Ministry of Transport
TE MANATŪ WAKA

NEW ZEALAND'S ROAD SAFETY STRATEGY 2010–2020

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MINISTER'S FOREWORD

This document is designed to guide New Zealand's efforts to improve road safety for the next 10 years. It sets out the direction and actions we will take to reduce the number of deaths and injuries on our roads.

The need for this strategy is clear. Despite substantial progress over the last 30 years, New Zealand still lags behind many other countries in road safety. Every year, hundreds are killed on our roads and nearly 2,900 people are seriously injured. Approximately 13,000 New Zealanders suffer minor injuries as a result of road crashes. We also know that the level of road death and injury suffered by our young people is especially high.

These numbers reflect lives lost and ruined in what are mostly preventable crashes, but they do not show the effect of these crashes on families, the wider community and the health system. Road crashes can also have an economic impact – the annual social cost of crashes is estimated to be $3.8 billion.

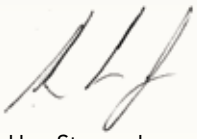
As road user numbers grow, our current efforts will not be enough to further reduce the level and impact of road crashes. Safer Journeys represents a new approach to this problem.

Its aim is that death and injury will in the future no longer be an inevitable part of our road system. To achieve this aim, the strategy outlines a Safe System approach with actions spread across the entire road system: roads and roadsides, speeds, vehicles and road use.

Some of these possible actions represent significant change – raising the driving age, lowering the drink-drive limits, introducing alcohol interlock technology and changes to our give way rules. But change is needed if we are to catch up with Australia, the United Kingdom and others that are best in the world, and benefit from a road system with fewer deaths and injuries.

The Safe System approach depends on us all taking responsibility for road safety. The roads belong to all of us and, in developing Safer Journeys, views were sought from all New Zealanders. This feedback was considered alongside evidence and research in selecting the road safety actions you see here.

The government will be working to improve road safety and to implement the actions in this strategy, but we will all need to play a part if we are to make our roads safer.



Hon Steven Joyce
Minister of Transport

WHAT IS SAFER JOURNEYS?

Safer Journeys is a strategy to guide improvements in road safety over the period 2010–2020. The long-term goal for road safety in New Zealand is set out in its vision:

"A safe road system increasingly free of death and serious injury"

This vision recognises that while we could never prevent all road crashes from happening, we could ultimately stop many of them resulting in death and serious injury. It also broadens our focus beyond preventing deaths to also preventing serious injuries.

To support the vision, Safer Journeys takes a Safe System approach to road safety. This approach means working across all elements of the road system (roads, speeds, vehicles and road use) and recognises that everybody has responsibility for road safety. We have also identified the issues that are of most concern. These are the priorities for road safety in New Zealand. Safer Journeys describes the actions we will take to address these issues, using a Safe System approach that works across all elements of the road system.

In developing Safer Journeys, we have looked to research and the experience in other countries such as Australia[1]. Public consultation, on a Safer Journeys discussion document that set out possible actions, was held from 18 August to 2 October 2009. More than 1,500 submissions were received. This feedback has been used in the development of Safer Journeys.

Safer Journeys will be implemented through a series of action plans. These plans will set out the actions we are to take, timelines for actions and responsibility for implementing them. They will also detail how progress will be monitored and actions evaluated.

The actions in Safer Journeys are not a complete list of everything that will be done to improve road safety over the next 10 years. Current initiatives that are effective in reducing road trauma and provide value for money will continue.

The government is dedicated to ensuring only those interventions that are effective are progressed. The new actions listed in Safer Journeys will be subject to further analysis to ensure that they can be effectively implemented. Many of the actions will still need to go through the regulatory process before they can be introduced. This process will include further consultation and, for some, the approval of Parliament. Actions that require funding changes will need to satisfy the funding requirements of the National Land Transport Programme.

FIRST ACTIONS

The first actions will start from 2010 and will focus on introducing a package of initiatives that will have the greatest impact on the road crash problem. This package will address four areas of high concern: increasing the safety of young drivers, reducing alcohol/drug impaired driving, safer roads and roadsides and increasing the safety of motorcycling. It will also focus on the new medium area of concern – high risk drivers – through the young drivers and alcohol/drug impaired driving actions.

Table 1 shows the first actions for formal Cabinet consideration.

Table 1 – First actions

PRIORITY AREA	ACTIONS FOR FORMAL CABINET CONSIDERATION
Increasing the safety of young drivers	Raise the driving age to 16 Make the restricted licence test more difficult to encourage 120 hours of supervised driving practice Introduce a zero drink-drive limit for drivers under 20 Raise public awareness of young driver crash risk Improve the road safety education available to young people and increase access to it Investigate vehicle power restrictions for young drivers
Reducing alcohol/drug impaired driving	Address repeat offending and high level offending through: • compulsory alcohol interlocks • a zero drink-drive limit for offenders Either lower the adult drink drive limit to BAC 0.05 and introduce infringement penalties for offences between 0.05 and 0.08 Or, conduct research on the level of risk posed by drivers with a BAC between 0.05 and 0.08 Review the traffic offences and penalties for causing death and injury
Safe roads and roadsides	Develop a classification system for the roading network Focus safety improvement programmes on high risk rural roads and high risk urban intersections Change the give way rules for turning traffic
Increasing the safety of motorcycling	Improve motorcycle rider training and licensing, including for mopeds Introduce a power-to-weight restriction for novice riders

1 A report that compares the Safer Journeys' proposals with the Australian interventions is available at www.saferjourneys.govt.nz.

FURTHER ACTIONS

We could take a number of further actions beyond those in Table 1. These are summarised in Table 2.

The first action plan is likely to advance the first steps outlined in Table 1 on the previous page. It could also contain other actions, including some of the actions in Table 2.

Table 2 – Further possible actions

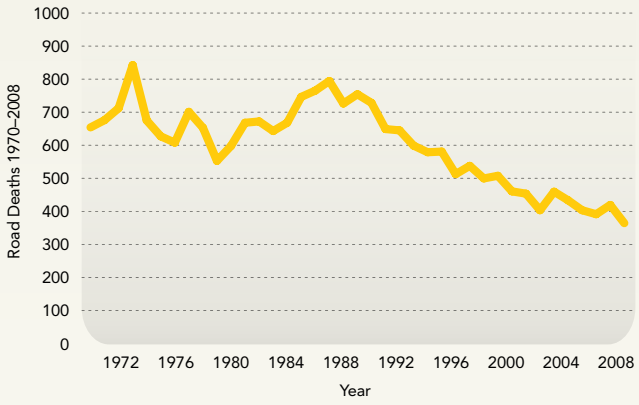
PRIORITY AREA	POSSIBLE ACTIONS
Increasing the safety of young drivers	Further evaluation of extending the learner licence period from 6 to 12 months Quickly adopt innovative practices and new technologies Increase access to quality and relevant road safety education for young people Further evaluation of compulsory third party vehicle insurance
Reducing alcohol/drug impaired driving	Support the future introduction of random roadside drug testing with research
Safe roads and roadsides	Implement targeted programmes of treatments for popular motorcycle routes Implement a series of demonstration projects on urban mixed-use arterials Better integrate road safety into land-use planning
Safe speeds	Increase the use of cameras for routine speed control (speed and red light) to allow Police to focus on higher risk drivers Rebalance penalties for speed with higher demerits and lower fines and investigate adding demerits and reducing fines for speed camera offences Investigate the use of point-to-point speed cameras Create more speed zones on high risk rural roads to help make roads more self-explaining, and to establish the criteria for what roads with different speed limits should look like (eg 80 km/h, 90 km/h, 100 km/h) Increase the adoption of lower speed limits in urban areas Develop a GPS-based speed management system across the network, and develop trials and initial applications for ISA and other emerging Intelligent Transport Systems Improve data on speed-related crashes
Increasing the safety of motorcycling	Improve the safety of riders who have returned to motorcycling after a long absence and whose skills are likely to have deteriorated
Reducing the impact of high risk drivers	Enforce and evaluate the effectiveness of the illegal street racing legislation Introduce driver licence assistance courses for unlicensed drivers Employ new technologies to restrict high risk drivers Focus Police on repeat offenders and high level offenders
Improving the safety of the light vehicle fleet	Consider mandating electronic stability control (ESC) and side curtain airbags (SCA) for all vehicles entering the fleet Promote vehicle safety systems to consumers with a focus on emerging advanced safety technologies Monitor any safety issues with electric vehicles
Safe walking and cycling	Review the effectiveness of give way rule changes for pedestrian safety Review the effectiveness of education initiatives for people who walk and cycle Increase coverage of temporary lower speed limits around schools
Improving the safety of heavy vehicles	Consider mandating ESC for all heavy vehicles entering the fleet Publish heavy vehicle operator safety ratings
Reducing the impact of distraction and fatigue	Educate users about distraction and how it can be managed Educate users about fatigue Improve the crash information on distraction and fatigue
Increasing the level of restraint use	Bring our child restraints laws in line with international best practice Focus on increasing the correct use and fitting of child restraints Improve our data on the correct use of child restraints
Increasing the safety of older New Zealanders	Investigate what New Zealand can learn from the approaches taken in Australia Monitor any emerging safety issues with mobility devices

WHERE WE ARE NOW

OUR PROGRESS IN IMPROVING ROAD SAFETY

Over the past 35 years, the road toll has dropped significantly. In 1973, 843 people died on New Zealand's roads. By 2002, this number had more than halved to 405 deaths (see Figure 1). This halving in road deaths occurred even though the number of vehicle kilometres travelled more than doubled over this period.

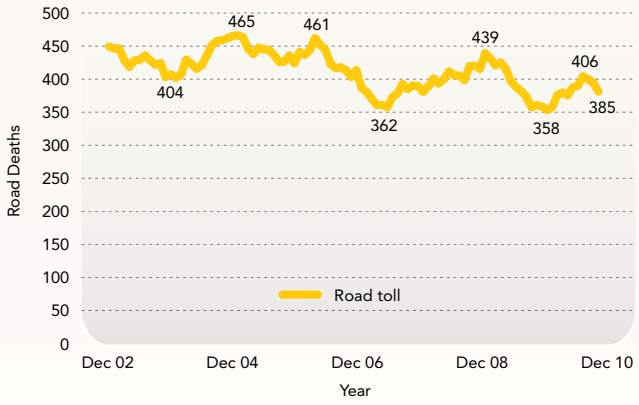
Figure 1: Number of road deaths 1970 – 2008



Similarly, since the 1970s the number of road injuries has reduced by over a quarter, declining from 20,791 in 1970 to 15,174 in 2008.

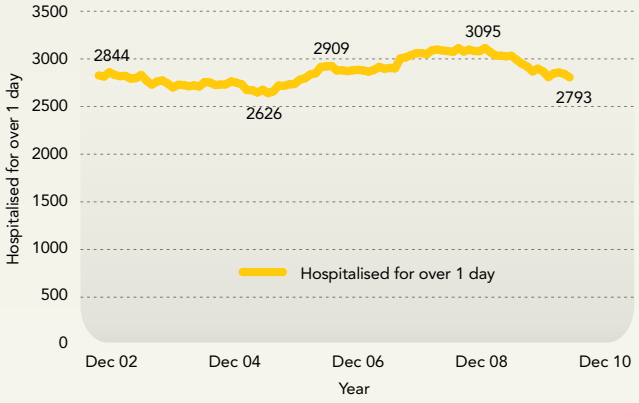
However, since 2003, progress has slowed with road deaths fluctuating between a high of 465 and a low of 358 (see Figure 2). In 2009 there were 385 road deaths. This is higher than the number of deaths in 2008 (365).

Figure 2: Rolling 12-month road toll



Since 2004, the number of serious injuries[2] has risen by six percent. However, the peak experienced in 2008 of 3,095 serious injuries has recently decreased (see Figure 3).

Figure 3: Rolling number of serious injuries



Another way to consider our progress is to look at our level of deaths and serious injuries compared with vehicle kilometres travelled. Figure 4 below shows the percentage change in deaths, hospitalisations, population, vehicle kilometres travelled and vehicle numbers since 2001.

Figure 4: Percentage change in deaths, hospitalisations, population, vehicle kilometres travelled (VKT) and vehicle numbers

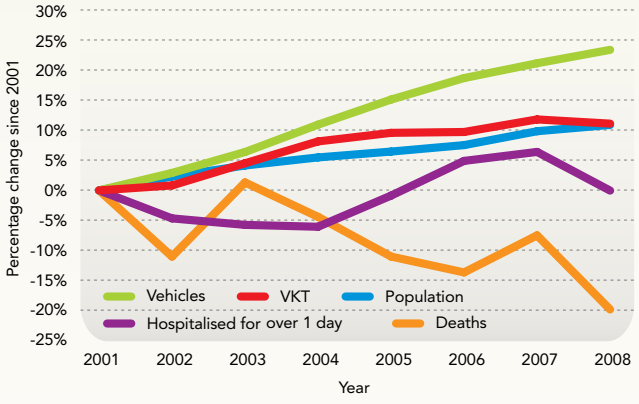


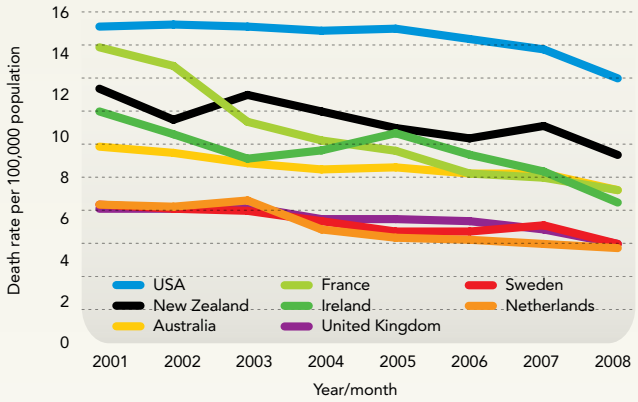
Figure 4 shows that vehicle kilometres travelled have grown by 11 percent while at the same time deaths have reduced by 20 percent (however in 2009 deaths rose again) and there has been little change in the number of serious injuries.

2 as measured by the number of hospitalisations over one day.

How do we compare internationally?

Compared to other OECD countries, New Zealand has a relatively high rate of road deaths per head of population (see Figure 5). Based on 2008 results, we have 8.6 deaths per 100,000 population. This compares with 6.9 deaths per 100,000 population for Australia. Our fatality rate is double that of the safest nations shown (United Kingdom, Sweden and the Netherlands). If New Zealand had the same road fatality rate as Australia, in 2009 our road toll would have been 298 instead of 384. Had we had the same fatality rate as the United Kingdom, our 2009 road toll would have been 186.

Figure 5: Road deaths per 100,000 population



New Zealand is a highly motorised country. More of our travel is by car than in many other countries. Even when we take this into account, a comparison between our level of deaths per vehicle kilometres travelled with the other countries in Figure 5 shows our performance is the poorest.

Based on 2008 results, we have a road fatality rate of 9.1 deaths per billion vehicle kilometres. This compares with 6.5 deaths per billion vehicle kilometres for Australia, 7.7 for France and 5.7 for Ireland. The strongest performer, the United Kingdom has 5 deaths per billion vehicle kilometres travelled.

Compared to the United States (the poorest performer in Figure 5), on a vehicle kilometres travelled basis, our safety performance is lower. The United States had 8.5 deaths per billion vehicle kilometres travelled in 2007[3] while New Zealand had 10.5 deaths in that year.

More information on the level of progress made in New Zealand since 2000 is in the *Report on road safety progress since 2000* that is available at www.saferjourneys.govt.nz

WHAT DOES THE FUTURE HOLD?

Several key challenges could affect our ability to make road safety gains in the future. These are:

Demographic

Population growth and increasing demand for transport – the total number of kilometres travelled by vehicles is predicted to increase by more than 40 percent by 2040. These changes will place more stress on the transport system, particularly in Auckland where most of the population increase is expected to happen. This could impact on the safety of pedestrians, cyclists and motorcyclists as the competition for road and roadside space intensifies.

Changes in ethnic make-up of the population – New Zealand's population will continue to become more diverse. We may need to tailor education and information so it is relevant for all of New Zealand's communities.

An ageing population – the number of New Zealanders aged 65 years and older is expected to increase by approximately 52 percent by 2020. As older road users are more physically vulnerable to injury, we expect to see some increase in the number of deaths and serious injuries.

Economic

A rapidly growing amount of freight – freight is predicted to double by 2040 and the largest share of it is likely to continue to be transported by road. Improving freight productivity will be important to reduce the impact of more trucks on the road. Crashes involving trucks are usually more serious than those involving lighter vehicles because of their greater size and weight.

Growing international demand for oil – it is predicted that demand for liquid fuels will grow by 32 percent by 2030[4]. If fuel prices rise then the way people choose to travel may also change. This could have positive and negative impacts for road safety.

The continuing impact of the global economic recession – this could have several impacts. It could mean there is less movement of people and freight, which would reduce exposure to road safety risk. It could also mean there is less public money available for road safety, and people may defer vehicle maintenance or keep their older (and generally less safe) cars for longer.

Environmental

Addressing climate change commitments – over the next decade it is anticipated that measures will be taken to reduce transport emissions. These measures are likely to influence people's choice of transport. We may see an increase in public transport, motorcycling, walking and cycling. It will be important to address the safety needs of all modes of transport.

3 The 2007 result is the latest available for the United States.

4 US Energy Information Administration. 2009. *International Energy Outlook*. US Govt Printer, Washington.

Technological

New technology – this could affect the way we deliver road safety messages. For example, we could make greater use of the internet and mobile phones to deliver road safety messages to the widest possible audience. New technology will also lead to improvements in enforcement and in vehicle safety.

Social

New illegal drugs that affect safe road use – organised production and use of methamphetamine is a relatively recent phenomenon in New Zealand. It illustrates how difficult it can be to predict what new challenges may arise for road safety as new drugs emerge. The ability to test for these drugs, monitor their impact and enforce against their use will be an area for ongoing research and policy development.

