# VICTORIAN ROAD SAFETY STRATEGY 2021–2030

VICTORIA State Government | Department of Transport

This Road Safety Strategy aims to halve road deaths and reduce serious injuries by 2030 and put us on the path to eliminating road deaths by 2050.

# VICTORIA IS A LEADER IN ROAD SAFETY

From mandating seatbelts in 1970 to legislating random breath testing in 1976 and introducing speed cameras in 1986, Victoria has been at the forefront of advances in saving lives.

And yet, in 2019, 266 people didn't make it home after losing their lives on Victoria's roads. Around 8,000 Victorians were hospitalised with serious injuries and a further 12,000 were injured. This is a big number, but I think this is an emotive issue that doesn't translate into economics for most people.

Crashes leave lasting impressions on friends and families and have far reaching social and community impacts.

This Road Safety Strategy is designed to reduce and eventually eliminate these shocking numbers. It aims to halve road deaths and reduce serious injuries by 2030.

The focus of this Strategy is on creating a safe road environment and supporting road users to make safe choices.

It aims to

- ensure all Victorians are safe and feel safe, on and around our roads
- see progressive reduction in fatalities and serious injuries from road trauma over the next 10 years
- embed a culture of road safety within the Victorian community
- deliver initiatives that have an immediate impact while also preparing for future changes to road safety technology.

The Strategy also acknowledges that road safety is complex, and that it takes a collective response across government agencies, our industry partners, and the Victorian community to deliver safer roads.

For that reason, we have established a dedicated team within the Department of Transport. Road Safety Victoria lead the efforts of all road safety partners in delivering the key aims and objectives of this Strategy.

I thank the Road Safety Partners – the Department of Transport, Department of Health and Human Services, Department of Justice and Community Safety, Victoria Police and the Transport Accident Commission – for their efforts in developing this Strategy and look forward to working with them as we deliver safer roads for all Victorians.

**The Hon Ben Carroll MP**
Minister for Public Transport
Minister for Roads and Road Safety

Road Safety Victoria leads the efforts of all road safety partners in delivering the key aims and objectives of this Strategy.

# CONTENTS


**MINISTER'S FOREWORD** 3
**CONTENTS** 5
**ABOUT THE STRATEGY** 6
- Action plans 7
- Developing the Strategy 7
- Vision 8
- Objectives 8
- 2030 goals 9
- Principles 10

**WHAT WE KNOW** 12
- Changes in road trauma 12
- Where crashes happen 14
- Road user profiles 16
- Driver behaviour 18
- Vehicle profiles 19
- Strategic approach 20

**STRATEGIC FOCUS AREAS** 22
- Supporting and enforcing safer driver behaviour 24
- Vulnerable and unprotected road users 26
- Increasing safety for those using the road for work or at work 28
- Removing unsafe vehicles from our roads 30
- Improving safety on high speed roads and at intersections and reducing the underlying risk 32
- Recognising the importance of post-crash care 34

**LEVERS OF CHANGE** 36
- Policy development 36
- Safer vehicles 38
- Safer travel speeds 38
- Infrastructure improvements 39
- Enforcement 39
- Innovation and technology 40
- Public information campaigns 40
- Data and research 41
- Education programs 41

**EVALUATE AND ADAPT** 42
- Outcome indicators 43
- Safety performance indicators 43
- Output indicators 43

# ABOUT THE STRATEGY

The Victorian Government is committed to the ambitious target of eliminating death and serious injury on our roads.

At its core, road safety is about people. We know that most Victorians do the right thing on our roads, but when crashes happen, they can have devastating impacts on individuals, families, communities and workplaces.

That's why we've identified key community groups and developed a strategic, multi-faceted and coordinated approach to addressing road safety issues that impact them.

Road safety is complex, requiring a bold, innovative and future focused approach, while taking immediate steps to educate and enforce safe behaviours on our roads.

This Strategy establishes the goals to be achieved by 2030 - building on the Safe System principles, the National Road Safety Strategy and previous Victorian road safety strategies.

Implementation of the Strategy will be via action plans for key initiatives that generate immediate road safety benefits while preparing us for technological advancement that will bring the next step-change in road safety. This approach allows us to be agile in our response to road safety.

Road safety is complex, requiring a bold, innovative and future focused approach.

## ACTION PLANS

Given the long-term nature of this Strategy, the detail of initiative packages and their implementation will be via short-term action plans.

This approach means we can be agile in adapting the initiatives to respond to developments in road safety technology, the needs of the Victorian community, and changes in the social and economic environment.

## DEVELOPING THE STRATEGY

The Strategy was developed by the Road Safety Partners of Victoria:

- Department of Transport
- Department of Health and Human Services
- Department of Justice and Community Safety
- Transport Accident Commission
- Victoria Police

The Road Safety Strategy Steering Committee oversaw the development of the Strategy, supported by specialist working groups that contributed to key aspects of its development.

This included data and evidence-based issue identification, initiative options development, modelling to validate direction, short-term and long-term action planning, and key performance indicator and evaluation development.

Engagement included a Road Safety Summit; regional, community-based forums; and a statewide survey, which provided road safety experts, stakeholders and the Victorian community with the opportunity to consider what could be done to make Victoria's roads safer.

Other contributions included a review of global evidence and literature, predictive modelling of future trauma levels [conducted by Monash University Accident Research Centre (MUARC)], and identification of priority groups as focus areas for the first action plan.

