

South Australia's
**ROAD
SAFETY**
Strategy to 2031



THINK!

**ROAD
SAFETY**



Government of
South Australia



Acknowledgement of Country

The South Australian Government acknowledges and respects Aboriginal people as the State's first people and nations, and recognises Aboriginal people as traditional owners and occupants of South Australian land and waters

Foreword



Minister Tarzia

Minister for Police, Emergency Services
and Correctional Services,
with responsibility for Road Safety

Thank you to all South Australians and stakeholders who provided feedback to inform South Australia's Road Safety Strategy to 2031. As the Minister responsible for road safety in our state, the consequences of road trauma – and what we can do to reduce it – constantly weighs on my mind.

Lives lost and serious injuries devastate families, friends and communities. Our dedicated first responders and support services personnel feel the impacts too.

Losing lives on South Australian roads is unacceptable. Our Strategy targets significant road trauma reductions by 2031 and we have our sights set firmly on zero lives lost by 2050. This can be achieved – but we must all Think! Road Safety. It's up to every motorist to embrace their personal responsibility in the car or on a motorcycle.

The Strategy contains nine strategic focus areas, which were guided by extensive consultation and evidence. We know that a focus is needed on vulnerable road users, such as pedestrians and cyclists, as well as those who are overrepresented in road trauma, including people living in regional and remote South Australia, young and old road users, and Aboriginal people.

Focus areas also include safer roads for all motorists and the use of safer vehicles.

Please take the time to read this new Road Safety Strategy for South Australia and join our commitment to its ambitious vision of zero lives lost on our roads by 2050.



Minister Wingard

Minister for Infrastructure and Transport

South Australia's road network plays a vital role in everyone's lives, delivering economic and social prosperity through the ability to access family, friends and recreational activities. We use our roads to get to and from work or school, get away on holidays, to move freight and deliver goods and services.

South Australia's Road Safety Strategy to 2031 sets ambitious targets and a path to realise them. Reducing the number of lives lost by 50 per cent and the number of serious injuries on our roads by 30 per cent by 2031 can be achieved when we work together and focus our efforts on where we can make a significant difference.

The Strategy will guide decision making on transport related investments with a focus on the safe movement of people throughout the state and a particular focus on regional road safety.

Improved road safety is vital to us all, as individuals and as a community. Implementation of the Strategy will help to create a safer road environment that supports road users to make the right decisions, minimises harm if mistakes are made and enables use of new safer vehicle technologies on our road network.

Summary

Vision

Zero lives lost on our roads by 2050

This Strategy sets out what we want to achieve over the next ten years, with a vision that outlines what we are aspiring to achieve in the future.

Ten Year Targets

The South Australian Government is adopting the targets supported for inclusion in the *National Road Safety Strategy 2021-2030*, of at least a 50% reduction in lives lost and at least a 30% reduction in serious injuries on South Australian roads by 2030. As this Strategy extends to 2031, the targets are adjusted accordingly.

The targets are based on halving the total number of lives lost and reducing the total number of serious injuries by 30% rather than on a per capita basis.

Baseline 2018–2020 (3 year average)	National Road Safety Strategy Targets by 2030 for South Australia	By 2031
96 LIVES LOST	FEWER THAN 48 LIVES LOST	FEWER THAN 43 LIVES LOST
708 SERIOUS INJURIES	FEWER THAN 496 SERIOUS INJURIES	FEWER THAN 474 SERIOUS INJURIES

Road Safety Strategic Focus Areas



Road user behaviour

Supporting and enforcing safer road user behaviour



Aboriginal road safety

Reducing the over-representation of Aboriginal people in road crashes



Vehicles

Increasing the use and purchase of safer vehicles in South Australia



Older road users

Greater focus on road users aged 70+



Roads

Safer design, construction and maintenance of road infrastructure



Walking, cycling and public transport

Improving safety for people who walk and cycle and increasing public transport patronage



Regional and remote areas

Reducing the number of lives lost and serious injuries on regional and remote roads



Young drivers and riders with a focus on those living in regional or remote areas

Reducing their over-representation in road crashes



Workplaces

Develop a culture of road safety in South Australian workplaces



Key highlights of the Strategy

A focus on regional and remote areas

Programs and initiatives to improve road safety outcomes will be weighted towards and tailored for regional and remote South Australia due to the disparity in road safety outcomes between metropolitan Adelaide and the rest of the State.

Network Safety Plan

Evidence-based analysis of relevant data and information will be used to plan and prioritise proposed investments in the most effective road safety treatments that reduce the risk to road users and this will be set out in a network safety plan for corridors and/or regions.

A focus on workplace road safety

Programs to improve road safety will be developed and delivered in partnership with key stakeholders, representative associations and large employers given work-related road crashes account for approximately half of all lives lost at work and 15% of lives lost in road crashes.

A focus on Aboriginal road safety

Specific initiatives, developed jointly with Aboriginal Communities' aimed at reducing the over-representation of Aboriginal people in road crashes which result in lives lost or serious injury.

A focus on younger drivers and riders in regional and remote areas

Initiatives aimed at younger drivers and riders aged 16 to 24 will be tailored for those living in regional South Australia, given they are around three times more likely to be involved in a crash where they lose their life, or are seriously injured, compared to Adelaide residents of the same age.

Working with Local Government

We will work in partnership with local government to improve road safety across the state and local network, consulting with them on proposed actions to ensure that planned measures adapt to the needs of the local area.

The social model approach

The social model approach will be applied to road safety education to reach beyond the traditional participants in the transport sector to every community organisation and enterprise that can contribute to behavioural and cultural change.

Research and data

To achieve our goals, reliable and consistent data and information sources will be developed and implemented to monitor, evaluate and understand the impacts of our actions over the life of this strategy.

Forgiving roads

For new investments, “Forgiving Roads” will be designed to include measures that take into account unintentional road user errors and mistakes, and incorporate features that reduce the likelihood of a crash and reduce their severity when they do occur.

Movement and Place Approach

The Movement and Place approach will be used when planning road safety treatments and determining operational settings (e.g. setting speed limits), as this approach delivers improved road safety outcomes by recognising factors in the local environment.

Normalising the use of safe vehicles

Measures will be applied to influence the rate of uptake and use of safer vehicles, given that newer vehicles with more safety features and 5-star ratings produce better road safety outcomes. A focus will be older and younger owners, and residents in regional areas who are most at risk.

A renewed focus on older road users (70+)

A tailored program will be developed for older South Australians, dealing with the key contributing factors to them losing their lives or being seriously injured on our roads, given the proportion of older people relative to the State’s population is expected to grow by 37% by 2031.

Walking and cycling

Specific strategies will be developed to mitigate risks for people who walk or cycle, given the importance of improved safety and connectivity for people who don’t travel by car, truck or motorcycle.

Education

Best practice, context appropriate education and public awareness will be used to educate road users and work towards cultural change.

Greater collaboration across Government

A joined up approach in dealing with specific aspects of road safety will be used to address complex issues that can contribute to our road toll such as alcohol and drug dependency.

Capacity and capability

We will build and retain capacity and capability across a range of disciplines within both government and organisations involved in road safety.

Measuring success

This Strategy will be supported by a robust monitoring and evaluation framework. This framework will identify how the actions are leading to change, and enable us to review our actions and to change our approach as needed.

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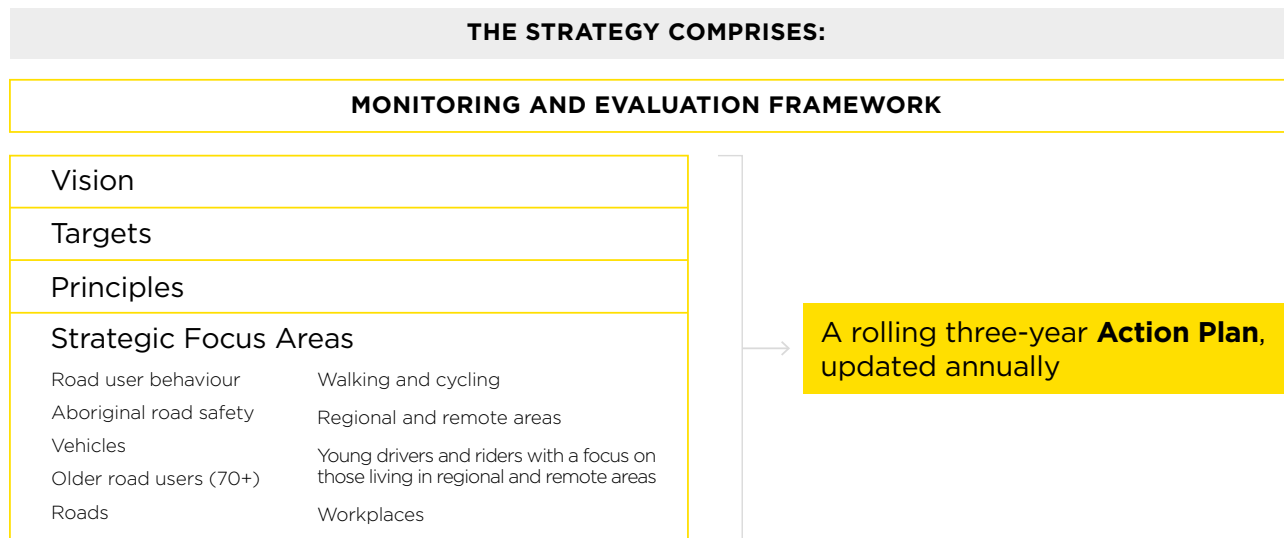


The Strategy

South Australia's Road Safety Strategy to 2031 (the Strategy) sets out the South Australian Government's agenda for reducing lives lost and serious injuries on our roads.

The Strategy sets ambitious targets for reducing lives lost and serious injuries between now and 2031 in line with the *National Road Safety Strategy 2021-30*.

Strategy Framework:



- A vision that outlines what we are aspiring to achieve in the future.
- Targets that set out what we want to accomplish by 2031.
- Principles that will guide the South Australian Government's decision making on transport related investments, policy setting, programs and initiatives.
- Strategic priorities that are the focus areas for the Strategy, informed by evidence, consultation and alignment with the National Road Safety Strategy. These focus areas are identified to collectively contribute to achieving our ten year target. The key strategies for each focus area are in no particular priority order.

A rolling three-year action plan, updated annually, will sit alongside the Strategy. It will set out the actions to be taken to give effect to the priorities, as well as responsibilities and timeframes for implementation.

Implementation of the Strategy will be supported by a robust monitoring and evaluation framework designed by the Centre for Automotive Safety Research (CASR) to ensure that what we are doing is effective in reducing lives lost and serious injuries. The outcomes of the monitoring and evaluation framework will help inform the review of the Action Plan and future Road Safety Strategies.

The Strategy has been developed using road safety data about lives lost and serious injuries over the five year period between 2016 to 2020, unless otherwise stated.

We drew on local, interstate and national research to investigate issues the statistics tell us are of significant concern in South Australia. Modelling by the Centre for Automotive Safety Research about what works to reduce lives lost and serious injuries also informed the Strategy.

Developing the Strategy

Development of the Strategy has been guided by extensive consultation with stakeholders and the community and we listened to them. This includes:

WHEN	ENGAGEMENT
CONSULTATION TO INFORM THE DEVELOPMENT OF THE STRATEGY	
August 2020	A series of 10 webinars with road safety stakeholders across four contexts: metropolitan Adelaide and the CBD; regional roads; regional centres; and rural towns and remote communities which identified priority issues, ambitions and principles.
October – November 2020	A state-wide survey on yourSAy, the South Australian Government's community engagement platform, with over 1340 survey responses received. 36 written submissions were also received.
October 2020 – February 2021	<p>Market research to better understand road user behaviour, motivators and barriers in relation to fatigue and older road users plus a focus session with stakeholders to further explore the issues and possible solutions.</p> <p>These topics were chosen based on road safety statistics and the need for further investigation (For example, extensive work has been undertaken either in South Australia or nationally on some key issues such as vehicles as a workplace, motorcyclists and driver distraction).</p>
January – February 2021	A series of subject based workshops, including road user behaviour, infrastructure and local government.
February 2021	Three regional community workshops in areas associated with high levels of road trauma: Yorke Peninsula, Coorong and Loxton Waikerie Council areas at Yorketown, Tintinara and Loxton respectively.
CONSULTATION ON THE DRAFT STRATEGY	
July 2021 – September 2021	Community consultation on yourSAy including a survey that received 352 detailed responses. Sixty one written submissions were received.
RELEASE OF THE STRATEGY - DECEMBER 2021	

Consultation to inform the development of the Strategy

The key themes that emerged from the consultation and informed development of the Strategy were:

Driver education to change behaviour, such as the need to improve driver training and assessment, road user education and broader public messaging campaigns regarding road rules.

Safe vehicles and fleet, including the role of safety technologies, newer vehicles and autonomous vehicles in improving road safety outcomes.

Infrastructure improvements for metropolitan Adelaide, such as infrastructure for active travel and better major intersection design to improve traffic flow and reduce the risk of crashes.

Heavy vehicles and freight, including educating all road users on the safe interaction with heavy vehicles, and the need for fit-for-purpose road infrastructure to accommodate heavy vehicles (such as overtaking lanes).

