# Road Safety Strategy Ministerial Advisory Group

**Agenda**

12.00 pm, Thursday 21 June 2018

<table>
<thead>
<tr>
<th>Item</th>
<th>Description</th>
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| 1 | **Welcome and role of the Ministerial Advisory Group**  
Confirmation of the role of the Ministerial Advisory Group in overseeing the development of the strategy. |
| 2 | **Context and the case for an ambitious new strategy**  
Context information on New Zealand’s road safety performance, best practice approaches to road safety and proposed early infrastructure improvements.  
Background papers circulated for noting:  
1. Overview of road safety in New Zealand  
2. Overview of the international development of road safety strategies |
| 3 | **Approach to the new strategy**  
Outline of overall strategy development approach, including scope, engagement, and the establishment of working groups.  
Paper circulated: Road safety strategy development programme |
| 4 | **Critical issues for ministers**  
Minister Genter to lead a discussion on the level of ambition for the strategy, including a Vision Zero approach, and early initiatives to enable safer speed limits to be set.  
Background paper circulated: The case for tackling unsafe speeds |
| 5 | **Other matters** |
Hon Julie Anne Genter
Associate Minister of Transport

Road Safety Ministers meeting

21 June 2018
Road deaths were declining but now trend upwards.

- 42% reduction from 2008 to 2013
- lowest annual road toll (253) in 2013
- 52% increase since 2013
- currently the highest total since 2009
- Rolling total for last 12 months: 384
NZ is in the bottom quarter of the OECD

International comparison of deaths per 100,000 population (2016)
(Human) Factors contributing to deaths and serious injuries

Top factors contributing to fatal and serious injury crashes (2007–2016)

- Lost control
- Too fast for conditions
- Alcohol or drugs
- Failed to give way or stop
- Did not see other party
- Inattention or attention diverted
- Inexperienced
- Driver tired or fell asleep
- Road factors
- Pedestrian factors
- Failed to keep left
- Too far left

% of fatal and serious injury crashes
40 per cent of state highways are two-star roads
Speed limits do not match the risk and function of our roads

87% of the network does not have safe and appropriate speed limits.

<table>
<thead>
<tr>
<th>Existing speed limit (km/hr)</th>
<th>Percentage of road with appropriate travel speed per speed bracket</th>
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<tbody>
<tr>
<td></td>
<td>110</td>
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<tr>
<td>Rural</td>
<td>100</td>
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<td>Urban</td>
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Waikato Region
Percentage of road at safe and appropriate travel speeds compared to current speed limits (based on NZ Transport Agency’s Speed Management Guide)
Cars with fewer safety features are over represented in serious crashes
The Safe System Approach

<table>
<thead>
<tr>
<th>What is the problem?</th>
<th>Traditional</th>
<th>Safe System</th>
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</thead>
<tbody>
<tr>
<td>Accidents</td>
<td>Fatalities and serious injuries</td>
<td></td>
</tr>
<tr>
<td>Human factors</td>
<td>Humans make mistakes Humans are fragile</td>
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<tr>
<td>Individual road users</td>
<td>Shared by those who design, build, manage and use roads and vehicles</td>
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<tr>
<td>People don’t want safety</td>
<td>People want safety</td>
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<tr>
<td>Optimum number of fatalities and serious injuries</td>
<td>Eliminate fatalities and serious injuries</td>
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What causes the problem?

Responsibility?

Peoples demand for road safety?

What is the appropriate goal?
State Highway – safety investment (Draft proposal, subject to approval by NZTA Board)

- $2 billion investment over 10 years targeted at safety treatments on State Highways
- 3,500 km of State Highway made safer
- An area 10 times greater than the Roads of National Significance programme.
- This is more than 20 percent of the funding in the state highway improvements activity class.

