Guidelines for trials of

Automated vehicles

in Australia 2023

Austroads

National Transport Commission

Guidelines for trials of automated vehicles in Australia

First published 2017. Second edition published 2020.
Third edition published 2023.

National Library of Australia

Cataloguing-Publication data:

Guidelines for trials of automated vehicles in Australia

ISBN: 978-0-646-87233-9

Published by National Transport Commission

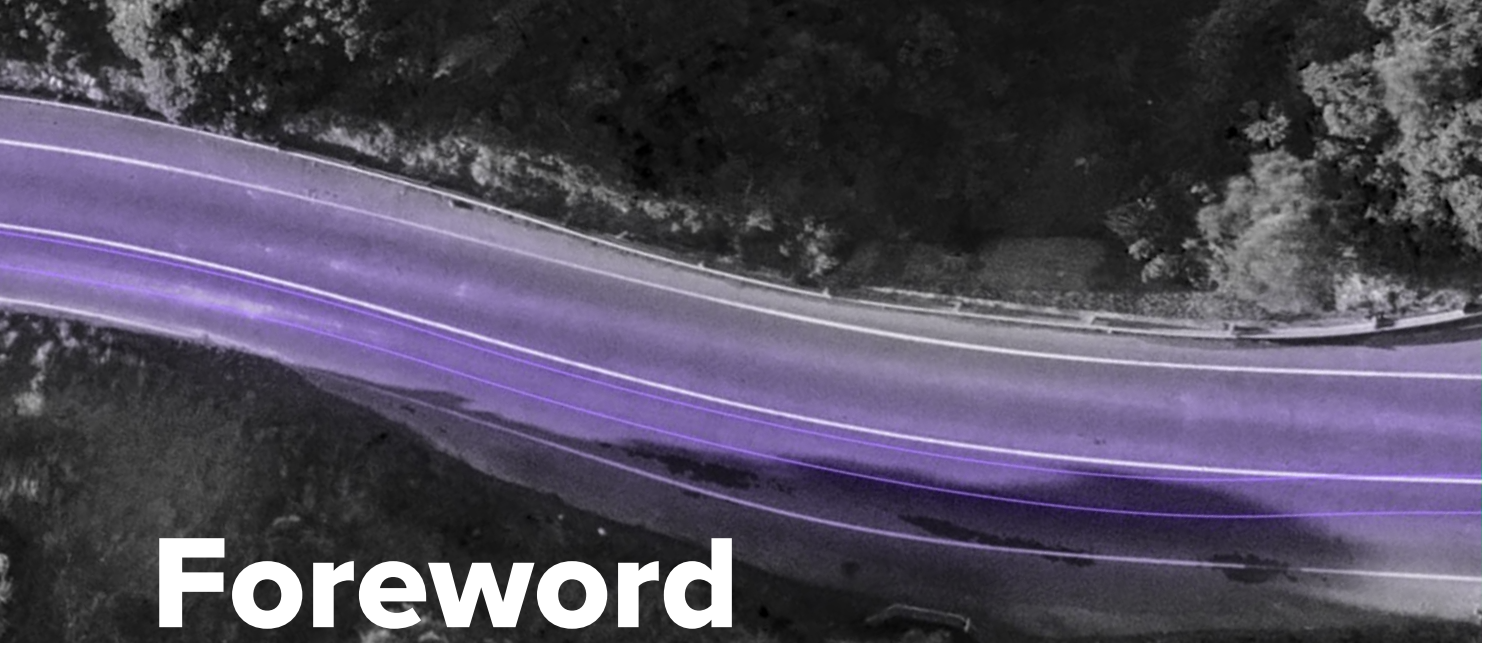
Level 3, 600 Bourke Street

Melbourne VIC 3000 Australia

Phone: +61 3 9236 5000

Email: enquiries@ntc.gov.au

www.ntc.gov.au



Foreword

Automated vehicles have the potential to make our roads safer and increase productivity, but we must ensure they do not increase emissions, car dependency or traffic congestion.

Australian governments are working closely to deliver a roadmap of reform so Australians can gain the benefits of this technology when it is ready for deployment.

Trials are an important step to ensure that automated vehicles can be used safely and efficiently in Australian conditions. In the six years since the Guidelines for Trials of Automated Vehicles in Australia were first published, trials have been run in every Australian state and territory. Thousands of Australians have experienced the technology for themselves.

Trialling organisations and governments recognise the guidelines as a useful tool which provides clarity to industry so trials can take place across the country.

The outcomes focus of the guidelines has helped to facilitate trials of different automated vehicle technologies, operating domains and applications.

This latest update to the guidelines provides further clarity and consistency, to ensure they remain fit for purpose.

The guidelines continue to be an important element of the National Transport Commission's automated vehicle reform program, which will prepare Australia for the safe commercial deployment of automated vehicles.

The National Transport Commission and Austroads recognise the contributions of industry, governments and the community to inform the updated guidelines, and we look forward to continuing this engagement as trials in Australia progress.

Dr Geoff Allan
Chief Executive
Austroads

Michael Hopkins
Chief Executive Officer and Commissioner
National Transport Commission

About Austroads and the NTC

Austroads and the National Transport Commission are working closely with key government and industry stakeholders to develop the regulatory and operational frameworks that will support the deployment and optimise the benefits of automated vehicles.

Austroads

Austroads is the collective of the Australian and New Zealand transport agencies, representing all levels of government.

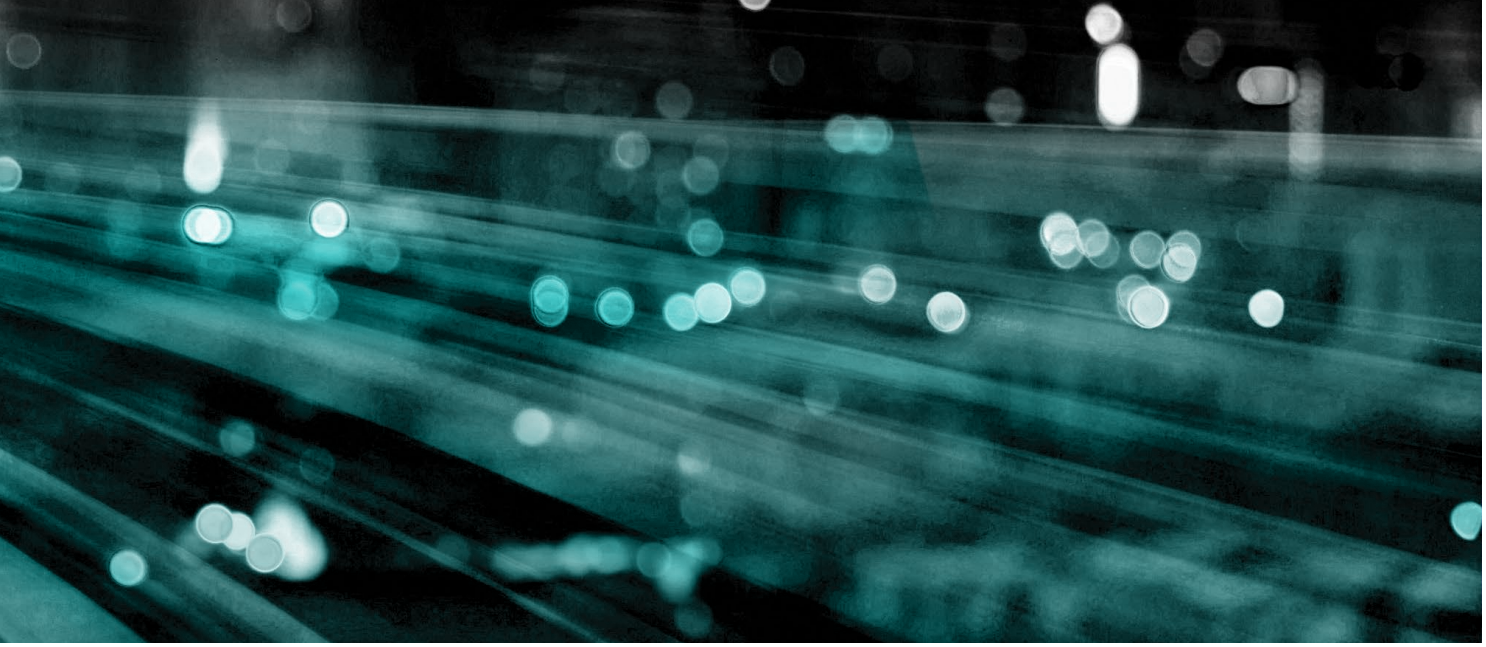
Austroads' purpose is to support its member organisations to deliver an improved Australasian road transport network. To succeed in this task, Austroads undertakes leading-edge road and transport research which underpins its input to policy development and published guidance on the design, construction and management of the road network and its associated infrastructure. Austroads also supports its members to achieve consistency and improvements in the application of registration and licensing practices, processes and systems.