Greater investment in road infrastructure, such as better signage and more dual carriageways, overtaking lanes, sealed roads, and rest stops on regional and remote roads.

Road user behaviour, with a focus on drink and drug driving, distraction (particularly around the use of mobile phones), fatigue, seatbelts and speeding.

Higher standards of road maintenance including resurfacing stretches of road rather than patch fixes, maintenance of road shoulders and the width of the roads being suitable for all vehicles using it.

Road user compliance and enforcement, including a greater police presence in regional and remote areas.

Active and/or alternative transport, such as safer separated cycling and pedestrian options, and the role of passenger transport for safe and active travel.

Removal of and/or higher standards of treatment for roadside vegetation, to address concerns about visibility, the dangers of animals being too close to the road, and survivability of a crash where objects, such as trees are too close to the roadside.

Speed, including speed limits, speeding and human impacts of speed.

Consultation on the draft Strategy

The feedback received from stakeholders and the community resulted in a number of amendments to the Strategy including changes to information in the Strategy on motorcycles and child restraints, and changes to, or the addition of, key strategies for Aboriginal road users, vehicles, older road users, younger road users, roads and workplaces.

65% of online survey respondents agreed that the strategies and focus areas would support achieving our ten year targets and improve road safety on South Australian roads.



Vision

Zero lives lost on our roads by 2050

To achieve the national vision of zero lives lost by 2050, over the next ten years our goal is to:

- develop a culture of road safety in the community and our workplaces, with local knowledge and capacity to support people and families; and
- have safer road infrastructure and transport options for all road users, ages and abilities.

To achieve this, individual road users, State and Local Government, regulatory partners, non-government organisations and the private sector all need to play a role in the long term aspiration to dramatically reduce harm on our roads.

Ten year targets

The South Australian Government is adopting the targets supported for inclusion in the *National Road Safety Strategy 2021-2030*, of at least a 50% reduction in lives lost and at least a 30% reduction in serious injuries on South Australian roads by 2030. As this Strategy extends to 2031, the targets are adjusted accordingly.

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The targets are based on halving the total number of lives lost and reducing the total number of serious injuries by 30% rather than on a per capita basis.

Principles for decision making and investment

The following principles will guide the South Australian Government's decision making on transport related investments, policy setting, programs and initiatives

They support the vision of this strategy and will contribute to eliminating serious harm.

Decisions taken over the life of the Strategy will be consistent with these principles and work towards the objectives of safer roads, safer vehicles and safer user behaviour.

- Road safety will be a key criteria in all decision making frameworks for investment decisions and policy setting.
- Roads will be designed to be forgiving of unintentional human error, meaning that design features should result in crashes being less likely to happen and, if they do occur, having a less severe outcome.
- The road environment will be safe for all road users, including pedestrians, cyclists and motorcyclists.
- Current known road safety issues will be prioritised for treatment, while being flexible and responsive to emerging issues, and consider innovative solutions (and opportunities such as technological advancements).
- When designing, building and upgrading road infrastructure, and planning maintenance, safety requirements and safety outcomes will be given priority.
- Well informed choices will be made that are evidence-based, prioritising investments to cost-effective solutions that are affordable and proportionate to the benefits they deliver.
- Input will be sought from communities and stakeholders, and consideration will be given to the issues that are raised that materially impact road safety.
- In planning the transport network we will consider the function of roads and the adjacent land use to provide safe movement and safe use for road users and visitors.

Note, the principles are not in any order of priority.

The Safe System Approach

The Safe System approach adopts a **holistic view** of the road transport system and the interactions between people, vehicles, and the road environment.

It recognises that people will always make mistakes and may have road crashes – but those crashes should not result in death or serious injury.

The Safe System model is regarded as international best practice and is the framework for improving road safety across Australia. “Safe System” is the Australian terminology for a philosophy shared by different practices in many different nations. It is built on several key principles:

1 People make predictable mistakes that can lead to road crashes

2 The human body has a limited physical ability to tolerate crash forces before harm occurs

3 A shared responsibility exists amongst those who plan, design, build, manage and use roads and vehicles to prevent crashes resulting in serious injury or death

4 All parts of the system must be strengthened to multiply their effects; and if one part fails, road users are still protected

There are four overarching pillars under the Safe System approach that influence road safety outcomes. These are safe road infrastructure, safe vehicles, safe speed at which people travel and safe road user behavior.

Social Model Approach to Road Safety

South Australia's Road Safety Strategy reflects and endeavours to strengthen the social model for road safety. The social model approach acknowledges the social systems which we live in and how individuals, organisations, government and community culture impact on road safety outcomes.

Core to its approach is a collaborative effort across private, not for profit and public sector agencies at the local, state and federal level. The social model also values the contribution of the broader South Australian community in achieving road safety outcomes and acknowledges that road safety is a complex issue that deserves and requires a complex strategy.

The social model approach has many benefits, including:

- positioning road safety as everyone's business, reaching beyond traditional lines of responsibility (i.e. relevant across disciplines, not just the transport sector);
- increased capacity for action through shared ownership of the issue, leveraging on stakeholder networks and influence;
- cultural change towards road safety, leading to long term and self-sustained commitment and contribution to road safety as an inherent part of everyday life; and
- a model that is complementary to the Safe Systems approach to road safety.

There are five layers under the social model.¹

System/Public Policy Approach

A systemic cross agency lens of how governmental policies, legislation and investments contribute to road safety outcomes.

Community Approach

This layer emphasises a grass root community led action. For example, a local sporting community promoting the use of a designated driver for after sports celebrations.

¹ Office of Road Safety, Fact sheet: The social model approach to road safety, online October 2021, www.officeofroadsafety.gov.au/nrss/resources-fact-sheets/the-social-model-approach-to-road-safety

Organisational Response

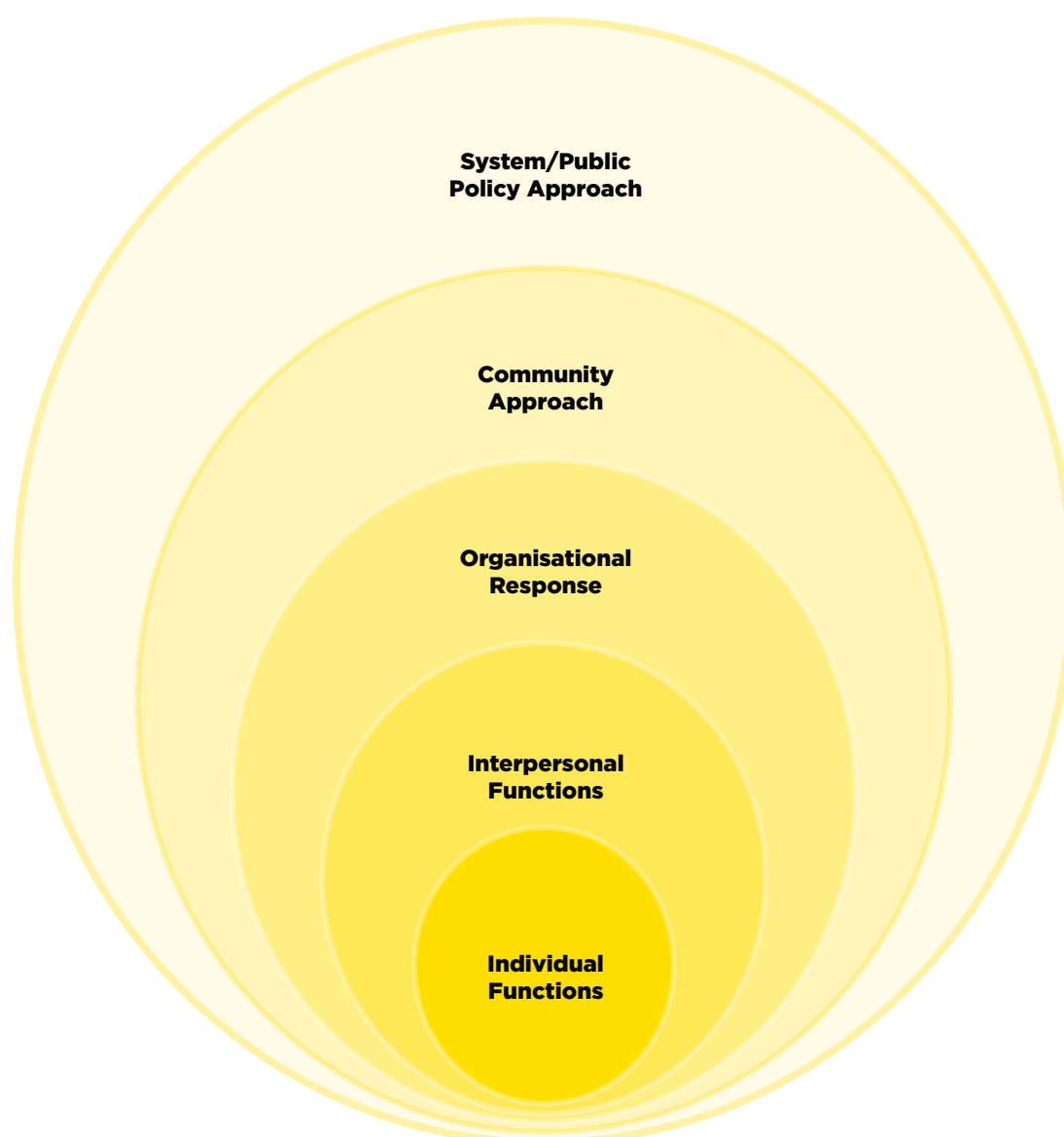
Consideration for how organisations establish systems that support a culture of road safety. For example, establishing policies and procedures for safe travel of employees both in and outside of work hours.

Interpersonal Functions

A relationships driven approach to influencing an individual, organisation or sector to establish a culture of road safety. For example, supporting school leadership to establish a culture of road safety amongst the local parent community.

Individual Functions

This layer focuses on the attitudes and behaviours of the individual and how behaviours demonstrate taking responsibility for oneself.



What we know about road safety in South Australia



State population of more than

1.75 MILLION PEOPLE



SA has a total land area of

983,482 km²

WHERE PEOPLE LIVE



78%

Adelaide and surrounding metropolitan areas



22%

Regional SA

AGE OF VEHICLES



Across Australia

10.4 YEARS



In South Australia

11.8 YEARS



In Regional South Australia

13.0 YEARS

ROAD CRASHES

Each year, based on the average for the past 5 years,

95 PEOPLE LOST THEIR LIVES

688 PEOPLE WERE SERIOUSLY INJURED in road crashes

LIVES LOST IN 2020

Regional SA recorded

14.1 LIVES LOST PER 100,000 POPULATION

Metropolitan Adelaide recorded

2.8 LIVES LOST PER 100,000 POPULATION

DRIVERS IN REGIONAL AREAS

Over two thirds of drivers who lose their lives or are seriously injured in regional areas are local to regional South Australia

SA'S REGIONAL POPULATION

Is ageing at a **faster rate** than that of Adelaide

As young people often leave for larger centres in search of opportunities, while older cohorts enter regional areas to retire

Percentage of lives lost and serious injuries by age group, South Australia, 2016-2020

AGE GROUP	LIVES LOST	SERIOUS INJURIES	PERCENT OF POPULATION
0-15	4%	4%	19%
16-24	20%	20%	12%
25-69	53%	62%	56%
70+	23%	14%	13%

The road network in SA

South Australia has an **extensive** network of roads.

Most (64%) vehicle travel is on state and national roads that comprise 23% of the state's road network. 68% of crashes where a life is lost and 61% of serious injury crashes occurred on state and national maintained roads in South Australia over the last five years, equating to an average of 66 lives lost and a further 428 serious injuries in crashes on these roads each year.

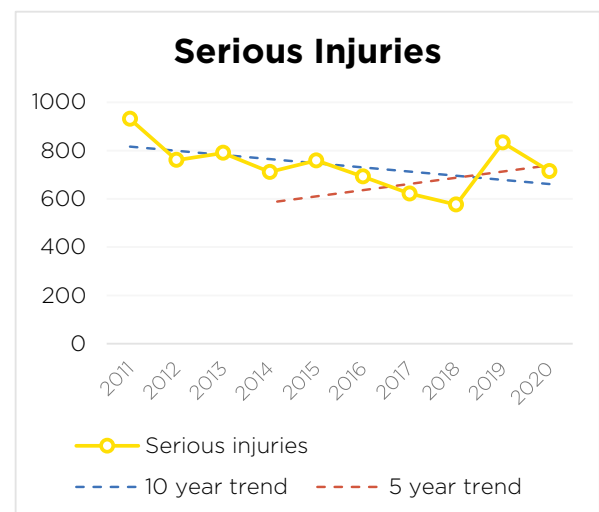
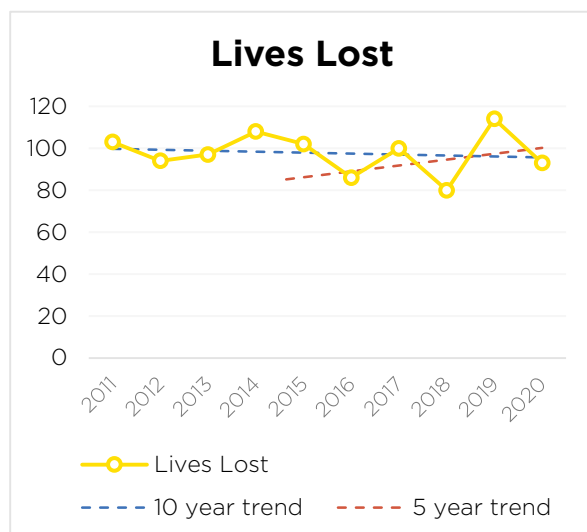
32% of crashes where a life is lost and 39% of serious injury crashes occurred on local government maintained roads in South Australia over the last five years, equating to an average of 28 lives lost and a further 259 serious injuries in crashes on local government roads each year.