Local roads - safety investment

- No draft NZTA programme yet.
- NZTA previously identified $800m in local road investment covering 670 km of urban and local road corridor & 172 intersections.
- ATAP allocated $900m for targeted safety improvements (SH & LR).
Safety interventions
Level of ambition: vision zero

Sweden’s “Vision Zero” principles:
• it can never be ethically acceptable that people are killed within the road transport system.
• eventually no one will be killed or seriously injured within the road transport system.

Key questions:
• Can we meet this level of ambition?
• Are you comfortable with public engagement?
Probability of pedestrian fatality by impact speed

Figure 2: Probability of Pedestrian Fatality by Impact Speed. Derived from the Interdisciplinary Working Group for Accident Mechanics (1986) and Waltz, Hoeffiger and Fehlin (1983)
What’s happening in other jurisdictions?

Case studies with speed limit reductions

Urban environments

• Since 1994, urban speed limit reductions in Hull (UK) from 30 mph to 20 mph (48 km/h to 32 km/h) have led to a 90 percent reduction in deaths and serious injuries.
• Urban speed limit reductions in Portsmouth (UK) in 2007 from 30 mph to 20 mph have led to a 21 percent reduction in deaths and serious injuries.

Rural environments

• Rural speed limit reductions in Norway in 2001, from 90 km/h to 80 km/h on high-risk roads, reduced death and serious injury crashes on these roads by over 85 percent.
• Reductions to speed limits in arterial/semi-rural roads near Adelaide in 2002, from 100 km/h to 80 km/h, led to a 15 percent reduction in serious injury crashes on these roads.
• In Sweden in 2008, the speed limit on some rural/open roads was reduced from 90 km/h to 80 km/h. This led to a 41% reduction in fatal crashes.

Future speed limit reductions

• In France on 1 July 2018, the speed limit on all rural/open roads (without median barriers) will be reduced from 90 km/h to 80 km/h.

Speed limits are also increasing with engineering

• Countries recognise that roads can be engineered up to support existing or higher speed limits. For example, Sweden increased speed limits on a number of motorways from 110 km/h to 120 km/h after engineering work to improve their safety, without any significant change in the number of road fatalities.
What’s already happening in New Zealand?

Case study – State Highway 1 (Centennial Highway)

- A 3.5 km long median safety barrier was installed on SH1 Centennial Highway, just north of Wellington, in 2005. This was a particularly treacherous piece of road – in the 4 years to 2000 it recorded 8 fatalities, 2 serious injuries and 7 minor accidents. Between 2001–2004, the passing lanes were removed and road markings, reflectors and signs were increased yet it still saw 4 fatalities, 2 serious injuries and 2 minor injury accidents.

- In the 13 years from 2005 to 2017, following the installation of a flexible median safety barrier and lowering the speed limit to 80 km/h, there were no fatal crashes, and only 3 serious and 13 minor injuries on the road.

What’s already happening in New Zealand?

Case study – Hamilton Safer Speed Areas

- In 2011-12, Hamilton City Council introduced 40 km/h Safer Speed Areas. Since their initial introduction, the 40 km/h Safer Speed Areas have been extended to significant residential areas across the city. In these areas, mean speeds have dropped and, in the first year after the 40 km/h speed limit was implemented, there was a 35 percent reduction in crashes. Hamilton City now has 40 km/h speed limits outside all schools.

![Graph showing all crashes on local roads and all Safer Speed Areas](image-url)
We need to accelerate changes to speed limits

- Ministerial support is sought to establish a working group to consider:
  - short-term changes, such as minor rule changes to enable road controlling authorities to accelerate speed management changes under the current regulatory framework, including through removing bylaw making requirements and improving safety around schools.
  - a longer-term approach for implementing risk-based speed limits that are credible to the public, building on the NZ Transport Agency’s Speed Management Guide and mapping tool.
  - the development of an appropriate implementation approach to speed limit changes, including appropriate public engagement and a communications programme to gain public buy-in, and reinforce the behaviour changes required.
  - the costs and benefits of any changes, including considering the costs of signage replacement and other costs of implementation.
  - how we can reinforce road safety awareness through the use of safety cameras.

