

DRAFT SOUTH AUSTRALIAN
ROAD SAFETY STRATEGY 2020
TOWARDS ZERO TOGETHER

May 2011

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INVITATION TO COMMENT

The Road Safety Advisory Council invites comments on the Draft South Australian Road Safety Strategy 2020 – *Towards Zero Together*. The strategy is an initiative of the Council whose role is to monitor road safety performance in South Australia and make recommendations to the Minister for Road Safety and the Government of South Australia for strategies and actions to reduce road trauma.

Comments close **Friday 10 June, 2011**.

Comments are welcome online at dtei.sa.gov.au/roadsafety or by mail to:

Draft Road Safety Strategy 2020 - Towards Zero Together
GPO Box 1533
Adelaide SA 5001



**Local Government Association
of South Australia**

Centre for
Automotive Safety Research



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TOWARDS ZERO TOGETHER

Our vision is that the whole South Australian community work together to address the deaths and serious injuries caused by everyday use of the roads, no matter the people or circumstances involved.

Targets 2011 to 2020

The targets for South Australia will meet the challenge of the draft national road safety strategy to reduce serious casualty trauma by at least 30% during the decade. This reduction represents the minimum improvement we can accept while recognising that we will strive to do better throughout the life of the strategy. On average between 2008 and 2010, there were 112 fatalities and 1126 serious injuries per year on South Australian roads. A 30% reduction target as set out in the draft national road safety strategy would provide a new target for South Australia of less than 80 fatalities, and less than 800 serious injuries by 2020.

The analysis undertaken for the draft national strategy suggests that it will take significant effort to achieve a 30% reduction in fatalities and serious injuries. Different mixes of intervention are possible, but road infrastructure, vehicle safety and speed management are the areas which have the greatest potential to significantly influence casualty reductions. Programs aimed at increasing driver behaviour compliance will also produce further improvements.

Three to four year action plans will be developed and published throughout the life of the strategy to set out the key actions that will be undertaken towards achieving the targets. One of the first actions will be to undertake a more precise analysis of what is required to achieve the road safety target that South Australia adopts.

Progress towards meeting the targets relating to deaths and serious injuries will be reported on a quarterly basis. A comprehensive monitoring framework will be developed that gives greater emphasis to the total burden of injury – for example, minor injuries account for approximately half of the annual Compulsory Third Party claim costs. The framework will also include a second level of indicators that can be used to more directly analyse changes in critical aspects of the safety of the road transport system. Key indicators differentiated by road and crash type, travel speed, vehicle safety technology, as well as behavioural measures such as drink driving and restraint wearing, will allow us to regularly assess the progress of our actions in these different areas. Reporting on the delivery of key programs will also be undertaken.

Setting The Scene

South Australia has benefitted from a significant and sustained reduction in road trauma over the last three decades. As we look towards the next decade, it is useful to see our progress in a broader context.

United Nations Decade of Action

Road trauma is a problem around the world. Over one million people die each year on roads and this is predicted to be two million by 2020 if urgent action isn't taken. Worldwide, road trauma is the leading cause of death for the 15 to 29 year age group and ranks in the top three for deaths of people between 4 and 44 years old.

The United Nations considers this situation to be unacceptable and declared 2011-2020 to be a decade of action for road safety. Eighty countries including Australia support this resolution, which has as its goal, to stabilise and then reduce the level of road traffic fatalities around the world. The aim is to reduce the 2020 predicted worldwide road toll by 50% through activities at the regional, national and global levels.

South Australia will support this decade of action by making South Australia safer and by providing an example for countries in our region with less advanced road transport systems than ours. We will also look for opportunities to participate in road safety activities which could have an international impact.

Draft National Road Safety Strategy 2011-2020

The draft National Road Safety Strategy 2011–2020 that was released for consultation put forward a target of a 30% reduction in deaths and serious injuries over the decade. The draft national strategy draws from the established safe systems approach to road safety, and challenges Australians to adopt a new vision of a safe road transport system and build a national culture of road safety.

Australia has a strong record in reducing road trauma which has largely been based on individual State and Territory and Commonwealth actions. However continued reduction in trauma will require better coordination, national agreement and cross fertilisation. In an increasingly mobile society, what happens in the rest of Australia affects South Australia and vice versa.

Nationally agreed actions are necessary to achieving our agreed safety goals during the next decade. South Australia will actively participate in the cooperative development of national licensing schemes for novice drivers, motorcyclists and older drivers.

The draft national strategy identified that funding for safety focussed infrastructure improvements needs to be significantly increased to help meet the crash reduction targets. South Australia will continue to play its part in infrastructure funding, and will need to lobby for increased Commonwealth funding for safety programs on national highways and local road networks as a vital contribution to meeting this goal.

There are also areas where Commonwealth leadership is required such as the regulation of vehicles through the development of new Australian Design Rules (ADRs). As vehicle technology continues to improve, the timely introduction of new ADRs is required to make sure maximum safety benefits are achieved as soon as possible.

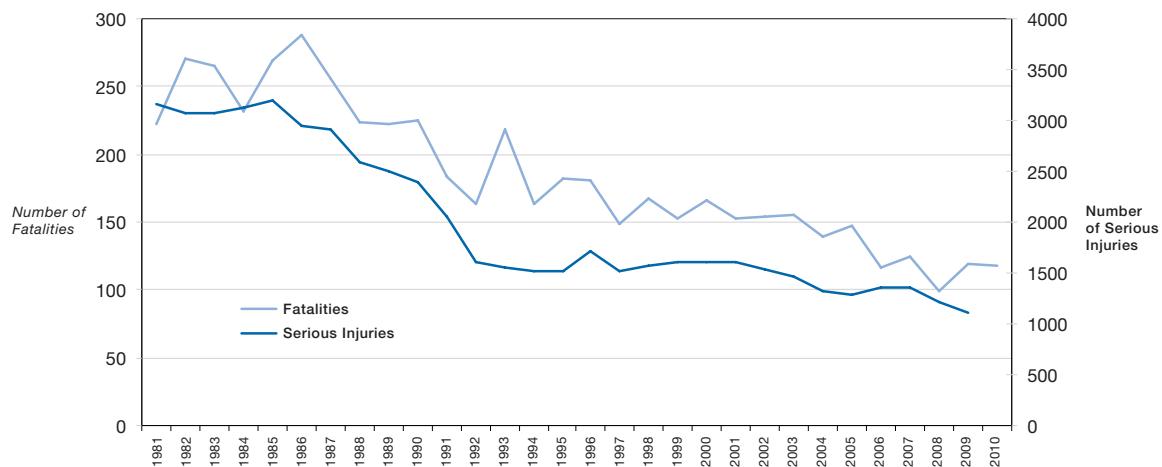
This strategy will complement and support the national strategy. It gives local expression to the vision and targets and discusses those areas where South Australia most needs to direct its efforts.

Road Safety In South Australia - History, Costs and Opportunities

South Australia has seen a substantial reduction in the number of deaths and serious injuries due to road crashes during the last 30 years. The average road toll for the years 1981-1983 was 252, this reduced to 155 for the period 2001-2003 and reduced to 112 for the period 2008-2010.

Similar reductions have been seen for serious injuries with an average of 3104 for 1981-1983 reducing to an average of 1126 for the years 2008-2010.

Figure 1 – Road Deaths and Serious Injuries, South Australia, 1981 - 2010

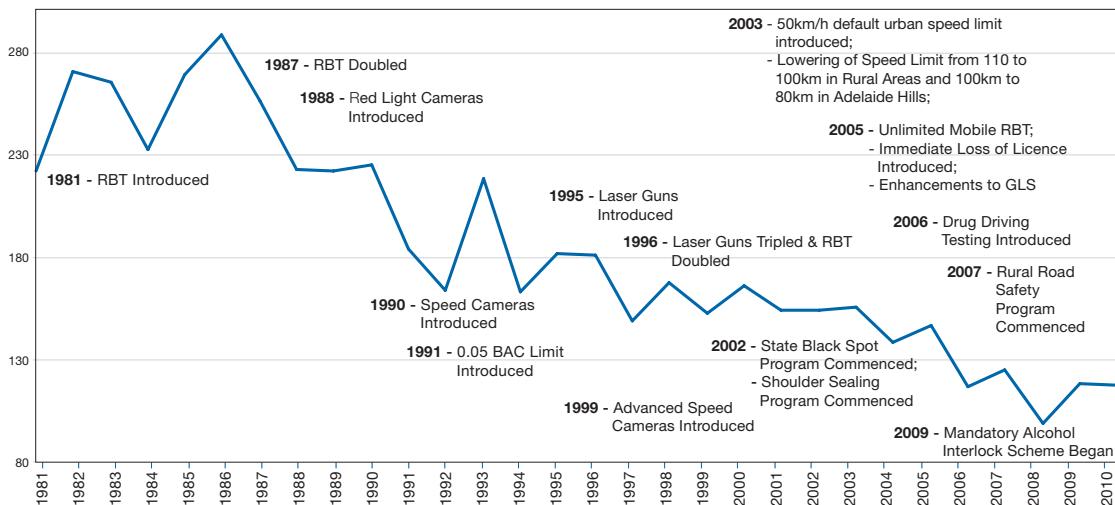


Many actions have contributed to these improvements including:

- > Black spot programs to improve sites with poor crash histories.
- > Infrastructure safety programs such as road shoulder sealing.
- > The introduction of a 50km/h default speed limit in urban areas.
- > Increased and better targeted enforcement.
- > A network of 80 safety cameras at high risk intersections.
- > Increased use of seatbelts and child restraints.
- > Static and mobile driver testing for alcohol and drugs.
- > Mandatory alcohol interlock program.
- > Increased numbers of 4 and 5 Star vehicles which provide better protection for occupants.
- > More vehicles fitted with Electronic Stability Control (ESC) to assist drivers to avoid crashes.
- > Graduated licensing schemes for young drivers.

Despite these improvements there is still much more to do with over 100 South Australians being killed and over 1000 seriously injured each year. These figures represent an enormous amount of grief, suffering and loss as well as a cost of about \$1 billion each year for the South Australian community.