National Transport Commission

The NTC is a national land transport reform agency that supports Australian governments to improve safety, productivity and environmental outcomes, provide for future technologies and improve regulatory efficiency.

The NTC has a legislative requirement to develop, monitor and maintain uniform or nationally consistent regulatory and operational arrangements for road, rail and intermodal transport.

As a key contributor to the national reform agenda, the NTC is accountable to Commonwealth, state and territory ministers responsible for transport and infrastructure who make up membership of the Infrastructure and Transport Ministers' Meeting (ITMM). The NTC works closely with ITMM's advisory body, the Infrastructure and Transport Senior Officials' Committee (ITSOC), which includes the heads of Commonwealth, state and territory agencies.



Contents

1. Introduction

Increasing automation in road vehicles has the potential to revolutionise urban mobility. Predicted benefits of automated vehicles include significantly improved road safety, along with better productivity, mobility and environmental outcomes.

To achieve these outcomes, it is crucial that automated vehicles are trialled in order to demonstrate the capability of the technology. Industry and governments must assess automated vehicles against real-world challenges, including interactions with other road users and road environments. Trials will also increase awareness and understanding among the public – the users and beneficiaries of this mobility revolution.

Vehicles cannot legally operate in a conditionally or highly automated driving mode on public roads due to existing legal barriers. Organisations seeking to run automated vehicle trials will require state and territory road transport agencies to provide permits or exemptions from these legislative obligations. This could include permits or exemptions from obligations in the Australian Road Rules or other road transport legislation.

Road transport agencies are also responsible for road safety and must ensure:

- trials are safe, including ensuring they are only conducted in appropriate conditions
- trialling organisations are managing safety risks appropriately
- trialling organisations can manage liability and that any injury or damage caused by a trial can be appropriately compensated
- any crashes can be appropriately investigated
- trials may operate across state borders where appropriate.

Road transport agencies will seek to impose conditions on these exemptions or permits to address the above matters – for example, by limiting the roads on which the trial can be run or requiring a safety management plan to be developed.

1.1. Guidelines

In November 2016, Australian transport and infrastructure ministers requested that the National Transport Commission (NTC) and Austroads develop national guidelines for trials of automated vehicles in Australia. The first version of the guidelines was released in 2017. This is the third version of the guidelines, with updates developed in close consultation with Commonwealth, state and territory governments.

The guidelines are intended to:

- support nationally consistent conditions for automated vehicle trials in Australia
- provide certainty and clarity to industry regarding expectations when trialling in Australia
- help road transport agencies manage trials in their own state or territory as well as across state borders
- establish minimum standards of safety
- help assure the public that roads are being used safely
- help raise awareness and acceptance of automated vehicles in the community.

To meet the requirements to receive an exemption or permit, trialling organisations will be expected to:

- provide key information on the proposed trial
- provide a safety management plan
- have appropriate insurance in place
- agree to provide certain data.

1.2. Applicability of criteria in the guidelines

The guidelines set out criteria that must be addressed in any application for an automated vehicle trial. Because trials will differ in technology, scale and risk, some criteria may not be relevant to some trials. Trialling organisations must set out how they have addressed each criterion or explain why that criterion is not relevant for their trial.

The guidelines provide a flexible mechanism to encourage innovation, while maintaining safety.

1.3. Purpose of the guidelines

The national guidelines are intended to promote Australia as a testbed for automated vehicle technology. The guidelines are also intended to help trialling organisations to ensure safety when testing automated vehicle technology on Australian public roads. The guidelines aim to provide clear guidance on matters that should be addressed by trialling organisations as part of the trialling process for both light and heavy automated vehicles.

The guidelines provide a flexible mechanism to encourage innovation while maintaining safety. They aim to accommodate a range of different automated vehicle technologies and applications, and the management of trials will allow for these differences. For example, the risks posed by the trial of a single, low-speed, driverless shuttle on a set route will be different from those for a trial of a fleet of heavy vehicles on a motorway.

National guidelines adopted and applied by all states and territories aim to ensure trialling organisations have similar trial conditions, regardless of which state or territory the trial is conducted in.[1] This supports cross-border or national trials. The national guidelines also aim to allow information sharing, where appropriate, about trial and research outcomes. The national guidelines will endeavour to facilitate collaborative research, support Australian competitiveness and reduce administrative costs.

1 Victoria has its own set of trial guidelines, based on these national guidelines.

1.4. Vehicle and driver regulation in Australia

Australia is a federation. The Commonwealth Government is responsible for setting requirements for new vehicles, while state and territory governments are responsible for the road network, vehicle operation, driver licensing and vehicle registration.

The *Road Vehicle Standards Act 2018* (Cth) requires all road vehicles, whether they are newly manufactured in Australia or imported as new or second-hand vehicles, to comply with the relevant Australian Design Rules (ADRs) at the time of supply to the Australian market. The ADRs are national standards for vehicle safety, anti-theft and emission controls and cover issues such as occupant protection, lighting, noise, engine exhaust emissions and braking. The Commonwealth Government can exempt new and imported vehicles from the ADRs.

Vehicles involved in a trial could be light or heavy vehicles. The Australian Road Rules and Australian Light Vehicle Standards Rules form the basis for state and territory road rules and vehicle standard requirements. The Australian Road Rules promote road safety by establishing uniform rules of the road for drivers and riders of motor vehicles, riders of bicycles, pedestrians and passengers. The Australian Light Vehicle Standards Rules form the basis for the in-service light vehicle standards within each state and territory. For states and territories that participate in the heavy vehicle national law scheme, in-service heavy vehicle standards are administered through the Heavy Vehicle National Law (HVNL).

States and territories have exemption and permit powers in relation to the road rules, traffic laws and in-service vehicle standards, although these powers do sometimes differ. In addition, local government agencies and utility agencies are responsible for access to local roads and other infrastructure such as railway crossings. Unlike light vehicles, which are regulated on a state-by-state basis, heavy vehicles are regulated under the HVNL, which is administered by a single regulator, the National Heavy Vehicle Regulator. Note, however, that the Northern Territory and Western Australia have not applied the HVNL at this time and maintain their own heavy vehicle regulation. The HVNL established a national system of laws for heavy vehicles weighing more than 4.5 tonnes gross vehicle mass and prescribes requirements related to:

- the vehicle standards heavy vehicles must meet before they can use our roads
- the maximum permissible mass and dimensions of heavy vehicles
- securing and restraining loads on heavy vehicles
- ensuring parties in the chain of responsibility are held responsible for drivers of heavy vehicles exceeding speed limits
- preventing drivers of heavy vehicles from driving while impaired by fatigue.