- The working group could include key partners in speed limit setting such as local councils, as well as stakeholders such as the NZ Automobile Association and the Road Transport Forum. The working group would operate for approximately 18 months, although short-term changes could be delivered in the next 6-12 months.
# Road Safety Strategy - Development Programme Timeline

**Ministerial Group Meeting: June 2018**

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<td><strong>Ministerial Advisory Group Meetings</strong></td>
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<td>Outcomes of engagement &amp; working group investigations</td>
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<td>Draft consultation strategy, including proposed harm areas, performance measures and targets, and intervention long list</td>
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<td><strong>Cabinet Approval</strong></td>
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<td>Approval of Strategy consultation draft for public engagement</td>
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<td>Approval of Strategy &amp; Action plan for publication</td>
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**Phase 1 - Establishing the programme**

- **Prepare for Engagement Activity**
  - Engagement Activity: to seek input and reaction for the vision of the new strategy
  - Investigations into harms and Interventions
  - Prepare draft strategy
  - Prepare for engagement on draft strategy

**Phase 2 - Design and develop the framework & interventions**

- **Prepare for Engagement Activity**
  - Engagement Activity: to seek input and reaction for the vision of the new strategy
  - Investigations into harms and Interventions
  - Prepare draft strategy
  - Prepare for engagement on draft strategy

**Phase 3 - Deliver strategy & action Plan**

- Engagement on draft strategy
  - Analyse submissions
  - Finalise strategy
  - Develop & finalise action plan
  - Publish Strategy & Action Plan

**Related Deliverables – outside of strategy programme**

- National Land Transport Programme Announced
- Cabinet approval to consult on short term speed measures and working group for longer term work.
- Cabinet approval to consult on new vehicle safety standards – ABS on motorcycles
- Cabinet approval for public consultation on Accessible Street Rules
- Amended speed rule in place
- New rules for ABS on motorcycles in place
- New Accessible Street Rules and Regulations in place
Road Safety Strategy - Development Programme

Ministerial Advisory Group Meeting: June 2018

Scope:
A new road safety strategy and action plan to reduce the number of deaths and serious injuries occurring on New Zealand roads will be delivered by September 2019. The strategy will consider harms to all road users, including health related impacts, and will include performance measures and targets.

Programme structure and governance:
- The Ministry of Transport will lead the development of the strategy and action plan through a core project team, with resource from partner agencies.
- A number of small working groups will be set up to undertake detailed investigations and provide reports on specific areas. These groups will be co-led with the most appropriate agency, with resource and expertise contributed from agencies, local government and stakeholder groups.
- An expert advisory group will provide support to the core project team and working groups.
- The National Road Safety Committee, comprised of Chief Executives, will review and endorse key strategic deliverables, before these are presented to the Ministerial Advisory Group, which will meet at key milestones in the project to oversee the strategic direction of the programme.

Programme phase 1: Establishing the programme
- The initial phase of activity has revolved around planning and preparation activities that underpin the programme of work. This includes the definition of the overall approach, plan and establishment of governance groups.
- Resourcing of the core inter-agency project team is underway and the make-up of the expert advisory and working groups is being discussed.
- A road safety summit has been held with local government and planning for further stakeholder engagement is in progress.

