GOVERNMENT OF
WESTERN AUSTRALIA

Driving Change

Road Safety Strategy for Western Australia 2020-2030

IMAGINING ZERO...

Imagine a seven year old today. They could be your child, your grandchild or your neighbour's child. That child will be a road user in many ways, whether its travelling in the car, walking or cycling to school. As they get older, they will become more independent and travel alone or with friends to and from school and activities, be it by bus, bike or walking.

By the time this strategy is reaching its end, that seven year old will be 17 and might be getting their drivers licence or alternatively choosing to wait and use public transport and other modes of transport to get to the places where they live, learn, work and play.

Do we want today's seven year old to hear about road deaths in their community?

Road safety is everyone's responsibility and depends on everyone sharing the journey.

The way road safety is approached today is very different to how it was viewed in the past. For example, community attitudes to drink driving have fundamentally changed.

How it is approached from 2020 onwards is determined by our growing awareness that many road deaths and serious injuries are preventable.

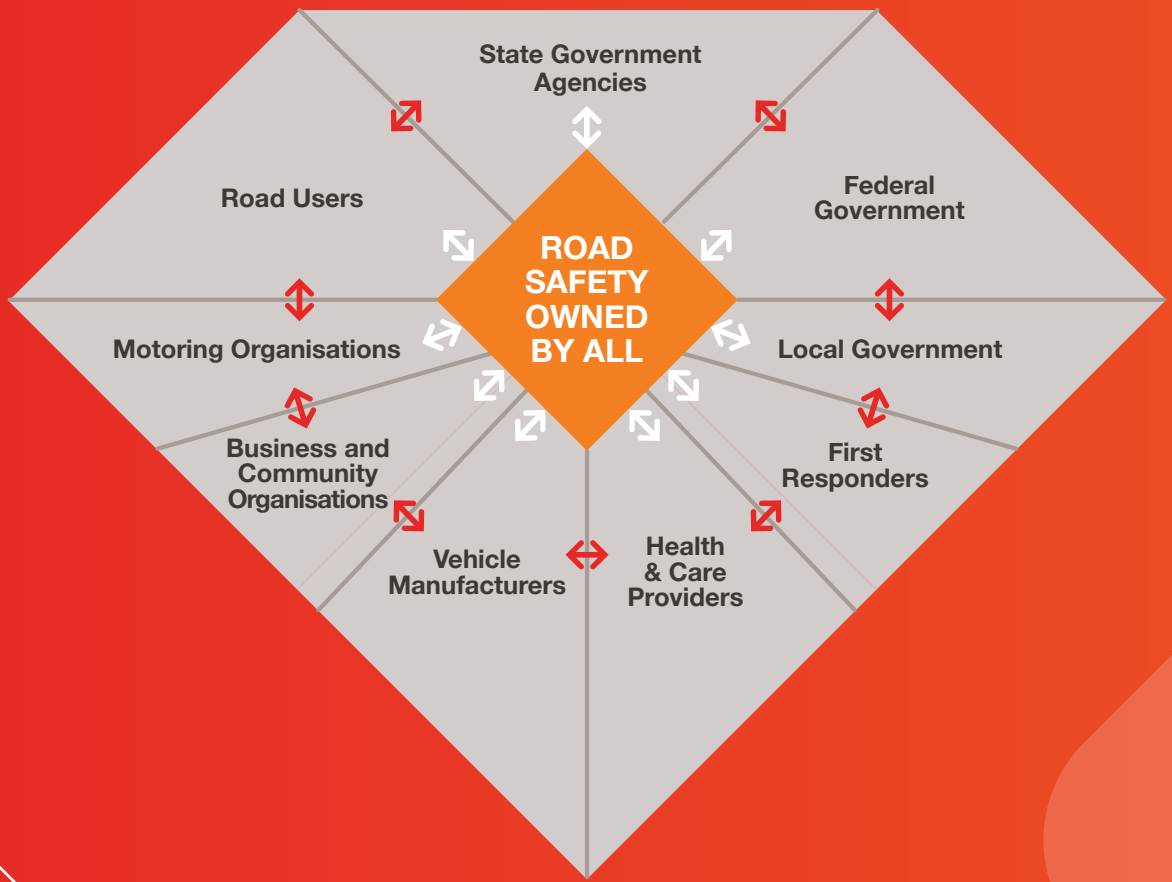
Fast forward to 2050. That seven year old will be 37 and may have their own family.

Imagine zero serious injuries and zero deaths on Western Australian roads.

Imagine if in 2050 road trauma could be talked about as a problem of the past.

There may still be crashes because people make mistakes but the outcomes will not be serious.

Driving Change sets out the journey over the next 10 years towards that shared vision and the steps to take to improve road safety infrastructure, vehicles and the cultural change needed to achieve it.



Driving Change

Road Safety Strategy for Western Australia 2020-2030

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Acknowledgment of Country

The Western Australian State Government acknowledges the traditional custodians throughout Western Australia and their continuing connection to the land, waters and community. We pay our respects to all members of the Aboriginal communities and their cultures – and to Elders both past and present. Within Western Australia, the term Aboriginal is used in preference to Aboriginal and Torres Strait Islander, in recognition that Aboriginal people are the original inhabitants of Western Australia. Aboriginal and Torres Strait Islander may be referred to in the national context.

» Premier's Foreword

Western Australia is one of the world's greatest places to live, learn, work and play.

Perth is one of the most liveable capital cities in the world and our regional towns and vast regional areas enjoy world class living and amazing places to visit and enjoy.

It is not enough, though, to have these wonderful communities and terrific amenities. We also know how important it is to keep ourselves safe.

If 2020 has taught Western Australians anything, it is just how strong we can be when we work together, and just how hard we need to work to keep everyone safe.

Our roads can be pretty dangerous places. Too many West Australians lose their lives in crashes; too many suffer from long-term injury.

We can have the safest roads in Australia, but it will require us to move out of comfort zones, to accept change and to work together - as we have shown that we can do - to put in place more of what works.

This Strategy is bold and it encourages us to aim high.

Using evidence and expert modelling this Strategy describes a journey where we could achieve between a 50% and 70% reduction in serious trauma by 2030. 50% is the expected rate of improvement across Australia over the next 10 years and if we can achieve a 70% reduction, Western Australia could again have the safest roads in the nation.

The Government has engaged with the community and with road safety experts to deliver a bold and exciting vision for safety on our roads.

This is a Western Australian strategy. It is not just the Government. It involves the whole community - and it seeks to leave no one behind. While governments at all levels can provide resources, leadership and support, it will take all of us as individuals, as businesses, as community groups to accept the challenge and work together to make change happen.

It is up to all of us so that we can once again enjoy Australia's safest roads.

Hon. Mark McGowan MLA
Premier

Message from the Minister for Road Safety

Our roads can be dangerous and unpredictable places. Too many West Australians are killed or suffer serious injury in traffic crashes. As a community, we need to continue to work together to make sure that we can all travel safely on our roads. This strategy is about showing us ways in which we can do just that.

Everyone makes mistakes on the road. The nature of those errors differs from circumstance to circumstance and their consequences fall across the widest possible spectrum – from none at all to multiple fatalities.

The Government has a responsibility to put laws in place to keep our community safe. Over the years, we have introduced seatbelts and speed cameras, changed speed limits, taken a tough approach to driving under the influence of alcohol and drugs, and outlawed the use of mobile phones while driving. These changes have found widespread acceptance in the community because people recognise that they are about saving lives.

The rules that govern the ways in which we drive are only part of the road safety equation. Our roads themselves also require attention. The way that we build them is one of the keys to the success of this strategy.

We have a serious objective: to reduce the number of people killed or seriously injured on our roads by more than half over the next decade. It is a bold vision but if we do not dare to imagine it, the cost of the trauma of the bereaved and the cost of long-term care for those who are seriously injured will be borne by the whole community.

Safer road infrastructure, appropriate speeds, increasing the number of vehicles with anti-collision technology, better protection for vehicle occupants and other road users and the best possible post-crash care are all essential components in saving lives.

A safe road system also encourages walking and cycling, social interaction and local business opportunities as our streets become safer places.