Proposed in-service safety law

A proposed new national law will regulate the in-service safety of automated vehicles. This national approach has been agreed to by infrastructure and transport ministers and is currently under development. The proposed Automated Vehicle Safety Law will regulate Automated Driving System Entities (ADSEs), their executive officers and remote drivers, and operate in conjunction with existing road transport laws. It will also establish an in-service regulator for automated vehicles.

1.5. Relevant terminology for these guidelines

What is an automated vehicle trial?

A trial of prototype or development automated driving systems (either a prototype, development or commercially deployed in another jurisdiction) on public roads and road-related areas, for the purpose of testing and assuring the safe operation of the system.

What is a trialling organisation?

Any company, organisation or individual who wishes to run an automated vehicle trial on Australian roads.

What is a road transport agency?

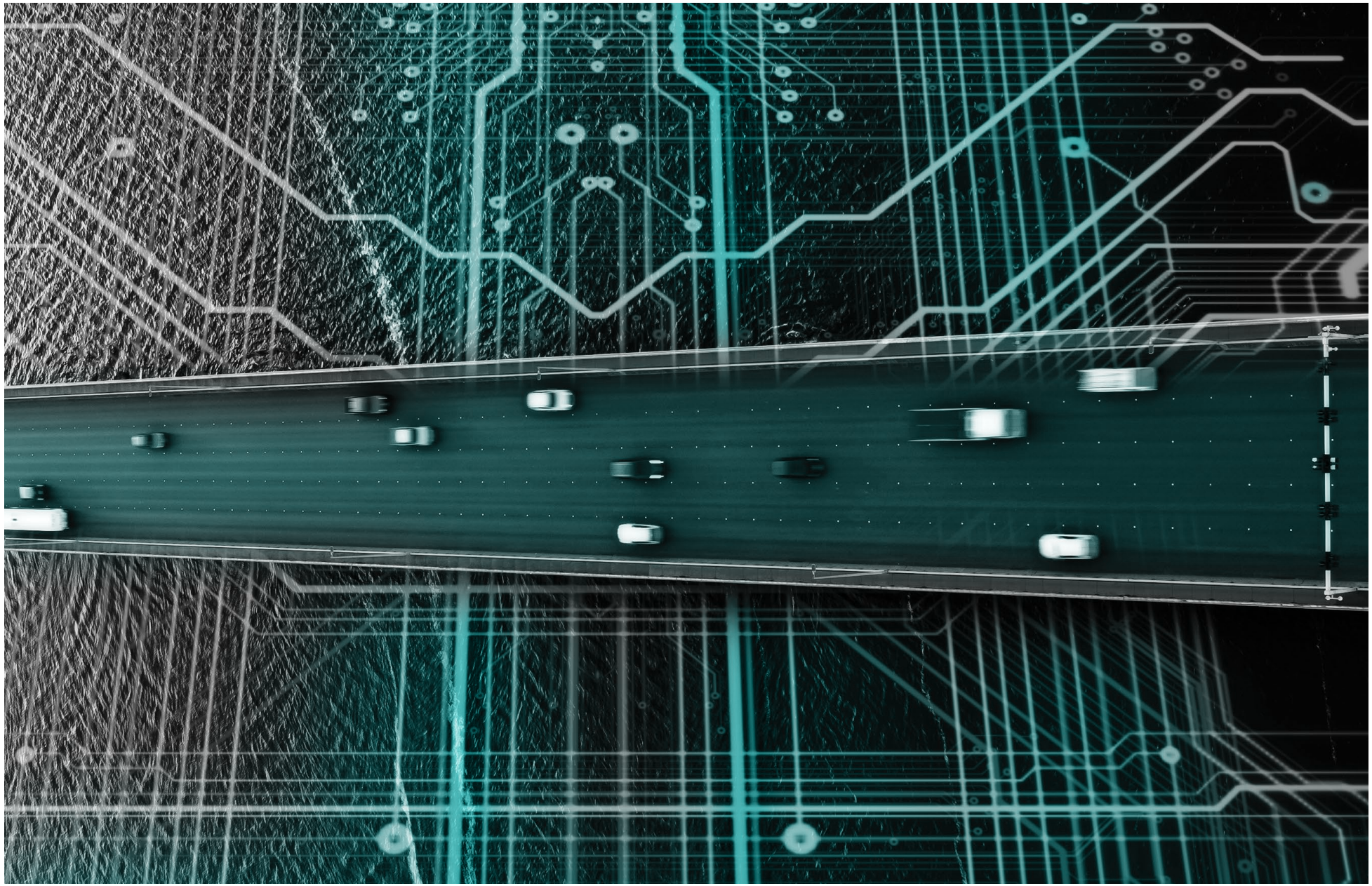
State and territory governments are road transport agencies and are responsible for roads and road transport within their jurisdiction (see section 8 for contact details).

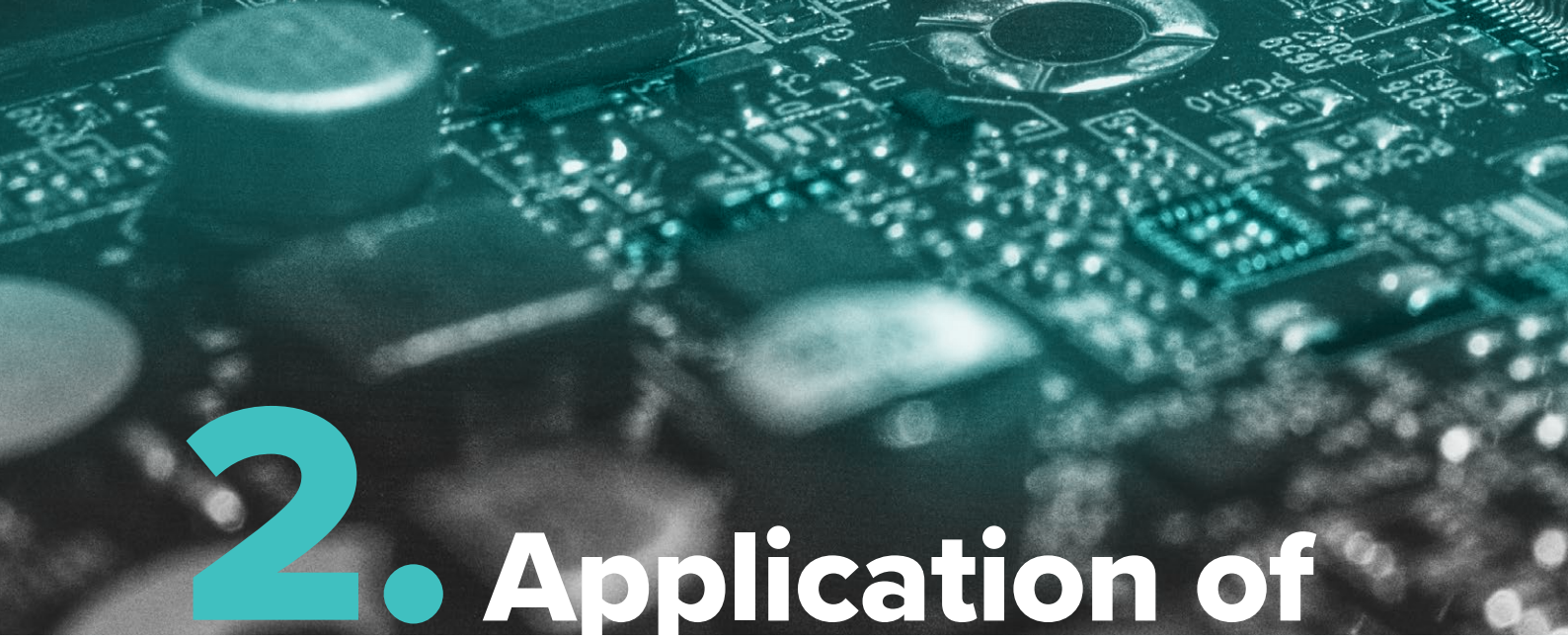
What is a local government agency?

