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# Queensland Road Safety Action Plan

2010 – 2011



# safe<sub>4</sub>life





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## Minister's foreword

Every life we lose on our roads is one too many. Deaths and injuries on Queensland roads devastate families, friends and communities.

The Queensland Government is committed to working to eliminate fatalities and serious injuries caused by road crashes in Queensland. This is our long term plan but in order to get there, we need the commitment and support of all members of the community.

The *Queensland Road Safety Action Plan 2010–2011* sets out the actions that the Queensland Government will take over the next two years to improve safety, reduce the number of crashes, prevent injuries and save lives on our roads. The actions also build a foundation for longer term improvements. It uses the best practice safe system approach to achieve the aim of *safe road users* travelling at *safe speeds* in *safe vehicles* on *safe roads and roadsides*.

The development of this action plan showcases the strong and practical relationship between the Department of Transport and Main Roads and the Queensland Police Service. These road safety partners have a history of successful collaboration in the development and implementation of innovative new countermeasures, strategic research and evaluation, crash investigation and the day-to-day management of traffic.

Other bodies, including the Department of Community Safety, Department of Education and Training, Queensland Health, Motor Accident Insurance Commission and local government provide crucial support to the partnership.

We will not be complacent about the need to continually improve and invest in road safety. We are confident that we can spare many Queensland families the grief of suffering the loss or serious injury of a loved one on the road, but we can't do it alone.

### **RACHEL NOLAN MP**

Minister for Transport

## Summary of actions

**Vision:** The elimination of all fatalities and serious injuries on Queensland roads

**Target:** 5.6 road deaths per 100 000 population by 2011. On the basis of current population growth projections, this is estimated to be 259 deaths by 2011



Safe roads and roadsides		
Focus area	Actions	Responsibility
<b>Identify and treat hazardous locations</b>	1. Through the Safer Roads Sooner program, implement engineering treatments at higher crash risk locations to improve the safety performance of state controlled roads.	TMR
	2. Investigate alternative methods of road safety assessment and prioritisation in order to develop a long term safety engineering investment strategy.	TMR
	3. Through the Queensland Road System Performance Plan, improve road infrastructure elements to reduce and prevent crashes on state controlled roads.	TMR
	4. Improve the Department of Transport and Main Roads' regional crash investigation capabilities and cooperation between local departmental staff and police through training and improved information sharing.	TMR, QPS
	5. Trial intelligent vehicle-activated signs, which warn drivers and riders of posted speed limits and hazards, and develop criteria for further deployment.	TMR
	6. Continue to trial 'safe separation' chevron road markings and develop criteria for further deployment.	TMR
<b>Reduce dangerous run-off-road and head-on crashes</b>	7. Finalise the audiotactile linemarking program and develop guidelines for the use of centre linemarking.	TMR
	8. Review road design standards and policies with a view to enabling trials of lane separation devices and barrier treatments on undivided roads.	TMR
	9. Review current practice relating to the placement of roadside objects, including utility poles, with a view to revising design guidelines to incorporate safe system principles.	TMR
<b>Improve road infrastructure to make vulnerable road users safer</b>	10. Provide safer road infrastructure and facilities for vulnerable road users, including pedestrians, cyclists and motorcyclists.	TMR
	11. Implement the Motorcycle Safety Mass Action Program of targeted safety improvements for motorcycle riders.	TMR
<b>Improve the safety of local roads</b>	12. Work closely with local governments to ensure the best safety outcomes are delivered on local roads.	TMR



Safe vehicles		
Focus area	Actions	Responsibility
Improve consumer take-up of safe vehicles and vehicle safety features	13. Build consumer demand for vehicle safety by: (a) improving availability and accessibility of consumer information about vehicle safety; and (b) increasing community awareness of the importance of vehicle safety and what features are available.	TMR
	14. Support and participate in the Australasian New Car Assessment Program (ANCAP).	TMR

Safe speeds		
Focus area	Actions	Responsibility
Strengthen enforcement of speed limits	15. Review speed limit guidelines to ensure consistency with the safe system approach and encourage all agencies involved with setting speed limits to review their roads in light of any changes to the guidelines.	TMR , QPS
	16. Implement an infringement processing system to support the performance of digital camera technology.	TMR , QPS
	17. Introduce digital speed cameras to replace wet film cameras.	TMR , QPS
	18. Implement point to point speed cameras that measure a vehicle's average speed between two points.	TMR , QPS
	19. Install combination red light/speed cameras to reduce crashes at signalised intersections with a high frequency of crashes (or the potential for crashes) that are often the result of disobeying traffic lights or speeding.	TMR , QPS
	20. Investigate prospects for expanding the camera detected offence program.	TMR, QPS
	21. Amend the <i>Transport Operations (Road Use Management) Act 1995</i> to adopt the national model law in relation to heavy vehicle speeding compliance which compels all persons who have influence or control over aspects of the transport task to take positive steps to prevent breaches of speed limits.	TMR
	22. Investigate prospects for increasing the range of covert enforcement strategies.	QPS

<b>Reduce speed limits to protect vulnerable road users</b>	23. Reduce speed limits where appropriate to protect vulnerable road users where a risk has been identified, for example, in areas with high pedestrian activity.	TMR, QPS
	24. Trial and evaluate the use of school zones on multi lane roads.	TMR
<b>Improve the link between speed enforcement and public education</b>	25. Coordinate the content and timing of road safety communication and education campaigns with local enforcement projects.	TMR, QPS
<b>Educate the community about the dangers of speeding</b>	26. Develop and implement anti-speed campaigns involving a range of different media and regional variations if appropriate, including continued rollout of the 'Slow Down Stupid' anti-speeding campaign.	TMR



## Safe road users

Focus area	Actions	Responsibility
<b>Improve safety for vulnerable road users</b>	27. Implement the Queensland Motorcycle Safety Strategy 2009–2012, including: <ul style="list-style-type: none"> <li>• Investigate further enhancements to the motorcycle graduated licensing system</li> <li>• Develop public education campaigns and/or communication activities for returning riders</li> <li>• Develop public education campaigns and communication activities, including a motorcycle riders' handbook and internet content appropriate for young riders.</li> </ul>	TMR
	28. Pilot a support program to assist disadvantaged learner drivers in a regional location accumulate the 100 supervised driving hours necessary to undertake the practical driving test.	TMR
<b>Review key interventions to ensure approaches match with best practice</b>	29. Continue the review of drink driving policy, legislation and countermeasures, conduct public consultation and implement recommended outcomes.	TMR