Over the next 10 years, the extent to which we as a community embrace further changes will go a long way to determining the progress we make in achieving our goal of zero deaths on our roads.

In truth, there is no number of dead and injured that is acceptable. It is my hope that this strategy will lay a firm foundation for a future where we can go further, a time when it is possible not just to “imagine zero”, but to achieve it.

Hon. Michelle Roberts MLA
Minister for Police; Road Safety

Message from the Road Safety Council

Under the state's Towards Zero strategy from 2008-2020[a] our community has made great progress achieving the 40% goal to reduce serious injuries and deaths by 2020.

This is the result of a tremendous collective effort by governments, individual road users, business and community organisations.

What we have been doing has worked to achieve greater reductions in crashes involving risk taking and young people but we have made less progress in reducing crashes involving someone making a mistake, on regional roads or involving people walking and riding.

We are not perfect, we all make mistakes so crashes will always happen while humans are in control. We must expand our responses to ensure the road system guides us to behave safely and provides forgiveness when crashes occur so that outcomes are not as serious. This is the safe system approach: all elements of the system (safe roads and roadsides, safe speeds, safe modes of transport, safe behaviours and emergency medical response) working together to prevent and reduce the impacts of crashes.

Achieving between a 50%-70% reduction in serious road trauma by 2030 is highly ambitious but evidence and modelling considered by the Council shows is possible and could save up to approximately 8,600 people from getting killed or seriously injured over the next decade. Achieving this would make WA roads amongst the safest in the country.

Our success will require our collective efforts to build a safety culture, to progress change, scaling up to do more of what we know works and to embrace new technology, particularly in vehicles.

We need to accelerate the rate at which new vehicles with advanced collision avoidance technologies enter our market with autonomous emergency braking, intelligent speed assist and lane keeping technologies important priorities.

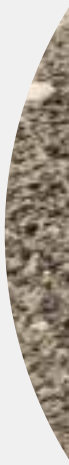
Safer speeds through revised speed limits and/or greater compliance, while often sensitive, remain one of the most powerful, quickest-acting options available to us that can be progressed in partnership with local governments and local communities. Investing in safer road infrastructure, such as shoulder sealing and rumble strips on the edges and centres of regional roads, as well as managing safer speeds are two of the most equitable safety actions we can take as they benefit all road users.

Continuing to engage and work with our community, sharing the evidence to implement more of what will save lives and reduce serious injuries will be essential to our success. The target can only be achieved with additional, different and sustained efforts by individual road users, businesses and governments all working collaboratively with a shared responsibility to act and build a supportive safety culture.

Some countries are aiming for zero by 2050. The Western Australian community has a right to expect the same and with bold leadership, implementing more of what we know works while growing a supportive culture and embracing new safety technology, we can.

Future generations will not grow up in the same road environment we have inherited. It will be safe and sustainable. It is up to each of us. It all depends on what we are prepared to accept and do. What will you accept and what will you do?

Iain Cameron
Chairman, Road Safety Council



» This Strategy

People are at the heart of our transport system and the vision is for all Western Australians to connect with the places where they live, work, learn and play safely.

WA's population is growing and ageing[b] and more people are choosing other transport options alongside private car use, including walking, cycling, public transport and on-demand transport. Over the next 10 years there will be ever greater transport personalisation and increased opportunities for car-sharing, bike-sharing and ride-sharing.

The growth in population and increase in vehicles, alongside rapid technological innovation and societal shifts in the ways we choose to move around our communities, has far-reaching implications for safety on our shared roads.

Road safety is an important public health issue and saving more lives depends on an important cultural shift towards greater acceptance of road safety as everybody's responsibility and less acceptance of road trauma as part of the journey.

Saving more lives also depends on recognising four key road safety principles:

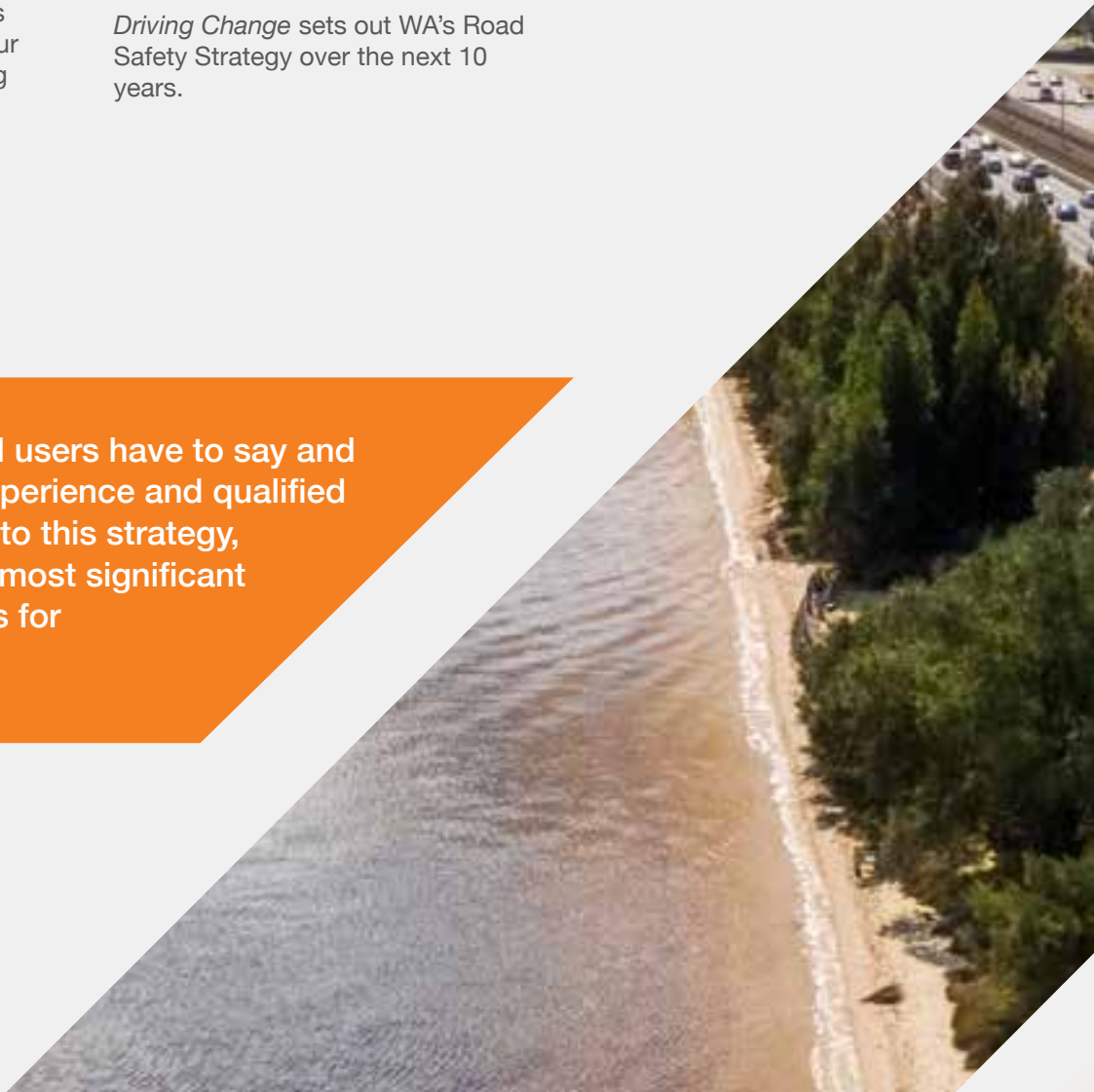
- People make mistakes.
- The human body is vulnerable to impact forces.
- The WA road system needs to guide safe behaviours and provide second chances.
- Shared responsibility.

Driving Change sets out WA's Road Safety Strategy over the next 10 years.

It outlines a shared vision, priorities and effective implementation areas for government, the private and not-for-profit sectors and the community.

Its implementation will be achieved through a series of policies and programs that focus on the actions required to save more lives on our roads.

Listening to what road users have to say and balancing that with experience and qualified expert advice has led to this strategy, which focuses on the most significant road safety challenges for Western Australia.



