A national in-service safety law for automated vehicles: Summary of proposals

November 2020

National Transport Commission

Have your say

What to submit

The NTC is seeking your views on the consultation questions in this summary paper and associated discussion paper, and any other relevant views you have on the content of a national law for the in-service safety of automated vehicles. The NTC would like to hear in particular from Commonwealth and state and territory road transport and enforcement agencies, regulators and agencies with a connection to in-service safety, vehicle manufacturers, automated technology providers, road managers, transport industry bodies and any other entities with an interest in the regulatory framework for automated vehicles in Australia.

When to submit

The NTC is seeking submissions by 11 December 2020.

How to submit

Any individual or organisation can make a submission to the NTC.

Making a submission

- Visit **www.ntc.gov.au** and select 'Have your say' on the homepage.
- Send an emailed submission to **automatedvehicles@ntc.gov.au**. You can also use this email address to suggest other preferred ways to submit.

Where possible, you should provide evidence, such as data and documents, to support the views in your submission.

Publishing your submission

Unless you clearly ask us not to, the NTC publishes online all the submissions received. Submissions that contain defamatory or offensive content will not be published.

The *Freedom of Information Act 1982* (Cwlth) applies to the NTC.

Contact us

National Transport Commission
Level 3/600 Bourke Street
Melbourne VIC 3000
Ph: (03) 9236 5000
Email: **enquiries@ntc.gov.au**
www.ntc.gov.au

Contents

Glossary

Term	Definition
Australian Design Rules (ADRs)	National standards for safety, anti-theft and emissions in vehicle design.
Australian Road Rules	National model law intended to provide the basis for nationally consistent road rules in each jurisdiction. These rules do not, by themselves, have any legal effect.
Automated driving system (ADS)	The hardware and software collectively capable of performing the entire dynamic driving task on a sustained basis. It is a type of driving automation system used in vehicles with SAE levels 3, 4 or 5 of automation as established in standard SAE J3016 by the Society of Automotive Engineers International (SAE).
Automated driving system entity (ADSE)	The legal entity that certifies that the automated driving system can safely perform the driving task in place of a human driver. The ADSE will self-nominate by seeking type approval for the automated driving system under the *Road Vehicle Standards Act 2018* (Cwlth).
Automated vehicles	A vehicle with SAE levels 3–5 automation. It is a vehicle that has an automated driving system, which means it is capable of performing the entire dynamic driving task on a sustained basis without human input. It is distinct from vehicles with automated features to assist a driver (SAE levels 1–2), which still require a human driver to perform part of the dynamic driving task.
Department of Infrastructure, Transport, Regional Development and Cities (DITRDC)	Department of the Commonwealth Government responsible for administering the *Road Vehicle Standards Act 2018* and housing the Office of Future Transport Technology.
Dynamic driving task	All the operational and tactical functions required to operate a vehicle in on-road traffic. This includes steering, acceleration and deceleration, object and event detection and response, manoeuvre planning and enhancing conspicuity through lighting signalling. The dynamic driving task excludes strategic functions like trip planning, such as where and when to travel and route selections.
Fallback-ready user	A human in a vehicle with SAE level 3 automation who can operate the vehicle, who is receptive to requests from the automated driving system to intervene and is receptive to evident dynamic driving task performance-relevant system failures. The fallback-ready user is expected to respond by taking control of the vehicle.
First supply	The market entry of motor vehicles to Australia.

In service	Vehicles supplied to the Australian market and are now in use.
In-service safety	The safety of automated vehicles once the vehicles are on the roads or ‘in service’.
Operational design domain (ODD)	The specific conditions under which a driving automation system or feature is designed to function (for example, locations, weather conditions, driving modes).
Road Vehicle Standards Act 2018 (Cwlth)	Commonwealth legislation to control the safety, environmental and anti-theft performance of all new and used vehicles entering the Australian market for the first time, and to set national road vehicle standards. It replaces the *Motor Vehicle Standards Act 1989* (Cwlth) from 2019. The main provisions of the Act came into effect on 10 December 2019. There is a 12-month transitional period, allowing some type approval holders to continue operating under existing approvals until 10 December 2020.
Remote driver	The remote driver (sometimes described as a ‘remote operator’ or ‘teleoperator’) is a human who can operate an automated vehicle but who is not seated in a position to manually operate vehicle controls such as brakes and steering (SAE International, 2018, p. 16). A remote driver may operate the vehicle from outside it or inside it.