Motorcycles

Increase in motorcycling – the recent rise in popularity of motorcycle and moped use is likely to continue. Without a focus on the safety of motorcyclists, this could mean motorcycle injuries continue to increase.

WHAT CAN WE EXPECT IF WE CONTINUE AS WE ARE?

Progress in reducing road deaths and serious injuries has slowed in recent years, showing that we need a new approach to road safety. If we continue with our current approach, and rely on our existing set of road safety initiatives, it is estimated[5] that in 2020 around 400 people will still lose their lives, over 3,000 people will be seriously injured and around 13,000 will suffer minor injuries.

These estimates are about the same level of death and injury as we have now which means our progress will continue to slow. The safety improvements we get from our current road safety effort will continue to be largely offset by the increased road use that comes with population increases and economic growth.

Road crashes place a substantial burden on the economy and the health sector. The current social cost of road injuries is approximately $3.8 billion per annum. Social cost includes the cost of the loss of life and life quality, loss of output due to temporary incapacitation, medical costs, legal costs and property damage costs.

Road crashes also impose other costs that are difficult to directly quantify. Road crashes have a negative impact on elective and non-emergency surgery waiting lists, and on the productivity of the workforce.

Annual social cost estimates cannot accurately reflect the ongoing cost that road injuries place on the community. A young person paralysed as a result of a road crash may need support from the community for the rest of their life. The ongoing nature of the cost of road crashes partly explains why they account for almost 30 percent of ACC's outstanding (ie future) claims liability.

An ageing population, and the challenges this presents to maintaining a skilled workforce, means that the impact of road crashes on the health sector and the economy could be more difficult to manage.

Our current approach will be enough to maintain existing safety levels, but it will not generate future improvements. We know that combining enforcement and advertising in road safety campaigns has resulted in strong benefits, but this approach faces declining returns. The OECD has commented that New Zealand's rate of social cost reduction for each additional dollar investment in enforcement and advertising programmes has decreased from around 9:1 to 4:1 over the course of the last decade[6].

We need a new approach to road safety that delivers a substantial and sustained reduction in injury, while at the same time supporting New Zealand's economic and environmental goals. That is why Safer Journeys introduces a Safe System approach.

The benefits from investing in improving road safety are real and substantial. The main benefits are:

- fewer people killed or injured
- less drain on the productivity of the workforce
- less pressure on the health sector including the waiting lists for elective and non-elective surgery
- lower ACC costs
- improvements in the quality of life for New Zealanders.

5 These predictions incorporate expected growth in traffic (Vehicle Kilometres Travelled –VKT) as the primary variable. There are many other potential variables that could affect this estimate but these have not been included because of the high degree of uncertainty surrounding their possible impacts.

6 OECD. 2008. *Towards Zero: Ambitious Road Safety Targets and the Safe System Approach*. pg 107. OECD Publishing, Paris.

WHAT YOU SAID

More than 1,500 submissions were received on the Safer Journeys discussion document (about 1,400 were from the general public and 120 were from organisations). In addition, more than 1,200 members of the general public and almost 20 key stakeholders ranked the 62 initiatives outlined in the discussion document. This is a much higher number of submissions than was received on the Road Safety to 2010 strategy (about 800).

The level of public engagement shows that New Zealanders are concerned about the number of people killed and seriously injured on our roads. Many submitters quoted from personal experience, like losing a family member in a road crash, or being involved in a dangerous situation.

Some of the most contentious initiatives received strong support. These included the initiatives to lower the legal blood alcohol limits for driving, raise the driving age and to change the give way rule. A few initiatives, such as the introduction of compulsory third party vehicle insurance, received high public support but are not strongly supported by policy and research.

In general, submitters placed more emphasis on initiatives aimed at road users than on roading, vehicle, or speed initiatives. This may indicate that submitters do not understand the Safe System approach and are much more focussed on the driver, rather than the other three elements of the Safe System.

General comment received on the discussion document:

- **Vision:** The vision for road safety is not strong enough; there should be a more ambitious long-term vision and road safety targets.
- **Safe System:** Strong support from stakeholder organisations for a Safe System approach.
- **Priority areas:** Walking/cycling, fatigue and distraction should be areas of high priority.
- **Funding:** For the proposed initiatives to be successful, the government will need to ensure that the necessary resources, including funding, are made available.
- **Focus on motorised road transport:** The discussion document is too focussed on a "roading business as usual approach." It "fails to consider cycling, walking and passenger transport as being integral parts of the system."
- **Focus on the driver:** We need to raise the competence of drivers and change New Zealand's negative driving culture through enhanced training. Education programmes were also requested: "[The driver] is where all road safety programmes must start. A competent driver will always adjust their driving according to the vehicle they are driving and to the standard of the road they are driving on."
- **Enforcement and compliance:** A lack of focus on enforcement and compliance was mentioned throughout the different priority areas. Submitters thought that repeat offenders especially should be penalised more rigorously.
- **Alcohol and drugs:** A significant number of submitters emphasised the wider problems caused by alcohol and drugs and wanted actions such as: restricting access to alcohol and drugs, placing more responsibility on people or organisations that supply alcohol, and providing treatment for alcoholics and addicts.
- **Young drivers:** There was strong support for raising the driving age, extending the learner licence period and making the restricted licence test harder to encourage more supervised driving practice.
- **Roads and roadsides:** There was strong support for changing the give way rule for turning traffic. Submitters were also particularly concerned about high risk rural roads.

- **Speed:** Many general public submitters commented that speed is not the underlying problem: "There is too much focus on speeding and not enough on good driving." Training, education and driving to the conditions were mentioned as more important than lowering speed limits.
- **Motorcycling:** The most popular initiative overall was improved rider training and licensing. Comments were also made about making professional training more widely available or even compulsory.
- **Vehicles:** Submitters commented that the focus needs to be on the driver rather than the vehicle. Too much technology or other insulating factors would mean greater risk-taking by drivers.
- **Walking and cycling:** There was strong support for cycle training in schools and for improving the walking and cycling infrastructure.
- **Distraction:** Although there was strong support for this priority area, submitters were concerned about enforcement as a response.
- **Fatigue:** There was support for this priority area. The most popular initiatives were roadside stopping places and information.
- **Restraints:** There was strong support for bringing New Zealand's child restraint laws in line with international best practice.
- **Older New Zealanders:** All initiatives were supported, although the education and engineering approaches were especially popular.
- **Education:** A majority of general public submitters thought that there is not enough emphasis on road safety education.

The summary of submissions can be found at www.saferjourneys.govt.nz

OUR RESPONSE

We carefully considered issues raised during consultation and made a number of changes to the Safer Journeys proposals to reflect public opinion.

High risk drivers (repeat offenders, disqualified and unlicensed drivers, high end offenders and illegal street racers) were presented as an area of continued focus in the discussion document. However, public concern about high risk drivers came through strongly in the consultation feedback. For this reason high risk drivers are an area of medium concern in Safer Journeys.

Not all of the issues that received strong support during consultation are backed by evidence. Compulsory third party vehicle insurance was one initiative that received a lot of support, but research has shown it would be unlikely to significantly improve road safety. This is partly because the rate of vehicle insurance among New Zealanders is already very high. Further evaluation of compulsory third party vehicle insurance will be undertaken. However, we would have to be confident that the benefits of such an approach would exceed the costs before introducing it.

In response to the submissions we developed three themes that help explain the Safe System from the individual's point of view:

1. **Helping us to get it right and avoid crashes**
   This recognises that alert, skilled, unimpaired drivers should expect to reach their destination without mishap every time. Consideration needs to be given over the life of the strategy to how we can encourage safe behaviour and decisions.
2. **Providing protection to people when things go wrong**
   This recognises human error and human vulnerability and seeks to reduce the consequences of crashes when they do happen.
3. **Enforcing the limits of the Safe System**
   This recognises that safe limits need to be imposed (eg on speed, vehicle standards, effect of alcohol and drugs) because no amount of design, vehicle quality and good driving can cope with random, dangerous driving.

TOWARDS A SAFE SYSTEM

The vision, a safe road system increasingly free of death and serious injury, challenges us to see road deaths and serious injuries as preventable.

We will need a significant shift in the way we think about and manage road safety if we are to realise our vision over 2010–2020. Our current approach could maintain our existing level of road safety, but it will not deliver further reductions in the number of deaths and serious injuries.

To achieve this change we will take a Safe System approach to road safety. The Safe System differs from traditional approaches to road safety. Rather than always blaming the road user for causing a crash, it acknowledges that even responsible people sometimes make mistakes in their use of the roads.

Given that mistakes are inevitable, we need the system to protect people from death or serious injury. To do this, the Safe System has objectives to:

- make the road transport system more accommodating of human error
- manage the forces that injure people in a crash to a level the human body can tolerate without serious injury
- minimise the level of unsafe road user behaviour.

To achieve these objectives, the human body's tolerance to crash forces will need to be the key design factor for the system. Crash forces would be managed so they do not exceed these limits.

For example, a pedestrian or cyclist is likely to be killed or seriously injured by a car travelling over 40 km/h. A Safe System would protect pedestrians and cyclists by providing safer roading infrastructure, by encouraging the uptake of vehicles that inflict less harm on vulnerable users in a crash, and by managing speeds to reduce serious injury risk.

The Safe System focuses on creating safe roads, safe speeds, safe vehicles and safe road use. Our goal would be to ultimately achieve:

- **Safe roads** – that are predictable and forgiving of mistakes. They are self-explaining in that their design encourages safe travel speeds.
- **Safe speeds** – travel speeds suit the function and level of safety of the road. People understand and comply with the speed limits and drive to the conditions.
- **Safe vehicles** – that prevent crashes and protect road users, including pedestrians and cyclists, in the event of a crash.
- **Safe road use** – road users that are skilled and competent, alert and unimpaired. They comply with road rules, take steps to improve safety, and demand and expect safety improvements.

The Safe System is illustrated in Figure 6.

Who is responsible for the Safe System?

Figure 6 shows that, under a Safe System, road safety is everyone's responsibility.

The Safe System approach requires shared responsibility between road users and system designers. It says that if road users are alert, comply with the road rules and travel at safe speeds, they should be able to rely on the road and roadside features, and the vehicle to protect them from death and serious injury.

For this to occur:

Road controlling authorities have to design, build and maintain roads and to manage speeds to protect responsible road users.

The vehicle industry has to provide safe vehicles and be socially responsible when marketing vehicles to consumers.

Central and local governments have to inform and educate New Zealanders about road safety issues. They need to provide effective road safety regulation and to adequately fund road safety. They also have a responsibility to integrate safety into decisions about land use.

Road users have to take steps to increase their safety, such as complying with road rules and being unimpaired by alcohol, drugs, fatigue or distraction.

Employers have to ensure their corporate policy and practice supports a positive road safety culture based on a Safe System approach.

Figure 6 – The Safe System

AREAS OF CONCERN AND THE SAFE SYSTEM

Analysis of New Zealand's current road crash problem, and how it is likely to change over 2010–2020, shows there are 13 areas where current performance needs to be strengthened. Of the 13 areas, five are of high concern and six are of medium concern. There are also two areas where attention needs to remain focussed. These areas are shown in Table 3.

All of these priority areas require attention over the period 2010–2020. However, high concern priorities are areas:

- where we need to make the most improvement in road safety and where a significant change in policy direction or effort is required to work towards a Safe System
- that could make the largest contribution to reducing the costs imposed on the economy by road deaths and injuries (eg reducing the days of productivity lost to the workforce, reducing ACC costs or reducing health sector costs).

Safer Journeys identifies actions that address these priority areas through a Safe System approach.

Table 3 – Safer Journeys' areas of concern and the Safe System

AREAS OF CONCERN WE WILL ADDRESS	WHERE WE WILL TAKE ACTION ACROSS THE SAFE SYSTEM			
	SAFE ROADS AND ROAD-SIDES	SAFE SPEEDS	SAFE VEHICLES	SAFE ROAD USE
Areas of high concern				
Reducing alcohol/drug impaired driving			✓	✓
Increasing the safety of young drivers	✓	✓	✓	✓
Safe roads and roadsides	✓			
Safe speeds	✓	✓	✓	
Increasing the safety of motorcycling	✓	✓	✓	✓
Areas of medium concern				
Improving the safety of the light vehicle fleet			✓	✓
Safe walking and cycling	✓	✓	✓	✓
Improving the safety of heavy vehicles	✓	✓	✓	✓
Reducing the impact of fatigue	✓	✓	✓	✓
Addressing distraction	✓		✓	✓
Reducing the impact of high risk drivers		✓	✓	✓
Areas of continued and emerging focus				
Increasing the level of restraint use			✓	✓
Increasing the safety of older New Zealanders	✓	✓	✓	✓

For some priorities (eg motorcycling), complementary action will be taken across all four areas of the Safe System. For others (eg reducing the impact of drink driving or safe roads), more effort would be focussed on one or two of the four Safe System areas.

IMPLEMENTING SAFER JOURNEYS

The actions in Safer Journeys are aimed at addressing the priority areas through a Safe System approach. These actions are not a list of everything that could be done to improve road safety over 2010–2020. But they are the key actions that, along with continuing our most effective current initiatives, are likely to help build a safer road transport system.

In developing the strategy we looked to choose actions that we know will be effective and have high benefit/cost ratios. We have to ensure that every dollar invested in road safety funds actions that are likely to save the most lives and prevent the greatest number of injuries.

Some actions will still need to go through the parliamentary process before they can be introduced. This process will include further consultation and the approval of Parliament. Actions that require funding changes will need to satisfy the funding requirements of the National Land Transport Programme.

When implemented, actions will be tailored to respond to the differing needs of New Zealand's communities. Currently, New Zealand's road system delivers significantly better road safety outcomes for some population groups, regions and methods of transport than others (eg Māori are almost twice as likely to die or be seriously injured in road crashes as other ethnic populations).

SAFER JOURNEYS WILL BE IMPLEMENTED IN THREE ACTION PLANS

Actions will be implemented in a series of three action plans. Each action plan will detail:

- the actions that will be implemented to address the areas of concern and the level of improvement we expect to achieve
- the timing of the actions
- who will be responsible for each action
- how progress will be monitored and actions evaluated.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 through Safer Journeys we will aim to:

Increase the safety of young drivers
- reduce the road fatality rate of our young people from 21 per 100,000 population to a rate similar to that of young Australians of 13 per 100,000

Reduce alcohol/drug impaired driving
- reduce the level of fatalities caused by drink and/or drugged driving, currently 28 deaths per one million population, to a rate similar to that in Australia of 22 deaths per one million population

Achieve safer roads and roadsides
- significantly reduce the crash risk on New Zealand's high risk routes

Achieve safer speeds
- significantly reduce the impact of speed on crashes by reducing the number of crashes attributed to speeding and driving too fast for the conditions

Increase the safety of motorcycling
- reduce the road fatality rate of motorcycle and moped riders from 12 per 100,000 population to a rate similar to that of the best performing Australian state, Victoria, which is 8 per 100,000

Improve the safety of the light vehicle fleet
- have more new vehicles enter the country with the latest safety features. The average age of the New Zealand light vehicle fleet will also be reduced from over 12 years old to a level similar to that of Australia, which is 10 years

Achieve safer walking and cycling
- achieve a reduction in the crash risk for pedestrians and particularly cyclists, while at the same time encouraging an increase in use of these modes through safer roading infrastructure

Improve the safety of heavy vehicles
- reduce the number of serious crashes involving heavy vehicles

Reduce the impact of fatigue and address distraction
- make New Zealanders' management of driver distraction and fatigue a habitual part of what it is to be a safe and competent driver

Reduce the impact of high risk drivers
- reduce the number of repeat alcohol and speed offenders and incidents of illegal street racing

Increase the level of restraint use
- achieve a correct use and fitting rate of 90 percent for child restraints and make the use of booster seats the norm for children aged 5 to 10

Increase the safety of older New Zealanders
- reduce the road fatality rate of older New Zealanders from 15 per 100,000 population to a rate similar to that of older Australians of 11 per 100,000.

MONITORING PROGRESS

We will continue to monitor road safety issues so that we can measure the progress and success of the actions in Safer Journeys. Measurement will be clear for some result areas. For example, for young drivers the overall outcome that initiatives will need to contribute to will be to reduce the road fatality rate of young people from 21 per 100,000 population to 13 per 100,000. However, for other result areas, such as distraction and fatigue, further work will be needed to find how we will monitor progress. This work could involve surveys of people's driving behaviour to see if they routinely take steps to avoid distraction and fatigue.

SAFE ROADS AND ROADSIDES

OUR 2020 GOALS

Our long-term goal is to improve the safety of our roads and roadsides to significantly reduce the likelihood of crashes occurring and to minimise the consequences of those crashes that do occur.

WHAT IS THE PROBLEM?

- Road improvements contributed to an estimated 11 percent drop in rural road deaths and an estimated 15.8 percent drop in urban road deaths between 1997 and 2005, but we can do much more.
- Head-on crashes account for 23 percent of all fatal crashes. Yet over 90 percent of them could be avoided by having a median barrier.
- Loss of control contributes to 40 percent of all fatal crashes. These crashes would be less severe if there were median barriers present and roadside objects were protected or removed.
- 21 percent of our fatal crashes occur at intersections (this figure includes some of the above types of crashes). These crashes can be prevented by using methods such as skid-resistant road surfaces and traffic calming.

New Zealand's roads are not as safe as those in other countries. Our road network is comparatively long, with much of it built when we had fewer vehicles travelling at lower speeds. Our geography is challenging, and our population base is small. This means it is difficult to spend the same amount per kilometre of road as the best-performing countries.

Our network is also highly variable. For example, a straight two-lane divided road and a narrow, twisty, single-lane undivided road may both be called State highways. They may both have a 100 km/h speed limit, but the former is much safer.

From 1999–2008, safety on State highways improved at a greater rate than other roads. The government has built on this with increased new investment in State highways over the next ten years. While much of this investment aims to improve capacity, safety features are an integral part of the improvements. In addition, there has been new investment specifically aimed at improving safety (eg the 2009 Budget funds an extra 750 km of rumble strips).

