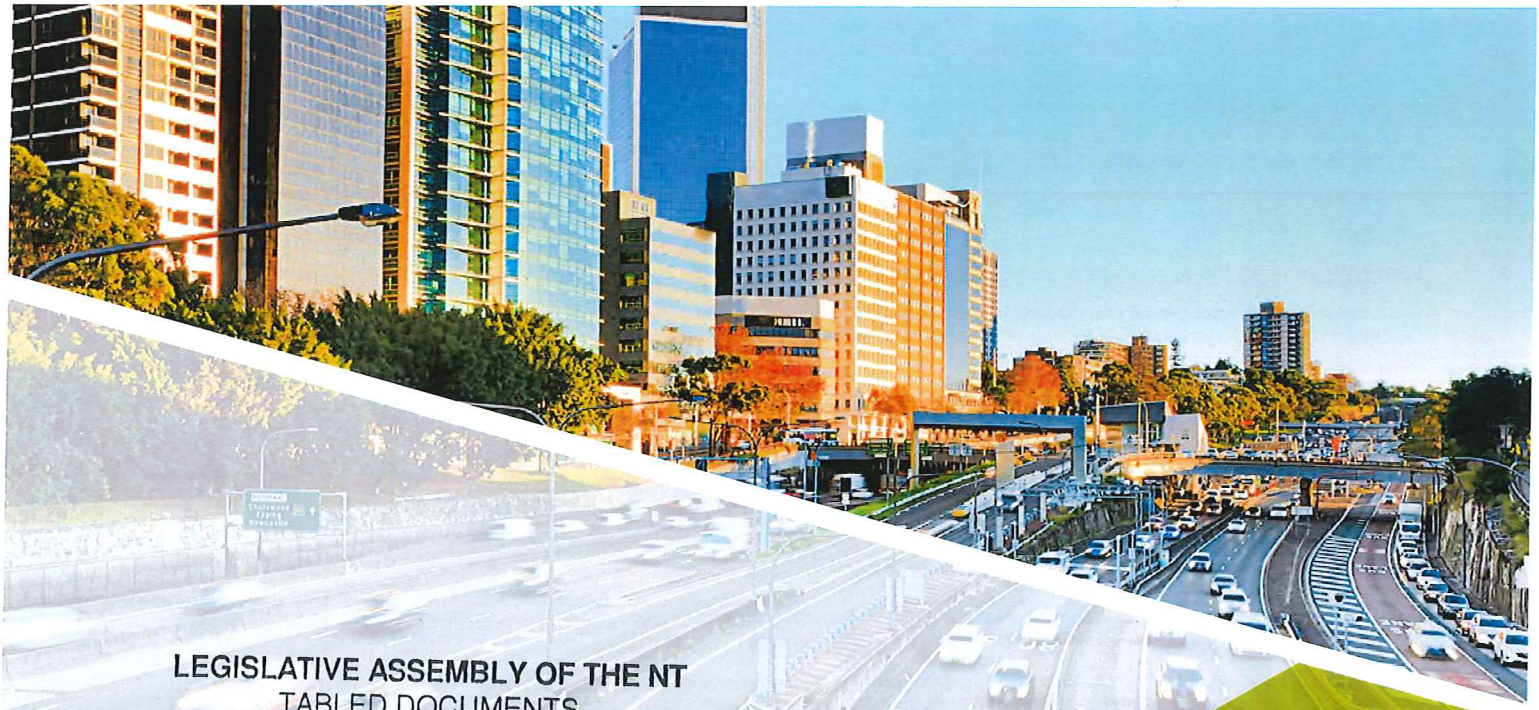
National Road Safety Strategy

TRANSPORT AND INFRASTRUCTURE COUNCIL

NATIONAL ROAD SAFETY ACTION PLAN 2018–2020



May 2018

Copyright

ISBN 978-1-925701-20-3

May 2018 / INFRA3507

Director - Publishing and Communications
Communications Branch
Department of Infrastructure, Regional Development and Cities
GPO Box 594
Canberra ACT 2601
Australia

Email: publishing@infrastructure.gov.au
Website: www.infrastructure.gov.au

The National Road Safety Action Plan 2018–2020 (Action Plan) supports the implementation of the National Road Safety Strategy 2011–2020 (NRSS) and details priority national actions to be taken by governments over the final three years of the NRSS, from 2018 to 2020.

The Action Plan was developed cooperatively by Commonwealth, state and territory transport agencies, and was endorsed by Ministers of the Transport and Infrastructure Council in May 2018. The Action Plan supports the broader 10-year agenda of the NRSS by ensuring that national efforts in the final three years of the NRSS are focused on strategically important initiatives.

The NRSS and this supporting Action Plan document the commitment of the Australian Government and state and territory governments to an agreed set of road safety goals, objectives and action priorities.

Introduction

Through the National Road Safety Strategy (NRSS) 2011–2020, the Australian Government and all state and territory governments have set national targets to reduce the annual numbers of fatalities and serious injuries from road crashes by at least 30% by 2020. Progress towards the targets is measured from a baseline: the annual average during the three-year period 2008 to 2010.

At the start of the NRSS, deaths from road crashes in Australia were occurring at the rate of 6.6 people per 100,000 population (based on the NRSS baseline of 1,426). Good progress was made until early in 2015; then there were increases in deaths in 2015 and 2016. There has been a slight decrease in 2017 (provisional total 1,225) and the current rate (at the end of April 2018) is 5.1 deaths per 100,000 population, after falling to 4.8 deaths in March 2015.

The increases in deaths in 2015 and 2016 highlight the difficulty Australia is facing to reach the 30% reduction target for deaths. There is currently no nationally agreed measure of serious injuries from road crashes, but annual hospitalisations due to road crashes appear to have been increasing. There are around 36,000 people hospitalised every year, causing ongoing pain and suffering, and an enormous economic loss to Australia. Work will continue under this Action Plan to establish and populate a matched national crash and hospital data series.

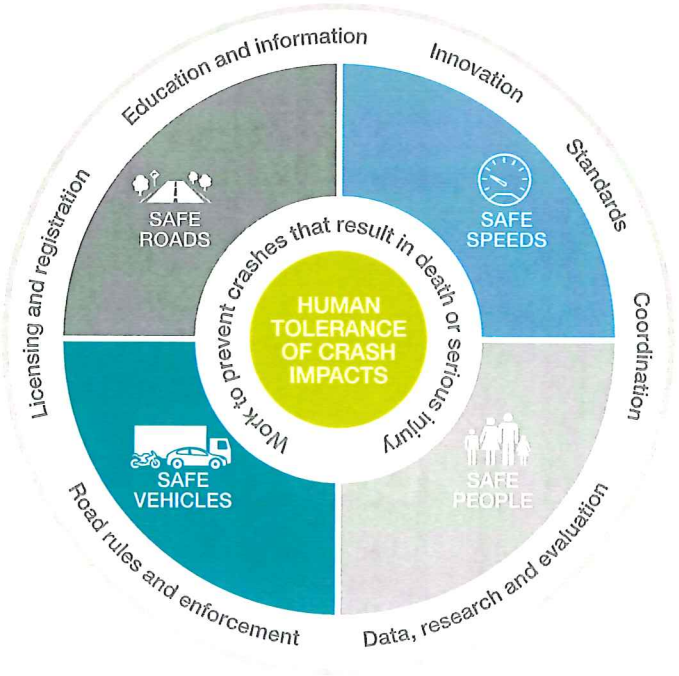
The Action Plan contains nine Priority Actions that all jurisdictions have agreed must be completed and will assist to meet the targets for road trauma reduction contained in the NRSS.

This plan also includes a list of Other Critical Actions – these represent either extensions of existing national efforts or supporting actions that are important to continue in addition to the key national priority list.

In addition to these, it is important to acknowledge that there will be a broader range of ongoing tasks and operations that will continue to be pursued by all Australian governments and stakeholders. The mix of measures adopted in individual jurisdictions, and the details of specific measures, may vary to reflect local circumstances and priorities.

The choice of Priority Actions and Other Critical Actions has been informed by available data and evidence about effective approaches to reduce road trauma. This included research commissioned by Austroads to identify key interventions to reduce road trauma and forecast potential road safety gains.

The NRSS is centred on a shared commitment from all jurisdictions to the vision that no person should be killed or seriously injured on Australia's roads. This vision, and the Safe System approach which underlies both the NRSS and the Action Plan, calls for an holistic view of the road transport system and the interactions among roads and roadsides, travel speeds, vehicles and road users.