South Australian Roads	Council road length (km)	%	State road length*(km)	%
Sealed roads	18,799	60	12,796	40
Unsealed roads	56,194	85	9,623	15

*State roads include National Highways

Road safety trends in SA

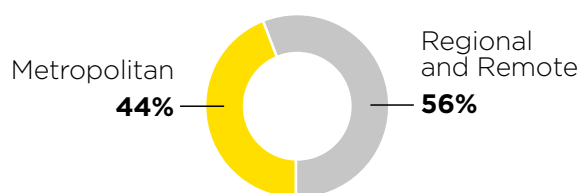
The number of lives lost and serious injuries in South Australia is decreasing over time, however further action is needed if we are to achieve the Strategy's targets.



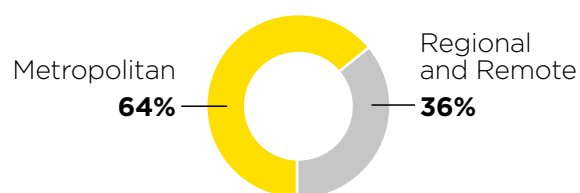
Where crashes happen

The majority of the crashes resulting in a life lost occur on regional and remote roads. This is the opposite when it comes to crashes resulting in serious injury with the majority of these occurring on metropolitan roads.

Crashes where lives are lost

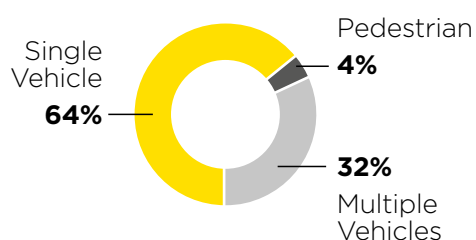


Serious injury crashes

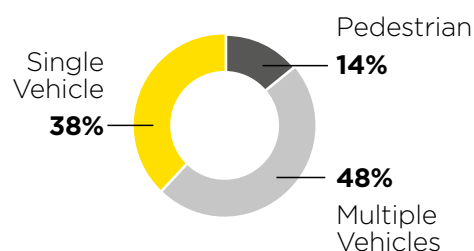


Almost two thirds of the crashes resulting in a loss of life or serious injury on regional and remote roads are often single vehicle crashes that do not involve other vehicles or pedestrians. Many of these occur when the vehicle leaves the road and collides with an object, or rolls over. In comparison, the types of crashes that result in a loss of life or serious injury on metropolitan roads are more likely to involve more than one vehicle or a pedestrian.

Crashes where lives are lost or serious injury occurs on regional and remote roads by crash type

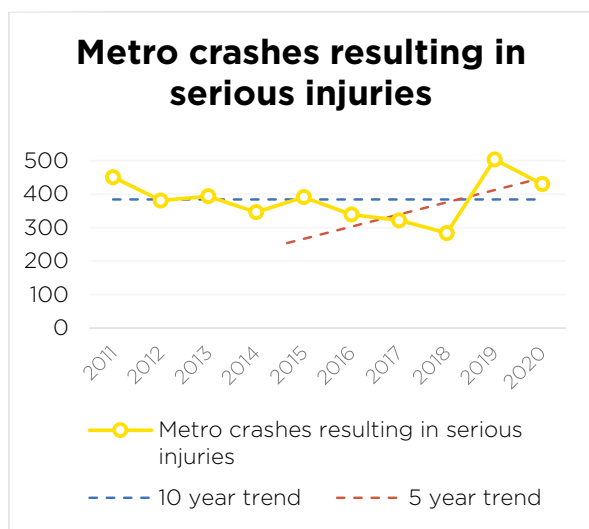


Crashes where lives are lost or serious injury occurs on metropolitan roads by crash type



Metropolitan Adelaide and the CBD

Serious injury crashes are **more likely** to be on metropolitan roads, where large numbers of people live and work.



Crashes resulting in serious injuries have shown a slight decline in trend over the previous 10 years with an average of 393 crashes per year recorded during 2011-2015 to 376 in the 2016-2020 period. The most recent five year trend however shows an increase.

38% of crashes resulting in loss of life or serious injury in the metropolitan area are single vehicle crashes, 48% involve more than one vehicle and 14% involve a pedestrian.

Pedestrians represent around one in every five lives lost and one in 10 serious injuries on metropolitan roads in South Australia.

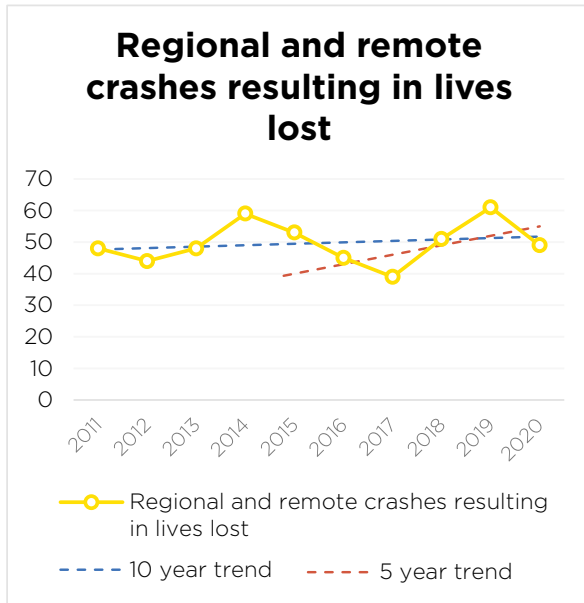
30% of crashes where a life is lost and 44% of serious injury crashes in the metropolitan area occur at intersections. More than one third (36%) of these crashes are at intersections controlled by traffic signals, another one third (32%) have no intersection controls and the remainder are controlled by stop or give way signs or roundabouts.

Motorcycles are involved in 14% of crashes where a life is lost and 22% of serious injury crashes on metropolitan roads. Over half (54%) of these crashes involve another vehicle with the majority of them (61%) occurring at an intersection.



Regional and remote SA

More than half (56%) of crashes where lives were lost and 36% of serious injury crashes are on regional and remote roads.



The 10 year trend shows the number of crashes on regional and remote roads resulting in lives lost have increased slightly with little change in the average. Fifty crashes were recorded per year in the five year period 2011-2015 and 49 for the period 2016-2020. The five year trend also shows an increase.

When taking into account the population, rates of driver and rider lives lost and serious injuries are much higher in regional and remote South Australia compared to metropolitan Adelaide.

The speed at which we travel has consequences for crash risk and also for injury severity when a crash occurs. 79% of all crashes on regional and remote roads where lives are lost and 70% of serious injury crashes occur on roads with a speed limit at 90km/h or above.

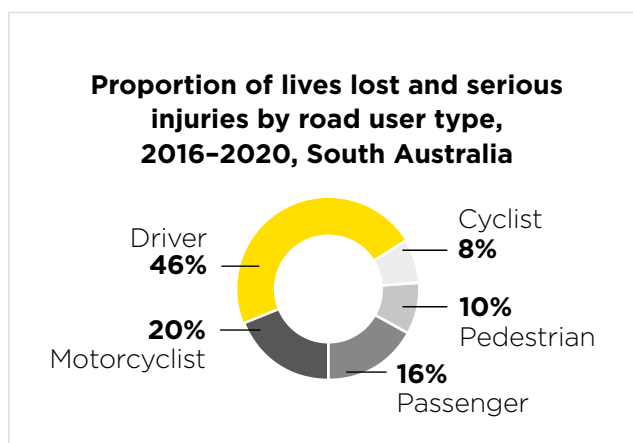
Nearly two thirds of crashes where a life is lost or a person is seriously injured involve a single vehicle on a regional or remote road. Many of these are road departure crashes where the vehicle collides with an object or rolls over.

On higher volume, two way undivided regional roads, head on crashes become more likely. Head on crashes often start the same way as run off road crashes with a driver travelling onto the unsealed shoulder and losing control when they try to steer back into their lane on the different surface.



What road safety looks like for different users

Around two thirds of people who lose their lives or are seriously injured in road crashes are motor vehicle occupants, and a third are people on motorcycles or bicycles, or pedestrians.



Younger road users

The number of young people being killed or seriously injured on South Australian roads has declined in the last decade, although young people continue to be over represented in road crashes, much more so than older age groups.

People aged 16 to 24 years make up 11% of the population, but account for 21% of all lives lost and 20% of all serious injuries in South Australia. 81% of drivers or riders aged 16 to 24 who lost their life were male. Most young drivers (96%) are responsible for the fatal crash they are involved in.

YOUNGER DRIVERS AND RIDERS IN REGIONAL AND REMOTE SOUTH AUSTRALIA

Young drivers and riders aged 16 to 24 living in regional or remote South Australia are around three times more likely to be involved in a crash where they lose their life or are seriously injured compared with Adelaide residents of the same age.

Older road users

Older road users (70+) make up 13% of the population yet account for 23% of all lives lost and 14% of serious injuries. Older drivers are involved in a relatively small number of crashes, but these crashes are more likely to be more severe in part due to the fragility and frailty of these older users (and sometimes as a result of the lower level of protection provided by older vehicles).

Older pedestrians have a higher risk of collision with road vehicles due to the perceptual, cognitive and physical deterioration associated with ageing. If an older person is hit by a car, the outcome is likely to be more severe, resulting in a life lost rather than an injury. Older pedestrian rates of lives lost or serious injury increases around the age of 70.

A study led by the Centre for Automotive Safety Research found that 11% of hospitalisation crashes were the result of a medical condition or medical event. For crash-involved people over the age of 70, this proportion increased to 34%. So for older people, medical fitness to drive is an important consideration.²

Older road user crashes are likely to continue to increase in future years due to the growing number of people in the 70+ age cohort. In 2019, 13% of South Australia's population were aged 70 or over. The number and proportion of older South Australians is expected to continue to grow. By 2031, it is projected there will be over 310,000 older people in South Australia (17% of the population), an increase of 85,000 older people.³

PEOPLE AGED 70+

Accounted for about **13%** of the State's population in 2019

By 2031, over **310,000** South Australians will be in the 70+ age group

OLDER DRIVERS

Older drivers are generally more cautious and tend to exhibit less illegal and dangerous driving behaviour than other age groups. They also typically control their exposure to risk when driving by avoiding driving at night or in peak hours.

Older drivers are more likely to be involved in fatal and serious injury crashes at intersections involving right angle crashes. Intersections and junctions are complex traffic environments, in which the driver has to attend to a variety of information while under time pressures. Taking into account licence numbers, drivers in the 70-79 year old age group have the lowest rate of involvement in crashes where lives are lost or serious injuries occur. This increases in the 80-89 year age group and again for drivers aged 90 and over.

² Lindsay, V.L., Ryan, G.A. (2011) Medical conditions as a contributing factor in crash causation (AP-R389-11). Sydney: Austroads

³ Australian Bureau of Statistics (2018) Population Projections, Australia

Aboriginal people

Aboriginal people comprise approximately 2.4% of South Australia's population but are 2-3 times more likely to lose their life and 30% more likely to have a serious injury than non-Aboriginal people.⁴ This over-representation extends across many public health issues including involvement in road crashes.

Sixty nine per cent of the light vehicles driven by Aboriginal people involved in crashes resulting in a life lost or serious injury were aged 10 years old or more. This is higher than crashes resulting in a life lost or serious injury in general where around 60% of all light passenger vehicles are aged 10 years or more.

Aboriginal drivers and riders represent 3.0% of all drivers/riders involved in crashes resulting in a life lost or serious injury on South Australian roads yet represent approximately 1.7% of all South Australian licence holders.

Aboriginal people aged 16 to 29 years represent 36% of Aboriginal licence holders yet 47% of the Aboriginal drivers and riders involved in crashes resulting in a life lost or serious injury were in the 16-29 year age group.

Twenty per cent of Aboriginal drivers who lost their life or were seriously injured were recorded as not wearing a seatbelt at the time of their crash (where this information was known). For drivers in general, 9% of drivers who lost their life or were seriously injured were not wearing a seatbelt.

Twenty six per cent of Aboriginal drivers and riders who lost their life or were seriously injured (and tested) had an illegal blood alcohol concentration (BAC) at the time of the crash. For drivers and riders in general; 12% of drivers and riders who lost their life or were seriously injured recorded an illegal BAC.