However, there is still room for further improvement. A key challenge over the next decade will be to find ways to cost-effectively improve other roads that have high crash rates.

Many of our roads fall short of the safety standards we need. We also know that investment in roads and roadsides will support the other priority areas. Road engineering improvements are not cheap and need to be maintained, but they are effective and last a long time. The issue is how much we can do, given resources and competing priorities.

WHAT WE WANT TO ACHIEVE

We will work to improve our roads so that each type of road will eventually have a recognisable and distinctive set of self-explaining features such as signage, lane width, road markings and speed limits. This work will ensure roads are predictable, so that road users can expect particular safety features on each type of road. This should encourage people to travel at speeds that best fit the design and function of the road.

We will also work to make roads forgiving, so that they help to reduce the consequences of those crashes that do occur. We will do this through installing median barriers and removing or protecting roadside objects in known black spot areas.

It will take time for these improvements to be implemented across the road network. Many roads of similar function and speed vary significantly in layout and appearance, which is not helpful to the road user. The initiatives in this section are the first steps to make these improvements a standard part of our network as upgrades take place.

The actions in this section focus on reducing the most common types of crashes on the road network in both rural and urban areas. Most of these actions will involve applying a combination of proven engineering methods where they can be most effective; building on existing risk assessment methods, such as KiwiRAP, which assigns star ratings to roads based on their level of risk. In addition, we will continue to look for innovative assessment methods to help us to achieve the long-term goal of establishing a distinctive roading hierarchy. We also propose changes to the give way rules to reduce crashes at intersections, and we address the need to integrate transport planning with land-use planning.

WHAT ACTIONS CAN WE TAKE?

- Develop a classification system for the roading network.
- Focus safety improvement programmes on high risk rural roads.
- Focus safety improvement programmes at high risk urban intersections.
- Change the give way rules for turning traffic.
- Implement targeted treatments on popular motorcycle routes.
- Develop and support new approaches to safety on mixed-use urban arterials.
- Strengthen techniques to integrate safety into land-use planning.

Develop a classification system for the roading network

Some of the best-performing road safety countries have developed a classification system for their roads. They have consistent safety engineering design standards for each type of road based on its level of use and its intended function. This enables them to better identify the safety treatments required on a particular type of road.

The overall aim of a classification system is to help drivers by making roads predictable, fit for purpose and forgiving of mistakes. The speed limits also reflect this classification. We do not yet have such a system.

Developing a classification system for New Zealand's roads based on the above principles is a priority for this strategy. Work is already underway to develop the Roads of National Significance (RoNS), which are at the top of the hierarchy. Given their importance, these roads will need to be engineered to a high level of safety.

Focus safety improvement programmes on high risk rural roads

Many high volume rural roads have known crash problems. We intend to focus on run-off road[7] and head-on crashes as they are the most common crash types. We will initially target highest risk rural roads – those that carry over 15,000 vehicles per day[8], in particular the RoNS. A road with 15,000 vehicles per day has roughly five head-on crashes per 10 km every five years. Some New Zealand roads carry 15,000 – 20,000 vehicles per day but do not have median barriers. Installing median barriers[9] on all high risk high volume rural roads is estimated to save 8 to 10 lives per year and 102 to 119 injuries per year. This is a social cost saving of $42 to $52 million per year[10].

CASE STUDY

SH2 KATIKATI TO BETHLEHEM (27 KM)

The problem

High-use road with a poor crash record - dubbed the 'horror highway'.

3.4 fatal crashes and five serious injury crashes per year prior to treatment.

The solutions

2001 Intersections, signs and road markings upgraded. Education campaigns and targeted enforcement.

2004 Rumble strips installed.

2005 90 km/h speed zone installed over partial length of the road.

Post-treatment 1.1 fatal crashes (down 66 percent) and 4.4 serious injury crashes (down 11 percent) per year.

Median barrier treatments will prevent many head-on crashes. We also want to address run-off road crashes. The underlying causes of run-off road crashes are excessive speed, alcohol, failure to drive to the conditions, fatigue and distraction. Half of all rural crashes and 28 percent of urban crashes involve a roadside object, such as a power pole.

We intend to use engineering methods, such as improved line markings and warning devices, to help reduce run-off road crashes by signalling to drivers the appropriate speed to travel. Other techniques could include skid resistant surface treatments, widening or sealing road shoulders, electronic warning devices, and installing rumble strips and guard rails.

Collisions with roadside objects such as trees and power poles can have devastating impacts even at relatively low speeds. We intend to continue protecting or removing roadside objects to reduce the chances of run-off road crashes resulting in death and serious injury.

To reduce head-on and overtaking crashes, this initiative would apply a combination of lower-cost measures such as rumble strips applied across the network, higher-cost measures such as median barriers at targeted high risk locations, passing lanes, intersection improvements and other proven treatments. Rumble strips help to prevent crashes caused by distraction or fatigue.

7 These are crashes where the driver loses control and the vehicle leaves the road.
8 The KiwiRAP programme's star rating results, due out in 2010, will be used to help identify where we need to target our initial efforts.
9 Other countries require median barriers on all high speed routes that have over 10,000 -15,000 vehicles per day.
10 This is based on treating high risk roads which carry over 12,000 vehicles per day.

CASE STUDY

SH1 LONGSWAMP TO RANGIRIRI (9 KM)

The problem

Two-lane, undivided, high volume road with a history of head-on crashes.

Seven fatal crashes and five serious injury crashes in five years, eight of which were head-on.

The solution

2 + 1 wire rope median barrier installed.

In the three years following installation there were no fatal crashes and two serious injury crashes.

Head-on and loss-of-control crashes occurring during overtaking are often caused by impatience or poor judgement. Passing lanes provide motorists with more opportunities to overtake and could reduce the number of head-on crashes significantly.

CASE STUDY

SH1 PUKERUA BAY TO PLIMMERTON

The problem

Undivided high volume road with high crash rate.

Twenty-nine crashes in five years prior to treatment.

The solution

Median barrier installed and four lanes established.

Ten serious crashes in the four years following treatment, a 44 percent reduction.

Focus safety improvement programmes at high risk urban intersections

Currently 21 percent of fatal crashes occur at intersections. The majority of fatal intersection crashes occur in rural areas, but the majority of serious injury crashes are in urban areas. Most local authorities have identified their highest risk urban intersections, so this initiative will support and build on their existing programmes.

Intersection crashes are often caused by poor judgement, but many are preventable with good intersection design, speed management and strong enforcement of road rules (eg red-light running).

Advanced stop box for cyclists at an intersection in Christchurch

Various proven engineering methods will be used to treat high risk intersections. These include more traffic control signals, roundabouts, advance stop boxes for cyclists, raised pedestrian crossings and speed control treatments. The mixture of treatments used at each site would depend on the types of crashes and the road users we are targeting.

To support this initiative, we also intend to make changes to the give way rules.

Change the give way rules for turning traffic

This action would change the current give way rule to require traffic turning right to give way to all traffic including those turning left into the same road.

The current give way rules[11] place complex demands on road users. Currently, the driver has to check in three different directions: the situation opposite them; behind them; and on the road they are entering – all within seconds. It is even harder if there is no give way or stop sign on a T-intersection. This situation also creates a number of crash risks for pedestrians, cyclists and motorcyclists[12].

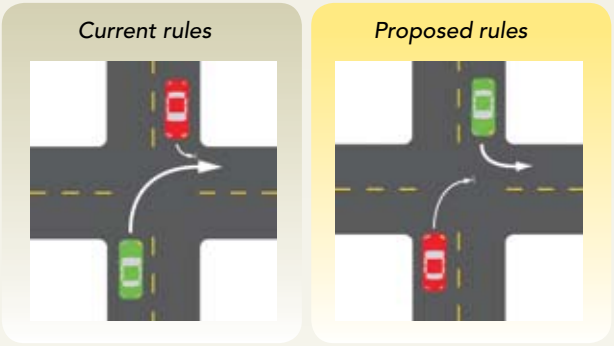
Changing this give way rule would simplify decision making at intersections (including at T-intersections) and could reduce relevant intersection crashes by about seven percent, a social cost saving of about $17 million annually[13].

11 The current give way rules are: if turning, give way to all traffic not turning, and in all other situations, give way to traffic crossing or approaching from the right.

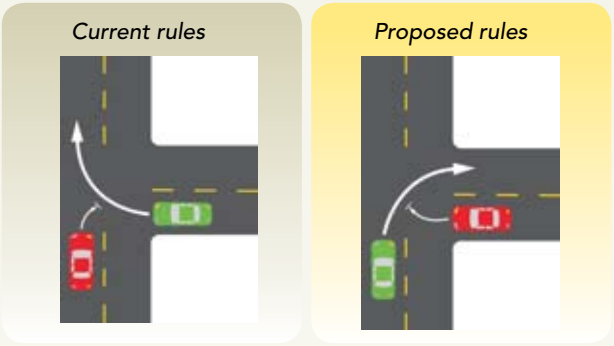
12 The rule creates the following crash risks: between left-turning vehicles and pedestrians crossing the road that the vehicle is turning into, or cyclists on the inside, due to the driver of the vehicle watching for right-turning traffic; between right-turning vehicles and left-turning vehicles; and between right-turning vehicles and vehicles overtaking the left-turning vehicles.

13 The State of Victoria made this change in 1993. The resulting reduction in crashes exceeded expectations and contrary to some predictions there was no increase in crashes in the period immediately following the rule change.

Left turn traffic giving way to right turn



T-intersection



This major rule change would be supported with a publicity campaign and an associated programme of minor engineering changes such as re-phasing traffic signals and changing road markings in some places.

The number of intersection crashes involving pedestrians has increased by 88 percent since 2000, and many of them were hit by a turning vehicle. The changes to the give way rules for turning traffic would improve pedestrian safety. We will review the effectiveness of these changes, and if necessary consider further changes at a later date to give pedestrians more priority.

Implement targeted treatments on popular motorcyclist routes

Parts of the road that are suitable for most vehicles can be particularly hazardous to motorcyclists (eg potholes, corrugations, rough surfaces, gravel on corners, crash barriers, limited or impaired sightlines, and sharp curves). We could introduce a set of treatments on popular motorcycle routes, especially those routes that have a high number of crashes. The first step will be to identify the popular routes.

Improving high risk routes, rather than the whole network, would be a cost-effective way of lowering the estimated social costs of motorcyclist road trauma. A similar scheme in Victoria, Australia, found a 38 percent reduction in motorcycle casualty crashes after sites were treated.

Develop and support new approaches to safety on urban mixed-use arterials

An arterial is a major urban road and many have high crash rates. They have high traffic volumes, cross many intersections and are used by a mixture of transport modes travelling at different speeds. Arterials can also pass through urban centres full of shops, and other commercial and community premises. A lot of our arterials are not designed to cope with this level of competing activity.

Conventional approaches to arterial roads usually involve restricting access to parts of the road by limiting driveway access, removing parking and in some cases installing median barriers. Ideally, different modes of transport would be clearly separated and the road would not pass through land uses which create conflict points, for example, around schools.

However, in reality many of our arterials do not have enough space for transport modes to be fully separated and they pass through areas with a high land-use access function. It is not practical to expect pedestrians and cyclists to use other routes, and it may not be feasible to put in traditional traffic calming measures (eg speed humps). This means we need a different approach.

In the Safe System, an arterial's through traffic function is balanced with its mix of uses and with the way the adjacent land is used. The road's layout and speed limit is designed accordingly. Many of our arterials lack these design features although some local authorities are beginning to address them.

The speed limits on many of our arterials do not reflect this complexity and mix of transport modes. Moderating speeds on these roads would reduce the crash risk and reduce the severity of crashes that do occur, especially for pedestrians and cyclists. Moderating speeds will not have a noticeable effect on traffic flows as these roads tend to be congested anyway.

If this approach involves a change to posted speed limits then roads must have supporting engineering features that help people understand and accept the change.

CASE STUDY

DEMONSTRATION PROJECT ON UNITED KINGDOM ARTERIALS

Overseas, there have been many innovative techniques used to deal with the range of problems at urban arterials. For example, in 2002 the United Kingdom government introduced a series of demonstration projects on urban arterials, investing one million pounds ($2.4 million) in each project.

Common factors in these projects were the reallocation of road space to better reflect the mix of users (eg bus lanes, wider footpaths), improvements to the streetscape, parking management, more pedestrian crossing points, intersection improvements and traffic calming. These are proven methods, but they were combined and integrated in new ways. These projects delivered, on average, a 46 percent reduction in casualties. They also helped to reduce congestion and increase the use of public transport, walking and cycling.

Over the first period of the strategy we will work with local authorities to assess how we could begin to incorporate new approaches to mixed-use arterials, such as the ones trialled in the United Kingdom. A series of demonstration projects is one possibility, building on what some local authorities are starting to do.

Strengthen techniques to integrate road safety into land-use planning

Land-use planning has a major influence on the safety of the transport system. A well laid out community reduces the need for car-based trips and provides safe and convenient access to schools, shops, work and other amenities for all modes of transport. This also improves the efficiency of the network. A poorly-planned community places extra pressure on the network and increases safety risk.

Over the course of the strategy, we will look for opportunities to better integrate road safety objectives into land-use planning. These would include:

- working with local authorities to better integrate safety into regional and district planning, especially District Plans and Long Term Council Community Plans (LTCCP)
- improving guidelines and other tools that influence subdivision development (eg a review of New Zealand Standard 4404 has begun. This Standard influences several aspects of road safety and district planning, especially at District Plan and LTCCP level)
- ensuring that good practice guidelines (eg the Pedestrian Planning and Design Guide) are being used by road controlling authorities
- strengthening initiatives such as Neighbourhood Accessibility Plans (NAPs) that identify and resolve local road safety issues and improve safe access to public transport, walking and cycling networks[14].

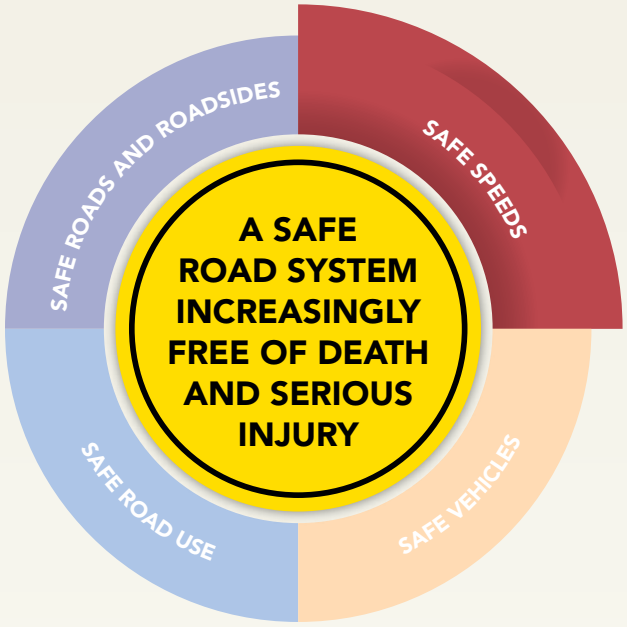
PROBABLE FIRST STEPS

The first steps that we intend to take are to:

- develop a classification system for the roading network
- focus safety improvement programmes on high risk rural roads
- focus safety improvement programmes at high risk urban intersections
- change the give way rules for turning traffic.

14 There have been many successful NAP projects that have delivered substantial safety benefits. For example, a NAP in Nelson CBD led to a significant reduction in pedestrian and cyclist crashes and a drop in crime in the first two years of the programme. The benefits exceeded the costs by over 4 to 1. Under a NAP, the roads, pavements, intersections, signs and facilities are improved where possible so that they are safe for local people, particularly children and the elderly. These are often supported by education and enforcement campaigns.

SAFE SPEEDS



WHAT IS THE PROBLEM?

- In 2008, speed contributed to 34 percent of New Zealand's fatal crashes and 20 percent of serious injury crashes.
- In 2008, 127 people died, 569 were seriously injured and 2,060 received minor injuries in crashes where speed was a contributing factor. The social cost of these crashes was about $875 million.
- There has been a drop in both mean speeds and the percentage of drivers exceeding the speed limit over the past decade. This has resulted in fewer fatal and serious injury crashes.
- However, recently progress has stalled. The majority of drivers, including heavy vehicle drivers, still routinely exceed the posted speed limit in urban areas.

Speed affects the likelihood and impact of all crashes. Small reductions in impact speeds greatly increase the chances of surviving a crash, particularly for pedestrians or cyclists (Table 4). This is why speed management is a key element of road safety strategies worldwide.

OUR 2020 GOALS

Our overall goal is to reduce the number of crashes and the severity of the crashes that do occur. Managing speed is crucial to this because the outcome of all crashes is strongly influenced by the impact speed.

A Safe System manages the forces of a crash to a level that the human body can tolerate without serious injury. The impact of a crash depends on the conditions of the road, the vehicle, the vulnerability of the road user and the travel speed. Small reductions in speeds greatly reduce the likelihood of a crash and increase the chances of surviving crashes that do occur. Our long-term goal is a significant reduction in speed-related crashes.

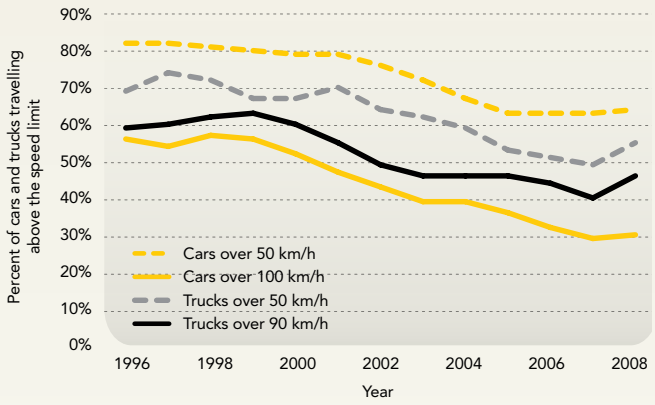
Table 4: Chance of death at different impact speeds

COLLISION TYPE	PROBABILITY OF DEATH		
	10%	30%	50%
Pedestrian struck by car	30 km/h	40 km/h	45 km/h
Car driver in side impact collision with another car	50 km/h	65 km/h	75 km/h
Car driver in frontal impact with another car	70 km/h	95 km/h	105 km/h

Over the past 10 years there has been a drop in both mean speeds and the percentage of drivers exceeding the speed limit. This resulted in fewer fatal and serious injury crashes.

