

Motor accident injury
insurance and automated
vehicles

August 2019

Policy paper

Report outline

Title	Motor accident injury insurance and automated vehicles
Type of report	Policy paper
Purpose	This paper contains recommendations approved by the Transport and Infrastructure Council in August 2019.
Abstract	This paper sets out a high-level national approach to personal injury insurance for automated vehicles. The approach requires existing motor accident injury insurance schemes to provide cover for injuries and deaths caused by a vehicle controlled by an automated driving system. The paper details further work to be done, including developing a consistent rights-of-recovery mechanism (if required) and reform that will enable insurers to access data to determine liability.
Key words	Automated vehicles, compulsory third-party insurance, motor accident injury insurance, personal injury, liability, rights of recovery, reinsurance pool, data
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Foreword

Australian transport ministers have recognised that automated vehicles will fundamentally change how transport is provided and have the potential to unlock a range of safety, productivity, environmental and mobility benefits. The National Transport Commission is working with the Commonwealth and state and territory governments on a program of regulatory reform to ensure the Australian community gains the benefits of automated vehicles.

This paper delivers an important element of Australia's automated vehicle reform agenda. Transport ministers have agreed on a national approach that requires existing motor accident injury insurance schemes to provide cover for injuries and deaths that result from automated vehicle crashes. Work will begin across jurisdictions and across government portfolios to make the necessary changes to give effect to this approach.

Thank you to the organisations and individuals who contributed to this policy process. In particular I would like to thank the Heads of Motor Accident Injury Schemes for bringing their expertise to this work. I encourage government, industry, academia and the wider community to continue to work with us on our automated vehicle regulatory reforms, to ensure Australians can gain the full benefits of this technology.



Carolyn Walsh
Chair and Commissioner

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Executive summary

The introduction of automated vehicles on Australian roads are anticipated to improve road safety. However, they will not eliminate all existing risks, and they are likely to introduce new risks. Crashes involving and caused by automated vehicles will happen. Efficient legal pathways that provide certainty and consistency in resolving liability for personal injury that results from crashes is an important part of Australia's goal to support the safe commercial deployment of automated vehicles.¹ This review focuses on high-level reform that enables people injured or killed to access care, treatment, benefits and compensation when involved in an automated vehicle crash.

Context

In November 2016, the Transport and Infrastructure Council directed the National Transport Commission (NTC) to develop a regulatory framework to support the safe commercial deployment and operation of automated vehicles, which included:

- state and territory governments undertaking a review of compulsory third-party (CTP) and national injury insurance schemes (NIIS) to identify any eligibility barriers to accessing these schemes by occupants of an automated vehicle or those involved in a crash with an automated vehicle
- subject to the review of insurance schemes, each state and territory government would amend their compulsory third-party insurance schemes in close consultation with each other and industry, ensuring that resulting reforms are nationally consistent wherever possible.²

Since November 2016:

- the review's scope has expanded to include examining the current motor accident injury insurance framework (CTP and NIIS), other existing legal avenues to access compensation and alternative insurance models
- the NTC has consulted extensively across government portfolios with agencies responsible for CTP and NIIS, transport, treasury/finance, justice, health and competition and consumer rights.

The laws and policies that underpin motor accident injury insurance (MAII) are the responsibility of state and territory governments, and the Commonwealth government is responsible for prudential regulation of commercial insurers. There is no central body responsible for progressing nationally coordinated personal injury insurance reform. The NTC has been asked by state and territory jurisdictions to take a leadership role in coordinating this review, given it cuts across transport and insurance portfolios.

What are the problems?

The NTC's discussion paper *Motor accident injury insurance and automated vehicles*, published in October 2018, identified the key problem to be addressed as:

¹ Transport and Infrastructure Council 10 November 2017
https://transportinfrastructurecouncil.gov.au/communique/files/8th_Council_Communique_10-Nov-2017.pdf

² Recommendation 7 National Transport Commission November 2016
[https://www.ntc.gov.au/Media/Reports/\(32685218-7895-0E7C-ECF6-551177684E27\).pdf](https://www.ntc.gov.au/Media/Reports/(32685218-7895-0E7C-ECF6-551177684E27).pdf)

- People injured in an automated driving system (ADS) crash may not have the same, or any, access to compensation under existing MAlI schemes compared with people injured in a crash involving a vehicle controlled by a human driver. This is because:
 - many definitions in MAlI laws do not contemplate an ADS crash
 - some MAlI laws require someone to be at fault
 - MAlI schemes are generally designed to cover injuries caused by human error rather than product faults.

The discussion paper identified elements within current MAlI schemes that may act as barriers to accessing compensation, for injuries caused by an ADS. We also examined the suitability of other types of law – contract, negligence and the Australian Consumer Law, to compensate for injuries caused by an ADS.

We sought feedback on whether existing MAlI schemes, or alternative insurance models, should provide cover for those injuries and deaths through the following options:

- Option 1: Rely on existing legal framework
- Option 2: Exclude injuries caused by an ADS from MAlI schemes
- Option 3: Expand MAlI schemes to cover injuries caused by an ADS
- Option 4: Create a purpose-built automated vehicle insurance scheme
- Option 5: Rely on minimum benchmarks
- Option 6: Allow a single insurer policy covering all vehicle liabilities

A national approach to personal injury insurance for automated vehicles

We received almost universal support for option 3, which requires reform of MAlI schemes in each state and territory to provide access for personal injuries and deaths caused when the ADS is engaged. Stakeholders considered that the option ensures an injured person receives equitable and timely access to support, which is essential to optimising health recovery. We were told that option 3 is a proportionate step given the expectation that in the short-medium term automated vehicles will represent a small proportion of the fleet.

We also received feedback that successful development and implementation of the high-level national approach depends on developing an effective right-of-recovery mechanism for insurers to use against at-fault parties. Stakeholders also advised us that a framework to access data for the purpose of determining liability is crucial. Work required to give effect to a national approach to personal injury insurance for automated vehicles will be guided by the principles listed in Table 1.

Table 1. Nationally agreed principles for motor accident injury insurance

Design and administration of motor accident injury insurance for automated vehicles should...	
1	Ensure no person is better or worse off, financially or procedurally, in the relevant jurisdiction if they are injured by a vehicle whose automated driving system was engaged than if they were injured by a vehicle controlled by a human driver.
2	Prioritise simplicity and flexibility.

3	Establish affordable, efficient and fair funding arrangements that allocate the cost of covering the liability for an automated driving system to those who can best control the risk.
4	Continue reasonable and timely access to compensation regardless of the type of vehicle involved in the injury.
5	Promote transparency and certainty in accessing compensation.
6	Minimise potential litigation between insurers and parties at fault for injuries and deaths caused by automated driving systems.
7	Promote safety innovation.
8	Include efficient processes to access a standard set of reliable and verifiable vehicle crash data.

Recommendations

Recommendations in this paper were developed after analysing feedback received via 25 submissions and consultations we held with government and insurance industry stakeholders.

At their August 2019 meeting the Transport and Infrastructure Council:

1. **Agreed** a national approach for motor accident injury insurance and automated vehicles that requires:
 - a) all jurisdictions to review their mechanisms for motor accident injury insurers to recover from parties at fault for injuries and deaths caused by automated driving systems, as a prerequisite to recommendations 1(b)-(e)
 - b) motor accident injury insurance schemes to provide access for injuries and deaths caused when automated driving systems are engaged, while ensuring that schemes can efficiently claim from parties at-fault
 - c) the principles set out in Table 1 to guide any changes to motor accident injury insurance schemes
 - d) the NTC to consider data access for insurers for assessing liability as part of its automated vehicle reform program
 - e) states and territories to review the inclusion of automated driving system caused crashes in motor accident injury insurance schemes once automated vehicles represent a sufficient proportion of registered vehicles to determine the impact on schemes.
2. **Agreed** that all jurisdictions within two years review their schemes (recommendation 1a) and, subject to any required assessment of costs and benefits, the approval of the responsible minister and the implementation of other automated vehicle reforms, make changes to their scheme to implement recommendations 1b and 1c.
3. **Noted** that recommendations 1 and 2 are subject to endorsement by the ministers responsible for motor accident injury insurance schemes.
4. **Agreed** that the NTC provides recommendations 1 and 2 to the agency head with portfolio responsibility for the motor accident injury insurance scheme in each

jurisdiction and that recommendations 1 and 2 are referred to the Board of Treasurers for endorsement.

Next steps

More work is required to develop the core details of a national approach to MAII for automated vehicles. This work will be performed primarily by states and territories. Table 2 indicates the next phases of work required, who will be responsible and approximate timeframes. The scope of the next phases of work and timeframes to achieve a national approach to MAII for automated vehicles are subject to endorsement by the Board of Treasurers, the timing of other automated vehicle reforms, and the priorities of state and territory parliaments.

Table 2. Next steps for a national approach to motor accident injury insurance for automated vehicles

Action	Lead agency or forum	Timing
Recovery mechanism tasks		
Review existing recovery mechanisms. Develop legislative options (if required).	States and territories, coordinated by the Board of Treasurers. Heads of Motor Accident Injury Schemes and the NTC to provide support.	November 2019
Recovery mechanism and inclusion of ADS-caused injuries tasks		
Develop detailed nationally consistent legislative policy recommendations. The process may vary between jurisdictions. It is likely to include public consultations, cost-benefit analyses and/or budgetary implication analyses, cabinet approvals, legislative drafting and exposure drafts of bills.	States and territories, coordinated by the Board of Treasurers. Heads of Motor Accident Injury Schemes to provide support.	November 2020
Legislation to provide cover for ADS-caused injuries with an efficient right-of-recovery process.	State and territory parliaments.	Late 2021
Data access framework		
Develop nationally consistent legislative policy recommendations.	NTC.	Late 2020
Legislation to clarify data access for insurers.	State and territory parliaments.	Late 2021

1 Context

Key points

- Crashes involving automated vehicles will occur, and when they do, it is important to ensure there is a clear and efficient legal pathway to resolve liability for injuries that result.
- This review identified elements within current motor accident injury insurance schemes that may act as barriers to accessing compensation³ for injuries⁴ caused by an automated driving system.
- We also explored the suitability of other types of law – contract, negligence and the Australian Consumer Law - to compensate for injuries caused by an automated driving system.
- We sought feedback on whether existing motor accident injury insurance schemes, or alternative insurance models, should provide cover for those injuries.
- This paper recommends a national approach that provides access to compensation for injuries caused by an automated driving system. We recommend that design and administration of the insurance solution should be guided by a set of nationally agreed principles.

1.1 About the National Transport Commission

The National Transport Commission (NTC) is a statutory agency that proposes nationally consistent land transport reforms. We submit reform proposals to the Transport and Infrastructure Council. The council comprises Commonwealth, state, territory and New Zealand ministers who are responsible for transport and infrastructure. The Australian Local Government Association is also a council member.

The NTC contributes to achieving national reform priorities that are agreed by the council. Our reforms are objectively assessed against the following policy objectives:

- improve transport productivity
- improve environmental outcomes
- support a safe transport system
- improve regulatory efficiency.

One of our key focus areas is removing regulatory barriers to transport technologies that have significant safety, productivity and environmental benefits.

1.2 About the Heads of Motor Accident Injury Schemes

The Heads of Motor Accident Injury Schemes is a group comprising the chief executives, or delegates, of the agencies responsible for regulating and/or delivering motor accident injury insurance (MAII) in Australia and New Zealand. It includes the separate agencies

³ In this paper, references to 'compensation' should be read to include 'compensation, care, treatment and benefits' as generally provided by motor accident injury insurance schemes.

⁴ In this paper, references to 'injury(ies)' caused by an automated driving system, should be read to include 'injury(ies) and death(s)'.

responsible for catastrophic injury insurance resulting from motor vehicle accidents under the National Injury Insurance Scheme (NIIS).

The group is committed to promoting and implementing best practice in MAII through:

- information exchange and benchmarking
- discussing strategic issues
- promoting reform through coordinated action
- providing advice to government
- engaging with other bodies associated with accident and injury insurance regulation.

The group has no legal constitution or status and cannot impose decisions on jurisdictions.

The NTC has consulted extensively with the group throughout this review and gratefully acknowledges its assistance.

1.3 What are automated vehicles?

The term 'automated vehicle' covers a variety of levels of automation. Key automated vehicle terms in the Glossary describe the levels of driving automation. These definitions are based on the Society of Automotive Engineers (SAE) International Standard J3016, 'Taxonomy and definitions for terms related to driving automation systems for on-road vehicles' (SAE International, 2018). These SAE levels are currently being used to develop legislative and regulatory responses to automated vehicles internationally.

Throughout this paper when we use the term 'automated vehicle' we are referring to vehicles with 'conditional', 'high' or 'full' automation as defined in the SAE International Standard J3016. Only vehicles at these levels of automation, when their automated driving system (ADS) is engaged, are capable of 'driving' on a sustained basis without human assistance or monitoring.

1.4 Key ministerial decisions on automated vehicles

Australia's transport ministers have made key policy decisions on automated vehicles. Ministers agreed to a safety assurance system that incorporates a self-certification approach for ADSs into existing Commonwealth legislation at first supply.⁵ Companies seeking to bring ADSs to market in Australia will have to demonstrate how they will manage risks against a set of safety criteria. They will have to satisfy several other obligations relating to management of data, their corporate location and financial position. These applicants are termed 'automated driving system entities' (ADSEs). The Commonwealth Department of Infrastructure, Transport, Cities and Regional Development (DITCaRD) is currently implementing the approach at first supply.

Ministers also agreed that Australia will develop a purpose-built national law for automated vehicles. The law will regulate the on-road (or 'in-service') operation of automated vehicles. We are currently seeking feedback on elements of the national law (National Transport Commission, 2019).

Table 3 lists the policy decisions that have implications for this review.

⁵ 'First supply' refers to when a vehicle enters the market through manufacture or importation. A safety assurance system for first supply of ADSs will be incorporated into existing Commonwealth legislation.