A limitation of the data analysis exists because not all individuals will self-identify their Aboriginal and Torres Strait Islander status when interacting with the department. Additionally the road crash database does not record Aboriginal and Torres Strait Islander information and therefore no such data is available to incorporate numbers of Aboriginal and Torres Strait Islander passengers, pedestrians or cyclists injured in road crashes.

It is likely that Aboriginal road safety data is under reported when taking into account the under representation in road safety data and the over-representation in public health data (presenting with injuries).

Transport disadvantage can increase risks of road trauma. Aboriginal people are more likely to experience social exclusion – related to limited, or no access to transport.⁵ Lack of access to transport options can lead people to make unsafe transport decisions whether they are a driver, passenger or pedestrian. Socio economic disadvantage also increases the risk of road trauma through the poor condition of ill maintained vehicles. Similarly, the lack of access and affordability of vehicles with a high safety rating results in lesser protection of occupants. Other forms of disadvantage, such as poor health and education can be compounded for Aboriginal people experiencing transport disadvantage.⁶

4 Australian Institute of Health and Welfare data (2019) online at www.aihw.gov.au/reports/injury/injury-indigenous-aus-transport-2010-11-2014-15/contents/table-of-contents

5 Currie, G., Stanley, J., & Stanley, J. (2007). *No way to go: Transport and social disadvantage in Australian communities*. Melbourne: Monash University Press.

6 NSW Aboriginal Road Safety Action Plan 2014-2017 (2014). Transport for NSW online at www.roadsafety.transport.nsw.gov.au/downloads/aboriginal-road-safety-plan.pdf

Pedestrians

Almost everyone is a pedestrian at some time. Pedestrians can be defined as someone who walks, uses a motorised or non-motorised wheelchair or mobility scooter (gopher). Risks to safety are increased because pedestrians are not protected by the structure of a vehicle and in the event of a crash, are more susceptible to the possibility of loss of life or serious injury. Pedestrians are at greater risk of death and injury if hit at impact speeds above 30 km/h. The most vulnerable pedestrians are children and older people.

Pedestrians are most exposed in busy areas. 82% of pedestrians who lose their lives or are seriously injured are located within the metropolitan Adelaide area at the time of the crash. Nearly one quarter of pedestrians who lose their lives or who are seriously injured are aged 70 years or older.

The presence of alcohol or drugs in a pedestrian's system can impair their ability to safely negotiate roads and traffic. From 2015-2019, 28% of pedestrians tested following a fatality were found to have a blood alcohol concentration of more than 0.05. On average, 16% of pedestrians killed tested positive to cannabis, MDMA (ecstasy), methamphetamine or a combination of these drugs.



PEDESTRIANS

13% Lives Lost

9% Serious Injuries

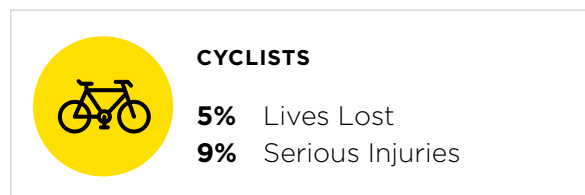


Cyclists

The cycling participation rate⁷ in South Australia is similar to the national average. Approximately 13% of the population ride weekly and just under one third have ridden in the past year. The cycling participation rate is higher for males and those aged under 18 years. Since 2007 the weekly bicycle traffic in the Adelaide CBD has increased by 56%.

Most (90%) serious injuries involving a cyclist occur in metropolitan Adelaide while just over half (52%) of lives lost are outside the metropolitan area. Half of the lives lost in regional and remote areas involve a cyclist being hit from behind. 70% of cyclist lives lost are in crashes that involved another vehicle.

Most crashes resulting in lives lost or serious injury of a cyclist occur at peak times of the day, around half occur between 6 am and midday and another 25% occur between 3 pm and 6 pm. 42% of lives lost and serious injuries occur at intersections, almost half of these are right angle type crashes and of these, the driver (not cyclist) was identified as at fault in almost two thirds of crashes.



⁷ Australian Cycling Participation 2019. Austroroads Publication No. AP-C91-19. Report for the National Cycling Strategy

Motorcyclists

Motorcycle riding is becoming more popular with an increase in the total number of registered motorcycles in South Australia over the past five years, mostly over 250cc engine capacity.⁸



MOTORCYCLISTS

17% Lives Lost

21% Serious Injuries

Motorcyclists continue to account for a considerable proportion of South Australia's road trauma and have a higher risk of death or serious injury than all other road users. For the numbers of kilometres travelled, motorcyclists have a much higher risk of losing their life than those travelling in other motor vehicles. Motorcyclists do not have the benefit of vehicle protection in the event of a crash and tend to sustain multiple injuries to the head, chest and legs, either from direct contact with solid objects or as a result of crash forces.

Motorcyclists represent 17% of all lives lost yet only 4% of all registered vehicles on South Australian roads. Of the motorcyclist crashes that result in lives lost or serious injury, 65% occur in the metropolitan Adelaide and CBD area.

Over half of motorcycle crashes (55%) which resulted in a life lost or a serious injury involved the motorcycle only. Most of these crashes (87%) were run-off-road crashes and just under one half occurred on a curved section of the road.

In addition, 44% of the motorcycle crashes which resulted in a life lost or a serious injury involved more than one vehicle. Right of way violations by the other road user was a factor in 37% of the crashes where a life was lost and 57% of serious injury crashes.

Males made up 94% of motorcycle rider lives lost and serious injuries compared to 60% of light vehicle driver lives lost and serious injuries in South Australia. 87% of motorcycle licence holders in South Australia are male.

Behavioural factors including speed, alcohol, drugs, fatigue and riding unlicensed remain significant contributing factors to motorcycle crashes that result in lives lost or serious injury. Inappropriate speed is a contributing factor in 54% of crashes where a life is lost and 31% of serious injury crashes involving a motorcyclist.

Thirty per cent of riders who lost their lives on South Australian roads were not licensed for riding at the time of the crash. This may be due to the rider never holding a motorcycle licence or the current licence being suspended or cancelled.

The condition of the road surface is important for motorcyclists whereby pot-holes, crumbling pavement, loose gravel and other debris on the road surface can present significant problems for riders.



⁸ Motorcyclists Fact Sheet Online at Motorcycle safety (www.dit.sa.gov.au)

Driver behaviour

Safe use of the road network relies on road users playing their part to uphold the standards and laws that have been designed to provide protection for all who use the road system. Most road users do the right thing most of the time. However, we also need to target the minority of drivers and riders who are dangerous road users and demonstrate deliberately risky and extreme behaviours.

Drink and drug driving

Impairment due to alcohol and drugs is a major contributor to people losing their life and being seriously injured on South Australian roads. Alcohol impairs skill and decision making and increases confidence and aggression. It can also lead to an increase in other risk-taking behaviour.

Almost one in five drivers and riders (19%) who lost their life on our roads recorded an illegal Blood Alcohol Concentration (BAC) while more than one in five (21%) was drug driving. Combined, this equates to one in three drivers who lost their life in road crashes in South Australia over the past five years testing positive to drugs and/or alcohol. The number of drivers and riders who have lost their life while drink driving has declined over the last decade, however the trend line has remained unchanged for drug driving.

The 20 to 29 year old age group represents the largest percentage of the population of drivers and riders with an illegal BAC losing their life (29%) or being seriously injured (28%). They also represent the largest percentage of the population of drivers and riders killed that tested positive for drugs (33%).

DRINK AND DRUG DRIVING IS OFTEN ACCOMPANIED BY OTHER DANGEROUS BEHAVIOUR

Of the drivers killed that had a BAC of 0.05 or above, 54% were not wearing their seatbelt and 8% of rider fatalities who lost their life were not wearing a helmet. For non-drink drivers 19% of fatalities were not wearing a seatbelt, and 4% of riders were not wearing a helmet.

Of the drivers who lost their life and tested positive for drugs, 43% were not wearing their seatbelt at the time of the crash and 17% of riders who tested positive were not wearing a helmet.

Distraction

Driver distraction (or inattention) is a significant issue in road safety. Distracted driving refers to any activity that takes a driver's attention away from the task of driving safely. Distractions can be inside a vehicle (e.g. mobile phone use, eating or drinking, navigation devices, passengers, reaching for objects), outside a vehicle (e.g. other road users, billboards) or from the driver's own mind (e.g. day dreaming, emotional stress). Road users other than drivers may also be distracted including pedestrians crossing roads, cyclists and motorcyclists.

Research indicates that taking your eyes off the road for two seconds doubles the risk of a crash.⁹

It is difficult to identify crashes involving distraction but a recent study revealed that inattention was a contributing factor in at least a third of crashes investigated where a life is lost or a person sustains an injury in South Australia.¹⁰ In-vehicle distractions were found to be most prevalent. Inattention crashes were most likely to involve right turn/angle or rear-end crash types and occur at intersections, in metropolitan areas, and in lower speed zones.

Inappropriate speed

Vehicle travel speeds affect both the risk of crash involvement and the severity of crashes, and subsequent injuries. A recent travel speed survey¹¹ indicated between 12% and 37% of motorists state-wide are not complying with posted speed limits, increasing their risk of being involved in a crash.

The risk of a crash where a life is lost or a person sustains an injury approximately doubles with each 5km/h increase in travel speed above the limit on a 60km/h speed limited road,¹² or with each 10km/h increase above the average speed on higher speed regional roads.¹³

Inappropriate or excess speed was a contributing factor in 31% of all crashes where lives were lost and 26% of crashes resulting in serious injury. Inappropriate speeds that are too fast for the conditions are not necessarily above the speed limit.



9 Klauer, S.G., Dingus, T.A., Neale, V.L., Sudweeks, J.D., Ramsey, D.J. (2006) *The impact of driver inattention on near-crash/crash risk: An analysis using the 100-car naturalistic driving study data*. Washington DC: National Highway Traffic Safety Administration

10 Wundersitz, L. N. (2019) *Driver distraction and inattention in fatal and injury crashes: Findings from in-depth road crash data*. Traffic Injury Prevention 20(7), 696-701.

11 2018 travel speed survey

12 Kloeden, C.N., McLean, A.J., Moore, V.M., Ponte, G (1997) *Travelling speed and the risk of crash involvement*. NHMRC Road Accident Research Unit, The University of Adelaide

13 Kloeden, C.N., Ponte, G, McLean, A.J. (2001) *Travelling speed and the risk of crash involvement on rural roads*. Road Accident Research Unit, The University of Adelaide

Fatigue

While fatigue is often ranked as a major factor in road crashes, its contribution to individual cases is hard to measure and is often not reported as a cause of crash. Analysis of South Australian crash data suggests fatigue is on average a factor in around ten crashes resulting in lives lost each year.

Research has shown that not sleeping for more than 17 hours has an effect on driving ability the same as a Blood Alcohol Concentration (BAC) of 0.05. Not sleeping for 24 hours has the same effect of having a BAC of 0.10, double the legal limit.¹⁴

Seatbelts and restraints

Wearing a seatbelt doubles your chances of surviving a serious crash. The most recent observational survey of restraint use in South Australia¹⁵ found around 97% of vehicle occupants wore seatbelts. However, seatbelt wearing rates are much lower for crashes where vehicle occupants lose their life or are seriously injured, particularly in regional and remote areas. Around one quarter of all drivers and passengers who lost their lives were not wearing a seatbelt at the time of the crash. Of these, 71% of crashes occurred in regional areas.

Non-seatbelt use in crashes is often associated with other dangerous behaviours (e.g. drink driving).

The incorrect restraint of children travelling in vehicles, or children moving to the next restraint category too soon, is a concern. In South Australia, between 2005 and 2018, 38 children aged 0 to 12 years lost their life while passengers in a vehicle. 61% (24) of these children were not appropriately restrained, including nine children who were unrestrained. Of these 24 children, almost half (11), were aged 8 to 12 years and seated in an adult seat despite being less than 145 cm tall (the tallest child was 140 cm).¹⁶

The correct use of approved child restraints and the correct installation could greatly improve child safety in vehicles. While the Australian Road Rules are specific about what type of restraint is to be used at different ages, children grow at different rates. It is important to improve and maintain public understanding about the correct installation and the selection of the right restraint or booster seat, particularly for children aged 7 to 12 years of age and children with a disability.

In 2018–19 more than 600 police cautions/fines were issued to drivers failing to safely restrain passengers under 16 years.¹⁷

Driveways

The safety of children in driveways is also a concern. Small children are at risk from moving vehicles in low speed off road locations such as driveways, yards and car parks. One child, often a toddler, is run over in their driveway every week in Australia. On average, seven children are killed each year in Australia and 60 seriously injured after being hit or run over by a motor vehicle at home.¹⁸

14 Dawson, D, Reid, K (1997) *Fatigue, alcohol and performance impairment*. Nature 338 (6639): 235

Dawson, D, Sprajcer, M.A., Thomas, M.J. (2021) *How much sleep do you need? A comprehensive review of fatigue related impairment and the capacity to work or drive safely*. Accident Analysis and Prevention. Department for Health and Wellbeing (2019)

15 Wundersitz, L.N., & Anderson, R. W.G. (2009) On-road observational study of restraint and child restraint use, 2009 (CASR065). Adelaide: Centre for Automotive Safety Research)

16 Child Death and Serious Injury Review Committee, Annual Report 2019–20 p42. Online at www.cdsirc.sa.gov.au

17 Child Development Council (2020) *How are they faring?* South Australia's 2020 Report Card for Children and Young People, Government of South Australia. Online at www.childrensa.sa.gov.au

18 BITRE, Information Sheet 43: Child pedestrian safety: 'driveway deaths' and 'low -speed vehicle run-overs', Australia, 2001–10, online www.bitre.gov.au

Vehicles on our roads

Vehicle safety refers to the level of safety a vehicle provides for occupants and other road users in the event of a crash as well as its ability through technology, to avoid or minimise the effects of a crash.