Consulting on a national in-service safety law for automated vehicles in Australia

Automated vehicles are equipped with an automated driving system (ADS) that enables them to perform the driving task on a sustained basis without human input. These vehicles have the potential to provide significant improvements to Australian society across road safety, mobility, accessibility, productivity, traffic flow, fuel efficiency and reduced carbon emissions. However, these vehicles may also introduce new types of safety risks. And inconsistent regulatory approaches could delay their benefits.

Since 2016, the National Transport Commission (NTC) has led reforms to develop a flexible and safety-focused regulatory framework to enable this technology when it is ready for deployment. Infrastructure and transport ministers have already agreed to the safety assurance framework for new automated vehicles entering the Australian market. However, we need to ensure automated vehicles continue to operate safely throughout their operational life on the road – that is, when they are 'in service'. Some in-service elements have already been agreed by Ministers:

- There will be a new national in-service safety law
- There will be a general safety duty on the entity that is responsible for an ADS (the Automated Driving System Entity or ADSE) over its lifecycle
- There will be due diligence obligations on executive officers of the ADSE to support its compliance with the general safety duty
- There will be a national regulator for in-service safety to regulate ADSEs, their executive officers and remote drivers of automated vehicles.

The NTC is now seeking feedback on the detailed content of the national law for the in-service safety of automated vehicles in Australia. This paper is a summary of proposals from the NTC's discussion paper, 'A national in-service safety law for automated vehicles'[1], which details the role of regulated parties and the new in-service regulator, the compliance and enforcement framework that overlays this relationship and the implementation of the national law. The questions the NTC is seeking feedback on are contained in this paper.

Our proposals aim to create a modern, fit-for-purpose regulator with powers to manage a flexible regulatory framework focused on safe outcomes. A risk-based approach to compliance and enforcement will see the new regulator work closely with regulated parties to resolve safety issues and achieve compliance with the new law. A safe industry benefits everyone.

The discussion paper forms part of the NTC's roadmap of reform to develop a nationally consistent regulatory framework to support the safe commercial deployment of automated vehicles in Australia.

The NTC will use the public feedback on its proposals for the content of the national law to inform recommendations to infrastructure and transport ministers in 2021 on the in-service regulatory framework for automated vehicles in Australia.

[1] The discussion paper can be accessed at https://www.ntc.gov.au/sites/default/files/assets/files/NTC-Discussion-Paper-national-in-service-safety-law-for-AVs.pdf

Proposals for the content of the Automated Vehicle Safety Law

The purpose of the discussion paper is to consult on the content of the new in-service Automated Vehicle Safety Law (AVSL). The AVSL will cover a range of issues on which the NTC is seeking feedback. Below is a brief overview of the proposals covered in the discussion paper and the relevant consultation questions.

ADSE duties and enforcement framework

Chapter 3 of the discussion paper proposes the content of the ADSE's general safety duty, which is the central feature of the automated vehicle in-service safety framework. Compliance with the general safety duty will require ADSEs to take reasonable steps to manage the safety risks that are within their control. The chapter outlines the limits of the duty and proposes prescriptive duties that aim to provide clarity about how to comply with the general safety duty, without limiting its scope. The chapter notes that the regulator may issue guidance for complying with the general safety duty. It also discusses how the ADSE's obligations under the first-supply framework interact with its duties under the in-service framework. Finally, it provides detail about the operation of a due diligence obligation on an ADSE's executive officers and clarifies the limits of this obligation.

The discussion paper proposes:

- The general safety duty is an outcomes-focused duty that will require the ADSE to take positive steps to ensure the safe operation/performance of the ADS.
- ADSEs will be required to ensure safety 'so far as reasonably practicable'.
- Prescriptive duties under the general safety duty will support the ADSE to achieve compliance.
- Executive officers are officers with decision-making authority who are in a position to influence safety.
- Due diligence obligations will apply only to the extent of an executive officers' personal influence. They will not make executive officers automatically liable for an ADSE's breaches of a general safety duty.
- A defence of 'reasonable reliance' would clarify that it is reasonable for executive officers to rely on information from others where they themselves do not have the requisite technical knowledge.

Question 1: What prescriptive duties under the general safety duty should be included in the AVSL to manage in-service safety risks?

Question 2: What matters relating to compliance with a general safety duty are better suited to guidance than being prescribed in the AVSL? Should this guidance have legislative force?