Table 3. Ministerial decisions with implications for the MAII review

Decision	Description	Implications
The ADSE will be an entity recognised in Australian law.	An entity will be identified as an ADSE when it is approved to bring an ADS to market in Australia through the safety assurance system at first supply (National Transport Commission, 2018d).	Having an identified legal entity with responsibility for the ADS's operation will help insurers identify a likely party that they can take action against for damages resulting from an ADS crash.
The ADSE will be responsible for the ADS's operation.	The legal entity responsible for the operation of an ADS will be the ADSE identified through the safety assurance system (National Transport Commission, 2018a).	
Decision	Description	Implications
The ADS, when engaged, will be in control of a vehicle at conditional, high and full automation.	A national law will be developed that provides for an engaged ADS to be in control at conditional, high and full automation (National Transport Commission, 2018a).	Defining an engaged ADS as in control of the dynamic driving task provides a greater degree of certainty and consistency. It will assist in aligning responsibility for ADS risks with the party best able to manage or mitigate them.
The ADSE will be required to have a corporate presence in Australia.	The safety assurance system will require an ADSE to have a corporate presence in Australia and maintain minimum financial requirements for the life of the ADS (National Transport Commission, 2018d).	The financial obligations on an ADSE will help to ensure financial risk and liability is appropriately distributed and managed. There will need to be insurance products on the market for an ADSE to purchase. Insurers will not have to deal with the complexity and cost of commencing legal proceedings against an overseas-domiciled ADSE.
The ADSE will require insurance.	The safety assurance system will require an ADSE to hold an appropriate level of insurance to cover personal injury, death and property damage caused by the ADS when it is engaged (National Transport Commission, 2018d).	
The ADSE will be obliged to show how it records and shares automated vehicle data.	The safety assurance system will require the ADSE to demonstrate the data it will record and how it will provide the data to relevant parties (National Transport Commission, 2018d).	This obligation does not specify data standards or data types. It does not define who 'relevant parties' are and what types of data they have access to. These matters will need to be developed so the rights of access and responsibilities to disclose of insurers, manufacturers, ADSEs, insured parties and injured people are clear. We discuss this further in chapter 4.

1.5 Motor accident injury insurance arrangements in Australia

Table 4 provides a high-level overview of the MAII arrangements in each jurisdiction. There is significant variation in how schemes are funded. Differences are also evident in scheme payment thresholds and in how schemes define the circumstances of an ‘accident’ or ‘injury’, and the role fault plays in determining eligibility for compensation.

Table 4. Overview of MAII arrangements in Australia

	Non-catastrophic injuries			Catastrophic injuries (NIIIS care and support)		Funding (underwriting)
	Fault-based	No-fault	Common law access	Lifetime care scheme	Common law access	
ACT ¹	●		●	●		Private
NSW	●	● ²	<i>Modified</i>	●	<i>Restricted</i>	Private
NT		●		●		Government
QLD	●		●	●	<i>Restricted</i>	Private
SA	●	● ³	●	●		Private
TAS		●	<i>Restricted</i>	●		Government
VIC		●	<i>Restricted</i>	●	<i>Restricted</i>	Government
WA	●		●	●	<i>Restricted</i>	Government

1. A hybrid MAII scheme is expected to start in 2020. It will provide defined benefits for up to five years on a no-fault basis and compensation for more serious injuries if fault is proven.

2. For necessary and reasonable treatment, care and support for victims of motor vehicle accidents who suffer minor injuries, for a period of up to 26 weeks.

3. For necessary and reasonable treatment, care and support for children under 16 years.

1.6 Objective of this review

The objective of this review is to recommend reform that provides insurance cover for injuries caused by an ADS. This policy paper continues the work of the review’s discussion paper *Motor accident injury insurance and automated vehicles* (the discussion paper), released in October 2018 (National Transport Commission, 2018b). The discussion paper:

- identified barriers to accessing compensation under current MAII schemes for personal injuries caused by an ADS
- sought views on whether existing MAII schemes should provide cover for injuries caused by an ADS, or whether other insurance models should provide cover

This review is part of a broader national reform program for the NTC that aims to develop end-to-end regulation to support the safe commercial deployment and operation of automated vehicles at all levels of automation (see section 1.8). In November 2016, the council approved the development of a regulatory framework to support the safe operation of automated vehicles (National Transport Commission, 2016), which included the following recommendation:

Recommendation 7: That state and territory governments undertake a review of compulsory third-party and national injury insurance schemes to identify any eligibility barriers to accessing these schemes by occupants of an automated vehicle or those involved in a crash with an automated vehicle.

That, subject to the review of insurance schemes, each state and territory government amends its compulsory third-party insurance schemes in close consultation with each other and industry, and that resulting reforms are nationally consistent wherever possible.

Lead agency: States and territories to undertake reviews, and the NTC to report progress to the council.

Timeframe: Legislative amendments to state and territory compulsory third-party and national injury insurance schemes completed by 2018.

Since the November 2016 recommendation:

- the review's scope has expanded to include examining the existing MAI framework as well as other existing legal avenues to access compensation and alternative insurance models
- the NTC has consulted extensively across government with agencies responsible for MAI, transport, treasury and finance, justice, health, competition and consumer rights.

The laws and policies that underpin MAI are the responsibility of state and territory governments, and the Commonwealth government is responsible for prudential regulation of commercial insurers. There is no central body responsible for progressing nationally coordinated personal injury insurance reform. The NTC has been asked by state and territory jurisdictions to take a leadership role in coordinating this review, given it cuts across transport and insurance portfolios.

1.6.1 Scope

The scope for this review was to identify barriers and gaps in the existing legal framework, primarily, but not exclusively, within MAI schemes that would limit access to compensation for people injured by an ADS. PricewaterhouseCoopers (PwC) and the Insurance Commission of Western Australia (ICWA) raised concerns that the scope was too narrow and disproportionately focused on barriers within existing MAI schemes. The NTC notes that MAI schemes are the predominant legal framework that currently governs liability for injuries caused by motor accidents on public roads – an environment where automated vehicles will be operating. The NTC ensured the review's expanded scope was reflected in the discussion paper's analysis of the strengths and weaknesses of other existing legal avenues to access compensation – via contract, negligence and the Australian Consumer Law (ACL). The discussion paper also considered alternative insurance approaches.

ICWA stated that it was unclear why detailed consideration of the ACL's suitability to address compensation claims arising from automated vehicles was out of scope. We discuss the extent of this review's focus on the ACL further at section 2.3.3 in the context of the problems that the discussion paper identified.

Several stakeholders identified financial administration, prudential regulation and scheme affordability as important considerations that need to be addressed in option choice (National Roads and Motorists' Association (NRMA), Royal Automobile Club of Queensland (RACQ), South Australian Department of Treasury and Finance (SA-DTF)). While we anticipate the initial financial implications of automated vehicles on personal injury insurance frameworks to be minimal, we recognise that the reform options raise complex financial sustainability challenges.

Financial implications were outside the scope of this review, given it is an initial phase of policy development. We acknowledge that financial impact analyses will be required and that other bodies are better placed to perform this work. The Heads of Motor Accident Injury Schemes, treasury and finance departments and the Australian Prudential Regulation

Authority are the appropriate bodies to consider risks around premium costs, government underwriting and prudential regulation of commercial insurers in further phases of work to refine elements of a personal injury insurance approach for automated vehicles. These entities have been consulted throughout this review. We outline the core elements of the next phases of policy development in chapter 5.

Some submissions raised issues that are outside the review's scope because they were:

- more appropriately considered in the context of broader insurance reform, and/or
- important to the successful commercial deployment of automated vehicles but are not the focus of this review.

Many of the issues raised are covered in other NTC work or are the responsibility of other government agencies like DITCaRD, Austroads, and state and territory governments. We have listed the issues at Appendix A.

1.7 Consultation

In October 2018 the NTC released the review's discussion paper (National Transport Commission, 2018b). The discussion paper identified several problems where elements of MAll schemes may act as barriers to accessing compensation by those who suffer injury caused by an ADS. The paper presented six options to address the problems.

We received twenty-five submissions from a range of stakeholders including government departments, insurance regulators, public and private insurance providers, insurance associations, transport associations, consultancies, law firms and law associations. Twenty-three submissions are public and are available on the NTC website.⁶ Two submissions were made on a confidential basis. A list of submissions is at Appendix B. In October and November 2018 and February 2019, the NTC undertook consultation sessions with government and insurance industry representatives.

We explicitly reference public submissions in this paper. Confidential stakeholder views are referenced by the sector of society they are from. We have incorporated stakeholder submissions and feedback from government and industry consultations into our analysis, which is the basis of the recommendations in this paper.

The recommendations listed in the Executive Summary and replicated in chapter 5 were considered at the council's meeting in August 2019. We have summarised the core intent of recommendations at the end of the chapter to which they relate.

1.8 Background

Since late 2015 the NTC has worked with Commonwealth and state and territory governments, Austroads and industry and consumer groups to identify and address regulatory barriers and policy issues associated with automated vehicles.

In November 2016 the council approved the NTC policy paper, *Regulatory reforms for automated road vehicles* (National Transport Commission, 2016). The paper provides a roadmap to prepare Australia for the safe commercial use of automated vehicles through the following projects:

⁶ Submissions available at <https://www.ntc.gov.au/current-projects/motor-accident-injury-insurance-and-automated-vehicles/>

Delivered
2017.
Under
review
2019.

Automated vehicle trial guidelines: national guidelines governing conditions for trials of automated vehicles. The guidelines will be reviewed in late 2019.

Delivered
2017.

Clarifying control of automated vehicles: national enforcement guidelines to clarify the application of current law on control and proper control to levels of driving automation available currently.

Phase 1
completed
May 2018.
Phase 2
started – see
'in-service
project'
below.

Changing driving laws to support automated vehicles: development of legislative reform options to clarify the application of current driver and driving laws to automated vehicles and establish legal obligations for ADSEs and human users.

Phase 1 was completed in May 2018 when the council agreed that a uniform approach to driving laws for automated vehicles is taken through developing a purpose-built national law. Phase 2 will develop detailed policy for the national law to regulate an ADS 'driver'.

Phase 1
completed
November
2018.
Phase 2
started - see
'In service
project'
below.

Safety assurance system for automated vehicles: development of an approach to the safety of automated vehicles. In November 2017 the council approved development of a safety assurance system based on mandatory self-certification in the interim period, until international standards are developed. In November 2018 the council agreed that first supply safety regulation will be the responsibility of DITCaRD (National Transport Commission, 2018d).

In-service safety of automated vehicles: This project brings together two projects:

Started.
Report to
council in
2020.

- phase 2 of changing driving laws to support automated vehicles
- phase 2 of the safety assurance system for automated vehicles.

We are currently seeking public feedback on regulatory reform options for the in-service safety of automated vehicles (National Transport Commission, 2019). We will report on the project's progress to the council in 2020.

Report to
Council in
August
2019.

Regulating government access to C-ITS and automated vehicle data: assessment of whether Australia's information access framework applying to government collection and use is sufficient to protect the privacy of cooperative intelligent transport systems and automated vehicle users. We released a discussion paper in September 2018 and reported to the council in August 2019.⁷

The NTC is working with the Commonwealth, Austroads and state and territory governments to ensure an integrated regulatory system can be delivered for deploying vehicles with automated functions. Figure 1 shows the completed and current projects addressing elements of regulation to prepare for automated vehicles.

⁷ The *Regulating government access to C-ITS and automated vehicle data* policy paper can be accessed at: <https://www.ntc.gov.au/current-projects/regulating-government-access-to-c-its-and-automated-vehicle-data/>

Figure 1. Creating a regulatory system for automated vehicles

Stage	Initiative	Owner	Status
 Import and manufacture	UN harmonization of vehicle standards	Commonwealth	Ongoing
	Safety criteria for first supply of automated vehicles	Commonwealth	Ongoing
 Registration and licensing	Framework for registration and licensing of automated vehicles	Austrroads	Ongoing
	Integrating advanced driver assistance systems in driver education	Austrroads	Ongoing
 On the road	In-service safety for automated vehicles	NTC	Ongoing
	Operation of automated heavy vehicles in remote and regional areas	Austrroads	Complete
	National enforcement guidelines for automated vehicles	NTC	Complete
	Regulating government access to C-ITS and automated vehicle data	NTC	Ongoing
	Review of motor accident injury insurance and automated vehicles	NTC	Ongoing
 Infrastructure	Infrastructure for automated vehicles: freeways and highways, traffic signs, line markings	Austrroads	Ongoing
	Road authority data for connected and automated vehicles	Austrroads	Ongoing

2 Access to compensation for people injured by an ADS

Key points

- It is unclear whether the majority of Australia's MAII schemes are likely to accommodate the commercial deployment of automated vehicles.
- People injured in an ADS crash may not have the same, or any, access to compensation under existing MAII schemes compared with people injured in a crash involving a vehicle controlled by a human driver. This is because:
 - many definitions in MAII laws do not contemplate an ADS crash
 - some MAII laws require someone to be at fault
 - MAII schemes are generally designed to cover injuries caused by human error rather than product faults.
- Most stakeholders supported our description of the problems and the need for reform. Their feedback provided valuable insights to refine principles for the design and administration of a national approach to personal injury insurance for automated vehicles.

2.1 Purpose of this chapter

This chapter sets out the need for reform based on the assessment, supported by stakeholders, that most MAII schemes are unlikely to accommodate automated vehicles with consistency or certainty. It also sets out why reform should be guided by nationally agreed principles.

2.2 ADS crashes may create uncertain and inconsistent outcomes for injured people using current MAII schemes

In the discussion paper, we outlined four problems created in an expected future state when automated vehicles are operating on our roads and an injured person seeks compensation.

Some automated vehicles will have the capability to be 'controlled' by either a human driver or an ADS. However, there will only be one entity legally in control of the vehicle at any point in time. In the event of an ADS crash, critical to determining liability for a range of damage, including injury, is whether the ADS was engaged at the time of the crash.

When an ADS is not engaged, the human driver will be 'driving', 'in control of', or 'in charge of' the vehicle, and existing MAII schemes will apply. Where fault is relevant, the human driver will be responsible for any injuries caused. When an ADS is engaged, it is not clear that the MAII schemes will apply. The problems we identified are set out below.