Newer vehicles are generally safer because a vehicle's age reflects the incremental improvements in safety due to advancements in technology, design and mandatory safety standards over time. The level of safety a vehicle provides is commonly reflected through a star rating, provided by an assessment program such as the Australasian New Car Assessment Program or the Used Car Safety Ratings. Research indicates safer vehicle technology can be promoted by active policies to promote uptake by government and private-sector fleets.

Recent highly effective improvements that have been mandated in new vehicles include electronic stability control (ESC) and motorcycle antilock braking system (ABS). Australian research shows that ESC reduces the risk of single car crashes by 25% and single 4WD crashes by 51%.

South Australia has the second oldest vehicle fleet in Australia. People living in regional and remote areas and young and older drivers often drive older vehicles, which may be due to their lower cost and availability.

Average age of vehicles
across **Australia**

10.4
YEARS



Average age of vehicles
in **South Australia**

11.8
YEARS



Average age of vehicles in
regional South Australia

13.0
YEARS



This data includes light vehicles only, excludes heavy vehicles and motorcycles.

Excluding those with a conditional registration,¹⁹ the average age of light vehicles registered to people aged 70+ in metropolitan Adelaide is 12.7 years. In regional and remote South Australia, the average age of light vehicles is 13.9 years.

Excluding those with a conditional registration,¹⁶ the average age of light vehicles registered to 16-24 year olds in metropolitan Adelaide is 13.0 years. In regional and remote South Australia, the average age of light vehicles is 13.7 years. It should be noted that around half of the licensed drivers in the 16-24 year age group do not have a vehicle registered to them.

Nationally, the age of the heavy vehicle fleet varies depending on the type of heavy vehicle. Light rigid trucks have an average age of 11.0 years, heavy rigid trucks have an average age of about 15.6 years and articulated trucks have an average age of 11.8 years.

Motorcycles in South Australia have an average age of around 12.1 years, again, higher than the national average age of 10.8 years.

¹⁹ Conditional registration includes: Unregistered vehicle permits, Seasonal registrations, Emergency response vehicles, Special purpose vehicles, Restricted primary producer's vehicle, Registered miscellaneous vehicles, Historic, left-hand drive and street rod vehicles and Light vehicle permits.

Older vehicles are more likely to be involved in a serious crash. 36% of light vehicles involved in crashes resulting in lives lost or serious injuries in South Australia were 15 or more years old. 28% of all light vehicles are more than 15 years old.

New vehicles sold or leased by business will eventually be purchased by the broader community. In 2019, approximately 77% of heavy vehicles and 42% of light vehicles first entered the South Australian market through business fleets. It is expected that following a relatively short lease period of 2-5 years, these vehicles will be sold to the general public.

Heavy vehicles and interaction with other transport modes

The mass and rigidity of heavy vehicles can contribute to the severity of crashes especially in collisions with other vehicles. Other road users may not be aware of the distance that heavy vehicles need to slow down, stop or change lanes, or how to safely overtake heavy vehicles, especially those that are larger such as restricted access vehicles or over dimensional loads.

76% of heavy vehicle crashes where lives were lost involved either a light vehicle, pedestrian, motorcyclist or cyclist. In 80% of these crashes the road user deemed at fault was not the heavy vehicle driver. Crashes between pedestrians, cyclists and heavy vehicles even at very low speeds can result in serious injuries and loss of life.

The most prominent crash type (38%) in heavy vehicle crashes are head on crashes and 95% of the time the other vehicle is going straight ahead, but not overtaking. The next most prominent crash type is a right angle or right turn crash (25%).

Two thirds of lives lost crashes and 44% of serious injury crashes involving a heavy vehicle occurred in regional and remote South Australia. 82% of those heavy vehicle crashes on regional and remote roads were speed limited to 100 or 110 km/h.

Midblock crashes (crashes not at an intersection) accounted for 76% of crashes resulting in lives lost or serious injury on regional and remote roads involving at least one heavy vehicle.





Road Safety Strategic Focus Areas



Road user behaviour

Supporting and enforcing safer road user behaviour



Aboriginal road safety

Reducing the over-representation of Aboriginal people in road crashes



Vehicles

Increasing the use and purchase of safer vehicles in South Australia



Older road users

Greater focus on road users aged 70+



Roads

Safer design, construction and maintenance of road infrastructure



Walking, cycling and public transport

Improving safety for people who walk and cycle and increasing public transport patronage



Regional and remote areas

Reducing the number of lives lost and serious injuries on regional and remote roads



Young drivers and riders with a focus on those living in regional and remote areas

Reducing their over-representation in road crashes



Workplaces

Develop a culture of road safety in South Australian workplaces

Road user behaviour

Every person living in or visiting South Australia is a road user, whether they drive, ride, walk or are a passenger. Road user behaviour remains a significant contributing factor to road trauma.

Most people who use the roads in our State obey the road rules and use roads safely most of the time. To improve safety for the majority of road users who do not deliberately engage in dangerous behaviour we need to progress a whole-of-community road safety agenda that assists people to do the right thing. We also need to deliver targeted, evidence-based interventions to address dangerous behaviour given its impact on the community.

The licensing system contributes to road safety outcomes by ensuring drivers and riders have the necessary skills and experience for the class of vehicle they are driving, they are medically fit to drive, and that appropriate sanctions are applied to drivers who don't comply with the road rules.

Licensing pathways for a motor vehicle, motorbike or heavy vehicle, include testing, training and minimum driving experience. Changes have been made to the graduated licensing schemes for motor vehicles and motorbikes to improve road safety outcomes for novice riders and drivers. Current licensing pathways for heavy vehicles do not adequately address safety as they require a driver to hold a class of licence for a minimum period of at least 12 months before they can progress, which does not guarantee that they gain any driving experience with no requirement to log driving hours in the 12 months.

Cultural change will be built over the life of the strategy, and requires ongoing engagement and collaboration with different sectors, including across state government, particularly with partner agencies which have regulatory and other functions that influence road safety outcomes, with local government, workplaces, organisations, community based organisations and the broader community. We will use a variety of communication channels to effectively embed communication reminders to reinforce road safety messaging.

Mass media campaigns, road safety education, training and partnerships with organisations that have a common goal will form part of the social model approach. Messages will be tailored to the audience and their local context and be culturally inclusive. Targeted communication campaigns, including coordinating mass media with enforcement activity (where enforcement messaging is used) and consistent messages are needed to address emerging and recurring road safety issues and build community understanding and support for road safety measures.

ROAD SAFETY EDUCATION

Best practice, context appropriate education and public awareness is required to educate road users and influence their behaviour. Research suggests that road safety education campaigns that focus on changing human behaviour are more effective if based on an appreciation of the factors that contribute to crashes, and why some people continue to behave in a manner that increases the likelihood of a crash or the severity of injury in the event of a crash.²⁰ School based education programs also play an important role. Research indicates that many of the characteristics of programs that are effective at a community level mirror those that are effective in road safety education in schools.²¹



20 *Principles for School Road Safety Education* (2009) www.sdera.wa.edu.au/media/2245/overview-of-principles-for-school-road-safety-education.pdf & *National Practices for Early Childhood Road Safety Education* www.childroadsafety.org.au/wp-content/uploads/2020/07/national-practices-for-early-childhood-RSE.pdf

21 Effective Community and School based road safety for young people. Vicroads and the Transport Accident Commission online Research_summary.pdf (www.roadsafetyeducation.vic.gov.au)

DANGEROUS ROAD USERS

A small group of road users are at higher risk of being involved in a serious crash because of the dangerous behavioural choices they make, including: speeding, drink/drug driving, using a mobile phone while driving, failing to wear a seatbelt and driving unlicensed. Targeted strategies to address dangerous behaviours will be informed by research.

One way to target and reduce dangerous road use is through monitoring, detection and enforcement programs. Law enforcement programs targeting dangerous behaviour can provide a deterrent effect.

Intelligence-led targeted enforcement focusses on high risk violations and can reduce road crashes.

General high visibility enforcement by police is also an important approach. It can also help influence road user behaviour because observing enforcement taking place and observing others being detected for offending behaviour increases the perceived likelihood of being caught.

Automated enforcement solutions play a key role with fixed cameras, including point to point average speed cameras, providing deterrence at specific locations and along lengths of roadway. Mobile road safety cameras are temporarily deployed for short periods at high risk locations, creating a network-wide deterrence due to the perception they could be anywhere, at any time. Deterring speeding and red light running improves the safety of not only the vehicle passing the camera but also other road users, including cyclists and pedestrians. Advanced enforcement solutions such as cameras that detect illegal mobile phone use whilst driving are aimed at providing deterrence against driver distraction.

It will be important to continue to build our road policing capabilities, refine our enforcement and prevention activities and enhance road user education, training and public awareness. We will develop a coordinated approach between agencies on specific themes to provide a greater impact for the community.

Key strategies to support and enforce safer road user behaviour include:

- 1** Co-ordinated enforcement and education campaigns to improve and maintain public understanding about the use of child restraints. Explore and address practical barriers to child restraint use;
- 2** Test and trial new technologies that support enforcement and enhance general deterrence;
- 3** Reduce driver and rider distraction through campaigns, education and advanced enforcement solutions, such as cameras that detect mobile phone use;
- 4** Contribute to the development of road rules for driver distraction that apply regardless of the device, that are technology neutral;

- 5** Better inform and educate the community about safe interaction with heavy vehicles;
- 6** Examine heavy vehicle licensing pathways;
- 7** Better data to inform what further actions are needed to target driver behaviours, with an initial focus on fatigue and distraction;
- 8** Continue to implement effective infrastructure treatments such as audio tactile line marking, barriers and rest stops as well as monitor and promote technological advancements to reduce crashes where fatigue is a factor;
- 9** Campaigns and road safety messaging targeted to risk behaviours, including fatigue;
- 10** Further investigate the road user demographics, behavioural and attitudinal factors that contribute to non-seatbelt use; and then deliver coordinated education and enforcement programs to reduce the instance of non-use;
- 11** Reduce drink and drug driving, through a range of measures, including public awareness and education, enforcement and compliance, and with a human centric approach. Collaboration is required across Government to address drug and alcohol dependency to improve road safety outcomes;
- 12** Through education and cultural change, enforcement and compliance we will reduce lives lost and serious injuries associated with speeding and travelling at inappropriate speeds;
- 13** Address the behaviour of drivers who repeatedly and persistently engage in dangerous driving behaviour. In addition to education and enforcement, collaboration will occur across Government to develop a broader societal approach. As these drivers are less likely to respond to traditional deterrence approaches, measures such as preventative health work or counselling will have a role; and
- 14** Continue to deliver road safety education through schools and other organisations, including bike education.



Aboriginal road safety

Aboriginal people are **over-represented** in road crashes which result in lives lost or serious injury.

Road trauma continues to have a significant effect on the wellbeing and socio-economic status of Aboriginal people, families, communities and culture.

Concerted effort is required to increase our knowledge of Aboriginal people, their communities and culture to create relevant and responsive actions to improve the safety of Aboriginal road users in South Australia.

Acknowledging and understanding the legacies of past government policies and their impact on Aboriginal South Australians today, is integral to how we address contemporary road safety issues into the future. A sustained reduction in the numbers of road related serious injuries and lives lost will only be achieved where the systemic and institutional barriers experienced by Aboriginal people are identified and addressed by government within this context.

In the context of road safety, barriers to attaining a driver's licence and maintaining a licence, high risk driver behaviour, limited provision and availability of road safety education, road conditions in regional and remote areas, older vehicles, delayed access to medical services in remote areas, roadside hazards, fewer transport options and the need to travel longer distances on higher speed or unsealed roads may all contribute to reduced road safety outcomes.

Not using a seatbelt or child restraint, overcrowding of vehicles, limited access to road safety education and influences from family and passengers to undertake risky behaviours whilst travelling have been found to contribute to road trauma for Aboriginal people. Some offences attract significant penalties which can contribute to an over-representation of Aboriginal people in contact with the criminal justice system.^{22, 23}

Contact with the criminal justice system impacts the social and emotional wellbeing of the individuals, families and their communities and adds to disadvantages already effecting Aboriginal people.

There are opportunities for improved service delivery and improved interaction between government and Aboriginal people by progressing our knowledge and understanding of culture. This will result in a more collaborative approach with increased engagement and relationship building interactions with the licensing and vehicle registration system, driver licensing programs, road network improvements and road safety education and knowledge.

Systematically increasing the numbers of Aboriginal people who obtain, as well as retain, their driver's licence helps to improve road safety as well as improving economic and social outcomes and reducing criminal justice system over-representation.