Question 3: Are existing and proposed regulatory frameworks (state and territory laws, first-supply requirements and general safety duty obligations) sufficient to address third-party interference with an ADS? If not, should interference with the safe operation of an ADS be a specific offence, and how should this offence be enforced?

Question 4: Should the law provide a specific defence for Australian ADSE executive officers who rely on information provided by others, like a parent company, when discharging their due diligence duty?

Transfer of ADSE responsibilities

The corporate entities involved in the automated vehicle market may change over time. Chapter 4 considers the existing frameworks that apply to the market exit and entry of corporations and proposes a process for accrediting a new ADSE where the original ADSE transfers its responsibility for an ADS.

The discussion paper proposes:

- An accreditation process for the in-service regulator to manage the transfer of an ADSE's responsibilities for an in-service ADS to a new entity. The new entity will need to meet obligations relating to corporate presence, minimum financial requirements and data recording and sharing.

Question 5: Please provide your views on the transfer of responsibilities for an in-service ADS from an ADSE to a new entity.

- Should an ADSE be able to transfer responsibility for an in-service ADS to a new entity?
- If so, what powers should the in-service safety regulator have for approving the transfer?

Question 6: If there is no new entity to take responsibility for an ADS when an ADSE exits the market, are recall (including disengagement) under the *Road Vehicle Standards Act 2018* (Cwlth) and recourse under the Australian Consumer Law appropriate measures? Is there any role for the in-service regulator?

In-service modifications and after-market installations

Chapter 5 considers different types of modifications that could be made to an automated vehicle. ADSEs may seek to alter their ADS's functionality while in service – for example, software updates that expand the ADS's level of automation or operational design domain (ODD). Vehicle manufacturers may install ADSs into their conventional vehicles. Business models may emerge that enable ADSs to be installed by commercial operators. Advancements in technology may enable individuals to install kits that confer automation on conventional vehicles.

The discussion paper proposes that in-service modifications made by an ADSE to expand its ADS's ODD or change its level of automation should be approved by the in-service regulator. The discussion paper also proposes the following options to regulate in-service modifications by vehicle manufacturers and ADS businesses:

- Option 1: Approval of the ADS through the first-supply regulator
- Option 2: Approval of the ADS by the in-service regulator
- Option 3: Accreditation of the vehicle manufacturer or commercial ADS installer by the in-service regulator against the three first-supply obligations

With regard to aftermarket ADS kits, given the potential safety risks, the NTC considers that it should be an offence for parties other than the ADSE, those authorised by the ADSE or those authorised by the first-supply regulator or in-service regulator to install an ADS.

Question 7: What should the role of the in-service regulator be for modifications made by an ADSE to an in-service ADS that changes its ODD or the level of automation?

Question 8: How should in-service modifications made by parties other than an ADSE to vehicles to make them automated vehicles be managed? Consider:

- vehicle manufacturers modifying vehicles to become automated vehicles while in service
- businesses that supply and install aftermarket ADSs
- individuals installing aftermarket ADS kits.

Question 9: Are there any gaps in the regulation and proposed regulation of in-service modifications that the NTC has not identified? Are there other options that should be considered?

Functions and powers of the in-service safety regulator

Chapters 6 and 7 propose the functions and powers the in-service regulator will need to carry out its role. The NTC previously consulted on these at a high level in 2019 and we are now seeking feedback on the detail of these functions and powers as well as proposals for additional functions and powers considered since our last consultation.

The following functions are proposed for the regulator: monitoring, education and guidance, enforcement, engagement with states and territories, research, creating standards and customer service. Additional functions could include reporting, crash investigation, accreditation and regulatory approvals. The regulator will initially perform limited core functions, with others to be phased in as the automated vehicle market grows and the scope of the regulatory task increases.

The NTC is proposing a risk-based regulatory approach that gives the regulator enforcement powers ranging from improvement notices to criminal prosecution. The regulator should take proactive action to monitor parties and focus on assisting them to achieve safety outcomes. Further prescriptive requirements on regulated parties may be required, and an indicative list of offence provisions and penalties is outlined in Appendix B of the discussion paper.