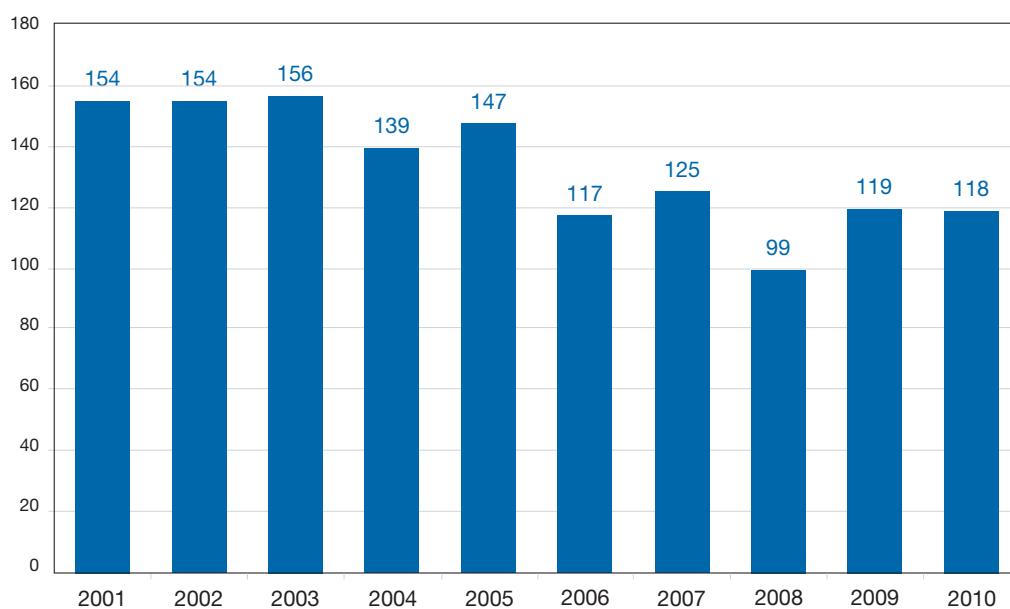
Figure 2 – Fatalities with Major Initiatives, South Australia, 1981 - 2010



Predicting the Future

Predicting the future number of road crashes is difficult to do with any kind of precision. The long-term trend in fatalities and serious injuries has been downward for 30 years. These trends suggest that fewer people should die as a result of being involved in road crashes into the future. However, the recent past would suggest that there are no guarantees – road crash statistics do not change in an orderly way.

Figure 3 – Fatalities, South Australia, 2001 – 2010



In the seven years from 1997 to 2003, South Australia recorded on average 157 deaths per year, with almost no trend downward. This was followed by steep declines from 2003 to 2008 to an average of 112 deaths per year from 2008 to 2010. This period coincided with the introduction of some significant new road safety initiatives.

Evidence-based, system-wide changes to speed limits reduced vehicle speeds and crashes that, together with other changes to the system, reduced road deaths by over 20% over the period of the last strategy. Reduced crashes have brought other significant benefits to the community through reduced injury, property damage costs and reduced pain and suffering.

We may be confident that the initiatives introduced in the last strategy will continue to deliver benefits for years to come, but the rapid declines associated with these initiatives will lessen without further effective initiatives being introduced.

While general improvements to vehicles will deliver some reduction, substantial initiatives that will significantly reduce crash risks to many road users in the community will be required.

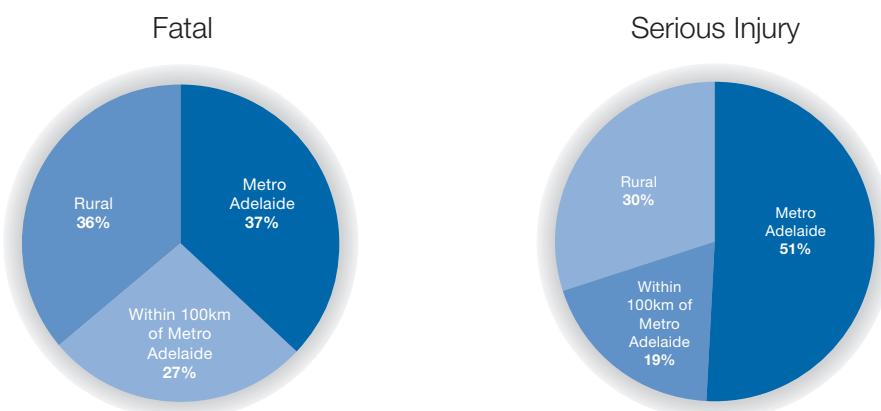
The changes required will need to be as effective as the changes successfully made during the period of the last strategy.

We will not reach our target unless we are willing to work together and adopt new approaches to reducing road trauma.

Where And When Crashes Happen

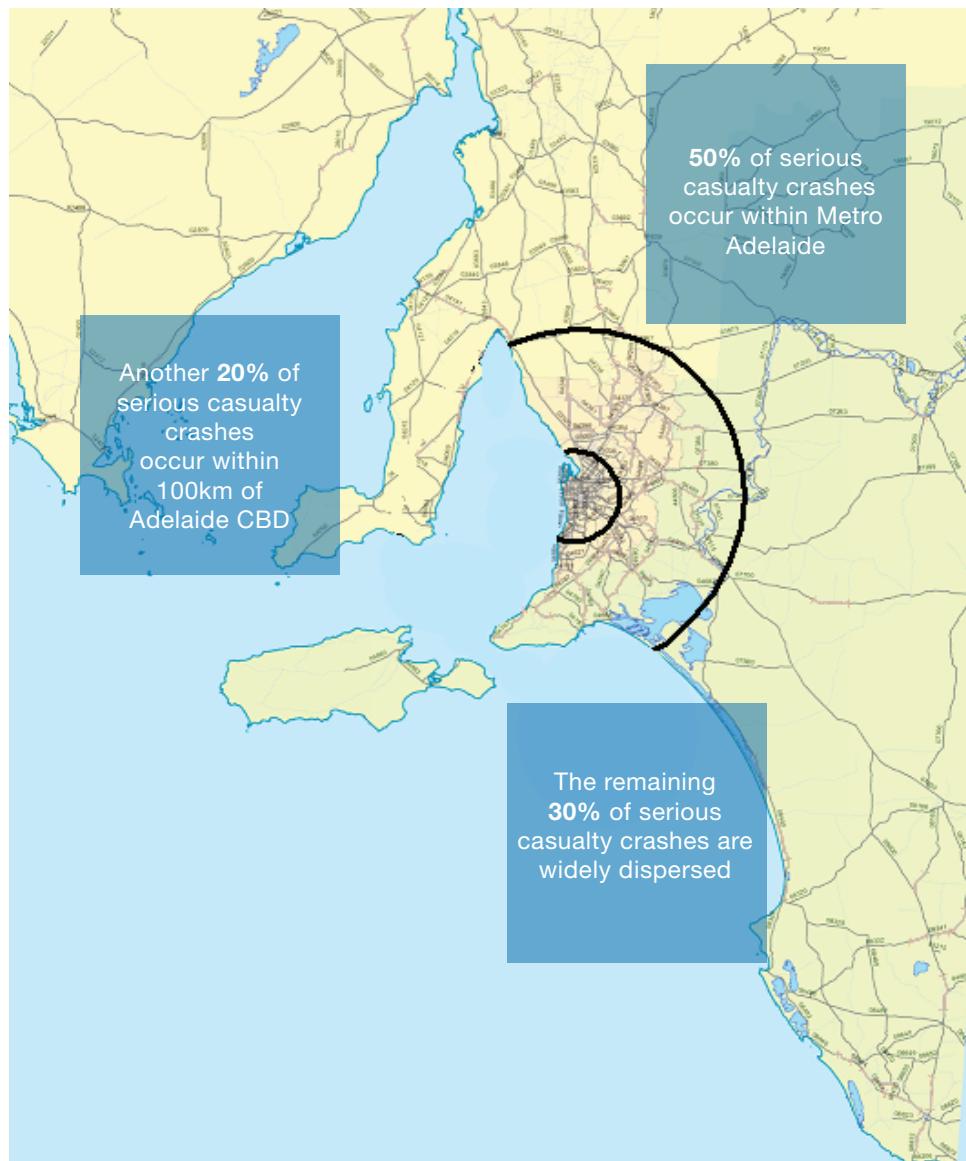
Road safety is a state-wide challenge. Over half of the serious injury crashes and 37 percent of fatal crashes occur in metropolitan Adelaide.

Figure 4 – Location of Fatal & Serious Injury Crashes, South Australia, 2008 – 2010



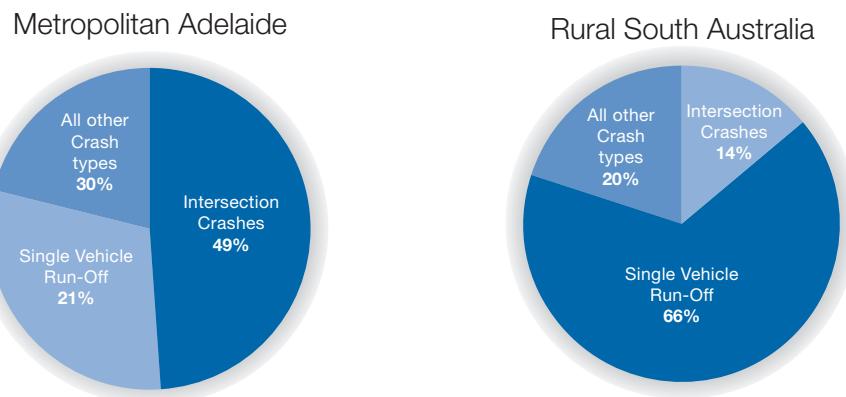
The remainder are spread throughout the State with a particular area of concern being the area outside metropolitan Adelaide, but within 100km of Adelaide, which accounts for 27% of fatal crashes and 19% of serious injury crashes. 29% of all fatalities also occur in this area.

Figure 5 – Map of Location of Serious Casualty Crashes (Fatal & Serious Injury), South Australia, 2008-2010



Crashes happen at all times of day. Just over half of all fatalities and about 25% of all serious injuries occur in the hours of darkness. A large number of crashes occur at intersections in both urban and rural areas. For minor injuries the most common crash type is a rear end crash.

Figure 6 – Serious Casualty Crashes, By Crash Type, South Australia, 2008-2010



Who is Involved in Crashes

48% of people killed or seriously injured in crashes are drivers and another 22% are motor vehicle passengers. Pedestrians, cyclists and motorcyclists make up the remaining 30%.