<p><b>Increase community awareness of road safety issues</b></p>	<p>30. Implement new marketing and communication campaigns, including:</p> <ul style="list-style-type: none"> <li>• <b>Seatbelts:</b> Implement a new seatbelts public education to promote awareness of the new laws requiring appropriate child restraints, as well as a general reminder to all community members to ‘buckle up’ when in the car</li> <li>• <b>Fatigue:</b> Implement a new campaign about the dangers of driving while fatigued, targeted at both rural and urban motorists, and develop and distribute information kits developed for key risk industries, including mining, heavy vehicles and taxis</li> <li>• <b>Motorcycles:</b> Implement an enhanced motorcycle safety campaign to promote safe riding practices</li> <li>• <b>Regional, rural and remote road users:</b> Implement targeted campaigns in regional locations, including monthly articles in 19 newspapers around Queensland and messages on 94 permanent road safety billboards, tailored to local road safety issues</li> <li>• <b>Young drivers:</b> Review, redevelop and reissue all education materials for young novice drivers to ensure that the messages are meaningful and appropriately targeted</li> <li>• <b>Drink driving:</b> Implement a new campaign to encourage people at risk of drink driving to ‘plan ahead’ when drinking alcohol</li> <li>• <b>Distracted driving:</b> Implement a new campaign to educate the community about the dangers of driver distractions.</li> </ul>	<p>TMR</p>
<p><b>Improve safety for heavy vehicles</b></p>	<p>31. Increase awareness of new heavy vehicle fatigue management legislation and increase the number of operators who move into fatigue management systems and manage application of chain of responsibility legislation.</p>	<p>TMR</p>
	<p>32. Increase the number of heavy vehicle rest areas.</p>	<p>TMR</p>
	<p>33. Establish, in participation with all jurisdictions, a single National Heavy Vehicle Regulator to administer all heavy vehicle laws, including a national registration and licensing scheme. The objective of the regulator is to deliver improved safety, reduced costs and the regulatory burden by administering nationally consistent heavy vehicle laws.</p>	<p>TMR</p>
<p><b>Implement tougher, smarter traffic policing and enforcement</b></p>	<p>34. Enhance operational and economic synergies through joint operations, in particular heavy vehicles.</p>	<p>TMR, QPS</p>
	<p>35. Develop a system and process to profile recidivist traffic offenders to support targeted enforcement.</p>	<p>TMR, QPS</p>



<b>Implement tougher, smarter traffic policing and enforcement</b>	36. Introduce new targeted public campaigns linked with enforcement.	TMR, QPS
	37. Utilise intelligent transport systems for electronic compliance for more efficient use of enforcement resources.	TMR
<b>Develop smart resources to educate road users</b>	38. Develop bicycle education resources to support TravelSmart initiatives.	TMR
	39. Develop a road safety education curriculum resource for students in Years 10–12.	TMR



## Enhanced delivery

Focus area	Actions	Responsibility
<b>Research, data and evaluation</b>	40. Conduct observational survey of seatbelt wearing.	TMR
	41. Improve coordination of road safety strategic research between agencies and formalise knowledge sharing arrangements.	TMR, QPS
	42. Review data needs and sources and enhance data sharing and knowledge transfer arrangements between road safety agencies.	TMR, QPS
	43. Evaluate the reforms to the graduated licensing system to determine their impact on reducing the young driver road toll.	TMR, MAIC
	44. Research unlicensed and unregistered driving in Queensland.	TMR, MAIC
	45. Research and develop a package of initiatives for improving motorcycle safety, including education and training programs.	TMR, MAIC
<b>Governance and strategy</b>	46. Revive the Road Safety Alliance between TMR and QPS.	TMR, QPS
	47. Develop capacity and leadership skills in road safety staff in Queensland Government agencies across the state.	TMR, QPS
	48. Improve coordination and information sharing between local/regional and statewide road safety management and planning.	TMR
<b>Community ownership and engagement</b>	49. Develop a unified approach to community engagement.	TMR, QPS
	50. Research and support effective community programs.	TMR, QPS
	51. Collaborate at a regional level to identify and treat the causes of road crashes, for example, through the North Coast Region research project and Road Safety Partnership Project.	TMR, QPS



## Introduction

The immense personal trauma of losing a loved one or watching them cope with debilitating injuries cannot be measured. However, road trauma also places a burden on the entire Queensland population. The expense associated with emergency recovery, treatment and rehabilitation in the health system and lost productivity due to serious injury, requiring long years of care, or death has been conservatively estimated as some \$3.6 billion every year. Everyone has a stake in road safety.

The Queensland Road Safety Strategy 2004–2011 (the strategy) guides our approach to road safety in Queensland (see Figure 1). The strategy articulates our vision of **safe4life**, a belief that all road users should be able to travel safely at all times on the road network. This vision has four elements:

### 1. Safety-focused attitudes and behaviours and optimal health outcomes in the event of a crash

We will use tools such as education and intelligence based enforcement to promote safety-focused attitudes and behaviours by road users, industry and government. Should a crash occur, we will deliver optimal health outcomes for crash victims and their families.

### 2. Safe roads, safe road environments and safe management of traffic

We will build and maintain safe roads and road environments through more forgiving roadsides, effective management of traffic and treatment of high risk stretches of roads.

### 3. Safe vehicles that reduce injury severity and maximise the chance of avoiding a crash

Safe vehicles help to avoid crashes and reduce the severity of injuries when a crash occurs. Investigation and adoption of vehicle safety features are a key aspect of providing safety for all road users.

### 4. A community that values road safety as a priority

By making road safety a priority across our community, we can maximise the benefits to be gained from the first three outcomes.

The strategy is supported by two-yearly action plans which identify high priority problems and ensure that the objectives of the strategy are met during the period of each action plan.