However, recently these trends have begun to change (Figure 7). The majority of drivers, including those driving heavy vehicles, still routinely exceed the posted speed limit in urban areas. Many people still drive too fast for the conditions (eg in wet weather). This is partly due to poor understanding of how changing conditions can increase risk and partly due to the variable quality of our roads.

Figure 7: Percent of cars and trucks travelling above the speed limit



WHAT SAFER JOURNEYS WILL ACHIEVE

Speed affects all crashes. We want to see a reduction in unsafe speeds; that is, both travelling too fast for the conditions and speeding. If we achieve this we will see a reduction in all crashes, not just speed-related ones.

The strategy will pursue this objective in two ways. First, it will help people to drive to the conditions, and second, it will encourage people to comply with the speed limits.

Improving our roads and roadsides will encourage people to travel at speeds that are safe for the conditions. Improving basic features such as road markings and signage will help road users to identify and understand the speed limit. The speed that is safe on a road under particular conditions (eg wet weather) should be obvious to the road user, but this is often not the case.

We want to better match speed limits to the safety features present on our roads and the mixture of road users. If a road does not have a high standard of safety features present, or if it is used frequently by pedestrians and cyclists, then its speed limit should reflect these conditions.

We will also strengthen our efforts to inform road users about the risks and consequences of speeding and driving too fast for the conditions. It is clear from the crash statistics that many people underestimate how changing conditions, such as wet weather, can increase road risk. Better communication about the proven benefits of travelling at safer speeds can increase support from road users.

Research shows that moderating both mean and excessive speeds could significantly reduce road deaths and serious injuries[15]. Our modelling suggests that:

- if open road mean speeds dropped by 5 km/h, 60 lives per year would be saved
- if urban mean speeds dropped by 5 km/h, 30 lives per year would be saved
- if all vehicles currently travelling above the speed limit were to travel at the limit, 60-70 lives would be saved per year
- if all drivers drove at speeds fit for the conditions lives would also be saved, although it is difficult to estimate how many.

Even if we safely engineer our roads, have sensible speed limits and improve understanding of speed, some drivers will still ignore the messages. These road users are a risk to themselves and to others, so enforcement is necessary. We will continue to strengthen enforcement, including tolerance (the minimum speed above the limit at which someone can be given a ticket), to reinforce the importance of complying with speed limits[16].

WHAT ACTIONS CAN WE TAKE?

- Improve the cost-effectiveness of enforcement by increasing the use of speed cameras and red light cameras. This would free up Police to focus on high risk drivers.
- Investigate the use of point-to-point (section control) speed cameras.
- Change the penalty system to deter speeding (higher demerit points and lower fines).
- Apply demerit points to speed camera infringements.
- Help people understand the benefits of travelling at safer speeds.
- Create more speed zones on high risk rural roads to make roads more self-explaining and help establish the criteria for what roads with different speeds should look like.
- Increase the adoption of lower speed limits in urban areas.
- Investigate the requirements to support Intelligent Speed Assistance.
- Improve data on speed-related crashes.

15 If we did achieve these reductions there could be some impact on journey times, notably on the open road. However, fewer crashes also mean fewer delays (eg blocked lanes, diversions). A high level of safety improves the reliability of journey times on key routes that carry high volumes of people and freight.

16 The OECD notes: "*Setting higher tolerance levels above speed limits gives a misleading signal to the drivers and makes the speed limit system less credible.*" OECD. 2006. *Speed Management*. OECD Publishing, Paris. The OECD recommends that tolerance levels should be set at the absolute minimum taking into account possible inaccuracies in measurement. If a driver receives a ticket at 61 km/h but not at 55 km/h, then they are more likely to think that 55 km/h is still a safe speed even though the speed limit is 50 km/h. Enforcement is more effective and speed limits are more credible if tolerance levels are low. In general a high tolerance level sends mixed messages to road users. Surveys have revealed that people believe it is safe to drive at speeds close to the tolerance level irrespective of the posted speed limit.

Improve the effectiveness of enforcement by increasing the use of cameras

Speed cameras

If the chance of being caught speeding and being penalised is high, most people will comply with the speed limit. Enforcement works best when it is highly visible and where drivers can expect speed limits to be strongly enforced on an 'anytime, anywhere' basis.

There are several proven methods that could be used to enforce speed limits. These include manual enforcement by police officers and automated enforcement by cameras. Technologies are now available to allow speed enforcement to be much more automated and efficient. The international trend is towards more automated enforcement.

International evidence shows that additional cameras can reduce the number of road deaths significantly and cost-effectively. They are expensive to install, but their effectiveness has been well demonstrated. Speed cameras are also more accurate than hand-held devices, so enforcement tolerance levels can be minimised.

Over time, making more use of speed cameras will free up Police resources so they can concentrate on enforcing other high risk behaviour.

CASE STUDY

In the early 2000s France installed over 1,500 fully-automated cameras to reduce speed-related fatalities. Subsequently, the average speed on French roads decreased by 5 km/h between 2002 and 2005. Road deaths fell by over 30 percent, three-quarters of which was credited to the new low-tolerance speed camera system.

In Australia, Victoria has taken a similar approach, introducing more speed cameras. Speeds are enforced at the lowest possible tolerance their equipment allows, which is 3 km/h over the limit.

The use of speed cameras would be prioritised where the greatest risk to safety exists. That is, places where monitoring shows a large proportion of people are driving at high risk speeds. Over the course of this strategy we would increase the use of speed cameras. Mobile and hand-held devices would continue to be part of enforcement.

Enforcement will also continue to include a random 'anytime, anywhere' element as this has been shown to effectively influence a driver's perception of being caught speeding.

Investigate the use of point-to-point speed cameras

Point-to-point control is an emerging speed management method. A driver's speed is measured by speed cameras at two points, typically 2 to 5 kilometres apart. The driver's average speed is then calculated based on the time it takes to travel between the two cameras. If this average exceeds the speed limit an infringement notice is generated.

Point-to-point speed management is already used in Australia and several European countries. Early results show a significant improvement in compliance with speed limits at point-to-point sites, and improved traffic flows. We intend to investigate the requirements to introduce point-to-point cameras in New Zealand and possibly undertake some trials.

Red light cameras

A high proportion of crashes occur at intersections. These are often due to poor decision making, such as running a red light. Red light cameras can discourage this risky behaviour. Red light cameras are relatively new to New Zealand although trials have been underway for some time.

CASE STUDY

Red light cameras are currently being trialled at a number of high risk locations in Auckland. Recent results show there has been, on average, a 43 percent drop in red light running at the six highest risk locations since the trial began.

We will continue to monitor these trials and work with local authorities to consider how we could best use and administer these cameras.

Change the penalty system to deter speeding (higher demerit points and lower fines)

Our current penalty system for speed enforcement is based more on fines than demerit points. This may be why some people believe speed enforcement is about revenue gathering.

Moreover, there is a high rate of non-payment of traffic fines, including those for speeding. Over 90 percent of all New Zealand's currently unpaid fines are for traffic offences. Moving towards a more demerit-based system would tackle these issues.

We intend to address this by reducing fines and increasing demerit points for speeding. This approach would also help to address repeat offending, because the potential for licence suspension resulting from an accumulation of demerit points is a stronger deterrent than a series of fines.

These changes would increase the effectiveness of speed management, ultimately make it more acceptable to the public, and be consistent with other countries.

Investigate applying demerit points to speed camera infringements and reducing fines

Demerit points and fines are currently applied when a police officer issues a ticket, but camera-detected offences attract only a fine. This gives the public mixed messages. More importantly, it also means that enforcement is less effective.

In New Zealand it has been estimated that introducing speed camera demerits would save five lives and prevent 170 serious injuries per year or $53 million in social cost. There would be associated costs but overall the benefits are calculated to exceed the costs by at least 10 to 1. Adding demerit points to speed camera offences would be accompanied by reducing the fines that infringements attract.

A number of practical issues would need to be resolved before this action could be taken. These include identification (what if the driver cannot be clearly identified), liability (what happens if the driver is not the owner), and administrative and system costs. These issues have been addressed in countries that have demerits on speed camera offences, so we would look at how applicable these approaches would be in New Zealand.

Help people understand the benefits of travelling at safer speeds

People are more likely to travel at safe speeds if they understand how it benefits them and if they believe the rules are important.

The majority of road users broadly recognise the risks of speeding and support enforcement of the speed limit[17]. However, crash statistics show that many people are not putting their understanding of speed risk into practice.

We want to help people to understand why it is important to manage their speed safely and how they can do it. This means:

- raising awareness of the benefits of travelling at safer speeds (eg by explaining how small reductions in speed can greatly reduce risk)
- communicating the strong link between travel speeds and serious trauma. Travelling too fast means less time to react, less chance to avoid a collision, more chance of losing control, and more chance that the trauma will be severe in the event of a crash
- helping people to understand the importance of adjusting their speed as conditions change
- tackling the myth that low level speeding is not a safety issue by highlighting the severe impact that crashes can have on pedestrians, cyclists and motorcyclists[18]
- using technology such as variable speed limit signs to help increase understanding of driving to the conditions.

Achieving these objectives would help road users make informed and conscious decisions to travel at safe speeds. This supports the subconscious signals they receive from the design, layout and safety features present on the road.

In time, technology such as Intelligent Speed Assistance (ISA) and other intelligent transport systems will also help the driver by sending information directly to the vehicle, such as the prevailing speed limit and if the driver is exceeding the limit or going too fast for the conditions.

Over the course of the strategy we will continue to improve the ways we promote and reinforce these key messages on speed for road users through education, advertising, information technologies and other means of raising awareness.

Create more speed zones on high risk rural roads to help make roads more self-explaining and to establish the criteria for what roads with different speed limits should look like (eg 80 km/h, 90 km/h, 100 km/h)

Most of our rural roads were built before the concept of design speeds (where roads are designed to be safe at a particular speed to match the condition of the road) were introduced. Most are undivided and have a single lane in each direction.

Many people drive at speeds that are unsafe for the conditions of the road. This is because they respond to inaccurate design features and cues on that road, which suggest the road is safer than it really is.

Safety would be improved if we could reduce operating speeds to match the standard of the existing network. A more suitable speed limit for these roads would be one that more closely matches their design and safety features (or lack of them), rather than the general open road limit of 100 km/h. The ideal solution will also engineer the road environment to send the correct speed cues to the driver.

CASE STUDY

SPEED ZONES

Several Australian states have conducted speed zone trials with good success. For example, in Queensland four high risk sections of road were recently treated with a 10 km/h reduction in the speed limit, supported with increased signage alerting motorists that it is a high risk area. There is also increased enforcement. Initial speed surveys revealed that mean speeds dropped by 7 to 10 km/h. This drop in mean speeds is expected to yield a reduction in speed-related crashes[19].

17 Ministry of Transport. 2008. *Survey of public attitudes to road safety*. MoT, Wellington.

18 A cyclist/pedestrian hit at 30 km/h has a 90 percent chance of survival. If they are hit at 45 km/h their survival chance decreases to 50 percent. Once the impact speed reaches 70 km/h the survival chance is virtually zero.

19 This is a recent project so the impact on speed-related crashes is not yet known.

This initiative focuses on rural roads where speed-related crashes are a big problem and the 100 km/h limit is clearly unsafe. On these roads we intend to create a number of new speed zones. The medium-term focus could be on changing the speed limits to 80 km/h or 90 km/h. Where possible, these speed limits would be supported by signage, enforcement and engineering treatments that make the roads more self-explaining. In the longer term it may be necessary to review the system for setting speed limits.

Increase the adoption of lower speed limits in urban areas

Road safety experts worldwide have increasingly recognised that a 50 km/h speed limit is generally too high for residential neighbourhoods and busy town and city centres where there are many pedestrians.

This reflects a better understanding of the impact that speed has on the human body. Small reductions in impact speed greatly improve chances of survival in a crash. A pedestrian hit at 45 km/h has roughly a 50 percent chance of survival. At 30 km/h the chances of survival are 90 percent. Children and the elderly are more vulnerable.

In addition to the safety benefits, lower speeds create a better ambience and encourage more activity around retail centres and local neighbourhoods, which is important for economic development and social interaction.

CASE STUDY

Many countries are dropping their urban speed limits and some impressive results have been reported. For example, the City of Hull in England introduced a 20 mph (32 km/h) speed limit on over a quarter of its urban roads, which contributed to a 90 percent reduction in fatal and serious injury crashes.

In New Zealand, 30 km/h or 40 km/h speed zones are being increasingly used by local authorities. We would work with local authorities to ensure there are no unnecessary barriers to creating these speed zones where they are needed.

Investigate the requirements to support Intelligent Speed Assistance (ISA)

ISA is a type of Intelligent Transport System that limits the speed of a vehicle. ISA is an innovative and emerging technology that could significantly reduce the number of deaths and injuries on our roads. It is a technological solution primarily aimed at reducing driver error and reducing trauma should crashes occur.

There are three forms of ISA:

- **advisory**, where it tells the driver if they are speeding (eg via alarms or lights)
- **voluntary**, where the system is linked to the vehicle controls (eg by limiting fuel injection) but the driver can choose when to have the system enabled
- **mandatory**, where no override is possible (the system automatically makes sure the driver cannot speed).

Research from the United Kingdom has shown that ISA has significant safety benefits, with advisory ISA achieving an 18 percent reduction and mandatory ISA a 37 percent reduction in fatal crashes. In other European Union countries, it is predicted that up to 50 percent of traffic deaths could be avoided if all cars were equipped with mandatory ISA. As a result of such research a number of countries are now trialling ISA. The Department for Transport in the United Kingdom is taking a leading role in the development of a national speed limit database to support the implementation of ISA.

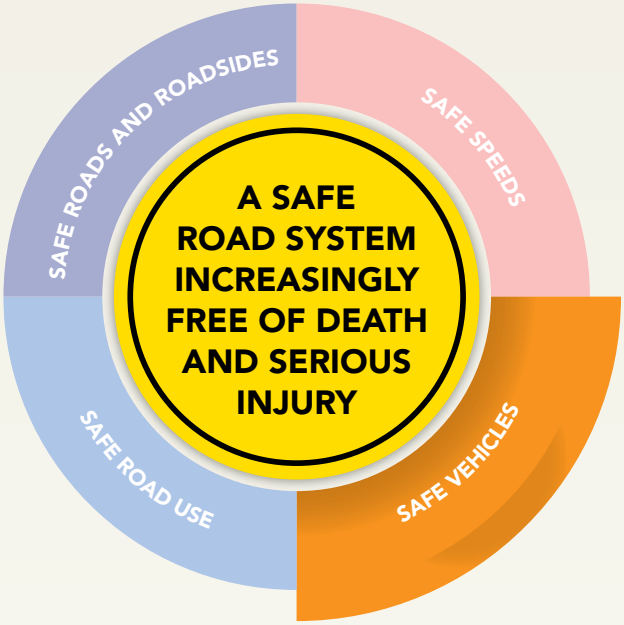
There are likely to be target markets for early implementation of ISA, including fleets, repeat speeding offenders and high risk groups, as well as heavy vehicles and eventually the wider community.

We will work with road controlling authorities and the motor vehicle industry to investigate the requirements for supporting ISA in New Zealand. This work could include a pilot project.

Improve data on speed-related crashes

Over the course of the strategy we will look to improve the way we collect and process information on speed-related crashes. Currently the speeds at which people were travelling just prior to crashing is only recorded for 43 percent of fatal crashes. We would like to record this information in all fatal crashes. Improving this data is important because it will give a better picture of the proportion of drivers who were exceeding the speed limit just before crashing, and by how much. It will also show the proportion who were travelling at, or under, the speed limit but going too fast for the conditions.

SAFE VEHICLES



OUR 2020 GOALS

A Safe System means we have a vehicle fleet where all of the cars, vans, motorcycles, buses and trucks have the latest proven vehicle safety technologies.

Overseas manufacturers, importers and dealers have an important role to play in providing safe vehicles to the market at an affordable price. Under a Safe System where everyone has a responsibility for road safety, proven safety features should not be offered as optional extras or sacrificed for performance and appearance. Workplaces also have a responsibility to provide safe vehicles for their employees. This links with the Workplace Health and Safety Strategy, which has workplace vehicles as one of its eight national priorities.

IMPROVING THE SAFETY OF THE LIGHT VEHICLE FLEET

WHAT IS THE PROBLEM?

- The average age of our light vehicles is 12 years old. This is old by international standards and it means our vehicles are less safe than those in other countries.
- Older vehicles generally have fewer safety features and provide less protection to their occupants in a crash.

There have been major advances in vehicle safety technologies over the last decade and vehicle safety features are becoming more common.

Since 2000, the safety of our light vehicle fleet has improved by four percent each year as safer vehicles have replaced less safe ones. It is also estimated that vehicle improvements reduced rural road fatalities by about 15.7 percent and urban fatalities by about 20 percent between 1997 and 2005. However, if our vehicles were newer, these safety gains could have been significantly greater.

If we compare ourselves to Australia, over 50 percent of the light vehicles entering the Australian fleet have at least a four star occupant protection rating. The equivalent figure for light vehicles entering the New Zealand fleet is estimated to be 15 to 20 percent.

WHAT SAFER JOURNEYS WILL ACHIEVE

There is significant room for improvement in our current vehicle fleet. We will encourage vehicles with the latest safety features to enter the New Zealand fleet as soon as possible to replace old vehicles that do not have these safety technologies.