2.2.1 People injured by an automated vehicle may not be able to access the same, or any, compensation under current MAII schemes

Injuries caused in an ADS crash do not clearly fall within the scope of many existing MAII schemes because:

- many definitions in MAII laws do not contemplate a vehicle being controlled by an ADS

- some MAll laws require someone to be at fault before compensation can be paid
- MAll schemes are generally designed to cover injuries caused by human error rather than product faults.

2.2.2 MAll laws do not contemplate an ADS ‘driving’ a motor vehicle

One of the circumstances in which an injury or accident is eligible under MAll schemes is if it was caused by ‘the driving of’ the vehicle. However, current definitions contained in MAll laws do not contemplate an ADS being ‘in control of’, being a ‘driver’ or ‘driving’ a vehicle. An ADS crash may not satisfy the threshold elements of an ‘accident’ or ‘injury’, and those injured may be ineligible to access compensation. The legislative gaps and barriers in MAll schemes are discussed further in section 2.3.2.

2.2.3 Many MAll laws require fault for compensation to be paid

To obtain compensation under fault-based MAll schemes (and hybrid MAll schemes in limited circumstances), an insured party, likely to be the driver or registered operator, must be at fault. Even if an ADS was considered to be ‘driving’, it is not a person. An ADS is a machine and cannot be negligent because it has no mental capacity to act with reasonable care and skill. Without fault, the MAll scheme may not apply to the accident and no MAll compensation would be available.

2.2.4 MAll schemes are generally designed to cover injuries caused by human error rather than product faults

ADS crash injuries are more likely to be the result of faults in software, sensors and communication systems. These systems could be both inside and outside the automated vehicle and may be susceptible to programming errors and external interference. MAll schemes are generally designed to cover injuries caused by human error rather than product faults.

2.3 Stakeholder feedback on the problems

The majority of stakeholders supported the key challenges automated vehicles pose to accessing personal injury compensation identified in the discussion paper. ICWA expressed strong views that any problems should be reframed as a broader discussion on ensuring liability for the cost of personal injuries remains with the party responsible for causing those injuries. Other stakeholders identified further challenges that will need to be addressed as the detail of an insurance solution is developed.

2.3.1 Focus should be on complexity of outcomes for the injured person

Stakeholders representing a range of perspectives supported our approach that framed the problems in the discussion paper on uncertain and inconsistent access to compensation for injured people in the event of an ADS crash (Australian Capital Territory Treasury (ACT treasury), a law firm, Australian Motorcycle Council, Insurance Australia Group (IAG), Insurance Council of Australia (ICA), Law Council of Australia, Maurice Blackburn Lawyers, PwC, State Insurance Regulatory Authority (SIRA), RACQ):

... the problems identified in the paper effectively raise the key issues requiring resolution to successfully develop a workable solution for automated vehicle injury insurance (SIRA).

A motorists association stated that:

... the existing framework is not sufficient to cover AV [automated vehicle] crashes and the barriers to MAll access must be addressed.

... failure to [address the barriers] will not adequately provide access to compensation for personal injury and is likely to negatively impact supply and take up, as well as result in intensified community concern around interacting with AVs ...

Many stakeholders noted that, without reform, people injured in an ADS crash face uncertainty as to whether they are covered by existing MAII schemes. Those who are not eligible to access MAII schemes may have to rely on alternative causes of action, including:

- product liability laws under the ACL
- negligence, and/or
- contract.

The Motor Accident Insurance Commission (MAIC) noted some of the challenges that these alternative pathways present for injured people:

- identifying respondents will be complex
- they lack the rehabilitative focus of MAII schemes
- significant legal expense is required over an extended time period
- claims may be limited by caps on damages limitation periods and manufacturer defences.

2.3.2 MAII laws have threshold elements that ADS crashes may not meet

In the discussion paper we summarised the barriers or gaps in the current MAII laws that may prevent a person injured in an ADS crash from accessing compensation as:

- an accident/injury caused by or involving ‘the driving of the vehicle’ or the vehicle ‘running out of control’ may not apply when the ADS is engaged
- the ADS may not fall within the definition of ‘driver’. There would be no insured party and so no indemnified party in fault-based and hybrid MAII schemes
- an ADS is not capable of negligence or wrongdoing. Even if it were an indemnified party, the requirement for fault in fault-based and hybrid MAII schemes is absent.

Most stakeholders agreed with the legislative gaps and barriers identified (ACT treasury, a motorists association, Australian Motorcycle Council, Deloitte, IAG, Law Council of Australia, Maurice Blackburn Lawyers, PwC, RACQ, SIRA). Some stakeholders submitted that it will be important to address the following legislative challenges:

- Intentional hacking/acts of violence. It was submitted that automated vehicles may introduce an increased opportunity for cyber-attacks causing personal injury. States and territories have varied levels of protection for victims of terrorism by a motor vehicle and that this should be reviewed (Law Council of Australia, RACQ).
- Technology defects. RACQ submitted that the current definition of ‘mechanical defect’ may be inadequate to account for technical defects of automated vehicles.

2.3.3 Focus should be on liability for ADS faults

ICWA did not support the focus of the key problem being that a person injured in an ADS crash may have an uncertain and/or inconsistent compensation outcome compared to a person injured in a conventional motor vehicle crash who is covered by existing MAII schemes. ICWA stated that:

... MAII schemes were not designed to cover vehicle manufacturer negligence, product liability, and cyber security risks ... the premise that MAII “may act as

barriers to accessing compensation for personal injuries or death caused by an automated driving system” is not supported.

ICWA's submission suggests that the problem statement should be refocused on how to ensure people injured in ADS-caused crashes access compensation and that those who bring ADS products to market remain liable for the costs of injuries incurred when an ADS is in control of a vehicle. ICWA suggested that automated vehicles present a new set of risks that require new products and solutions to manage them.

It is our view, and the view of most stakeholders we consulted when developing the discussion paper, that the problems were appropriately focused on the gaps and barriers within MAII schemes created by automated vehicles. This is because MAII schemes are the predominant legal framework that currently governs liability for injuries caused by motor accidents on public roads, and schemes are an important part of any discussion concerning ADS-caused injuries.

We recognise that ADS crash injuries are anticipated to more likely be the result of product faults than human error. This is reflected in the fourth problem at section 2.2.4. We acknowledge that thorough consideration of insurance models to provide compensation for ADS crash injuries required discussion of non-MAII scheme compensation mechanisms. That was done in the discussion of causes of action in negligence, contract and the ACL,⁸ as well as alternative insurance models, in the discussion paper.

We canvassed the views of the Australian Competition and Consumer Commission (ACCC) – the entity responsible for the ACL. The ACCC expressed the following view on using the ACL as a legislative scheme for personal injury compensation resulting from ADS crashes:

... the ACL is not appropriate to provide people injured in ADS crashes with compensation in the place of an insurance scheme. Seeking damages for an unsafe or defective product under the ACL would require each individual to commence a claim in a court or tribunal, the burden of which may prevent or deter many injured persons from seeking compensation.

The ACCC is of the view that relying on the ACL for personal injury compensation would result in inconsistent and ineffective outcomes for injured persons and would not address the wider policy issue of providing an equitable and just avenue for compensation for the wider public.⁹

2.3.4 Complexity of who or what caused an ADS crash

Some stakeholders explained that the number and character of parties potentially liable for an ADS crash will differ from the parties currently liable for vehicle crashes. Stakeholders suggested that further work is required to determine who, or what, is at fault and who is liable for ADS crash injuries.

The Law Council of Australia noted that there may be multiple causation issues - for example, a software defect that results in a human driver intervening to attempt to avoid a collision, but in doing so the driver acts negligently in a way that might be seen as contributing to a crash. They emphasised that it will be necessary to determine whether a crash was caused by the:

- owner/user of the vehicle

⁸ See the *Motor accident injury insurance and automated vehicles* discussion paper at sections 1.4.1, 4.2.3, 4.2.4, 4.3.1 and 4.3.2.

⁹ See the *Motor accident injury insurance and automated vehicles* discussion paper at sections 1.4.1 and 4.2.3 for the ACCC's views.

- producer of the vehicle or the installed software and algorithms
- manager and collector of information and data shared by the vehicle; and/or
- supplier of the vehicle's maintenance and services.

IAG noted that the connectivity of automated vehicles poses further challenges, for instance where the connected infrastructure, rather than the ADS, has failed. IAG suggested that there may be:

... scenarios where a telecommunication provider experiences a disruption to their service, a sensor fitted on external infrastructure (e.g. stop sign) fails or there is a major cyber security event.

In these instances, "control of" or "driving" of the automated vehicle does not solely rest with the ADS. Instead it rests with the interaction between the external environment and the ADS. IAG believes that these types of accidents also need to be defined and included in legislation to enable MII schemes to respond to those who are injured in accidents involving connectivity disruption.

We agree that liability for ADS crashes may fall upon a range of parties, not merely the manufacturer or ADSE. This is recognised in the fourth problem at section 2.2.4, and in discussion of principles to guide the design of an insurance solution at section 2.4.3.

We sought feedback on whether the entity best able to manage ADS risks should be responsible for the cost of damage if the risk eventuates. Stakeholders provided significant support for this concept. We consider that liability should rest with the party(ies) in the best position to manage or mitigate the risk. This could include a variety of parties identified by both the IAG and the Law Council of Australia, including road network managers, who may have responsibility for connected infrastructure. Actions to recover costs against the range of parties who may be responsible for an ADS crash are considered at 3.5.2.

Maurice Blackburn Lawyers submitted that:

... if the person in control of the vehicle chooses to switch the vehicle to its automated setting, they should be responsible for what happens while the vehicle is on that setting.

This position is true for vehicles where a human driver is required to be in control of the vehicle. However, as noted in section 1.4 the council agreed in November 2018 that for vehicles with conditional, high and full automation the ADS is in control of the vehicle (not the human occupant or fall-back ready user) at the point the ADS is engaged, and the ADSE is responsible for the operation of the ADS. We agree that establishing who engages the ADS and when it is engaged will be important and access to data for liability purposes will be critical. We discuss access to data in further detail in chapter 4.

2.3.5 NTC's conclusions

Stakeholders largely supported the problems we identified. They acknowledged that most MII schemes do not provide certainty that people injured by an automated vehicle will be able to access the same or, in some cases, any compensation compared with people injured by a human-driven vehicle.

Without comparable compensation certainty, people injured by an ADS may suffer financial disadvantage, complex and prolonged legal proceedings and/or uncertain outcomes. We believe it is reasonably likely that these negative outcomes will exacerbate an injured person's physical and emotional injuries. This is an undesirable policy outcome.

Who, or what, is responsible for an ADS crash and who should provide compensation for injuries that result was reiterated by stakeholders as a key issue. Without clarity, liability may fall on parties that do not have reasonable means to control the risk. In light of the council's

agreement to develop an end-to-end regulatory framework for the safe deployment and operation of automated vehicles, then reform is needed.

2.4 Principles to guide how injured people should access compensation

In the discussion paper, we posed a set of principles to guide discussion of the problems and assess a range of options to ensure people can access compensation if injured by an ADS. The principles were developed with the Heads of Motor Accident Injury Schemes.

2.4.1 Proposed principles from the discussion paper

To ensure that people injured in an ADS crash can obtain compensation, it was considered that any agreed solution should achieve the overarching principle and supporting principles below:

Overarching principle

No person should be worse off, financially or procedurally, if they are injured by a vehicle whose ADS was engaged, than if they were injured by a vehicle controlled by a human driver.

Supporting principles

1. Reasonable and timely access to compensation should continue regardless of the type of vehicle involved in the injury.
2. The arrangements should promote transparency and certainty in accessing compensation.
3. The arrangements should ensure that insurance for personal injuries caused by automated vehicles is fully funded, and that affordability is considered – for example, by minimising potential litigation between insurers and manufacturers/ADSEs.
4. Existing state and territory benefit regimes should not be required to change.
5. The arrangements should include an efficient process to access a standard set of reliable and verifiable vehicle crash data.

2.4.2 Stakeholder feedback on the proposed overarching principle

There was almost universal stakeholder support for the proposed overarching principle that conveys the concept that there should be equitable access to compensation regardless of whether the vehicle was driven by a human or by an ADS.

A number of government and insurance industry stakeholders suggested modifying the principle (as indicated) to ensure the equitable application of the overarching principle such that:

No person should be better or worse off, financially or procedurally, in the relevant jurisdiction if they are injured by a vehicle whose ADS was engaged, than if they were injured by a vehicle controlled by a human driver.

SA-DTF explained that the words *or better off* are added to explicitly state that an injured person should have the same rights to compensation regardless of whether an automated

vehicle or a conventional vehicle was involved. The words *in the relevant jurisdiction* are added to reflect that any insurance approach to support the introduction of automated vehicles must work within the current personal injury entitlements of each state or territory (SA-DTF). We support these arguments and have amended the principle as suggested.

The Federal Chamber of Automotive Industries (FCAI) suggested an additional overarching principle:

At the very least, no ADSE should be worse off as a result of any reform.

While we have not adopted this as an additional or expanded overarching principle, we have amended the supporting principles that may help address the FCAI's concerns about inappropriate burdens being placed on ADSEs. For example, we have amended the supporting principle relating to 'minimising potential litigation between insurers and manufacturers/ADSEs' to replace 'manufacturers/ADSEs' with 'parties at-fault'. We have also added a new principle that requires the costs of covering liability for an ADS to be allocated to those who can best control the risk. In our view, these principles will not place any further burden on ADSEs than manufacturers are currently subject to through the operation of contract, negligence and the ACL.

2.4.3 Stakeholder feedback on the proposed supporting principles

Stakeholders who commented on the proposed supporting principles expressed broad support. Several stakeholders suggested additional principles, and one stakeholder disagreed with the principles.

Customer focus

Some insurance industry stakeholders considered that the supporting principles should put a greater focus on the injured person's needs:

- IAG explained that a customer-focused scheme is one that is simple to access, enables and promotes recovery and facilitates access to the right benefits when they are needed.
- ICA suggested that reform should aim to ensure an injured person has easy and timely access to treatment, care and recovery support.