Local government agencies are the third tier of government in Australia and are responsible for local roads and related infrastructure that link homes to schools and shops and to arterial roads and national highways.

What is the in-service safety law?

The development of a new Commonwealth law, the Automated Vehicle Safety Law. The proposed law will deliver a nationally consistent regulatory approach to enable the safe operation of automated vehicles when they are deployed on Australian roads.





2. Application of the guidelines

2.1. When the national guidelines apply

Before beginning an automated vehicle trial, a trialling organisation should contact the relevant road transport agency (see section 8) to determine if any exemptions or permits to test on Australian roads are required. There may be some instances where local government agencies, utility agencies or private road managers should be contacted for access to local roads and other infrastructure such as railway crossings. In these instances, the relevant road transport agency may be able to assist in coordinating these. It is the trialling organisation's responsibility to ensure any required exemptions or permits are obtained before beginning a trial. Road transport agencies may also facilitate discussions with the Commonwealth Government to import vehicles for a trial if those vehicles do not comply with the ADRs or there are other relevant laws that may need to be considered. It is important that these matters be considered early in the trial application process.

Figure 1 depicts this decision-making process.

2.2. Trials that require an exemption or permit

Where a trialling organisation requires an exemption or permit to trial an automated vehicle on Australian roads, the road transport agency will apply the guidelines as part of the conditions of the exemption or permit.

To satisfy the conditions of the exemption or permit, trialling organisations must demonstrate to the road transport agency that they have addressed all relevant criteria.

If any condition of the exemption or permit is not complied with, the exemption or permit may be suspended or revoked. Penalties may also apply, depending on the state or territory's enabling legislation or regulations.

2.3. Trials that do not require an exemption or permit

These guidelines are intended to facilitate trialling of a range of technologies in a range of operating domains (including off road and controlled testing facilities). Where, due to the technology being trialled or the operating domain within which the trial is undertaken, a trialling organisation does not require an exemption or permit, the organisation is still encouraged to follow the guidelines to help ensure their vehicles are operating safely and in compliance with Australian laws.

In the event of an incident or breach involving the automated vehicle, consideration of the guidelines could be relevant in demonstrating that the trialling organisation took appropriate steps to minimise the risk of the incident or breach occurring.

2.4. Addressing criteria set out in these guidelines

In their application, trialling organisations should address all criteria set out in these guidelines. Not all trials will be the same, and some of the criteria will not be applicable to all trials. In this case a trialling organisation will need to explain why a particular criterion is not relevant. For example, a fully automated vehicle will not transition between the human driver and the automated system because there is no human driver. In this case, a trialling organisation can simply state on the application form that appropriate transition processes are not relevant.

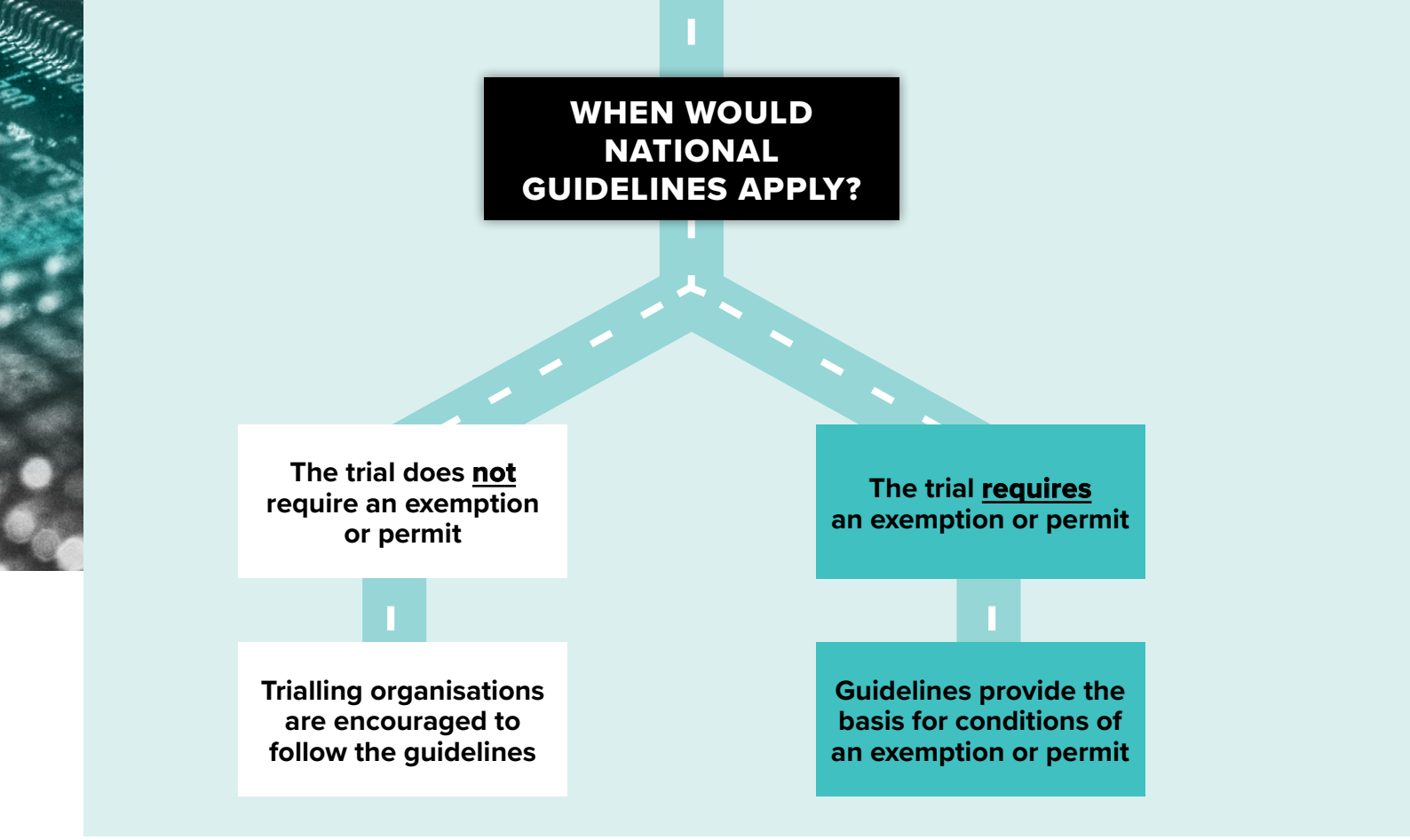


Figure 1: Determining when national guidelines apply

2.5. Application to heavy vehicles

Due to their size and mass, heavy vehicles pose different risks to public safety and infrastructure than light vehicles. Crashes involving heavy vehicles can result in more serious outcomes.

Trialling organisations may need to consider and include additional mitigation factors in their safety management plan to address any additional risk posed by their heavy vehicle trial. This may include consideration of network access, community consultation and engagement.