Vehicle safety technologies can improve road safety in three ways:

- preventing crashes (eg through electronic stability control)
- protecting drivers and their passengers in the event of a crash (eg airbags and restraints)
- protecting other road users in the event of a crash (eg through a less rigid vehicle front structure).

WHAT ACTIONS CAN WE TAKE?

- Consider mandating electronic stability control (ESC) and side curtain airbags (SCA) on all light vehicles entering the fleet.
- Promote vehicle safety systems to consumers.
- Monitor any safety issues with electric vehicles.

It is international best practice to promote the uptake of safe vehicles through both consumer awareness programmes and vehicle standards. This approach signals a change away from our previous reliance on regulation to achieve road safety gains.

Consider mandating ESC and SCA on all light vehicles entering the fleet

ESC reduces the likelihood of crashes occurring by helping drivers stay in control of their vehicle during an emergency manoeuvre, such as swerving or braking suddenly to avoid an obstacle. SCA increases the protection to occupants in the event of a side-impact crash.

Many studies show that ESC could reduce loss of control crashes by 20 to 30 percent. For certain types of vehicle, such as SUVs, the figure is more like a 60 percent reduction. SCA can significantly reduce the risk of death in side impact crashes by well over 30 percent.

Promotional activities have increased the uptake of ESC and SCA in new vehicles over the past few years, but very few used imports entering the fleet have these safety features.

If we mandate these technologies, it is likely all New Zealand-new vehicles entering the fleet would be required to have ESC and SCA earlier than used imports. The staged implementation acknowledges that a larger proportion of New Zealand-new vehicles entering the fleet have these safety features as standard, but the figure is much lower for used imports. Mandating is also reliant on the development of international safety standards for these technologies.

To illustrate the benefits, if all New Zealand-new vehicles entering the fleet have ESC from 2014 and all used imports entering the fleet have ESC from 2015, it is estimated that this action will save 32 lives and prevent 170 serious injuries by 2020. This is a social cost saving of $265 million. If all New Zealand-new vehicles entering the fleet have SCA from 2014 and all used imports entering the fleet have SCA from 2015, it is estimated that this action will save 9 lives and prevent 50 serious injuries by 2020. This is a social cost saving of $62 million.

Analysis carried out overseas and in New Zealand has shown the benefits of mandating ESC significantly outweigh the costs. Further analysis will be necessary, including the impact that this proposal will have on the market for vehicles (both availability and price). The potential safety benefits are particularly large in New Zealand. The old age of our fleet, and the fact that the majority of our vehicles come from Japan, means that a relatively low proportion of New Zealand vehicles have these features. Less than 10 percent of newly manufactured vehicles for the Japanese domestic market have ESC.

The government intends to show leadership by ensuring the government fleet moves towards being equipped with ESC and SCA. This will give importers an early incentive to supply vehicles with these technologies. It will also have a downstream benefit as these vehicles move into the second-hand market.

Promote vehicle safety systems to consumers

Overseas experience shows that consumer awareness programmes combined with vehicle standards are the best way to increase the uptake of safer vehicles.

Mandating ESC and SCA for all light vehicles would ensure that there is a minimum level of safety set for entry into the fleet. However, ESC and SCA are just two safety features and we want to encourage people to purchase vehicles with other safety technologies.

By increasing consumer awareness of the benefits of buying a vehicle with the latest safety features, consumer demand for safer vehicles will increase. This in turn will encourage importers to bring more of these vehicles into the country.

There are three main ways we can help consumers to choose safer vehicles:

- Increase the coverage of the Right Car[20] website so it provides safety ratings for older vehicles.
- Work with the motor vehicle industry to give vehicle buyers standard and easily understood safety information, eg star ratings.
- Work with the motor vehicle industry to promote vehicle safety technologies to consumers as they become available. Vehicle safety systems are continually being developed. Known systems include lane departure warnings, night vision assistance, fatigue/distraction warnings, automatic braking, intelligent speed assistance, and adaptive cornering headlights.

It is estimated that promoting safety systems will save one life and prevent one to five serious injuries each year. This is an annual social cost saving of $1.5 million to $7.6 million.

MONITOR ANY SAFETY ISSUES WITH ELECTRIC VEHICLES

There is expected to be an increase in the number of electric vehicles entering the vehicle fleet over the next 10 years. It will be important to ensure these vehicles meet appropriate safety standards.

20 www.rightcar.govt.nz

IMPROVING THE SAFETY OF HEAVY VEHICLES

WHAT IS THE PROBLEM?

- In 2008, crashes involving heavy vehicles accounted for 18 percent of road deaths and 9 percent of total injuries. This equates to 65 deaths, 258 serious injuries and 1,144 minor injuries.
- About 80 percent of people killed in heavy vehicle-related crashes are other road users.

Heavy vehicles[21] are essential to our economy. Every year trucks carry approximately 70 percent of New Zealand's freight. Buses provide a range of services from taking children to school and commuters to work, to carrying tourists around the country.

However, heavy vehicles pose a particular challenge to road safety because the consequences of their crashes are more severe. Regardless of fault, other road users usually come off second best in a crash with a heavy vehicle. Heavy vehicle crashes also create significant delays on our roads and this congestion creates additional costs for businesses and people.

Since 2000, the distance travelled by heavy vehicles has increased but the number of deaths in heavy vehicle-related crashes has dropped. However, serious injuries have increased over the same period. We need to ensure the predicted increase in heavy vehicles on our roads does not mean an increase in serious crashes.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 we will have improved the level of safety of our heavy vehicle fleet and as a result reduced the number and consequences of some of the most costly, disruptive and severe crashes on our road network.

WHAT ACTIONS CAN WE TAKE?

The initiatives suggested in the Safe Roads and Safe Speeds sections will help reduce the impact of heavy vehicle crashes. However, we can also improve the safety of heavy vehicles themselves.

- Consider mandating electronic stability control (ESC) on all heavy vehicles entering the fleet.
- Publish operator safety ratings.

Consider mandating ESC on all heavy vehicles entering the fleet

ESC significantly reduces the chances of loss-of-control crashes. Vehicle instability is a serious risk for heavy vehicles and heavy vehicle drivers are often unaware of this risk until their truck actually rolls. There are approximately 140 heavy vehicle rollovers each year due to instability. ESC improves stability and could prevent truck rollovers by 25 percent if fitted to vehicles that are at high risk.

ESC reduces the likelihood of crashes occurring by helping drivers stay in control of their vehicle during an emergency manoeuvre, such as when swerving or braking suddenly to avoid an obstacle.

A rule could be drafted so that all vehicles over 3.5 tonnes entering the fleet will be required to have ESC. In comparison with new light vehicles there is a small number of heavy vehicles with this safety feature and we need to allow time for a greater number of vehicles with ESC to be imported before making it mandatory. This would allow importers and heavy vehicle companies to obtain vehicles with this technology. Costs to business would also need to be carefully considered.

If all heavy vehicles entering the fleet were required to have ESC from 2015 it is estimated that half the heavy vehicle fleet would be equipped with ESC by 2020. The benefit is estimated to be a 25 percent reduction in loss of control crashes. This would save 10 lives and 260 injuries by 2020. This is an estimated social cost saving of $147.5 million. This initiative is estimated to have a benefit/cost ratio of almost two to one.

Other countries are moving towards mandating ESC for heavy vehicles. In Europe, ESC will start to become compulsory on vehicles from 2012 with priority given to vehicles where the potential benefit is greatest, such as heavy truck/trailer combinations and touring coaches.

Publish operator safety ratings

The Operator Safety Rating System (OSRS) gives heavy vehicle operators safety ratings based on their safety performance. These ratings will be available to potential customers and others with an interest in the industry, such as finance and insurance firms.

The ratings will act as an incentive for heavy vehicle operators to be safety conscious. Customers are more likely to choose operators with good safety records, while poorer performing operators will have to improve safety to attract customers. The ratings will also allow Police to focus on the most risky operators.

The OSRS is estimated to reduce the social costs of at-fault heavy vehicle crashes by about six percent per year (or $17 million) by 2021.

21 Heavy vehicles are those motor vehicles operated under a transport service licence with a gross vehicle mass over 3.5 tonnes. This includes buses.

IMPROVING THE SAFETY OF MOTORCYCLES AND MOPEDS

WHAT IS THE PROBLEM?

- Motorcycle riding requires a higher level of both vehicle control and cognitive skills than car driving. The potential outcomes of any crash, whether caused by the rider, other road users, the road environment or the vehicle itself, are severe.
- The risk of a motorcyclist being killed or seriously injured in a crash is about 18 times higher than for a car driver.

Specific motorcycle-related actions proposed in both the Safe Roads and Roadsides and Safe Road Use sections will help improve the safety of motorcycle and moped riders. This section focuses on improving the safety of motorcycles themselves.

Motorcycles do not have the same safety features to prevent crashes and protect riders that we have grown accustomed to in cars. Motorcyclists are therefore more vulnerable on our roads.

A higher proportion of crashes involving large motorcycles (500 cc or larger) result in death rather than injury – riders of large motorcycles make up 41 percent of all casualties but 60 percent of deaths. This is partly a result of riding patterns.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 more novice riders will be riding motorcycles that are better suited to their level of experience. We will also have more motorcycles with technologies that help prevent motorcycle crashes and protect riders, including motorcycle airbags and integrated braking systems. Together with the other proposed motorcycle actions in the strategy, this will lead to a reduction in the road fatality rate of motorcycle and moped riders; from 12 per 100,000 population to a rate similar to the best-performing Australian state, Victoria, of 8 per 100,000.

WHAT ACTIONS CAN WE TAKE?

Actions are needed across all four elements of the Safe System to reduce the level of death and injury involving motorcycling. However, improving the safety of the motorcycles themselves will help reduce the high crash risk of riders.

Safer motorcycles for novice riders

Currently holders of learner and restricted motorcycle licences are restricted to riding motorcycles of 250 cc and less. This is because larger and more powerful bikes increase crash risk; and novice riders have more crashes per vehicle kilometres travelled than experienced riders.

However, recent advances in technology are limiting the effectiveness of the restriction. A number of powerful high-performance 250 cc motorcycles capable of high speeds and rapid acceleration are available on the market. These motorcycles are not suitable for novice riders due to their power, riding position and handling. Advances in motorcycle power and performance are likely to continue.

To better reflect the intent of the cc restriction, we could replace it with a power-to-weight ratio limit of 150 kilowatts per tonne. A 660 cc restriction for learner and restricted motorcycle licensed riders would also apply to ensure motorcycles are not too physically large for novice riders.

This restriction would give novice riders access to a greater range of motorcycles appropriate for their level of experience, including more that have safety features like automatic braking systems. It will also provide a more progressive step to larger bikes than the 250 cc restriction. Evidence from overseas jurisdictions shows a power-to-weight restriction encourages novice riders to stay on a less powerful bike for longer than a 250 cc restriction after their restriction period ends. This is positive for safety as familiarity with a motorcycle reduces crash risk.

PROBABLE FIRST STEP

The first step that we intend to take is to:

- introduce a power-to-weight restriction for novice riders.

INCREASING THE LEVEL OF RESTRAINT USE

WHAT IS THE PROBLEM?

- New Zealand has one of the highest child road fatality rates in the OECD and part of this is due to the lack, or incorrect use, of appropriate restraints.
- Passenger safety for 5 to 9 year-olds has improved less than that for younger children. Since the mid 1990s, the injury rate for 5 to 9 year-olds has been decreasing much more slowly than that for those aged four years or less.

New Zealand has fallen behind international best practice in child restraint use by primary school-aged children. Many child deaths and serious injuries could be prevented by ensuring children are appropriately restrained when travelling in a vehicle.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 we will achieve a correct use and fitting rate of 90 percent for child restraints, and the use of booster seats will be the norm for children aged 5 to 10. As a result there will be less death and injury due to the lack of, or incorrect use of, appropriate restraints and we should no longer have one of the highest child road fatality rates in the OECD.

WHAT ACTIONS CAN WE TAKE?

- Bring our child restraint laws in line with international best practice. This initiative includes a focus on the correct use and fitting of child restraints.
- Improve our data on the correct use of child restraints.

Restraints are one of the most important vehicle safety features. In a crash, seatbelts reduce injury severity by preventing occupants from being thrown from a vehicle. A number of other safety features designed to protect occupants in a crash (for example airbags) only work properly if the driver or passengers are correctly restrained. We can ensure that children, a group vulnerable in the event of a crash, receive additional protection.

BRING OUR CHILD RESTRAINT LAWS IN LINE WITH INTERNATIONAL BEST PRACTICE

This action could be introduced in two stages to minimise costs. First we could introduce a requirement for all children up to the age of eight years to use an appropriate child restraint. Then later we could extend this requirement so that all children up to their tenth birthday or 148 cm in height, whichever comes first, use an appropriate child restraint. This initiative is estimated to have a benefit/cost ratio of more than three to one (based on $80 per child restraint). In terms of practicality at the roadside, age can be difficult to determine for Police and so height is the preferred option for measurement in the field.

Seat belts and the seats in cars are designed to fit adults and children are usually too small for the seatbelt to cross their shoulders and hips in the correct place. These factors mean that a seatbelt crosses the child's neck and abdomen resulting in greater injury risk in a crash. Children's small size and tendency to slouch means they are more likely to slide under or be thrown out of the seatbelt.

An appropriate child restraint reduces the risk of serious and life-threatening injuries to a child in the event of a crash. Currently, 5 to 7-year-olds are only required to use a child restraint if one is present in the vehicle. There are no requirements for children aged eight years or older to use a booster seat.

For children aged 5 to 9, use of a restraint would reduce their risk of injury by 52 percent. It is estimated that strengthening our child restraint requirements will save one life and prevent five serious injuries each year. This is an annual social cost saving of $9.8 million.

A number of countries, including member states of the European Union, Canada and several states of the United States, have strengthened restraint laws for children over the age of five years. Other countries, including Australia, are in the process of doing so. Research from these countries and in New Zealand has shown the benefits from mandating these technologies outweigh the costs.

To increase the benefit of this initiative we would also:

- **Educate parents and caregivers on the correct use and fitting of child restraints:** Parents and caregivers are often unaware of the danger of inappropriate or incorrect child restraint use. This can be addressed by building on our current education programmes. The key message will be that child restraints only work properly when they are the right size for both the child and the vehicle, and the child is correctly positioned and strapped in.
- **Improve our data on the correct use of child restraints:** Our current survey data on child restraints is based on wearing rates rather than correct use. One-off regional surveys carried out in 2005 and 2009 found that between 45 and 65 percent of families were not using child restraints correctly. We need more data to determine how much of a problem this is across the country. This will also help monitor the effectiveness of programmes focussing on the correct use of child restraints.

SAFE ROAD USE

OUR 2020 GOALS

A Safe System assumes that even responsible road users will sometimes make mistakes. This does not mean that road users have no role to play in improving road safety. A Safe System demands safe and responsible road use and reducing unsafe behaviour is crucial.

Responsible users are competent, alert, comply with the road rules and are unimpaired by alcohol, drugs, distraction or fatigue. They take steps to improve their own safety and the safety of others. As citizens they demand and expect safety improvements, for example from vehicle manufacturers and road controlling authorities.

A Safe System assumes road users receive adequate information and education so they understand how to be a responsible road user.

REDUCING THE IMPACT OF ALCOHOL/DRUG IMPAIRED DRIVING

WHAT IS THE PROBLEM?

- Alcohol/drug impaired driving is one of the largest causes of serious road crashes.
- In 2008, alcohol and drugs contributed to 31 percent of fatal crashes and 21 percent of serious injury crashes. These crashes resulted in 119 deaths, 582 serious injuries and 1,726 minor injuries. It is estimated that in 2008 the social cost of crashes where alcohol/drugs were a factor was $841 million.
- Through the 1990s substantial progress was made in reducing the number of alcohol/drug-related deaths and serious injuries. However, we have made no further progress since 2000.

Drink driving

After drinking the brain works less efficiently, taking longer to receive messages from the eyes; processing information becomes more difficult, and instructions to the muscles are delayed. In driving, alcohol results in decreased vision, poor judgement, increased risk-taking, poor attention and decreased reaction time.

The effect of alcohol on driving has been comprehensively researched over the last 50 years. There are nearly 300 studies that look at the effect that increasing levels of alcohol have on a person's ability to drive.

The findings from this extensive body of research are very consistent and show that driving starts to be impaired with very low levels of alcohol (this is typically measured as blood alcohol content (BAC[22])). The vast majority of adult drivers are affected or impaired with a BAC of 0.05 with significant impairment at BAC 0.08.

Recent research has demonstrated that the impairment is magnified when alcohol consumption and fatigue are combined.

The risk of being killed while driving in New Zealand at different BAC levels is shown in Table 5. The table uses New Zealand data on drivers involved in fatal crashes[23].

22 Blood alcohol concentration is the amount of alcohol present in a 100 millilitre (mL) volume of blood. For example 50 mg is 0.05 grams, 0.05 grams of alcohol in 100 mLs is written as 0.05 percent. In other words, 50 mg is equal to 0.05 percent which is equal to 50 mg/dL (decilitre; 100 mLs). This value can also be described as BAC 0.05

23 Keall, M.D, Frith, W.J and Patterson, T.L. 2004. The influence of alcohol, age and the number of passengers on the night-time risk of driver injury in New Zealand. *Accident Analysis and Prevention*, 36(1), 49-61.

Table 5: Relative risk of fatal crash by blood alcohol level

BAC	30+ years	20-29 years	15-19 years
0	1	3	5.3
0.03	2.9	8.7	15
0.05	5.8	17.5	30.3
0.08	16.5	50.2	86.6

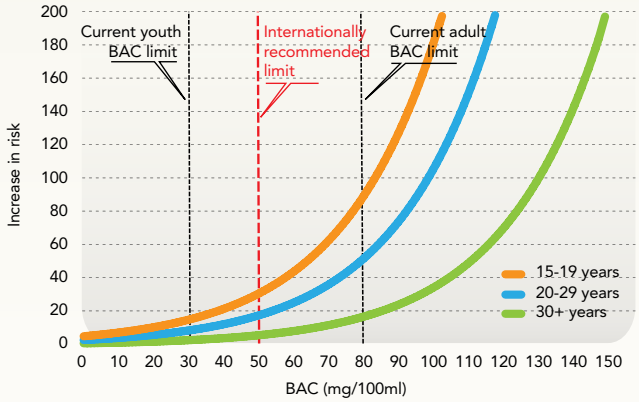
The table shows that at BAC 0.08, adult drivers aged over 30 years are about 16 times as likely to be involved in a fatal crash than if they were sober. Adults aged between 20 and 29 years are about 50 times as likely. These same results are shown graphically in Figure 8.