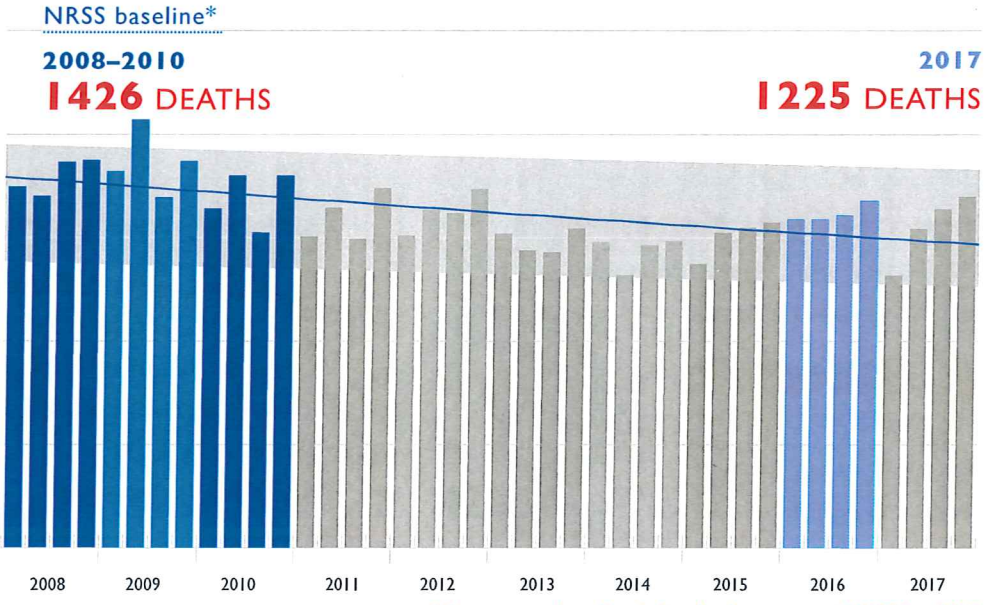
The Safe System means recognising that people do make mistakes and that there are physical limits to the amount of force our bodies can take. This means that the road transport system should be designed so that the forces in collisions do not exceed the limits of human tolerance. Actions targeted to achieve safe roads, safe speeds, safe vehicles and safe people can work together to achieve this aim. Each of the actions in this Action Plan relates to one or more of these 'cornerstone' areas of the NRSS and the following symbols are used to indicate these.

Recognising the need for improved integration across the Safe System, these symbols have been used to indicate the interaction of these areas for each of the Priority Actions and Other Critical Actions. The final section 'Addressing road safety issues across the Safe System' goes further to demonstrate how improved integration of initiatives and associated management works to address specific road safety issues and road user groups.

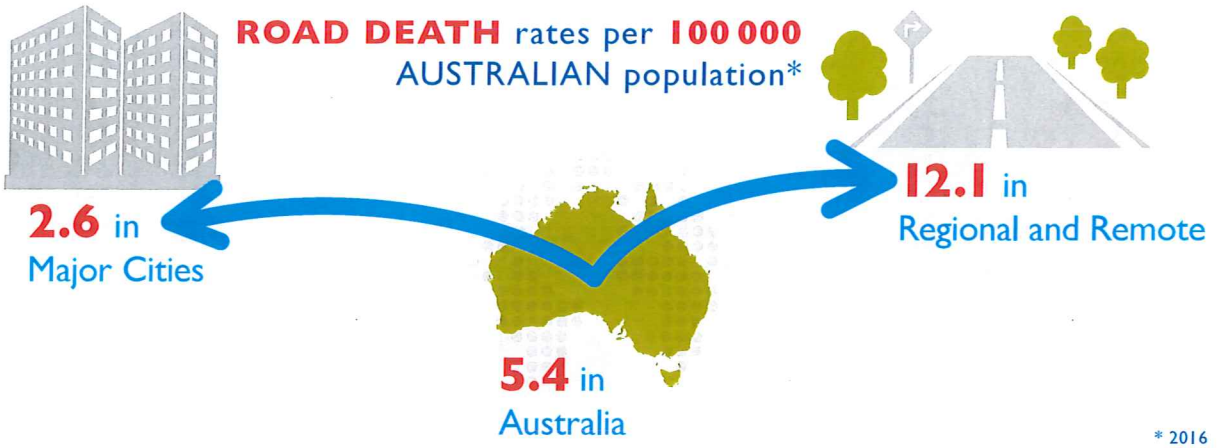
Road Safety in Australia

The **NRSS** set targets to **REDUCE** the numbers of **DEATHS** and **serious injuries** from **road crashes** by at least **30%**

There were **1225 DEATHS** in **2017**, **DOWN** **14%** on the **NATIONAL ROAD SAFETY STRATEGY** **NRSS 2011–2020** baseline



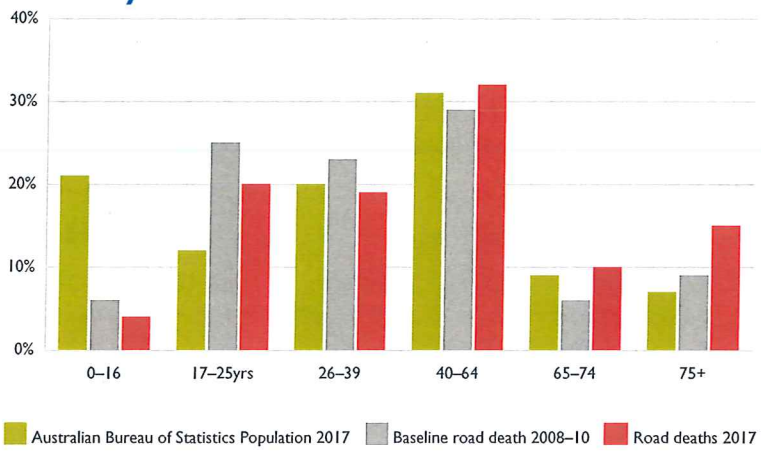
* Average annual number during the three-year period 2008 to 2010

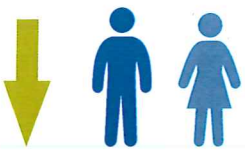


* 2016

ROAD DEATHS by AGE

OLDER road user* **DEATHS** INCREASED





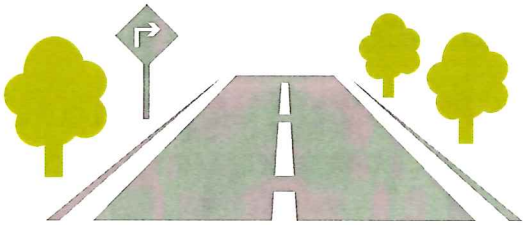
17–25 year olds **DECREASED** from **25%** to **20%** of total **ROAD DEATHS** but still over-represented

* Older road user refers to 65 years and over

DEATHS from **road crashes**

This proportion has not changed since **2008–2010**

73% **27%**

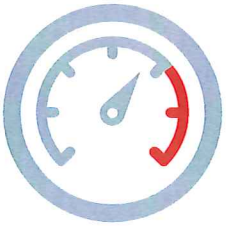


Single vehicle run-off crashes are **46%** of all crashes on **regional** and **remote** roads

* 2016

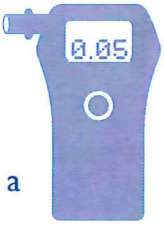
Most **FATAL crashes** on **regional** and **remote** roads occur in **high-speed zones**

≥100km/h



No significant change in **6 YEARS**

Alcohol involvement in **FATAL crashes** has trended down over last **6 years**

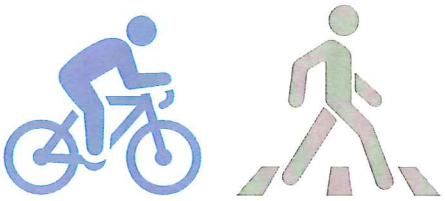


But on **remote roads** is still a factor in **32%*** of **FATAL crashes**

* Excludes Victoria and Western Australia

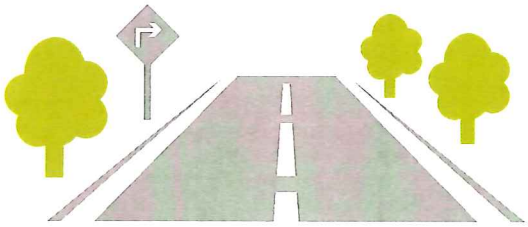
In **major cities** half of all **DEATHS** are **vulnerable road users**

In 2008–10 **48%**



2016 **56%**

Vulnerable road user DEATHS as a proportion of all **ROAD DEATHS** has increased in **major cities**, **regional** and **remote areas**



65% of **ROAD DEATHS** occur in **regional** and **remote** areas*

* 2016 data

In **2016** the proportion of **ROAD DEATHS** from **crashes** involving **drug-impaired** drivers or motorcycle riders **INCREASED 55%** since **2012** across **5 jurisdictions**

* excludes Victoria, Queensland and Western Australia

Road death figures are preliminary and subject to revision

Priority Actions for 2018–2020

1	Review speed limits on high risk regional and remote roads, in consultation with the community
2	Target infrastructure funding towards safety-focused initiatives to reduce trauma on regional roads
3	Implement safety treatments to reduce trauma from crashes at urban intersections
4	Increase deployment of Autonomous Emergency Braking (AEB) in both heavy and light vehicles
5	Increase roadside drug testing significantly in all states and territories
6	Reduce speed limits to 40 km/h or lower in pedestrian and cyclist places
7	Increase deployment of point-to-point and mobile cameras to achieve safe travel on Australia's road network
8	Improve heavy vehicle safety through improvements to licensing arrangements and fatigue laws
9	Increase the market uptake of safer new and used vehicles and emerging vehicle technologies with high safety benefits

Priority Actions

Actions		Responsibility	Links to other Actions
1	Review speed limits on high risk regional and remote roads, in consultation with the community 	Commonwealth States and territories Local government Austroads	A, B, D

Why

Australia has relatively high speed limits across much of its road network compared with similar roads in comparable countries. Crash risk is high on many low standard regional and remote roads. Two-thirds of all road crash deaths occur in regional and remote areas, and most of those occur in 100 km/h or higher zones. The road network is very large and in many cases it is not feasible to address this risk with infrastructure improvements alone. Reviews of research have shown that changing the speed of vehicles from 100 km/h to 90 km/h can be expected to produce a 35% reduction in fatal crashes and a 31% reduction in serious injury crashes.