The discussion paper proposes:

- The in-service regulator will have a range of functions including monitoring, education and guidance, enforcement, engagement with states and territories, research, creating standards, customer service and reporting to ministers.
- The regulator may also need crash investigation (for enforcement), accreditation and regulatory approvals functions.
- A project team will resolve operational and legal matters before the in-service regulator commences operation.
- The in-service regulator will initially perform limited functions. Additional functions will be phased in as the automated vehicle market grows and the scope of the regulatory task increases.

- A range of powers will enable the in-service regulator to tailor its responses to the nature and seriousness of a breach.
- Powers for the regulator include issuing improvement notices, directions to act, infringement notices, formal warnings, enforceable undertakings and seeking injunctions. The NTC is also seeking feedback on the power to suspend an ADS's operation.
- Prescriptive requirements on the ADSE will ensure the regulator can effectively manage the safety framework and engage proactively with the ADSE to achieve compliance.
- Breaches of the AVSL will be subject to civil or criminal penalties depending on the severity of the breach.

Question 10: Do you agree that the additional functions the NTC has identified may need to be undertaken by the regulator to ensure in-service safety?

- Reporting
- Crash investigations (for enforcement, with a specialist agency like the ATSB to undertake no-blame investigations)
- Accreditation
- Regulatory approvals

Question 11: Accreditation provides an alternate pathway for an entity to enter the market. Are there other purposes for which accreditation should be used in the in-service framework?

Question 12: Do you agree with the functions the regulator is likely to perform in the initial phase following commencement of the AVSL?

Question 13: Are the proposed compliance and enforcement powers proportionate to meet the objective of safely operating automated vehicles in Australia?

Question 14: Do you consider that the in-service regulator should have any of the following powers?

- Recall powers
- Power to suspend the operation of an ADS until a safety issue is resolved by the ADSE
- Power to permanently suspend an ADSE from operating its ADS. In what circumstances would such a suspension be warranted?

Question 15: Do you consider that additional prescriptive requirements may be needed to support a risk-based approach to compliance and enforcement under the AVSL? Please provide examples.

Question 16: Please share your views on the illustrative penalties set out in appendix B.

Question 17: Has the NTC identified the additional powers that may be required by the in-service regulator in addition to the baseline powers provided in the *Regulatory Powers (Standard Provisions) Act 2014* (Cwlth)?

Roadside interaction and enforcement

Automated vehicles operating on our roads will create challenges for agencies responsible for enforcing the road rules. The purpose of existing infringement processes that relate to human drivers should be reconsidered in the context of the risk-based automated vehicle regulation framework being developed. Chapter 8 considers the issues that roadside enforcement agencies will face when interacting with automated vehicles and enforcing the law against ADSEs and human drivers of automated vehicles.

The discussion paper proposes:

- A nationally consistent approach to roadside enforcement should be developed.
- A breach of a road traffic law that occurs when an ADS is engaged, or when a roadside enforcement agency reasonably believes an ADS was engaged, should be taken as evidence of a breach of the general safety duty.

Question 18: Are there other roadside enforcement issues relating to automated vehicle in-service safety that the NTC should consider?

Question 19: How should ADSEs advise on their ADS's interaction with roadside enforcement agencies? Should the AVSL require the ADSE to provide a law enforcement interaction protocol to the in-service regulator and/or roadside enforcement agencies?

Question 20: Do you agree that when a breach of road traffic laws occurs and:

- the ADS is engaged, or
- a roadside enforcement agency forms a reasonable belief that the ADS was engaged at the time of the breach

that the incident should be treated as a potential breach of the general safety duty and not handled through the infringement system for human drivers?

Question 21: Do you agree that when a breach of a road traffic law occurs and a roadside enforcement agency forms a reasonable belief that the remote driver was in control of the vehicle at the time of the breach, that the incident should be referred to the in-service regulator and not handled through the infringement system for human drivers?

Question 22: Do you agree that when a breach of road traffic laws occurs and:

- it is unclear to a roadside enforcement agency which entity is in control of the vehicle at the time of a road traffic law breach, or
- a road safety camera detects a road traffic law breach

that the infringement notice be issued in the first instance to the human driver or registered owner/operator with a process to nominate the ADS or remote driver as the driver if required?

Are there other approaches that should be considered?

Relationship between the in-service regulator and other agencies

Chapter 9 sets out the other Commonwealth, state and territory and local government regulators and agencies that the in-service regulator will need to interact with to carry out its functions and to ensure a coordinated approach to safety assurance for automated vehicles. The discussion paper identifies where there may be overlaps or a close interface in agencies' roles and suggests ways for agencies to interact.