Trialling organisations should address all criteria set out in these guidelines.

2.6. Compliance with Australian laws

Trialling organisations must comply with all relevant Australian laws unless a specific exemption or permit has been granted by the relevant road transport agency. This includes all existing:

- road rules and traffic laws
- vehicle standards
- public and passenger transport laws
- disability standards
- privacy and surveillance laws
- work health and safety laws.

It is the responsibility of trialling organisations to ensure, unless an exemption or permit has been granted, all tests planned to be undertaken comply with all relevant existing laws. Trialling organisations must ensure the vehicles involved are roadworthy, meet all relevant vehicle requirements and can be used in a way that is compatible with existing road traffic laws. Because laws vary between states and territories, trialling organisations should consult with the relevant road transport agency to confirm the applicable laws.

3. Management of trials

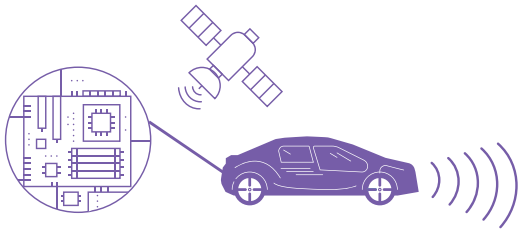
The following criteria should be addressed as part of the trialling organisation's application to run an automated vehicle trial. Where a criterion is not relevant due to the scope of the trial, the trialling organisation should explain this in their application.

3.1. Key management criteria

Purpose of the trial: Trialling organisations must provide the purpose and the outcomes sought from the trial.

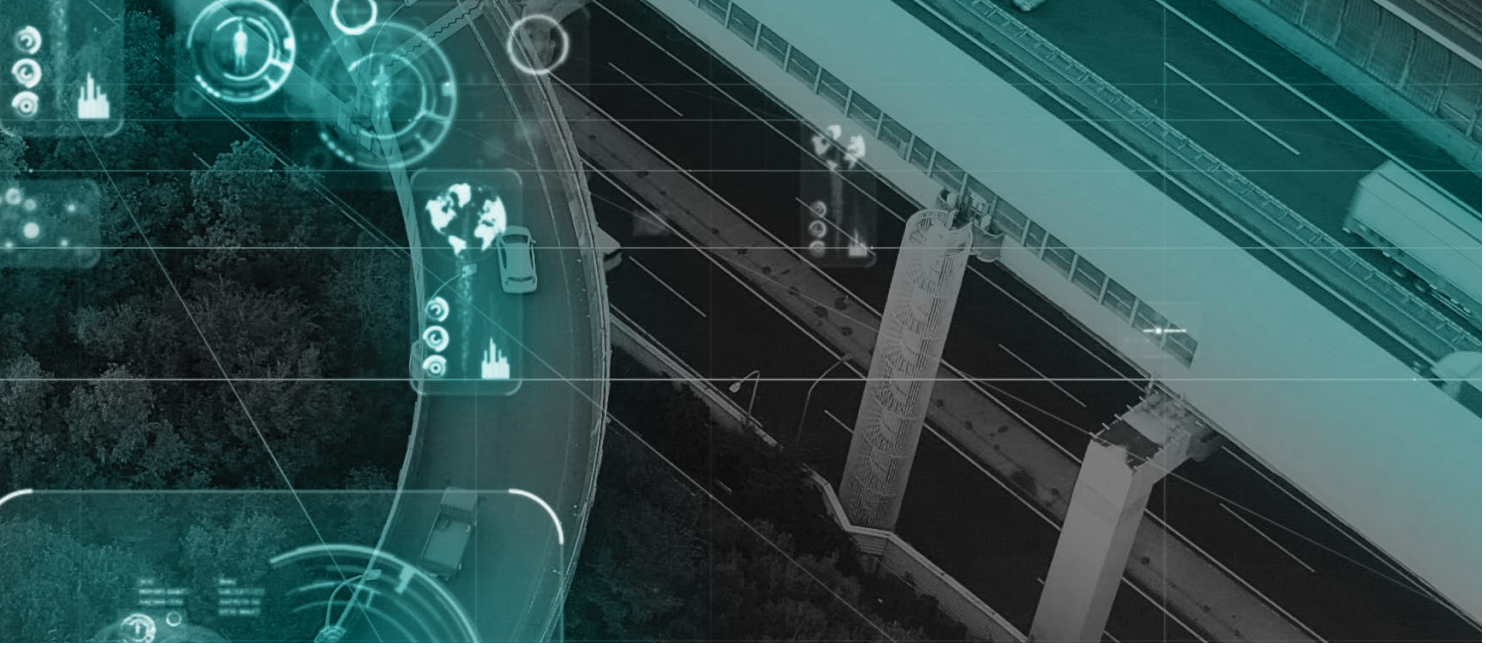
Trial location: The proposed trial location must be clearly set out. This could be specific roads, routes or regions and/or the vehicle's operational design domain.[2] Other elements of the vehicle's operational design domain should be described in detail.

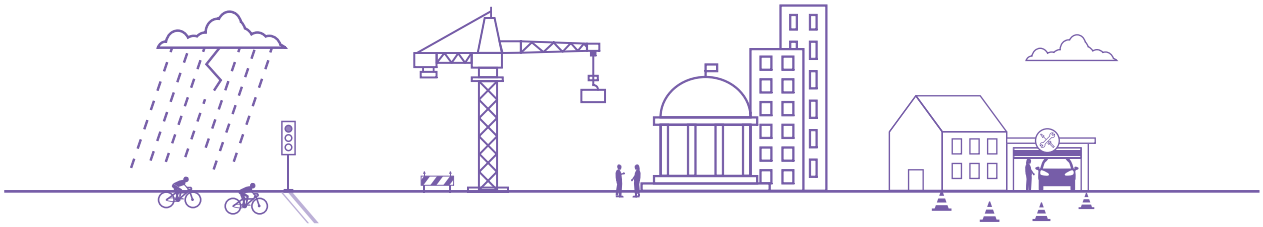
Road transport agencies will consider the location suitability for an automated vehicle trial. This will depend on factors including: the type and level of automation; any safety considerations relevant to the road network such as proximity to built-up areas; speed limits; and traffic congestion.



Description of the technology being trialled: Trialling organisations must provide a high-level description of the technology being trialled in their application. The intent is not to force trialling organisations to reveal commercially sensitive intellectual property but to allow the road transport agency to reasonably assess the safety risks of the trial.

2 The 'operational design domain' is the specific conditions an automated driving system or feature is designed to function in (for example, locations, weather conditions, driving modes).





Traffic management plan: Trialling organisations must provide a traffic management plan to inform road transport agencies of the trial's anticipated traffic risks and mitigating actions. This could include consideration of matters relevant to the traffic environment including:

- traffic density/vehicles
- speed environment
- pedestrians
- signage
- irregular events – construction, crash scenes, road detours, flooding
- complex intersections and merges
- regional variations in road design
- rail-road interfaces.

Infrastructure or network requirements: Trialling organisations must inform road transport agencies of any infrastructure or network requirements for the trial. Road transport agencies may be able to provide support or assistance in managing any changes to infrastructure (such as roadworks) during the course of a trial.

Engagement with the public and other stakeholders: Trialling organisations must set out how they intend to engage with the public and other key stakeholders as part of the trial. This could include engagement with local government authorities, road user groups, law enforcement agencies, emergency services, infrastructure managers and public transport providers.