Figure 7 – User Type In Serious Casualty Crashes, South Australia, 2008-2010

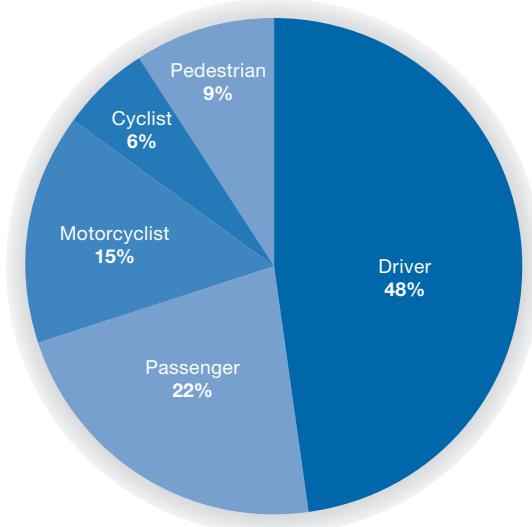
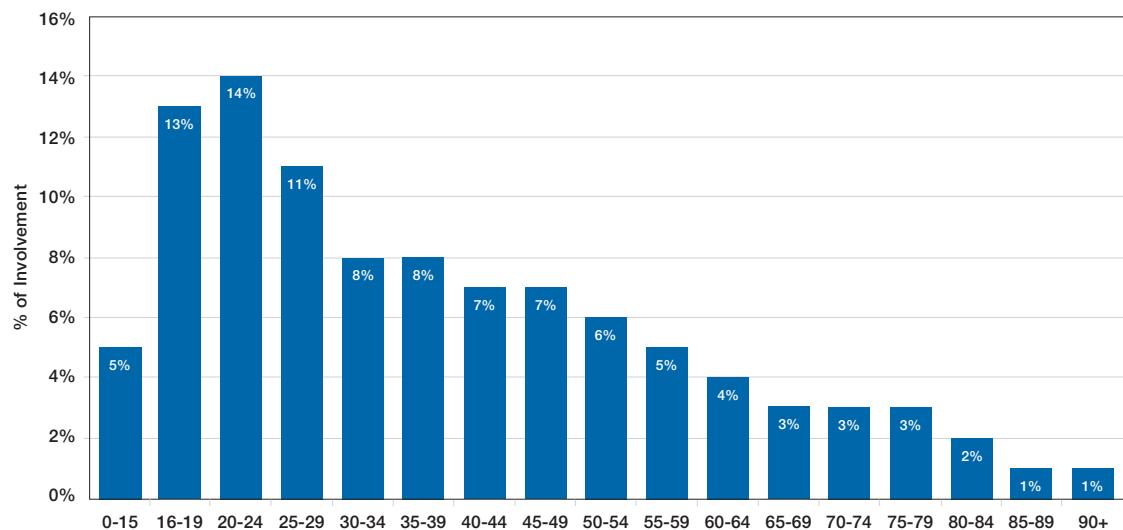


Figure 8 –Serious Casualties By Age Group, South Australia, 2008-2010



Road users aged 24 years or younger account for approximately 34% of those killed and 31% of those seriously injured.

Other important factors are alcohol and the use of seatbelts. On average, between 2008-2010, 34% of fatally injured drivers and riders had a BAC over 0.05 and 37% of vehicle occupants killed were not wearing a restraint. Fatigue also plays a major role in crashes but the extent of the problem is hard to quantify. However, research has indicated that between 15% and 30% of drivers involved in crashes were suffering from fatigue.

Why This New Approach

This strategy presents the view that road deaths and injuries are not inevitable and society has a responsibility to prevent them.

Road safety is a community issue and the strategy includes roles and responsibilities for everyone. It sets direction for a change in culture. A culture in which fatalities and serious injuries on our roads are not accepted as inevitable, and which strives to avoid them occurring. This change in culture includes every driver, every passenger, every pedestrian, every cyclist, every motorcyclist, every truck or delivery driver, every bus or taxi driver, every individual responding appropriately to safety rules and their ongoing enforcement. This change in culture also includes each organisation and part of society. Those engaged in building and managing roads have a responsibility to provide a safe network, manufacturers have a responsibility to design and market the highest standard of safety in their vehicles, organisations and businesses purchasing vehicles have a responsibility to build a safe vehicle fleet, road users have a responsibility to comply with the law, and enforcement agencies have a responsibility to increase compliance. Most importantly the community has the responsibility to demand safe travel on our roads and support the actions that will make a difference.

There is a belief in the community that road fatalities and serious injuries are the result of risk taking or extreme behaviour, and these crashes can receive extensive media coverage. However, research shows that in South Australia over half of all fatal crashes, and 90% of injury crashes, are the result of mistakes or common lapses in judgement. We want a system that minimises injuries and their severity in the event of road crashes.

This approach adopts a holistic view of the road transport system and the interaction between people, vehicles and the road environment. It recognises that people will always make mistakes and poor choices, and may always have road crashes, but seeks to ensure that those actions do not result in a fatality or serious injury. The Safe System approach to road safety is built on several key principles:

- > Human Factors – no matter how well we are trained and educated about responsible road use, people make mistakes, and the road transport system needs to accommodate this.
- > Human Frailty – the finite capacity of the human body to withstand physical force before a serious injury or fatality can be expected is a core system design consideration.
- > Forgiving Systems – roads that we travel on, vehicles we travel in, speeds we travel at, and communities we live in, need to be more forgiving of human error.
- > Shared Responsibility – everyone has a responsibility to use the road safely and organisations, businesses and communities have a responsibility to design, manage and encourage safe use of the road transport system.

We have made major gains in reducing road trauma using our traditional approach but it will not take us the rest of the journey. A new approach is necessary if we are to continue to make gains and move towards a truly safe road system. We will have to keep doing all the things we have done so far but also implement actions which put safety at the centre of all our transport choices.

A new approach is needed to fully recognise the road environment as the essential building block for a safe road transport system. Our new approach will seek to increase safety priorities in land use and transport planning decisions by building connections with the planning process. An important step will be to increase the involvement of local government in building a safe system.

A major opportunity for integrating safety into planning is the development of the 30 Year Plan for Greater Adelaide. Liveability and sustainability are priorities for the 30 Year Plan which seeks to reduce the dependence of Adelaide on the private motor vehicle. It will be important to make sure that implementation of the plan is achieved so that the potential safety benefits of changed travel patterns can be realised.

In the short term the major opportunity for reducing road trauma is a reduction in travel speeds. An important step in making sure speeds are appropriate is to ensure the road environment provides the right signals to road users about the appropriate travel speed.

A new approach is needed to harness the major technological benefits that are on offer to improve road safety. By accepting that humans are fallible, we encourage technology solutions that can dramatically reduce the chances of vehicle-to-vehicle, vehicle to infrastructure and vehicle to pedestrian collisions and improve the quality and timeliness of safety information to road users. Advances in technology will also increase the effectiveness of enforcement activity when safety standards are breached.

More significantly, a technology perspective on safety opens up opportunity to further explore the latent capacity within modern vehicles to address longstanding behavioural issues, such as drink driving, as well as safety communications between vehicles, and between vehicles and roads.

A safe system approach will require us to take advantage of known successful technologies and be flexible enough to incorporate new developments as they occur.

A new approach is also required to encourage many different organisations to integrate road safety into their priorities and activities. An important part of this strategy is to build the partnerships and connections necessary to make this happen. Within government, the existing partnership between the Department for Transport, Energy and Infrastructure, the South Australia Police and the Motor Accident Commission will continue and be strengthened, as will the important roles of the health, education, research and local government sectors.

The strategy will also look for new opportunities and new partners to address road safety from as many directions as possible. Private organisations all have a major role to play in building a safe system. A priority of this strategy for example will be to form partnerships with those organisations with large fleets of vehicles to find ways to prioritise safety in vehicle purchasing.

A new international standard under development (ISO 39001 Road Traffic Safety Management) is expected to assist organisations to build road safety plans suitable for their business.

What We Will Do

The strategy sets a direction that will have a significant impact on road trauma in South Australia over the next 10 years. The strategy will be supported by detailed action plans covering shorter time periods within the life of the strategy, the four key intervention areas where action will be required – safer roads, safer speeds, safer vehicles and safer people – and the management activities to support them.

SAFER ROADS

Investment in infrastructure can be highly effective in reducing trauma. New road construction and safety focussed retrofits is expensive, but when well planned, designed and managed can provide lasting safety benefits to road users. Research in Victoria and South Australia has shown that expenditure over the length of rural roads can produce crash savings with a value at least 10 times the cost of the infrastructure and even greater benefits can be achieved for treatments at specific sites.

Safer road infrastructure is seen in a strongly positive light by road users and the community in general, and understanding is growing about the most important safety treatments such as roadside hazard management. The Australian Road Assessment Program (AusRAP), part of an international program developed by automobile clubs, takes this further in the form of consumer advocacy which rates the safety of Australian roads on behalf of road users and is communicated in an easy to understand star rating system. It is important for the community to understand where most road safety gains can be made and to support improvements in these areas.

Planning

A safe road transport system starts with better planning. Urban planning decisions have the potential to influence how the road network is used and what infrastructure investments are required. Traditionally decisions about urban planning and road safety have been made independently, and we need to make sure that transport infrastructure is provided which supports both planning and safety objectives. This will require a partnership between all levels of Government.

Liveability and sustainability are becoming more important to the community and are priorities for the 30 Year Plan for Greater Adelaide. This plan seeks to change urban form and build a walking and cycling friendly city served by increased and better public transport services, with reduced dependence on the private motor vehicle.

The changes to Adelaide envisaged in the 30 Year Plan (which include new major projects to improve freight efficiency, increase public transport coverage and improve access for people walking and cycling) have the potential to produce significant road safety benefits. These benefits could be further increased if road safety criteria were explicitly included in the planning process so that safe road environments are provided for pedestrians, cyclists, light and heavy vehicles.

It is not always clear to the road user that different roads in South Australia's road network perform different functions. Applying a clear, functional hierarchy of roads, that is more deliberately articulated to the community would assist road users to understand the road environment. Figure 9 shows the strategic and primary freight corridors in South Australia.

In the long term, for example, greater consistency in the road network will support better compliance with speed limits, which are ideally set to be consistent with the function and design standard of the road. During the life of the strategy we will move closer to consistent speed limits for roads with similar functions, design standards and access management.

Investment

Infrastructure investment is expensive and it is important that funding is applied where it will achieve the most benefits. South Australia will continue to improve its methods for developing and targeting effective infrastructure programs, including regular safety assessments and audits of the network, and monitoring of the effectiveness of new programs.