As can be seen from the graph, at BAC levels greater than 0.08 the rate of exponential increase in risk is greater.

Two standard drinks is broadly equivalent to a BAC of 0.05, or 50 mg of alcohol per 100 ml of blood. For men of average height and weight it equates to two standard drinks in the first hour and one standard drink per hour thereafter. For women of average height and weight a BAC of 0.05 equates to one standard drink per hour.

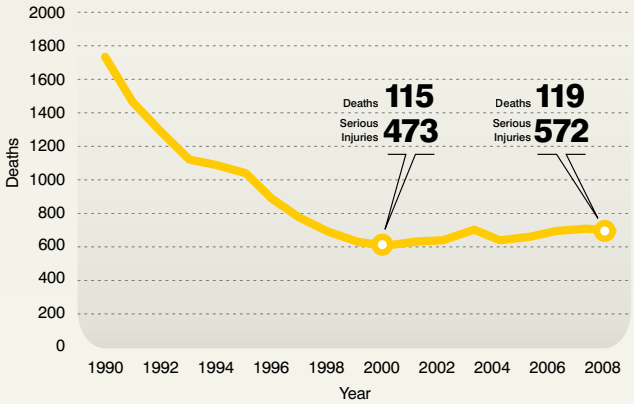
Our current BAC of 0.08 allows people to become significantly impaired and still legally drive. It allows a man of average height and weight to consume six standard drinks within 90 minutes. For a woman[24] it allows four standard drinks to be consumed.

Figure 8: Relative risk of fatal crash by blood alcohol level



In terms of the progress we have made to reduce alcohol-related crashes, Figure 9 shows that through the 1990s substantial progress was made in reducing the number of alcohol/drug related deaths and serious injuries. However, we have made no further progress since 2000.

Figure 9: Deaths and serious injuries in crashes with driver alcohol/drugs as a contributing factor



In comparison with Australia, where an adult drink drive limit of BAC 0.05 has been in place for many years, New Zealand experiences a higher level of alcohol-related road crashes.

Based on the Australian results for 2006 (the latest available), around 22 Australians die in alcohol-related road crashes per one million population. This compares with 28 New Zealanders per one million population in 2008. Of the limited state data that is available, in Victoria, 16 Australians die per one million population in alcohol-related crashes.

Another indicator of the prevalence of drink driving is the results from Police breath testing operations. Nationally about 1 in 150 Australian drivers tested exceed the legal limit of BAC 0.05. In contrast, 1 in 85 New Zealand drivers exceed our limit of BAC 0.08. In Victoria the rate is 1 in 314 drivers tested and in Queensland it is 1 in 192 drivers tested.

Drugged driving

In comparison to drink driving, less is known about the extent of drugged driving in New Zealand and the impact it has on road safety. However, evidence suggests that drugs may be a bigger factor in crashes than officially reported.

Preliminary results of a study of the blood of deceased drivers[25] show a number of trends that are of concern to road safety:

- 52 percent of drivers had used alcohol and/or drugs
- 31 percent of drivers had used cannabis with or without alcohol or other drugs
- 19 percent of drivers used alcohol and another drug(s)
- 14 percent had used drugs other than alcohol or cannabis, and the most commonly detected were methamphetamine, methadone and morphine.

We also know from the *2008 Illicit Drug Monitoring System* report that 90 percent of frequent methamphetamine users, 62 percent of frequent ecstasy users, and 90 percent of frequent injecting drug users, have driven under the influence

24 Also of average height and weight – individuals process alcohol at different rates and these estimates are only guides.

25 This study by the Institute of Environmental Science and Research Limited has been conducted over 2004–2009 and is using blood samples taken from all coronial cases. It is limited to 1,000 samples. The interim report which is quoted here has a sample size of 732.

of a drug other than alcohol in the past six months. High proportions of frequent drug users report speeding, losing concentration, driving through a red light, or nearly hitting something while driving under the influence of a drug.

The report also shows that frequent drug users believe Police are less likely to detect them driving under the influence of a drug than drink driving.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 the incidence of alcohol and drug impaired driving will be significantly reduced, with fewer people losing their lives or suffering serious injuries as a result of drunk or drugged drivers. We aim to reduce the level of fatalities and serious injuries caused by drink or drugged drivers to a level similar to that of Australia.

WHAT ACTIONS CAN WE TAKE?

- Either lower the adult drink drive limit to BAC 0.05 and introduce infringement penalties for offences between BAC 0.05 and 0.08.

  Or, conduct research on the level of risk posed by drivers with a BAC between 0.05 and 0.08.
- Address repeat offending and high BAC drink drivers through compulsory alcohol interlocks and a zero drink-drive limit for offenders.
- Review the traffic offences and penalties for causing death or injury.
- Support the future introduction of random roadside drug testing with research.

Alcohol/drug impaired driving is not just a transport problem – it is a wider public health and social problem. Society's attitudes to alcohol and drugs, including the importance placed on access to rehabilitation and treatment services, will significantly influence what we can achieve in road safety.

Nevertheless, we know that to address the persistent number of alcohol/drug-related road deaths and serious injuries, we need a more effective road safety response. We have to set safe limits that protect all road users and we need specific action to address repeat offenders. This will be provided through the following key initiatives:

Lower the adult drink-drive limit to BAC 0.05

When asked how many drinks a person should be allowed to have before driving, most New Zealanders typically give an answer of two drinks or less. This equates to an adult drink drive limit of BAC 0.05.

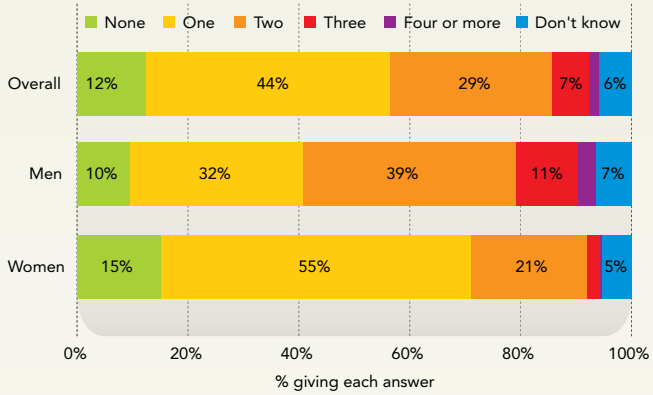
For example, the following question was asked as part of the Ministry's Public Attitudes to Road Safety Survey in 2009:

> "A 'standard drink' is a measure of alcohol equivalent to one can of beer or one small glass of wine. How many standard drinks should a man/a woman [the same gender as the respondent was used] be allowed to have in an hour if he/she is planning to drive immediately afterwards?"

The survey sampled 1,650 adults and the responses to the question are summarised in Figure 10 below.

Figure 10: Drinking before driving

How many standard drinks should a man/woman* be allowed to have in an hour if they are planning to drive immediately afterwards?



*Men were asked about men and women were asked about women

Based on the overall results, 85 percent of people surveyed said drivers should be limited to two or fewer drinks before driving. More than half (56 percent) said drivers should be limited to one drink or no drinks. Two percent said drivers should be permitted four or more drinks in an hour before driving.

Converting these numbers of drinks into BAC levels[26], this survey suggests that only two percent of New Zealanders support the current adult limit of BAC 0.08. Eighty-five percent of people support an adult limit of BAC 0.05 or lower.

International experience[27] shows that an effective response to drink driving is based on three building blocks:

- Police enforcement of drink-driving laws
- random breath testing
- legal blood alcohol limits set to a blood alcohol concentration (BAC) of no more than 0.05.

We have two of these building blocks. Over the first three years of the strategy we will look to lower the legal drink-drive limit for adults to a BAC of 0.05, or 50 mg of alcohol per 100 ml of blood.

Lowering the adult drink-drive limit would be the strongest initiative in the area of Safe Road Use. It is estimated that each year this initiative could save between 15 and 30 lives and prevent between 320 and 686 injuries. This would be an annual social cost saving of between $111 million and $238 million.

26 The conversion of alcohol consumed into a BAC level can only ever be a guide as gender, body size, empty/full stomach, level of body fat all lead to variations between people. The conversion is based on a person of average height and weight.

27 OECD 2008. *Towards Zero: Ambitious Road Safety Targets and the Safe System Approach*. p 78. OECD Publishing, Paris.

Australian and Danish experience suggests that one of the key strengths of a limit of BAC 0.05 is its ability to reduce the number of drivers with very high blood alcohol levels (eg BAC 0.1 and above). For example, in the Australian Capital Territory following the lowering of the limit from BAC 0.08 to BAC 0.05, drivers stopped in random breath tests between the BAC limits of 0.15 and 0.2 declined by 34 percent, and those above 0.2 declined by 58 percent.

Reducing the number of drivers with very high levels of alcohol is important, as if we could reduce the number of drivers with very high blood alcohol levels, we would make a substantial impact on the number of alcohol-related deaths and serious injuries.

One reason a lowered limit is effective is that it encourages drivers to keep a better count of the drinks they consume in order to stay within the limit. As well, at BAC 0.05 people are required to make a responsible decision (to either stop drinking or to not drive) before their judgement is significantly impaired. Once blood alcohol content approaches 0.08, people are less able to make responsible decisions. In this way a lower BAC limit can have a strong preventative effect.

To ensure the new limits do not impose additional workload on the courts, infringement penalties could be introduced for adult offences between BAC 0.05 and BAC 0.079, and possibly for youth offences between BAC 0 and BAC 0.03. Above these limits criminal sanctions would continue to apply.

The infringement penalties would be a mixture of demerit points and instant fines. They would be tiered to reflect the severity of offending and repeat offending. Infringement penalties instantly reinforce the message that drink driving compromises safety. They would do this without the cost and delay of court-imposed sanctions.

The introduction of the lowered drink-driving limits would be supported by a public awareness raising campaign.

Conduct research on the level of risk posed by drivers with a BAC between 0.05 and 0.08

The role of a drink-drive limit is to specify the maximum level of road safety risk society is willing to tolerate from alcohol. There is significant confusion as to what level of alcohol use our current limit of BAC 0.08 represents. Most people are unaware of the amount of alcohol that can be consumed within the legal limit.

Although the great majority of submitters to the Safer Journeys' discussion document favour setting the drink-drive limit at a level of alcohol use that equates to a BAC of 0.05, or lower, the proposal is controversial, with some key stakeholders disagreeing with the propoals.

Some stakeholders also questioned whether the level of risk from permitting people to drive with a BAC between 0.05 and 0.08 is significant. They point out that comparatively few New Zealanders are killed in alcohol-related transport incidents where drivers record a BAC in the 0.05–0.08 range.

We do not know the exact extent of the harm caused by drivers with a BAC between 0.05 and 0.08. From 2004 to 2008, 18,729 drivers were involved in fatal or serious injury crashes, and of these, 2,063 had a BAC level recorded in the crash analysis system. However, a further 1,329 drivers were suspected of being impaired by alcohol but a BAC was not recorded.

There are several reasons why the data is incomplete, including that:

- if a BAC reading is obtained, but it is lower than the legal limit of 0.08 for adults it is not required to be recorded
- at a crash scene it is not a priority to take a blood sample for analysis; the priority is to stabilise the person until they can be transferred to hospital
- fluid given to injured drivers to replace major blood loss compromises the accuracy of subsequent blood alcohol tests
- in some cases long time delays between the crash and the request for a blood alcohol sample from hospital staff mean a relevant BAC cannot be obtained.

However, based on the alcohol-related crashes that occurred over 2004–2008, we estimate that adult drivers with a BAC of between 0.05 and 0.08 are responsible for at least 7 deaths, 45 serious injuries and 102 minor injuries of the total 119 deaths, 582 serious injuries and 1,726 minor injuries that were caused by drunk and drugged drivers in 2008. These figures are based on the number of casualties where the blood alcohol levels are known, combined with an estimate for those where the blood alcohol levels are unknown.

This estimate equates to an annual social cost of $56.5 million for crashes caused by drivers with a BAC between 0.05 and 0.08. ACC estimate the cost to the ACC scheme of the claims arising from these road crashes to be $28.5 million.

We do know, however, that one of the key strengths of a lowered limit would be its ability to reduce the number of drivers with very high BAC levels. For example, in the Australian Capital Territory a lower limit achieved a 34 percent reduction in the number of drivers randomly breath tested with BACs between 0.15 and 0.2, and a 58 percent decrease in those over BAC 0.2.

As an alternative to lowering the adult drink-drive limit, we could do more research on the level of risk presented by drivers with a BAC of between 0.05 and 0.08.

To do this we could replicate, using New Zealand drivers, the overseas studies that look at the impairment effects of alcohol at different levels of BAC while driving.

We could also investigate whether we could better establish the level of crashes that are caused by drivers with a BAC between 0.05 and 0.08. This could involve requiring all drivers involved in crashes to be subject to a compulsory breath or blood test.

Address repeat offending and high level offending through compulsory alcohol interlocks

To move towards a Safe System we need to address repeat drink driving. The current approach of fines and licence disqualification works well in deterring most people from drink driving, but it fails for the 27 percent of drink drivers who re-offend.

To be successful in addressing repeat drink driving, we need to be open to new approaches. We will look to introduce compulsory alcohol interlocks in the first three years of the strategy. Alcohol interlock technology prevents a vehicle from being driven if the driver cannot provide a low or alcohol-free breath sample.

As the proposal is that the alcohol interlock programme will operate on a user-pays basis, it could offer a cost-effective way of responding to drink driving. There would, however, be costs to government with operating interlock programmes.

Alcohol interlocks represent a move beyond punishment and focus on preventing drink driving. As interlock programme participants are monitored, there is an opportunity for underlying drinking problems to be identified. This provides the potential for rehabilitation and treatment.

Work is underway on how alcohol interlocks could be introduced as an alternative to disqualification, for both first time and subsequent offenders. It is estimated that interlocks could save between two and seven lives each year and prevent between 32 and 128 injuries (depending on whether interlocks are applied from the first or second offence; whether they are installed for one year or two years; and whether a lifetime definition of repeat offender or a five year definition is used). This would be a social cost saving of between $12.3 million and $48 million.

Address repeat offending and high level offending through a zero drink-drive limit

We would also investigate imposing a zero BAC drink-drive limit on repeat offenders and first time offenders who have a high BAC level. Although the existing sanction of licence disqualification and the new initiative of alcohol interlocks mean that drink-drive offenders cannot drink and drive, a zero BAC limit would increase the effectiveness of these two sanctions. It would send a strong message that drink driving poses a significant risk to the safety of New Zealanders.

The duration of the zero BAC limit, for any offender, would be linked to the term of their licence disqualification or mandatory use of an alcohol interlock.

Review the traffic offences and penalties for causing death or injury

Many people, including members of the judiciary, are concerned that the penalties for traffic offences causing death or injury are too lenient. For example, the current offence for drink driving causing death or injury has penalties of a prison term of up to five years, or a maximum fine of $20,000, and disqualification for more than one year. The comparable offence in New South Wales has a maximum prison term of 14 years and Victoria has a maximum of 20 years.

We will review our offences and penalties to ensure they better reflect society's view of the level of culpability of drink and drugged drivers who cause death and serious injury.

Support the potential for random roadside drug testing with research

The roadside drug impairment test, introduced in 2009, lays the foundation for tackling drugged driving. We will also look to complement the impairment test with random roadside testing for illegal drugs as technology allows. Illegal drugs include cannabis, methamphetamine, MDMA (ecstasy), heroin, cocaine (and 'crack'), LSD, GHB, amphetamines and prescription drugs that are abused.

With random testing, a police officer could require a driver to undergo a substance test (for example a saliva test) whether or not there is reason to suspect impairment. This would work in the same way as random breath testing for alcohol. By increasing the likelihood of being caught driving under the influence of impairing drugs, random testing would provide a greater deterrence to drugged driving.

To evaluate this future initiative, research will be carried out to establish the prevalence of drugged driving across the general driving population, as well as for drivers involved in crashes. This research would help us make informed decisions about which drugs pose a significant crash risk in New Zealand. We would then know which type of drug testing we should focus on.

PROBABLE FIRST STEPS

The first steps that we intend to take will be to:

- either lower the adult drink-drive limit to BAC 0.05 and introduce infringement penalties for offences between BAC 0.05 and 0.08
  or, conduct research on the level of risk posed by drivers with a BAC between 0.05 and 0.08
- address repeat offending and high level offending through compulsory alcohol interlocks
- address repeat offending and high level offending through a zero drink-drive limit
- review the traffic offences and penalties for causing death and injury.

INCREASING THE SAFETY OF YOUNG DRIVERS

WHAT IS THE PROBLEM?

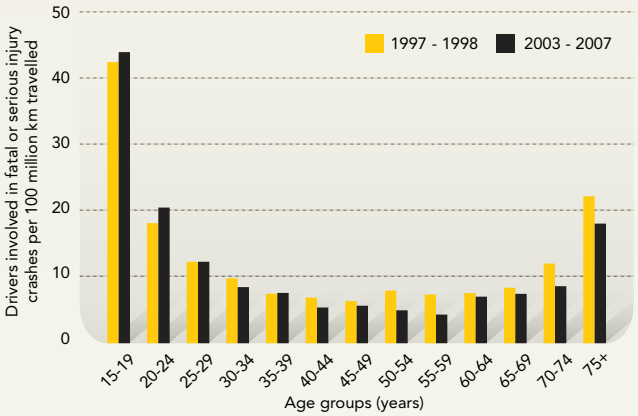
- Road crashes are the single greatest killer of 15 to 24-year-olds, and the leading cause of their permanent injury.
- Young New Zealanders aged 15 to 24 years are 14.5 percent of New Zealand's population; yet in 2008 they were involved in around 37 percent of all fatal crashes and 38 percent of all serious injury crashes. This equates to a road fatality rate of 21 per 100,000 population, more than double New Zealand's overall rate.
- Our 15 to 17-year-olds have the highest road death rate in the OECD and our 18 to 20-year-olds have the fourth highest.
- Crashes where young drivers were deemed at fault resulted in 122 deaths and 800 serious injuries in 2008. The social cost of these crashes was approximately $1.1 billion.