We believe that the revised principles one and four in Table 5 adequately focus on the injured person by ensuring that any insurance solution should provide both equitable and timely compensation.

Additional principles

Several stakeholders identified additional concepts that could be incorporated into principles for the design of an insurance solution for people injured by an ADS:

- prioritise simplicity and flexibility (ACT treasury, Motor Accidents Insurance Board (MAIB), MAIC, SIRA, RACQ)
- affordability (SIRA)
- promote competition and safety innovation (ACT treasury, MAIB, MAIC, QBE Insurance Group (QBE))
- efficient and fair funding and cost allocation arrangements (ACT treasury, ICWA, MAIB, MAIC, PwC, SIRA).

ICWA suggested that principles should 'ensure that responsibility for the cost of personal injury due to product failure lies with ADSEs and their insurers'. We believe that liability for product failure may fall on ADSEs and their insurers in many cases, but not all. As such, we have added a principle, reflecting support of stakeholders, that liability for an ADS should fall

on those who can best control the risk. These parties are likely to be manufacturers, ADSEs, communication providers and infrastructure owners, rather than governments and vehicle owners.

Allianz suggested including a principle that:

... occupants of a vehicle who have the capacity to control a vehicle (e.g. by sitting in the driver's seat), should retain the legal duty to control the vehicle in response to novel or adverse circumstances when reasonable to do so. This should be reviewed when the majority of vehicles on Australian roads are at automation levels 4 and 5.

NTC does not support including this principle because it would be inconsistent with key decisions of Australia's transport ministers, detailed in section 1.4 that:

- ADSEs will be responsible for the safe operation of an ADS via the approval process of a safety assurance system (November 2017)
- an engaged ADS is in control of a vehicle at conditional, high and full automation and the ADSE is responsible for compliance with dynamic driving task obligations (May 2018).

2.4.4 Revised principles

Based on analysis of stakeholder feedback we have developed the three new principles described below.

Principle # 2 – Prioritise simplicity and flexibility

The design and administration of an insurance solution should prioritise **simplicity** and **flexibility**.

Simplicity means:

- reliance upon, or complementarity with, existing laws, judicial processes and arrangements in each jurisdiction to the greatest extent possible, like the collection of compulsory third-party premiums by registration authorities (Allianz, MAIC)
- preservation, rather than disruption, of the integrity of existing MAll schemes.

Flexibility means:

- capable of adjusting to different stages of the automated vehicle industry's development (ACT treasury)
- supporting an initial mixed fleet of automated vehicles and human-controlled vehicles, transitioning to a future state dominated by automated technology (MAIB, RACQ, SIRA).

(In the short term, this will likely include a small number of automated vehicles operating at lower levels of automation, a low volume of accident data, and the prospect of rapid improvements in automated vehicle safety)

- capable of being technology-neutral so it does not become outdated - for example, if future transport modes include alternative technology like drones (a law firm, SIRA)
- ensuring injured people are not left vulnerable by delays in any required legislative changes (RACQ).

Principle # 3 – Establish affordable, efficient and fair funding arrangements that allocate the cost of covering the liability for an ADS to those who can best control the risk

The design and administration of an insurance solution should include arrangements that are:

Affordable

- Funding arrangements that accurately represent costs incurred, have capital adequacy to meet claims and are sustainable over time. If the solution was to involve existing MAII schemes, then they should not be taking on more risk without appropriate means to securing the necessary funding to underwrite that risk (MAIB, SIRA).

Efficient

- Funding arrangements that are cost-effective, easy to access and comply with.

Fair

- Funding arrangements that secure a **fair and equitable distribution of ADS crash costs** between parties who can best control the risk, including manufacturers, automated vehicle owners, conventional vehicle owners, insurers and taxpayers. In any solution design, liability should be assigned to the right entity. That is, the right people should pay for the risk they are putting on the road (MAIB, SIRA).

Principle # 7 – Promote safety innovation

The design and administration of an insurance solution should optimise safety outcomes by:

- **incentivising and stimulating competition** between ADSEs and others in the automated vehicle supply chain to prioritise safety (ACT treasury, MAIB, QBE)
- **minimising regulatory complexity** that may impede innovation and the take-up of automated vehicles or cause automated vehicle manufacturers and ADSEs to bypass the Australian market (MAIC).

Consistent with the approach in new principle 3 above, we amended the proposed supporting principle 3 from the discussion paper (that insurance arrangements are fully funded, and that affordability is considered – by minimising litigation between insurers and manufacturers/ADSEs). We have replaced ‘manufacturers/ADSEs’ with ‘parties at-fault for injuries and deaths caused by automated driving systems’, explicitly recognising a broader range of parties that may be liable for ADS failures.

Principle deleted

IAG and PwC questioned the justification and feasibility of principle 4 in the discussion paper (that existing state and territory benefit regimes should not be required to change). The intent of this principle was to preserve the integrity of existing MAII schemes and minimise disruption. We acknowledge that *no change* is unlikely to be feasible particularly given analysis of the options feedback in chapter 3. We have removed this principle. We have captured the broader intent of the removed principle in the new principle number 2 which prioritises simplicity and flexibility in the design and administration of an insurance solution.

2.4.5 Importance of a coordinated national approach

In the discussion paper we asserted that without national agreement to change and a coordinated national approach to the changes, people injured in an ADS crash may have access to compensation in some jurisdictions, but not in others. Maurice Blackburn Lawyers agreed with the sentiment, stating:

As a national plaintiff law firm, we are well placed to advocate strongly for a co-ordinated national approach to ensure comparable legislative amendment across all states and territories.

*We emphasise that **we do not advocate for a national compensation system, but rather a nationally consistent approach** to broadening each state and territory's existing laws and schemes to ensure that in each state or territory, injured persons are not disadvantaged based on the involvement of an automated vehicle.*

Similarly, ICWA clarified that its support for the overarching principle 'does not indicate support for the pursuit of harmonisation of Australian MAlI schemes'. While acknowledging differences in existing MAlI schemes, it argued that:

The introduction of automated vehicles into the Australian market should not be seen as policy justification for wider MAlI scheme changes or harmonisation of existing schemes.

Harmonisation of different state and territory MAlI schemes is beyond the scope of this review and was not a reform objective. A nationally consistent approach, founded on agreed principles, will play an important part to ensure ADSEs (and other parties involved in automated vehicle supply chain, and operation), insurers and injured people experience a regulatory environment that has certainty and consistency.

2.5 NTC's conclusions

Based on stakeholder feedback we have refined a set of principles to support a national approach to personal injury insurance for automated vehicles as follows:

- included three new principles:
 - prioritise simplicity and flexibility
 - establish affordable, efficient and fair funding arrangements that allocate the cost of covering the liability for an ADS to those who can best control the risk
 - promote safety innovation
- removed the principle that 'existing state and territory benefit regimes should not be required to change'
- rephrased the range of parties that could be at-fault for an ADS failure
- removed the distinction between the overarching principle and its supporting principles. While there was no disagreement from stakeholders that the overarching principle was paramount, we no longer view it as being an 'umbrella' principle that is necessarily achieved through the satisfaction of all its supporting principles.

There was strong support from government stakeholders during additional consultations that the refined principles in Table 5 should guide the design and administration of the preferred approach to personal injury insurance for automated vehicles across Australia. The preferred approach is discussed in chapter 3.

Table 5. Nationally agreed principles for motor accident injury insurance

Design and administration of motor accident injury insurance for automated vehicles should...

1	Ensure no person is better or worse off, financially or procedurally, in the relevant jurisdiction, if they are injured by a vehicle whose automated driving system was engaged than if they were injured by a vehicle controlled by a human driver.
2	Prioritise simplicity and flexibility.
3	Establish affordable, efficient and fair funding arrangements that allocate the cost of covering the liability for an ADS to those who can best control the risk.
4	Continue reasonable and timely access to compensation regardless of the type of vehicle involved in the injury.
5	Promote transparency and certainty in accessing compensation.
6	Minimise potential litigation between insurers and parties at fault for injuries and deaths caused by automated driving systems.
7	Promote safety innovation.
8	Include efficient processes to access a standard set of reliable and verifiable vehicle crash data.

Summary of recommendation 1(c)

The NTC recommends that the principles set out in Table 5 should guide the design, implementation and administration of the approach to personal injury insurance for automated vehicles across Australia.

3 National approach to personal injury insurance for automated vehicles

Key points

- A consistent, national approach should be taken to provide cover for injuries that result from an ADS crash.
- The majority of stakeholders supported expanding existing MAll schemes to cover injuries caused by an ADS. This approach will likely require further work to develop an effective right-of-recovery for insurers.
- In the short to medium term cover for injuries should be provided by MAll schemes. The approach should be reviewed by MAll schemes when automated vehicles are a statistically sufficient portion of registered vehicles to enable assessment of their safety risks.

3.1 Purpose of this chapter

The purpose of this chapter is to explain why:

- the NTC recommends that a national approach to cover ADS-caused injuries should be achieved through an expansion of MAll schemes, rather than alternative insurance options proposed in the discussion paper
- it is important to have an effective right -of-recovery mechanism as part of a national approach.

3.2 Reform options

The discussion paper asked for feedback on six options that offer possible avenues for injured people to access compensation:

Option 1: No changes and rely on the existing legal framework

This option requires a person injured by an ADS to rely on the current legal framework to claim compensation. Claims could be made under existing MAll schemes, the ACL, negligence or relying on contract law.

This option would not change established processes, but it would result in uncertain and inconsistent outcomes for injured people under MAll schemes. For non-MAll claims, there would likely be delays in accessing compensation, up-front expenses being paid and inconsistent and uncertain outcomes.

Option 2: Exclude injuries caused by an ADS from MAll schemes

This option requires all MAll schemes to exclude cover for injuries caused by an ADS. People injured would not be able to use the MAll schemes to seek compensation and would have to rely on a claim in contract, negligence or the ACL.

This option makes it clear that ADS crashes are not covered by MAll schemes. This option would have similar challenges to option 1, but it provides greater certainty to MAll schemes.

Option 3: Expand MAII schemes to cover injuries caused by an ADS

This option explicitly provides MAII scheme cover for ADS-caused injuries. An injured person could claim compensation regardless of whether injuries were caused by an ADS or a human driver. The option builds on the existing legislative and administrative MAII framework and provides a single point of access for an injured person to claim.

This option could compromise the financial sustainability of MAII schemes if the costs of ADS faults shift from at-fault parties, such as ADSEs to vehicle owners, MAII insurers and governments. Cost-shifting risks could be addressed by:

- insurers exercising a right-of-recovery against at-fault parties (either existing or enhanced right), and/or
- a compulsory reinsurance pool funded by relevant parties who could be responsible for, or contribute to, an ADS fault. MAII schemes would have access to, or a right to recover from, the pool.

Option 4: Purpose-built automated vehicle scheme

This option establishes a separate insurance scheme providing cover for automated vehicles. It could be a national scheme, or a state and territory-based scheme. This option contains ADS liabilities within the automated vehicle supply chain. However, if the scheme was nationally managed, ensuring equitable compensation between automated and non-automated vehicle caused injuries would be complex.

Suggestions were sought from stakeholders on design elements of the scheme.

Option 5: Minimum benchmarks

This option creates agreed national benchmarks for the scope and coverage of ADS crash injuries. States and territories would retain individual responsibility and flexibility to deliver the benchmarks to suit their jurisdictional circumstances. The benchmarks could build upon existing MAII schemes or permit alternative insurance models.

This option will have minimal disruption to existing MAII schemes. However, there may be uncertainty and complexity about how to claim compensation and possibly varied insurance costs for ADSEs.

Option 6: Single insurer

This option allows private insurers to provide personal injury, property damage and other insurance types under a single policy covering all liabilities for an automated vehicle. Jurisdictions that have publicly underwritten MAII schemes would be required to open their market to the private sector (Northern Territory, Tasmania, Victoria, Western Australia).

This option provides the convenience of dealing with one insurer covering all liabilities. It also reduces the exposure of MAII schemes to ADS-related claims. However, insurer costs of pursuing recovery against at-fault parties may ultimately be reflected in premiums paid by automated vehicle owners. A national, single insurer scheme would be difficult to establish given the varied funding of current MAII schemes.

3.2.1 Assessing the options

The NTC proposed five criteria for assessment, in line with the policy principles developed by the Heads of Motor Accident Injury Schemes (see 2.4.1) to evaluate the options. The assessment criteria used to perform an initial assessment of the options were:

- Will the option ensure a person injured by an ADS is no worse off financially or procedurally than if they were injured by a vehicle controlled by a human driver?
- Will the option provide timely payment of claims to injured persons?

- Does the option address an identified gap or barrier to personal injury compensation created using automated vehicles?
- Will the option send an appropriate price signal to those responsible for the safe operation of automated vehicles to obviate product/system/technology failures and risks?
- Is the option capable of accommodating evolving technology, automated vehicles and ownership models?

3.2.2 Stakeholder feedback on the assessment criteria

In our discussion paper, we asked whether the criteria were adequate for assessing the options and if alternative or different criteria should be considered. Most stakeholders viewed the criteria adequate.

PwC emphasised the importance of the first criterion that 'ensures a person is no worse off' and fourth criterion that 'sends price signal to entities responsible for automated vehicle risks'. Some stakeholders suggested that the cost and complexity of implementation should also be a criterion (MAIC, PwC, SIRA). This is now captured by the revised principle to 'prioritise simplicity and flexibility' (see Table 5).

PwC noted that the options assessment does not separately assess option 3 (expanding MAll schemes to provide cover for ADS-caused injuries) with a reinsurance pool. PwC considered that if the reinsurance pool was separately assessed, it may become the preferred option because it would score high across the first four criteria. They noted that a key issue to be resolved is how to determine the respective premium contributions of the various parties that could be responsible for a faulty ADS.