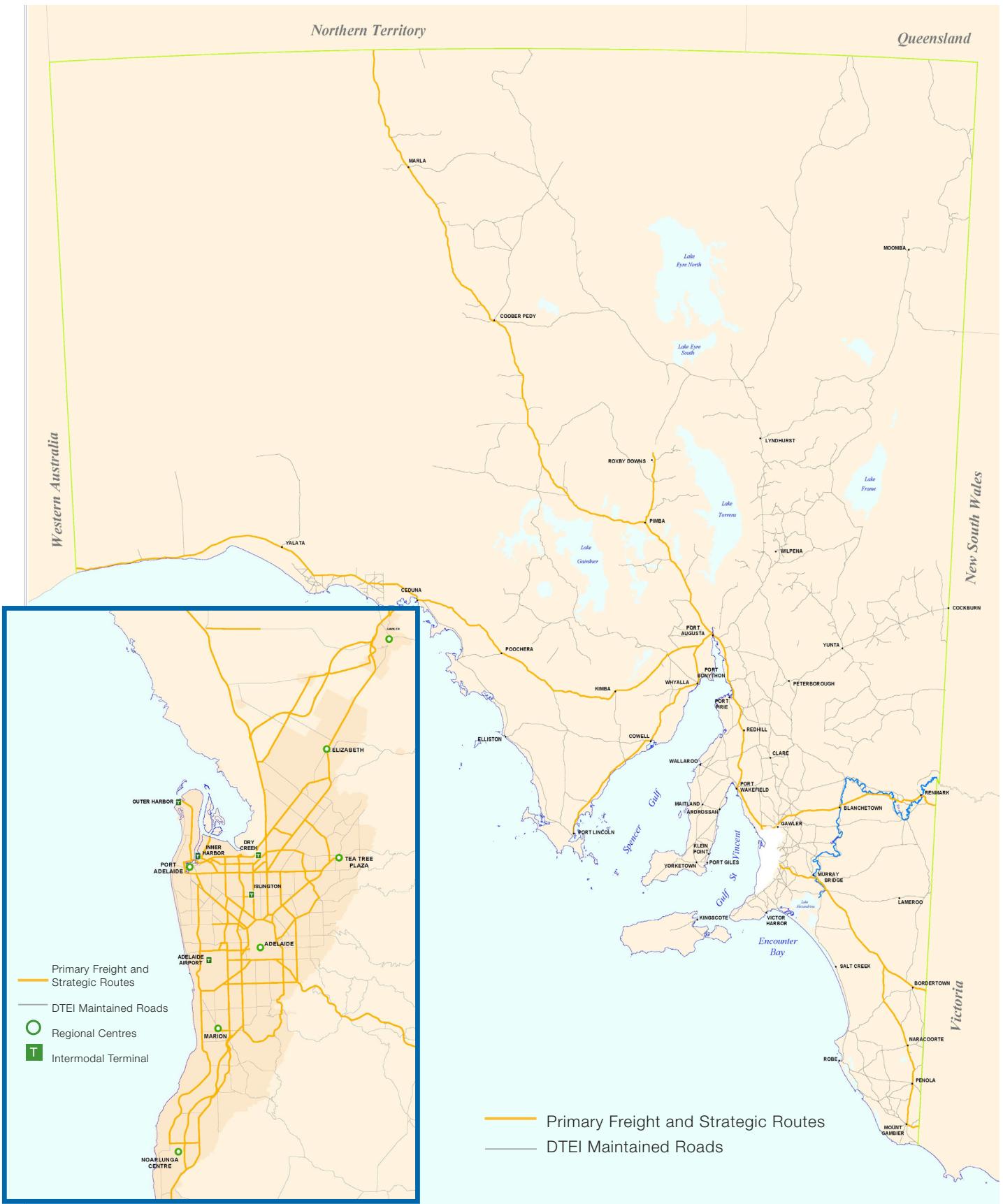
Economic assessment of programs is also important, and the productivity focussed measures that are currently used do not reflect the true value that the community places on avoiding the pain and suffering that comes with deaths and serious injuries on the road. South Australia will move towards a new holistic approach to valuing safety improvements, as reflected in the Draft National Road Safety Strategy 2011-2020, and applied in many other developed economies.

More investment in safety focussed improvement programs will be needed to support achievement of the new safety targets, and the dedication of fine revenue to safety programs in South Australia will continue to support this.

Funding programs are also essential to allow local government as a significant road network owner to make major progress in developing safe systems. South Australia will work with the Commonwealth to seek a mechanism for local government to access increased safety funding.

Irrespective of the level of investment, the greatest share will be allocated to where the greatest potential trauma reductions are possible. The investment will also be focussed on the most effective treatments that can be applied to the key crash types, consistent with safe system principles.

Figure 9 - Strategic and Primary Freight Corridors, South Australia



Run off the road crashes

Most South Australian rural roads are two way, two lane roads with unforgiving roadsides. 66% of serious casualty crashes on rural roads involve a vehicle running off the road and either hitting a fixed object or rolling over. Each year approximately 25 people die when their vehicle strikes a tree after leaving a rural road.

There are a number of measures which have been proven to reduce the trauma resulting from run off the road crashes.

- > Sealed shoulders and audio tactile edge lines reduce the risk of vehicles leaving the roadway and has already been successfully used in South Australia.
- > Widening sealed shoulders and traffic lanes at curves will reduce the number of vehicles leaving the road at these higher risk locations.
- > Clearing areas next to the road reduces the risk of a vehicle striking a fixed object and also the severity of collisions when they do occur.
- > Safety barriers next to the road are a highly effective way of preventing vehicles from striking roadside objects.

Priority will be given to treating those sections of the road network where most run off the road crashes occur. Giving initial priority to treating curved sections of roads has been shown to provide higher risk reductions for each dollar invested.

Treatments which reduce run off road crashes will also reduce head on crashes, which often result from a loss of control situation when vehicles leave the road to the left, over-correct and enter the opposing traffic lane. This also means that median treatments, including wire rope barriers, wide painted medians and audio tactile lines have a significant role to play.

Run off road crashes, particularly those involving a fixed object are also a major issue in urban areas where the main types of objects struck are trees and stobie poles. Stobie poles are common throughout Adelaide and are unforgiving when struck by an out of control vehicle.

A program exists to replace stobie poles with underground power but this is expensive. As part of this strategy we will look for initiatives to increase the importance of safety in setting a pole removal program.

Intersections

Over 50% of casualty crashes in urban areas occur at intersections. One of the most difficult tasks undertaken by drivers is to judge gaps in the opposing traffic when turning right or entering a major road from a local road. Effective treatments will reduce the frequency at which drivers need to make these individual judgements.

Appropriate treatments for urban intersections can be complex to develop and implement. The best site specific mix is dependant on the type and volume of traffic and factors such as the space available for redesign and the land use around the intersection. A program of intersection treatments will be developed including:

- > The provision of roundabouts at suitable locations.
- > Working with local government to reduce uncontrolled right turns including increasing the number of fully controlled right turns at signalised intersections.
- > Installing engineering treatments to reduce speed at intersections, particularly in areas with high numbers of people walking and cycling.

In some cases the most appropriate treatment to improve safety may be to reduce speed through the intersection. 27% of rural casualty crashes also occur at intersections and these are distributed throughout the many intersections in the rural area. The most effective solution is often the installation of a roundabout.

As part of this strategy we will develop a prioritised program for the treatment of rural intersections.

Vulnerable Road Users

In urban areas provision for people walking and cycling is important and in some locations these modes should be given priority over motorised traffic when designing the road network. The strategy will include infrastructure initiatives to address the particular needs of vulnerable road users. Initiatives will include the provision of safe and separate facilities for people walking and cycling and the provision of a safe speed environment when separation is not possible. It is important to recognise the different needs of pedestrians and cyclists and that it will often be necessary to provide different infrastructure solutions.

Motorcyclists are also vulnerable to greater injury when involved in a crash and high use motorcycle routes will be identified and the feasibility of removing hazards assessed. The possibility will be explored of funding this infrastructure investment through a motorcycle registration levy as suggested in the draft national strategy.

Key Strategies for Safer Roads

- > Integrate safety into all stages of urban / rural and transport /corridor planning processes.
- > Form stronger partnerships between State and Local Government to apply safe system principles when improving the local road network.
- > Target infrastructure safety investment with the most effective safe system treatments at locations with the highest volumes of crashes.

SAFER SPEEDS

An overall framework for safe and credible speeds requires a stronger functional approach to management of the road network.

National and international research has consistently shown that reductions in travel speeds save lives and injuries, and these benefits have been clearly demonstrated on South Australian roads. The reduction in urban speed limits to 50km/h produced a reduction of over 20% in urban crashes. Other targeted speed limit reductions, such as in parts of the Adelaide Hills where the speed limit was reduced to 80km/h and selected 110km/h rural roads with a lower limit of 100km/h, have produced similar results.

Reductions in average travel speed across the network would produce significant road safety benefits and is the most effective and swift way to reduce road trauma. A reduction of 5km/h in average travel speed would reduce rural casualty crashes by about 30% and about 25% in urban crashes and even a modest reduction of 3km/h in average travel speed across the network is capable of generating a 15% overall reduction in casualties.

Travel speeds have consequences for crash risk, and also for injury severity when a crash occurs. Biomechanical research into the capacity of the human body to absorb crash energy without significant harm suggests that safe travel speeds would ideally be less than 30km/h in areas where conflict with people walking and cycling is possible, less than 50km/h where side impacts with rigid objects are possible and less than 70km/h on roads where head on collisions are possible. This illustrates the need to address speed within a functional approach to road management.

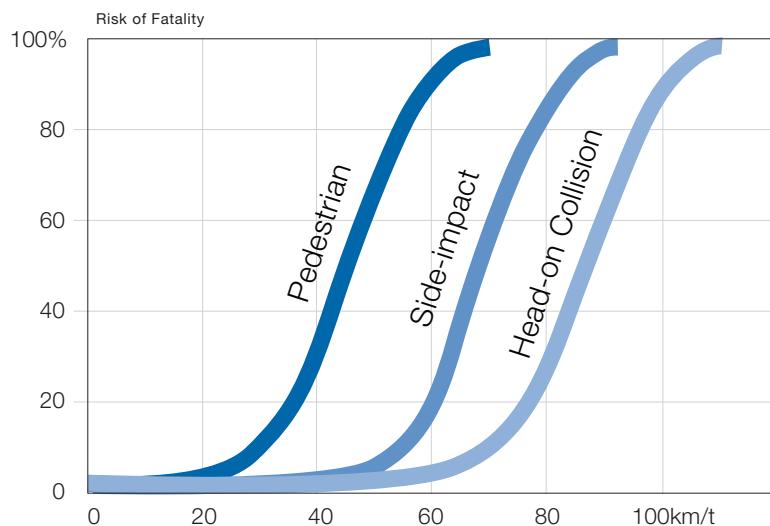
Reductions in speed and speed limits can also be the most publicly contentious way to reduce road trauma. Sustained improvement in speed management will only occur with the support of the community and other stakeholders, and the adoption of a total change management approach. It will be vital to explain the importance of speed management to a safe system and the community gains that can be achieved from even small reductions in travelling speed. This message needs to be heard consistently from as many sources as possible, in particular from local government and community groups.

The wider benefits of reducing speeds, including better fuel consumption, lower greenhouse gas emissions, less traffic noise, and better support for active travel modes, contribute to South Australia's environmental, sustainability, and wellbeing objectives. Increasing understanding of the role of speed, setting appropriate speed limits and improving compliance with all speed limits are all important parts of this strategy.

Appropriate Speed Limits

International work has shown that to achieve our vision, speed limits need to take into account potential crashes and the likely outcomes of these crashes based on the impact of forces on the human body. Investing in a safer road network that achieves safe and credible speed limits and helps remove these conflicts, could be suitably illustrated through a range of urban and rural road demonstration projects.