» Target: 50-70% by 2030

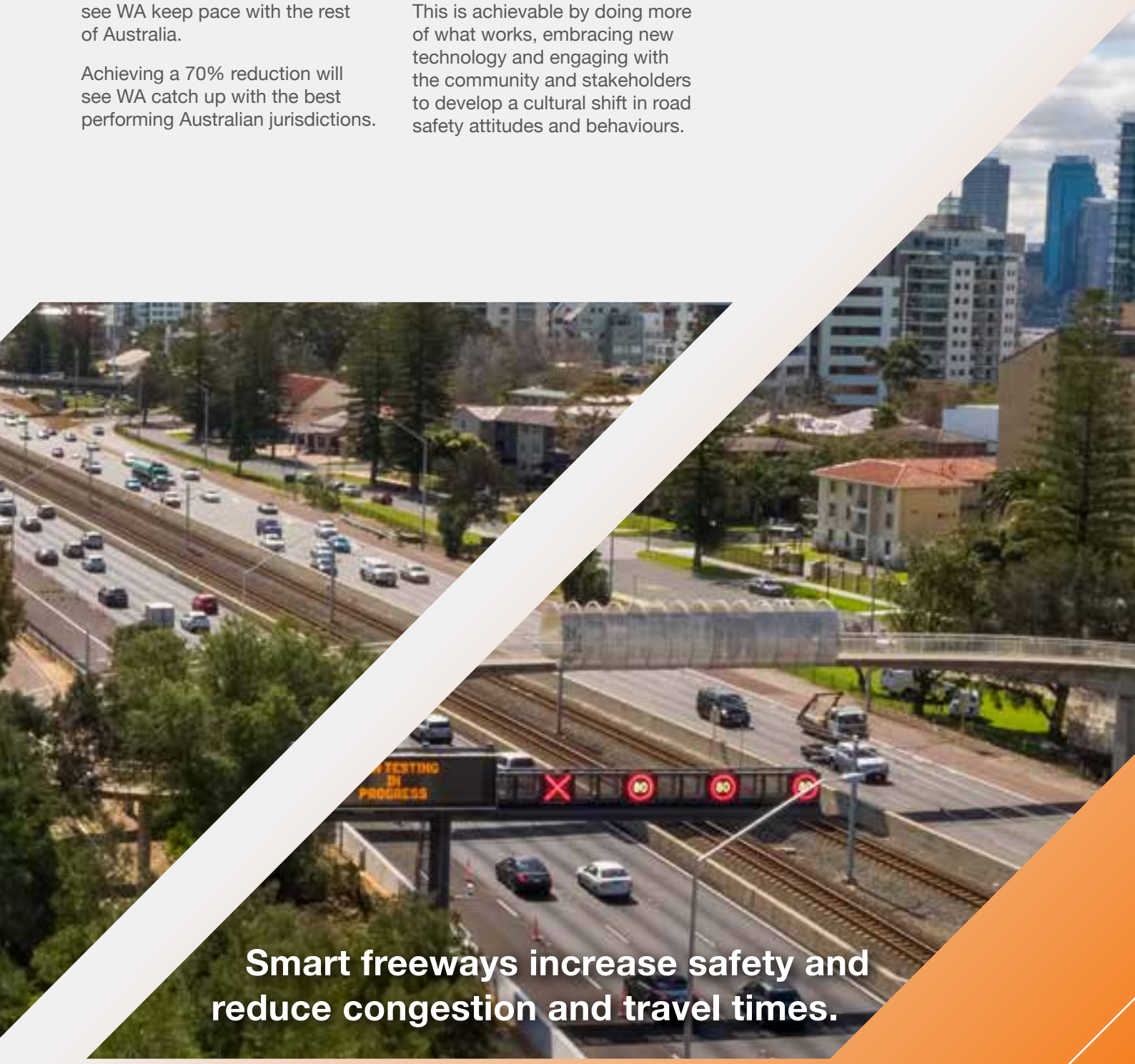
Driving Change aims to reduce the numbers of people killed, severely or seriously injured by 50-70% by 2030.

Achieving a 50% reduction will see WA keep pace with the rest of Australia.

Achieving a 70% reduction will see WA catch up with the best performing Australian jurisdictions.

WA could save up to 723 lives and prevent approximately 8,000 fewer people suffering from serious and life-changing injuries over the next decade.[c]

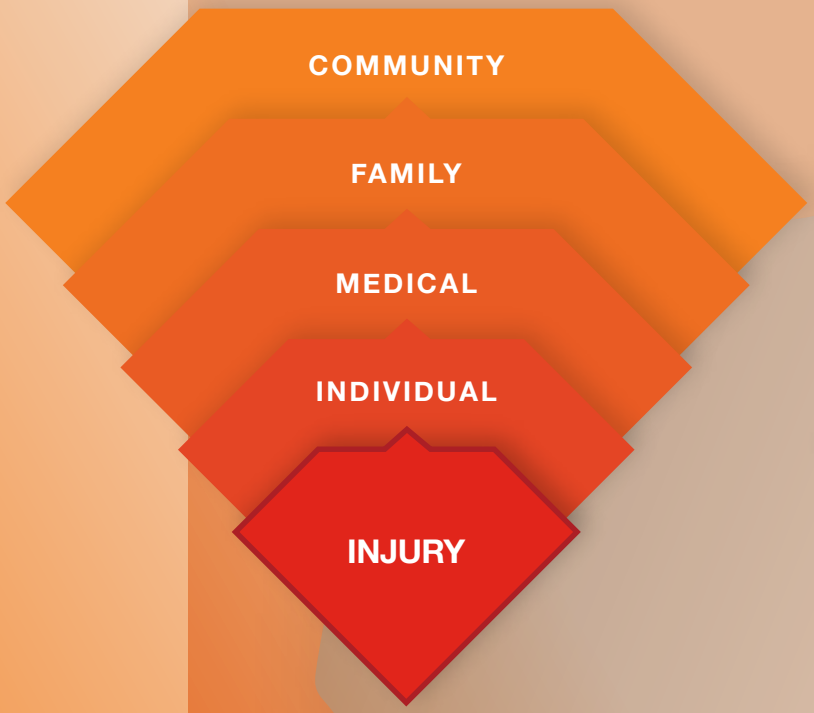
This is achievable by doing more of what works, embracing new technology and engaging with the community and stakeholders to develop a cultural shift in road safety attitudes and behaviours.



Smart freeways increase safety and reduce congestion and travel times.

THE CASE FOR CHANGE

» The True Cost of Road Trauma in Western Australia…



Every death and serious injury affects the community.

1,513

people are seriously injured on average every year[d]

An average of

† 168

people are killed on WA roads every year[d]

Every year road trauma costs WA

$ 2.4 billion[e]

» How We Compare

WA's population has doubled since the 1970s and road deaths have halved. Since WA published the previous Road Safety Strategy in 2008, there has been a 19% reduction in road deaths and a 43% reduction in serious injuries.

This means approximately 11,000 fewer Western Australians died or were seriously injured on our roads.[f]

Just as attitudes towards public health issues such as smoking and drink driving have changed, so too have attitudes towards road trauma.

Deaths and serious injuries are no longer accepted as part of our day to day journey.

SERIOUS INJURIES

2008: 2,859[g]

2019: 1,639

▼ 43%

FATALITIES

2008: 200[g]

2019: 163

▼ 19%

In the early 70's almost 350 people died on WA roads every year.

Despite the downward trend in road trauma over time, there are still too many preventable deaths and serious injuries on WA roads.

Between 2015-2019, 839 people have lost their lives on WA roads and a further 7,567 have been seriously injured.

WA is ranked sixth of the eight Australian jurisdictions. If WA had the same 2019 road trauma rates as Victoria, 57 fewer people would have died on our roads. In international comparisons, we fare even worse. If we had the same 2019 road trauma rates as Norway, 111 fewer people would have died.

HOW DO WE COMPARE?

In terms of annual deaths per 100,000 population, Australia's rate of 4.5 was the 14th lowest rate out of 36 nations with available data.