The strategy sets a target for the Queensland road toll of no more than 5.6 fatalities per 100 000 population by 2011. This is modelled on the target agreed by Transport Ministers in all Australian jurisdictions and contained in the National Road Safety Strategy 2001–2010. It represents a 40 per cent reduction in the road toll over the life of the strategy.

This action plan will be the last in the life of the strategy and, unfortunately, at this time the target appears difficult to achieve. However, we can still make inroads into decreasing the fatalities and serious injuries on Queensland roads.

This action plan does not list all the road safety policies and programs which will be carried out over 2010 and 2011. Queensland has an ongoing and responsive road safety program in place, encompassing targeted programs of evidence based policy, enforcement, licensing and public education. Proven measures which are now the backbone of the road safety program will remain in place to ensure that past gains are not lost. Instead, the action plan outlines the new interventions that we believe can accelerate progress towards the target of this strategy and lay the foundations for the next.

**Figure 1:** Key principles from the Queensland Road Safety Strategy 2004–2011

## Road safety in Queensland is...

**Evidence-based**—with the identification of road safety issues and solutions being based on analysis of crash data, transport trends, road safety research and community input.

**Equitable**—by ensuring that road safety practice caters for all users of the road transport system regardless of transport mode and geography and reduces or removes disadvantages where possible.

**Innovative**—by leading in the development of new road safety initiatives and approaches (for example, emerging technologies and techniques) that have the potential to reduce road trauma.

**Collaborative**—by continuing to establish, grow and maintain alliances with a wide range of national, state and local government agencies, industries, interest groups, community organisations and individuals and harnessing these partnerships to deliver integrated solutions.

**Responsive**—to the needs and perceptions of Queenslanders by consulting and effectively educating communities in the identification, understanding, ownership and resolution of road safety issues.

**Accountable**—with individual initiatives being regularly monitored and evaluated using outcome based performance indicators (for example, reductions in travelling speeds, crash numbers and severity and increased feelings of safety for all road users).

**Proactive**—recognising that future road safety challenges and opportunities will need research and understanding to implement timely and appropriate initiatives.

**Broadly based**—by seeking to influence and be influenced by transport, public health, education, security and other relevant whole of government community agendas.

**Cost effective**—with the selection and management of road safety initiatives being based on value for money and a demonstrated ability to reduce road trauma.

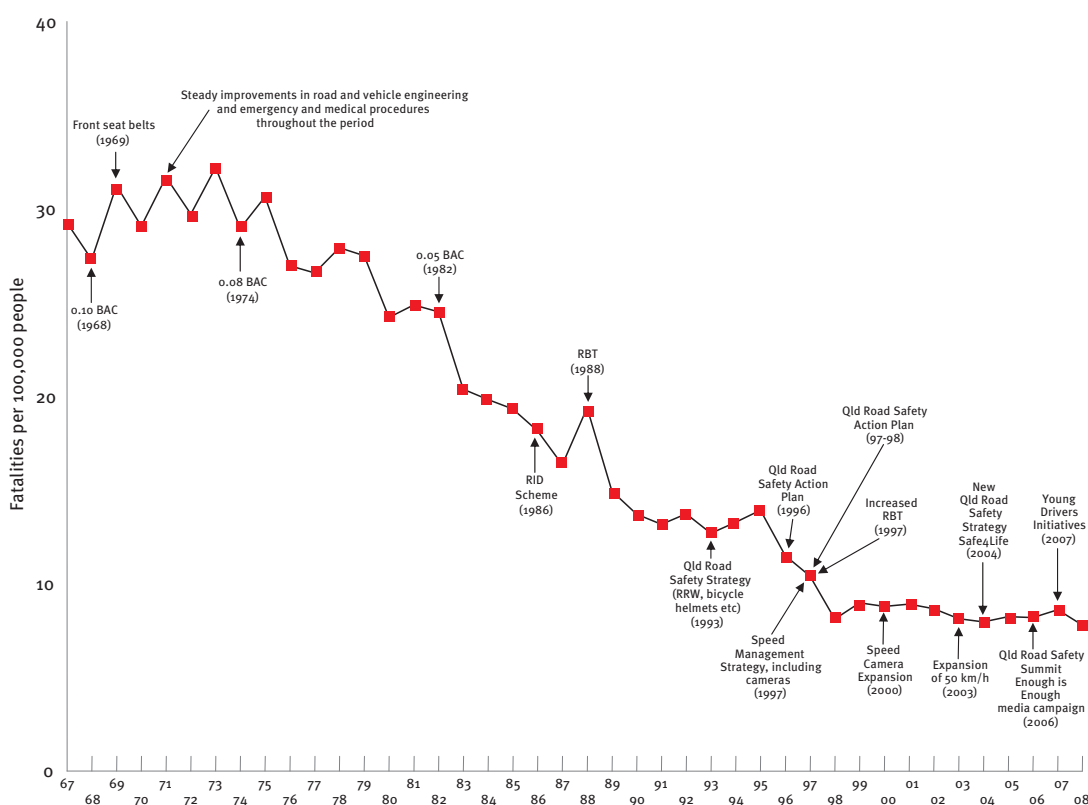




## Our progress: How far have we come?

Despite large increases in the population and vehicle ownership, it is much safer to drive on Queensland roads today than it was three decades ago. The road toll rate has generally trended downward as the result of landmark interventions which are still the basis of the road safety program today, including seatbelts, drink driving and speeding countermeasures (see Figure 2).

**Figure 2: Road toll fatalities per 100 000 people in Queensland: 1967–2008**



The current strategy has provided a framework for the road safety program since its inception in 2004. A number of innovations have been instituted since its first action plan, including:

- Reform of the licensing system to improve the safety of young drivers;
- Introduction of a strategic approach to improving motorcycle safety with the Motorcycle Safety Strategy 2009–2012;
- Introduction of fixed speed cameras to Queensland roads;
- Commencement of random testing to detect drug drivers;
- Introduction of vehicle impoundment, immediate suspension and cumulative disqualification;
- Investment in the safety of roads and roadsides with the Safer Roads Sooner program;
- Implementation of a national program of heavy vehicle safety reforms;
- Introduction of year round double demerits points for repeat serious offences; and
- Major road safety campaigns, including *Enough is Enough*, *Here For Life* and *Share My Story*.