## VISION

Our vision is for

# ZERO ROAD DEATHS BY 2050

The Victorian Government is committed to the ambitious target of eliminating death and serious injury from our roads.

We've looked at comprehensive data and listened to expert advice to understand what's happening on our roads and why, and we're planning for the initiatives that will change the road safety landscape forever.

## OBJECTIVES

### BE SAFE

Ensure all Victorians are safe and feel safe, on and around our roads.

### 10 YEAR REDUCTION

Halve road deaths and progressively reduce serious injuries by 2030.

### A CULTURE OF SAFETY

Embed a culture of road safety within the Victorian community.

### DELIVER INITIATIVES

Deliver a suite of initiatives that are achievable and have an impact in the short-term, but also prepare the state for the future.

# 2030 GOALS

Improve outcomes for vulnerable and unprotected road users who are involved in a crash

Reduce fatalities and serious injuries where speed is a contributing factor

Prepare the road network for the increasing connectivity and automation of vehicles

Ensure unprotected and vulnerable road users are supported by the road system, not impacted by it

Reduce fatalities and serious injuries where drivers engage in distracting behaviour

Optimise road safety data across government agencies to inform future action plans and strategies

Reduce the occurrence of old and unsafe vehicles as a contributing factor to road trauma

Minimise or eliminate road safety hazards for those who work on or use the road for work

Reduce fatalities and serious injuries where alcohol and/or drugs are involved

Make remote and rural roads safe for all road users

## PRINCIPLES

The following principles guide how we go about achieving our road safety objectives.

1 We want **positive outcomes** for all Victorians.

2 Our approach to road safety is built around a **safe system approach** that is coordinated and collaborative and includes all the Road Safety Partners of Victoria.

3 We will **use all the levers** available to us to address immediate road safety concerns while also preparing for and welcoming **technological advancement** opportunities.

4 We will ensure the **data and evidence base** of our initiatives and interventions is **sound and strong**.

5 We will take a holistic approach, to **build initiatives** that address all aspects of the system including public health, vehicle safety technology, infrastructure, and behaviour change supported by enforcement practices.

6 When developing action plans **we will consider** how we adapt to **changes** in road safety technology, the **needs** of the Victorian community, and the social and economic environment.

VICTORIA POLICE

# WHAT WE KNOW

## CHANGES IN ROAD TRAUMA

Victoria has led the world in road safety interventions – introducing mandatory seat belts, random breath testing, bike helmet laws, safety cameras, and running public behaviour change campaigns around dangerous driving activities such as drink and drug driving.

This has seen significant step change reductions in deaths on Victorian roads from 1,061 deaths in 1970[1], 548 in 1990, to 266 in 2019[2].

Even so, in 2019, **266** people lost their lives on Victoria's roads, around **8000** Victorians were hospitalised with serious injuries and a further **12,000** were injured.

For every
DEATH on Victorian roads there are around
30 SERIOUS INJURIES

Survivors and families affected by road crashes have a range of physical, psychological and legal needs. Outcomes of crashes may include physical injuries and resulting disability, psychological trauma that can impair reintegration into work and family life, and a range of economic and legal consequences[3].

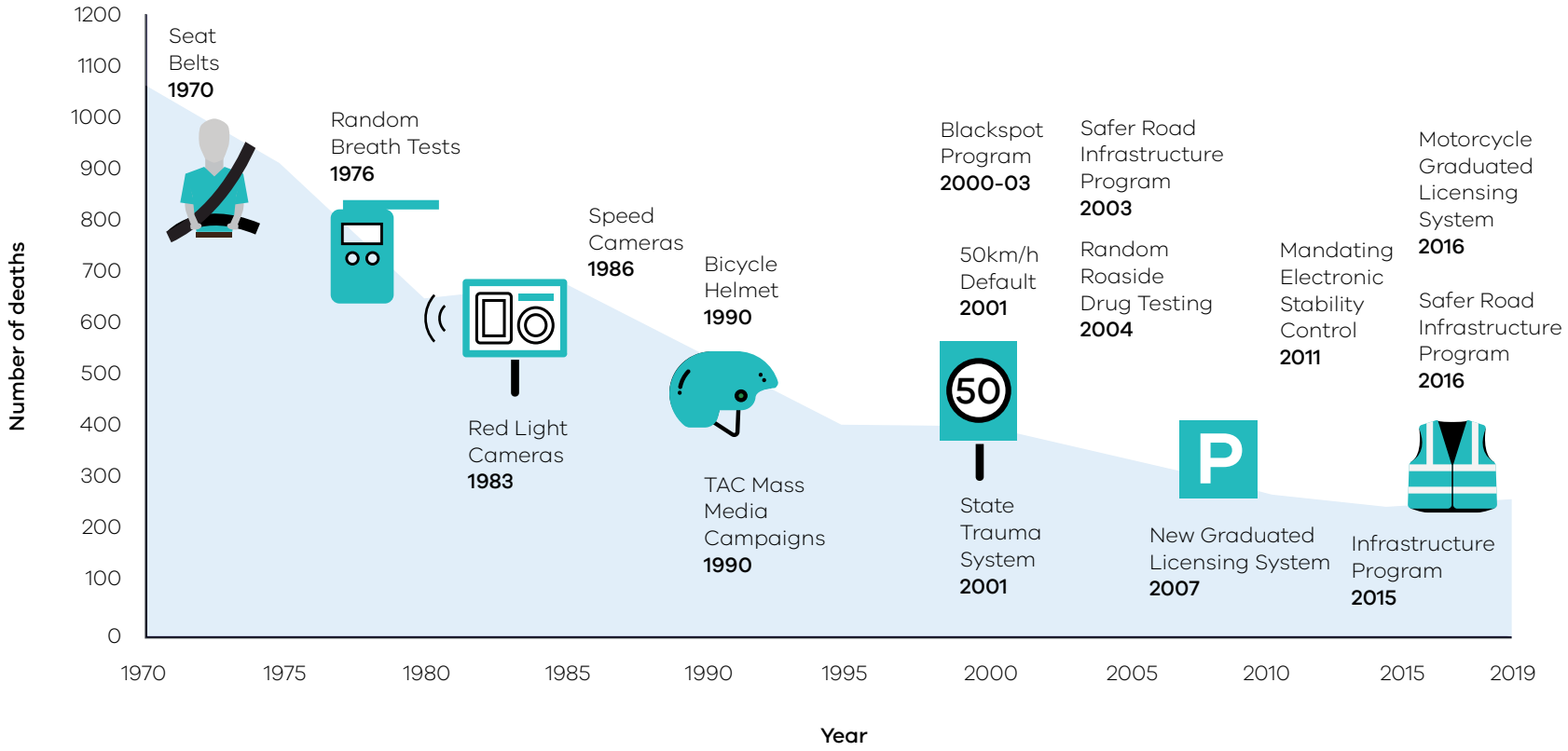
While deaths have been steadily declining, serious injuries have been increasing – with current data indicating that for every death on Victorian roads around 30 people are seriously injured.