Between 2008 and 2018:

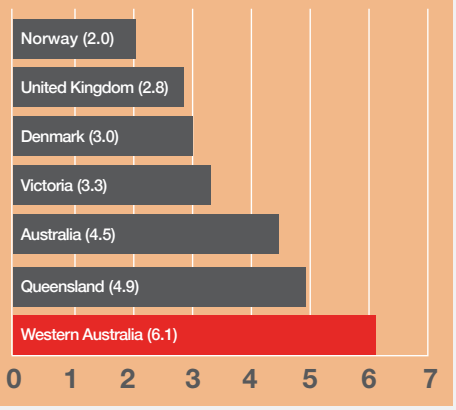
Australia's rate reduced:

▼ 34%

Western Australia's rate reduced:

▼ 35%

2018 fatality rate per 100,000 persons



In addition to the huge personal, social and health impacts of road trauma, the economic cost of each death on WA roads has been estimated at over $7 million. The average cost of each hospitalised injury is over $300,000. Road trauma costs Western Australia approximately $2.4 billion every year.

For every death on our roads, 10 people are seriously injured.

These people and their loved ones are the hidden victims of road trauma. In 2019, 1,639 people were hospitalised in WA as a result of reported crashes on our roads.

To date, little is known about the lasting physical, social and emotional impacts of road trauma on these individuals and their families.

The numbers of lives and livelihoods affected by road trauma are unacceptably high.

It doesn't need to be like this.

Did you know?

Road trends show fewer crashes involving offences such as drink driving and speed, and a higher proportion of serious crashes due to errors, tiredness and inattention.

» WA Road Safety Landscape

Since 2008 there has been a reduction in crashes involving young people and risk taking, such as speeding, drink driving and not wearing seatbelts or helmets. Less progress has been achieved with reducing crashes involving mistakes, inattention and tiredness.

There has been significant progress in reducing crashes for vehicle occupants but less progress for people walking and riding bicycles and motorcycles.

Crashes at intersections are the most common crash type in urban areas.

The most common crash type on regional roads is a single vehicle leaving the road, generally at a high speed.

Between 2015-2019, 62% of people killed or seriously injured were male, 37% were female and 1% had no gender recorded.

Approximately 75% of all serious crashes involve a mistake, a momentary lapse in attention or being tired. That is why we need a safe system - one that not only encourages and guides the right behaviours but also ensures when something does go wrong crashes do not result in death or serious injury.

Since 2008, the greatest improvements have been in:

		Killed or Seriously Injured Baseline[g]	2019	% change
Young road users	17-19	350	108	▼ 69%
Seatbelt not worn		216	68	▼ 69%
Speed related		640	301	▼ 53%
Motor vehicle occupants		2,385	1,258	▼ 47%

But, areas where we still need more focus include:

	Killed or Seriously Injured Baseline[g]	2019	% change
Metro intersections	1,054	607	▼ 42%
Regional and Remote	1,062	676	▼ 36%
Pedestrians	210	137	▼ 35%
Crashes involving errors, tiredness and inattention	2,104	1,414	▼ 33%
Cyclists	100	87	▼ 13%
Motorcyclists	364	320	▼ 12%

Approximately 75% of all serious crashes involve a mistake, a momentary lapse in attention or being tired.

What we change today can have a lasting impact - just as the default speed limit of 50 km/h put in place in 2001 has saved lives in every subsequent year and the Graduated Driver Training and Licensing system has impacted on every driver that's gained their licence since.

» Our Approach Needs to Change

This strategy presents a different way forward for Western Australia.

With everyone working together it is possible to achieve a 50-70% reduction in road trauma, more than halving the 2019 road trauma figures and once again having the safest roads in the nation.

The road safety problems that we face have solutions; the experts know how to prevent road trauma. But to effectively imagine and realise these solutions demands increased focus and effort from all of us.

» Community Support is Critical to Success

Community engagement is key to the success of this strategy.

Behaviours and attitudes to transport are changing. These changes include a growing demand for sustainable transport solutions and rapidly changing technological advances. In this context of growing challenges and opportunities, Western Australians want everyone to support safe behaviours and embrace innovative solutions that save lives.

Importantly, Western Australians want to be part of the solution.

The WA community and stakeholders were invited to have their say on road safety and what should be included in this strategy.

The strong community response showed that Western Australians care deeply about the numbers of people affected by road trauma and the negative impacts it has on our communities.

Over 3,000 comprehensive surveys were submitted online. A further 57 public and specialist forums were held in metropolitan, regional and remote areas of WA, including 30 community forums across the breadth of WA, from Kununurra to Esperance.

The forums involved a range of road user and community members, including Aboriginal communities, pedestrians, cyclists and motorcyclists, industry, schools, regional stakeholders and various State and Local Government agencies.

Community discussions underlined an expectation for all levels of government, business, industry and community organisations to work together to achieve better road safety outcomes.

The WA community wants to focus on the needs of all road users, on building better roads, infrastructure and intersections, on driver training and on enforcement and compliance where it is needed. The community welcomes measures to address drink driving and mobile phone use when driving. Some community members expressed concerns about reducing speed limits but a majority of Western Australians are supportive of local changes to speed in high pedestrian and cycling areas and on WA's most dangerous roads.

Community feedback has shaped this strategy. Over the next 10 years, community participation and changing attitudes will be central to the success of this strategy.

Three in every four serious crashes on regional Western Australia roads involved a local driver either within their own local government area or an adjacent one.

Life in regional and remote Western Australia involves driving long distances, variable road conditions and limited traffic safety measures. Road safety needs to be owned by everyone using these roads.

Saving more lives and livelihoods on WA roads depends on the community working together to improve road safety.

» Case Study: Indian Ocean Drive

Evidence shows that increasing traffic volumes are leading to different types of crashes on regional roads and potentially more fatal and serious injuries.[1] One example is on Indian Ocean Drive, which follows the coast to the north of Perth.

The WA Government conducted a Safe System review along a 58km section of Indian Ocean Drive with high incidences of road trauma. Along with crash analysis and expert investigation, the review considered community and road user feedback. Community feedback was balanced with the evidence of what works to recommend practical solutions.

The review examined 146 crashes (including three fatal, 23 hospitalisations and 28 medical treatments) between January 2012 and August 2017 and the potential effect of speed limit reductions on these crashes. A total of 79 high risk road sections were identified and a further 12 sections where an increase in traffic volume may affect crash profiles.

Identified road safety infrastructure enhancements to high risk sections of the road included:

- full width sealing of the shoulders
- the installation of audible edge lines and centre lines to provide warnings
- a reduction in the speed limit to 100km/h for a certain section of the highway
- installation of curve warning signs, wildlife warning signs and replacement guide signs
- the replacement of advance intersection warning signs
- wide centre line treatment to create more space between opposing traffic
- the addition of overtaking lanes
- line markings
- safety barriers between Seabird and Lancelin
- a widening of the road in one section.

Community education campaigns and enhanced police patrols were introduced to support these enhancements. Since these changes, data has shown a reduction from 5 to 2.2 fatal and serious crashes per year.

Indian Ocean Drive is an example of how better road infrastructure can reduce the likelihood and consequences of road crashes. Additionally, a 10 km/h average speed reduction on the 79 high risk road sections is estimated to reduce the numbers of fatal and serious crashes by up to 76.

This example also demonstrates how a proactive approach to road safety infrastructure and speed has the potential to reduce serious and fatal crashes as the annual average daily traffic volume increases.

When complemented by the increasing use of newer vehicles that have enhanced vehicle safety features, such as lane departure warning, intelligent speed assist, collision avoidance mechanisms and fatigue detection technology, these infrastructure enhancements will contribute to a sustained reduction in crashes that lead to fatalities and serious injuries on this stretch of road.

» Case Study: Sam's Story

Sam exchanged farewells with his parents and little sister as he left to visit his fiancée for the Friday evening. Living in the Wheatbelt it was not unusual for him to visit her in the neighbouring town.

There was plenty of planning to do for the future, so Sam and his fiancée spent a quiet evening together. No drinking, and no sleep-over. He needed to be back in his hometown first thing in the morning to travel with his team to a hockey carnival.

About five kilometres from his hometown Sam fell asleep and crashed. His neck was broken as a result of the crash, but he survived. Sam's injury was serious, and it left him a quadriplegic.

'If' is a big word. If Sam had recognised that he was too tired to drive, fatigue would not have got the better of him as he drove the 60kms home. His car and the road were not forgiving of this misjudgment.