The discussion paper notes:

- Close interaction is needed for the in-service regulator to carry out its functions and to ensure a coordinated approach to safety assurance for automated vehicles.
- Overlapping functions and shared duties will need to be clearly identified and arrangements will be needed to ensure there is no duplication.
- Interactions will be both formal (for example, legislation and service-level agreements) and informal.

Question 23: Are the interactions between the in-service regulator and other regulators and agencies accurately described?

Question 24: Are there other agencies that the in-service regulator will need to interact with?

Access and exchange of information by the in-service regulator

Information will need to be shared between the in-service regulator, other regulators and law enforcement agencies in the performance of in-service safety functions. This exchange will be facilitated by statutory powers, agency agreements and collaboration across entities. Chapter 10 shows the types of information the in-service regulator will require to effectively perform its role and explains the information flows and exchange arrangements that will be needed. It also proposes the information access powers the regulator will require and discusses the limits of these powers.

The discussion paper proposes:

- The AVSL will confer power to enable the in-service regulator to exchange information with other regulators and agencies:
  - for any purpose associated with the regulation of automated vehicles
  - between broadly defined agencies or jurisdictions and industry
  - through direct exchange of information and other methods like agreements.
- The power to share personal information with others will need to be in accordance with information privacy principles.
- A privacy impact assessment will be undertaken before the policy detail of the AVSL is finalised.

Question 25: Are there other information types, purposes or parties relevant to the in-service regulator's access to information?

Question 26: Have the key information flows that the in-service regulator needs to be a party to been identified? Are there others that you suggest?

Question 27: Do the proposed information access powers meet the objectives of the in-service regulator? Are there other statutory powers for information access that the regulator will require to support its compliance and enforcement functions?

Question 28: Do you agree that a specific power authorising collection, use and disclosure of personal information is required in the national law and in state and territory legislation?

Question 29: What privacy protections may be needed around the collection, use and disclosure of ADS-derived personal information?

Legislative implementation of the national approach to in-service safety

Chapter 11 provides an overview of how the national approach for in-service safety will differ depending on the legislative implementation approach chosen for the AVSL. This assessment and the feedback received will inform an updated regulation impact statement on the in-service safety of automated vehicles that will be prepared in 2021.[2] This will assist infrastructure and transport ministers to decide the appropriate legislative implementation approach.

Ministers have agreed that the national approach for in-service safety will be implemented through either complementary Commonwealth and state and territory law, or state and territory applied law. Each legislative implementation approach can achieve the key objectives of in-service safety for automated vehicles. Each has practical impacts on the implementation and operation of in-service safety.

A state and territory applied law will potentially allow broader coverage of parties and operational in-service issues. It would also allow greater control by state governments of ongoing amendments to the law.

A Commonwealth complementary law approach will better ensure national consistency and avoid any potential cross-border issues. It would allow better integration with the first-supply process. A Commonwealth law can also potentially be implemented and updated more quickly.

The discussion paper notes:

- The national approach to in-service safety could be implemented through a complementary law approach or a state and territory applied law approach. Each approach has practical impacts on the implementation and operation of in-service safety.

Question 30: Do you agree with the differences outlined between the legislative implementation approaches? Which approach will best achieve the reform outcomes?

[2] The NTC's 2020 decision regulation impact statement on 'In-service safety for automated vehicles' can be accessed at https://www.ntc.gov.au/sites/default/files/assets/files/NTC-Decision-RIS-In-service-safety-for-AVs.pdf.

Next steps

The content of the AVSL must be decided in order to progress to the next stage of implementing the national approach to in-service safety for automated vehicles and related reforms.

The NTC is seeking stakeholder feedback to the questions listed in this document. This feedback will allow us to refine the national approach to ensure it is fit for purpose when implemented.

The public consultation period runs from 16 October 2020 to 11 December 2020. The NTC will hold consultation sessions during this period and welcomes written submissions.

Following public consultation further targeted consultation will be undertaken with governments. The NTC will make recommendations on the content of the AVSL to the infrastructure and transport ministers in the first half of 2021.

The full discussion paper is available on the NTC website at https://www.ntc.gov.au/transport-reform/ntc-projects/in-service-safety-AVs

National Transport Commission
Level 3/600 Bourke Street
Melbourne VIC 3000
Ph: (03) 9236 5000
Email: enquiries@ntc.gov.au
www.ntc.gov.au