Queensland has made significant gains in road safety over the last thirty years, but it is becoming increasingly difficult to achieve further incremental improvements. The year 2009 saw an increase in the road toll on previous years. However, this should not mean that the road safety program should abandon the ambitious target of the strategy. Instead, the government will continue to research and adopt evidence based, innovative approaches that target resources where there is the greatest potential to save lives.

## The safe system framework

Road safety policy requires balanced attention to the road environment, vehicle safety, speed limits and the behaviour of road users.

This is summed up in the 'safe system' concept, which aims for safe road users travelling at safe speeds in safe vehicles on safe roads and roadsides. Its central aim is to minimise the physical energy forces involved in a crash to a level that the human body can withstand without sustaining serious injury or death.

- Safe roads and roadsides—aims to improve the infrastructure of roads and the surrounding road environment to minimise both the likelihood of a crash happening and the severity of the crashes that do occur.
- Safe vehicles—aims to increase the adoption of safety features in vehicles that prevent crashes and minimise the danger to vehicle occupants and other road users in the event of a crash.
- Safe speeds—aims to encourage travel at speeds that are appropriate to the conditions and limit the physical impact forces of crashes to survivable levels.
- Safe road users—aims to influence alert and compliant road user behaviour through public education, enforcement and licensing.

The safe system concept emphasises that road safety is a shared responsibility between all parties associated with the road network, including the system owners, designers and users. It accepts that human error means that crashes will occur, therefore the road system should be designed to be more forgiving of human error, minimise the impact of crashes to survivable levels and reduce the contribution of road user behaviour to crashes.

The safe system concept draws from the principles of the successful road safety policies adopted in countries such as Sweden, Norway, the Netherlands and the United Kingdom, where road fatality rates are generally a little more than half that in Australia. Since the endorsement of the National Road Safety Action Plan 2005–2006 by the Australian Transport Council in 2004, road safety policy across Australian jurisdictions has been based on safe system principles.

The approach allows jurisdictions to build on past road safety achievements and successful interventions. Adoption of the safe system framework has been recognised as essential for achieving ambitious reductions in road fatalities and injuries.<sup>1</sup>

The Queensland Road Safety Action Plan 2008–2009 was the first Queensland road safety action plan to address each element of the safe system approach. This action plan follows its lead and identifies priorities within each part of the safe system framework. A range of 'enhanced delivery' actions are also included to highlight the critical role of research, governance and strategy and community engagement and ownership in supporting progress towards a safe system.





## The road safety partnership

A key message of the safe system approach is that the responsibility for road safety is shared between all parties associated with the road network. This must translate into a robust partnership and practical links forged between all agencies and major stakeholders with an interest in the road system.

Road safety improvement in Queensland is a collaborative activity (see Figure 3). The government’s transport portfolio has lead responsibility for road safety, and the Department of Transport and Main Roads and the Queensland Police Service have a long history of working together to develop and implement policies and programs. These two agencies also have a strong presence in rural and remote areas through their network of regional offices and seek to maintain a close relationship with residents and promote ownership of local road safety issues which, in some cases, may be unique to the community.

Other agencies also have a support role in this partnership as their activities influence road users and crash outcomes. For example, the Department of Transport and Main Roads works closely with the Department of Education and Training in the preparation of appropriate road safety resources for inclusion in the school syllabus. Through its emergency services function, the Department of Community Safety saves thousands of lives every year with its prompt and effective retrieval and life support systems. Many people injured in crashes have contact with Queensland Health through the hospital system. The Motor Accident Insurance Commission provides substantial funding towards strategic research into road safety issues including, most recently, an evaluation of reforms to the graduated licensing system aimed at improving the safety of young drivers.

Local governments have a key role in managing road safety in their capacity as both the owner and designer of the local road network and advocate for their community. This is achieved through their ongoing investment in capital and maintenance works and local projects to improve awareness of road safety issues.

The road safety partnership also depends on a strong working relationship with stakeholder representatives from the community, industry and academia.

**Figure 3: The road safety partnership**

Organisation	Area of responsibility
<p><b>Department of Transport and Main Roads</b></p>	<ul style="list-style-type: none"> <li>• Designs, builds, improves, operates and maintains the state road network</li> <li>• Collects and analyses information about traffic infringements and road crashes</li> <li>• Undertakes road safety research, analysis, evaluation and policy and program development</li> <li>• Researches and develops vehicle and road safety legislation</li> <li>• Facilitates the delivery of local road safety initiatives in collaboration with regional road safety partners</li> <li>• Sets and reviews speed limits in accordance with the Speed Management Strategy</li> <li>• Manages the camera detected offence program</li> <li>• Sets standards for the licensing of drivers and riders and registration of vehicles</li> <li>• Licenses drivers and riders and registers vehicles</li> <li>• Educates the community about road safety through campaigns, publications and information materials</li> </ul>

<b>Queensland Police Service</b>	<ul style="list-style-type: none"> <li>• Enforces legislation concerning road user behaviour</li> <li>• Operates the camera detected offence program</li> <li>• Investigates road crash scenes</li> <li>• Collects and analyses information about infringements and road crashes</li> <li>• Educates and engages the local community about road safety</li> </ul>
<b>Department of Community Safety</b>	<ul style="list-style-type: none"> <li>• Extricates and treats road crash casualties</li> </ul>
<b>Queensland Health</b>	<ul style="list-style-type: none"> <li>• Treats people injured in road crashes</li> </ul>
<b>Department of Education and Training</b>	<ul style="list-style-type: none"> <li>• Educates young road users through the school and TAFE systems</li> </ul>
<b>Motor Accident Insurance Commission</b>	<ul style="list-style-type: none"> <li>• Manages motor vehicle injury claims</li> <li>• Provides funding for road safety research</li> </ul>
<b>Local governments</b>	<ul style="list-style-type: none"> <li>• Designs, builds, operates and maintains local roads</li> <li>• Advocates for road and roadside improvements</li> <li>• Educates and engages the local community about road safety</li> </ul>



## How will the action plan work and how we will measure performance?

This action plan aims to:

- Reduce the road toll rate from its current level closer to the strategy target of 5.6 fatalities per 100 000 population;
- Ensure that the road safety program addresses each element of the best practice safe system framework – safe roads and roadsides, safe vehicles, safe speeds and safe road users; and
- Lay the foundations for the next Queensland road safety strategy.