Outcomes by 2020

Increased application (km) of lower speed limits to improve the star rating of regional and remote roads and achieve a reduction in fatality and serious injury risk on these roads.

Evidence of stronger community engagement with reduced speed limits.

Case studies assessing the impact of reduced speeds.

Implementation

- Investigate and implement low-cost options to reflect a lower speed environment, such as consistency of application of curve advisories and gateway treatments, when applying speed reduction as a road safety treatment.
- Engage with the community on safer speeds, the human tolerance to impact, and the benefits of lower highway speeds in reducing crash risk and the limited effect on travel times.
- Develop nationally consistent public communication and education messages that can be used by all levels of government to build awareness of safe and appropriate speeds.

2	Target infrastructure funding towards safety-focused initiatives to reduce trauma on regional roads 	Commonwealth States and territories Local government	3, A, B

Why

Australia has many high speed regional roads that are key routes and where crash risk is high. There were 843 people killed on regional and remote roads in 2016, representing 65% of all road crash deaths.

Outcome by 2020

Increase safety treatments on roads with highest risk of death and injury. Actions 2 and 3 (together with A and B) collectively aim to improve the star ratings across the whole road network, with the aim to achieve 3-star AusRAP ratings or better for 80% of travel on state roads, including a minimum of 90% of travel on national highways.

Implementation

The Commonwealth, states and territories, and local governments will work together to develop and deliver regional road safety initiatives within infrastructure investment frameworks.

- Upgrades to start with corridors/routes with the highest death and serious injury risk.
- Apply mass action treatments (e.g. barriers, wide medians, audio-tactile line markings) for state and local roads with the highest risk of fatality and serious injury.
- Accelerate and/or redirect funding to focus on highly beneficial mass action treatments as part of the delivery of funded infrastructure programs/projects, and use pilot projects to demonstrate the benefits to the community.

Actions		Responsibility	Links to other Actions
3	Implement safety treatments to reduce trauma from crashes at urban intersections 	Commonwealth States and territories Local government	2, 6, A, B

Why

Intersection crashes account for approximately 20% of fatalities in Australia. The majority of these deaths occur at urban intersections, with a total of 206 people killed at urban intersections in 2016. Many urban intersections have large traffic volumes flowing through them, and speed limits can be up to 80 km/h. Side impacts can lead to serious crash outcomes and the chance of survival decreases rapidly over 50 km/h. Pedestrians, cyclists and motorcyclists are particularly vulnerable at intersections and make up over half of the fatalities. Low cost works designed to prevent crashes can reduce the number of fatalities and serious injuries.

Outcomes by 2020

Increased safety treatments at urban intersections with the highest risk, leading to reduced numbers of deaths and injuries for all road users. New intersections built to better manage the consequences of collisions.

Actions 2 and 3 (together with A and B) collectively aim to improve the star ratings across the whole road network, with the aim to achieve 3-star AusRAP ratings or better for 80% of travel on state roads, including a minimum of 90% of travel on national highways.

Implementation

- Increase implementation of safety treatments at urban intersections with the highest risk of death and injury by separating conflicts, installing innovative intersection design, including raised intersections or raised platforms and implementing variable speed limits. On a case-by-case basis consider treatments such as only allowing filter turns (left and right) at signals where the risk is low, controlling access with right turn bans or closing access to minor streets from arterials, pedestrian protection changes to signal phasing, options for separation of cyclists and motorcyclists.
- Increase deployment of speed/red light cameras at intersections with the highest risk of fatal and serious injury.

4	Increase deployment of Autonomous Emergency Braking (AEB) in both heavy and light vehicles 	Commonwealth States and territories	8

Why

AEB can reduce death and injury through a demonstrated reduction in rear-end crashes of close to 40% for early systems, and has the potential to reduce deaths by between 1% to 10% as systems become more sophisticated.

Outcome by 2020

Achieve a majority of consumers purchasing vehicles fitted with AEB, through mandating AEB in heavy and light vehicles as well as increasing voluntary uptake.

Implementation

- International standards for AEB exist for heavy vehicles and are under development for light vehicles.
- The Commonwealth will examine international standards for AEB for heavy vehicles for implementation in the Australian new vehicle fleet, and finalise a regulatory package through the Australian Design Rules (subject to Regulatory Impact Statement (RIS) outcomes).
- The Commonwealth will contribute to the development of international standards for AEB for light vehicles for implementation in the Australian new vehicle fleet, and finalise a regulatory package through the Australian Design Rules (subject to international development and RIS outcomes).
- The Commonwealth and the states and territories will work to increase voluntary uptake of AEB through government and private fleet purchasing policies and consumer information.

Actions		Responsibility	Links to other Actions
5	Increase roadside drug testing significantly in all states and territories 	Commonwealth States and territories Austroads, Police, NTC	F

Why

Australia has a longer history of testing of drivers for illicit drugs than other countries. Roadside drug testing is now well established, though still conducted at much lower levels than random breath testing for alcohol. In contrast to alcohol testing, the positive test rate for drugs has been increasing strongly in the past few years, indicating that further benefits can be achieved from higher testing rates. There are a number of issues to be resolved including the cost of drug testing and the time taken at the roadside.

Outcome by 2020

Reduce trauma from drug driving through increasing levels of roadside drug testing across Australia, with individual jurisdictions aiming for a 50 to 100% increase, where commensurate increases have not already been applied in recent years.

Implementation

- A national working group to progress coordinated efforts to mitigate drug driving has been established and will report to the Transport and Infrastructure Council in November 2018.
- Improve the efficiency of drug testing processes without reducing the overall profile of random breath testing for alcohol.
- Work with industry to improve current testing technology to reduce time taken at the roadside and to reduce the cost of testing kits, as well as to explore new and emerging testing technology and develop products better suited to Australian jurisdictions' needs and conditions.
- Improve the understanding of the relationship of general and targeted testing to achieving deterrence, as well as the role of community awareness.
- Develop a national approach to roadside drug testing, recognising police operational and resourcing differences.
- Review current heavy vehicle drug testing practices and identify opportunities for improvement.

6	Reduce speed limits to 40 km/h or lower in pedestrian and cyclist places 	States and territories Austroads Local government	B

Why

Road users who are not protected by a vehicle are extremely vulnerable in collisions. The risk of death or serious injury increases markedly over impact speeds of 30 km/h.

Outcomes by 2020

High pedestrian activity areas, and pedestrian and cyclist places under 'movement and place' frameworks[1], will have speed limits of 40 km/h or less. There will also be greater use of 30 km/h limits where appropriate, to reduce risk to vulnerable road users.

Highlight towns and cities with zero fatalities.

Implementation

- Implement 40 km/h (or lower) speed limits in high pedestrian and cyclist use zones.
- Investigate 30 km/h (or lower) speed limits in high-risk pedestrian and cycling areas.
- Investigate and implement low-cost infrastructure options to reflect a lower speed environment, when applying speed reduction as a road safety treatment.

1 Movement and place' frameworks identify a road or street's position in a matrix in terms of movement, based on strategic importance in the broader road network; and place, the strategic significance and community value of a place.

Actions		Responsibility	Links to other Actions
7	Increase deployment of point-to-point and mobile cameras to achieve safe travel on Australia's road network 	States and territories	D

Why

Speeding increases both crash risk and severity. Point-to-point (average speed) cameras influence speed choices over long lengths of road. With speeding detected over a greater distance, they demonstrate intentional behaviour rather than a possible short lapse of concentration. Mobile speed cameras can allow for more unpredictable enforcement, contributing to greater overall compliance over the network.

Outcome by 2020

Multiple point-to-point camera systems in all jurisdictions, and increased use of mobile speed cameras, resulting in greater compliance with speed limits.

Implementation

- Implement point-to-point (average speed) safety cameras across high risk, high traffic volume parts of the national highway system including heavy vehicle routes.
- Increase targeted deployment of mobile speed cameras across the network to improve compliance with speed limits and reduce crash risk.

8	Improve heavy vehicle safety through improvements to licensing arrangements and fatigue laws 	Commonwealth States and territories Austroads, NHVR, NTC	3, K, L

Why

While heavy trucks are under-represented in the number of serious crashes relative to distance travelled, they are over-represented in crashes causing deaths and serious injuries. This is due to the significant impact a heavy vehicle can have on other road users when involved in a crash. The regulation of heavy vehicle operations has been recognised as a key factor in the safe operation of heavy vehicles.

Outcomes by 2020

Stronger and more harmonised heavy vehicle driver licensing arrangements across Australia.

National heavy vehicle monitoring network substantially complete, improved rates of heavy vehicle compliance with fatigue and speeding laws, and better compliance with, and understanding of, Chain of Responsibility laws.

Improved heavy vehicle accreditation framework to strengthen safety management by heavy vehicle operators.

Review of Heavy Vehicle National Law (HVNL) finalised and recommendations focused on achieving better safety outcomes provided to the Transport and Infrastructure Council.

Implementation

- Implement recommendations of Austroads' Review of the National Heavy Vehicle Driver Competency Framework, including strengthening safety components to ensure drivers and assessors have necessary skills. Pursue harmonised application of the Framework across jurisdictions to ensure best practice implementation, regardless of location, training and assessment process, or license type.
- The National Heavy Vehicle Regulator (NHVR) will deliver improved options for strengthening safety management for businesses using heavy vehicles, including registering codes of practice for adoption by operators, and improving and harmonising safety accreditation schemes.
- Build and integrate the heavy vehicle compliance monitoring network, allowing for the first time national data analysis about vehicles and operators to inform a risk-based approach to safety enforcement.
- The NHVR and state/territory enforcement agencies will ensure all supply chain participants are aware of their safety obligations under strengthened Chain of Responsibility provisions in the HVNL (taking effect from mid-2018). They will ensure investigations into non-compliance consider the liability of others in the supply chain, not just the driver.
- As part of the review of the HVNL, the NHVR and National Transport Commission (NTC) will review the heavy vehicle fatigue framework, informed by findings of the heavy vehicle driver fatigue research project conducted by NTC and the Alertness, Safety and Productivity Cooperative Research Centre.