Managing change: Trialling organisations must set out how they intend to manage changes to the vehicle, infrastructure or to the ODD over the course of a trial. Trialling organisations are likely to update software and upgrade hardware over the course of a trial as issues are discovered and technology evolves. Software and hardware updates that substantially change the performance and characteristics of the vehicle, such as changing the level of automation of the vehicle, will require a reassessment of the safety management plan and may require a new request for approval. Trialling organisations should set out their processes for managing software and/or hardware changes to ensure they maintain safety. Trialling organisations should also set out how they will ensure compliance with changes to the road environment that may occur over the course of the trial (such as changes to road infrastructure). Finally, changes to the ODD over the course of a trial may take place, either to facilitate software learnings or because of changes to the testing environment. Trialling organisations should set out a clear process for altering the agreed ODD in their approach to road transport agencies.

Accessibility: Trialling organisations must set out how they intend to manage specific safety and accessibility concerns, and interactions with road users or passengers. If trials involve passengers, trial proponents may need to develop a safety case to identify and manage the risks of the passenger trial, and address accessibility and interactions with all types of passengers and management of on-board conditions. Trialling agencies may need to demonstrate compliance with applicable disability and accessibility legislation if they are providing passenger services.

Evaluation: Trialling organisation should set out how they intend to evaluate the trial of their Automated Driving System (ADS) and report on the key findings from their evaluation. Guidelines for the evaluation and reporting of automated vehicles trials can be found on Austroads website.[3]

3 **https://austroads.com.au/publications/connected-and-automated-vehicles/ap-g102-23**

4. Insurance

4.1. Appropriate insurance

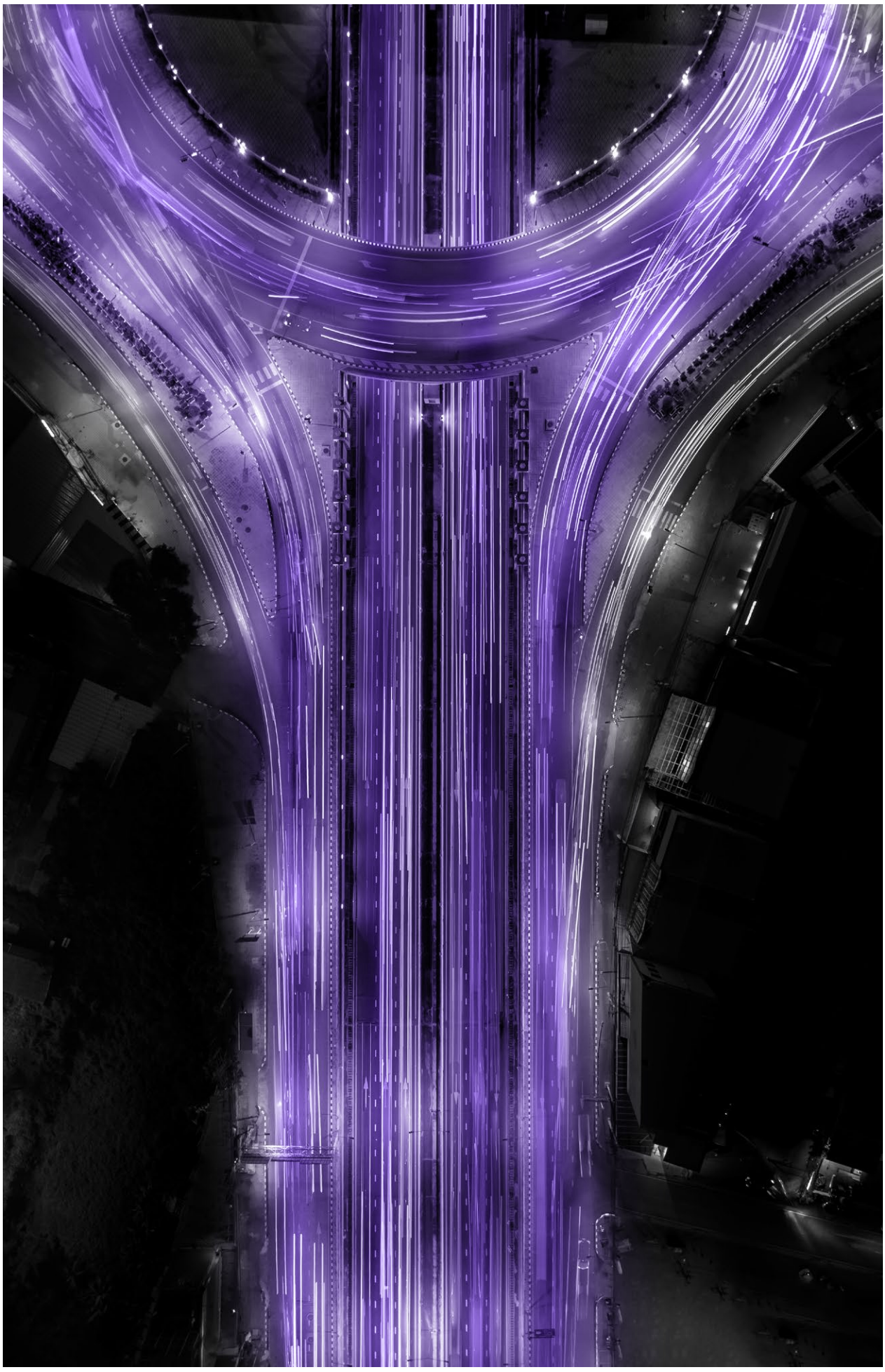
Trialling organisations must demonstrate to the road transport agency that they have appropriate insurance to protect against the risks associated with the trial. Trialling organisations should consult with the relevant road transport agency about insurance in the first instance.

Appropriate insurance could include:

- compulsory third-party insurance
- comprehensive vehicle insurance
- public liability insurance
- product liability insurance
- self-insurance
- work or occupational health and safety insurance.

The trialling organisation should check with the relevant road transport agency to see if they are covered by the state-based insurance scheme. The requirements and coverage of these schemes differ between states and territories.

As a key principle in assessing trial applications, states and territories will aim to ensure any road user injured by an automated vehicle trial is no worse off than if they were injured by a human-operated vehicle.



5. Safety management plan

5.1. Safety management plan

Road transport technology provides the opportunity for safer roads for all road users. However, governments have a responsibility to ensure new technology is introduced onto public roads safely. Trialling organisations must develop a safety management plan outlining all relevant key safety risks for the trial and how they will be mitigated or eliminated. This safety management plan must be

5.2. Key safety criteria

Key safety criteria and mitigations include the following:

Risks to occupants. Trialling organisations conducting trials of passenger services, or trials with a human driver, operator and/or passengers present in the trial vehicle, will need to demonstrate that risks to all occupants' safety have been considered and addressed.

Behaviour of other road users including potential noncompliance with road rules by other drivers, riders and pedestrians. The trialling organisation will need to demonstrate that it has considered the risks posed by the behaviour of other road users and has adopted risk mitigation strategies to manage these risks to the extent possible.

Interaction with enforcement and emergency services on the road and at the roadside. The trialling organisation must demonstrate how it will ensure safe interaction with emergency services (including but not limited to police, fire and ambulance services) when the ADS is engaged. This includes interactions on-road and at the roadside.

Security of the automated system. In order to ensure against hacking of a system to take control of the vehicle or access any personal information, appropriate security measures will need to be taken by trialling organisations. Trialling organisations may need to consider how to minimise cybersecurity threats, vulnerabilities and consequences of intrusions and breaches during the trial.

Risks to other road users including drivers and riders of motor vehicles, cyclists, pedestrians and passengers. Vulnerable road users in particular will need to be considered carefully as part of the safety management of all trials taking place on public roads.

Risks to road infrastructure. Trialling organisations will need to consider how their trial may impact on existing infrastructure and how they plan to address this.