1 Towards Zero 2016-2020 Victoria's Road Safety Strategy and Action Plan

2 TAC Online Crash Database

3 World Health Organization (2016) Post-crash response: Supporting those affected by road traffic crashes. WHO Document Production Services, Geneva, Switzerland.

## REDUCTION IN ROAD DEATHS IN VICTORIA



## A NOTE ABOUT DATA IN THE NEXT SECTIONS

The Abbreviated Injury Scale (AIS) scores injuries based on their severity, from 1 (minor) to 6 (maximum/fatal). A severe injury will score a 3 or above. The Maximum Abbreviated Injury Scale (MAIS) allocates an overall score to an individual based on the most severe injury they've sustained.

These figures consider data over five years (30 June 2013 – 1 July 2018); percentages may overlap, with some crashes resulting in both death and injury; and the data does not indicate the cause of the crash, which may have been other factors such as speed, driver inexperience, or alcohol.

## WHERE CRASHES HAPPEN

Research tells us that most crashes (38 per cent) that result in death occur on high speed rural roads 'midblock' (on sections of road not connected to an intersection). This is followed by intersections (23 per cent), and midblock on urban arterial roads (19 per cent).

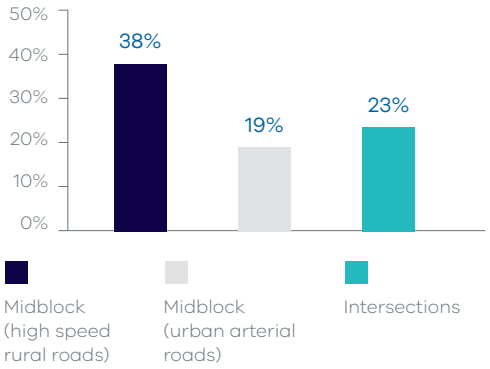
The risk profiles of these locations differ significantly:

- high speed midblock crashes are likely to result from a vehicle departing its lane
- crashes at intersections are likely to be between vehicles, while also presenting significant risk to pedestrians, motorcyclists and cyclists
- crashes on urban arterial roads are likely a result of lane departure, rear-ending, and pedestrian interaction.

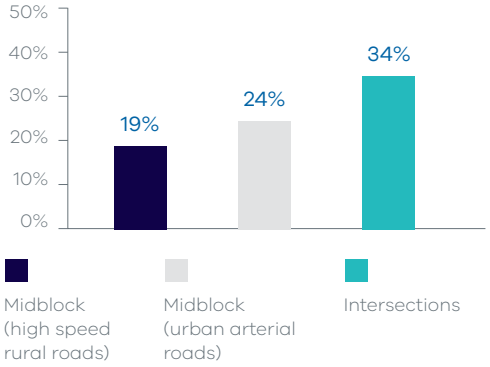
For MAIS 3+ injuries, these are more likely to occur at intersections (34 per cent), midblock on urban arterial roads (24 per cent), and midblock on high speed rural roads (19 per cent).