Programme phase 2: Design and develop the vision, framework and interventions
- Material will be prepared to support engagement with key stakeholder groups on the potential vision for road safety in New Zealand and to test the reaction to interventions for the strategy.
- The working groups will be established to look at specific areas of harm and undertake further investigation into what is known about the causes of harms and who they are happening to. They will examine interventions that have been successful both in New Zealand and internationally in addressing the harms.
- Workshops with the working groups and expert advisory group will be used to identify cross-cutting issues and determine next steps, identifying where further data and evidence may be required. Feedback from the engagement activity will be used in these workshops.
- Work will commence on investigating potential targets and performance measures for the strategy.
- A Ministerial Advisory Group meeting will be scheduled in November to discuss the outcomes from the engagement activity and outcomes/issués from the working groups.
- Further work will be conducted by the working groups and core team to identify potential interventions. Targeted engagement with stakeholder groups will be planned to test ideas around potential interventions. The list of potential interventions for inclusion in the initial action plan will be determined.
- The draft strategy will be prepared along with materials to support the engagement process. These will be presented to Cabinet for approval to be released for public engagement at the end of March 2019.

Programme phase 3: Deliver the strategy and action plan
- Engagement activity on the draft strategy and interventions will be planned over a six-week period from April through to mid-May 2019. Feedback will be reviewed and further actions determined.
- The outcomes from the engagement process and interventions for inclusion in the initial plan will be discussed with the Ministerial Advisory group in late June 2019.
- Following this meeting the strategy and action plan will be updated and finalised in preparation for Cabinet approval and publication at the end of September 2019.

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<thead>
<tr>
<th>Proposed Working Groups (TBC)</th>
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<tr>
<td>Speed</td>
<td>Co-led with NZTA</td>
</tr>
<tr>
<td>Infrastructure, design and planning</td>
<td>Co-led with NZTA (includes road dust and road noise)</td>
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<tr>
<td>Vehciles, standards and certification</td>
<td>Led by Ministry of Transport (includes vehicle noise)</td>
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<tr>
<td>Road user safety</td>
<td>Co-led with Police (includes impairment, restraints, distraction and personal safety)</td>
</tr>
<tr>
<td>Vehciles as a workplace</td>
<td>Co-led with WorkSafe</td>
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</table>

- Working groups will consider the safety of cyclists, pedestrians and motorcyclists as well as car/truck drivers.
- Driver licensing and training is currently considered separately through a senior officials group and evaluation.
**Ministerial Advisory Group for Road Safety Strategy**

| Workshop date: | Week of 18 June 2018 |
| Prepared by:   | Safety & Environment Group  
                 NZ Transport Agency |
| Subject:       | Overview of the international development of road safety strategies highlighting the Safe System Approach |
Purpose and Outline

This report provides background information on the historical development of road safety strategies internationally, the emergence of the Safe System approach, and comparison of safety strategies in different jurisdictions. It includes:

• a brief historical overview of the development of road safety strategies
• Vision Zero and the Safe System approach in Sweden from the mid-1990s
• the key principles and pillars of the Safe System approach and how it differs from “traditional” approaches to road safety
• why New Zealand adopted the Safe System in *Safer Journeys: New Zealand’s road safety strategy 2010-2020*
• key features and outcomes from road safety strategies in selected jurisdictions including Scandinavia, the Netherlands, and Australia
• international institutions that have endorsed the Safe System approach
Historical Overview of Road Safety Strategies (1)

Early road safety policies in high income countries in the 1950s and 1960s were based on the assumption that the primary goal was to correct human errors in road crashes. This ignored the role of inherent risks in infrastructure, meaning that early road safety efforts often relied excessively on driver education measures.

In the 1970s William Haddon, the first administrator of the US National Highway Traffic Safety Administration (NHTSA), developed an injury prevention matrix. This encouraged evaluation of all the factors that contribute to road injury and provided an assessment methodology for safety interventions. Haddon also emphasised the importance of energy transfer in crashes and human vulnerability to crash forces – “The faster you go, the bigger the mess.”

Haddon also developed a ten-point strategy to reduce crash harms that has since played a major role in road safety policy-making.

Cont...
Injury prevention theory was further influenced by James Reason’s “Swiss Cheese Model” developed following his work in the nuclear industry. The model has now been applied in most safety critical industries including road transport.