In its submission, Deloitte suggested that an evaluation of options 4, 5 and 6 would benefit from a multi-criteria assessment and scenario modelling. They considered that there would be value in examining the complexities of the interaction between the current publicly underwritten MAll schemes and options 4, 5 and 6 - for example, the extent of funding, spending and profits derived from the MAll schemes.

RACQ submitted that while the criteria are appropriate, the weightings given against the options should be reassessed. For example, comments offered on the 'sends a price signal to those responsible for ADS safety' criterion were:

- Option 1 (rely on the existing legal framework) should be assessed as low (not medium) if there is no effective right-of-recovery mechanism.
- Option 2 (exclude ADS-caused injuries from MAll schemes) should be assessed as low (not medium) as it eliminates any immediate compensation pathway, prompting an injured person to pursue a lengthy and uncertain non-MAll claim. This may result in an outcome that does not reflect the true cost of damage suffered and costs incurred.
- Option 5 (minimum benchmarks) should be assessed as medium (not high) as a price signal would only be sent in relation to claims of injured people who met the eligibility benchmarks.

ICWA was the only submitter that did not consider the criteria appropriate. ICWA viewed the criteria as being founded on an assumption that MAll schemes should be amended to cover automated vehicle manufacturer negligence and product liability risks. The NTC disagrees with ICWA's view. An objective of this review was to identify barriers in the existing legal framework, primarily within MAll schemes that would limit access to compensation for people by an ADS. The review examined MAll schemes because they are the predominant legal framework that currently governs liability for injuries caused by motor accidents on public roads – an environment where automated vehicles will be operating. The discussion

paper outlined the strengths and weaknesses of reform options involving MAII schemes and alternative models to provide cover to people injured by an ADS, and the assessment criteria was an effective way to guide the best approach towards reform. To have a discussion without a review of the MAII schemes would not be appropriate to achieve the review's intended objectives. Our response to further concerns raised by ICWA are discussed in Appendix C.

Based on feedback, the NTC considers that the assessment criteria provide an appropriate and useful guide for an initial analysis of the options.

3.3 Stakeholder feedback: options not supported

In the discussion paper, we asked stakeholders for their views on which of the six options best met the assessment criteria and policy principles. The following options received little or no support:

- option 1 – make no change to the existing legal framework
- option 2 – exclude injuries caused by an ADS from MAII schemes
- option 4 – purpose-built automated vehicle scheme
- option 6 – single insurer policy covering all vehicle liabilities.

Stakeholder feedback on these options is summarised in Appendix C.

3.4 Stakeholder feedback: supported options

Using the assessment criteria and principles in the discussion paper as a basis, there was almost universal stakeholder support for option 3 - expand MAII schemes to cover injuries caused by an ADS. There was some support for option 5 - minimum benchmarks. As SIRA stated:

Option 3 and Option 5 best meet the core principles ... these options are best placed to protect injured people, minimise differences in treatment between people injured by automated and non-automated vehicles, and provide the most effective basis for supporting other priorities within the scheme such as financial sustainability and consistency across jurisdictions.

3.4.1 Stakeholder feedback on option 5 – minimum benchmarks

In the discussion paper, we asked if stakeholders supported minimum benchmarks and how the benchmarks should be defined. DITCaRD and IAG considered minimum benchmarks offer a desirable long-term solution for MAII schemes in Australia, particularly if the objective was to increase national consistency.

ACT treasury, MAIB, MAIC and SIRA suggested that the minimum benchmarks could include the following criteria:

- Injured people only have to deal with one insurer.
- Injured people have access to the same rights and benefits, regardless of the ADS status.
- An automatic right-of-recovery to indemnify the insurer for loss incurred through the payment of a claim resulting from an accident caused by an ADS. Recovery action would be against the companies capable of managing safety risks associated with ADS operation.
- A recovery mechanism that ensures those in control of the risk pay for it.

- The minimum level of insurance cover is MAII and it is compulsory for automated vehicles.

Stakeholders noted that further work would need to be undertaken with all Australian jurisdictions to define the key benchmarks. Suncorp emphasised that, given several jurisdictions have substantial degrees of at-fault cover and the pace of scheme reform, option 5 was not an adequate response in and of itself to the issue of coverage for people injured in ADS crashes, particularly given the NTC's desired timeframe for implementation.

MAIB, MAIC and SIRA indicated minimum benchmarks could be used as a guide to implement option 3.

ICWA did not support option 5 in its entirety. It considered the option does not adequately reflect that existing MAII schemes were designed to provide cover for driver negligence and that the new risk of the ADS in control of the vehicle requires new insurance products. ICWA did agree that there may be some merit in states and territories agreeing on minimum benchmarks that set standards for making a claim, assessing a claim and accessing early medical and treatment supports for the injured person. This could occur through new or existing products at the discretion of each jurisdiction.

Noting this feedback, the NTC considers minimum benchmarks may assist with further work to develop policy detail of option 3 and any longer-term approach to personal injury insurance relating to automated vehicles.

3.4.2 Stakeholder feedback on option 3 – expand MAII schemes to cover injuries caused by an ADS

The clear majority of stakeholders, representing a variety of sectors, supported option 3. These included ACT treasury, a law firm, Allianz, a motorists association, Australian Motorcycle Council, Deloitte, Department of State Growth, DITCaRD, DTF-SA, FCAI, IAG, ICA, Law Council of Australia, Law Institute of Victoria (LIV), MAIB, MAIC, Maurice Blackburn Lawyers, PwC, QBE, RACQ, SIRA and Suncorp. Figure 2 captures key elements of option 3.

There was consistent comment that option 3 best satisfied the principles and assessment criteria. Some stakeholders submitted that a key benefit of option 3 is that it ensures injured people receive equitable and timely access to support, which is essential to optimising health recovery (a law firm, Allianz, IAG, ICA, SA-DTF and Suncorp). These stakeholders expressed concern that there may be a significant risk that an injured person's recovery will be hampered if they cannot access MAII schemes and instead must pursue compensation through product liability and contract law provisions that are not designed to deliver timely, health-focused support.

Other key reasons for supporting option 3 were that it:

- is agile enough to withstand technology developments
- continues the link between MAII and registration and preserves mutual recognition of registration between jurisdictions (RACQ, QBE).

IAG stated that expanding the current MAII schemes also provides a single compensation access pathway for all people injured in vehicle crashes in each state and territory, regardless of the type of vehicle involved. This single pathway will promote transparency for injured people and facilitate greater understanding and certainty around the types of support and compensation that a person can access. As the ICA concluded:

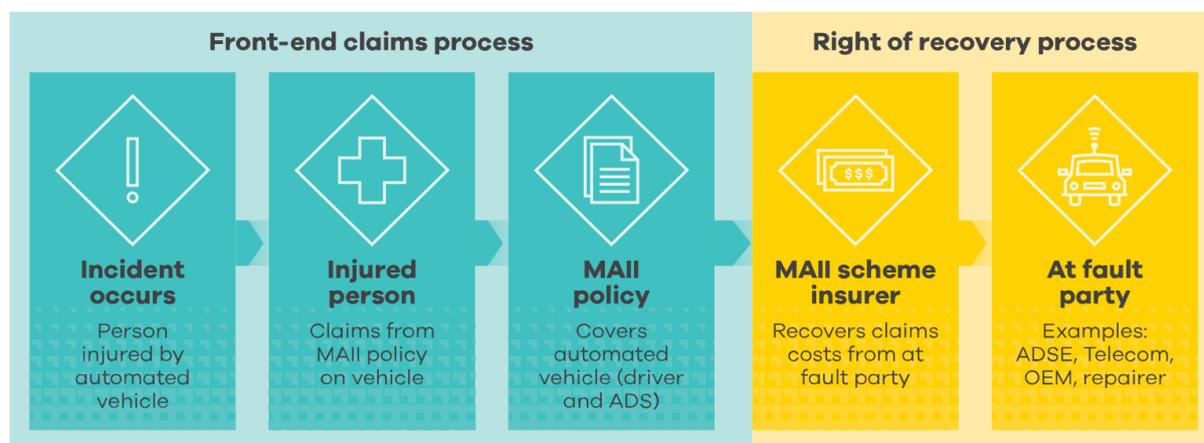
If a light touch approach is adopted there will be greater certainty, efficiency and transparency for road users as their path to recovering compensation for an injury will remain largely unchanged ... The MAII framework should remain flexible, with incremental change as problems arise and are identified with more

certainty with greater experience as the number of autonomous vehicles increase on the road.

Some stakeholders considered that option 3 would be the quickest to implement, so is the most appropriate intermediate or stepped approach to resolving personal injury insurance for automated vehicles. The NTC notes comments from MAIC and RACQ that:

- *radical overhaul of CTP for all vehicles is an excessive response, particularly given the expected gradual adoption of automated vehicles (MAIC)*
- *there are insufficient autonomous vehicles on Australian roads that warrant radical changes to the relevant legislation (RACQ)*

Figure 2. Claim and recovery process under option 3



Legislative change is likely to be required to ensure that MAll schemes provide cover for ADS-caused injuries. Responsibility for any policy or legislative change to MAll schemes rests with each state and territory jurisdiction. We summarise possible legislative approaches that could be taken to include injuries from ADS crashes in MAll schemes in Appendix D.

3.5 Cost-shifting implications of option 3

Many stakeholders expressed concern that any reform that simply provides a compensation pathway within existing MAll schemes for a person injured by an ADS will, in effect, subsidise manufacturers for their product faults. The complexity of proving causation and establishing liability in ADS crashes will make it challenging for MAll insurers to recover from at-fault parties, those claims costs it has paid to an injured person.

There are risks that costs will not be recovered by MAll insurers. There are also risks of increased administration and legal costs in MAll schemes for recovery actions - for example, where a systemic ADS fault causes a series of crashes. Reinsurance costs to cover these large-scale events may result in higher premiums. MAll schemes may also carry the claims cost for some time until liability against an at-fault party is established, and recovery action concludes.

Stakeholders expressed concerns that failure to adequately consider the implications of expanding schemes to cover ADS-caused injuries would result in MAll schemes covering the legal liability of parties who failed to ensure an ADS was safe (ICWA, Maurice Blackburn Lawyers and PwC).

However, FCAI suggested that it is reasonable to expect that the community, through governments, bear a proportional cost of automated vehicle technology because it will be a significant beneficiary.

Several stakeholders (a law firm, ICWA and Suncorp) raised concerns on the complexity of recovering costs from liable parties not domiciled in Australia. The risk that MAll insurers will be unable to take action against an ADSE for an unsafe ADS (as noted by IAG) will be mitigated by requirements in the safety assurance system (under development) that ADSEs, for the lifetime of the ADS it is supporting (National Transport Commission, 2018d):

- maintain a corporate presence in Australia
- provide evidence of its current financial position and its grounds for claiming it will have a strong financial position in the future
- provide evidence of holding an appropriate level of insurance to cover personal injury, death and property damage caused by the ADS

Also refer to section 1.4 for key ministerial decisions.

The NTC recognises that expanding MAll schemes to include injuries caused by an ADS may unfairly shift the cost from parties responsible for the safe operation of an ADS to others such as insurers, governments and vehicle owners. Acknowledging the importance of addressing cost shifting, the discussion paper sought feedback on whether existing right-of-recovery mechanisms are fit for purpose to operate in the circumstances of an ADS crash. The discussion paper also suggested that a reinsurance pool could be established.

3.5.1 Stakeholder feedback on a reinsurance pool

We suggested a reinsurance pool could be an element of option 3. The pool could be established by compulsory funding contributions of parties who are likely to be responsible for, or contribute to, an ADS fault. MAll schemes would have access to, or a right to recover from, the pool.¹⁰

Some stakeholders believed this variation has merit but would be complex to implement. RACQ expressed concerns that a pool would require capital adequacy to pay for injuries long into the future and to cover fleet-wide ADS defects. We were advised that while a mechanism to minimise the friction costs associated with insurers recovering claims costs from ADSEs may be required at some point in the future, a reinsurance pool is not necessarily the most cost-effective and workable mechanism for the present time (Suncorp, Allianz).

FCAI noted that if a reinsurance pool is in place, the risk is shared collectively, and that there is limited incentive on individual participants to reduce their risk by improving the performance of their product. This concern was reflected in Maurice Blackburn Lawyers' submission that, without modification:

... contribution to the pool would not vary depending on safety outcomes from particular manufacturers. Therefore, it does not encourage wrongdoers to create change. Additionally, it may require 'faultless' parties, who have never contributed to any defect causing an accident, to continually have to contribute to the pool and pay the costs of those parties who have contributed to a defect.

The Law Council of Australia submitted that these concerns would be addressed if contributions are risk-rated.

¹⁰ See the *Motor accident injury insurance and automated vehicles* discussion paper at section 4.4.4.

DITCaRD did not support creating a reinsurance pool, particularly if it required ‘backing’ from the Commonwealth Government.

Stakeholders generally agreed with our assessment that there are complex challenges associated with how the pool would be constituted, maintained and administered. Those stakeholders who did not favour establishing a reinsurance pool considered a right-of-recovery mechanism against at-fault parties associated with the ADS was the more appropriate approach.

Considerably more stakeholders supported option 3 incorporating a robust right-of-recovery process than those who supported a reinsurance pool. We note that the two mechanisms are not mutually exclusive – that option 3 could include a right-of-recovery to claim against a reinsurance pool. However, given feedback that establishing a reinsurance pool would be a complex task that is not justified in the short to medium term, we have not proposed a reinsurance pool model at this time.

3.5.2 Stakeholder feedback on insurer rights-of-recovery

MAII scheme insurers’ ability to recover their costs will be vital to ensuring the costs of expanded MAII schemes are contained. We sought views on whether insurers’ existing right-of-recovery provisions are sufficient.

Most commercial insurance industry stakeholders (Allianz, IAG, RACQ, Suncorp) expressed confidence in the adequacy of existing rights-of-recovery to hold potentially liable parties to account. ICA stated that they had:

... not identified any obvious barriers [beyond definitional barriers] that current recovery mechanisms available to insurers present with respect to product liability and automated vehicles... The insurer under its right of subrogation would continue to pursue the manufacturer at-fault behind the scenes.