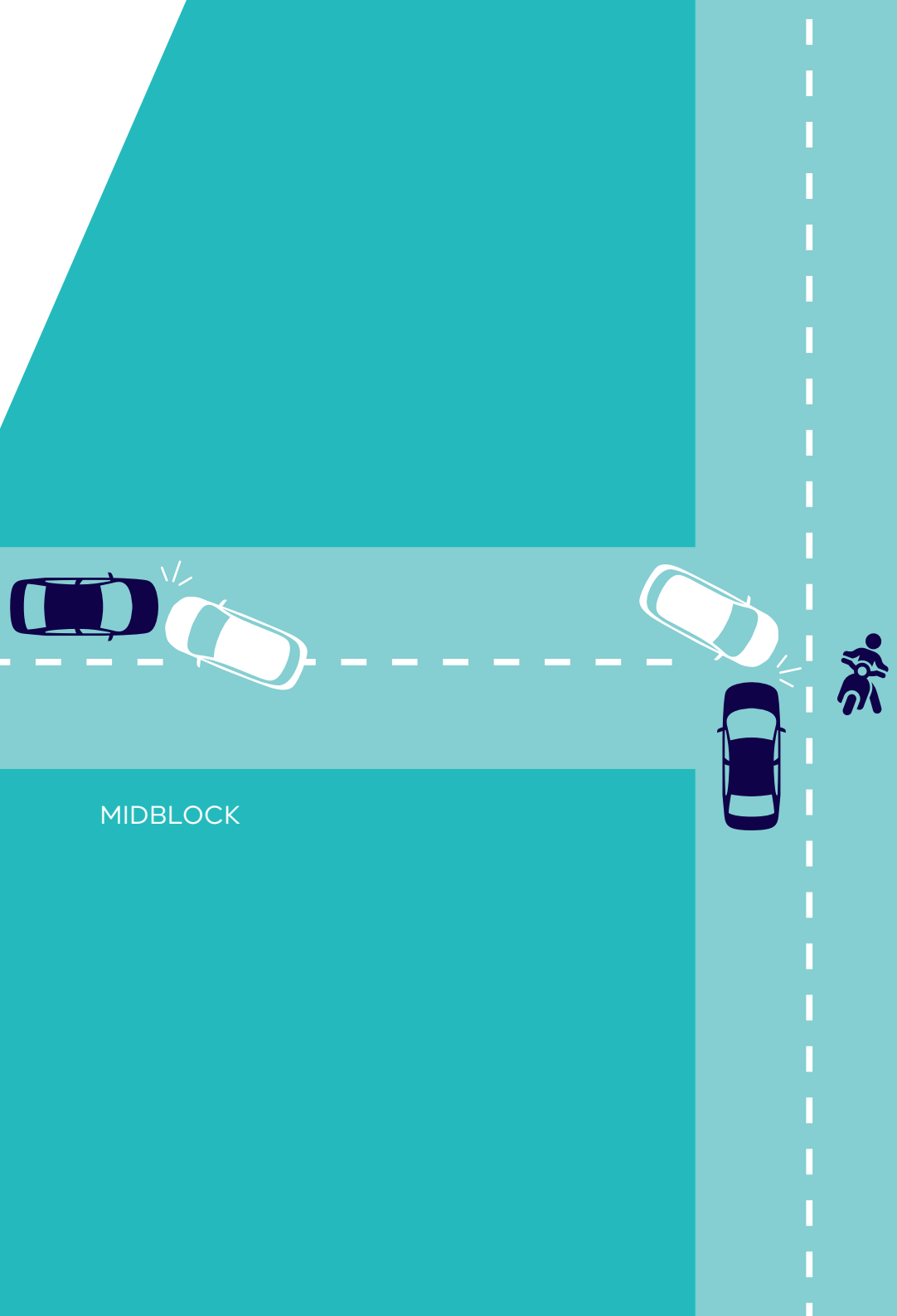
Road safety risks are also present, however to a lesser degree, on midblock on local streets (10 per cent deaths, 14 per cent MAIS 3+) and on mid-speed undivided roads (8 per cent deaths, 6 per cent MAIS 3+).

DEATHS




MAIS 3+ INJURIES



# ROAD USER PROFILES

**Drivers at either end of the age spectrum** present a higher road safety risk. Crashes among **young drivers**, aged between 18 and 25 (22 per cent deaths, 25 per cent MAIS 3+) often feature an older vehicle, occur at night or in dusk/dawn conditions, and/or involve a driver with an illegal blood alcohol concentration.

**Older drivers** aged 60 and above, are increasingly represented in crashes (22 per cent deaths, 20 per cent MAIS 3+), likely due to the ageing population. The increased vulnerability of older bodies means they are more likely to not survive a crash or suffer significant injury compared to younger people.

22% DEATHS

25% MAIS 3+

YOUNG DRIVERS

22% DEATHS

20% MAIS 3+

OLDER DRIVERS

**Unprotected and vulnerable road users -** being cyclists, pedestrians and motorcyclists (unprotected road users), and older people, children and young drivers (vulnerable road users) - are also at risk for various reasons.

Death and trauma to **motorcyclists** is comparably high (16 per cent deaths, 20 per cent MAIS 3+), with a common profile one of a male aged 30-59 having lost control or been involved in a head-on collision on a relatively new motorcycle.

**Pedestrian** deaths (14 per cent deaths) or hospitalisation (12 per cent MAIS 3+) have increased in recent years, with those aged 30-69 most at risk at intersections in metropolitan, urban or growth corridor areas.

**Cyclist** fatalities (3 per cent deaths) tend to occur on higher speed roads and see them struck from behind; while injuries (6 per cent MAIS 3+) result from a cyclist being hit by a left-turning vehicle crossing into their path at intersections on 50 or 60km/h urban roads. Those involved in crashes tend to be male, aged 30-60 years.

| | | |
|---|---|---|
| MOTORCYCLISTS | 16% DEATHS | 20% MAIS 3+ |
| PEDESTRIANS | 14% DEATHS | 12% MAIS 3+ |
| CYCLISTS | 3% DEATHS | 6% MAIS 3+ |

# DRIVER BEHAVIOUR

Risk taking behaviour presents a significant concern to road safety. This ranges from drink and drug driving, to speeding and driver distraction.