Figure 11 – Collision–Force and Risk Of Fatality



The default speed limit in South Australia is 50 km/h in urban areas and 100 km/h in rural areas. Speed enforcement and speed limit reductions will be targeted to roads and road sections with high crash rates and where land-use and infrastructure planning does not justify a limit above the default.

Demonstration projects for retrofitting safe and credible speed limits will be progressed in rural and metropolitan areas, taking into account:

- > sustainability and liveability aims of the 30 Year Plan for Greater Adelaide, and the need to support safe movement for pedestrians and cyclists which may include reducing speeds in urban areas where there are large concentrations of people walking and cycling.
- > the concentration of trauma in rural areas close to Adelaide, including fringe areas undergoing changes in traffic volumes and demographics, such as the collaborative approach to speed limit reductions taken by the Onkaparinga, Adelaide Hills and Barossa Council areas.
- > increased understanding of the impact of a rural road network of two-way two lane roads with speed limits of 110km/h, which is out of step with the most successful road safety countries and where major benefits could be achieved from reduced speed limits.

Reducing speed limits has been shown to be a successful safety countermeasure but is sometimes of concern to the community through an overestimation of related costs and an underestimation of related benefits. Travelling at 100km/h uses on average 8% less fuel than travelling at 110km/h which equates to paying about 10c per litre extra for fuel when travelling at 110km/h. The safety benefits of small speed reductions are not intuitively obvious and more public information needs to be provided to explain the extent of the benefits possible.

Compliance With Speed Limits

Whatever the speed limit, improved compliance with the limit plays a vital role in improving the safety of all road users. Enforcement is vital in achieving compliance with speed limits, and will continue to play a key role throughout the life of the strategy.

The current network of fixed safety cameras in urban areas will continue to expand, including greater attention given to mid-block cameras. These traditional automated enforcement approaches will continue to be supplemented by targeted deployment of SAPOL personnel operating with a range of technologies including mobile cameras and mobile radars at their disposal.

New technologies have the potential to increase the range and effectiveness of enforcement resources. Point-to-point speed cameras that measure the speeds of all vehicles between relatively distant points on the road are more effective than one-point speed cameras. They can monitor all vehicles over a long section of road continuously and are considered fairer as they do not penalise momentary breaches of the speed limit.

Focusing on major regional and interstate routes, the development of a comprehensive point-to-point speed enforcement system will begin, with an initial focus on the key routes into and out of Adelaide.

The penalties in place to deter users who may otherwise flout the law and create unacceptable risk to others are a critical part of the mix of speed compliance interventions. The current mix of demerit points and fines for speeding offences does not match the fundamental safety risk associated with the offence. Drink driving penalties are comparatively much higher.

While significant safety benefits will be achieved by reducing the speed of the large number of vehicles travelling within 10km/h of the speed limit, a change in penalties will mean considerably more severe consequences for the much smaller number of offenders travelling at very high speeds.

Over the life of this strategy, it is expected that new vehicle technologies will begin to provide the ultimate support for the vast bulk of drivers who have no intention of breaking the law but may inadvertently travel above the speed limit. Intelligent speed adaptation is a proven technology that has been trialled in Australia and around the world and has been shown to provide strong safety benefits.

Focusing initially on demonstration and voluntary take-up, a proposal will be investigated for a digital speed map of South Australia that provides verifiable real-time in-vehicle information to drivers about the speed limit at any point in the network. Once established and operational in South Australia, this technology could become a useful support over time for all drivers.

Key Strategies for Safer Speeds

- > Align speed limits to the function, standard and use of the road and apply consistently across the State.
- > Strengthen public information explaining the impact of speed and speed limits on crashes.
- > Target speed limit reductions for roads according to crash rates and a functional road hierarchy.
- > Increase the use of new technologies to boost speed limit compliance.
- > Increase the penalties for speeding to better match the risk posed and comparability with drink driving.

SAFER VEHICLES

Improvements in vehicle safety are important contributors to reducing trauma. These improvements help drivers to avoid crashes, and protect occupants and other road users when crashes happen. Vehicle technology is being developed at a rapid rate and new technologies will emerge during the life of this strategy. However, the average age of the South Australian fleet is just over 11 years so it takes considerable time for new technologies to be available to the majority of road users.

A major aim of this strategy is to develop methods to accelerate the take up of proven safety technologies into the vehicle fleet. Some technologies such as Intelligent Speed Adaptation (ISA) and alcohol interlocks can be retrofitted to existing vehicles so a quicker realisation of benefits from these devices may be possible but other important technologies such as stability control and occupant protection measures are not suitable for retrofitting.

New vehicles are becoming safer but there is evidence that those drivers at higher risk, particularly novice drivers, are more likely to drive older cars. One challenge is to find ways for our highest risk drivers to be driving the safest cars.

Over the next ten years, many of the innovations in new vehicles will become more commonplace in vehicles driven by many South Australians. For example, more than 50 percent of vehicles will have electronic stability control and about the same proportion will have a 5-star safety rating (based on the standards of today). Because of the slow turnover of vehicles, many of the advances in new vehicles made in the past decade are only now beginning to become commonplace. Therefore, part of the benefit of newer vehicles will come from momentum already in the vehicle system.

Consumer Driven Safety

The safety of new vehicles varies considerably and if buyers are to choose safer cars they need reliable, understandable and accessible information. The Australian New Car Assessment Program (ANCAP) assesses the crashworthiness and safety features of new vehicles and assigns stars based on safety performance.

The Used Car Safety Rating (UCSR) program provides real world data about the safety of different vehicles in the used market. These star rating programs allow all buyers to make informed decisions and encourage levels of safety that exceed those required by regulation.

Taking every opportunity to promote and explain ANCAP and UCSR results is an important part of this strategy. Consumer support and demand has led to this becoming a de-facto standard for many manufacturers.

Another important part of this strategy will be to continue to promote and explain ANCAP and UCSR results. South Australia will continue to contribute to the development and improvement of the program as more vehicle safety systems become available over the next 10 years.

We will also look for new ways to encourage manufacturers to ensure that vehicles selling in high volumes are of the highest standard.

A large proportion of the private vehicles now travelling on South Australian roads were first registered as part of a private or government fleet. Encouraging fleet buyers to adopt safe buying practices will have strong flow on benefits and over time improve vehicle safety in the total fleet. There are a number of possible approaches for influencing fleet buyers which need to be investigated. These approaches include provision of better information, public recognition for “safe fleets”, financial incentives and incorporation into occupational health and safety requirements. Consultation will be carried out with fleet buyers to identify which strategies will be the most practical and effective.

New technologies

There are new technologies available which provide information to the vehicle and driver about road and traffic conditions, such as ISA. These technologies rely on vehicle-to-infrastructure and vehicle-to-vehicle communication. Providing the necessary digital mapping and fixed technology to allow the deployment of these technologies will be part of this strategy.

There are currently important emerging technologies which research has shown to have the potential to significantly reduce road trauma. The best example in 2011 is frontal collision avoidance technology, which allows the vehicle to reduce speed so as to avoid a collision or reduce its severity. Accelerating its introduction into the fleet would generate further injury savings.

The frontal design of vehicles can have a major effect on the severity of injuries to pedestrians. ANCAP tests the pedestrian friendliness of vehicles, but while the ANCAP star rating for occupant protection has improved considerably there has been little change in vehicle safety ratings for pedestrian collisions in the same period. South Australia is well placed to explain and promote the importance of the pedestrian rating as the relevant crash testing is conducted in Adelaide. A known risk to pedestrians is the widespread use of bull bars in urban areas. Ways to discourage the unnecessary fitting of bull bars will be explored as part of this strategy.

Another example is Anti-Lock Braking Systems (ABS) on motorcycles, which have been shown to improve the safety of motorcycles and reduce out of control crashes. Mandating ABS would be possible for inexperienced motorcyclists who are currently restricted to a limited range of vehicles and would reduce crashes for this group. Mandating ABS for all new motorcycles would be an even more significant step.

New vehicle technologies may provide opportunities to modify driver behaviour and enhance enforcement. Alcohol interlocks are already in use and there is potential in the future to use speed-limiting ISA devices to deal with recidivist offenders. Further appropriate technologies may be developed during the life of the strategy.

The health sector plays a major role in improving road safety. Timely and effective post crash care is clearly vital and cooperation is needed between health, road designers and vehicle regulators to ensure advantage is taken of new technologies which allow more rapid and accurate reporting and locating of crashes.

The Draft National Road Safety Strategy 2011-2020 includes a number of vehicle related initiatives including extending ANCAP, streamlining the vehicle regulation system and strengthening vehicle regulations for heavy vehicles and motorcycles. South Australia will actively support these initiatives.

Key Strategies for Safer Vehicles

- > Promote adoption of safest vehicle fleet buying policies by public and private fleet owners.
- > Continue to support and promote ANCAP and UCSR in cooperation with other national initiatives, including the promotion of pedestrian safety initiatives.
- > Accelerate the introduction of a range of new vehicle technologies such as frontal collision avoidance and intelligent speed adaptation.

SAFER PEOPLE

Influencing the behaviour of road users is critical to prevent death and serious injury on our roads. At an individual level, road users need to comply with the road rules, remain alert and safety conscious, and accept that continual improvement in their behaviour and the behaviour of others is critically important to achieve improvement in road safety. At a societal level, a culture of road safety in the community is required where it is not accepted as inevitable that loss of life and injury on the road will occur, and where the cost of making significant improvement in safety is accepted.

While progress has been made there are still a number of key priority areas that require addressing in order to further reduce road trauma. Reducing the incidence of driving while impaired by alcohol, drugs or fatigue, addressing the small number of vehicle occupants who do not use restraints and providing greater protection for young drivers whilst they are at their most vulnerable stage of driving experience by limiting their exposure and encouraging the use of safer vehicles.

Graduated Licensing Schemes

Good practice and safe experience for young drivers will continue to be important, but research indicates that maturity does not stop being an issue for the driving population until the mid 20s, which is why government agencies do not promote driver licensing in high school years. Licensing age, consumption of alcohol, excess speed, carriage of passengers, and driving at night are all factors which significantly increase the risks for young drivers and need to be considered and discussed. Addressing these factors for young drivers will have a substantially positive effect on road safety, and helping young people to drive in the safest way possible can set the scene for a lifetime of safe driving behaviours.

Graduated licensing schemes (GLS) have proved an effective way of gradually introducing young drivers to the network and helping them to gain experience. Further enhancements to the GLS will be considered as part of this strategy especially those that have proven benefits and provide for restrictions that are progressively lifted as experience and maturity is gained. South Australia will also strongly support any national moves to improve the consistency and safety of graduated licensing schemes. We will also continue to increase and improve educational support for young people who enter the licensing system. This will leverage off the major improvements to web based licensing information and continue to utilise new media options that give the best chance of engaging young people.

