of durability and reliability which people expect from the Toyota brand.

Globally, Toyota is actively engaged in creating environmentally friendly, safe and intelligent vehicles that will enable mobility into the future. Toyota Australia will play a key role in achieving this global vision through its R&D functions.

2. Introduction

Toyota Australia welcomes the opportunity to provide comment on the National Transport Commission's (NTC) *Safety Assurance for Automated Driving Systems* Consultation Regulation Impact Statement (RIS). Autonomous vehicles present an evolutionary shift in the way transportation is used. Toyota Australia recognises the potential associated tangible benefits provided by automated vehicle technologies, particularly in relation to improved road safety, increased mobility, enhanced productivity and positive environmental outcomes.

Technologies to support advanced automated driving systems will continue to develop rapidly in the future. Toyota Australia supports the objectives identified in the RIS and the exploration of the potential way in which Automated Driving Systems (ADS) may benefit industry, government and community interests.

Toyota Australia also acknowledges that the development of international vehicle regulatory standards for ADS is currently being considered by the United Nations World Forum for Harmonisation of Vehicle Regulations - Working Party 29 (WP.29). In this forum, the International Organization of Motor Vehicle Manufacturers (OICA), incorporating representation from the Federal Chamber of Automotive Industries (FCAI) and the Japan Automobile Manufacturers Association (JAMA), are actively engaged in IWG-ITS/AD to develop regulatory requirements and certification procedures for ADS. It is noted that the Australian Government through the Department of Infrastructure, Regional Development and Cities (DIRDC) is also an active participant in this forum.

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3. Toyota Australia Position

Toyota Australia supports the NTC's initiation of discussion on the adoption of a national safety assurance framework to oversee the commercial deployment of automated vehicles in the Australian marketplace. To identify the impact of policy on industry, government and the community, Toyota Australia supports a collaborative approach which enables Industry to work together with government, road infrastructure entities and representatives of road users. This is important in order to achieve an adaptable safety assurance system framework which both realises the benefits of Automated Driving Systems (ADS) being brought to market and achieves high levels of safety.

In principle, Toyota Australia recognises the importance of implementing a safety assurance system in Australia to govern the deployment of automated vehicles and supports the five impact categories selected for the multi-criteria analysis. However, having regard to ADS' rapid technological advancements, there is a need for regulation to develop with the technology, and Toyota Australia recommends that each impact category and assessment criteria be reviewed at regular intervals in consultation with industry.

The RIS identifies four reform options as proposals to counter the safety risks associated with the deployment of automated vehicles in the Australian market. Whilst the analysis accurately assesses the uptake benefits, further consideration is required to assess the flexibility and responsiveness of each reform option. Toyota Australia supports harmonisation with international regulations and standards as developed by the United Nations 1958 Agreement. This includes the recent movements by the United Nations World Forum for Harmonisation of Vehicle Regulations - Working Party 29 (WP.29) to consider global requirements in the development of international regulations and standards for automated vehicle systems. Toyota Australia also highly recommends that consideration be given to ensure Australia has a nationally consistent approach across federal and state governments.

It is important for Australia to maintain flexibility when considering selection of a reform option until such time that global markets have implemented a comprehensive regime. This will enable the Australian Government to implement international regulatory standards with minimal risk of Australian specific regulatory requirements with associated compliance burdens, which may render automated vehicle technology prohibitively expensive and impact the technology's introduction to the domestic market.

With this in mind, Toyota Australia supports a balanced regulation of ADS, which is mindful of the barriers to adoption which may be presented by inconsistent regulatory burdens imposed on manufacturers and importers of the technology. It is Toyota Australia's assessment that a self-certification safety assurance system as described by Option 2, would have a positive impact on road safety. We believe this could be considered a practical approach, and allow the technology to continue to develop.

Although regulatory cost burden to the Industry has been considered, further consultation is required to more accurately estimate cost implications to ADSE's. Further consultation is also required between industry and government to jointly consider how to appropriately share the burden of compliance cost to secure consumer uptake and increase benefit to society.

It is also noted that whilst Option 2 is described as an '*Administrative* System', it would be supported by existing Australian legislation, and as such, would provide enforceable safety obligations.

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For the reasons outlined above, Toyota Australia believes that, of the options provided within the Consultation RIS, Option 2: *Administrative Safety Assurance System* would provide a regime able to develop with technology and not act as a barrier to innovation through overly prescriptive clauses. Further to this, Toyota Australia believes that Option 2 would best realise the safety and economic benefits of ADS technology being brought to market, while also providing effective safety assurances. As the international regulatory environment becomes clear, and as technology develops, a better informed, nationally consistent, internationally harmonised regulatory framework can be developed and implemented to capture the benefits of ADS, without presenting prohibitive costs for development, reporting, compliance and administration for the Automated Driving System Entity (ADSE).

4. Conclusion

Toyota Australia appreciates the opportunity to provide comment to the NTC *Safety Assurance for Automated Driving Systems* consultation RIS and would welcome the opportunity to discuss additional details on the recommendations proposed.

Toyota Australia supports a collaborative approach which enables industry to work together with government. This is important in order to achieve an adaptable safety assurance system framework which both realises the benefits of ADS being brought to market and achieves high levels of safety.

Such a framework must not be so restrictive that it acts as a barrier to technology development and rollout in Australia. Alignment of an Australian framework to UN-R harmonisation would minimise the risk of a unique Australian regulatory regime rendering automated vehicle technology prohibitively more expensive in Australia, thereby delaying its introduction timing behind other comparable markets.