## SPEEDING

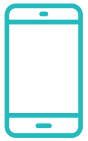
Speeding contributes to at least 30 per cent of fatalities each year and a quarter of serious injuries sustained by light vehicle occupants. People who speed are generally:

- those who regularly engage in mid and high-range speeding (small proportion of speeding drivers)
- those who don't believe there is anything wrong with driving or riding 5-10km/h over the limit, and consistently drive accordingly (a large proportion of speeding drivers)
- those who are mostly compliant with speed limits but may occasionally drive 5-10km/h over the speed limit (a large proportion of speeding drivers).

## DRINK AND DRUG DRIVING

The incidence of drug driving has increased in recent years, particularly the use of methamphetamine. This trend makes drug driving an ongoing focus for prevention and enforcement.

While road trauma from drink driving has decreased after strong enforcement and public campaigns, of all the substances that are tested for roadside, alcohol remains the most represented drug in fatally injured drivers.



## DISTRACTION

Fatalities where distraction is a factor have been increasing, which may be attributed to the prevalence of smartphones and societal pressures to remain 'connected'. Other instances that involve cognitive distraction include the 'looked but failed to see' phenomenon. It is believed that distraction as a cause of crashes is under-reported due to difficulties ascertaining it as a contributing factor.

Distraction also applies to road users other than drivers, including pedestrians using mobile phones when crossing the street, impairing their ability to respond to risks.

## FATIGUE

While not always deliberate behaviour, driving when fatigued is a contributing factor to many road accidents, injuries and deaths.

Fatigue is a complex road safety issue to address because there is currently no objective way for it to be measured at the roadside. Even though fatigue is often thought of as a 'long distance' driving issue, it presents problems for all types of drivers.

The use of technological solutions designed to detect sleepiness are continually improving, however, self-awareness of increasing sleepiness remains a critical component in on-road strategies for mitigating this risk.

# PROFILES

## OLDER VEHICLES

Older vehicles represent a significant concern for road safety (58 per cent deaths, 55 per cent MAIS 3+), particularly those vehicles 10 or more years old. On high speed regional roads, there is a significantly higher number of fatalities involving older vehicles. Younger (<30 years) and older (>70 years) people are more likely to be killed or injured in crashes involving older vehicles.

## LIGHT COMMERCIAL VEHICLES

The number of crashes involving light commercial vehicles (including utes, vans and small trucks) is growing faster than the growth in kilometres travelled by these vehicles (22 per cent deaths, 18 per cent MAIS 3+). These vehicles are most likely to be involved in head-on or rear-end crashes, on high speed roads in non-metropolitan/inner-regional areas. Drivers involved in these crashes are typically male and participating in risk-taking behaviours.

## HEAVY VEHICLES

Due to their mass, heavy vehicle (those over 4.5 tonnes) crashes more often result in death (17 per cent) than injury (6 per cent MAIS 3+). Most crashes involving heavy vehicles are rear-end or head-on crashes, however the risk to the heavy vehicle driver is highest in a single vehicle collision.

# ZERO ROAD DEATHS BY 2050
## STRATEGIC APPROACH

### 2030 GOALS

Improve outcomes for vulnerable and unprotected road users who are involved in a crash

Ensure unprotected and vulnerable road users are supported by the road system, not impacted by it

Reduce the occurrence of old and unsafe vehicles as a contributing factor to road trauma

Reduce fatalities and serious injuries where alcohol and/or drugs are involved

Prepare the road network for the increasing connectivity and automation of vehicles

Reduce fatalities and serious injuries where speed is a contributing factor

Reduce fatalities and serious injuries where drivers engage in distracting behaviour

Minimise or eliminate road safety hazards for those who work on or use the road for work

Make remote and rural roads safe for all road users

Prepare an optimised crash data set to inform future action plans and strategies

## STRATEGIC FOCUS AREAS

Supporting and enforcing safer driver behaviour

Removing unsafe vehicles from our roads

Vulnerable and unprotected road users

Improving safety on high speed roads and at intersections and reducing the underlying risk

Increasing safety for those using the road for work or at work

Recognising the importance of post-crash care

## LEVERS OF CHANGE

Policy development

Safer vehicles

Safer travel speeds

Infrastructure improvements

Enforcement

Innovation and technology

Public information campaigns

Data and research

Education programs

# STRATEGIC FOCUS AREAS

Supporting and enforcing safer driver behaviour

Removing unsafe vehicles from our roads

Vulnerable and unprotected road users

Improving safety on high speed roads and at intersections and reducing the underlying risk

Increasing safety for those using the road for work or at work

Recognising the importance of post-crash care

We know what we need to do to get to zero road deaths in 2050 and what we need to do to reduce road deaths now. These two approaches are complementary and must happen concurrently to maintain a long-term downward trend. They guide how we allocate resources over time to match developing technologies and road use trends. They balance programs that support safe choices by road users now with those programs that underpin future network safety.

How we design and implement initiatives will be subject to a series of action plans, which will allow us to be agile in our approach and adapt to change over the lifetime of the Strategy.

# SUPPORTING AND ENFORCING SAFER DRIVER BEHAVIOUR

We will support safer driver behaviour through deterrence and both active and passive enforcement activities.