QBE offered a different view, stating that if option 3 is implemented, it will be imperative for insurers to have a legislated right-of-recovery against the ADSE, as existing laws are likely to be inadequate. ICA recognised that a legislated right-of-recovery may be required in time as claims experience involving automated vehicles evolves:

... current schemes may need to be modified so that there is a clear party that an insurer can seek recovery from ... [and] ... recovery mechanisms can be reviewed to ensure they remain appropriate and fit for purpose.

QBE, RACQ and Suncorp suggested recovery processes and procedures to support the exercise of insurers’ existing rights will need further development and could be supported by instruments like codes of conduct and/or guidelines.

Government stakeholders’ views differed from the views of many of the commercial insurance industry stakeholders. For example, MAIC expressed concern that existing legislative rights-of-recovery do not cover the broad range of parties potentially liable. ICWA highlighted the risks of insurers relying on common law causes of action resulting in lengthy and expensive proceedings with uncertain outcomes. ICWA’s submission noted that recovery from liable parties is ‘*inherently problematic*’ and that ‘*its recovery rate of funds from parties liable for the costs of motor vehicle accident injuries is less than 1%.*’ This suggests that relying on the common law to pursue recovery action against at-fault parties involving the operation of an ADS will not be an effective mechanism.

Numerous stakeholders highlighted the challenge of establishing an effective cost recovery mechanism. SIRA identified that:

... the issue of recovery between insurers and other responsible parties, such as manufacturers, ADSEs or software design companies, will require substantial development before an insurance solution for automated vehicles can be agreed

upon. To ensure that the core principles by the Heads of MAlI schemes are upheld, it will be a priority to minimise costly legal battles over fault between these parties. The solution design, regardless of which option is selected, will need to address this clearly and in detail.

As a result of the differing views from key stakeholders, further work will be required to examine whether current rights-of-recovery are adequate and, if not, to develop an effective mechanism. We summarise stakeholder suggestions of possible legislative changes that provide a right-of-recovery in Appendix D.

3.6 NTC conclusions

Based on almost unanimous support from stakeholders, the NTC proposes that a national approach to cover ADS-caused injuries is achieved by expanding MAlI schemes. The approach will offer cover in the short to medium term and can be reviewed when automated vehicles are a statistically sufficient portion of registered vehicles to enable assessment of their safety risks. The NTC notes NRMA's statement that:

...anticipated change in road transport will demand that insurance adapts and evolves as the fleet does to meet shifting needs.

Having a national approach will help build public confidence by providing certainty to the community that adequate insurance arrangements are in place to deal with crashes involving automated vehicles.

We recognise that successful implementation of the high-level national approach depends on all jurisdictions and, where applicable, the Commonwealth collectively working together to review existing right-of-recovery processes. Enhancing insurers' existing recovery rights or developing new recovery rights may be necessary.

Further work will be required to give effect to a national approach to expand MAlI schemes to provide cover for ADS-caused injuries with an effective recovery mechanism. The NTC proposes that this work be primarily undertaken by states and territories (in liaison with the NTC) under the direction of the Board of Treasurers. We discuss this in chapter 5.

Summary of recommendations 1(a), 1(b), 1(e) and 2

An agreed national approach to MAlI for automated vehicles will be taken in two phases, with a high-level implementation and review plan:

Phase 1 All jurisdictions will review the suitability of their mechanisms for MAlI scheme insurers to recover claims costs from at-fault parties for injuries caused by automated driving systems. If necessary jurisdictions will enhance existing or develop new recovery mechanisms, aiming for a similar or consistent approach.

Phase 2 MAlI schemes will provide access for injuries caused when automated driving systems are engaged while ensuring schemes can efficiently claim from parties at-fault. This phase depends on satisfactory completion/progression of phase 1.

Implementation Jurisdictions will aim to implement phases 1 and 2 within two years. Implementation is subject to approval of the responsible minister, any assessment of reform costs and benefits and progress of other automated vehicle reforms that phase 1 and 2 depend on.

Review States and territories will review reforms that provide access for injuries caused when automated driving systems are engaged once automated vehicles represent a statistically sufficient proportion of registered vehicles. It is not

appropriate to indicate a timeframe because it is anticipated that, in the short term, automated vehicles will represent a small percentage of the fleet.

4 Data access to determine liability

Key points

- Data will be important to determine liability of parties for crashes involving automated vehicles and assessing eligibility for MAll compensation. It is unlikely that the current legal framework enabling MAll insurers to access data is adequate for these purposes.
- The NTC will develop a data access framework for the purposes of determining liability within MAll schemes as part of its future automated vehicle reform work program.

4.1 Purpose of this chapter

The purpose of this chapter is to:

- explain what data is likely to be needed to determine liability for ADS crashes and the parties that will require the data
- propose further work is undertaken by the NTC to develop a data access framework.

4.2 Data to determine liability and access compensation

Automated vehicles will have complex interactions on the road with a broader array of objects and parties than a current-day vehicle. As outlined in the discussion paper, automated vehicles will generate data on:

- the operation of internal vehicle systems
- interactions between the vehicle systems and external devices or communications systems
- the occupants of the vehicle and their interactions with the operation of the vehicle.

Although vehicle data does not feature greatly in determining liability under MAll schemes now, access to data about the circumstances of a crash will become more important when automated vehicles are deployed. How much of the data produced by the automated vehicle is necessary to determine liability for a crash will need to be considered. Essential data that will be required includes whether the ADS was engaged and what level of automation was operating at the time of the crash.

Automated vehicle data will be important to determine:

- the cause of a crash involving an automated vehicle and any contributing factors
- an injured person's entitlement to compensation.

4.2.1 Parties who need access to data and how this should occur

Many entities will require automated vehicle data to make claims and to defend claims, including:

- the injured person, who needs to identify which party to take action against
- parties who have claims made against them and their insurers

- insurers assessing whether to take recovery proceedings against parties that caused or contributed to a crash. This could be - for example - the fall-back ready user, the vehicle manufacturer, ADSE or a telecommunications provider.

The safety assurance system (under development) will obligate ADSEs to ensure individuals and insurers receive data to dispute liability when a reasonable request is made. ADSEs will be required to provide the data in a standardised, readable and accessible format (National Transport Commission, 2018d).

Requirements of the statement of compliance

The applicant must outline the ADS data it will record and how it will provide the data to relevant parties. Without limiting the data to be recorded and shared, the applicant must explain how it will ensure:

- the vehicle has real-time monitoring of driving performance and incidents, including event data records in the lead-up to any crash that identifies which party was in control of the vehicle at the relevant time
- the vehicle can provide road agencies and insurers with crash data
- relevant parties (including police) receive information about the level of automation engaged at a point in time if required
- individuals receive data to dispute liability (for example, data showing which party was in control to defend road traffic infringements and dispute liability for crashes) when the individual makes a reasonable request
- data is provided in a standardised, readable and accessible format when relevant
- data is retained to the extent necessary to provide it to relevant parties (the amount of time data is retained for may depend on the purpose(s) the information could be used for – for example, law enforcement, insurance)
- data relevant to the enforcement of road traffic laws and the general safe operation of the ADS (including data relevant to crashes) is stored in Australia. This does not require the applicant to store the data exclusively in Australia.

In responding to this criterion, the applicant should note that the Privacy Act places limits on the collection, use and disclosure of personal information, which may limit the data the applicant can record and share.

While the safety assurance system obligation on an ADSE will provide a basis to access data, it is not a power or right for insurers to require data disclosure. We suggested in the discussion paper that future developments on automated vehicle data access policy could be informed by the approach taken in Germany. The German *Road Traffic Act* specifies that the data recorded (vehicle control mode and any requests by the vehicle for the driver to take control) must be made available to the authorities, as well as to any third party who provides plausible facts that:

- the data is necessary for asserting, satisfying or defending claims resulting from an accident
- the vehicle was in fact involved in the accident (Bird & Bird, 2017).

The German approach is likely to be reviewed in 2020 (Taeihagh & Lim, 2018). Outcomes of any review will help inform development of data access policy in Australia.

4.2.2 Maintaining privacy

The vehicle data relevant to determining liability in an ADS crash is likely to be personal information for the purposes of Australia's privacy laws. The data is likely to be 'information ... about ... an individual who is reasonably identifiable'.¹¹ The individual could be the owner or driver of, or occupant in, the vehicle. The NTC's discussion paper *Regulating government access to C-ITS and automated vehicle data* (National Transport Commission, 2018c) provides a useful discussion of personal information and automated vehicle technology.

The entity that holds the personal information, most likely the ADSE, would need to comply with the privacy principles in the *Privacy Act 1988* (Cth). Under Australian Privacy Principle 12,¹² an individual can obtain access to their own information. The driver of an automated vehicle could seek disclosure of their personal information connected with a crash from the ADSE to defend a MAII scheme claim. For other entities wishing to gain access to vehicle data that was personal information for the purposes of pursuing a MAII scheme claim, disclosure may be possible under the Privacy Act's permitted general situation described as where 'the collection, use or disclosure is reasonably necessary for the establishment, exercise or defence of a legal or equitable claim'.¹³ This does not compel an entity to disclose personal information in response to a request from a third party. It may be difficult for an entity to be satisfied that it is reasonably necessary to do so solely on the basis that a third party has requested the information in connection with existing or anticipated legal proceedings (Office of the Australian Information Commissioner, 2015). Entities may refuse to disclose personal information under the permitted general situation. This tension will need to be considered in further work to develop a data access framework.

4.3 Stakeholder feedback on data access

In the discussion paper we asked stakeholders whether current legislative and non-legislative processes would be sufficient to access automated vehicle data to determine liability relating to personal injury claims.

4.3.1 Importance of data access

Many stakeholders submitted that access to data to determine liability will be critical (IAG, ICA, LIV, MAIC, Maurice Blackburn Lawyers, QBE, RACQ, SIRA, Suncorp). Access to data will ensure efficient outcomes for all entities participating in the connected and automated vehicle network (IAG). It will also ensure that no person is worse off, financially or procedurally, under future MAII schemes (LIV). ICA considered access to data will be a key element to ensure MAII schemes are efficient and premiums kept low. Maurice Blackburn Lawyers suggested that a streamlined and cost-efficient mechanism to access event data could rationalise the process of insurance claims and reduce litigation.

4.3.2 Access difficulties

Maurice Blackburn Lawyers submitted that currently the only mechanism for an injured person to access event data is through a direct request to the owner of the data, which could be refused, or through discovery processes as part of actual or anticipated legislation. The Law Council of Australia also noted that, currently, limited parties have access to the 'black box' of a vehicle. PwC stated that contracts for the sale of new vehicles typically provide that the data the vehicle generates will be owned by (or irrevocably licensed to) the manufacturer.

¹¹ *Privacy Act 1988* (Cth), s 6.

¹² *Ibid.* Schedule 1.

¹³ *Ibid.* s 16A.

Deloitte submitted that there needs to be a regulatory environment for ADSEs to provide data under prescribed circumstances. PwC noted that American legislation¹⁴ has been passed to provide that a vehicle's event data recorder is the property of the owner or lessee of the vehicle and suggested that transport ministers include similar legislation in Australia.

4.3.3 Support for a legislative framework

We did not receive detailed proposed legislative reform suggestions; however, we received feedback that the current framework is unlikely to be sufficient (Maurice Blackburn Lawyers, PwC). Stakeholders identified components that will be crucial in a future framework. IAG noted that the types of data produced, the length of time it is stored and who can access the data and how, are elements that should form part of a robust, nationally consistent legislative framework. The Australian Motorcycle Council, Maurice Blackburn Lawyers, Suncorp, and QBE submitted that any legislative change should enable relevant parties, including vulnerable road victims and insurers, to receive early, simple and transparent access to event data. ICA stated that access to data will make the recovery process more efficient for insurers, which will result in lower premiums for road users.

Suncorp suggested that national data sets concerning ADS vehicle crashes that cause injury could be collated and shared with all MAII insurers. This proposal would aim to identify systemic ADS issues early (prior to a product recall) and possibly form part of a cost-recovery mechanism.

QBE recognised that adopting international data requirements will be more feasible than creating a bespoke model for the local market. The German approach to automated vehicle data access was supported by ICA and QBE. RACQ submitted that current legislation requiring retention of data should also be reviewed and that access to data should not be hindered due to a manufacturer holding the data offshore.

Some stakeholders noted that any data access requirements will need to be determined consistently with the requirements of Commonwealth and state and territory privacy legislation to provide adequate protection of personal information (ACT treasury, DITCaRD, IAG, RACQ, SIRA).

4.4 NTC conclusion

The NTC recognises stakeholders' views on the importance of insurers and injured parties gaining access to vehicle data. The NTC notes the views expressed that the current legislative framework may not be sufficient for relevant parties to access data in an efficient manner. We note strong stakeholder support for developing a national approach to a data access framework.

The NTC acknowledges that developing a data access framework will need to consider interactions with the data recording and sharing obligations on ADSEs being developed by DITCaRD under the safety assurance system at first supply.

Australia's policy on vehicle standards is to align wherever possible with international standards. The NTC and Commonwealth government are actively engaged with working parties in the United Nations Economic Commission for Europe responsible for road safety

¹⁴ It appears that PwC is referring to the *Driver Privacy Act 2015*. The Act provides that data recorded or transmitted by an event data recorder may not be accessed by a person other than the vehicle's owner or lessee. There are several exceptions allowing disclosure. For details see: <http://www.ncsl.org/research/telecommunications-and-information-technology/privacy-of-data-from-event-data-recorders.aspx>

and vehicle regulations. International and overseas developments will inform the design of elements of a data access framework for automated vehicles in Australia.

There are additional issues not considered in this paper such as whether a framework could be a national law or one that must be legislated within each state and territory. The NTC considers that developing a data access framework for the purposes of determining liability could be considered in a future work program focused on the on-road/in-service elements of automated vehicle regulation. This framework could assess issues highlighted by submissions including adequate and expedient access to data, ownership of data, and data storage requirements.

Summary of recommendation 1(d)

That the NTC will coordinate a national approach to a data access framework for insurers to determine liability as part of the NTC's automated vehicle reform program.