Challenges arise from the lack of Aboriginal specific road safety data in South Australia, making it difficult to identify the proportion of Aboriginal people involved in road crashes.

22 SA Health (2010). *Improving the Mobility, Safety & Wellbeing of Aboriginal People in South Australia*. Health in All Policies: Health Lens Analysis Project.

23 Legal Services Commission of South Australia: Driving without a licence online May 2021 [Driving without a licence](http://www.lawhandbook.sa.gov.au) (www.lawhandbook.sa.gov.au)

AN EXAMPLE OF WHAT WE ARE ALREADY DOING

'On the Right Track Remote' uses a 'human centric' approach to assist Aboriginal people who live in the APY and MT Lands to improve the culture of safety and driver licensing outcomes for Aboriginal people living in remote communities. Prior to 'On the Right Track Remote' commencing in February 2015, only 17% of age eligible Aboriginal people living in the APY lands held a driver's licence (of any type), compared with 89% of the general SA population. As at March 2021, this has increased to 49%.

Key strategies to improve road safety for Aboriginal people to enhance, sustain and initiate programs/policy are:

- 15** Closing the gap in licensing outcomes between Aboriginal and non-Aboriginal South Australians;
- 16** Collaborating and partnering with Aboriginal communities and Aboriginal Community Controlled Organisations to develop and deliver culturally sound, community led strategies that meet the needs of the people involved;
- 17** Measures to improve access to driver training for Aboriginal people;
- 18** Explore and address practical barriers to child restraint use;
- 19** Areas of attention will include research, community engagement and collaboration to address the over representation of Aboriginal road users in road trauma as well as incarcerated due to road traffic offences;
- 20** Improve data collection and analysis relating specifically to Aboriginal road safety; and
- 21** Review road safety programs to identify improvements to meet the needs of Aboriginal people.



Vehicles

Improvements in vehicle safety and the inclusion of advanced safety technologies are helping drivers to avoid crashes and also help to reduce the injuries suffered by vehicle occupants and other road users when a crash occurs. Vehicle technology is developing at a rapid rate and advanced safety technologies are now commonly available in new vehicles. According to the Australian and New Zealand Driverless Vehicle Initiative, 90% of all crashes could be eliminated through advanced driverless vehicle technology.²⁴

A Monash University Accident Research Centre study reveals a potential 33% reduction in road trauma if all Australians were able to travel in the safest vehicles possible.²⁵ International research also indicates that single vehicle crashes can be reduced by 35% in light vehicles and 67% in four wheel drive and sports utility vehicles fitted with Electronic Stability Control.²⁶

We will all benefit from these improvements as newer, safer vehicles progressively replace older vehicles on our roads.

The South Australian Government will further promote the use and uptake of the safest vehicles across government and business fleets. This has flow on benefits into the community, as a significant proportion of privately-owned vehicles on our roads are first registered to government or business fleets.

Cost may be a barrier to purchasing a new vehicle with the latest safety technology. Increased consumer awareness and education is needed regarding 'used car safety ratings', 'thinking about the safest vehicle you can afford' when purchasing a second hand vehicle and the safest vehicle that may be available for use for the journey or purpose of travel.

Vehicles affected by compulsory airbag recalls have had registration sanctions applied to them in the interests of road safety. This process has proved successful in rectifying or removing vehicles fitted with defective airbags from South Australian roads.

Similar registration sanctions may be considered should further compulsory vehicle recalls arise under legislation, meaning any safety issue or non-compliance with road vehicle standards in relation to a road vehicle or road vehicle component is resolved in a timely and effective manner.

Some feedback received highlighted the issue of vehicle maintenance. We will investigate whether a light vehicle inspection scheme could improve road safety outcomes, and how often inspections would be required to provide a cost effective safety outcome.

24 [Driverless car benefits | Automated Transport | Self-driving Vehicles \(www.advi.org.au\)](http://www.advi.org.au) (online April 2020)

25 Budd, L, Newstead, S (2019) *Potential road safety benefits of making safer vehicle choices in Australia*. Monash University, Accident Research Centre, Victoria

26 [Road Safety Commission - Safe Vehicle Features Information | Road Safety Commission WA \(www.rsc.wa.gov.au\)](http://www.rsc.wa.gov.au) (online April 2020)

Key strategies for normalising the use of safe vehicles in South Australia are:

- 22** The South Australian Government demonstrating a leadership role through:
 - continuing to demonstrate across government leasing / purchasing policies for the safest vehicles that are fit for purpose;
 - work related travel policies that consider 'vehicles as a workplace'; and
 - supply of safer second hand vehicles through fleet sales.
- 23** More strongly promoting safer vehicles and increased consumer awareness, including 'thinking about the safest vehicle that you can afford';
- 24** Promote the benefit and use of advanced vehicle safety technologies through public awareness and education;
- 25** Continue to trial automated vehicle technologies to increase acceptance and awareness of public benefit;
- 26** Enable the safe deployment of automated vehicles on our roads;
- 27** Influencing the rate of uptake of safer vehicles in regional areas, and with the older and younger demographic. Investigate incentives for younger and older drivers to encourage the move to safer vehicles;
- 28** Investigate options to promote the purchase or lease of the highest ANCAP star rated vehicles for business fleet;
- 29** Continue registration sanctions against vehicles that are unsafe to be driven on the road network, due to a safety recall;
- 30** Investigate the costs and benefits of introducing a light vehicle inspection scheme to improve the safety of older vehicles; and
- 31** Continue to work nationally in partnership with ANCAP and the Commonwealth Government to influence the Australian Design Rules and ANCAP Star ratings.



Older road users

Older drivers are involved in a relatively small number of crashes, however these crashes are more likely to be of a **higher severity** in part due to the fragility and frailty of these older users.

Research shows that as people age, a medical condition or medical event is more likely to be a contributing factor in a road crash.

There will also be a focus on the use and promotion of safer vehicles with older drivers. The use of safer vehicles could provide benefits for older drivers particularly in providing increased protection when a crash occurs. Improvements to the road environment are also important, particularly changes which reduce or simplify the decision-making task for the driver.

Older road user crashes are likely to continue to increase in future years due to the growing number of people in the 70+ age cohort.

Key strategies include:

- 32** Influencing the uptake of safer vehicles by older people and providing information about the benefits of vehicle safety technology. Investigate incentives for older drivers to encourage the move to safer vehicles;
- 33** A tailored program will be developed for older South Australians, dealing with the key contributing factors to them losing their lives or being seriously injured on our roads;
- 34** Explore opportunities to make roads and crossings easier to use for older road users; and
- 35** In collaboration with the health profession, develop improved reporting and recording systems for the lodgement of medical information relating to licence holders.

Roads

Investment in infrastructure should be geared towards long-term transformation of the road system taking into account **future transport needs** and the requirements of future vehicles.

A safe road transport system starts with improved planning. Safer road design principles aim to minimise conflict points, remove and simplify road user decisions, minimise impact angles and minimise impact speeds. One aspect of safer road design is to reduce the mistakes and errors that road users make. 'Self-explaining' roads achieve this through consistent roads that make it easier for drivers to match their behaviour to the environment.²⁷ The other aspect of safer road design is to reduce the severity of crashes that do occur. 'Forgiving' roads include measures that take into account unintentional road user errors and mistakes, and incorporate road design features that reduce the likelihood of crashes and reduce their severity when they do occur.

Vehicles are becoming more automated and connected. As vehicle technology advances, we will require road infrastructure that helps to support the operation of automated and connected vehicles. We will continue to review technical road standards and guidelines in the context of changing vehicle performance, new technologies and other new information. Autonomous vehicle technologies are likely to provide significant supporting contributions to the Safe System vision now and into the future. To support autonomous vehicles, a range of changes to the way we build and operate our roads may be required, such as changes to line marking and road signs that allow vehicles to consistently read our roads.

Safety and the consequences of crashes will be a key consideration in the way we manage, build and maintain our transport infrastructure.

Trains and trams provide a critical network for the transport of passengers and freight across our State. However, the combination of speed, passengers and freight travelling on intersecting rail and road systems has the potential for high impact or catastrophic incidents. While they do not occur often, any incident at a level crossing can cause service disruptions, motorist delays, property damage and, in the most serious cases, injury and death. The impacts on communities and the economy can be significant and far-reaching. Research has shown that the major cause of crashes at level crossings is road user behaviour like inattention, distraction, risk taking and disobeying the road rules. Responsibility for managing level crossing safety is shared by many organisations, including State and local governments and rail infrastructure owners.

²⁷ Herrstedt, L (2006) *Self-explaining and forgiving roads: speed management in rural areas*. ARRB

Safe system road treatments

Safe system treatments seek to create a forgiving road system, and are used in locations where there is a high risk of a crash, not just those locations where crashes have already occurred. The most common crash types on regional roads are run-off-road and head-on crashes. We will continue to prioritise works to address these. The treatments selected will depend on the role and function of the road, the volume and type of traffic, and both the crash risk and history on the road and are subject to continuous improvements over time.

SITUATION

110 km/h high volume regional road
e.g. National Highway

EXAMPLES OF SAFE SYSTEM TREATMENTS

Midblock

- Roadside barriers or hazard removal and smooth gentle slopes
- High quality wide sealed shoulders at least 1.5m
- Median treatment e.g. Wide Centre Line Treatment and/or Median Wire Rope Safety Barrier
- Duplication with a wide median and/or median barrier
- 2+1 treatments with a median barrier
- Audio Tactile Line Marking on Centre and Edge Lines

Intersections

- Grade Separation
- Roundabout
- Channelised turn lanes
- Relocation of right turns and creation of U-turns

ROAD SAFETY BENEFITS

- Reduced run-off-road crashes
- Reduced severity of any crashes which still occur
- Reduced intersection crashes
- Reduced head on crashes

EXAMPLES



SITUATION

110 km/h moderate traffic volume regional road

e.g. road connecting two regional towns

EXAMPLES OF SAFE SYSTEM TREATMENTS

Midblock

- Roadside barriers or hazard removal
- High quality sealed shoulders of 1 m width
- Median treatment e.g. Wide Centre Line Treatment
- Audio Tactile Line Marking on Centre and Edge Lines

Intersections

- Roundabout
- Rural Intersection Active Warning System
- Channelised turn lanes

ROAD SAFETY BENEFITS

- Reduced run off road crashes
- Reduced likelihood and severity of intersection crashes
- Reduced head on crashes
- Reduced severity of any crashes that still occur

EXAMPLES



SITUATION

100 km/h low traffic volume regional road providing access to local destinations

EXAMPLES OF SAFE SYSTEM TREATMENTS

Midblock

- Roadside barriers or hazard removal
- High quality sealed shoulders of at least 500mm width
- Audio Tactile Line Marking on Centre and Edge Lines

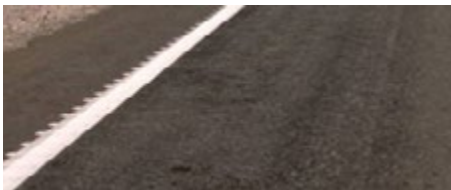
Intersections

- Channelised turn lanes
- Wide sealed shoulders
- Duplicated warning signs and rumble strips

ROAD SAFETY BENEFITS

- Reduced run off road crashes
- Reduced intersection crashes

EXAMPLES



SITUATION

Metropolitan intersections major roads

EXAMPLES OF SAFE SYSTEM TREATMENTS

- Grade separation
- Control or separation of turn movements
- Separation of walking and cycling movements

ROAD SAFETY BENEFITS

- Reduced right turn crashes
- Reduced pedestrian and cyclist crashes

SITUATION

Metropolitan intersections with local roads

EXAMPLES OF SAFE SYSTEM TREATMENTS

- Roundabout
- Raised platform
- Cycling and walking infrastructure
- Protected turn lanes
- Reduced speed limit or environment
- Closure / change to some access

ROAD SAFETY BENEFITS

- Reduced turn crashes
- Reduced pedestrian and cyclist crashes

EXAMPLES



SITUATION


Motorcycle touring routes

EXAMPLES OF SAFE SYSTEM TREATMENTS

- High quality advanced warning signs
- Audio Tactile Line Marking on Centre and Edge Lines
- High quality sealed shoulders 1m wide
- Motorcycle under-run protection on all roadside barriers

ROAD SAFETY BENEFITS

- Reduced likelihood and severity of motorcycle crashes

SITUATION
Metropolitan roads midblock
EXAMPLES OF SAFE SYSTEM TREATMENTS
<ul style="list-style-type: none"> ■ Footpaths and shared paths ■ High quality, separated bike lanes ■ Pedestrian refuges and signalised crossings ■ Lower speed limits ■ Wide run off areas with minimal roadside hazards ■ Frangible roadside infrastructure e.g. removal of stobie poles
ROAD SAFETY BENEFITS
<ul style="list-style-type: none"> ■ Reduced likelihood and severity of hit fixed object crashes and pedestrian and cyclists crashes
EXAMPLES


Strategies for safer roads for all road users is located on pages 55-56



Walking, cycling and public transport

Improving safety for people who walk and cycle and increasing public transport patronage.