The section 'Actions for 2010 and 2011' gives a brief description of each element of the safe system framework and lists key evidence and actions. Responsible agency/ies are indicated for each action (in alphabetical order). Implementation of actions will be reported as part of whole of government performance reporting.

Robust safety performance indicators are increasingly being recognised as an essential component of road safety management, especially if jurisdictions want to achieve ambitious targets.<sup>2</sup> This action plan sets out a number of safety performance indicators to allow us to track progress against the key safe4life outcome of the eventual elimination of road fatalities and serious injuries on Queensland roads, and the intermediate safe system outputs of safe roads and roadsides, safe vehicles, safe speeds and safe road users (see Figure 4).

Development of a comprehensive set of safety performance indicators will form the basis of the next road safety strategy.

Figure 4: Safety performance indicators



<b>Safety performance indicators</b>	
<b>Overall</b>	
Number of fatalities per annum	
Number of serious injuries per annum	
Number of fatalities per 100 000 population per annum	
Number of serious injuries per 100 000 population per annum	
Number of fatal crashes per annum (total and urban/rural/remote breakdown)	
Number of serious injury crashes per annum (total and urban/rural/remote breakdown)	
Number of fatal crashes per 100 000 population per annum (total)	
Number of serious injury crashes per 100 000 population per annum (total)	
<b>Safe roads and roadsides</b>	
Number of intersection fatalities per annum	
Number of intersection serious injuries per annum	
Number of run-off-road fatalities per annum	
Number of run-off-road serious injuries per annum	
Number of head-on crash fatalities per annum	
Number of head-on serious injuries per annum	
<b>Safe vehicles</b>	
Proportion of new vehicle sales of five-star Australasian New Car Assessment Program Standard (ANCAP), or fitted with Electronic Stability Control and side/curtain airbags, by vehicle type (light passenger vehicle, 4WD and light commercial vehicle)	
<b>Safe speeds</b>	
Number of speed related fatalities per annum	
Number of speed related serious injuries per annum	
Number of fatalities in urban/rural/remote regions by speed-zones	
Number of serious injuries in urban/rural/remote regions by speed-zones	
Percentage of drivers and riders travelling over the speed limit	
Percentage of drivers and riders travelling over the speed limit by 10km/h or more	
Mean speeds by speed limits and rural/urban road categories	
<b>Safe road users</b>	
Number of young driver fatalities per annum	
Number of young driver serious injuries per annum	
Number of motorcycle fatalities per annum	
Number of motorcycle serious injuries per annum	
Number of heavy vehicle-involved fatalities per annum	
Number of heavy vehicle-involved serious injuries per annum	
Number of heavy vehicle-involved serious crashes per annum	
Number of alcohol-related fatalities per annum	
Number of alcohol-related serious injuries per annum	
Number of alcohol-related serious crashes per annum	
Proportion of drivers/riders detected driving/riding under the influence of alcohol at roadside tests	



Proportion of drivers/riders detected driving/riding under the influence of illegal drugs at roadside tests
Number of unrestrained fatalities per annum
Number of unrestrained serious injuries per annum
Proportion of vehicle occupants properly restrained (front/rear and urban/rural)
Number of fatigue related crash fatalities per annum
Number of fatigue related crash serious injuries per annum
Number of drivers self-reported as falling asleep while driving in the past 12 months

## Next steps

This action plan will be the last in the lifetime of the current strategy. It is intended that the next strategy will be strongly evidence based and projects are underway to develop a robust evaluation methodology for previous strategies, and produce a suite of safety performance indicators to allow swift identification of emerging issues. The new strategy will guide road safety policy over the following decade and many stakeholders will have opportunity to contribute to its long term vision.



## Actions for 2010 and 2011

### Safe roads and roadsides

Safety treatments and upgrades to roads and roadsides can play a role in preventing a crash and, in the event of a crash occurring, can reduce the severity of the outcome for the road users involved. Two areas of activity contribute: first, ongoing investment in upgrades to and maintenance of the road network improves its overall quality; and, second, targeted remedial treatments in selected high risk locations (or 'black spots') offer a substantial return on investment to the community in terms of lives saved.

The Safer Roads Sooner program is a key example of this type of program. The program includes projects to improve sections of the state controlled road network with a high risk of head-on, run-off-road and intersection crashes, locations with a high number of fatal and serious injury crashes, fatigue zones in rural areas and upgrading roadsides to be more forgiving of driver error. Projects funded under Safer Roads Sooner include clearing roadside vegetation, installing crash barriers to protect vehicles from roadside obstacles and introducing new rest stops. As part of the fatigue countermeasures component of the program, audio tactile linemarking has been applied on 2 000 kilometres of roads over three years.

Some sections of the road are inherently riskier than others—at intersections, for example, there is an increased risk of dangerous side impact crashes. As with all interventions, it is necessary that funding is managed in a cost effective manner and targeted to those sections of the road network where there is high risk of a crash and higher volumes of traffic.

#### What we know:

- The National Road Safety Strategy 2001–2010 estimated that almost half of the targeted 40 per cent decrease in the road toll by 2010 could be achieved by improving the safety of road infrastructure.<sup>3</sup>
- Between 2003 and 2008, on average 59.2 per cent of crash fatalities occurred on state controlled roads and 40.8 per cent on local government roads.<sup>4</sup>
- Evaluations of Australian black spot programs suggest a benefit cost ratio of between 4 and 14.<sup>5</sup>