Figures 1 and 2 illustrate the Swiss Cheese Model. The slices of cheese represent the various system defences against adverse events and the holes represent latent and active errors or mistakes. Latent errors are factors not directly linked, but contributing to the incident (e.g. organisational level failures). Active errors are unsafe acts that can be directly linked to the incident.

Cont...
By the end of the 1970s high-income countries had started to implement some elements of a Safe System such as speed limits, compulsory seat belts and helmets, new infrastructure design and expansion of separated motorway networks.

Strategies of this era are often characterised as **Education, Engineering and Enforcement** – the Three Es. In New Zealand the Land Transport Safety Authority’s strategy for 2000-2010 was based on these elements.

These approaches resulted in large initial reductions in road deaths, followed by slowing in the rate of improvement, then levelling off. Because of the assumption that road safety would improve if drivers were more careful road safety policies lacked the holistic approach needed to achieve further significant injury reduction.

Clearly a radical new approach was needed.
The development of Vision Zero and the Safe System approach (1)

The Safe System approach, Vision Zero and Towards Zero essentially mean the same thing—a safe road system where making a mistake doesn’t cost a life or a limb. The differences are mainly in the degree of ambition stated.

Vision Zero began in Sweden in 1995 with what might have been written off as just another fatal accident where the driver made a foolish mistake:

• Five young people were killed on a motorway off-ramp, when the driver lost control in heavy rain and the car aqua-planed under a concrete foundation supporting a lamp post, crushing the roof and the occupants.

• The newly appointed National Traffic Safety Director of Sweden’s Road Administration, Claes Tingvall, asked the regional director what would be done, and was advised that an identical replacement foundation would be installed. Anything else would be an admission of fault by the roading authority.

• Tingvall was appalled: “I was shocked over the mentality that prevailed. That crashes were subject to moralization and the cause was always sought in the actions of the victims.”

Cont...
The development of Vision Zero and the Safe System approach (2)

Tingvall gathered a group of Swedish experts to focus on road safety. They looked at other hazardous industries such as aviation and nuclear energy where system designers took account of human error and assumed responsibility for designing systems where mistakes did not cost lives. Why didn’t this apply in road safety?

They also questioned the assumption that investment in roads had to be “balanced” between safety, the environment, accessibility and budget constraints – all outcomes are not equal.

Under Vision Zero or a truly Safe System, saving human lives has to come ahead of everything else.

In 1997 the Swedish Parliament formally adopted Vision Zero:

FROM GOVERNMENT BILL 1996/97:137
“In this bill, the Government proposes a new direction for road safety work based on the so-called Vision Zero. The long-term goal for road safety is proposed to be that nobody will be killed or seriously injured as a result of traffic crashes in the road transport system.”
### Comparing Safe System with “traditional” approaches

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<thead>
<tr>
<th>Issue</th>
<th>Traditional approach</th>
<th>Safe System Approach</th>
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<tbody>
<tr>
<td>What is the problem?</td>
<td>Try to prevent all crashes</td>
<td>Prevent crashes from resulting in deaths and serious injuries. Focus on casualty reduction by asking not what caused the crash, but rather what caused the fatality</td>
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<tr>
<td>What is the appropriate goal?</td>
<td>Reduce the number of fatalities and injuries</td>
<td>Zero deaths and serious injuries.</td>
</tr>
<tr>
<td>What are the major planning approaches?</td>
<td>Reactive to incidents Incremental approach to reduce the problem</td>
<td>Proactively target highest risks. Systematic approach to build a safe road system for all users.</td>
</tr>
<tr>
<td>What causes the problem?</td>
<td>Non-compliant road users</td>
<td>People make mistakes and are physically vulnerable in crashes. Varying quality and design of infrastructure and operating speeds provides inconsistent guidance to users about safe behaviour.</td>
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<td>Who is ultimately responsible?</td>
<td>Individual road users</td>
<td>Shared responsibility by system designers and system users.</td>
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<tr>
<td>How does the system work?</td>
<td>Is composed of isolated interventions</td>
<td>Different elements of a Safe System combine to produce a total effect greater than the sum of the individual treatments – so that if one part of the system fails other parts still provide protection.</td>
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</table>
The four Safe System principles

1. People make mistakes
   We need to recognise that people make mistakes and some crashes are inevitable.

2. People are vulnerable
   Our bodies have a limited ability to withstand crash forces without being seriously injured or killed.