The crash didn't just change his life, all those around him were involved too. His parents supported him through lengthy hospital and rehabilitation treatments, but after a couple of years they separated due to the strain it placed on their marriage.

His fiancée stood by him, but Sam increasingly pushed her away as he struggled to come to terms with the realities of his life after the crash. She took many years to move on with her life. His little sister lost her big brother as she knew him.

Sam worked hard to recover and establish a new life for himself. He had to retrain and pursue a different career and develop new past-times. It wasn't just Sam that had to adjust. One moment of fatigue changed the lives of all those who loved him.

If we have a safe road system

A safe system recognises that we make mistakes and that crashes will occur. But, when something goes wrong, a safe system builds in second chances.

If Sam had been driving in a five-star ANCAP[h] rated car, its lane departure and correction system would have alerted him to keep in his lane. Failing that, audible centre and edge lines on the road would have given him another warning and if that didn't work, roadside barriers would stop the car. A car with a high ANCAP rating would also deploy airbags and be built with improved vehicle occupant protection.

No one expects to crash but we all make mistakes. *Driving Change* envisions a safe system that is designed for people and that can prevent serious harm through safe roads, safe speeds, safe vehicles and safe road use.

This story is based on real events but names and identifying details have been changed to protect the privacy of individuals.

MAKING IT HAPPEN

WA's Road Safety Framework

This strategy sets out an ambitious and achievable target with clear priorities and a focus on key enabling factors underpinned by internationally recognised *safe system* principles.

Driving Change puts people at the heart of the road safety journey.

It recognises that we all have a role to play to make every journey safe.

This includes engineers building better roads, vehicle designers making safer cars, health professionals providing after-crash care, greater recognition across the private and public sector of vehicles as a workplace, and individuals, making informed and careful choices to improve their chances of arriving safely at their destination.

Driving Change is informed by the *safe system* principles highlighted in the diagram below.[i]

This systematic approach involves a holistic view of the road network and interactions among various types of road users, roads and roadsides, travel speeds and vehicles.

These principles recognise that some road users are more vulnerable, and that people will always make mistakes and may have road crashes, but those crashes should not result in death or serious injury.

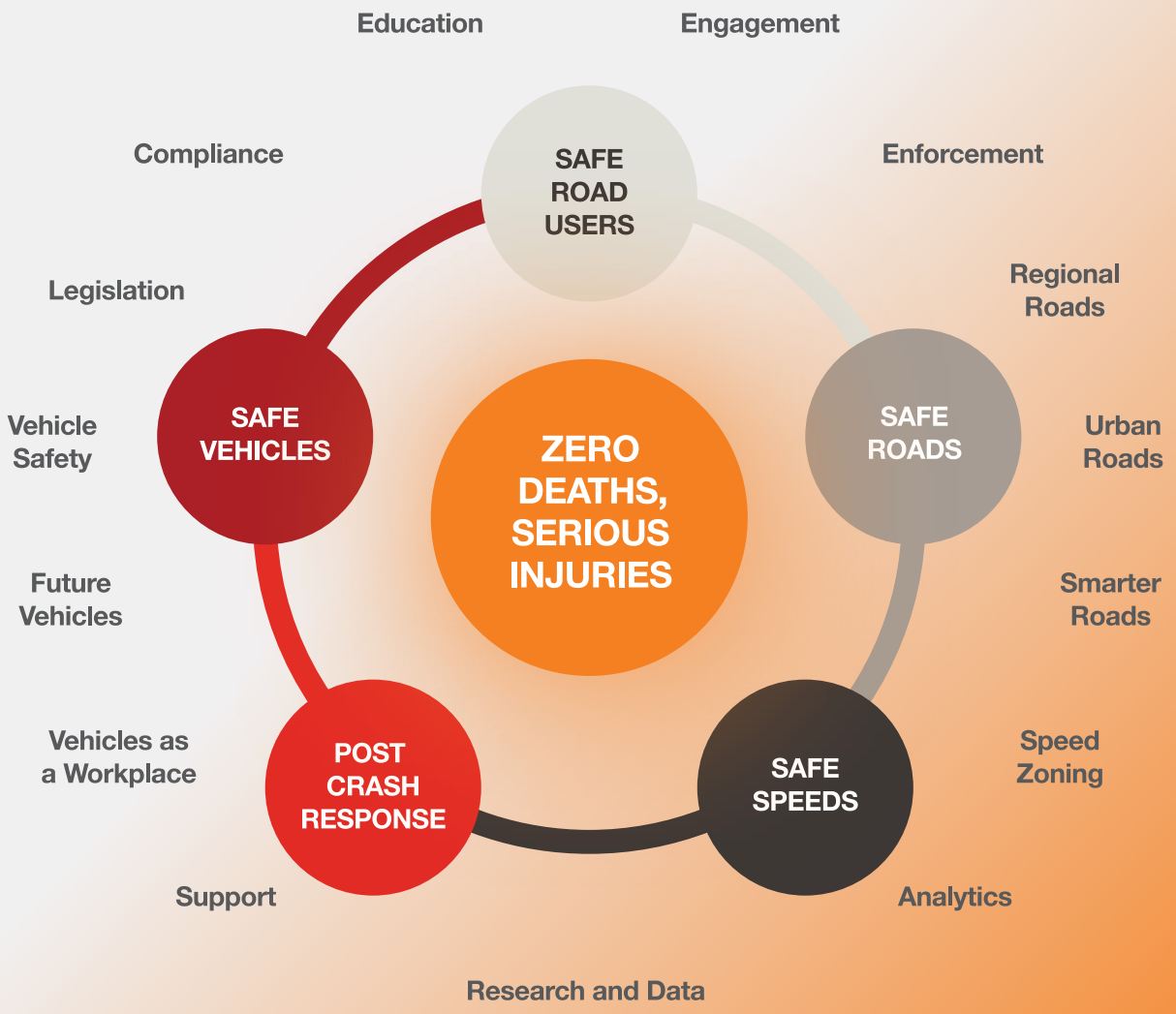
» Our Priorities

The achievement of this strategy's ambitious target: a 50-70% reduction in road trauma, will see up to 8,648 fewer deaths and serious injuries on WA roads by 2030.

To achieve the target, *Driving Change* identifies five priority areas that the government - in collaboration with business, the not-for-profit sector and wider community - will focus on over the next 10 years:

1. **Safe Road Users**
2. **Safe Roads**
3. **Safe Vehicles**
4. **Safe Speeds**
5. **Post-Crash Response**

These priorities underline a holistic view of the road system and a recognition of the interactions between each priority area.



» Our Priorities

SAFE ROADS | Safe Road Users | Safe Speeds | Safe Vehicles | Post-Crash Response

MAKE WA'S REGIONAL AND REMOTE ROADS SAFER.

Almost 40% of fatal and serious crashes happen on WA's regional and remote roads. Between 2015-2019, 3,283 people were killed or seriously injured on rural roads. This means approximately 40% of crashes are in areas where only around 20% of the population live. Roads improved as part of the Regional Run-Off Road Program show significant reductions in run-off road crashes.

Crash insights reveal that 55% of rural crashes are on roads of 110km/h and 37% involve the vehicles crashing into an object such as a tree.

The sealing of road shoulders and installation of audible edge and centre lines on a number of WA's rural roads has reduced severe and casualty crash rates by 58% and 80% respectively. After accounting for treatment costs, the net cost savings to the community were estimated at $50.6 million.[2]

In partnership with the Commonwealth and Local Governments, the State Government will continue to invest in the Run-Off Road Program and increase shoulder widening and sealing and the percentage of wide audible centre lines on WA's most dangerous rural roads.

The government will work to ensure that investments in road infrastructure planning, design and construction align with *safe system* principles.

Around 20% of WA's population live in regional areas but regional WA accounts for approximately 40% of people killed or seriously injured on our roads. Additional focus is needed in regional areas to correct this imbalance.

64% of those involved in rural crashes are men, and of those, 23% are young men aged between 20-29.