## Safe roads and roadsides: Initiatives

Focus area	Actions	Responsibility
<b>Identify and treat hazardous locations</b>	1. Through the Safer Roads Sooner program, implement engineering treatments at higher crash risk locations to improve the safety performance of state controlled roads.	TMR
	2. Investigate alternative methods of road safety assessment and prioritisation in order to develop a long term safety engineering investment strategy.	TMR
	3. Through the Queensland Road System Performance Plan, improve road infrastructure elements to reduce and prevent crashes on state controlled roads.	TMR
	4. Improve the Department of Transport and Main Roads' regional crash investigation capabilities and cooperation between local departmental staff and police through training and improved information sharing.	TMR, QPS
	5. Trial intelligent vehicle-activated signs, which warn drivers and riders of posted speed limits and hazards, and develop criteria for further deployment.	TMR
	6. Continue to trial 'safe separation' chevrons road markings and develop criteria for further deployment.	TMR
<b>Reduce dangerous run-off-road and head-on crashes</b>	7. Finalise the audiotactile linemarking program and develop guidelines for the use of centre linemarking.	TMR
	8. Review road design standards and policies with a view to enabling trials of lane separation devices and barrier treatments on undivided roads.	TMR
	9. Review current practice relating to the placement of roadside objects, including utility poles, with a view to revising design guidelines to incorporate safe system principles.	TMR
<b>Improve road infrastructure to make vulnerable road users safer</b>	10. Provide safer road infrastructure and facilities for vulnerable road users, including pedestrians, cyclists and motorcyclists.	TMR
	11. Implement the Motorcycle Safety Mass Action Program of targeted safety improvements for motorcycle riders.	TMR
<b>Improve the safety of local roads</b>	12. Work closely with local governments to ensure the best safety outcomes are delivered on local roads.	TMR

## Safe vehicles

Vehicle safety features which were once innovations have now become the norm. People seeking to purchase new vehicles now expect anti-lock braking systems, front airbags and seatbelt reminders as standard features. Current vehicle models are much safer than those of previous decades and evidence suggests that the chance of an occupant escaping death or serious injury improves with each year of manufacture of the vehicle driven.

Vehicle safety applies in two ways. Primary safety features prevent crashes from occurring in the first place, for example, through improved braking systems and suspension and sophisticated warning and avoidance systems. Secondary safety features help reduce trauma to vehicle occupants and other road users involved (including pedestrians) in the event that a crash occurs, through features such as crumple zones, airbags and other technologies.

Electronic Stability Control (ESC)—also known as Electronic Stability Program (ESP), Dynamic Stability Control (DSC), Vehicle Stability Control (VSC) and other names given by manufacturers—is fast becoming the latest vehicle safety innovation to become standard in many new vehicles. ESC improves vehicle handling and skid evasion by detecting and preventing loss of steering control. ESC is now a requirement for the top ‘five star’ safety rating from the Australasian New Car Assessment Program (ANCAP) and, on 23 June 2009, the Australian Government announced the introduction of an Australian Design Rule for the mandatory fitting of ESC to passenger vehicles from November 2011 (for new models) and November 2013 (for all vehicles).

The Australian Design Rules process has played a role in ensuring that vehicle safety innovations are disseminated widely in the vehicle fleet over time, but it should be remembered that regulatory processes are slower than the pace of technological change. Consumer demand is important in encouraging manufacturers to innovate and install life saving technologies in their vehicle models. Government can support this by ensuring that consumers are informed.

### What we know:

- Australian research has estimated that if every car was upgraded to the safest model currently available in its class, current levels of road trauma involving light passenger vehicles could be reduced by up to 26 per cent. If each car incorporated the best available safety features, trauma could be reduced by up to 40 per cent.<sup>6</sup>
- The average ‘crashworthiness’ of a vehicle improves with year of manufacture, implying that drivers of newer cars are less likely to be killed or admitted to hospital after a crash, with the rate of serious and fatal crashes increasing with each year of vehicle age.<sup>7</sup>
- An Australian evaluation of cars fitted with ESC suggested that it reduced the risk of fatal single vehicle crashes by 32 per cent, in line with overseas studies.<sup>8</sup> Research also suggests that ESC is particularly valuable on four wheel drive vehicles, with reductions in run-off-road crashes of up to 60 per cent.<sup>9</sup>
- A 2009 simulation study of 12 real-life rural road crashes found that in ten of the simulations the addition of ESC to the vehicle enabled the driver to avoid the collision altogether, while in the remaining two it reduced the severity of the crash.<sup>10</sup>
- Airbags have been shown to reduce the risk of death in serious crashes by up to 11 per cent.<sup>11</sup>





## Safe vehicles: Initiatives

Focus area	Actions	Responsibility
Improve consumer takeup of safe vehicles and vehicle safety features	13. Build consumer demand for vehicle safety by: (a) improving availability and accessibility of consumer information about vehicle safety; and (b) increasing community awareness of the importance of vehicle safety and what features are available.	TMR
	14. Support and participate in ANCAP.	TMR

## Safe speeds

Many people think they practise 'safe speeding' but there is, in fact, no such thing. Crash studies have established that speeding contributes to increased stresses on the vehicle and the driver, increased stopping distance, decreased vehicle stability and increased risk of losing control on curves or during emergency manoeuvres. Speed has a dual impact: first, it increases the risk of a crash occurring and, second, once a crash situation arises, it increases the physical forces of the impact and ultimately determines the seriousness of the outcome. Speed has therefore been described as the most important factor in road safety.

It is also among the most controversial. Proposals to change speed limits or increase enforcement of existing limits are often met with mixed reactions from the community. Australian speed limits are high by international standards, however many people believe that lower speeds will adversely affect travelling times, in spite of research showing there is limited impact. Australian researchers have also documented the 'speed paradox' or the contradiction between attitudes and behaviour; although people understand that speeding is dangerous, it is a common behaviour across the road network.<sup>12</sup>

Speed enforcement in Queensland is based on the principle of general deterrence, which requires drivers and riders to perceive the risk of being detected as high ('anywhere, anytime') and the level and nature of penalties as sufficiently high to act as a deterrent. The Queensland Police Service conducts random enforcement using mobile speed cameras according to this principle. Fixed speed cameras complement this by delivering strong localised deterrence at places which have a history of speed related crashes. The Department of Transport and Main Roads reinforces the safe speeds message through regular campaigns which aim to educate drivers and riders about the consequences of choosing to speed.