Our young people have lower levels of safety compared with their peers in other developed countries. For example, young Australians have a road fatality rate of 13 per 100,000 population, while young New Zealanders have a fatality rate of 21 per 100,000 population. If New Zealand had the same road fatality rate for 15 to 24 year olds as Australia, then in 2009 25 lives would have been saved.

From 2000 to 2008 the number of people killed or seriously injured in crashes where a young driver was at fault increased by about 17 percent. This compares with a six percent increase across all road users over the same time period.

Since 2000 we have made no progress in increasing the safety of young drivers. Figure 11 shows that young drivers appear to be less safe now than they were a decade ago. This is not the case for the rest of the population.

Figure 11: Drivers involved in fatal or serious injury crashes per 100 million km driven



The key reasons why young drivers have lower levels of road safety are:

- **Age:** the crash risk is higher for those aged under 18[28] and tends to decrease as age increases. The greatest risk period for young drivers is in the first six months of driving solo (ie the first six months of gaining a restricted licence).
- **Risk taking/maturity:** young drivers underestimate risk, tend to drive in higher risk situations (for example at night and with peer passengers) and incorrectly perceive hazards. In part this reflects the fact that the parts of the brain that assess risk and control emotions and impulses are still developing into a person's twenties. Gender also plays a role with young males being significantly over-represented in crash statistics.
- **Driving inexperience:** driving experience reduces crash risk over time. However, the combination of driving inexperience and immaturity makes the crash risk higher for young novice drivers than for older novice drivers.
- **Alcohol/drugs:** 15 to 24-year-olds are more likely to be affected by alcohol/drugs.
- **Speed:** young drivers are more than two-and-a-half times more likely to have speed as a contributing factor in a fatal crash than drivers over the age of 25.
- **Distractions:** younger drivers have the highest rate of distraction-related fatal and serious crashes.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 our young drivers will enjoy a greater level of road safety. The Graduated Driving Licensing System will better protect them from serious crashes. Access to quality and relevant road safety education will be commonplace.

We will aim to reduce the road fatality rate of our young people from 21 per 100,000 population to a rate similar to that of young Australians of 13 per 100,000.

28 OECD. 2006. *Young Drivers: The Road to Safety.* p. 127. OECD Publishing, Paris.

WHAT ACTIONS CAN WE TAKE?

- Raise the driving age to 16.
- Make the restricted licence test more difficult to encourage 120 hours of supervised driving practice. This initiative includes raising public awareness of young driver crash risk and reviewing and improving the road safety education available to young people.
- Lower the youth drink-drive limit to zero.
- Further evaluation of extending the learner licence period from 6 to 12 months.
- Quickly adopt innovative practices and new technologies.
- Investigate vehicle power restrictions for young drivers.
- Further evaluation of compulsory third party vehicle insurance.

If we are to take a step towards young drivers being free of road deaths and serious injury, a fundamental change is needed in our approach to young peoples' road safety.
To date, effort has tended to focus on improving young driver behaviour. We need to broaden this through a Safe System approach. We will look across the system of users, vehicles, speeds and roading initiatives to make improvements.

We know from crash data that serious crashes involving young drivers are more likely to involve loss-of-control, high speeds, alcohol/drugs, distraction and occur at night. We also know that among the underlying causes of their crashes are age, inexperience and risk taking (caused in part by physiological immaturity).

The Safer Journeys' initiatives in the areas of alcohol/drugs, distraction, Safe Speeds, Safe Roads and Safe Vehicles, will all improve safety for young drivers. Alongside these measures, the following specific young driver initiatives could be introduced:

Raise the driving age to 16

The key road user change we can make to improve road safety for young drivers is to raise the age at which young people can start to learn to drive, and when they can start driving solo.

Currently we have one of the lowest driving ages in the OECD. Across the OECD, the age at which most countries allow someone to learn to drive is 17 years.

Research shows that the greatest risk period for young drivers is in the first six months of driving solo (ie the first six months of gaining a restricted licence). The younger a driver starts driving solo, particularly before the age of 18, the higher their crash risk[29], with 15 and 16-year-olds most at risk.

To help young people learn to drive and build experience with a greater level of safety, we will look to raise the minimum driving age to 16 years. This would delay the start of solo driving until young drivers are at least 16 and a half years-old and more competent and mentally capable. This initiative will move New Zealand closer to the best-performing road safety countries. Action could be taken on this in the first 3 years of Safer Journeys.

This action is central to developing a Safe System. It is estimated that this initiative will save 4 lives and prevent 26 serious injuries and 160 minor injuries each year. This equates to an annual social cost saving of around $40 million.

Make the restricted licence test more difficult to encourage 120 hours of supervised driving practice

Action will also be taken to ensure young drivers develop the full range of competencies and experiences needed to be safe, responsible drivers.

Experience from Sweden suggests that young drivers who undertake 120 hours of supervised driving practice in all conditions before driving solo could reduce their crash risk by up to 40 percent[30]. Currently learner drivers are estimated to do around 50 hours of supervised practice.

To encourage 120 hours of supervised practice, in the first three years of Safer Journeys, we will look to make the restricted licence test more difficult. The test will place more emphasis on skills such as hazard perception and risk management. To be able to pass the test, novice drivers will need to have done substantially more supervised practice than 50 hours.

To increase the effectiveness of this initiative we will:

- **Raise public awareness of young driver crash risk.** Parents and caregivers often do not appreciate the high crash risk young drivers face and what they can do to reduce it. A public awareness campaign will look to address this. It will explain why supervised practice is important, and why we have licence conditions for novice drivers (eg restrictions on night-time driving and carrying peer passengers).
- **Review and improve the road safety education available to young people.** Many young New Zealanders do not have access to quality road safety education, either in school or through professional driver training. We will review how access to quality and relevant education can be improved.

Lower the youth drink-drive limit to zero

We will also look to lower the legal drink-drive limit for youth (drivers under 20 years) to zero. Currently, New Zealand has a BAC limit of 30 mg per 100 ml (BAC 0.03) for drivers under 20 years of age.

Figure 8, in the previous alcohol/drugs section, shows the crash risk for young drivers rises significantly even at very low BAC levels. At the existing BAC of 0.03, the risk of a 15 to 19-year-old driver being involved in a fatal crash is 15 times greater than a sober driver aged over 30.

Lowering the youth limit is estimated to save two lives and prevent 43 injuries each year. This would be an annual social cost saving of $16.5 million.

30 Compared to a control group of drivers who undertook around 40 hours of supervised driving practice.

29 Op.Cit.

Investigate vehicle power restrictions for young drivers

Access to high-powered or modified cars is a factor in a number of crashes involving young drivers. Some Australian states have introduced vehicle power restrictions for young drivers as a condition of their learner or restricted licence. New South Wales and Queensland ban the use of V8s, turbo and supercharged vehicles, modified vehicles and certain high performance six cylinder vehicles. There are exemptions for those that need to drive a high-powered car for work.

We will investigate whether vehicle power restrictions for young drivers should be introduced in New Zealand. This investigation will include evaluating the effectiveness of the Australian restrictions in reducing young driver crash risk.

Further evaluation of extending the learner licence period from 6 to 12 months

Extending the learner licence period allows for greater levels of quality supervised practice. It also delays the start of unsupervised driving by a further six months. As mentioned on the previous page, the younger a driver starts driving solo, the higher their crash risk.

This initiative is estimated to save 3 lives, and prevent 18 serious injuries and 106 minor injuries per year. This equates to an annual social cost saving of $28 million.

Quickly adopt innovative practices and new technologies

The above actions are those that international experience suggests will have the greatest impact in improving the safety of young drivers. Once they are introduced we will be monitoring international developments to see what else is possible. We want to ensure that our young drivers gain the benefit of innovative practices and that new technologies are adopted quickly.

For instance, vehicle technologies have the potential to significantly increase the safety of young drivers. Apart from existing safety technologies like ESC and side curtain airbags, other features like intelligent speed assistance (ISA) will also contribute. For example, parents could opt for an ISA system that restricts travel speed to the speed limits in the car that will be driven by their young driver.

Further evaluation of compulsory third party vehicle insurance

Compulsory third party vehicle insurance received a lot of support in the consultation phase. However, recent research suggests the rate of vehicle insurance among New Zealanders is already very high and so compulsory third party vehicle insurance would be unlikely to significantly improve road safety. Further evaluation will be undertaken to determine the effectiveness of this initiative.

PROBABLE FIRST STEPS

The first steps that we intend to take will be to:

- raise the driving age to 16
- make the restricted licence test more difficult to encourage 120 hours of supervised driving practice
- raise public awareness of young driver crash risk
- review and improve the road safety education available to young people
- lower the youth drink-drive limit to zero
- investigate vehicle power restrictions for young drivers.

INCREASING THE SAFETY OF MOTORCYCLING

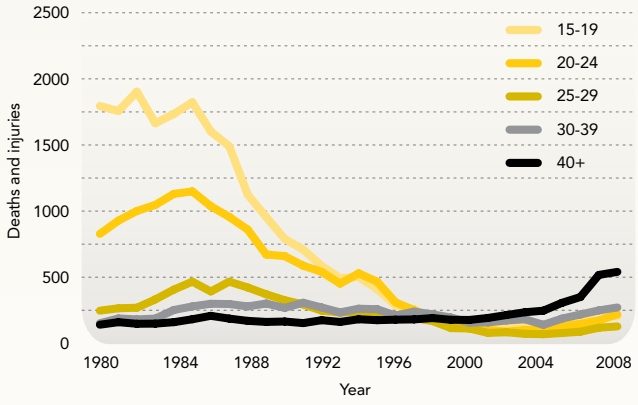
WHAT IS THE PROBLEM?

- The risk of a motorcyclist being killed or seriously injured in a crash is about 18 times higher than for a car driver.
- In 2008, 52 motorcyclists were killed, 466 were seriously injured and 1,030 suffered minor injures. These figures represent 14 percent of all road deaths and 18 percent of all serious injuries. The total social cost of crashes involving motorcyclists in 2008 was $587 million.
- Motorcyclist deaths and injuries dropped significantly during the 1990s. However, from 2000 there has been no further decrease and since 2005 deaths and injuries have risen (see Figure 12). The number of motorcycle casualties in 2008 was more than double the total in 2000.

This increase in casualties coincides with a quadrupling in motorcycle registrations since 2000. The increase in motorcycling probably reflects higher fuel prices, congestion, environmental awareness and the rise in popularity of motorcycling among older age groups.

The last reason partly explains why motorcyclists aged 40 years and over have experienced the largest increase in deaths and injuries. This has also pushed up the average age of motorcycle casualties over the last 28 years from 22 in 1980 to 35 in 2008.

Figure 12: Motorcycle deaths and injuries by age group



With more motorcyclists on the road it is expected that motorcycle casualties will continue to rise unless we take steps to tackle the problem. If we do not we could expect to see over 650 fatalities for the 10 years to 2020, with about 20,000 injuries for the same period.

ACC estimate that its motorcycle injury claims costs could increase from $70 million (estimated for 2010), to about $114 million in 2020 if no new road safety measures are implemented.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 increasing the safety of motorcyclists will be a core part of road safety. We will know we have been successful in doing this when the numbers of motorcyclists losing their lives, or suffering serious injuries, are significantly reduced.

WHAT ACTIONS CAN WE TAKE?

- Improve rider training and licensing, including licensing moped riders.
- Improve the safety of returning riders.

Safer Journeys will set out complementary action across the four areas of the Safe System.

In the Safe Roads and Roadsides section of this strategy, a targeted programme of roading treatments on popular motorcycle routes, the focus on high risk urban intersections, and the change in the give way rule for turning traffic will all improve safety for motorcyclists.

The speed initiatives will contribute to reducing loss-of-control motorcycle crashes, and will improve survival rates in serious motorcycle crashes. There are also specific initiatives to improve the safety of motorcycles in the Safe Vehicles section.

Alongside these initiatives, action will be taken to raise the skill and competence of motorcyclists.

Improved rider training and licensing

Riding a motorcycle requires a different set of skills and a higher level of vehicle control than driving a car. However, the Graduated Driver Licensing System makes little acknowledgement of this, nor does it encourage training to give motorcyclists the skills they need to ride safely.

To address this we could, in the first three years of Safer Journeys, strengthen the basic handling skills test as well as the restricted and full motorcycle licence practical tests. In addition moped riders, who currently only require a car licence, would be required to pass the upgraded basic handling skills test and a moped-specific theory test.

By increasing rider competence before permitting people to ride on public roads, the risk for novice riders will be lowered. This is important as the first 12 months of riding is the key crash risk period for motorcyclists.

The strengthened tests will also encourage novice riders to access training. This would mean that key skills, such as hazard perception, could be taught when riders are most at risk. To support this, approved training courses will be made available to those on learner motorcycle licences (currently they are only available in the restricted phase).

Improve the safety of returning riders

These actions will increase the skill and competence of new riders. However, they will not address the issue of people who hold valid licences returning to motorcycling after a long break with deteriorated riding skills. The first Safer Journeys action plan will consider how the safety of returning riders can be improved.

PROBABLE FIRST STEP

The first step that we intend to take will be to:

- improve rider training and licensing, including licensing moped riders.

SAFE WALKING AND CYCLING

WHAT IS THE PROBLEM?

Pedestrians

- In each year over the period 2004 to 2008, an average of 678 pedestrians were hospitalised and 38 were killed.
- The number of pedestrian injuries has not changed in the last 15 years, despite the decline in walking by children, who are most at risk.

Cyclists

- In each year over the period 2004 to 2008, an average of nearly 300 cyclists were hospitalised and 10 were killed from crashes involving a vehicle.
- Cyclists were found to have primary responsibility in only 25 percent of all cyclist-vehicle crashes in which they were injured or killed.

Pedestrians currently account for 10 percent of all road deaths and cyclists 3 percent. However, in urban areas, pedestrians and cyclists account for 30 percent of all road deaths. The majority of crashes involving a cyclist or pedestrian and a motor vehicle occur on urban roads, particularly busy urban arterials where vehicle speeds tend to be higher.

The evidence shows that the most obvious way to improve safety for pedestrians and cyclists, especially in urban areas, is to reduce vehicle speeds. The faster a driver is going the harder it is for them to avoid hitting someone in their path. The speed at which a cyclist or pedestrian is hit determines how seriously they will be injured.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 we will have a safe road environment that encourages more people to walk and cycle, where vehicles travel at safe speeds and there is a culture of sharing the road. We will aim to achieve a significant reduction in the number of pedestrians and cyclists killed and seriously injured while at the same time encouraging people to use these modes through safer roading infrastructure.

WHAT ACTIONS CAN WE TAKE?

- Change the give way rules for turning traffic (see Roads section).
- Strengthen techniques to integrate safety into land-use planning (see Roads section).
- Lower speeds in urban areas (see Speed section).
- Increase coverage of temporary lower speed limits around schools.
- Increase cycle skills training in schools and increase the effectiveness of road user education to make it safer to walk and cycle.

Our strategy to improve safety for pedestrians and cyclists is based on:

- providing safe and convenient routes for pedestrians and cyclists, especially to and from work and school
- reducing vehicle speeds on roads used frequently by pedestrians and cyclists
- encouraging drivers and cyclists to share the road safely.

The initiatives in the Safe Roads and Roadsides sections on mixed-use arterials, intersections, and changes to the give way rule would support safer walking and cycling routes. The actions in the Safe Speed section that aim to moderate speeds in urban areas would assist as well. Together, these initiatives would produce the greatest safety benefits for pedestrians and cyclists.

Road safety education in schools will remain an integral part of improving walking and cycling safety. Over the course of the strategy we will look to improve on existing initiatives such as cyclist skills training, the BikeWise programme and school travel plans that equip young road users with the skills to become safe and competent on the road.

If more children walk and cycle and appreciate the importance of the road rules then they are likely to have a better understanding of how they should behave around pedestrians and cyclists when they start driving. We will also continue to promote a Share the Road[31] culture that encourages all road users to respect each others' safety.

We intend to continue to support the roll-out of strongly enforced variable speed limits around schools. Variable speed signs help road users to appreciate the safety needs of school children when they are most likely to be using the road.

Investment in safe walking and cycling infrastructure will continue through the National Land Transport Programme (NLTP)[32]. A new walking and cycling initiative in the NLTP that has relevance to Safer Journeys is the model community project. A model community (which could be in a typical town suburb) is a concentrated package of small infrastructure improvements, speed limit changes, road safety education, improved access to public transport, walking and cycling initiatives and targeted enforcement[33]. Model communities seem ideal for trialling the latest safety techniques.

Increase cycle skills training in schools and increase the effectiveness of road user education to make it safer to walk and cycle

Cyclist training has been successful overseas, mainly because it helps children to become proficient and safe on a bicycle at an early age. When combined with measures like low speed zones and safer routes to school, it helps parents to feel confident about their children cycling to school.

Christchurch has had a successful and cost-effective programme (Cycle Safe) for several years. This programme equips children with safe cycling skills. It also contributed to an increase in cycling. Children who have gone through the programme are also less likely to have a crash. The benefits of this programme outweigh the costs by almost eight to one. We will consider how this programme could be expanded.

We could also encourage more considerate and safe behaviour from all road users. For drivers the key messages are to take extra care around pedestrians and cyclists. This includes giving them sufficient space on the road, driving at speeds that are safe for all users on the road and not parking in dangerous places.