Research Evidence

INTERSECTIONS

Perth has around 50,000 intersections and between 2015 and 2019, almost half - 49% - of all urban crashes happened at intersections. In part, these crashes were due to high speeds; WA's urban speed limits remain higher than countries leading in road safety. Evidence shows that improvements to infrastructure and re-engineering at intersections reduces risk and crashes.

▶ *Safe System* design principles minimise conflict points, remove and simplify road user decisions, minimise impact angles, and minimise entry and impact speeds.[3]

The Metropolitan Intersection Crash Program will continue to improve safety on the state's most dangerous high-volume urban intersections.

This approach to greater safety of intersections will be expanded to include low-cost road and intersection safety improvements on established roads.

The government will target improvements to dangerous rural intersections using emerging technology, e.g. driver activated signage on the intersection approach that slows down traffic.

PEDESTRIANS, CYCLISTS AND OTHERS WHO ARE MORE VULNERABLE ON OUR ROADS.

34% of people killed and seriously injured in crashes between 2015-2019 were pedestrians, cyclists and other more vulnerable road users. That figure represents 249 killed and 2,581 seriously injured.

Pedestrians, cyclists, motorcyclists and other more vulnerable road users are disproportionately affected by road trauma. Children, older people and those with mobility restrictions are particularly at risk of injury in the event of a collision.

Research Evidence

Lower speeds and other counter-measures reduce deaths and serious injuries for pedestrians and cyclists.

Even at low speeds, vulnerable road users are at risk and there is a large increase in deaths as impact speeds rise above 30km/h. Countermeasures include improved vehicle design and technology and metropolitan intersection sensors.[4]

Community feedback shows widespread support for traffic calming measures in busy areas that will prevent collisions with pedestrians and cyclists and make local communities more people-friendly. The feedback also highlighted a need for a greater shared understanding and tolerance between all road users.

As part of this strategy, the Government will continue to collaborate with representatives from different road user groups to support a greater shared understanding of safe road use.

By working with the community and relevant stakeholders, one objective will be to increase awareness amongst new and current drivers of how to safely share the road with bike riders, pedestrians and others.

Driving Change will expand the focus on road user behaviours and the steps that we can all take to arrive safely.

Crashes involving vehicles account for approximately 86% of Australian cyclist deaths and 75% of cyclist serious injuries.

The *Kindness Travels* campaign is one example of promoting tolerance and courtesy on WA roads.

Together with Local Government, the State will continue to develop cycling plans and other innovative measures that reduce risk, connect off-road shared paths and make local areas more people-friendly.

This work includes the *Safe Active Streets Program* that reduces speed on local streets and creates a safer shared street space.

The WA Bicycle Network Plan will continue to expand the *Principal Shared Path* (PSP) network and integrate PSP development into all new major road projects.

CHILDREN'S ROAD SAFETY

For the period 2015-19, just over 1 in 10 of those children aged 0 to 10 who were killed or seriously injured on WA roads were not using Child Car Restraints (CCRs) or helmets. Children are also particularly at risk around vehicles.

Seatbelts protect against and minimise driver and passenger traffic injuries.[5] CCRs protect infants and children and reduce the impact of a collision.[6]

Education initiatives will be implemented to develop a greater awareness of safe driving practices around children. Vehicle technology that incorporates reversing sensors and cameras will also be encouraged.

Alongside seatbelt enforcement measures, action will be taken to work with training providers and community groups to increase the number of trained CCR fitters across WA and improve access to child car seats in regional and remote areas.

Active transport has a significant role to play in a healthy lifestyle.

In 1971 75% of children walked or cycled to school, now 70% are driven.

MOTORCYCLISTS

Motorcyclists are overrepresented in road trauma. Between 2015-2019, 148 motorcyclists lost their lives in road crashes and 1,521 were seriously injured. An average of 30 motorcycle deaths and 304 serious injuries occur every year. The government is commited to reducing the number of motorbike deaths and injuries.

Anti-Lock Braking Systems - ABS - saves lives. Australian research found that the presence of ABS on motorcycles is associated with a 33% reduction in all injuries and a 39% reduction in severe crash types.[7]

Protective clothing can reduce the severity of an injury to motorcyclists involved in a crash.[8]

The government will continue to engage with the WA motorcycling community and road safety experts to promote motorcycle technologies such as ABS, the use of protective clothing and footwear and to address other issues affecting motorcyclist safety, including in-attentional blindness.

ABORIGINAL ROAD SAFETY

Approximately 62% of WA's Aboriginal population live in rural or remote areas and in addition to risks associated with regional road users, they are disproportionately exposed to and affected by road trauma.

In 2016, the rate of fatal road injuries for the Aboriginal population in WA was 4.1 times higher than the rate amongst the non-Aboriginal population.[9]

Driving Change outlines a commitment to working with Aboriginal communities to reduce deaths and injuries.

Partnerships with local communities and Aboriginal media will deliver inclusive campaigns, tailored road safety initiatives and culturally responsive education programs.

Collaborations with Aboriginal community and not-for profit groups will support regional road safety champions and continue work towards reducing licence inequality.

INCLUSIVE EDUCATION AND ENGAGEMENT

In order to save more lives on our roads, we all need to understand the challenges and be part of the change. Reducing road trauma is a big undertaking but the rewards are huge and benefit us all.

Part of the challenge is in imagining zero – a road system where there are no deaths or serious injuries – and motivating everyone to do what they can to save lives.

Evidence suggests that greater use of behaviour change techniques could improve outcomes of road safety messaging and interventions aimed at drivers.[10]

By embarking on a new program of education and engagement, the government aims to achieve the important cultural shift needed to reach our 2030 target and the 2050 vision of zero deaths and serious injuries.

Drawing on international best practice, education and engagement tools will be implemented that address road safety in WA across the lifecycle – from early childhood to senior years – with a view to supporting positive road safety behaviours and attitudes and achieving short, mid and long-term reductions in road trauma.

What does a positive road safety culture look like?

In a well-developed road safety culture, individuals consider the dangers of being a road user and in response they make decisions that have regard for their own as well as other people's safety. They demonstrate positive behaviours, speak up about unsafe situations and behaviours and strive for continuous improvements that save lives.

Research Evidence

VEHICLES AS A WORKPLACE

Many crashes on our roads involve individuals and organisations who use vehicles for work.

Over the five year period from 2014 to 2018, 60 per cent of Australian worker fatalities (555 fatalities) involved vehicles. Of these, just under half (271 fatalities) occurred on a public road.[11]

Widespread recognition of the vehicle as a workplace is an important step towards reducing work-related road deaths and injuries.

The government will continue to support the work of the National Road Safety Partnership Program and promote vehicle safety technology, and will explore opportunities to support employers to address and embed road safety in the workplace.

RISK BEHAVIOURS

High risk driving behaviours associated with serious and fatal crashes include alcohol and drug impairment, speeding and using mobile phones.

Effective measures that prevent drug and alcohol consumption when driving include random breath and drug tests, booze buses and alcohol interlocks.[12]

Mobile phone use, infotainment and other forms of distraction are directly linked to increased crash risk and drivers who look at their mobile phones while driving are three times more likely to be involved in a crash than non-users.[13]

Although improving, young drivers still have higher crash rates than other groups of drivers.

Efforts will continue to support and improve learner driver training, alongside an expansion of engagement, compliance and enforcement efforts in response to current and emerging risk behaviours on our roads.

These risks include mobile phone use, fatigue, seatbelt compliance, drink and drug driving and speeding.

BETTER ENFORCEMENT

WA's traffic enforcement effort is concentrated on high-risk driving behaviours associated with serious and fatal crashes including alcohol and drug impairment, speeding, non-use of restraints and mobile phone use.

Red light, intersection and speed cameras reduce the risk of road trauma and make neighbourhoods more people friendly.

Research estimated that the increased use of mobile speed cameras in metropolitan and rural areas across WA led to a 5.6% overall reduction in serious casualty crashes. This figure could be increased to between 20% and 50% with greater enforcement.[14]

The deterrent effect of speed enforcement cameras and other technologies slows down drivers and calms the speed environment on roads.[15]

Using analytics and best practice, the government will improve enforcement and compliance using the right technology, at the right locations, for the right offences.

Driving Change aims to better inform and educate the community about the effects of speed and other risk behaviours on our lives and livelihoods.