GLS is also an effective measure for motorcyclists. Current licensing requires new motorcyclists to undertake training and restricts them to certain types of motorcycles while gaining experience. Measures to strengthen motorcycle licensing will be considered.

Alcohol and Drugs

Impairment due to alcohol and drugs continues to be a major contributor to death and serious injury with on average 34% of drivers and riders killed recording BAC levels above the legal limit. Research shows that with every increase of 0.05 above zero in BAC level doubles the risk of being involved in a casualty crash.

The majority of driver and rider fatalities that test positive to an illegal BAC are more than three times the legal limit.

Reducing the involvement of alcohol in crashes will need to be further addressed through strong enforcement, together with public education and a penalty regime that sends a clear message to drivers/riders about the severity of drinking and driving.

The increased use of technological solutions including the use of alcohol ignition interlocks will need to be further explored as a mechanism for recidivist offenders who are not responsive to mainstream deterrence methods. In the later years of this strategy, vehicle technology and consumer interest may have developed so that passive alcohol interlocks are fitted into new cars. Encouraging this development may be the most effective long-term measure to reduce drink driving.

There is a range of evidence linking certain illegal and prescription drugs to increased crash risk and South Australia currently undertakes a higher rate of random testing for drugs than any other jurisdiction. Maintaining this level will be important, as will ongoing monitoring and increasing our understanding of the problem.

Restraint Use

37% of all fatalities between 2008-2010 were not wearing a seatbelt at the time of the crash, and this rate of non compliance amongst fatalities is generally higher in rural areas than in metropolitan Adelaide. Research shows that wearing a seatbelt doubles your chances of surviving a serious crash yet there are a small number of road users that continue to travel unrestrained and put themselves and others at much higher risk of death and injury.

There is evidence that seat belt reminders in vehicles can improve seatbelt wearing rates, and South Australia will promote investigation into regulation in this area. During the life of this strategy, however, focus will remain on co-ordinated enforcement and publicity efforts which will be necessary to improve and maintain public understanding and use of seatbelts. In addition, the use of appropriate child restraints will also greatly improve child safety in vehicles.

Aboriginal Road Users

Aboriginal people make up 1.5% of the State's population but on average account for 4.5% of road deaths, this is three times the road fatality rate for non-Aboriginal people. Significant numbers of Aboriginal crash casualties are vehicle passengers, and factors for this may include - failure to wear seatbelts, traveling in the rear of utilities or trucks and in some instances over-crowding of vehicles. Also, almost as many Aboriginal pedestrians as drivers are admitted to hospital each year. Many crashes involving Aboriginal people are not reported.

Many Government policy statements recognise that driver licensing, custodial sentences, employment and life expectancy for Aboriginal people, whether in urban, rural and remote situations, are inextricably linked. Systematically increasing the numbers of Aboriginal people who obtain as well as retain their driver's licence through a dedicated Aboriginal Driver Licensing Program would be a powerful start.

These and other approaches all serve to raise the profile of road safety as a key issue of concern in Aboriginal communities. Infrastructure treatments such as road sealing and maintaining roads within and around Aboriginal communities, together with improved road signage, help reduce road trauma for all drivers as well as Aboriginal drivers.

Older Road Users

During the last 10 years 162 people over the age of 70 were killed and 904 seriously injured while using the South Australian road network. Those killed included drivers, motorcycle riders, vehicle passengers, cyclists and pedestrians.

Research has shown that although older drivers are involved in a small number of crashes these crashes are of higher severity, probably because of the frailty of these older users. Older drivers have been shown to be more cautious and to exhibit less illegal and dangerous driving behaviour than other age groups and there is evidence that older drivers self regulate to avoid risky situations and times of day.

Common crash types for older drivers are right turn crashes and crashes due to disobeying a traffic signal or sign. 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, for example lower speed limits and controlled phases at traffic signals would prove beneficial for older drivers. Improved safety for pedestrians and improved public transport will be important to older drivers to maintain mobility and access to services without the need to drive a private motor vehicle.

Young Road Users

Over the last ten years almost 4000 young people aged between 16 and 24 have been killed and seriously injured on our roads. Young drivers are over represented in crashes and the resulting deaths and injuries are a serious loss for South Australia. People aged 16 to 19 make up 5% of the population but account for 13% of fatalities and 14% of serious injuries in South Australia each year. On average in South Australia 31% of deaths of people between 15 and 24 are attributed to road crashes.

Younger drivers have a significantly higher risk of death relative to the number of kilometres they drive, compared to other driver age groups. Neurological research shows that the human brain's final stage of development, particularly for males, continues well into a person reaching their early 20s. Young drivers are at a high risk of crashing and also often have a high exposure at higher risk times of day. The combination of these factors result in young drivers accounting for a significant proportion of the total South Australian road toll.

Research has shown that young drivers are at most risk of crashing during their first year of driving independently. Measures to limit exposure to high-risk situations during this first year have the potential to significantly reduce trauma for younger drivers.

In the early months of driving independently young drivers are involved in high numbers of right turn and run off the road crashes which would suggest skill and judgement issues. However, drivers aged 16 to 24 are also involved in crashes involving excessive speed and illegal alcohol levels at much greater rates than older drivers which would suggest an involvement of risk taking behaviour.

Fatigue

Fatigue has been identified as a major factor leading to crashes, with estimates of the number of crashes involving fatigue varying between 15% and 30%.

The only solution to fatigue is rest. However, further work needs to be undertaken to highlight the risks associated with fatigue to the driving community and to continue to monitor technological advances that may assist drivers. This will continue to be complemented by infrastructure treatments such as audio tactile line marking that are known to be effective.

Enforcement

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. To enable this, regular and comprehensive information needs to be provided that leaves no doubt as to the level of compliance required. For most road users, this is sufficient.

Other road users may consider the additional risks they impose as insignificant and push the boundaries. They need to be deterred with consistent enforcement operations focussing on the key behaviours that are known to present high crash risk – drink/drug driving, speeding, not wearing a restraint, or being distracted by using technology such as mobile phones. A very small proportion of users knowingly operate outside acceptable boundaries. Considerable attention will continue to be given to ensuring that they perceive there to be a high chance of being detected, and that the consequences they face at the roadside or through the Court are severe.

Enforcement efforts will be underpinned by appropriate legislation and further legislative change will also be considered to respond to emerging road safety needs.

This strategy will be backed up by a new South Australian Police Road Safety Strategy 2011-2020 that will outline their contribution to delivering on this strategy, and the State achieving our road safety targets to 2020. As in many other areas of the strategy, policing will benefit from a stronger technological platform that will provide a greater ability to deploy resources to where they are needed, and to identify and apprehend those users who are presenting the greatest risk to others. Ongoing evaluation will be important to sustain the effectiveness of the enforcement activity.

Cyclists

During the last 10 years 37 cyclists have been killed and 631 seriously injured in road crashes on South Australian roads. Seriously injured cyclists were predominantly male and included all age groups. Most bicycle crashes occurred in Adelaide where high bicycle and motor vehicle numbers coincide. Cycling in South Australia is increasing and data shows that Adelaide has the highest percentage of people cycling to work of any Australian State capital city.

The most effective counter measures to improve bicycle safety is by providing lower speed environments where motor vehicles and bicycles travel at comparable speeds or by providing separation between vehicles and cyclists where there is significant speed differential. Providing a low speed environment reduces both the likelihood of collisions occurring and reduces crash severity.

Separation can be achieved by having separate operating spaces on-road in the form of bicycle lanes or through the use of off-road bicycle paths. New approaches for on road bicycle lanes are being considered which provide greater physical separation than a painted line, using either purpose built barriers or vehicle parking areas. Comprehensive, safe bicycle networks are required so as to meet the diverse needs of the range of people who cycle, from athletes in training to family groups and children riding to school.

Motorcyclists

Motorcycling is a high-risk mode of travel with motorcyclists being at more than twenty nine times the risk of being involved in a crash than car drivers. During the last 10 years 167 motorcyclists have been killed and 1666 seriously injured in road crashes in South Australia. Nearly all of the casualties were male and crashes occurred in both Metropolitan Adelaide and the rural areas.

In South Australia motorcycle registrations have been steadily growing and of recent years scooters have become more popular. Motorcycle crashes are also increasing due to this increasing exposure. The most common types of motorcycle crashes are single vehicle, run off road crashes (especially on curves) and multi-vehicle crashes involving right of way violations by other road users. Recent research has shown that new riders and those returning to riding after a number of years are at a higher risk of being involved in a crash.

Protective clothing has been shown to be beneficial in reducing serious injuries in motorcycle crashes. High conspicuity clothing and daytime headlight use have also been shown to be useful in reducing crashes by assisting other road users to see motorcycles before a collision occurs. International research is showing safety benefits from fitting motorcycles with anti-lock braking systems (ABS). There are also a range of infrastructure treatments that can assist motorcyclists.

Pedestrians

Pedestrians are involved in about 17% of crashes in metropolitan Adelaide and 4% of crashes in the rest of South Australia. During the last 10 years 147 pedestrians have been killed in road crashes and 1119 seriously injured. Although the number of child pedestrian injuries has reduced in recent years still more than 10% of pedestrians injured in a road crash are aged under 15. Pedestrian crashes can happen to people of any age or gender with the young and the old being at greater risk. Those who have high blood alcohol levels are also at greater risk of being involved in a crash.

A key aim of the 30-year Plan for Greater Adelaide is to design our city and suburbs so as to encourage more walking and cycling through a range of measures including more walking and cycling “friendly” streetscapes and neighbourhoods. Pedestrian safety can be increased by providing lower speed environments where there is both high pedestrian activity and motor vehicle numbers and by providing separation between vehicles and pedestrians in higher speed areas.

Education

Road safety education is a lifelong learning process linked appropriately to various life stages and contexts. Formally, it can include programs and curriculum that are explicitly delivered in sites such as schools, learning through family, peers, community and media influences as well as awareness developed as a result of personal experiences.

School based road safety education is widely supported in the community. Evidence shows that road safety education programs that focus on attitudinal change by increasing understanding of risk taking, decision making, and working towards encouraging better choices are also more effective than those that focus on developing driving control skills.

The strategy supports the implementation of school based road safety education developed according to our current knowledge of best practice. It will be important to provide schools with clear information about what road safety education programs are available to them and how those programs measure against best practice principles, so that decisions can be made at the local school level based on sound information and the school context.

Coordination must also occur between the different providers of school-based education so that consistent and evidence based messages are presented to children and young adults. The education sector plays an important role in introducing young people to being safe and healthy. This includes their experiences with various modes of travel and their use of the roads. The strategy identifies opportunities to work more closely with education providers to build a safer community.