Actions		Responsibility	Links to other Actions
9	Increase the market uptake of safer new and used vehicles and emerging vehicle technologies with high safety benefits 	Commonwealth States and territories Austroads, NHVR, NTC	3, C, H

Why

The Australasian New Car Assessment Program (ANCAP) and Used Car Safety Ratings (UCSR) and related safety research demonstrate the benefits of consumers choosing safer vehicles. A large proportion of new vehicle purchases are made for private and government fleets, being turned over to the general fleet after 2–3 years. Ensuring that fleet operators purchase the safest vehicles is one of the quickest ways to improve the safety of the Australian fleet overall.

Outcome by 2020

Increased market uptake of safer vehicles and technologies.

Implementation

- Government fleet purchasing policies to require ANCAP 5-star rated light passenger and light commercial vehicles, as well as driver assistance technologies including AEB, Lane Keep Assist, Lane Departure Warning and Adaptive Cruise Control; and other beneficial technologies, where available.
- Support and promote ANCAP and the UCSR at point of purchase – with a particular focus on young drivers, older drivers and remote and regional drivers.
- Influence organisations to purchase 5-star safety rated vehicles, with the most recent date stamp available, through fleet purchasing policies, ongoing collaboration with Workplace Health and Safety agencies, industry and the National Road Safety Partnership Program (NRSPP).
- Work with industry partners to educate drivers on safer vehicle technology and how to use it.
- Ensure safety across all Safe System areas is properly considered in the Transport and Infrastructure Council's ongoing work program to prepare for connected and automated vehicles.
- Influence industry to apply, and if possible accelerate, new safety technologies, for example AEB, fatigue detection, distraction mitigation, vehicle control and aftermarket vehicle warning technologies.
- Explore opportunities to create greater demand for vehicle safety technologies including inexpensive after-market features, particularly for young drivers.

Other Critical Actions

Action		Responsibility
A	Set safety plans for high risk corridors within the network to direct investment to reduce Fatal and Serious Injury (FSI) risk 	States and territories Local government Austroads
	Develop corridor safety plans to achieve the best network outcome by consistently applying treatments along corridors. Treatments known to reduce the FSI risk and which can be sustainably applied over a medium term timeframe will be considered. These include median separation, audio tactile line marking, wide centre line, lower speed limits, roundabouts, roadside barriers, motorcycle underrun barriers, intersection platforms and gateway treatments. Programs/projects will deliver this vision over subsequent years. As a first step, Austroads will provide guidance in how to develop corridor safety plans to achieve the safest network outcome.	
B	Apply Safe System principles and treatments to all road infrastructure investment programs 	Commonwealth States and territories Local government Austroads
	Even when programs are not targeted specifically towards safety, all road infrastructure investment at all levels of government projects should apply Safe System principles and treatments as outlined in Austroads guidance materials, and national willingness to pay values. All road infrastructure investment should be implemented in a way that is consistent with network safety plans, including facilitating enforcement requirements.	
C	Better protect light passenger vehicle and light commercial vehicle occupants by updating to the latest available international crash standards 	Commonwealth
	Active safety systems such as ESC and AEB prevent crashes, while vehicle crashworthiness reduces death and injuries when crashes occur. The protection of a 2013 built Australian vehicle is double that of 20 years ago, due to a combination of regulatory and non-regulatory activities. Following the 2017 mandating of a new Australian Design Rule for pole-side impact, further work is being undertaken towards adopting new international crash standards for full-frontal impact and modernising existing standards for offset-frontal and side-impact. The Commonwealth will examine the latest international standards for full-frontal, offset-frontal and side-impact occupant protection for light vehicles for implementation in the Australian new vehicle fleet, and finalise a regulatory package through the Australian Design Rules (subject to RIS outcomes).	
D	Develop a national speed enforcement strategy in cooperation with police and explore greater use of technology for a range of enforcement outcomes  	Police States and territories Austroads
	Speeding increases both crash risk and severity, and there is evidence that best practice speed enforcement measures are highly effective in reducing speeding and improving safety. Individual jurisdictions face pressure from some sectors of the community on speed enforcement, and a national approach will provide support for best practice enforcement and assist governments to maintain or increase levels of enforcement. All governments will work together to develop a national strategy supporting highly randomised speed enforcement on high speed rural roads; use of both cameras and roadside policing; enforcement of limits at roadworks; best practice approaches for the introduction of new speed zones; and review of tolerances, particularly the scope for lower tolerances with the development of new technologies. The strategy will consider trials of telematics to manage speed and other high risk behaviours; and options to better measure the trauma reduction outcomes of enforcement efforts.	

Action		Responsibility
E	Reduce distraction from mobile device use	Commonwealth States and territories Police, NTC

There is concern among governments, the corporate sector and the community about the risks of driver distraction by mobile devices. There is supporting research evidence about the risks, although data about mobile phone use in crashes is incomplete, and there may be scope to improve data collection, providing a better understanding of the problem.

All governments will work together to develop an holistic strategy that will consider enforcement, new and emerging technology including vehicle technology and refining relevant legislation to reduce driver distraction; and the scope for work health and safety policies and broader corporate responsibilities to contribute. The NTC will investigate how the Australian Road Rules can provide a better model for the regulation of distraction from technology.

F	Strengthen efforts to reduce drink driving	States and territories, Austroads, Police

Although the involvement of alcohol in fatalities has reduced over the past decade, it remains a significant factor, with approximately 16% of fatalities in 2016 involving alcohol. States and territories will continue to review and adjust their alcohol interlock programs to improve their effectiveness in addressing drink driving; and will maintain highly visible random breath testing including car-based operations on the rural network to complement larger operations elsewhere.

Austroads will coordinate work to review alcohol limits across various classes of motor vehicles in Australia along with overseas experience on the impact on road trauma when alcohol limits are changed.

G	Strengthen graduated licensing systems (GLS) for car and motorcycle drivers	States and territories Austroads, NTC

Young drivers remain over-represented in serious road crashes. A reduction in the rates of serious crash involvement for 17–25 year old drivers over the past decade or more has been credited to the progressive implementation and enhancement of GLS in all states and territories.

States and territories will increase the implementation of best practice GLS consistent with the 'enhanced' and 'exemplar' models for driver licensing identified in the Australian Graduated Licensing Scheme Policy Framework, to reduce the number of novice drivers killed and seriously injured.

States and territories will implement best practice GLS for motorcyclists.

H	Introduce a rating scheme for motorcycle protective clothing	States and territories

Motorcyclists face disproportionate risk on the roads, and helmets and other protective clothing have an important role in reducing some of this risk. There is evidence suggesting that over 25% of the protective clothing worn by motorcyclists in Australia is of inferior quality and may fail under crash conditions.

Governments will progress the development of a consumer rating program for motorcycle protective clothing. Clothing will be rated based on the level of protection provided as well as comfort under a range of conditions. The intention is to promote awareness of safer motorcycle clothing among motorcyclists in order to increase usage rates and reduce injuries, and to encourage manufacturers to provide a wider range of more effective protective clothing suitable for Australian conditions.

I	Establish a system for reporting of a national matched injuries series using an agreed serious injury definition	Austroads Commonwealth States and territories

All jurisdictions will work together to establish and populate a matched national crash and hospital data series, and establish management arrangements for the series so that it can be used for the ongoing monitoring of the NRSS.

The pilot national data matching project shows that matching is possible, but continued work is required to complete and assess the initial data linkage pilot and develop and populate a national matched crash and hospital data series.

Action		Responsibility
J	Remote road safety – identify and implement key interventions 	Commonwealth States and territories Local government Austroads

All jurisdictions will work together to better address road safety in remote areas, consistent with the Transport and Infrastructure Council's National Remote and Regional Transport Strategy; with particular attention to: tailored solutions (eg access to driver licensing, training and education); unlicensed driving; vehicle safety including use of seatbelts and child restraints; speed management; targeted speed reductions in advance of engineering treatments; and gateway and threshold treatments for high speed to low speed transition zones. There is scope for greater consideration of whole of government approaches to remote transport issues, such as alternative community transport options.

K	Require contractors on government-funded construction projects to improve the safety of vulnerable road users around heavy vehicles through safety technology and education programs 		Commonwealth States and territories

In urban areas, heavy vehicles feature prominently in crashes causing deaths and serious injuries to vulnerable road users. There is a large amount of major infrastructure construction currently underway or planned across Australia. As much of this increased activity is in city and suburban areas, it brings increased risk to vulnerable road users.

Governments will investigate options to require improved heavy vehicle safety standards through their construction contracts, informed by the results of current trials in Victoria and NSW involving increased driver training requirements and fitting improved safety equipment to heavy vehicles used on major projects. As part of this work there are also opportunities to improve awareness of risk among both heavy vehicle drivers and vulnerable road users.