System failure, which is a key risk for any new technology. Trialling organisations should set out how they intend to manage any system failures including hardware failures, software errors and human errors. This could include system redundancy and fallback options. Warnings for the vehicle will also be needed to alert the driver or operator of the vehicle to any malfunctions that occur as part of the trial. These alerts could take many forms as long as critical information is clearly conveyed and monitored throughout the trial.

provided as part of the application for a trial. Safety management plans will need to demonstrate that the trialling organisation has a safety culture that will enable it to manage emerging risks during the trial.

The safety management plan should address the key safety risks and mitigations set out below. If some risks are not relevant due to the scope of the trial, the trialling organisation should explain this in their application.

To assist in developing the safety management plan, trialling organisations could refer to standards such as:

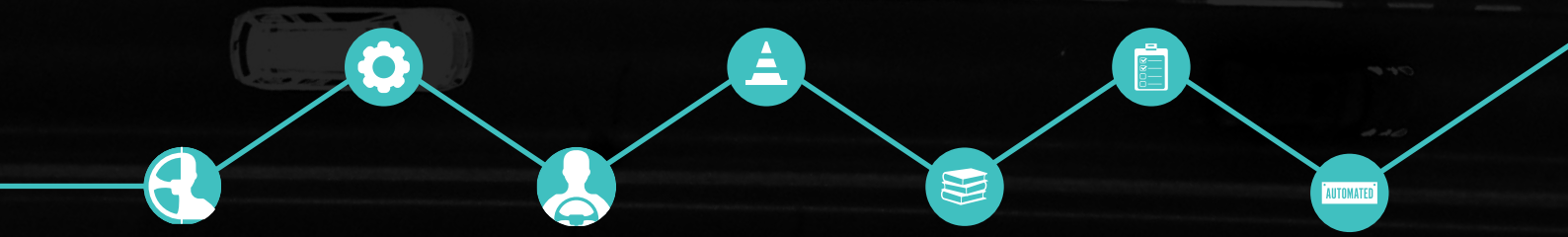
- ISO 26262 – Road vehicles – Functional safety series
- ISO/TC 241 – Road traffic safety management systems
- ISO/PAS 21448 - Road vehicles – Safety of the intended functionality
- UL4600 - Autonomous vehicle safety case

Operation within operational design domain. The trialling organisation should describe how the automated driving system will be:

- able to operate safely within its operational design domain
- incapable of operating in areas outside of its operational design domain
- able to transition to a minimal risk condition (for example, a stop) when outside of its operational design domain.

Pre-trial testing of the vehicle at a test facility such as a closed track. This could provide additional assurance that the automated vehicle technology can be safely deployed on public roads. Approving agencies may at their discretion accept the results of appropriate testing conducted in other jurisdictions.

Fitness-for-duty to ensure the driver, operator or remote operator of a trial vehicle is fit to drive or operate the vehicle.



Appropriate transition processes for vehicles that can move between automated and human driving modes. Trialling organisations will need to demonstrate a practical process for transitioning. This should include ensuring a human driver or operator has enough time to take control of the driving task when requested.

Whether there is a human driver, operator or remote operator that can control the vehicle. Note that a human driver will be required in the vehicle unless a specific exemption or permit has been granted. If there will be no human driver, trialling organisations simply need to demonstrate how they have addressed the relevant safety risks of not having the fallback of a human driver. Where there is a human driver, operator or remote operator, associated human factor risks will also need to be considered. In particular, trialling organisations should specify how they will mitigate, monitor and address human driver inattention.

Training provided for the driver, operator or remote operator that may be critical for the safe operation of the trial. The human driver, operator or remote operator must be sufficiently trained to operate the vehicle, respond to any safety issues and take back control of the vehicle if required.

Whether vehicle identifiers will be used to signal to other road users that the vehicle is automated. These could be visual or other identifiers as appropriate.

6. Data and information

6.1. Data recording and sharing capability

Trialling organisations must outline the data that will be recorded by the ADS and stored by the trialling organisation, and how it will provide the data to relevant parties. Specific data requirements may also be subject to information sharing arrangements with the road transport agency and/or local government agency, negotiated and agreed prior to the trial.

In responding to this criterion, the trialling organisation should note that the *Privacy Act 1988* (Cwlth) places limitations on the collection, use and disclosure of personal information, which may limit the data they can record and share.

6.2. Provision of data/information for serious incidents

Trialling organisations must abide by existing crash reporting requirements of the state or territory in which they are conducting their trial. Minimum reporting conditions are contained in the road rules.

Trialling organisations must also report any serious incident to the relevant road transport agency. A serious incident is defined as a crash involving a trial vehicle or a contravention of any law such as exceeding the speed limit or a red light violation.

In these cases, trialling organisations must collect and provide all information relevant to the event and the performance of the system so that the circumstances of the event can be reconstructed. This must be provided to the road transport agency that issued the exemption or permit. The data must be provided in a standardised, readable and accessible format to the road transport agency. Trialling organisations are also required to provide any assistance that a road transport agency requires to decipher the data.

The data available in the event of a serious incident will be dependent on the nature of the trial and the technology employed. Information could include:

- time
- date
- location
- whether the ADS is engaged at a given time, the level of automation engaged, any handover of control requests, and traffic conditions (for example, empty road, in heavy traffic)
- road and weather conditions
- vehicle information (speed, brake/throttle applications)
- sensor information in relation to other road users and the surrounding road environment
- the identity of the vehicle operator at the time of the incident.

A trialling organisation must provide an initial report of a serious incident within 24 hours of the incident occurring, except in exceptional circumstances.

A full report including relevant data and information must be provided to the road transport agency within seven days of the incident occurring.

The trialling organisation will need to retain data to the extent necessary to provide it to relevant parties. The length of time data is retained may depend on the purposes the information could be used for – for example, law enforcement and insurance.

6.3. Provision of data/ information for other incidents

Trialling organisations must also report other incidents to the relevant road transport agency on a monthly basis.

Other incidents include:

- near-misses
- when a human takes back emergency control of the vehicle, or the vehicle deactivates where there is no human driver, and this does not result in any injury or death (for example, making an emergency stop or using the emergency stop function to avoid a collision)
- a public complaint regarding the performance of the vehicle.

If a road transport agency requests an earlier report the trialling organisation should provide a report within seven days.

Trialling organisations must also report any serious incident to the relevant road transport agency