Community Actions

Community groups and community activities play a key role in contributing to improved road safety outcomes. Local government has a close relationship with their communities and is well placed to foster community road safety initiatives. A partnership approach is required to harness the power of local communities towards initiatives which can make a real difference. These partnerships can be linked to, and enhance whole of school approaches which further foster whole of community capacity building.

Priorities for the strategy will include providing tools and information for community interests to allow them to make a difference in their local areas. Engagement with Councils and their communities will be further undertaken so that high value is placed on the broad well-being benefits (personal, social, financial and environmental) that can be gained from a strong road safety culture.

Building community understanding of road safety and support for road safety measures will be a priority for communication campaigns. Mass media campaigns will continue to be coordinated with enforcement and the implementation of new safety measures so that maximum benefits are obtained. The range of other promotional activity conducted by a variety of stakeholders will be better co-ordinated.

Heavy Vehicle Drivers

Heavy vehicles are involved in about 15% of fatal crashes and 8% of serious injury crashes on South Australian roads. The crash rate per kilometre for heavy vehicles is lower than for other road user types but because of the high kilometres travelled and the high severity of crashes they are significant contributors to the total cost of road trauma. Just over half of heavy vehicle crashes occur in rural areas and the most common type of fatal or serious injury crash involves a vehicle turning right. Most heavy vehicle crashes involve rigid trucks or semi trailers with only small numbers of B-Doubles, road trains and buses involved.

In fatal crashes involving a heavy vehicle just over 15% of those killed are truck occupants. One contributor to these deaths is the low use of seatbelts by truck drivers with some studies finding wearing rates as low as 10%. Speed and fatigue have also been identified as key contributors to heavy vehicle crashes with speed surveys showing high numbers of heavy vehicles travelling above the posted speed limit.

Vehicle technology has the potential to significantly improve heavy vehicle safety. Technologies such as intelligent speed adaptation, seat belt monitoring and advanced emergency braking systems would all be expected to reduce heavy vehicle crashes as would the increased use of telematics to monitor vehicle and driver behaviour.

High Risk and Recidivist Drivers

A small group of drivers have been shown to be at higher risk of being involved in a crash because of the choices they make. These include motorists who drive with high BAC levels or when affected by drugs, those who frequently drive at inappropriate speeds and those who drive when not wearing a seatbelt. Driving while disqualified or unlicensed has been shown to be linked to all of these behaviours.

Targeted enforcement and related road safety marketing are the key measures used to reduce the incidence of high-risk behaviours. These measures increase the awareness of enforcement and also the actual likelihood of offenders being caught. The willingness of high-risk drivers to continue to drive while disqualified is a major challenge in developing effective countermeasures. Loss of licence is the usual deterrence to continuing to offend but is obviously ineffective for those road users who do not value their licence. Use of automatic number plate recognition may increase the detection of unlicensed drivers but further work is required to develop other effective countermeasures.

In the longer-term vehicle technology may be the best answer to reducing high-risk driving. Alcohol interlocks and mandatory intelligent speed adaptation for recidivist offenders have the potential to significantly reduce the two most frequent high-risk behaviours.

Road Safety Marketing

Road users require accurate, current and well delivered road safety information to play their part in a safe system of behaving responsibly and in accordance with the standards and road rules. Information provided through a variety of means to most influence the target audience is essential if public education campaigns are to be successful.

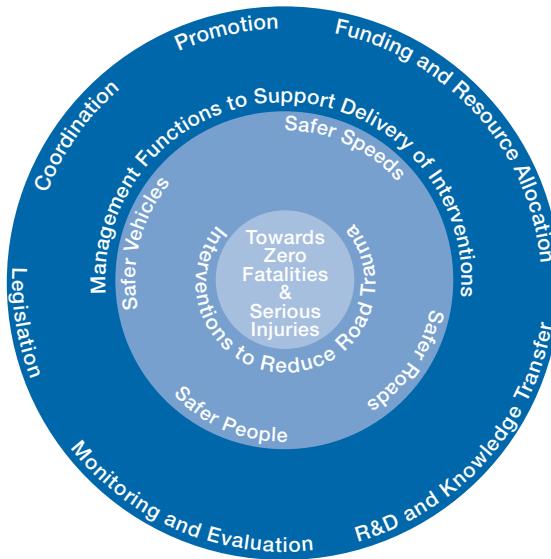
The Motor Accident Commission (MAC) will continue to plan, coordinate, implement and evaluate comprehensive road safety marketing programs to support the reduction of road trauma. These will continue to focus on road safety priorities and at risk target groups as well as responding to emerging issues.

Key Strategies for Safer People

- > Enhance the Graduated Licensing Scheme to further protect young road users.
- > Reduce the involvement of alcohol and drugs and non restraint use in crashes through increased enforcement measures integrated with public education campaigns, and supported by new technologies.
- > Strengthen policing resources and deploy enforcement effort to areas of high crash risk.
- > Align road safety education with safe system and best practice education principles.
- > Empower communities to take action through the provision of better information about road safety problems and opportunities.

Managing The Strategy

A new approach is needed to improve how road safety is managed. This strategy sets the direction for key interventions required to reduce road trauma, and the management function necessary to support the delivery of the strategy.



Partnerships and Coordination

The strategy is built on a platform of partnerships and many organisations and individuals will need to work together if we are to achieve its goals. Delivering reduced road trauma will require significant commitment by all levels of Government, stakeholders, private industry and the community. Achieving the aims put forward in the strategy will also demand ongoing attention and adoption of clear management functions.

Implementing the strategy will require all involved organisations to understand their roles and to focus on results. It will be important for all organisations involved in road safety to support the strategy and align their own programs with its philosophy and aims.

The Road Safety Advisory Council (RSAC) brings together leaders from the major state and local government stakeholders together with representatives from industry and research, including the Royal Automobile Association, Centre for Automotive Safety Research and the Transport Workers Union. The Council members have played the leading role in developing this strategy and will continue to lead its promotion to stakeholders and the community. The RSAC will also oversee the ongoing implementation and monitoring of the strategy that will be essential to its success.

There have been a number of inputs to this strategy. They include the development of a draft National Road Safety Strategy through the Australian Transport Council and the appointment of the world renowned Dutch road safety authority, Professor Fred Wegman,

as an Adelaide Thinker in Residence. Further input was obtained from stakeholder workshops on possible interventions and community forums about values and aspirations for road safety. It is clear that the current level of road trauma is not consistent with the value our community places on life and well being, and that a vision of a safe road transport system is in line with community aspirations.

The three key State Government agencies DTEI, MAC and SAPOL have worked closely together for many years and actively seek to integrate their programs. The integration with the health and education sectors will also be further strengthened in key areas of road safety activity.

The Role of Local Government

Local Government has an important role to play in road safety –

- > As a provider and manager responsible for 75,000 kilometres of roads across the State, or 85% of the entire road network in South Australia.

Significant road safety gains could be made if safe system principles were applied throughout this large local road network.

- > As representatives and advocates for their communities.

A closer partnership will be built between State and Local Government and the necessary support and tools provided for local government to develop local road safety plans in conjunction with their communities.

- > As a responsible employer of collectively 9,000 employees and a major fleet owner.

A number of Councils across the State have been pro-active in implementing employee policies around phone usage while driving, minimum safety standards for fleet vehicle purchases and in promoting or supplying public transport for licensed Council events and reinforcing the requirements for wearing of seatbelts. Further adoption of such initiatives across local government will assist in showing leadership to their communities and building a culture of road safety.

Engaging the Community and Promoting the Strategy

The successful implementation of the strategy will require an ongoing and active partnership with the community. Measures to include and involve the community are a major part of this strategy and will continue to be developed throughout the life of the strategy.

Measures identified in the strategy will need to be clearly explained and promoted to the community to encourage public discussion and understanding of the Safe System approach.

Local Government will play a pivotal role in linking to the community to build support for the strategy. Local Councils and other community and service groups will also have major roles to play in identifying and increasing the understanding of road safety issues in their communities. Strong involvement and commitment by Councils to build a culture of road safety and provide clear leadership and advocacy on road safety issues will be critical.

Providing the Resources

In order to succeed the strategy will need appropriate financial and professional resources. The strategy will require additional investment, reallocation or reprioritisation of resources. Detailed action plans will be developed to support the strategy and these will include identifying the necessary resources.

Monitoring Progress

Ongoing monitoring will be essential to the success of the strategy. Monitoring and reporting on progress will assist organisations to identify which of their programs are working and where modifications or changes in resource levels may be required.

A review of the strategy will be undertaken in 2014 to assess progress and make any necessary adjustments.

To assist in this monitoring key performance indicators will be developed to track progress. Regular public reports on the success of the strategy based on performance indicators and against the agreed targets will be produced.

The strategy will be supported by shorter-term action plans developed through the life of the strategy. Progress in achieving the measures identified in these plans will also be closely monitored as an additional performance indicator.

Legislation, Regulation and Standards

Changes in legislation and regulation will be required to improve road safety performance and areas for legislative change will be identified in the associated action plans, however detailed planning and consultation will be required before the changes can be achieved.

Appropriate standards underlie safe road and vehicle design and ongoing development of these standards will continue through the life of the strategy. This development will be based on research and will be carried out in cooperation with national transport organisations and industry.

Research and Development

Investment in research and development is essential to understand road crashes and to ensure we are creating new solutions and evaluating existing initiatives and programs. If we are to develop a truly safe system we need to understand where the system is failing.

Research will be particularly important in understanding the links between road safety and other community objectives such as sustainability, mobility amenity and liveability and to assist in finding solutions that meet all these different needs. Another research challenge will be to find ways to present the road safety message which actively engage the community.

A local research capability is essential to understanding road safety needs and priorities in South Australia. Although many solutions are being developed nationally and internationally there is a need to understand the relevance of these measures and how they can be applied in a South Australian context.