L	Investigate the introduction of safer, cleaner heavy freight vehicles by minimising regulatory barriers  		Commonwealth States and territories Austroads, NHVR, NTC

The overall age of the heavy vehicle fleet has an impact on safety as newer vehicles have more safety features. It is proposed to investigate ways to encourage the greater uptake of newer, safer, cleaner vehicles into the Australian fleet, including regulatory requirements and the capacity of the road network to accommodate different sizes of vehicles.

To meet current Australian regulations, heavy freight vehicles must be 50 to 100mm (2–4%) less in width than vehicles in other major markets. This costs manufacturers $15–30 million per year to redesign their vehicles, and in some cases reduces the availability of safer, cleaner models.

Regulatory restrictions exist in Commonwealth and state and territory regulations, and include both vehicle size and mass. They were originally introduced to protect infrastructure such as roads, building clearances, and bridge loading limits, and to prevent head-on crashes and reduce conflict with other road users on narrower roads.

All parties will examine current regulatory requirements, as well as network capacity for vehicles of different size and mass, where the roadway can safety accommodate such vehicles and minimise crashes. Subject to this assessment, the Commonwealth will release a discussion paper, ahead of a regulatory package for any agreed changes to heavy freight vehicle width and any other dimensions, and axle transitional mass, in the Australian Design Rules. The NHVR and the state and territory governments will consider additional changes to heavy freight vehicle size and axle mass limits. The aim is to achieve increased take up of safer, cleaner heavy freight vehicles in Australia from a reported 0.1% to be closer to the global average of 2.0%, also leading to a lower average age of the heavy vehicle fleet.

Monitoring and reporting

Under the existing National Road Safety Strategy governance arrangements, the Austroads Road Safety Task Force will continue to have overall responsibility for monitoring and reporting on the implementation of the Action Plan. A comprehensive annual report on progress is prepared for Transport Ministers at the end of each calendar year and released publically on the Transport and Infrastructure Council website.

Responsibilities for implementing, monitoring and reporting on progress on the actions sit with the Commonwealth, state and territory transport departments and road authorities, Austroads, police, the National Transport Commission and the National Heavy Vehicle Regulator.

The primary measure of success for the 10-year strategy will be determined by the actual reduction in the numbers of deaths and serious injuries from road crashes. Intermediate progress is assessed annually using the high level outcome indicators established when the strategy commenced, as well as the Safety Performance Indicators (SPIs) that have been developed for detailed progress monitoring. Development of additional SPIs and associated data collection arrangements will continue.

Road safety risk and mitigation modelling will increasingly be used, enabling better assessment of interventions with consistent reporting on safety outcomes.


DRIVE
WITH
CARE

Addressing road safety issues across the Safe System

The actions in this plan are intended to work together to address road safety for all road users. There are particular road user groups and issues that have been identified as being of particular concern. This section demonstrates how the actions work together to address road safety.

Motorcyclist safety

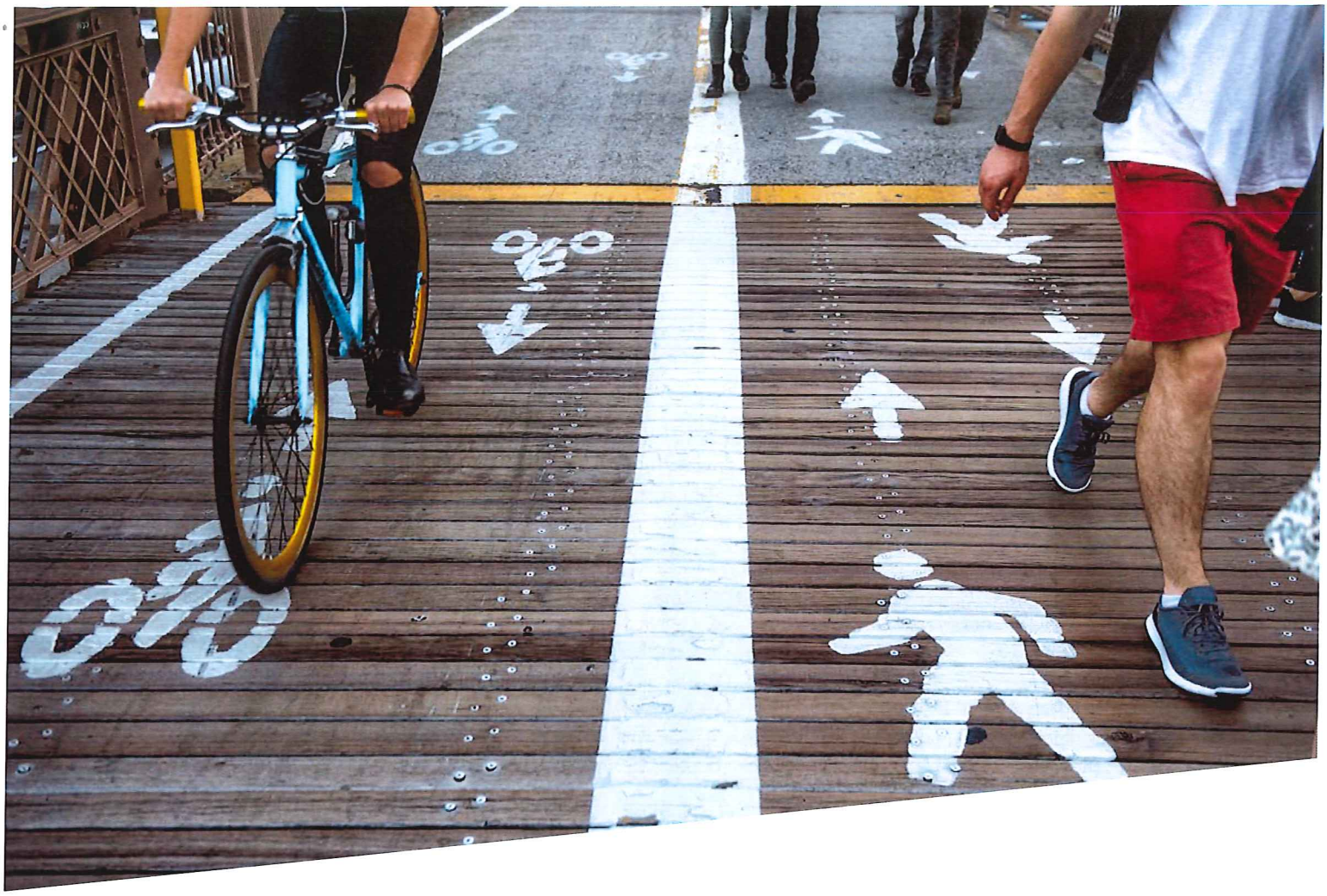
Motorcycling is an increasingly popular form of transport in Australia for both commuting and recreational reasons. However, the risk of being killed or seriously injured is higher for motorcyclists in comparison to occupants of other vehicles, due to the extra vulnerability of riders. Fatalities have declined over the last decade in a number of road user groups, but since 2014 there have been steady increases in motorcyclist fatalities. In Australia in 2016 there were 251 motorcyclist fatalities (243 riders and 8 pillion passengers), up more than 20% on 2015 figures and representing around one in five of all road crash deaths. Exposure has increased substantially over the last ten years, with motorcycle registrations increasing by approximately 5% per year and estimated kilometres travelled by 4% per year.

Fatalities for those motorcyclists under 40 years of age are more likely to occur in urban areas (higher levels of daily commuting) while more of the motorcycle fatality crashes involving those over the age of 40 occur in non-urban locations (higher levels of leisure/recreation). This indicates that the issue is likely to have multiple causes, and may require a variety of strategies aimed at differing contributing factors.

In attempting to improve motorcycle safety in Australia a number of initiatives have been implemented, including increased understanding about the use of appropriate protective clothing and other protective gear; recognition of the importance of infrastructure design and maintenance; targeted safety campaigns and information sharing; improved vehicle safety, including through technology such as anti-lock braking systems (ABS); and enhanced motorcycle training and education.

An example that has demonstrated positive results is the Victorian motorcycle blackspot program, which was instigated in 2003. This included assessment of higher volume motorcycle routes, and identification of infrastructure improvements (such as improvements to roadside barrier systems) to improve safety outcomes. Program evaluation results indicate substantial safety benefits for riders, with around a 30% reduction in fatal and serious injury. Recognising the importance of this issue, Austroads has produced a recent report on infrastructure improvements to assist in providing safer conditions for motorcyclists, and another on graduated licensing systems (GLS) for motorcycle riders.

Given that motorcyclists are over-represented in trauma statistics, further areas of improvement are required to enhance motorcycle safety. This Action Plan contains a number of specific actions, as well as some broader ones, that will bring benefits for this group of vulnerable road users. Specific actions include introduction of a rating scheme for motorcycle protective clothing and strengthening of GLS for motorcycle riders. Broader benefits to riders will occur through other actions such as the development of network-wide safety plans (Action A); infrastructure and speed reduction measures to reduce trauma at urban intersections (Action 3) further road design and Safe System approaches to support better outcomes for specific road users; and implementation of safer speeds and improved enforcement.



Pedestrian and cyclist safety

Walking comprises the largest transport mode because almost everyone is a pedestrian at some stage in their journey. Walking and cycling can provide many benefits, including improved health, and reduced pollution and congestion. However, pedestrians and cyclists are vulnerable road users, as they have little or no protection in the event of a collision. Certain groups of pedestrians are particularly vulnerable, such as the elderly, the young and those who are impaired (for example by alcohol or drugs). There has been a steady decline in the number of pedestrian fatalities over the last decade. However, in 2016 there were 182 pedestrian fatalities (14% of all fatalities), an increase for the second year in a row. Pedestrian fatalities and serious injuries are most common in major cities and towns (including on local roads, and higher volume roads with mixed traffic use), but also occur in more remote locations. In 2016, a total of 29 cyclists were killed in road crashes.