In urban areas, safer, lower speed environments can provide environmental, health and access benefits by making road users feel safe and choose more active transport. Public transport is a safer mode of transport than any other form of road travel, based on crash exposure risk.²⁸ Efforts will continue to be directed towards encouraging greater use of these shared transport modes. Improved safety for pedestrians and improved public transport can assist older road users to maintain mobility and access to services without the need to drive a private motor vehicle. Younger people also benefit from this freedom to travel safely before they are old enough to drive.

Strategic approaches are needed to improve road safety for people who walk, ride bikes and to encourage people to use public transport. Data is a key enabler to inform decision making, for example better data on walking and cycling that includes injury crashes. We will also continue to partner with local government, schools and other stakeholders to identify, plan, design and implement safety improvements in local streets near schools and other community precincts to support safer, better connected travel by all road users. School and education precinct improvements will continue to be a focus as will bicycle education to provide practical education for children to learn road rules and safe cycling behaviour.

E-scooters have become popular in Adelaide with the approval of three trials across the metropolitan area. E-scooters can be a low cost, attractive and convenient travel option potentially providing an alternative to vehicles and travel independence for users. Currently they can be used through trials approved for certain council areas.

There are a number of ways to make our roads safer for walking, cycling and using a mobility device, such as clearly marked and signalised pedestrian crossings, pedestrian refuges, bicycle lanes, off road paths and safe road crossings. Lower speed environments where motor vehicles and bicycles travel at comparable speeds, or physical separation between vehicles and cyclists where there is significant speed differential are both ways to improve safety for cyclists as they reduce both the likelihood of collisions occurring and reduces crash severity.

²⁸ Australian Transport Assessment and Planning Guidelines, M4 Active Travel (2016). Transport and Infrastructure Council. Canberra

DIFFERENT PURPOSES FOR DIFFERENT ROADS

Roads and streets not only enable the movement of people and goods between destinations, they also are places and destinations for people to live, work and socialise. Some roads, such as motorways, provide for fast movement with little or no 'place' function, whereas in vibrant entertainment precincts, local streets and places for people (low speed shared zones), the emphasis on place is the primary consideration.

Movement and Place is an approach that takes into account road function in road design and operation. In planning for the transport network we need to consider the role of the road and its integration with the adjacent land use to ensure that the treatment meets the needs of the users.

Use of the approach involves assigning a place and movement category to a section of road. It considers the local context of the road and assists in selecting appropriate measures for operation, management and improvements to the network. This approach informs speed management and road design and will be used to inform decisions, including those on speed management.

Place is categorised from 1-5 with 1 being a place of strategic significance such as a recognised tourist precinct or major activity centre such as a CBD. These places have active land uses and lots of activity on the street such as outdoor dining. 5 at the other end of the scale is a local residential or industrial street.

Movement is categorised from 1-5 with 1 being corridors for the mass movement of people or goods often defined as major traffic or freight routes. These corridors are designed for non-stop movement with limited access to adjacent land use. Local access roads fit into movement category 5.

In an area where there is high pedestrian usage, cyclists sharing roads with vehicles including buses and meeting places adjacent to the road, the movement and place approach will emphasise the need for slower movement with place as the primary consideration. This might result in a lower speed limit or other road safety treatments to improve the safety for all road users in that area.

Aligning road design with function improves road safety by ensuring the road network recognises and provides for different transport modes.

Key strategies to improve safer roads for all road users include:

- 36** Strengthen or embed the use of the movement and place approach in the design of safer roads, suburbs and towns;
- 37** The movement and place approach will be used to take account of road function when planning road safety treatments and determining operational settings (e.g. setting speed limits);
- 38** Positive provision policies for cycling and walking infrastructure irrespective of the project intent;

- 39** Safer and more connected walking and cycling infrastructure;
- 40** Enable the safe use of innovative mobility solutions (e-scooters);
- 41** Work with local councils to design safer community and pedestrian precincts (schools, main streets, recreation and sports) using a movement and place approach;
- 42** Improving pedestrian and cyclist safety when crossing arterial roads;
- 43** Work with all relevant stakeholders to ensure a consistent, informed and collaborative approach to the holistic management of level crossing risks;
- 44** Improved design of roads that encourage the desired behaviours in users, for example, signage and a road environment that gives a clear indication of what is ahead;
- 45** Public awareness and education about safe road use;
- 46** Continue to review technical roads standards and guidelines, for example traffic control devices, in the context of road safety risks and priorities, changing vehicle performance, new technologies and other new information;
- 47** Develop an evidence-based model to guide maintenance investment and maximise the safety of existing road assets;
- 48** Infrastructure improvements such as signage and line marking, to facilitate the advancement of automated driving systems, electric vehicles and other technology;
- 49** Monitoring and continuous improvement of road infrastructure treatments to quantify safety performance and effectiveness;
- 50** Continued focus to identify high risk locations for motorcyclists and provide appropriate treatments and protection from roadside hazards;
- 51** Promote the benefits of public transport to encourage mode shift to increase public transport patronage; and
- 52** Improve data collection and analysis relating to walking and cycling crashes.

Specific strategies to improve the safety of regional roads are set out as part of the priority on regional and remote areas below.

Regional and remote areas

While many of the strategies identified will benefit all road users in South Australia, programs and initiatives to improve road safety outcomes will be weighted towards and tailored for regional and remote South Australia due to the disparity in road safety outcomes between metropolitan Adelaide and the rest of the State.

Regional and remote road users are twice as likely to be killed or seriously injured on the roads as those in metropolitan Adelaide. Single vehicle run-off-road crashes account for 58% of all regional crashes where a life is lost or serious injury occurs, and a further 10% are head-on collisions. 71% of all regional and remote crashes where a life is lost or serious injury occurs are on a road with a speed limit of 100 or 110 km/h.

People from regional and remote areas involved in serious injury crashes tend to have poorer outcomes because treatment, care and support is more challenging in regional and remote areas.

Network Safety Plan

There are a number of tools that road authorities can use to assess the safety of their regional and remote road networks. Two of the commonly used ones are AusRAP star ratings and ANRAM Risk Scores.

AusRAP star ratings score sections of the road to a standard considering speed, volume, road and roadside attributes. It provides a measure of the level of safety “built-in” to the road for users and are used for communicating or telling the story of the road network.

ANRAM is used for predicting severe crash risk based on the relative safety performance of the road infrastructure, traffic speed, volume and potential for vehicle conflicts. It is also used to identify the road sections with the highest potential risk of severe crashes (supported by lives lost and serious injury crash data). It informs investment planning as it identifies relative risk of sections of road and the most appropriate treatments.

Data and information from analysis based on star ratings, stereotypes or crash risks can be used to inform the development of a Network Safety Plan. A Network Safety Plan is a strategic plan used to prioritise safety infrastructure investment where it will have the most impact. They comprise analysis of current risks across the network, mapping the network to identify gaps and desired outcomes and determination of appropriate treatment and prioritisation of treatment across the network. Adopting a network wide approach to road design facilitates the self-explaining roads principle providing for more consistent corridors and optimising investment to reduce crash risk for all road users.

Infrastructure safety treatments can provide safety benefits for all road users. Network-wide we will plan for and invest in safer road infrastructure, with additional focus on regional and remote areas. We will continue to target run-off-road and head-on crashes and implement shoulder sealing, roadside hazard removal and road side safety barriers, wide centreline treatments and in some situations median barriers to address high risk and high crash history locations. This investment needs to be informed by a range of considerations, including:

- Investing where the greatest potential for trauma and risk reductions are possible;
- Using the most effective treatments to address key crash types; and
- Addressing current injury trends, as well as maintaining a long-term vision of zero harm across our network.

Infrastructure treatments such as shoulder and apron sealing, and maintaining roads in regional and remote areas, together with improved delineation and road signage to improve the network in line with the Safe System approach, helps to reduce road trauma for all vehicle occupants. Continuing work to build community understanding about the risk factors related to speeding and travelling at inappropriate speeds is a priority, but also one that will take time to reach its full potential. Innovation and experimentation will be a key enabler for rural and regional road safety. We have to consider new, cost effective countermeasures.

Increasing the perceived risk of detection (i.e. general deterrence) is a key strategy to improve road user behaviour, coupled with coordinated road safety education and public awareness campaigns targeted to the specific needs of the region.

Drink and drug driving is of concern in regional South Australia. In 58% of crashes that occurred in regional South Australia that resulted in drivers and riders who lost their life or were seriously injured the driver or rider had an illegal BAC. The majority (81%) of drink and (76%) drug drivers and riders killed in regional South Australia also lived in regional South Australia.

It is estimated that fatigue plays a role in 20-30% of crashes resulting in a life lost or serious injury nationally.²⁹ We have heard from the broader community and stakeholders that there is a need for a greater number of rest stops across regional and remote areas suitable for both light and heavy vehicles. These rest areas are located to supplement other rest opportunities made available by commercial operations and by local councils within townships. Road network studies are undertaken to identify appropriate rest opportunities (at regular spacing) to enable heavy vehicle drivers' compliance with the regulations as per the heavy vehicle driver fatigue laws. Sealed shoulders, ATLM and roadside barriers can also reduce the likelihood and severity of fatigue-related serious crashes. Through community consultation to inform the development of the Strategy, many people provided feedback on the need to make walking and cycling safer and easier in regional and remote areas. Off-road paths and safe road crossings are ways to help create a safer environment for people who walk or cycle.

There are limited alternative travel or public transport options in many regional and remote areas, and often longer travel distances between services and homes, leading to increased vehicle use.³⁰

Limited public transport could also encourage people to drive when unlicensed or disqualified. It may also be a contributing factor to people choosing to drive under the influence.

Reducing barriers, such as lack of ride share or community transport options and enabling safe alternative travel options in regional and remote areas of need, where possible would help to address this.

Such travel options may also increase the economic and social opportunities for people in remote areas. To increase ownership of outcomes, community-led programs are needed that meet the needs of the community involved.

29 National Road Safety Strategy 2011-2020

30 Terer, K, Brown, R (2014) *Effective drink driving prevention and enforcement strategies: Approaches to improving practice*. Trends & issues in crime and criminal justice no. 472. Canberra: Australian Institute of Criminology

Key strategies aimed at improving road safety in regional and remote South Australia include:

- 53** Evidence-based analysis of relevant data and information will be used to plan and prioritise proposed investments in the most effective road safety treatments that reduce the risk to road users, and this will be set out in a network safety plan for corridors and/or regions;
- 54** Improve the star rating of our road network, with a particular focus on high speed, high volume roads;
- 55** Changing vehicle sizes and requirements will be considered when upgrading roads and related infrastructure (including overtaking lanes and rest stops) in regional and remote areas;
- 56** Innovation and experimentation will be key enablers for rural and regional road safety. We have to consider new cost effective road safety infrastructure treatments that are appropriate for South Australian roads;
- 57** Safer walking and cycling infrastructure in regional and remote areas;
- 58** Undertake public awareness campaigns targeted to regional and remote road users on relevant road safety issues, coordinated with enforcement to increase the perceived risk of detection. Encourage community-led programs and ownership of outcomes;
- 59** Enable safe alternative transport options in regional and remote areas of need where possible; and
- 60** Consider policies and initiatives that will increase the uptake of safer vehicles in regional and remote areas.



Young drivers and riders, with a focus on those living in regional and remote areas

Young drivers and riders aged 16 to 24 living in regional or remote South Australia are around three times more likely to be involved in a crash in which they lose their life or are seriously injured compared with Adelaide residents of the same age.

There will be a particular focus on the use and promotion of safer vehicles in regional and remote areas with younger drivers. Many young people drive older cars which do not have the safety features available in newer models. Finding ways to encourage and assist young drivers into safer vehicles could have major safety benefits, as newer vehicles with advanced safety technologies may help to avoid crashes or reduce the severity of injuries in the event of a crash.

AN EXAMPLE OF WHAT WE ARE ALREADY DOING

Motorcycle riding is becoming more popular among young people, and tragically, the number of young people are overrepresented in crashes in terms of motorcycle licence and registration numbers. For novice motorcycle riders, data for the 16-19 year old age group shows that over the last five years, the trend in young rider lives lost and serious injuries increased by an average of about 18.9% per year.

In 2021 enhancements to the South Australian motorcycle Graduated Licensing Scheme (GLS) came into operation to improve the safety of novice motorcyclists and other road users. A GLS is a staged approach to obtaining a full licence, with learners commencing in relatively low risk situations. As the novice grows in knowledge, skills and on-road experience, restrictions are gradually lifted as they progress through to an intermediate stage and then to a full licence.

Enhancements include raising the minimum age for a motorcycle learner's permit from 16 to 18 years (with some exemptions), extending the time holders of a motorcycle learner's permit and R-Date licence classification are required to hold their permit or licence before progressing to the next stage and a number of restrictions relating to passengers, towing trailers, night-time riding restrictions, zero alcohol and riding only an automatic motorcycle if tested on one. Taken together, these measures will mean that generally people will be older and have had more riding experience before they can ride a motorcycle of any size.