For pedestrians and cyclists the key messages are to comply with the road rules (eg stopping at red lights and crossing on the 'green man') and to take safety precautions (eg being visible at night). As well as improving safety this would go some way to gaining more respect from drivers. We intend to continue to improve the effectiveness of these road safety education campaigns over the course of the strategy.

Increase coverage of temporary lower speed limits around schools

If backed with strong enforcement, this initiative would significantly improve safety around schools. Variable speed signs help to educate road users to consider the needs of school children and their vulnerability. A variable speed limit of 40 km/h is introduced before and after school, and at other busy times.

A number of these temporary lower speed limits have already been established and are supported by stronger enforcement. The Police start enforcing the speed limit once a driver goes more than 5 km/h over the limit, rather than the 10 km/h discretion which they usually apply. Initial results suggest this method has been effective in bringing down mean speeds and reducing the incidence of speeding around schools.

This initiative will be closely linked to existing locally-driven programmes such as school travel plans and neighbourhood accessibility plans. We will review the effectiveness of these and consider how to further roll them out where they can be most successful.

PROBABLE FIRST STEP

The first step that we intend to take will be to:

- change the give way rule for turning traffic.

31 The NZ Transport Agency has published guidelines for Share the Road campaigns.

32 The 2009/12 NLTP provides $51 million in the walking and cycling activity class.

33 Model communities have been successfully trialled overseas. Projects there yielded not only an increase in walking and cycling activity but also big improvements in safety and reduced levels of congestion.

REDUCING THE IMPACT OF DISTRACTION AND FATIGUE

WHAT IS THE PROBLEM?

- Over the period 2004–2008 distraction, or inattention, contributed to at least 10 percent of fatal crashes and 9 percent of serious injury crashes. In 2008, these crashes resulted in 245 serious injuries and 42 deaths. In 2008, it was estimated that the social cost of crashes involving distraction was $413 million.
- Over the period 2004–2008 fatigue contributed to 7 percent of serious injury crashes and 12 percent of fatal crashes. In 2008 alone, fatigue-related crashes resulted in 192 serious injuries and 52 deaths. It is estimated that the total social cost of crashes involving fatigue in 2008 was $316 million.
- Distraction and fatigue contribute to more road deaths and injuries than official statistics show. International research suggests that fatigue could be a factor in up to 25 percent of fatal crashes and distraction a factor in 20 percent of fatal crashes.
- As distraction and fatigue are under-reported, neither area has received the focus that their contribution to crashes actually warrants.

Distraction

Driving safely requires a driver's full attention. Drivers need to maintain control of their vehicle and stay aware of the surroundings while looking out for and reacting to potential hazards. Distraction (or diverted attention) occurs when a driver's attention is diverted away from activities that are critical for safe driving, towards competing events, objects, or people inside or outside of the vehicle. Common distractions include talking with passengers, adjusting vehicle controls, watching or looking at other traffic, cell phones, and eating and drinking. Being upset or angry can also mean drivers are not paying full attention to the driving task.

Other terms are also used to describe distraction. To avoid any doubt in Safer Journeys, distraction is synonymous with diverted attention, which is part of the broader concept of inattention. Other key causes of distraction or inattention – alcohol, drugs and fatigue – are all addressed in this strategy.

Distraction is a serious road safety issue. It is often the initial event in a chain of events resulting in serious road trauma. Despite its seriousness, we do not know the full extent of distraction's contribution to crashes. Crash statistics tend to under-report distraction. This is because drivers at a crash scene are often not willing to admit they were distracted and so it is difficult for a police officer to identify whether distraction has contributed to a crash.

Despite its seriousness, public understanding of distraction is low. Focus group research[34] shows that many drivers do not see distraction as a road safety issue. People tend to view distraction as a normal part of driving. This is despite people also describing 'near-misses' and other situations where their driving had been affected by distraction.

There is concern that the number of distraction crashes may increase over 2010–2020. This is because the number and types of technologies that can distract drivers is increasing rapidly (eg MP3 players, navigation systems and entertainment systems).

The challenge in dealing with distraction is to put in place initiatives that will be both effective and offer value for money. Distractions are part of everyday life. Unlike alcohol or drug impaired driving, it is unrealistic to require all drivers not to be distracted at all times while driving.

Fatigue

People driving while they are tired, drowsy or sleepy is referred to as driver fatigue. Fatigue can affect a driver's reaction time, their ability to concentrate and their understanding of the road and traffic around them. The three main causes of fatigue are:

- insufficient sleep
- driving during times when we usually sleep
- long periods of work or activity without a break.

Crashes resulting from driver fatigue are among the most severe on the road. This is because a fatigued driver is less able to brake or avoid the impending crash. Severity and risk is increased further when fatigue is combined with speed, alcohol or drugs.

Until recently, efforts to reduce driver fatigue have focused on commercial drivers. This is because it is easier to influence fatigue in the workplace than in private vehicle use. To reduce fatigue-related crashes we need to extend the focus to all drivers.

34 Commissioned by Land Transport New Zealand (now NZ Transport Agency) in 2004.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 New Zealanders' management of driver distraction and fatigue will be a habitual part of what it is to be a safe and competent driver.

Before 2020 we will have established the extent to which distraction and fatigue contribute to road crashes. This will enable us to set targets for improvement and monitor our progress.

WHAT ACTIONS CAN WE TAKE?

- Educate users about distraction and how it can be managed.
- Educate users about fatigue.
- Improve the crash information on distraction and fatigue.

With a Safe System approach, roads, speeds, vehicles and road users will all be targeted to reduce the incidence and severity of distraction and fatigue-related crashes.

Over the period 2010–2020, we will continue to invest in road treatments that prevent or minimise loss-of-control, run-off road and head-on crashes (eg rumble strips, guard rails, median barriers and sealed road shoulders).

The Safer Journeys' speed initiatives will contribute to reducing the severity of crashes. As vehicle technologies that help prevent fatigue and distraction crashes (eg lane departure warning systems) become available, and their real-world effectiveness proven, they will be promoted to consumers.

However, in the first years of Safer Journeys, action will focus on education as a way of *avoiding* fatigued and distracted driving. Effort will be directed at giving drivers the information they need to take responsibility to avoid fatigue and distraction/inattention.

Educate users about distraction and how it can be managed

Many people are unaware of the risk of distraction, and the ways they can reduce this risk (eg planning the travel route, choosing music while stopped and adjusting controls prior to the journey). We intend to use targeted public awareness campaigns to inform users about distraction.

The aim is that actions to reduce distraction become as habitual as putting your seat belt on.

Information will be incorporated into road safety education, particularly the education provided to young people. Identifying and managing distraction could then be included in driver testing.

Any workplace injury prevention activity undertaken by the government will also include a focus on managing driver distraction.

Educate users about fatigue

There is widespread understanding that fatigue is a road safety issue, but people often do not recognise the signs of fatigue and realise when to stop driving. As soon as practicable, we intend to make a greater range of information available on recognising the signs of fatigue and what to do about it (eg sharing the driving and making use of roadside stopping places for power napping).

Like the distraction campaign, the aim of the fatigue campaign would be to make the management of fatigue part of what it is to be a safe and competent driver.

This information will be targeted to high risk groups such as commercial drivers, shift workers, young people, and people driving on holidays.

Improve the crash information on distraction and fatigue

Distraction and fatigue contribute to more road deaths and injuries than official statistics show. This is because our crash statistics are based on Police reported crash data. At a crash scene it can be difficult to determine, without an admission from a driver, whether fatigue or distraction are contributing factors.

To improve crash information, research will be conducted over 2010–2020 to ascertain the prevalence of fatigue and distraction in crashes. This research, along with evaluation of the information and education campaigns, will be used to improve our response to distraction and fatigue.

REDUCING THE IMPACT OF HIGH RISK DRIVERS

WHAT IS THE PROBLEM?

- High risk drivers are dangerous and reckless drivers, disqualified drivers, unlicensed drivers, drivers involved in illegal street racing, repeat drink/drug drivers, high BAC level offenders, repeat speed offenders and high level speed offenders.
- It is not possible to know exactly how many high risk drivers there are. We do know that around 67,000 drivers are disqualified each year and 27 percent of drink-drive offenders are repeat offenders.
- Although probably low in number, high risk drivers are over-represented in crash statistics and their crashes tend to be more serious than those involving other drivers. They are also more likely to be at fault.
- Over the period 2004–2008 high risk drivers were deemed to be at fault in at least 11 percent of serious injury crashes and at least 15 percent of fatal crashes. For 2008 such crashes resulted in 1,030 minor injuries, 300 serious injuries, and 51 fatalities.
- The total social cost of crashes where high risk drivers were at fault was at least $410 million for 2008.

High risk drivers are low in number, and most crashes on New Zealand roads do not involve drivers from this group. However, high risk drivers contribute disproportionately to road trauma and unnecessarily expose New Zealanders to a higher level of crash risk.

WHAT SAFER JOURNEYS WILL ACHIEVE

By 2020 we will have reduced the heightened crash risk that high risk drivers expose New Zealanders to. We will know we have been successful in doing this when the number of crashes where high risk drivers are at fault is significantly reduced.

WHAT ACTIONS CAN WE TAKE?

- Implement the initiatives in the alcohol/drug impaired driving, young drivers and safe speeds sections.
- Focus Police resources on high risk drivers.
- Evaluate the effectiveness of the illegal street racing legislation.
- Offer driver licence assistance courses for unlicensed drivers.
- Employ new technologies to restrict high risk drivers.

Safer speeds, alcohol/drugs and young drivers

There are initiatives in the areas of alcohol/drugs and safer speeds that specifically target repeat offenders and high level offending. These are:

- compulsory alcohol interlocks
- a zero drink-drive limit
- increasing the number of road safety cameras and allowing demerit points on camera detected offences
- rebalancing speed penalties; that is, higher demerit points and lower fines.

These initiatives, coupled with the illegal street racing legislation discussed below, are intended to be the core of our response to high risk drivers. These specific initiatives would work with the general initiatives (eg a lower adult drink-drive limit, a higher driving age and strengthened driver licensing) to lower the crash risk from high risk drivers.

Focus Police resources on repeat offenders and high end offenders

To make sure we get the most value from our Police resources, the first Safer Journeys action plan will consider how those resources can be better used in reducing the impact of high risk drivers. For example, this could include Police focussing on repeat alcohol offenders and using authorised officers, rather than sworn personnel, to operate compulsory random roadside tests.

Evaluate the effectiveness of the illegal street racing legislation

In October 2009 the Land Transport (Enforcement Powers) Act 2009 was passed. This Act contains a number of measures aimed at tackling illegal street racing and the anti-social behaviour that is associated with it. This legislation came into force on 1 December 2009.

This legislation gave Police, the courts and local authorities greater powers and sends a strong message to illegal street racers that dangerous, disruptive and anti-social use of vehicles will not be tolerated.

We will evaluate the effectiveness of the illegal street racing legislation by 2012. Results of the evaluation will be used to improve our efforts to deal with illegal street racing and other high risk drivers.

Driver licence assistance courses for unlicensed drivers

Unlicensed drivers present a significant problem for road safety. Unlicensed drivers are less influenced by the threat of loss of licence and are more likely to engage in other high risk behaviours, such as drink driving and speeding.[35]

Unlicensed drivers work against the idea of a Safe System, which requires all drivers to be licensed and compliant with the road rules.

There are many reasons why a driver might drive unlicensed. For some drivers there will be issues of accessibility, cost, or literacy. Driver licence assistance courses have been run in various centres around New Zealand for several years. Anecdotal evidence suggests that these courses are effective for people wanting to obtain a licence and drive legally.

We will review how we can make better use of these courses in reducing the number of unlicensed drivers.

Employ new technologies to restrict high risk drivers

Once the above actions are introduced we will be monitoring international developments to see what else is possible to reduce the crash risk from high risk drivers.

Apart from alcohol interlocks there are other vehicle technologies that could be used to protect New Zealanders from high risk drivers. For instance, in the future we could rely on intelligent speed assistance to limit the travel speed of repeat offenders. We could rely on vehicle technology to limit the hours of the day that an offender's vehicle could be driven.

PROBABLE FIRST STEPS

The first steps that we intend to take will be to:

- address drink-drive repeat offending and high level alcohol offending through compulsory alcohol interlocks and a zero drink-drive limit.
- review the traffic offences and penalties for causing death or injury.

AREAS OF CONTINUED AND EMERGING FOCUS

Restraints and older New Zealanders are two areas where the road safety effort will continue over 2010–2020.

RESTRAINTS

Effort will continue in regions where rates of restraint use are lower than the national average. We will also focus on restraint use by commercial drivers across all regions. Alongside this, the Safe Vehicles section contains a new initiative to bring our child restraint requirements in line with international best practice.

OLDER NEW ZEALANDERS

With an ageing population, the road safety of older New Zealanders (that is people over the age of 75 years) is an increasingly important issue. By improving road safety generally, the actions in Safer Journeys will increase the safety of older New Zealanders, which we will be closely monitoring.

Our second or third action plan will set out any changes that may be needed to improve safety for older New Zealanders. We know that the road fatality rate of older New Zealanders is 15 per 100,000. This compares with 11 per 100,000 for older Australians. If New Zealand had the same road fatality rate for over 75 year olds as Australia then, in 2009, 11 lives would have been saved.

We will investigate what we can learn from Australia's approaches to raising the safety of older road users. We could also focus on the safety of mobility devices.

35 Watson, B.C.,2004. "The Crash Risk of Disqualified/Suspended and Other Unlicensed Drivers" in *Proceedings of the 17th International Conference on Alcohol, Drugs and Traffic Safety*, Glasgow, UK.

MAKING THE STRATEGY WORK

ACTIONS AND ROLES FOR GOVERNMENT AGENCIES

The responsibility for Safer Journeys lies with all New Zealanders, but the implementation of specific actions will be led by the National Road Safety Committee (NRSC). The NRSC is made up of the government agencies that have a role in road safety. It is led by the Ministry of Transport and includes the New Zealand Police, the NZ Transport Agency, the Accident Compensation Corporation, and Local Government New Zealand. The Ministries of Health, Education and Justice and the Department of Labour are associate members.

This section describes some of the actions and roles the NRSC will need to take in implementing Safer Journeys to ensure it is successful.

Inform road users

While New Zealanders are very interested in road user issues, there is less understanding of the importance of safer roads, speeds and vehicles. The NRSC will need to inform road users about all aspects of the road system including their vulnerability in a crash; encouraging them to be more aware of their actions on the road; and to demand safer vehicles.

Providing rewards for responsible use of the transport system, such as a long safe driving record, or recognising safe actions throughout the system could be another way of reinforcing desired behaviours and building a culture of safety.

Work as a team to provide strong leadership, coordination and clear accountability

The NRSC will meet regularly to ensure the actions are progressed on time. In order to be effective the NRSC agencies will need to work with key stakeholders and the wider community, on a national and regional scale, in developing and implementing these actions.

Regional transport committees and regional Road Safety Action Plans will be a key part of developing and monitoring these regional actions and ensuring consistency with national programmes.

Develop whole of government approaches

Part of working in a coordinated manner is to develop whole of government approaches to address issues that cut across a number of areas, such as alcohol-related harm. Agencies can work together to develop shared approaches to reducing these problems.

Research new and innovative solutions and use new technologies

Technology, innovation and investment in research will be key in developing future actions. Automated processes may enable us to be both more efficient and effective.

Being innovative may mean taking some risks and trying new techniques that are not fully proven. This risk will be managed by using demonstration or pilot projects which will be closely monitored.

Effective value for money solutions and the capacity to deliver

It is important that the actions we take to improve road safety provide value for money. This means we must direct our limited road safety resources into actions that we believe will be the most effective. Many of the initiatives in the strategy are proven road safety initiatives that have worked in other countries; they are the building blocks towards a Safe System. In terms of future actions, the benefits and costs will be considered and value for money will be a major consideration in choosing which part of the system to address and which action to implement.

At the same time, those working in road safety (particularly the core NRSC agencies) will need adequate resources to implement the strategy. The National Land Transport Programme (NLTP) is the main source of funds for road safety. The 2009/12 NLTP will need to be reprioritised to give effect to Safer Journeys.

Ongoing monitoring and reporting

Monitoring will be used to measure the progress of the strategy, to consider emerging issues and to assist in the development of further actions.

While New Zealand has good systems for monitoring road safety, they will need to be modified to allow for further monitoring to support the Safe System approach. We will need to consider how they could be improved and/or how we can supplement the crash information we gather.

For example, Safer Journeys broadens our attention beyond preventing deaths to also preventing serious injuries. To do this we need to investigate how we can improve the timeliness of the serious injury data while at the same time maintaining its completeness and quality.

In addition to monitoring the results, the sector's ability to deliver the strategy needs to be monitored.

RESPONSIBILITY FOR SAFER JOURNEYS

While there are roles and actions government agencies will take to make Safer Journeys work, ultimately the responsibility for the strategy lies with all New Zealanders.

Its Safe System approach requires everyone from road controlling authorities, road designers to vehicle manufacturers and road users, to do their bit to make roads, vehicles and road use safer.

The strategy has used this approach in selecting actions that will address New Zealand's major road safety issues: the safety of our young drivers; the impact of drugs, alcohol and speed; the safety of our vehicles and roads; the risk posed by high risk drivers; the impact of fatigue and distraction and the safety of our pedestrians and cyclists. The actions in Safer Journeys can tackle these issues and reduce the number of deaths and injuries on our roads, but they will need support.

For this reason, everyone has had the opportunity to contribute to the development of Safer Journeys. The strategy seeks to strike a balance between the feedback received, resources available and what research shows can have an impact.

The government will work to introduce the strategy and to improve road safety, but all New Zealanders are urged to make safety a top priority when using the roads. That will allow us to have safer journeys and live in a country moving towards a safe road system increasingly free of death and serious injury.

Ministry of Transport
TE MANATŪ WAKA

NATIONAL ROAD SAFETY COMMITTEE

New Zealand Government