There is risk for vulnerable road users even at low speeds, but it is clear that the chance of injury or death increases dramatically above certain speed thresholds. There is a large increase in deaths for collision speeds above around 30 km/h, while the critical speed of impact for serious injury and for particularly vulnerable road users is likely to be less than this. The solutions include lower speed environments; separation of pedestrians and cyclists from other road users; and provision of appropriate crossing facilities. Solutions also lie in improved vehicle design and technology, road user education, training and enforcement.

Previous examples of safety improvements to address vulnerable road user risk include the reduction of the default urban speed limit from 60 km/h to 50 km/h. This measure resulted in reduced pedestrian casualties (for instance, a 20% reduction occurred in South Australia). More recently there has been some movement to 40 km/h speed limits in urban activity centres and CBDs. In NSW, the 40 km/h zone in the Sydney CBD has recently been extended, and the NSW Government has produced guidance on 40 km/h speed limits for high pedestrian activity areas. Improved pedestrian protection through vehicle design and technology is also likely to have led to safety improvements.

This Action Plan contains additional activities aimed at improving vulnerable road user safety. Actions 4 and 9 call for the development and promotion of vehicle safety technologies expected to bring benefits to pedestrians and cyclists. Action 3 calls for a combination of infrastructure and speed reduction measures to reduce trauma at urban intersections. Action 6 highlights the expanded application of lower speed limits to address fatal and serious injury risk in pedestrian and cyclist areas (30 km/h in high risk areas, 40 km/h or lower in high use zones). Several items in the Other Critical Actions list will also improve safety for vulnerable road users, through applying Safe System principles to all road infrastructure investment, improving speed enforcement, attempting to reduce driver distraction and drink driving, and reducing the risks to vulnerable road users of sharing the roads with heavy construction vehicles.

Fatigue

Fatigue is a loss of alertness that reduces human performance and may or may not end up in sleep or micro-sleeps. It is one of the leading factors contributing to road crashes and has several problematic effects on driving performance, including slowed reaction time, shorter attention span, less effective memory, narrowing of attention, and less effective reasoning and decision making.

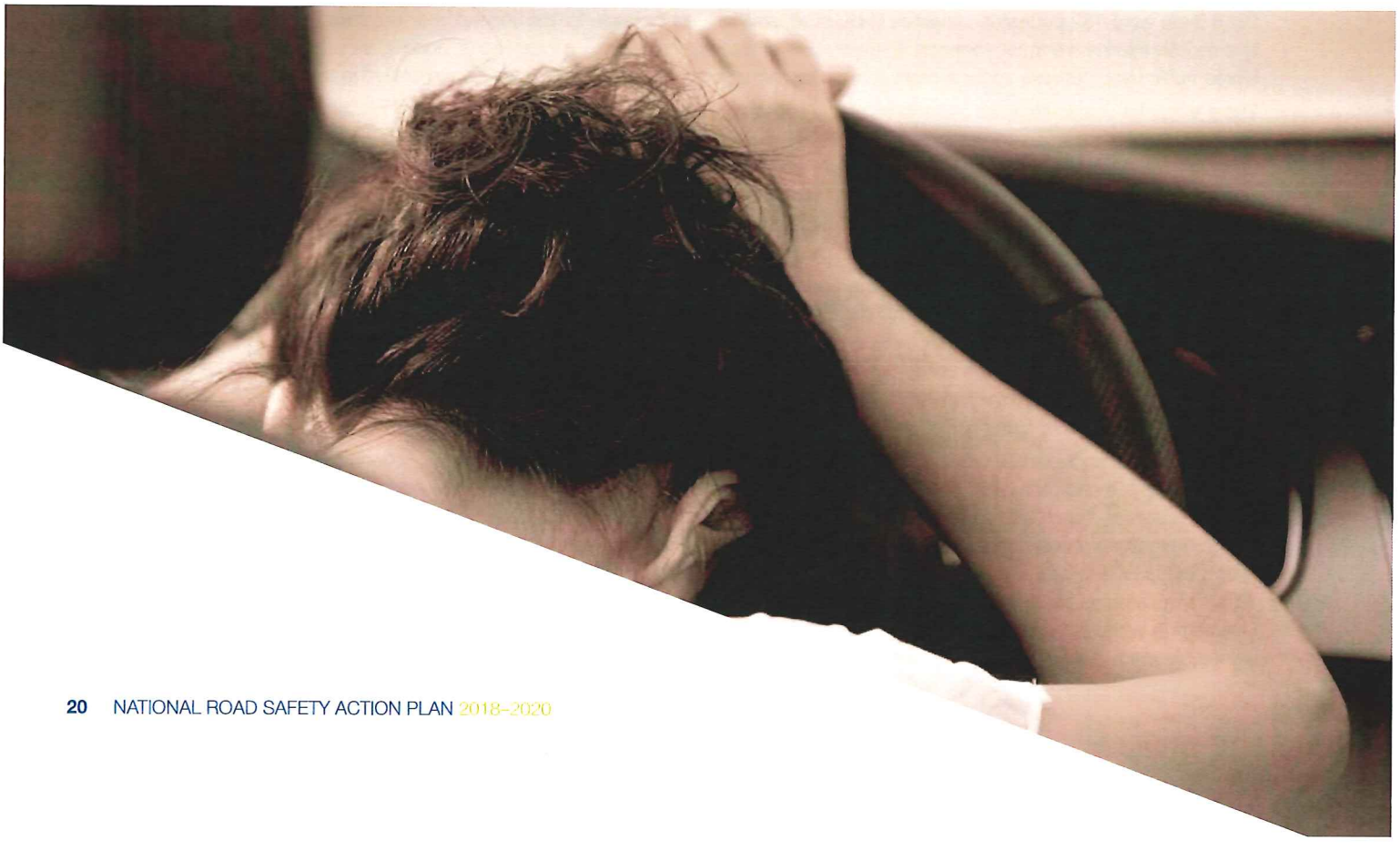
According to the Transport Accident Commission, 20% of all fatal road crashes in Victoria involve driver fatigue, while estimates in Queensland (from the Centre for Accident Research and Road Safety, Queensland) are that sleepiness contributes to 20–30% of all deaths and severe injuries on the road. Fatigue is four times more likely to contribute to impairment than drugs or alcohol.

The only effective way to address fatigue is through sleep, but a number of successful strategies have been used to mitigate the risks. The National Road Safety Partnership Program (NRSPP) has highlighted the 'Safe Driving Procedure' implemented by the Bureau of Meteorology, which has an extensive infrastructure network around Australia and a large number of employees required to drive long distances. The Bureau's Safe Driving Procedure includes: provision for managing fatigue; dictating that drivers should be well rested; adhere to mandated driving breaks and driving times; have accommodation booked in advance; be well nourished in preparation for driving and maintain a good level of hydration; and follow napping guidelines. These fatigue principles are defined in the Bureau's workplace safety procedures and it is mandatory for drivers to follow them. These and other new provisions have led to a substantial reduction in road incidents, and in the average cost of each incident.

The Government is co-funding research into heavy vehicle driver fatigue. Run by the National Transport Commission and the Alertness, Safety and Productivity Cooperative Research Centre, this project aims to produce robust, evidence-based research to inform the design of future fatigue arrangements for the heavy vehicle industry. A review of the Heavy Vehicle National Law within the next two years will provide the opportunity for improvements to the fatigue regulatory framework in light of the research findings.

Other measures to address fatigue include improved vehicle technologies (including lane assist systems and fatigue detection), real-time monitoring of long distance drivers, and infrastructure measures, which were assessed in a recent Austroads report on this subject. The report highlighted solutions such as the provision and promotion of rest opportunities, enhanced signage, audio-tactile line markings, and improved roadside protection.

This Action Plan extends these activities and includes further specific provision to address fatigue. Action 8 identifies improved safety for heavy vehicles through improvement to fatigue laws, and educating and assisting companies to meet their obligations under chain of responsibility laws. Other actions will have indirect benefits, including Action A, which requires establishment of network-wide safety plans to direct infrastructure investment for corridors.



Balancing infrastructure improvements and speed limits

Both infrastructure and speed limits play a significant role in the safety performance of the road network, and they are linked. Although many road crashes are attributed to human error, the severity outcome from any given crash is most strongly dictated by the infrastructure and environment that is provided. If protective infrastructure is present (for example a flexible roadside barrier instead of a tree) or the design of the road encourages speeds within human tolerance levels to injury, then the injury outcome is more likely to be of low severity.

There is very clear evidence about the safety benefits of both improved infrastructure and provision of appropriate speed limits. Evaluations have shown that provision of certain infrastructure (e.g. roundabouts, and flexible barriers in the centre and on the edge of high speed roads) virtually eliminates fatalities and serious injuries. However, extensive rollout of higher cost infrastructure tends to be limited to high volume roads. In the short to medium term, lower speeds limits can produce significant safety benefits. With speed reduction benefits there is a 'power' effect, meaning for even small reductions in speeds, there is a substantial reduction in risk, particularly for fatal and serious crash outcomes. As an example, a 10 km/h reduction in speed on a high speed road would result in over a 30% reduction in fatal and serious injury. Speed reduction is influenced by changes in speed limits, but this often needs to be supported by appropriate infrastructure. Austroads has provided recent guidance on this issue for high speed roads as well as urban arterial networks.