The general deterrence effect from road safety cameras is established and effective, with this technology used in Victoria for more than 30 years. It is anticipated that developments in technology will see us expand and adapt this monitoring approach to enforcement by identifying other behaviours – such as distracted driving – and encouraging compliance among drivers.

Our approach to enforcement will remain focused on high and low-level speeding, as well as drug and drink driving, wearing of seat belts and distracted driving, such as using a mobile phone. Enforcement will be complemented by ongoing behaviour change programs and communications to promote positive and safe driver behaviours.

## ILLEGAL BEHAVIOURS, INCLUDING DRIVING UNDER THE INFLUENCE OF ALCOHOL AND DRUGS

We will target illegal behaviours like drink and drug driving, and speeding.

In recent years, we have observed an increase in the rate of illicit drugs found present in road fatalities and drug driving requires targeted strategic and operational responses. To reduce risks associated with drug driving, we will increase the number of drug tests undertaken across the state to an optimal level to deter people who choose to take drugs and drive from making that choice.

We will also introduce new laws and penalties to remove risk-takers from the roads swiftly.

A small proportion of drivers under the influence of drugs are not deterred by current penalties and continue to drive after using drugs.

Further reforms are needed to increase deterrence for these drivers and to better address the underlying issues that increase the likelihood of repeat offending.

## RISK-TAKING BEHAVIOUR

We will address persistent risky road behaviours. This includes those drivers who believe that driving slightly over the speed limit is not dangerous – where the cumulative effect of drivers behaving this way means significant increased risk of road trauma.

# VULNERABLE AND UNPROTECTED ROAD USERS

We will target our efforts to improve the safety of vulnerable road users – including older road users, children and young drivers – and foster liveable cities that encourage active transport considerate of the relationship between transport, sustainability and public health outcomes.

We will work to protect our most at-risk communities who are unprotected on the roads, including pedestrians, cyclists and motorcyclists with a combination of initiatives drawing on safety infrastructure, safer road design, land-use planning strategies and behaviour change campaigns.

We will research the use of new training programs aimed at improving rider awareness, skills and knowledge for both on road and off road riders, and we will promote educational and information campaigns about safe and appropriate behaviour when using the road network. We will investigate new and emerging technologies, and encourage greater use of safer motorcycles, helmets, and protective clothing.

In order to support our most at-risk community members, we recognise the inherent fragility of younger and older road users and their vulnerability in a crash, this includes in vulnerable environments such as pedestrian or cycling activities, but also within a vehicle.

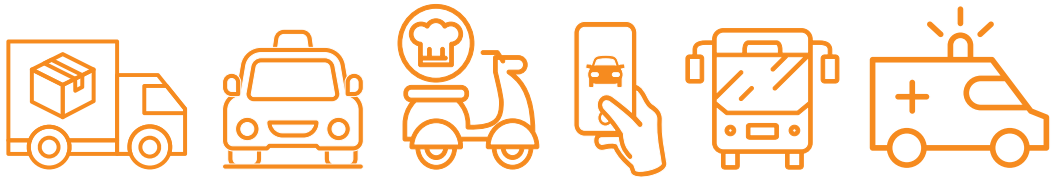
# INCREASING SAFETY FOR THOSE USING THE ROAD FOR WORK OR AT WORK

We recognise that the road is a workplace for many Victorians, including those whose vehicle is work and those who drive to facilitate their work. This includes, but is not limited to, truck and bus drivers, road crews, emergency workers, and couriers.

Changes in the gig and delivery economies also means driving or riding for work is on the increase.

Being on the road for work means these people are more exposed to road related risks – making road safety a workplace health and safety issue.

We'll work with industries and workforces for whom workplace road safety is a concern, as well as with other agencies beyond the traditional road safety partners, to identify opportunities to improve safety for workers on the road.



# REMOVING UNSAFE VEHICLES FROM OUR ROADS

As vehicle safety and other technologies improve, so must our fleet.

We will support drivers to better understand the safest vehicle options in their price range. We will facilitate a contemporary fleet on our roads with in-vehicle lifesaving and crash-preventing technology. We will also seek to understand how infrastructure and in-vehicle technology influences travel patterns.

We will continue to investigate and facilitate the roll out of technological innovations including vehicle connectivity and automation, and intelligent transport systems.

## LEVERAGING TECHNOLOGY TO GET SAFER VEHICLES ONTO OUR ROADS

Vehicle safety has steadily improved over the decades, and in the last few years we have seen significant progress in the development of advanced driver assistance systems in our vehicles and on our roads. As vehicle safety standards and these technologies improve, so must Victorian vehicles.

Older vehicles are over-represented in Victorian crash statistics, and contribute to more crashes that lead to fatalities and serious injuries. Part of our role in driving road safety is to ensure that the vehicles on our roads are the safest available and our road network is designed to support them.

Advancements in vehicle safety technology mean that the safest vehicles are those with lifesaving driver assistance technologies,  which help to prevent or significantly reduce the impacts of a crash.

Modern vehicles today are equipped with features such as Autonomous Emergency Braking (AEB) that can detect a vehicle or pedestrian ahead and automatically apply the brakes to avoid a collision if the driver does not react in time. Lane Keep Assist technology also helps to keep drivers in their lane if they start to drift off the road or into the next lane or oncoming traffic.

As technology develops, the safest vehicles will become more automated, connected and will rely more heavily on supporting infrastructure and a modern, flexible regulatory framework.