The government will review the road safety legislation to identify and implement best practice reforms.

SAFER TRAVEL SPEEDS

Many crashes on WA's regional and remote roads involve high speeds. Between 2015-2019 1,912 people were killed or seriously injured on 110km/h roads. There is a direct correlation between speed and road trauma and WA speed limits on rural roads are amongst the highest in Australia.

Many of the roads that extend across and connect WA's regional and remote communities are unsealed. At different times of the year, extreme weather conditions make these roads even more dangerous.

A 10% reduction in mean speed could result in approx. 33% reduction in fatal road crashes.[16]

There is a strong relationship between the average speed of traffic and road safety, which is reflected in the numbers of road accidents and injuries.[17]

The safety benefit from speed limit reductions on regional and remote roads in WA outweighs the small increase to travel time.[18]

Lower speed limits in residential areas are an important part of making our neighbourhoods safer and more liveable.[19]

Speed limit reductions are a quick and cost effective way to greatly decrease deaths and serious injuries.

Speed limit compliance is gradually improving but speeding and inappropriate speeds are still a significant cause of road trauma.

Around 24% of crashes resulting in death or serious injuries on rural and 12% on metropolitan roads, are caused by excessive or inappropriate speeds to the conditions.

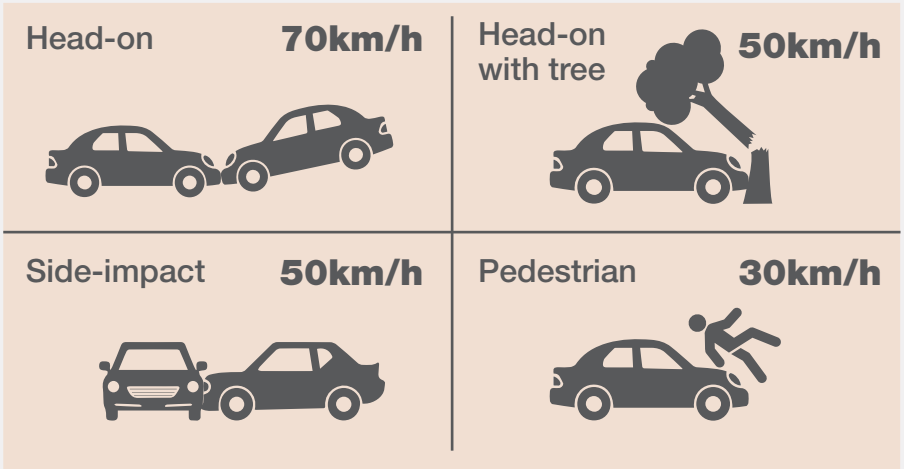
Achievement of the target reduction in death and serious injury on our roads requires universal compliance with speed limits and reduced speed limits where appropriate.

By working in collaboration with communities and local government areas in regional, remote and metropolitan WA, the government will increase local understanding of safer speeds and increase locally driven and tailored solutions to risks.

In order to maximise the safety of road users, there will be a greater policing presence in regional WA, including the expanded Regional Enforcement Unit and investment in camera safety operations on identified regional and remote roads.

Safe System Speed Thresholds

Impact speeds where the risk of death and serious injury escalates.



Did you know?

Some drivers speed because they think they will arrive at their destination sooner. The difference speeding makes to the journey time is much lower than drivers expect and it comes with greater fuel consumption, vehicle emissions and maintenance costs.

VEHICLE SAFETY

The average age of registered vehicles in WA in 2019 was 11.2 years, which is older than the national average of 10.2 years.

Older vehicles (pre 2002) make up 20% of registered vehicles but are involved in 36% of fatalities.

There's twice the chance of death or serious injury if you're involved in a crash with a 3 star safety rating, than there is in a 5 star vehicle.[h]

If every vehicle was replaced with the safest vehicle of the same age and within the same market group, fatal and serious injury reduction of around 33% would be possible, representing savings to the Australian community of nearly $2b per annum through reduced trauma costs.[20]

Personal safety, economic and social benefits can be gained from crash avoidance technologies, including auto emergency braking, blind spot monitoring and lane departure warning.[21]

Older adults can benefit from increased safe mobility with greater uptake of safer vehicles.[22]

Existing technological solutions that can make roads safer for everyone include Auto Emergency Braking, Electronic Stability Control, reversing sensors and Intelligent Speed Assist.

Advances in road and vehicle technology mean that soon it will be possible to ensure that cars drive at safe speeds, avoid crashes and detect when a driver has consumed alcohol or is too tired to drive.

In addition to the protection gains to drivers and vehicle occupants, increasing vehicle safety technology will provide safety benefits to others outside the vehicle.

It is important to promote and increase the rate at which new safety technologies enter our vehicle fleet: The benefits of safer vehicles will accrue and be felt in the mid to longer term, as increasing numbers of safer vehicles are in the hands of enough people to offer a protective benefit to the population.

Advanced collision avoidance technologies will accumulate in our community and eventually help take us to zero by 2050.

The WA Government is leading by example by ensuring that its vehicle fleet has the best ANCAP safety rating available and other safety features including Lane Keep Assist.

Work will continue with the community to increase awareness of ANCAP vehicle safety ratings and encourage people to buy safer cars. Parents, young people and older drivers will be targeted to make safety a priority when buying a car.

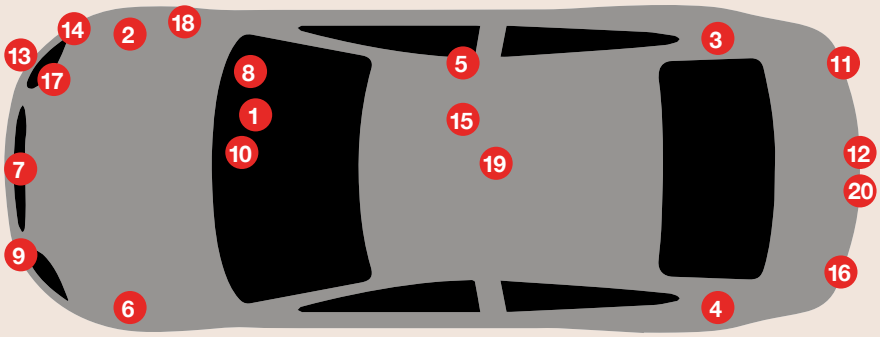
Work will also continue to inform motorcyclists about technological advances and safety features and advocate for life-saving ABS technology.

Work will continue with local government and others to facilitate automated vehicle trials.

Together with national partners and experts, exploring the benefits and potential risks of emerging future vehicles and technology.

FEATURES OF SAFER CARS

1. Airbags
2. Antilock brakes (ABS)
3. Traction control
4. Electronic stability control (ESC)
5. Safety-belt features
6. Brake assist
7. Forward-collision warning (FCW)
8. Automatic emergency braking (AEB)
9. Pedestrian detection
10. Intelligent Speed Assist
11. Blind-spot monitoring (BSM)
12. Rear cross-traffic alert
13. Lane-departure warning (LDW)
14. Lane-keeping assist (LKA)
15. Active head restraints
16. Reversing sensors
17. Automatic high beams
18. Tyre-pressure monitors
19. Telematics
20. Reversing Cameras



POST-CRASH RESPONSE

In addition to preventing crashes, there is a need to reduce the impact of crashes when they occur.

An integrated post-crash response can mitigate the short and long-term effects of a crash.[23]

The effectiveness of emergency medical and rescue operations is critical in reducing deaths and injuries resulting from road crashes.[24]

An effective post-crash response delivers timely, evidence based and appropriate care for the victims of road trauma and informs preventative actions.

The government will continue to provide and improve support services for those involved in or affected by road crashes.

These services include appropriate, timely and culturally responsive counselling.

Technological solutions with the potential to improve the post-crash system response will be reviewed; these include telecommunications infrastructure that increases regional and remote crash response capabilities.

The government will improve data capabilities towards achieving a better understanding of the effects of crashes on individuals and the wider community and explore opportunities to initiate post-crash investigations that inform future improvements in road safety.

Research Evidence

» Effective Implementation

This strategy will be supported by a focus on:

1. **Leadership**
2. **Safety Culture**
3. **Actions and Outcomes**
4. **Better Data**

Bold and Sustained Leadership

We can all be road safety leaders.