There are many examples around Australia demonstrating the safety benefits of improved infrastructure. These include lower cost infrastructure measures used on lower volume roads such as the rollout of sealed shoulders and audio-tactile line marking in Western Australia. Lower cost infrastructure measures are often supported by more appropriate speed limits, such as Queensland's Bruce Highway where wide centreline treatments were used in combination with lower speed limits. For higher volume roads there has also been extensive rollout of wire rope barrier systems, including in South Australia, New South Wales, Victoria and Tasmania.

This Action Plan builds on the success of previous infrastructure and speed-related safety improvements with a number of new initiatives. Actions 1, 2 and 3, with Actions A and B, are together aimed at achieving 3-star AusRAP ratings or better on the most-travelled roads and improving safety on low-standard regional and remote roads. This will be done through a combination of implementing proven safety treatments, reducing speed limits on low-standard roads, and targeting safety-focused infrastructure funding. Action A calls for the establishment of network-wide safety plans for corridors, involving further application of treatments known to reduce fatalities and serious injuries, as well as improving design and the approaches to address risk for specific groups through infrastructure improvements. Action 3 calls for a combination of infrastructure and speed reduction measures to reduce trauma at urban intersections.

There are also specific actions relating to application of safer speeds. Action 6 highlights the need for lower speed limits to address vulnerable road user safety, and Action 7 calls for increased use of point-to-point and mobile speed cameras, while Action D involves the development of a national speed enforcement strategy.

Older road users

Older road users are among the most vulnerable groups in our communities. Whether walking, riding or travelling within a vehicle, crash outcomes for older road users are typically more severe due to their greater frailty. This level of frailty increases with age. Data provided by the Bureau of Infrastructure Transport and Regional Economics (BITRE) indicates that the average length of hospital stay following a road crash is seven days for those over 75 years of age, while it is four days for those aged 25 to 54. Older road users are defined as those over 65 years of age, but this is not a homogenous group. It includes active walkers and cyclists, motorcycle riders, drivers still engaged in the workforce, 'grey nomads' who travel long distances for leisure, as well as those who are more frail and can no longer drive or even walk without assistance.

While fatalities overall have generally decreased over the last decade, numbers of fatalities for older road users have actually increased. The average rate of reduction for all road users was around 3% per year over this period. For the 65 to 74 year old age group there was a 2.3% increase per year, while for those over 75 years, there was a 1.2% increase. This increase needs to be set within the overall context of an ageing population, with BITRE figures indicating an increase in driver licences for this older age group. Other demographic and societal factors relating to this older group of road users might also be of influence (e.g. greater extent of walking, riding and driving at an older age).

Much of the historic approach to addressing safety for this older group of road users has relied on monitoring of driving performance, and removal of licence when performance falls below a threshold level. Although assessment of fitness to drive will remain an important approach to managing older road user safety, there are other activities that form part of an older road user strategy that are being implemented by state and territory governments. These include improvements to road infrastructure and enhanced speed management to improve facilities for older pedestrians, especially when crossing roads. Broader safety improvements to infrastructure and speeds have brought benefits for all road users, including older road users. Similarly, improvements to vehicles, including improved crashworthiness and technologies, as well as improved advice on vehicle choice also bring safety benefits to this group.

This Action Plan contains specific actions relating to older road users. Action 9 specifically highlights the support and promotion of new and used car safety ratings (ANCAP and UCSR) with a particular focus on young drivers, older drivers and remote and regional drivers. Other actions within the plan will provide supporting activity, including Action 3, calling for a combination of infrastructure and speed reduction measures to reduce trauma at urban intersections, Action B which promotes road design and Safe System approaches to support outcomes for specific groups at greater risk, and Action 6 which identifies the expanded application of lower speed limits to improve safety.

Vehicle safety

In Australia, consumer awareness programs that encourage consumers to purchase vehicles that meet higher safety levels in some areas are complementary to the regulation of minimum vehicle safety standards.

The Australian Government and the states and territories support the Australasian New Car Assessment Program (ANCAP) as well as the Used Car Safety Ratings (UCSR), which both provide vehicle safety ratings aimed at assisting consumers to choose safer vehicles.

Where international standards are yet to be developed, and where there is not a strong case for development or implementation either internationally or through national regulation, non-regulatory programs such as ANCAP can be very effective in improving safety. ANCAP's goal is to encourage manufacturers to exceed mandated levels of safety performance through its star rating system. ANCAP has the ability to promote promising safety technologies based on early evidence about their effectiveness, without being subject to the stricter standard of evidence that would be required as part of introducing new regulation.

Under the Motor Vehicle Standards Act 1989, Australia applies international vehicle design and performance standards, with road vehicles generally required to meet national design and performance standards – the Australian Design Rules (ADRs) – before they can be supplied to the market. The ADRs set requirements for vehicle safety, environmental performance and anti theft protection in line with community expectations and international standards.

Recent initiatives have seen, for example, Electronic Stability Control (ESC) mandated for light commercial vehicles (complementing the earlier mandating of ESC for passenger cars) and Brake Assist Systems mandated for light commercial and passenger vehicles.

During the period 2010 to 2014, Australia led the development of a major international vehicle regulation; an occupant protection standard for side impact crashes with narrow objects, such as poles and trees. By setting performance requirements for head and thorax protection, the standard will deliver significant fatality and injury reductions in all side impact crashes, which currently account for 20% of Australia's road deaths. The standard came into force for new vehicles in Australia, through the ADRs, in late 2017.

Australia's vehicle standards are being increasingly harmonised with international – United Nations (UN) – regulations that are being adopted and implemented in a significant and growing number of countries. Harmonisation acts as a form of deregulation, removing trade barriers and delivering safety and environmental benefits by allowing vehicles that meet the latest UN regulations into the Australian market at the lowest possible cost.

Internationally-based design and performance standards for vehicles are not universally mandated: Australia must continue to legislate its minimum standards (the UN regulations mandated through the ADRs) and ensure that both locally manufactured and imported vehicles have been assessed and certified as meeting those standards.

This Action Plan includes a strong program of regulatory and non-regulatory activity to drive improved vehicle safety in Australia over the next three years. Action 4 calls for increased deployment of AEB in heavy and light vehicles, both through the development and implementation of new standards, and through increasing voluntary uptake through fleet purchasing and consumer information via ANCAP.

Action 9 focuses on greater uptake of safer vehicles and of emerging technologies with safety benefits, through promotion of ANCAP and the UCSR and other initiatives such as the National Road Safety Partnership Program (NRSPP). The Action Plan also calls for updates to the latest crash standards, to better protect light vehicle occupants (Action C), consideration of safety equipment and standards that could better protect vulnerable road users sharing the roads with the heavy trucks that are used in construction in urban areas (Action K), and work to minimise regulatory barriers that are currently impeding the use of safer newer heavy vehicles in Australia (Action L).

Advancing the Safe System – Making it happen

As outlined in the *National Road Safety Strategy 2011–2020* (under 'Making it happen') and consistent with the first pillar of the Global Plan for the Decade of Action for Road Safety 2011–2020, the cornerstone interventions must be supported by a series of management functions focused on achieving results.

While there are many other actors influencing road safety, accountability for management systems rests with governments. Government responsibilities for road safety program delivery are spread across all levels and multiple jurisdictions and are shared among different agencies within jurisdictions. To achieve the best road safety outcome, each jurisdiction needs to have an overall management framework, with a clear focus on results.