6.4. End-of-trial report to the relevant road transport agency

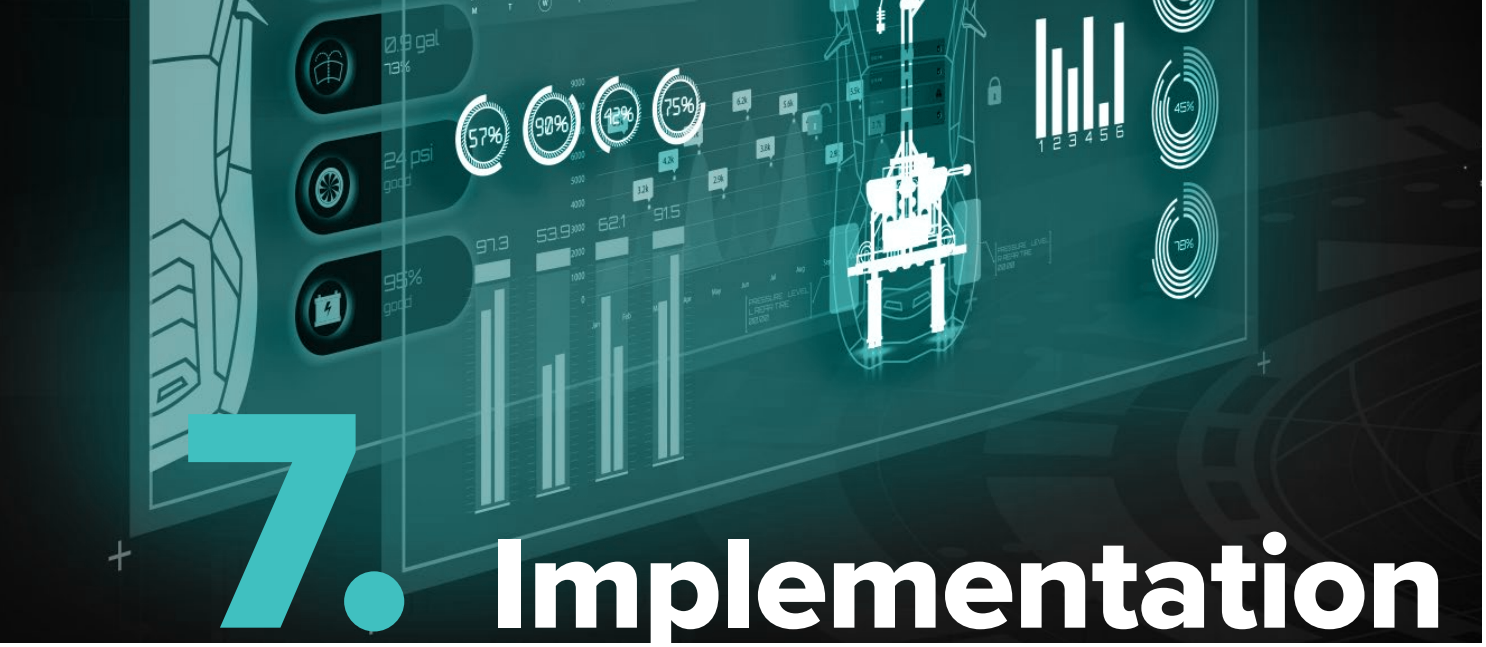
Trialling organisations will be required to provide an end-of-trial report on research outcomes. This would be a high-level summary and would not necessarily need to include commercially sensitive information. Examples of what could be included in an end-of-trial report are:

- what worked well in the trial
- challenges faced during the trial
- what was learnt from the trial.

Trialling organisations should also consider the outcomes of the trial in the context of the original purpose of the trial.

6.5. Commercially sensitive information

Where trialling organisations provide commercially sensitive information, road transport agencies will respect the confidentiality of such information and the trialling organisation's intellectual property.



7. Implementation

7.1. Cross-border trials

States and territories are committed to working together to support cross-border or national trials and to maintain consistency and to ensure that the administrative burden of trial applications is minimised. Trialling organisations should nominate states and territories in their application if they intend to run trials in more than one jurisdiction.

7.2. Existing trials

Trials that are already in place will continue to operate under the existing arrangements with the host state or territory.

7.3. How trials transition into deployment

It is possible that some trials may run for an extended period. In this case trialling organisations will need to have an ongoing dialogue with the host state or territory. Requirements for large-scale commercial deployments of automated vehicles are still under development.

7.4. Trials or deployment

These guidelines and associated exemption or permit processes are intended to cover trials of automated vehicles, not large-scale commercial deployments.

An automated vehicle trial is not to be considered a deployment of automated vehicles, the requirements for which are still under development.

7.5. Commercial and/or passenger services

Trials of automated vehicles can be commercial in nature; for example, it is conceivable that trial vehicles could operate as fee for service during a trial (ridesharing or taxi operations). However, it should be noted that the guidelines process is not intended to support large-scale commercial deployment of automated vehicles such as the sale of vehicles to the general public or freight operators for unrestricted use.

Passenger vehicles may need to comply with relevant state and territory passenger transport legislation, Commonwealth legislation setting out the disability standards for accessible public transport and any other applicable legislative requirements.

7.6. Vehicle limits for trials

The number of vehicles that will be approved to trial will be determined by the road transport agency based on how the trialling organisation satisfies the relevant criteria. This will include how traffic risks will be managed under the traffic management plan. The guidelines process is not intended to support broad, commercial deployment of automated vehicles.

7.7. Time limits for trials

A fixed time limit will be placed on any exemption or permit granted to an automated vehicle trial; this limit will be set by the relevant road transport agency. Most state and territory laws support renewals or extensions of exemptions or permits if required.

8. Contacts

Commonwealth

Department of Infrastructure, Transport, Regional Development, Communications and the Arts

W: www.infrastructure.gov.au/sites/default/files/documents/nonrav-guide-1.3-final.pdf

E: heavyvehicles@infrastructure.gov.au *or* lightvehicles@infrastructure.gov.au

Western Australia

Department of Transport

W: www.transport.wa.gov.au/projects/automated-vehicles.asp

E: CAVTrials@transport.wa.gov.au

South Australia

Department for Infrastructure and Transport

W: www.dit.sa.gov.au/driverlessvehicles

E: DPTI.Innovation@sa.gov.au

Northern Territory

Department of Infrastructure, Planning and Logistics

Registrar of Motor Vehicles

W: www.dipl.nt.gov.au

E: EDTS.DIPL@nt.gov.au

Queensland

Department of Transport and Main Roads

W: www.business.qld.gov.au/industries/transport/trialling-automated-vehicle

E: LAVR@tmr.qld.gov.au

New South Wales

Future Mobility

Transport for NSW

W: www.transport.nsw.gov.au/data-and-research/future-mobility

E: future.mobility@transport.nsw.gov.au

Australian Capital Territory

Transport Canberra and City Services

W: www.tccs.act.gov.au

E: TCCS_roadtransportregulation@act.gov.au

Victoria

VicRoads

W: www.vicroads.vic.gov.au/safety-and-road-rules/vehicle-safety/automated-and-connected-vehicles/testing-of-automated-vehicles

E: cavtesting@roads.vic.gov.au

Tasmania

Department of State Growth

W: www.transport.tas.gov.au

E: info@stategrowth.tas.gov.au

Glossary

TERM OR TITLE	DESCRIPTION
Australian Design Rules	National standards for safety, anti-theft and emissions in vehicle design.
Australian Light Vehicle Standard Rules	Model vehicle standard requirements developed by the NTC and applied in state and territory legislation.
Australian Road Rules	Model road rules developed by the NTC and applied in state and territory legislation.
Commonwealth of Australia (Cwlth)	Federal government of Australia.
Gross vehicle mass	The maximum loaded mass of a vehicle.
Heavy vehicle	A vehicle with a gross vehicle mass of more than 4.5 tonnes.
Heavy Vehicle National Law (HVNL)	A single national system of laws for heavy vehicles over 4.5 tonnes gross vehicle mass.
Light vehicle	A vehicle other than a heavy vehicle.
National Heavy Vehicle Regulator	Australia's independent regulator for all vehicles over 4.5 tonnes gross vehicle mass.
National Transport Commission (NTC)	National land transport reform agency that supports Australian governments to improve safety, productivity and environmental outcomes, provide for future technologies and improve regulatory efficiency.
States and territories	Australia is divided into six states and two territories. The six states are: • New South Wales • Queensland • South Australia • Tasmania • Victoria • Western Australia. The two territories are: • Australian Capital Territory • Northern Territory.

Austroads

Phone: +61 2 8265 3300
Email: austroads@austroads.com.au
www.austroads.com.au

National Transport Commission

Phone: +61 3 9236 5000
Email: enquiries@ntc.gov.au
www.ntc.gov.au

Austroads

National Transport Commission