5 Conclusion and next steps

Key points

The next phase of reform (2019–2021) has the following core elements:

- jurisdictions to review existing rights-of-recovery that MAII schemes can use to claim costs against at-fault parties for ADS crashes. If required, jurisdictions, liaising with the NTC, to develop an agreed recovery mechanism for MAII schemes.
- states and territories to develop legislative reform proposals that:
 - provide access to MAII schemes for people injured by ADS
 - enable MAII schemes to efficiently claim from at-fault parties
- the NTC to coordinate reforms that enable insurers to access data to determine liability for crashes involving automated vehicles.

5.1 Purpose of this chapter

This chapter explains the next phases of work required to create a national approach to MAII for automated vehicles, the bodies who will be responsible and a proposed timeframe to give effect to the recommendations below.

The Transport and Infrastructure Council:

1. **Agreed** a national approach for motor accident injury insurance and automated vehicles that requires:
 - a) all jurisdictions to review their mechanisms for motor accident injury insurers to recover from parties at-fault for injuries and deaths caused by automated driving systems, as a prerequisite to recommendations 1(b)-(e);
 - b) motor accident injury insurance schemes to provide access for injuries and deaths caused when automated driving systems are engaged, while ensuring that schemes can efficiently claim from parties at-fault;
 - c) the principles set out in Table 1 to guide any changes to motor accident injury insurance schemes;
 - d) the NTC to consider data access for insurers for assessing liability as part of its automated vehicle reform program;
 - e) states and territories to review the inclusion of automated driving systems caused crashes in motor accident injury insurance schemes once automated vehicles represent a sufficient proportion of registered vehicles to determine the impact on schemes.
2. **Agreed** that all jurisdictions within two years review their schemes (Recommendation 1a) and subject to any required assessment of costs and benefits, the approval of the responsible minister and the implementation of other automated vehicle reforms, make changes to their scheme to implement recommendation 1b and 1c.
3. **Noted** that recommendations 1 and 2 are subject to endorsement by the ministers responsible for motor accident injury insurance schemes.
4. **Agreed** that the NTC provides recommendations 1 and 2 to the agency head with portfolio responsibility for the motor accident injury insurance scheme in each

jurisdiction and that recommendations 1 and 2 are referred to the Board of Treasurers for endorsement.

5.2 Consideration by the Board of Treasurers and other ministers

Personal injury insurance arrangements for people injured or killed by automated vehicles cuts across transport and insurance portfolios. The NTC, under the auspices of the council, has led this reform, given its mandate to develop end-to-end regulation for automated vehicles. A high-level national approach to MAII and automated vehicles has been agreed by the council. It is now at an appropriate stage for the council to hand over responsibility to progress reforms to a body with an appropriate remit on insurance.

Ministerial responsibility for MAII schemes varies across Australia. Treasurers have responsibility for MAII schemes in most states and territories. The New South Wales MAII scheme is primarily the responsibility of the Minister for Customer Service. The Victorian MAII scheme is primarily the responsibility of the Minister for Roads and the Transport Accident Commission. There is no central decision-making body for MAII scheme reforms.

To develop the next phase of policy to support a national approach, the matter has been referred to the Board of Treasurers. The board includes all state and territory treasurers and its role is to 'collaborate on issues of common interest, advance national reform priorities from a state and territory perspective' (Board of Treasurers Secretariat, 2019).

The MAII scheme ministers in New South Wales and Victoria are not members of the board. To ensure that those jurisdictions are advised of the referral to the board, and to encourage cross-portfolio consultation, the NTC has provided the recommendations in this paper to the MAII scheme in each jurisdiction.

5.3 Reform of MAII schemes to include ADS-caused injuries

A national approach to expand MAII schemes will require many jurisdictions to undertake a series of processes. The next steps are likely to include legislative analysis of key definitions, public consultations, legislative change proposals, cost-benefit analysis and/or budgetary implication assessments and drafting legislative changes to MAII laws.

States and territories will have primary responsibility for these processes, which may differ across jurisdictions. However, it is important that a nationally consistent approach to policy is taken so that injured people, insurers and the automated vehicle industry experience a regulatory environment in each jurisdiction that has certainty and consistency. States and territories have agreed that further policy work to give effect to the national approach will be guided by the principles in Table 5.

5.4 Insurer access to data as part of the NTC's broader automated vehicle national reform program

Stakeholder feedback indicated that the current legislative framework may not be sufficient for insurers to access data to determine liability for crashes involving automated vehicles. The NTC concluded that further work is required to develop a data access framework.

Development of a data access framework for the purposes of determining liability will require additional consultation across government and industry. Proposals will need to ensure any requirements on parties to record, share and store data is informed by and, where relevant, consistent with:

- development of the in-service safety regulation framework by the NTC

- implementation of the safety assurance system at first supply being developed by DITCaRD
- overseas and international developments such as the data approach taken by Germany and data proposals being considered by working parties within the United Nations Economic Commission for Europe.

The NTC's future work on in-service regulation of automated vehicles will be considering several facets of access to data for a range of purposes (for example, compliance, enforcement, and government access). It is appropriate that the NTC coordinate policy development on a data framework for insurers. Given that any legislative changes are likely to be made to existing state and territory MAII laws or transport laws, the NTC will work closely with jurisdictions to ensure there is a consistent approach to data access.

5.5 Cross-portfolio links

Some components of the next phases of work to make changes to MAII schemes may run in parallel with, dovetail into, or be dependent on, other automated vehicle policy reform work being coordinated by a range of government entities, for example:

- Recognition of ADSEs for MAII purposes, and developing a data access framework for insurers will be informed by:
 - DITCaRD's implementation of the safety assurance system at first supply
 - the NTC's in-service safety regulation framework.
- Requirements of MAII schemes for a consistent approach to identifying and classifying automated vehicles within registration systems will be considered by Austroads.

The NTC will continue to report on progress of automated vehicle regulation reforms to the council. The NTC's reports will capture policy reform work being done across portfolios. This will ensure that MAII reform work draws on relevant policy developments in automated vehicle projects.

5.6 Next steps

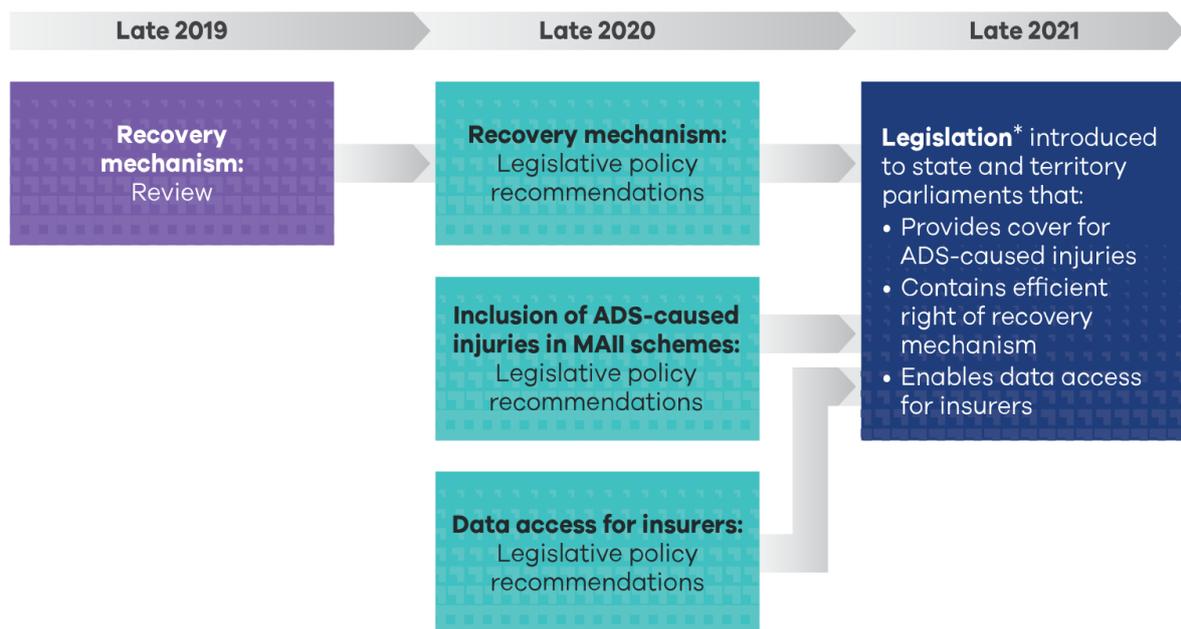
Table 6 and Figure 3 set out the work required to create a national approach to MAII for automated vehicles. The indicative timeline is subject to endorsement by the Board of Treasurers, the timing of other automated vehicle reforms, and the priorities of state and territory parliaments.

Table 6. Next steps for a national approach to MAII for automated vehicles

Action	Lead agency or forum	Timing
Recovery mechanism tasks		
Review existing recovery mechanisms. Develop legislative options (if required).	States and territories, coordinated by the Board of Treasurers. Heads of Motor Accident Injury Schemes and the NTC to provide support.	November 2019
Recovery mechanism and inclusion of ADS-caused injuries tasks		

Develop detailed nationally consistent legislative policy recommendations. The process may vary between jurisdictions. It is likely to include public consultations, cost-benefit analyses and/or budgetary implication analyses, cabinet approvals, legislative drafting and exposure drafts of bills.	States and territories, coordinated by the Board of Treasurers. Heads of Motor Accident Injury Schemes to provide support.	November 2020
Legislation to provide cover for ADS-caused injuries with an efficient right-of-recovery process.	State and territory parliaments.	Late 2021
Data access framework		
Develop nationally consistent legislative policy recommendations.	NTC.	Late 2020
Legislation to clarify data access for insurers.	State and territory parliaments.	Late 2021

Figure 3. Timeline for a national approach to MAII for automated vehicles



* These elements may be included in MAII scheme laws or sit in other laws like transport laws.

Appendix A Issues raised that are outside the scope of this review

Table 7. Issues raised by stakeholders that are outside the motor accident injury insurance (MAII) and automated vehicles review’s scope

Issue	NTC response
<p>Reforms to harmonise MAII arrangements across Australia</p> <p>Raised by: Suncorp</p>	<p>The NTC recognises the complexity of MAII arrangements across states and territories. The NTC does not have a broad-based insurance reform role. NTC’s mandate is to develop national reform proposals to improve land transport. NTC’s coordination of this review is based on the cross-portfolio connection of insurance and automated vehicles.</p>
<p>Compulsory property damage cover within MAII schemes.</p> <p>Raised by: QBE</p>	<p>Responsibility for MAII schemes rests with state and territory governments, and they are the appropriate authorities to consider reforms to harmonise MAII schemes.</p>
<p>Sustainability of existing MAII schemes, impact on insurance premium costs</p> <p>Raised by: SA-DTF, RACQ</p>	<p>The purpose of this review was to recommend a high-level option that provides cover for injuries caused by an ADS crash. Analysis of financial impacts on MAII schemes will be part of further work to develop the national approach to personal injury insurance for automated vehicles.</p>
<p>Reforms to recognize remote operators</p> <p>Raised by: HiAuto</p>	<p>The NTC’s in-service safety for automated vehicles project, listed at section 1.8 will develop reforms to:</p> <ul style="list-style-type: none"> ▪ provide legal recognition of the entity in control of an automated vehicle when the ADS is engaged ▪ place obligations on a range of parties responsible for the operation of an automated vehicle
<p>Reform of the Australian Consumer Law</p> <p>Raised by: ICWA</p>	<p>The Australian Consumer Law is the responsibility of the ACCC.</p>
<p>Responsibility for cyber security (liability for crashes caused by intentional interference)</p>	<p>The safety assurance system for automated vehicles being developed will require ADSEs to demonstrate how they will manage cyber security threats.</p> <p>DITCaRD is working with other Commonwealth agencies on cybersecurity as it relates to motor vehicles.</p>

Raised by: Law
Council of
Australia, SA-DTF

Interaction of any
insurance changes
to registration
systems

Raised by: IAG,
QBE, RACQ

Austrroads is leading coordination policy work that examines the impacts of automated vehicles on registration and licensing systems.

Appendix B Submission list

Name of organisation	Abbreviation	Description
Confidential	-	Law firm
Confidential	-	Motorists association
Allianz	-	Insurance company
Australian Capital Territory- Chief Minister, Treasury and Economic Development Directorate	ACT treasury	Australian Capital Territory government agency
Australian Motorcycle Council	-	Motorists association
Deloitte	-	Consultancy
Department of Infrastructure, Transport, Cities and Regional Development	DITCaRD	Commonwealth government department
Department of State Growth (Tasmania)	-	Tasmanian government department
Federal Chamber of Automotive Industries	FCAI	National industry body
HiAuto	-	Technology company
Insurance Australia Group	IAG	Insurance company
Insurance Commission of Western Australia	ICWA	Western Australian insurance provider
Insurance Council of Australia	ICA	Insurance association
Law Council of Australia	-	Law association
Law Institute of Victoria	LIV	Law association
Maurice Blackburn Lawyers	-	Law firm
Motor Accidents Insurance Board	MAIB	Tasmanian CTP insurance provider
Motor Accident Insurance Commission	MAIC	Queensland CTP regulator
National Roads and Motorists' Association	NRMA	Motorist association and insurance provider

Name of organisation	Abbreviation	Description
PricewaterhouseCoopers	PwC	Consultancy
QBE Insurance Group	QBE	Insurance company
Royal Automobile Club of Queensland	RACQ	Motorist association and insurance provider
State Insurance Regulatory Authority	SIRA	New South Wales CTP regulator
South Australian Department of Treasury and Finance	SA-DTF	South Australian government department
Suncorp	-	Insurance company

We received a total of twenty-five submissions. Two submissions were confidential. Public submissions are available on the NTC website at:

<https://www.ntc.gov.au/submissions/history/?rid=167380&pid=11983>

Appendix C Options not supported

C.1 Stakeholder feedback on option 1 - make no changes and rely on the existing legal framework

Option 1 received no support because stakeholders were firmly of the view that it does not satisfy the overarching 'no worse off' principle. Stakeholders recognised that under this option, it is unclear whether people who are injured by an ADS-controlled vehicle are eligible to pursue a claim under MAll schemes in most jurisdictions. There is a risk that an injured person would be unable to receive the same benefits as those injured by a human driver, as the ACT treasury submitted:

... the alternative routes to compensation would only be through litigation and contingent on proving negligence, leading to costly and less certain outcomes for those injured.