### What we know:

- Australian research suggests that speeds just 5 km/h above average in urban areas and 10 km/h above average in rural areas are sufficient to double the risk of a casualty crash – roughly equivalent to the risk associated with a blood/breath alcohol concentration of 0.05.<sup>13</sup>
- Even small reductions in vehicle travelling speeds deliver substantial benefits in terms of injury reductions, with vulnerable road users such as pedestrians and cyclists being the primary beneficiaries.<sup>14</sup>
- An evaluation of the Queensland speed camera program in 2003 estimated that, in areas within two kilometres of speed camera sites, there had been a reduction of around 45 per cent in fatal crashes and 31 per cent in serious injury crashes.<sup>15</sup>
- The chances of survival for an unprotected pedestrian hit by a vehicle decrease rapidly at speeds greater than 30km/h. For a restrained vehicle occupant, the critical impact speed is 50km/h for side impact crashes and 70 km/h for head-on crashes.<sup>16</sup>

## Safe speeds: Initiatives

Focus area	Actions	Responsibility
<b>Strengthen enforcement of speed limits</b>	15. Review speed limit guidelines to ensure consistency with the safe system approach and encourage all agencies involved with setting speed limits to review their roads in light of any changes to the guidelines.	TMR , QPS
	16. Implement an infringement processing system to support the performance of digital camera technology.	TMR , QPS
	17. Introduce digital speed cameras to replace wet film cameras.	TMR , QPS
	18. Implement point to point speed cameras that measure a vehicle's average speed between two points.	TMR , QPS
	19. Install combination red light/speed cameras to reduce crashes at signalised intersections with a high frequency of crashes (or the potential for crashes) that are often the result of disobeying traffic lights or speeding.	TMR , QPS
	20. Investigate prospects for expanding the camera detected offence program.	TMR, QPS
	21. Amend the Transport Operations (Road Use Management) Act 1995 to adopt the national model law in relation to heavy vehicle speeding compliance which compels all persons who have influence or control over aspects of the transport task to take positive steps to prevent breaches of speed limits.	TMR
	22. Investigate prospects for increasing the range of covert enforcement strategies.	QPS
<b>Reduce speed limits to protect vulnerable road users</b>	23. Reduce speed limits where appropriate to protect vulnerable road users where a risk has been identified, for example, in areas with high pedestrian activity.	TMR, QPS
	24. Trial and evaluate the use of school zones on multi lane roads.	TMR
<b>Improve the link between speed enforcement and public education</b>	25. Coordinate the content and timing of road safety communication and education campaigns with local enforcement projects.	TMR, QPS
<b>Educate the community about the dangers of speeding</b>	26. Develop and implement anti-speed campaigns involving a range of different media and regional variations if appropriate, including continued rollout of the 'Slow down stupid' anti-speeding campaign.	TMR





## Safe road users

Queensland has a long history of introducing robust interventions aimed at improving road user behaviour. The requirement for front seat belts in 1969, successive decreases in the general blood/breath alcohol concentration (BAC) limit down to 0.05 in 1982 and the introduction of random breath testing in 1988 are all associated with a long term decline in the road toll over the past three decades. These initiatives are now the foundation for the Queensland road safety program and will continue—with strengthened, targeted enforcement where appropriate—to ensure that past gains are not lost.

More recent work in the road user behaviour space includes the launch of the Queensland Motorcycle Safety Strategy 2009–2012 in May 2009. The strategy outlines 11 priority actions for implementation over its four year life and identifies a number of further initiatives to ensure alignment with best practice. Under the strategy, the government will introduce new restrictions to enhance the current motorcycle graduated licensing system, including introduction of the Learner Approved Motorcycle Scheme (LAMS), develop public education campaigns and communication activities to encourage motorcycle riders to wear protective clothing and other gear to increase their visibility, release a motorcycle riders' handbook and undertake road maintenance and infrastructure projects aimed at improving motorcycle safety.

The Department of Transport and Main Roads is also undertaking a review of drink driving policy and countermeasures to ensure that the government's approach to tackling this dangerous behaviour is effective, equitable and has the most potential to substantially reduce drink driving over the long term. The department is conducting extensive consultation with stakeholders as part of the review process so multiple independent voices from community, academia, health institutions and industry will be heard and incorporated into the recommendations. The review and its implementation will occur over the life of this action plan.

The government has also undertaken significant reform of the graduated licensing system to improve the safety of young drivers, one of Queensland's most at risk road user groups. The initiatives, implemented from 1 July 2007, aim to close the gap between real and perceived ability and help young people develop good driving skills and behaviours by encouraging extensive supervised on road experience. Key changes included the introduction of a two phase provisional licensing scheme and a requirement for learners under 25 years of age to gain 100 hours of supervised on road driving experience, including 10 hours of night driving, recorded in a logbook. The measures are currently being evaluated to determine their impact on the young driver road toll.

A number of reforms to the heavy vehicle industry have also been undertaken over 2008 and 2009 as part of a national program to improve fatigue management, clarify the safety obligations of parties under the chain of responsibility and increase compliance.

### What we know:

- **Drink and drug driving:** The likelihood of a crash is at least nine times greater for vehicle controllers with a BAC in the 0.05–0.09 range than those with no alcohol in their systems.<sup>17</sup> Each 0.02 per cent increase in BAC doubles the risk of involvement in a fatal single car crash.<sup>18</sup> Drugs such as cannabis, benzodiazepines, hallucinogens, antihistamines and opiates also impair driving and are often found in combination with alcohol in crashes.
- **Fatigue:** Fatigue crashes tend to be more severe than crashes attributable to other causes, as the driver has not taken emergency action to avoid the crash. Although driving while fatigued is often associated with commercial truck drivers, the majority of vehicles involved in fatigue related crashes are light passenger cars.
- **Unrestrained occupants:** Using a seatbelt correctly reduces the risk of a fatal injury to front seat passengers by 45 per cent and the risk of serious injury by 50 per cent.<sup>19</sup> While the wearing rate is high in Australia, some people continue to reject the benefits of wearing seatbelts and enforcement is difficult, particularly in rural and remote areas.
- **Heavy vehicles:** Road crashes involving trucks may be more likely to be fatal than other crash types due to the size and weight of the vehicle. This is a diverse area and there are numerous safety issues related to heavy vehicles, including use of seat belts, scheduling, driver health and fatigue management.<sup>20</sup>
- **Young novice drivers:** Young drivers are among the most vulnerable road users and are overrepresented in fatal and serious injury crashes. The high crash risk of young drivers reflects the effects of both youth and inexperience.<sup>21</sup>
- **Children:** Young children are exposed to road safety risks, such as while walking or cycling to and from school. Research suggests that children between the ages of six and ten years have a risk of collision four times that of adult pedestrians, due to increased exposure during this period as well as less developed awareness and perceptual skills.<sup>22</sup>
- **Motorcycle riders:** Riders have a fatal crash risk 30 times higher than vehicle occupants and a serious injury risk 41 times higher.<sup>23</sup>
- **Seniors:** While older people are less likely to be involved in crashes, increased physical frailty means that a serious crash is more likely to result in their death or serious injury. Prolonged recovery time can also seriously impact an older person's quality of life.
- **Regional, rural and remote road users:** Rural and remote areas have experienced smaller reductions in the road toll compared to urban areas. Crashes that occur in rural areas also tend to be more serious because of the circumstances involved, for example, fatigue induced by long distance travel along a monotonous road or higher speeds.
- **Pedestrians and cyclists:** Vulnerable road user groups such as pedestrians and cyclists are much more likely to be killed or injured than vehicle occupants in the event of a crash. With more people choosing sustainable transport options over travel by private car, road safety policies must encompass these user groups.