Driving Change recognises the importance of all levels of government – the Commonwealth, State and Local Government areas working together, leading by example and putting people's safety at the heart of our transport systems.

Decision makers, community organisations, researchers, businesses, governments and fleet operators all play vital leadership roles. Businesses and industry can be road safety leaders by recognising the vehicle as a workplace, adopting road safety management systems and choosing five-star ANCAP rated vehicles.

Individuals lead by setting good examples. These include not driving when tired, complying with road rules and making car safety ratings a primary consideration when buying a new car. Similarly, individuals lead by speaking up about unsafe situations and behaviours on our roads and engaging in road safety conversations.

This strategy calls for a commitment by every Western Australian to lead by example in how we use roads, cycleways and footpaths and from all those involved in designing, maintaining, and upholding our roads and road rules, to improve our safety.

Positive Behaviours and Road Safety Culture

Underpinning this strategy is an intent to achieve an important cultural shift across governments, business, the not-for-profit sector and the wider community. The goal is to build a supportive and sustained culture of road safety in WA. This includes increasing road safety capacity and capability amongst leaders, key professionals and the community.

This will be achieved by using a range of evidence-based and inclusive education, training and campaign programs that address and support positive road safety behaviours across the lifecycle – from early childhood to senior years.

A focus on road safety culture sets in motion actions that are immediate – such as the courtesy and patience that all road users can demonstrate when travelling – and others that will benefit Western Australians in the longer term.

A key aim of *Driving Change* is to develop and sustain a cultural shift in attitudes and perceptions of road safety that leads to safer behaviours, less acceptance of road trauma and support for changes that save lives and reduce injuries.

Evidence-Based Actions and Outcomes

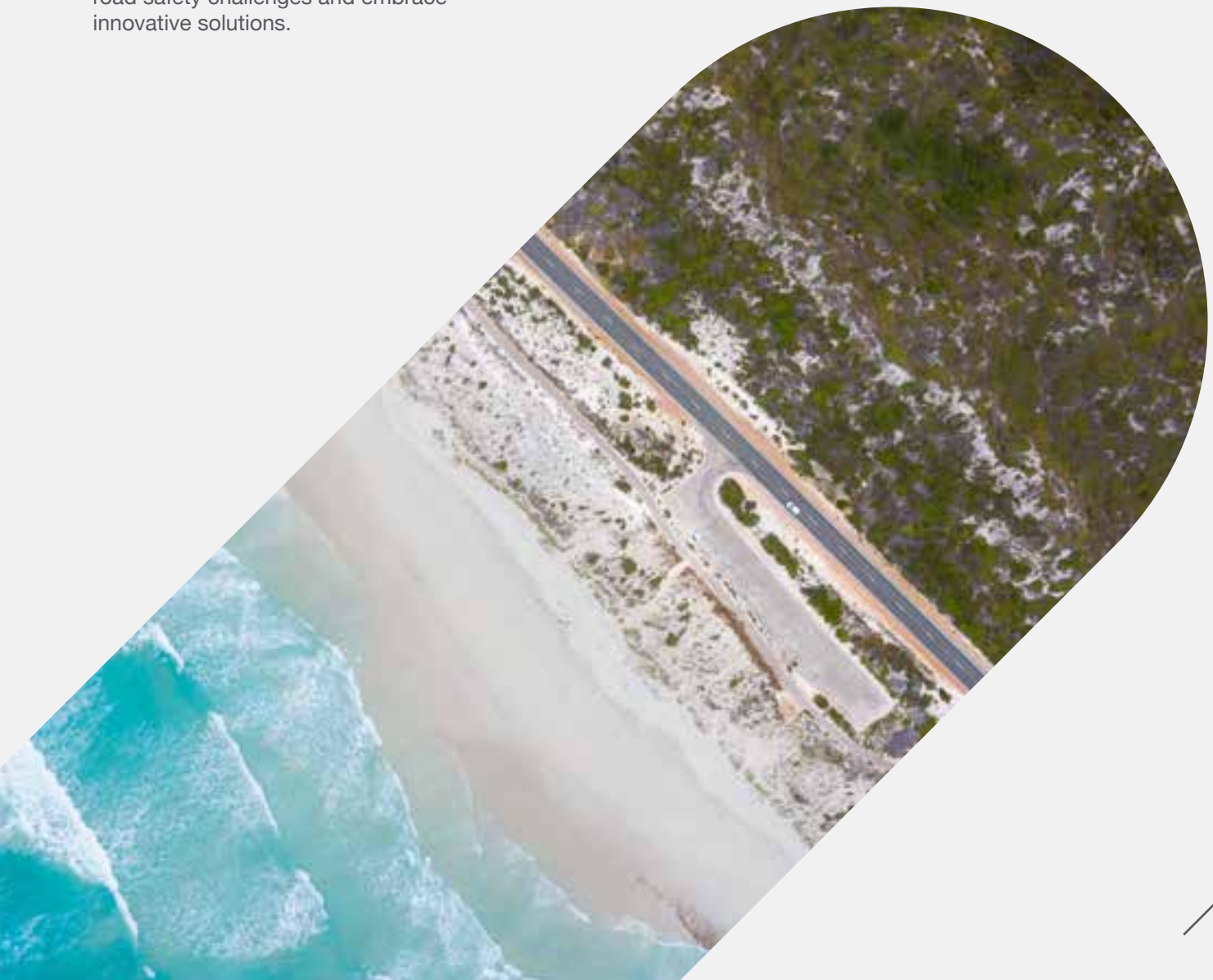
Actions designed to deliver priorities will be based on evidence. Actions will be measured for their effectiveness and their impact will inform future decision-making.

In addition to research and data evidence, community engagement will be expanded to ensure that over the next 10 years, actions are responsive to the evolving needs of the community.

Over the life of this strategy there will be a focus on the future to ensure that WA can respond to road safety challenges and embrace innovative solutions.

Improving Data

Taking a 'whole of Government' approach will enhance data sharing and evaluation capabilities to better capture and understand the total picture of road safety. This means shifting from a focus on fatal road crashes – which is an incomplete view of the road safety problem – to a broader picture of why crashes occur, of injury severity and the responses implemented, that can inform potential solutions. It also means gaining a better understanding of the personal, health and economic costs of severe and life-changing injuries sustained in crashes.



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FOOTNOTES

[a] Towards Zero, Western Australia Road Safety Strategy 2008-2020.

[b] By 2031, WA's population is set to increase by approx. 460 000 people or 17%. This means a WA population of approx. 3.1 million as compared to 2.7 million in 2020 (WA Dept. of Planning 2019).

[c] Progress is compared to a baseline – the average figure over the period 2015-2019; this removes some natural variation that occurs year-to-year.

[d] Figures are based on averages from 2015-2019.

[e] The cost of road trauma is calculated using the willingness-to-pay method, which is based on the aggregated and averaged amounts that a representative sample of individuals are prepared to pay for reduced risk.

[f] The WA Government consistently works to improve the quality and reliability of its data holdings by ensuring the most reliable primary data sources are used. As a result underlying data sources will evolve over the life of a strategy which may be reflected in figures presented.

[g] Figures are based on averages from 2005-2007.

[h] Australasian New Car Assessment Program - ANCAP https://www.ancap.com.au

[i] Safe System Principles information: http://www.towardszerofoundation.org/thesafesystem/

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DISCLAIMER

Unless otherwise identified, the Road Safety Commission has derived the statistics reported in this publication based on crash data provided by Main Roads WA through the Integrated Road Information System and the WA Police Force Traffic Enforcement and Crash Executive Information System.

Numbers reported in this publication are preliminary and may change in the future due to police investigations, coronial inquiries or upgrades of injuries. For this reason, comparisons between this publication and others may result in minor differences.

Any minor apparent differences in percentages or figures are due to rounding in the publication text or differences in definitions used by data custodians.

This publication talks about reportable road crashes that occurred on roads open to the public, including usual road use in metropolitan and regional WA. Regional WA includes remote areas. This definition excludes crashes when the cause of the crash was a medical condition or premeditated intent to cause harm.