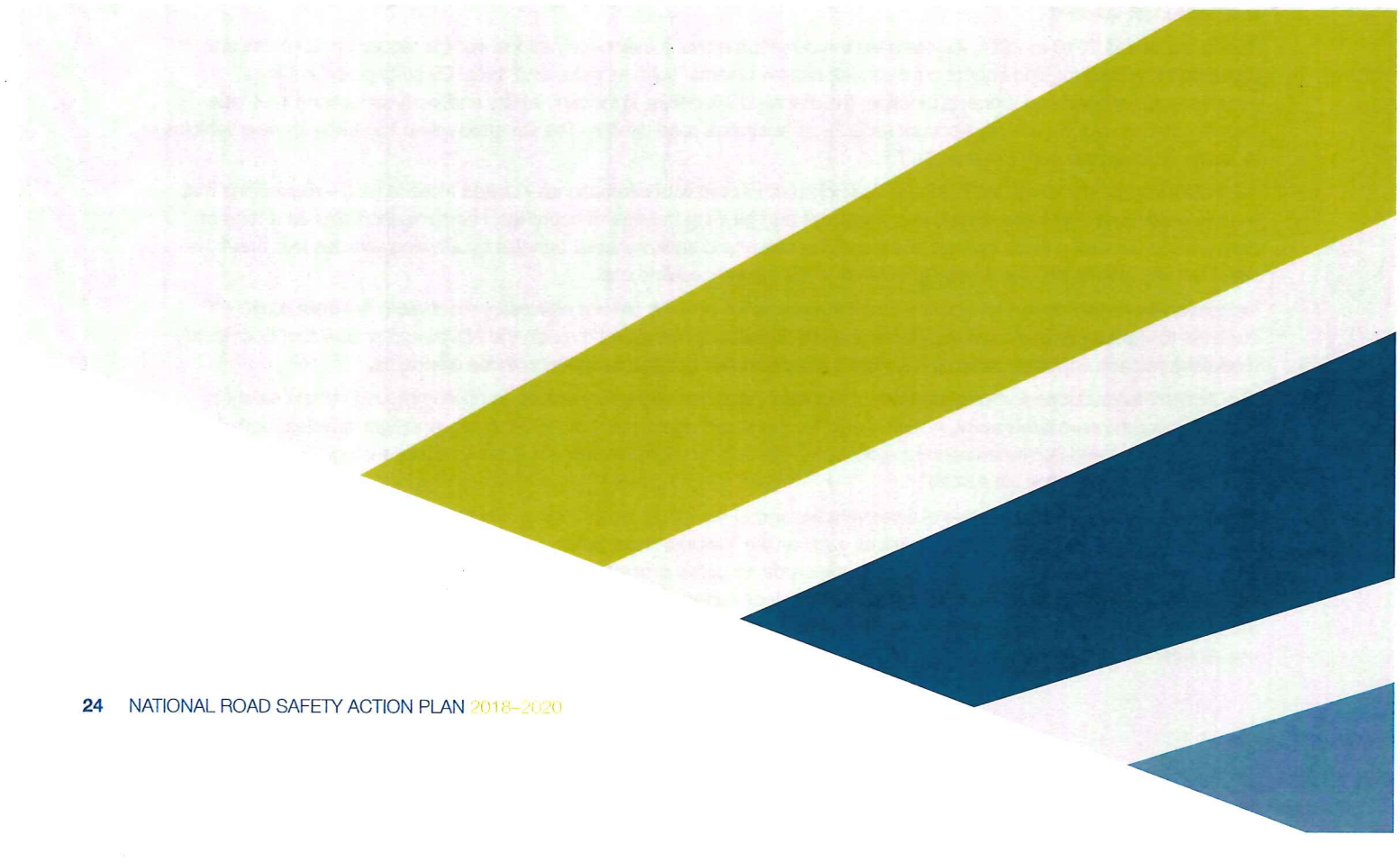
From a management perspective, the National Road Safety Strategy provides the overarching direction and facilitates the priority aspects of integration across jurisdictions and disciplines, as well as integration across the Safe System cornerstones. The individual states and territories also maintain their own comprehensive road safety strategies, and on behalf of all local governments, the Australian Local Government Association (ALGA) publishes a road safety policy statement.

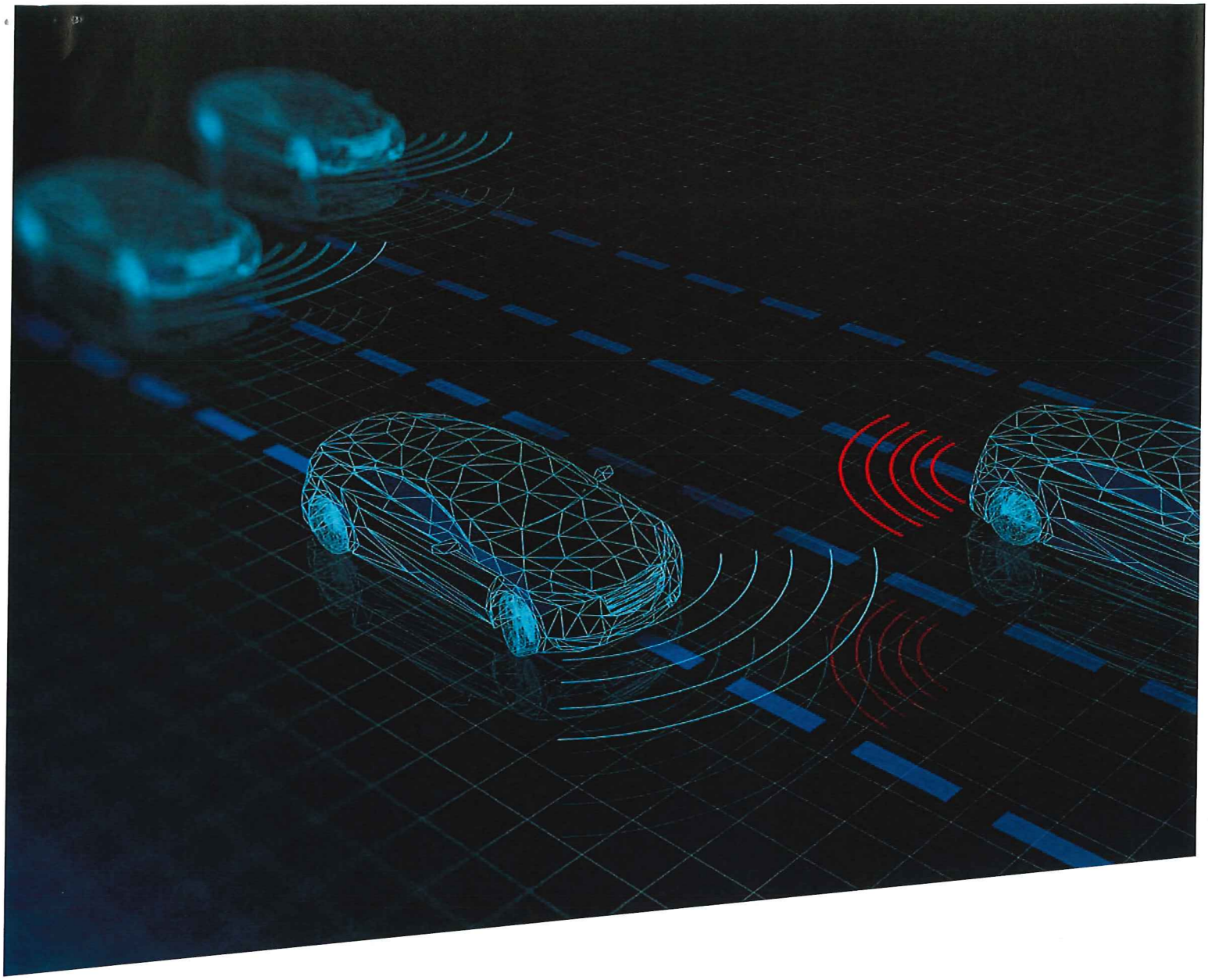
It is important to measure performance across the system. In addition to the established Safety Performance Indicators, in this Action Plan, aspects of national performance management are integrated into many of the actions. As input to the next national strategy development cycle, this stronger focus on system-wide measures of performance will allow for more effective assessment to better understand the causes of crashes and effects of treatments. This is consistent with standard risk management methodologies. Examples of system measures integrated as part of this plan are corridor AusRAP star ratings, number of ANCAP 5-star rated vehicles, reduced speed limit coverage, and speed camera coverage across the network.

Road safety has close links with many other stakeholders. The NRSS and this Action Plan identify collaboration on priority topics between governments, levels of government, within and across Austroads specialists, with police and health agencies, regulators, workplace health and safety agencies, industry groups, researchers, vehicle manufacturers and technology providers such as telecommunications and drug equipment.

Ongoing collaboration with key stakeholders is to be an integral part of the implementation of this Action Plan and will also inform the development of the national strategic approach to improving road safety from 2021 onwards.

Along with road authority research and implementation experiences, targeted and comprehensive Austroads research programs, and industry research, the annual Australasian Road Safety Conference will continue to be supported as the premier knowledge sharing and learning event for road safety in Australia.





Post 2020 – the next National Road Safety Strategy

In 2017 the Australian Government, with the support of the state and territory governments, launched an independent Inquiry into the effectiveness of the NRSS, to examine how to further reduce deaths and serious injuries on our roads. The NRSS Inquiry will report to the Australian Government and to the Transport and Infrastructure Council in 2018.

The results of this work will inform development of the national strategic approach to improving road safety from 2021 onwards. The development of a new national strategy will also need to consider the expanded set of performance measures developed under this Action Plan and the additional information about the safety performance of the road transport system, with a particular focus on how to accelerate Australia's progress towards zero deaths and serious injuries from road crashes.

In a post-2020 strategy it will be important to consider emerging technologies, including the increasing introduction of automated vehicles into the transport system; and give greater attention to the improvement of post-crash care to reduce deaths and ongoing disability and improve recovery from injuries; as well as the broader supporting management functions critical to the Safe System approach.

Glossary

AEB	Autonomous Emergency Braking
ABS	Anti-lock Braking Systems
ADR	Australian Design Rules
ALGA	Australian Local Government Association
ANCAP	Australasian New Car Assessment Program
ARR	Australian Road Rules
AusRAP	Australian Road Assessment Program
Austroads	Association of Australian and New Zealand road transport and traffic authorities
Austroads Road Safety Task Force	The cross-jurisdictional group tasked with managing the Austroads Road Safety Program and providing advice on the National Road Safety Strategy
BITRE	Bureau of Infrastructure, Transport and Regional Economics
CBD	Central Business District
Chain of Responsibility laws	Legislation that extends the general liability for on-road transport offences to all parties in the supply chain
Commonwealth	Australian Government
ESC	Electronic Stability Control
FSI risk	Fatal and serious injury risk
GLS	Graduated Licensing System
HVNL	Heavy Vehicle National Law
NHVR	National Heavy Vehicle Regulator
NRSPP	National Road Safety Partnership Program
NRSS	National Road Safety Strategy
NTC	National Transport Commission
Point-to-point cameras	A system of cameras which measures the average speed of a vehicle over a substantial distance
RIS	Regulation Impact Statement
SPI	Safety Performance Indicators
States and territories	State and Territory Governments
Transport and Infrastructure Council	A council bringing together Commonwealth, State, Territory and New Zealand Ministers with responsibility for transport and infrastructure issues, as well as the Australian Local Government Association
UN	United Nations
USCR	Used Car Safety Ratings