Safe road users: Initiatives		
Focus area	Actions	Responsibility
<b>Improve safety for vulnerable road users</b>	27. Implement the Queensland Motorcycle Safety Strategy 2009–2012, including: <ul style="list-style-type: none"> <li>• Investigate further enhancements to the motorcycle graduated licensing system</li> <li>• Develop public education campaigns and/or communication activities for returning riders</li> <li>• Develop public education campaigns and communication activities, including a motorcycle riders’ handbook and internet content appropriate for young riders.</li> </ul>	TMR
	28. Pilot a support program to assist disadvantaged learner drivers in a regional location accumulate the 100 supervised driving hours necessary to undertake the practical driving test.	TMR
<b>Review key interventions to ensure approaches match with best practice</b>	29. Continue the review of drink driving policy, legislation and countermeasures, conduct public consultation and implement recommended outcomes.	TMR
<b>Increase community awareness of road safety issues</b>	30. Implement new marketing and communication campaigns, including: <ul style="list-style-type: none"> <li>• Seatbelts: Implement a new seatbelts public education to promote awareness of the new laws requiring appropriate child restraints, as well as a general reminder to all community members to ‘buckle up’ when in the car</li> <li>• Fatigue: Implement a new campaign about the dangers of driving while fatigued, targeted at both rural and urban motorists, and develop and distribute information kits developed for key risk industries, including mining, heavy vehicles and taxis</li> <li>• Motorcycles: Implement an enhanced motorcycle safety campaign to promote safe riding practices</li> <li>• Regional, rural and remote road users: Implement targeted campaigns in regional locations, including monthly articles in 19 newspapers around Queensland and messages on 94 permanent road safety billboards, tailored to local road safety issues</li> <li>• Young drivers: Review, redevelop and reissue all education materials for young novice drivers to ensure that the messages are meaningful and appropriately targeted</li> <li>• Drink driving: Implement a new campaign to encourage people at risk of drink driving to ‘plan ahead’ when drinking alcohol</li> <li>• Distracted driving: Implement a new campaign to educate the community about the dangers of driver distractions.</li> </ul>	TMR



<b>Improve safety for heavy vehicles</b>	31. Increase awareness of new heavy vehicle fatigue management legislation and increase the number of operators who move into fatigue management systems and manage application of chain of responsibility legislation.	TMR
	32. Increase the number of heavy vehicle rest areas.	TMR
	33. Establish, in participation with all jurisdictions, a single National Heavy Vehicle Regulator to administer all heavy vehicle laws, including a national registration and licensing scheme. The objective of the regulator is to deliver improved safety, reduced costs and the regulatory burden by administering nationally consistent heavy vehicle laws.	TMR
<b>Implement tougher, smarter traffic policing and enforcement</b>	34. Enhance operational and economic synergies through joint operations, in particular heavy vehicles.	TMR, QPS
	35. Develop a system and process to profile recidivist traffic offenders to support targeted enforcement.	TMR, QPS
	36. Introduce new targeted public campaigns linked with enforcement.	TMR, QPS
	37. Utilise intelligent transport systems for electronic compliance for more efficient use of enforcement resources.	TMR
<b>Develop smart resources to educate road users</b>	38. Develop bicycle education resources to support TravelSmart initiatives.	TMR
	39. Develop a road safety education curriculum resource for students in Years 10–12.	TMR





## Enhanced delivery

Effective and cost-effective mechanisms are critical for delivering the outcomes of this action plan. We see three components involved in enhancing the impact of the above actions and building our capacity over the long term: research, data and evaluation; governance and strategy; and community ownership and engagement.

Enhanced delivery: Initiatives		
Focus area	Actions	Responsibility
<b>Research, data and evaluation</b>	40. Conduct observational survey of seatbelt wearing.	TMR
	41. Improve coordination of road safety strategic research between agencies and formalise knowledge sharing arrangements.	TMR, QPS
	42. Review data needs and sources and enhance data sharing and knowledge transfer arrangements between road safety agencies.	TMR, QPS
	43. Evaluate the reforms to the graduated licensing system to determine their impact on reducing the young driver road toll.	TMR, MAIC
	44. Research unlicensed and unregistered driving in Queensland.	TMR, MAIC
	45. Research and develop a package of initiatives for improving motorcycle safety, including education and training programs.	TMR, MAIC
<b>Governance and strategy</b>	46. Revive the Road Safety Alliance between TMR and QPS.	TMR, QPS
	47. Develop capacity and leadership skills in road safety staff in Queensland Government agencies across the state.	TMR, QPS
	48. Improve coordination and information sharing between local/regional and statewide road safety management and planning.	TMR
<b>Community ownership and engagement</b>	49. Develop a unified approach to community engagement.	TMR, QPS
	50. Research and support effective community programs.	TMR, QPS
	51. Collaborate at a regional level to identify and treat the causes of road crashes, for example, through the North Coast Region research project and Road Safety Partnership Project.	TMR, QPS

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