# IMPROVING SAFETY ON HIGH SPEED ROADS AND AT INTERSECTIONS AND REDUCING THE UNDERLYING RISK

We know most deaths and serious injuries occur on high speed roads in regional areas. We also know intersections continue to be key locations for major trauma to drivers, unprotected and vulnerable road users.

We will do the work now, and into the future, to transform the network to accommodate new technology and is more forgiving in event of a crash.

We will continue to pursue road infrastructure treatments that we know will work and reduce the risks of crashes occurring.

We will design roads to facilitate safe movement of people and goods, balanced with place-based needs and those of the community. We will ensure that speed limits are appropriate to the infrastructure and function of the road.

# RECOGNISING THE IMPORTANCE OF POST-CRASH CARE

We know survivors and families affected by road trauma can experience physical, psychological, social and economic impacts. These may include life-changing physical injuries and disability, psychological trauma that can impair reintegration into work and family life, and a range of economic and legal consequences.

We will consider road safety as not only a series of preventative measures, but inclusive of what happens after crashes occur. This mean the public health response to road safety requires a coordinated and multi-disciplinary approach to rehabilitation and support.

# LEVERS OF CHANGE

We recognise that safety can only truly be reached by addressing each aspect of the road network as a whole system.

Reductions in serious injuries and fatalities can be best achieved through:

- a long-term public health approach
- systematically addressing unsafe driver behaviours and the underlying motivations for those behaviours
- broad communications strategies
- enforcement
- safe vehicles on a network transformed to be safer now and for future transport needs.

Where we cannot prevent or minimise the injuries, the post-care system must provide high quality support to reduce the lasting impacts of the trauma.

We will use the following levers of change to develop action plans for specific initiatives to achieve the objectives of this Strategy.

## POLICY DEVELOPMENT

We will continue to use policy, regulatory and legislative levers to drive more positive road safety outcomes. The policy framework is designed to create a competent and safe environment in combination with all section of the road safety system including vehicles, infrastructure, speed, safer road users and a good trauma management system.

This framework is complex, with interconnected factors to incorporate compliance and justice, public health, work health and safety, urban planning, and road and transport perspectives.

Road safety policy should also be considered in the context of broader policies, such as those linked to climate change, improving safety and health, enhancing quality of life, and promoting greater equality of opportunity.

## SAFER VEHICLES

Progress in occupant protection and active safety technologies for vehicles has improved significantly in recent years and continues to do so. This means the potential for newer vehicles to reduce road trauma is huge.

Implementing proven technologies sooner and trialling new technologies can improve the safety at a fleet and individual driver level.

Socio-economic barriers are a very real barrier to choosing the newest, safest vehicle. We must continue to support drivers looking for a low-cost vehicle to choose the safest vehicle in their price range.

This Strategy will pursue ambitious targets to ensure the fleet on our roads has the highest ANCAP safety rating and crash-preventing technology, providing a safeguard for those involved in road trauma incidents.

## SAFER TRAVEL SPEEDS

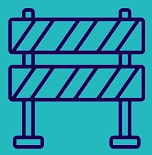
Reducing the instances of speed-related death and trauma on our roads is an ongoing challenge. Speeding contributes to at least 30 per cent of fatalities each year and quarter of serious injuries sustained by light vehicle occupants.

Travel speeds that match road design and road use are an effective, sustainable and long-term road safety risk mitigation approach.

A critical component to effective speed management is to ensure the community understand what speed is safest for the particular environment they are driving in. This understanding contributes to the way speeds are set and also assists in compliance, as community appreciate and adhere to the given limit with safety in mind.

Speed is not always the cause of the crash, but it will always play a contributing factor to the consequence.

Where other safety interventions cannot be implemented, adjusting speed can reduce the severity outcomes of a crash.



## INFRASTRUCTURE IMPROVEMENTS

Victoria has a proven track record of implementing effective infrastructure treatments across the road network.

Ongoing investment in physical treatments has the ability to achieve immediate and sustainable road safety results. This ranges from improvements to the road itself, installation of road-edge barriers, lane departure audible warning systems, through to red-light cameras at intersections.

These treatments are proven to work, and result in immediate impacts on road safety outcomes.

While technologies to support increasing levels of vehicle automation are rapidly evolving, a full driverless vehicle society will not exist for some time. Therefore, we know that transformation of the road network with safety infrastructure in the near-term will save many lives for decades to come, while also uplifting the network to support the technology advancements in vehicles.

## ENFORCEMENT

Enforcement generates both specific and general deterrence and includes active enforcement through the deployment of police patrols and roadside testing, and passive enforcement through speed and red light cameras.

Fixed and mobile road safety cameras have been used successfully in Victoria for more than 30 years and are fully established as an effective road safety intervention through their general deterrence effect. Stronger and smarter enforcement practices will provide for improved road trauma outcomes in the short-term.

It is anticipated that technological advancement will enhance enforcement activities through detecting other risky behaviour such as driving fatigued or illegal mobile phone use.

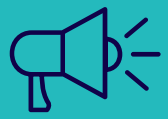
Enforcement practices will be supported by ongoing behaviour change programs to promote positive and safer driver behaviours.