The changes to the South Australian motorcyclist licensing system implement several recommendations made by the Centre for Automotive Safety Research (CASR). The recommendations of CASR provided an independent review of best practice Graduated Licensing Systems to reduce the risk of crashing for novice motorcyclists in South Australia.³¹

³¹ Baldock, MRJ, University of Adelaide, Centre for Automotive Research, Recommendations for a Graduated Licensing System for Motorcyclists in South Australia, January 2018

Key strategies include:

- 61** Targeted public awareness campaigns and education specific to younger drivers including encouraging selecting the safest vehicle accessible to them for the journey or purpose of their travel, and information available to select the safest vehicle that they can afford e.g. the Used Car Safety Rating;
- 62** Research to better understand why regional and remote younger drivers and riders are over-represented in serious crashes;
- 63** Targeted road safety education and messaging to address dangerous behaviour among younger drivers and riders;
- 64** Investigate measures to improve access to driver training;
- 65** Driver training will be strengthened so that novice drivers have more effective training and experience to identify and undertake safe driving practices; and
- 66** Rider training will be strengthened so that novice riders have more effective training and experience to identify and undertake safe driving practices.



Workplaces

Safe Work Australia data indicates that more workers lose their lives as a result of vehicle-related incidents than any other cause of work-related death. It has been estimated that work-related road crashes in Australia account for approximately half of all occupational lives lost and 15% of lives lost in road crashes nationally.

In 2018, light passenger vehicles were driven 2.34 million kilometres for work travel (excluding the commute) in South Australia.³² Heavy vehicles travel more than 1.3 billion kilometres per year in South Australia.³³ Heavy vehicles represent 7% of the kilometres travelled across the state, yet they were involved in 20% of crashes where lives were lost and 7% of serious injuries.

Vehicles used for work-related travel are considered part of the workplace. There will be benefits from further increasing awareness of Work Health and Safety (WHS) obligations through education, compliance and enforcement with the aim to reduce lives lost and serious injury crashes associated with work-related travel.

Work-related travel contributes to road crash and work health and safety risk for employees in all sectors. Compliance with road traffic law is not necessarily sufficient to ensure WHS obligations have been met.³⁴

Work-related road trauma is likely to be significantly under-reported whereby casualty crashes involving people travelling for work-related purposes is not recorded in the crash data unless the vehicle involved was obviously identifiable as being driven for work (such as a truck or bus).³⁵

The 'gig' economy is creating emerging road safety challenges, particularly with delivery workers. Different business models impact on the ability to apply traditional WHS approaches. This has been identified as an issue both across Australia (particularly NSW) and internationally.³⁶

There is an opportunity to develop a culture of road safety through engagement with South Australian workplaces and promotion of good practice road safety policies such as fatigue management policies, distraction related policies, speed policies and driver monitoring systems that contribute to a safety culture.

Regulation of heavy vehicle safety is a shared responsibility between the South Australian Government and the National Heavy Vehicle Regulator.

32 Australian Bureau of Statistics (2018)

33 Heavy vehicle includes the following types: Rigid truck, Semi-Trailer, Bus, B Double & Other defined motor vehicle

34 *Vehicles as a Workplace: Work Health and Safety Guide* (2019). Austroads

35 Centre for Accident Research & Road Safety. (2014). Work-related road safety Fact Sheet online [Work-related-road-safety-screen.pdf \(www.qut.edu.au\)](http://www.qut.edu.au)

36 NSW Government Media Release: Gig economy at the heart of new project online www.nsw.gov.au/media-releases/gig-economy-at-heart-of-new-project

An overview of roles and responsibilities is below.

SA GOVERNMENT	NATIONAL HEAVY VEHICLE REGULATOR
Driver licensing & vehicle registration	Compliance and Enforcement - Heavy Vehicle National Law
Road safety laws – driver behaviour	Access (Oversize Mass) – Heavy Vehicle National Law notices/permits
Passenger transport regulation	Heavy Vehicle Standards
Enforcement of South Australian road and vehicle laws	National Heavy Vehicle Accreditation Scheme
State road infrastructure – development, maintenance and network management	Performance Based Standards Scheme
National input – Heavy Vehicle National Law, Australian Road Rules, Australian Design Rules	Heavy Vehicle Driver Fatigue – Electronic Work Diary approvals, exemptions
Driver education and awareness	Industry Codes of Practice
	Education of heavy vehicle industry and parties in supply chain

Key strategies aimed to improve road safety in South Australian workplaces are:

- 67** Develop a culture of road safety through leadership across Government and promotion of good practice road safety policies, including reduction in exposure and fleet leasing / purchasing policies;
- 68** Increasing awareness of WHS obligations, combined with education, enforcement and compliance. Programs to improve road safety will be developed and delivered in partnership with key stakeholders, representative associations and large employers;
- 69** Identify and implement measures to address new and emerging service delivery and employment models, such as the gig economy;
- 70** Work collaboratively to progress national reforms of the heavy vehicle sector to improve safety practices and outcomes;
- 71** Expanded network of heavy vehicle rest stops in strategic remote locations; and
- 72** Co-ordinated enforcement and education campaigns for heavy vehicle drivers to improve safety practices and outcomes, in partnership with the National Heavy Vehicle Regulator.

Effective implementation

Local Government

National, state and local government all have an important role in improving road safety in South Australia.

Local government manages a significant proportion of the roads in South Australia. As road managers, councils design, build, maintain and regulate roads and footpaths as well as have a shared responsibility for providing a safe road environment for all road users.³⁷

Local government is the level of government closest to the community. In South Australia they are a significant employer and community leader, employing approximately 11,000 people. Work-related travel (and vehicles as a workplace) can be influenced through policy and by developing road safety culture within councils and their communities.

All levels of government will need to work together to improve data, create a safe road system and minimise harm.

Key strategies are:

- 73** Support capacity building in local government and develop and maintain a shared understanding of the road safety evidence base and safe systems approach through strengthening engagement with and support provided to local government;
- 74** Work in partnership with local government with a holistic view to improving road safety, consulting with them on proposed actions to ensure that planned measures adapt to the needs of the local area. This may include:
 - Supporting the development of Network Safety Plans;
 - Working with Councils on reviewing, designing and improving local precincts, including schools, to prioritise infrastructure improvements such as crossings, signage and connectivity for pedestrians and cyclists; and
 - Using an evidence based approach to inform decision making, such as the black spot program.

Build understanding and support for action

We recognise the need to build and retain skilled people across a range of disciplines both within government and organisations involved in road safety, including road design and planning, road safety assessment and prioritisation, behaviour change, education and communication, enforcement, policy and legislation and data and analytics.

³⁷ Guide to Local Government Road Safety Strategy and Action Plan (2019). Local Government Association of South Australia. Adelaide

Consistent with the proposed approach outlined in the National Road Safety Strategy, we will adopt a social model approach to road safety, reaching beyond the traditional transport sector to achieve cultural change.

The social model approach recognises that road safety is not solely a transport problem, and that transport solutions alone are not enough to realise Vision Zero by 2050. This approach aims to prevent road trauma through building wider community acceptance and collective ownership of road safety solutions.

Achieving a cultural shift in attitudes and perceptions of road safety and support for changes that can reduce lives lost and serious injuries on South Australian roads will require a range of education and public awareness campaigns to build public understanding of the evidence base.

Key strategies are:

- 75** Collaborate with individuals, businesses, regulatory partners, Aboriginal communities and organisations, organisations (including schools, sporting and other clubs/groups), local government and across government to promote, enhance and sustain a culture of road safety;
- 76** Build and retain capacity and capability across a range of disciplines, within both government and organisations involved in road safety; and
- 77** A variety of communication channels will be used to effectively embed communication triggers and reminders to reinforce road safety messaging.

Improving and integrating information, data and research

To achieve our goals, reliable and consistent data and information is needed to monitor, evaluate and understand the impacts of our actions over the life of this Strategy. Continuous improvements to our road safety data will be underpinned by expanded access to primary information resources from both within government and private sector data consolidators that will allow for appropriate impact modelling and Key Performance Indicator (KPI) tracking to be developed.

As a longer term measure, it is proposed to put in place a more sophisticated modelling tool that enables the road safety outcomes of different scenarios to be modelled across the network to inform decision making using a big data approach.

Further research and data is required to better understand how people are being seriously injured. Currently there is no national definition of what constitutes a serious injury. A consistent definition across Australian jurisdictions is critical to improve the measurement and reporting of serious injury crashes. Work is being done at the national level to match hospital records with police reported crash data. Reporting on crash data alone can result in under reporting of certain types of crashes (e.g. cyclist only crashes) whereas matching this with hospital data will provide a more complete picture of the severity and treatment of injuries.

Better data is needed to understand the problem and inform decisions relating to Aboriginal road safety, workplace road safety, fatigue and distraction, walking and cycling.

The National Data Hub will enable more targeted evidence-based interventions to prevent serious injuries and measure the effectiveness of those treatments. Consistent with the National Road Safety Strategy we will work with data custodians across sectors to create a framework to support a timely ongoing data series.³⁸

The importance of research and innovation for improved road safety outcomes is critical.

Key strategies are:

- 78** Working with key agencies and organisations to implement data linkages and processes;
- 79** Research and innovation is required for road safety to better understand current and emerging road safety issues and to develop countermeasures that are relevant in a local context;
- 80** Development of an accessible online road safety information portal providing accurate and timely information for the community, local councils, universities and others;
- 81** Development of more sophisticated analysis and modelling tools to identify what measures will have the greatest impact on road safety; and
- 82** Enabling provision of data via the national road safety data hub to build the national picture of road safety.

Links with other strategies

In developing this Strategy we have considered other strategic documents, including the:

- *National Road Safety Strategy 2021-2030*
- *20-Year State Infrastructure Strategy*
- *State Public Health Plan 2019-2024*
- *Railway Crossing Safety Strategy*
- *Closing the Gap 2021*
- *Game On: Getting South Australia Moving*
- *Vehicle SETUP 2020, and*
- *Heavy Vehicle Safety Strategy 2021-2025.*
- *National Serious Injury Strategy 2020-2030*
- *South Australian Government Climate Change Action Plan 2021 -2025*
- *South Australia's Electric Vehicle Action Plan*
- *National Level Crossing Safety Strategy for 2021-2030*

³⁸ [National Road Safety Strategy 2021-30 \(www.officeofroadsafety.gov.au\)](http://www.officeofroadsafety.gov.au). Consultation Draft February 2021

Measuring success

This Strategy will be supported by a robust monitoring and evaluation framework. This framework will identify how the actions are leading to change, have the agility and ability to review our actions and to thereby enable adjustments to our approach. Continual improvement will be critical to our success.

Core principles informing the monitoring and evaluation framework include:

- Intermediate measures to identify performance gaps and indicating system transformation;
- Indicators that reveal whether actions are effective;
- Ongoing development of new indicators over the life of the strategy;
- Indicators subject to periodic review and refinement where necessary;
- Transparency and monitoring of implementation; and
- Annual reporting.

Road Safety Performance Indicators for the Strategy will include:

- Outcome indicators including reductions in lives lost and serious injuries in regional and remote areas and metropolitan Adelaide and the CBD;
- Safety performance indicators, including the risk rating of high volume, high speed roads in our network; and
- The outputs delivered to improve the safety of our roads and road user.

The monitoring and evaluation framework aligned with this Strategy and associated Action Plans is separate to the Strategy. This will allow for refinement and periodic review of the indicators and for new indicators to be developed, and progress reports to be published.



Glossary

Autonomous vehicles

Automated vehicles are vehicles that include an automated driving system (ADS) that is capable of monitoring the driving environment and controlling the dynamic driving task (steering, acceleration and braking) with limited or no human input.

Distraction

Distracted driving refers to any activity that takes a driver's attention away from the task of driving safely.

Drugs

THC (Cannabis), Methylamphetamine or MDMA (Ecstasy) present in saliva or blood.

Fatigue

Driving when tired. There are a range of factors that cause fatigue, the four main causes are:

- lack of quality sleep;
- number of hours continuously awake;
- time of day driving when you would normally be sleeping (i.e. 1am-6am) or in the afternoon period (i.e. 2pm-4pm) when our biological time clock makes us feel tired;
- length of time performing the task; and
- sleeping disorders such as sleep apnoea.

Forgiving roads

Forgiving of road user errors and mistakes, ensuring that these do not lead to serious harm.

Heavy vehicle

Any vehicle over 4.5 tons. This includes the following types: rigid truck, semi-trailer, bus, b-double, mobile crane, low loader and road train.

High speed regional road

Roads in regional and remote South Australia where the speed limit is 100 km/h or 110 km/h.

Inappropriate speed

Speeds that are too fast for the conditions and are not necessarily above the speed limit.

Lives lost on our roads

A person who dies within 30 days of a crash as a result of injuries sustained in that crash.

Older road users

A person aged 70 years or above.

Road user

Everyone is a road user. Whether you drive, ride a motorbike, cycle or are a pedestrian or passenger.

Serious injury crash

A non-fatal crash in which at least one person is seriously injured.

Serious injury

A person who sustains injuries and is admitted to hospital for a minimum period of an overnight stay as a result of a road crash and who does not die as a result of those injuries within 30 days of the crash.

Shoulder

A sealed or unsealed area on the outside of the travel lanes of a road that has no kerb.

Younger road users

A person aged 16-24 years.

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