C.2 Stakeholder feedback on option 2 - exclude injuries caused by an ADS from MAll schemes

ICWA was the only stakeholder that supported option 2 based on its views that:

- MAll schemes were not designed to cover vehicle manufacturer negligence, product liability and cyber-security risks
- costs of damage and personal injury caused by ADS failures could shift from a manufacturer to registered operators, insurers, government and taxpayers
- government underwritten insurers should not underwrite private sector risk.

ICWA suggested option 2 could be modified to require insurance products to cover the new risks ADSs pose. These products could be sold by commercial insurers to automated vehicle manufacturers or the suppliers of ADSs.

The NTC acknowledges the issues raised by ICWA; however, without further detail on how their suggested modified option 2 could be implemented it is difficult to assess. Some key features of a modified option 2 that would need resolution include:

- clarity for an injured person – and the insurers involved – on which product (MAll or the ADS insurance product) to claim against. It may take some time to establish the circumstances of a crash.
- how to ensure an injured person receives 'broadly consistent' compensation.
- what type/level of claims management response the ADS insurer should be expected to provide.
- what dispute resolution avenues should be available – for example - where liability is disputed or where there is a dispute over the amount of compensation sought.

The NTC considers that while option 2 sets a clear price signal to parties responsible for ADS risks, it is unlikely to meet community expectations that a person injured by an ADS is no worse off financially or procedurally than if they were injured by a vehicle controlled by a human driver.

IAG emphasised that 'there is a significant risk that an injured person's recovery will be hampered if they cannot access MAll schemes and instead must pursue compensation through product liability and contract law provisions. It is well recognised that these avenues are not designed to deliver timely, health-focused support'. IAG's views were echoed by LIV, who stated that 'if individuals are specifically excluded from MAll schemes, they will most

likely need to rely on existing contract law, Australian Consumer Law or negligence to claim compensation, which may lead to unfair and less predictable outcomes for injured people as well as an increase in complex litigation.’¹⁵

The Law Council of Australia noted that the Australian Consumer Law was likely to be unsatisfactory because of the likelihood that manufacturers will seek to rely upon the scientific knowledge defence:

... there is a concern that defective product claims may be met with a statutory defence that the state of scientific and technical knowledge at the time when the product was put into circulation was not such as to enable the existence of the defect to be discovered.

C.3 Stakeholder feedback on option 4 - purpose-built automated vehicle scheme

Stakeholders expressed views that option 4 is not an appropriate short to mid-term solution given the complexity and potential administrative burden of implementation. ICA’s submission noted that it is undesirable to create confusion in the market during the early years of automated vehicle adoption, with injured people being uncertain about which scheme to access – MAll or the automated vehicle insurance scheme.

Most feedback (ACT treasury, LIV, QBE, SIRA, DITCaRD) reflected that having a purpose-built scheme:

... would be better suited to a time when highly and fully automated vehicles form the greater part of the national fleet, as administrative costs of operating a scheme for a relatively small number of automated vehicles operating during the initial period of operation is likely to be disproportionately high (ACT treasury).

C.4 Stakeholder feedback on option 6 - single insurer policy covering all vehicle liabilities

Option 6 received little support. For stakeholders, this option meant significant change to the current way insurance is provided in Australia. It would require new, complex administration and it would take a long time to implement. MAIC considered that option 6:

... would only be viable if the existing CTP schemes were disbanded and a common national scheme instituted for non-autonomous and autonomous vehicles.

This option also requires private insurers to offer all policies of insurance to participate; including CTP, third party property, automated vehicle and comprehensive insurance. As there are varying levels of coverage, notably within comprehensive insurance, this option would also require the difficult task of attempting to regulate ‘how much’ comprehensive insurance is required to facilitate the requirements of this option.

MAIC considered that comprehensive insurance policies would most likely be prohibitive for vehicle owners and could lead to a higher proportion of uninsured or underinsured vehicles. Affordable pricing of policies, which is a current feature of Queensland’s MAll scheme, is unlikely to be possible under option 6 and would expose consumers to unregulated and

¹⁵ The LIV also stated that in Victoria the amount of damages payable would be significantly altered if ADS crashes are not within the current TAC framework.

increased costs for vehicle ownership. The ICA commented that, while option 6 is not required in the short term, it could be developed as a longer-term solution.

Appendix D Legislative proposals to provide cover for ADS-caused injuries and insurers' rights-of-recovery

To implement a national personal injury insurance approach for automated vehicles, changes will be required in most, if not all, MAII schemes. These changes will need to address legislative gaps and barriers that prevent people injured by an ADS to access compensation. Work will also be required to evaluate whether current rights-of-recovery are sufficient or whether changes are required for MAII scheme insurers to effectively and efficiently take action to recover claims costs they have paid to injured people.

To the extent possible, it is desirable that a similar approach is taken across jurisdictions. However, given the differences between MAII schemes, responsible state and territory agencies will need to consider the implications of reform proposals on their scheme to ensure there are no unintended consequences.

D.1 Suggestions that provide cover for ADS-caused injuries

In the discussion paper,¹⁶ we summarised the barriers or gaps in current MAII schemes that may prevent an injured person from accessing compensation as:

- an accident/injury caused by or involving 'the driving of the vehicle' or the vehicle 'running out of control' may not apply when the ADS is engaged
- the ADS may not fall within the definition of 'driver'. There would be no insured party and so no indemnified party in fault-based and hybrid MAII schemes
- an ADS is not capable of negligence or wrongdoing. Even if it were an indemnified person, the requirement for fault in fault-based and hybrid MAII schemes would be absent.

There are a variety of ways in which MAII schemes could provide cover to people injured in ADS crashes. The following are a collection of our suggestions and those of stakeholders. They are not mutually exclusive, and a number lay foundations for a right-of-recovery:

- change the definition of 'driving of the vehicle' to include the ADS when it is engaged
- replace 'driving' in 'the driving of the vehicle' with the technologically-neutral term 'operation' of a vehicle
- define 'driver' to include 'the person in charge of the vehicle'. For an ADS crash caused by the 'driving of the vehicle', there will always be a person 'driving' or deemed in charge of the vehicle (even in circumstances where a person selects the journey route but is not in the vehicle)
- deem the ADSE at-fault
- deem the fall-back ready user or vehicle occupant negligent (Suncorp)
- deem the MAII scheme insurer liable (United Kingdom approach)
- define an 'indemnified party' to include the ADS, when engaged, or the ADSE (Maurice Blackburn Lawyers)

¹⁶ See Appendix C in the *Motor accident injury insurance and automated vehicles* discussion paper.

D.2 Suggestions to ensure MAII insurers can recover claims costs

Stakeholders made several suggestions on changes to establish a new or enhance a MAII scheme insurer's existing right-of-recovery against at-fault parties:

- the WorkCover model of recovery against third parties (Maurice Blackburn Lawyers)
- a rebuttable presumption of fault against the ADSE (Maurice Blackburn Lawyers, Law Council of Australia). The RACQ suggested - for example - that where there is an infrastructure or sensor defect and an alternate liable party is identified which is not the ADSE, it is presumed that the ADSE would reimburse the MAII insurer first and then seek their own recovery from that liable party directly
- deemed fault on the ADSE, with the MAII insurer automatically entitled to a recovery payment from the ADSE. (MAIB)

Some stakeholders suggested additional matters that will require consideration:

- that ADSEs, manufacturers and suppliers of ADSs should not be entitled to rely on the state of scientific knowledge defence in the Australian Consumer Law (Law Council of Australia)
- time limits applying to claims by injured people and recovery claims by insurers – given the long tail nature of MAII claims (Law Council of Australia, QBE)

Glossary

Term	Definition
automated driving system (ADS)*	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 conditional, high or full automation.
automated driving system entity (ADSE)	The legal entity responsible for the ADS. This is likely to be the vehicle manufacturer, but could be the operator, legal owner of the vehicle or another entity seeking to bring the technology to market.
ADS crash	A crash caused by an automated vehicle whose ADS is engaged at the time of the crash.
compulsory third party (CTP) scheme	<p>Compulsory insurance to protect insured persons from liability arising from death or injury caused by motor vehicle accidents. It aims to ensure people injured or killed in those accidents receive compensation.</p> <p>Some schemes require fault on the part of the insured person (Western Australia, South Australia, the Australian Capital Territory, Queensland). Others have moved to no-fault (the Northern Territory) or partial no-fault, where a certain level of cover for injured people is provided regardless of fault and actions in negligence are allowed in some cases. In this paper we refer to these schemes as hybrid schemes (Victoria, New South Wales, Tasmania).</p>
conditional automation*	The ADS undertakes the entire dynamic driving task for sustained periods in defined circumstances. The human driver does not have to monitor the driving environment or the ADS but must be receptive to ADS requests to intervene and any system failures. This is SAE level 3 automation.
damages	Monetary compensation for loss suffered due to the wrongful conduct of another party awarded by courts that endeavours to place a person in the position where they would have been had the loss not been suffered.
dynamic driving task*	<p>All the real-time operational and tactical functions required to operate a vehicle in on-road traffic. This includes:</p> <ul style="list-style-type: none"> ▪ lateral vehicle motion control via steering (operational) ▪ longitudinal vehicle motion control via acceleration and deceleration (operational) ▪ monitoring the driving environment via object and event detection, recognition, classification and response preparation (operational and tactical)

Term	Definition
	<ul style="list-style-type: none"> ▪ object and event response execution (operational and tactical) ▪ manoeuvre planning (tactical) ▪ enhancing conspicuousness via lighting, signalling, gesturing, etc. (tactical). <p>It does not include strategic functions such as trip scheduling and selection of destinations and waypoints.</p>
dynamic driving task fallback*	The response by the fallback-ready user or an ADS to either perform the dynamic driving task or achieve a minimal risk condition after a dynamic driving task performance-relevant system failure or when the vehicle exits the operational design domain.
event data recorder (EDR)	A device installed in a motor vehicle to record technical vehicle and occupant information for a brief period of time (seconds, not minutes) before, during and after a crash. For instance, EDRs may record (1) pre-crash vehicle dynamics and system status, (2) driver inputs, (3) vehicle crash signature, (4) restraint usage/deployment status, and (5) post-crash data such as the activation of an automatic collision notification system (National Highway Traffic Safety Administration, 2018).
fallback-ready user*	A human in a vehicle with engaged conditional automation who is able to operate the vehicle and who is receptive to requests from the ADS to intervene. They are receptive to evident dynamic driving task performance-relevant system failures and are expected to respond by taking control of the vehicle.
full automation*	The dynamic driving task and monitoring of the driving environment are undertaken by the ADS. The ADS can operate on all roads at all times. No human driver is required. This is SAE level 5 automation.
high automation*	The ADS undertakes the entire dynamic driving task for sustained periods in some situations, or all of the time in defined places. When the ADS is driving, a human driver is not required to monitor the driving environment or the driving task. They required to intervene as the ADS can bring the vehicle to a safe stop unassisted. This is SAE level 4 automation.
insurance	A 'risk transfer, loss-spreading arrangement' (Pynt, 2011) to distribute or mitigate risk. This is done through insurance products, called premiums, purchased by individuals and organisations.
motor accident injury	An injury or death that is the result of a motor vehicle accident.
motor accident injury insurance (MAII) schemes	Collective term for compulsory third party and national injury insurance schemes.

Term	Definition
national injury insurance scheme (NIIS)	Nationally agreed arrangements for no-fault cover for treatment and lifetime care and support for people with eligible serious or catastrophic injuries provided in line with minimum benchmarks. Injuries are required to be caused by specified accident types, including motor vehicle accidents. The arrangements were incorporated into CTP laws in Victoria, the Northern Territory and Tasmania, and under special purpose laws in South Australia, New South Wales, Queensland, the Australian Capital Territory and Western Australia. ¹⁷
no-fault benefits	The benefits paid to injured persons under partial no-fault CTP schemes without the person having to prove the injuries were caused by another person's negligence or wrongdoing.
nominal defendant	A statutory scheme that enables injured people to be compensated due to the negligent driving of unidentified or uninsured vehicles. In claims involving uninsured motor vehicles, the nominal defendant has the right to recover as a debt, the amount paid in settlement of the claim from the owner or driver (or both) of the uninsured motor vehicle. The nominal defendant also steps in where a private insurer becomes insolvent.
operational design domain*	The specific conditions under which a driving automation system or feature of that system is designed to function. This includes environmental, geographical and time-of-day restrictions, and/or the requisite presence or absence of certain traffic or roadway characteristics.
premium	The amount payable to obtain insurance or reinsurance protection for a specified risk for a specified period of time.
risk	The likelihood of an event occurring that causes injury or loss. That risk may be the subject of a contract of insurance or reinsurance.
reinsurance	Insurance for insurers. A mechanism that allows insurers to transfer risk or parts of risk to other parties by contract. Where an incident occurs that requires payment to a claimant, the insurer may pass part of that liability onto a reinsurer.
SAE	Society of Automotive Engineers. The global engineering professional association that established the levels of vehicle automation in its technical document J3016.
safety assurance system	A regulatory mechanism for governments to assess the safety performance of an automated vehicle to ensure it can operate safely on the road network.

¹⁷ In Western Australia, treatment, care and support of catastrophic motor vehicle injuries is provided under both the *Motor Vehicle (Catastrophic Injuries) Act 2016* and the *Motor Vehicle (Third Party Insurance) Act 1943*.

Term	Definition
system failure*	A malfunction in a driving automation system or other vehicle system that prevents the driving automation system from reliably performing the dynamic driving task (partial or complete).

* Terms marked with an asterisk are quoted or paraphrased from SAE International Standard J3016.

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