Bibliography

- Aarts L, van Schagen I (2006). Driving speed and the risk of road crashes: A review. *Accident Analysis & Prevention* 38(2): 215-224.
- Anderson RWG, Baldock MRJ (2008). *Vehicle improvements to reduce the number and severity of rear end crashes (CASR052)*. Centre for Automotive Safety Research, Adelaide.
- Anderson RWG, Streeter LD, Ponte G, Sommariva M, McLean AJ (2003). Vehicle design and operation for pedestrian protection: accident simulations and reconstructions (VSSR 1). Vehicle Safety Standards, Department of Transport and Regional Services, Canberra.
- Anderson RWG, Hutchinson TP (2010). 'In Australia, is injury less in recent cars than in earlier cars? Evidence from comparing the injury severities of two drivers in the same collision', 2010 Australasian Road Safety Research, Policing, Education Conference, Canberra, 31 August -3 September 2010.
- Anderson RWG, Doecke SD, Van Den Berg AL, Searson DJ, Ponte G (2009). The effect of bull bars on head impact kinematics in pedestrian crashes (CASR059), Centre for Automotive Safety Research, Adelaide.
- Anderson RWG, Doecke SD (2009). 'The relative age related crashworthiness of the registered South Australian passenger vehicle fleet', in Proceedings of 2009 Australasian Road Safety Research, Policing and Education Conference, Road Traffic Authority, Sydney, pp 333-347.
- Armour M (1984). The relationship between shoulder design and accident rates on rural highways. *Proceedings of the 12th ARRB Conference*, Australian Road Research Board, Vermont South, pp 49-62.
- Armour M, Cinquegrana C (1990). Victorian study of single vehicle rural accidents. *Proceedings of the 15th ARRB Conference*, Australian Road Research Board, Vermont South, pp 79-91.
- Baldock MRJ, Hutchinson TP (2010). Motorcycling in South Australia: Knowledge gaps for research (CASR075), Centre for Automotive Safety Research, Adelaide.
- Baldock MRJ, Kloeden CN, Lydon M, Ponte G, Raftery SJ (2010). 'Motorcycling in Victoria: Preliminary findings of the evaluation of the Community Education and Policing Project', 2010 Australasian Road Safety Research, Policing, Education Conference, Canberra, Australian Capital Territory, 31 August - 3 September 2010.
- Baldock MRJ, Mathias JL, McLean AJ, Berndt A (2006). 'Self-regulation of driving and its relationship to driving ability among older adults'. *Accident Analysis & Prevention*, 38(5), pp 1038-1045.
- Baldock MRJ, Mathias JL, McLean AJ, Berndt A (2004). 'Self regulation of driving and its relationship to driving ability among older adults', 3rd International Conference on Traffic and Transport Psychology, Nottingham, United Kingdom, 5-9 September 2004.
- Baldock MRJ, Kloeden CN, McLean AJ (2008). In-depth research into rural road crashes (CASR057), Centre for Automotive Safety Research, Adelaide.
- Baldock MRJ, Thompson JP, Mathias JL (2008). 'Self-regulation of driving behaviour among older drivers: Findings from a five year follow-up', Proceedings of 2008 Australasian Road Safety Research, Policing and Education Conference, Department for Transport, Energy and Infrastructure, Adelaide, pp 470-478.
- Baldock MRJ, Berndt A, Mathias JL (2008). 'The functional correlates of older drivers' on-road driving test errors', *Topics in Geriatric Rehabilitation*, 24(3), pp 204-223.
- Broughton J et al (2009). Road safety strategy beyond 2010: A scoping study. Department for Transport, London.
- Bureau of Infrastructure, Transport and Regional Economics (2009). *Road crash costs in Australia 2006*. Bureau of Infrastructure, Transport and Regional Economics, Canberra.
- Cameron M, Elvik R (2010). Nilsson's Power Model connecting speed and road trauma. Applicability by road type and alternative models for urban roads. *Accident Analysis & Prevention* 42(6), pp 1908-1915.
- Christoph M (2010). *Estimate of the safety effects of intelligent vehicle systems. A literature study*. SWOV Institute for Road Safety Research, Leidschendam.
- Connell D, Cleaver M, Job RFS, de Roos M, Hendry T, Foster J (2010). 'Trial evaluation of wide, tactile, centre line configurations on the Newell Highway', 2010 Australasian Road Safety Research, Policing, Education Conference, Canberra, Australian Capital Territory, 31 August -3 September 2010.
- Corben BF et al (2009). *Strengthening road safety strategy development 'Towards Zero 2008-2020 – Western Australia's experience scientific research on road safety management SWOV workshop 16 and 17 November 2009*. Safety Science, 48(9), pp 1085-1097.
- D'Elia A, Newstead S, Cameron M (2007). Overall impact during 2001-2004 of Victorian speed-related package. Clayton: Monash University Accident Research Centre.
- Doecke SD, Anderson RWG, Woolley JE (2010). 'Cost Benefit Analysis of Intelligent Speed Adaptation', 2010 Australasian Road Safety Research, Policing, Education Conference, Canberra, 31 August -3 September 2010.
- Doecke SD, Grigo JAL (2011). Annual performance indicators of enforced driver behaviours in South Australia, 2009 (in press). Centre for Automotive Safety Research, Adelaide.
- Doecke SD, Woolley (2010). Clear zones and barriers on rural roads (CASR085) (in press). Centre for Automotive Safety Research, Adelaide.
- Doecke SD, Woolley (2010). Post impact trajectory of vehicles at rural intersections (CASR686) (in press). Centre for Automotive Safety Research, Adelaide.
- Doecke SD, Woolley JE (2010). Adequacy of barrier and median separation on rural roads (CASR087) (in press). Centre for Automotive Safety Research, Adelaide.

- Dragutinovic N, Twisk D (2006). The effectiveness of road safety education. SWOV Institute for Road Safety Research, Leidschendam.
- Fildes B, Langford J, Andrea D, Scully J (2005). Balance between harm reduction and mobility in setting speed limits: A feasibility study (AP-R272/05). Austroads, Sydney.
- Harrison JE, Berry JG (2008). Injury of Aboriginal and Torres Strait Islander people due to transport, 2001-2002 to 2005-2006. Australian Institute of Health and Welfare, Canberra.
- Haworth NL, Bowland L, Foddy W, Elliot B (1999). Seat belts for truck drivers (AP-141-99). Austroads, Sydney.
- Hoareau E, Newstead S, Oxley P, Cameron M (2002). An evaluation of the 50 km/h speed limits in South East Queensland. Monash University Accident Research Centre, Clayton.
- Hoareau E, Newstead S (2004). An evaluation of the default 50km/h speed limits in Western Australia. Monash University Accident Research Centre, Clayton.
- Hosking S, Newstead S, Hoareau E, Delaney A (2005). An evaluation of the 50km/h default speed limit in Regional Queensland. Monash University Accident Research Centre, Clayton.
- Kloeden CN (2008). The crash and offence experience of newly licensed young drivers (AP-R331/08). Austroads, Sydney.
- Kloeden CN, McLean AJ, Glonek G (2002). Reanalysis of travelling speed and the risk of crash involvement in Adelaide South Australia (CR207), Australian Transport Safety Bureau, Canberra.
- Kloeden CN, Ponte G, McLean AJ (2001). Travelling speed and the risk of crash involvement on rural roads (CR204), Australian Transport Safety Bureau, Canberra.
- Kloeden CN, Woolley JE (2010). Vehicle speeds in South Australia 2008 (CASR066), Centre for Automotive Safety Research, Adelaide. Kloeden CN, Woolley JE, McLean AJ (2004). 'Evaluation of the 50km/h default urban speed limit in South Australia', 2004 Road Safety Research, Policing and Education Conference, Perth, Australia, 14-16 November 2004.
- Kloeden CN, Woolley JE, McLean AJ (2007). 'A follow-up evaluation of the 50km/h default urban speed limit in South Australia', 2007 Road Safety Research, Education and Policing Conference, Melbourne, Australia, 17-19 October 2007.
- Levett S, Job RFS, Tang J (2009). 'Centreline treatment countermeasures to address crossover crashes', 2009 Australasian Road Safety Research, Policing and Education Conference, Sydney, Australia, 10-13 November 2009.
- Long AD, Kloeden CN, Hutchinson TP, McLean AJ (2006). 'Reduction of speed limit from 110km/h to 100km/h on certain roads in South Australia: A preliminary evaluation', 2006 Australasian Road Safety Research, Policing and Education Conference, Gold Coast, Australia, 25-27 October 2006.
- Long AD, Hutchinson TP (2008). 'Evaluation of the Adelaide Hills speed limit change from 100 km/h to 80 km/h', Proceedings of 2008 Australasian Road Safety Research, Policing and Education Conference, Department for Transport, Energy and Infrastructure, Adelaide, pp 69-78.
- Mackenzie JRR, Anderson RWG (2009). The effects of Electronic Stability Control interventions on rural road crashes in Australia: simulation of real world crashes (RSRG 2009-005), Department of Infrastructure, Transport, Regional Development and Local Government, Canberra. McLean AJ, Kloeden CN, McColl R, Laslett R (1995). 'Reduction in the legal blood alcohol limit from 0.08 to 0.05: effects on drink driving and alcohol related crashes in Adelaide', Proceedings of 13th International Conference on Alcohol, Drugs and Traffic Safety, Road Accident Research Unit, Adelaide, pp 373-377.
- McLean AJ, Kloeden CN (1992). Reduction of the legal blood alcohol limit and late night drink driving in Adelaide (1/92), Office of Road Safety, SA Department of Transport, Adelaide.
- Ogden KW (1992). Benefit cost analysis of road trauma countermeasures: rural road and traffic engineering programs. Monash University Accident Research Centre, Clayton.
- Organisation for Economic Co-operation and Development (2008). Towards zero: Ambitious road safety targets and the safe system approach. Organisation for Economic Co-operation and Development, Paris.
- Petrus R (2001). 'The development of New Zealand's road safety strategy 2010', in Proceedings of 2001 Road Safety Research, Policing and Education Conference. Monash University, Clayton, pp 253-259.
- Ponte G, Anderson RWG, Seardon DJ (2007). 'A comparison of the pedestrian passive safety performance of the new vehicle fleet in Australia, France and the United Kingdom', 2007 Road Safety Research, Education and Policing Conference, Melbourne, Australia, 17-19 October 2007.
- Raftery SJ, Wundersitz LN (2011). The efficacy of road safety education in schools: A review of current approaches (CASR077). Centre for Automotive Safety Research, Adelaide.
- Roberts P, Turner B (2008). 'Engineering responses to fatigue', in Proceedings of 2008 Australasian Road Safety Research, Policing and Education Conference, Department for Transport, Energy and Infrastructure, Adelaide, pp 574-580.
- Ryan GA, Wright JN, Hinrichs RW, McLean AJ (1988). An in-depth study of rural road crashes in South Australia (CR 78), Road Accident Research Unit, Adelaide.
- Thompson JP, Baldock MRJ, Mathias JL, Wundersitz LN (2010). 'Older drivers in rural and urban areas: Comparisons of crash, serious injury, and fatality rates', 2010 Australasian Road Safety Research, Policing, Education Conference, Canberra, 31 August - 3 September 2010. Turner B, Pyta V, Woolley JE, Zhang S (2010). Road safety on local government roads: final report (AP-R359/10). Sydney: Austroads.
- Wegman F & Aarts L (eds) (2006). Advancing sustainable safety: National Road Safety Outlook for 2005-2020.
- SWOV Institute for Road Safety Research, Leidschendam.
- Wundersitz LN, Baldock MRJ (2011). The relative contribution of system failures and extreme behavior in crashes (in press). Centre for Automotive Safety Research, Adelaide.



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