## INNOVATION AND TECHNOLOGY

New and emerging technologies will likely bring significant benefits for road safety, trauma reduction and network efficiency. These include:

- Enforcement technologies to detect risky behaviours like driver distraction, fatigue, reckless and unauthorised driving.
- Intelligent transport systems to allow messages to be transmitted to warn road users of the imminent danger around them (e.g. roadwork, red light violation, slow vehicle ahead, wet/slippery roads).
- Vehicle automation such as driver alert systems; semi-automation of actions such as autonomous emergency braking and automated lane centering; or fully automated (driverless) operation.
- Automatic crash notification (e-Call) to notify first responders of crash location.

We encourage innovation and will work with work industry to understand these new technologies and how they can be facilitated on the Victorian road network.



## PUBLIC INFORMATION CAMPAIGNS

Information campaigns help road users understand how to use the road network safely, such as the rules they need to follow, why it's important to comply with the rules, and the consequences if they don't.

Road safety mass media campaigns play an important role in promoting safe behaviours and improving road safety. Over time, technological and societal changes have meant that message content and communication channels must be tailored to defined sub-groups to ensure maximum effectiveness. New technology offers innovative ways to disseminate messages and for measuring the effectiveness of road safety campaigns.

This includes mass media campaigns on seatbelt wearing, speed and speeding, drink driving, mobile phone use/distraction, fatigue and, more recently, drug driving. These campaigns sought to inform the public about the risks associated with these activities, encourage culture and behaviour change and support Victoria Police in enforcing road safety.

## DATA AND RESEARCH

Quality data and research are integral to ensuring Victoria develops and executes effective evidence-based road safety actions over the life of this Strategy and beyond. While Victoria has a rich source of road safety data, there is a need to improve the systems that support reporting and analytics, access and dissemination, timeliness and quality. This Strategy emphasises an evolution in how the road safety partnership uses data and evidence, along with expertise and insights to measure and evaluate progress.

It does this in two ways:

1. Building on recent work that links data across the road safety partnership and exploring further links.
2. Developing and implementing a roadmap for the governance and development of road safety data and systems that will deliver:
    - trusted reporting and evaluation
    - unified and fit-for-purpose analytics
    - deeper insights through data integration
    - insights into what is working.

A new and comprehensive approach to governance and coordination will ensure Victoria's solid foundation and recent improvements are locked in, while building a platform for continuous improvement. This will enable faster, robust, and more granular analysis; provide a high level of transparency; and enable a more responsive approach to drive better road safety performance.

## EDUCATION PROGRAMS

Education in road safety is required throughout life from early childhood, through to pre-licence and licensing activities, to ongoing awareness of road rules and risk factors, medical review and end of driving life stages. Each of these periods require a tailored approach to address the shifting priority messages, and the various media options that are likely to have the biggest impact with each audience.

The learning outcomes achieved by licensing practices reflect the learning design built into licensing processes and tools. Providing high integrity training and testing ensures competent drivers are licenced across all vehicle classes.

Driver licensing regimes and education programs contribute to road safety by ensuring those accessing the road meet appropriate levels of competency.

# EVALUATE AND ADAPT

Effectively managing the Strategy requires performance indicators, evaluation frameworks and the ability to adapt over its lifetime. Continual improvement is integral to the success of this Strategy.

The performance indicators for the Strategy will be based on the 2030 goals, as well as how these contribute to the overall vision of halving all road deaths and reducing serious injuries by 2030.

The performance indicators should provide evidence of the effectiveness of past or current activities and to inform future policies and initiatives. It also helps us to ensure accountability across all those responsible for road safety outcomes – from the Road Safety Partners to the broader Victorian community.

The key performance indicators for the Strategy include:

- outcome indicators
- safety performance indicators
- output indicators.

The evaluation framework and key performance indicators are being developed separate from, but aligned to, this Strategy. This allows for their use as live documents to inform the Strategy's implementation.

Continual improvement is integral to the success of this strategy.

## OUTCOME INDICATORS

The outcome indicators consist of the reporting of fatalities and serious injuries (hospitalisation and MAIS 3+) over time. These should be reported as total numbers but also as trauma outcomes for the identified cohorts.

## SAFETY PERFORMANCE INDICATORS

The safety performance indicators represent the conditions needed to achieve zero trauma on our road network applicable to roads, vehicles, road use and speeds.

The longer-term safety performance indicators will be informed by shorter-term output indicators of success based on immediate actions.

This acknowledges that what are considered safe conditions today may change over time. For example, today's safe road design may change with advancements in vehicle technology; or where general and specific deterrence by enforcement is effective in speed compliance today, technology may facilitate in-vehicle driver support as the primary mechanism for achieving speed compliance in the future.

## OUTPUT INDICATORS

Output indicators are the tangible result of the initiative programs that will make up the action plans. Therefore, these speak to the delivery of specific actions such as enforcement activities, infrastructure improvements, vehicle safety initiatives, and behaviour change actions – both in the short-term and as a contribution towards broader road safety outcomes.

Authorised by the Victorian Government,
Melbourne
1 Spring Street Melbourne
Victoria 3000
Telephone (03) 9655 6666

Designed by OU Design
Published by the Department of Transport

ISBN 978-0-7311-9181-9 (Print)
ISBN 978-0-7311-9182-6 (pdf/online/MS word)

Contact us if you need this information in an accessible format such as large print or audio, please telephone (03) 9655 6666 or email community@transport.vic.gov.au

© Copyright State of Victoria Department of Transport 2020

Except for any logos, emblems, trademarks, artwork and photography this document is made available under the terms of the Creative Commons Attribution 3.0 Australia licence.