3. We need to share responsibility
   Those who design the road system and those who use the roads must all share responsibility for creating a road system where crash forces don’t result in death or serious injury.

4. We need to strengthen all parts of the system
   We need to improve the safety of all parts of the system - roads and roadsides, speeds, vehicles, and road use - so that if one part fails, other parts will still protect the people involved.
Pillars of the Safe System Approach

• The pillars are:
  ➢ safe roads and roadsides
  ➢ safe speeds
  ➢ safe vehicles
  ➢ safe road use

• Some countries include a fifth pillar relating to post impact care

• The pillars are interdependent – actions under one pillar can influence outcomes under another

• We need to think across the system – actions under one pillar can influence outcomes under another

• No silver bullets

• Reducing serious road trauma is not just about people being more careful
Fifth pillar: post-crash response systems

• In some other jurisdictions, the Safe System approach has a fifth pillar, post crash response systems

• Recognition that the timeliness and quality of responses can significantly affect outcomes – whether a serious injury becomes a fatality, or a minor injury becomes severe

• The road system can support post-crash responses through greater connectivity – for instance, sensors can alert traffic managers of an incident, then emergency services can be advised

• The Transport Agency has funded research into: “Post impact care – the fifth pillar – how well New Zealand delivers post impact care through to hospitalisation” This will inform the development of the new road safety strategy.
Why did New Zealand adopt the Safe System Approach in 2010?

During 2008-2009 performance under the Road Safety Strategy to 2010 was extensively reviewed and compared to international developments, particularly the emergence of Vision Zero and the Safe System approach.

The consensus was that the traditional approach of the Three E’s (Education, Engineering and Enforcement) was unlikely to achieve further significant gains in road safety in New Zealand.

Safer Journeys adopted the Safe System approach to enable a whole of system approach with focus on the areas of greatest risk:
How the Safe System Approach is applied in different jurisdictions: (1) Scandinavia – Sweden

Sweden: as the acknowledged pioneer of Vision Zero and the Safe System approach, Sweden completed 20 years of Vision Zero in 2017. During this time road deaths reduced from 6.1 per 100,000 population in 1997 to 2.8 per 100,000 in 2015 (total deaths reduced from 541 in 1997 to 259 in 2015)

Key Interventions include:

4,000 km of 2+1 roads: The first Swedish 2+1 median barrier road was opened in 1998. The concept was to retrofit the standard existing two-lane 13 m paved width cross-section at 90 and 110 kph posted speed limit without widening. This design has one continuous lane in each direction, a middle lane changing direction every one to three kilometres with a median barrier separating the two traffic directions providing safe opportunities to overtake.

1100 Speed Cameras: deployment aims to encourage safe driving rather than raise revenue, so each camera operates only 2-3% of the time
How the Safe System Approach is applied in different jurisdictions: (1) Scandinavia – Sweden

Key Interventions continued...

**Roundabouts** have become more commonplace at intersections, particularly in populated areas. They are not a new phenomenon, but since the introduction of Vision Zero their key role in road safety has been highlighted. Roundabouts have a traffic calming effect. The consequences of a collision there are less severe than in a normal intersection due to the different angles of impact and lower speeds.

**Creating shared spaces** where pedestrians, cyclists and vehicle drivers each have to show consideration for other users assisted by the installation of raised footpaths, speed bumps, signage and speed reductions.

**Focus on setting interim targets**, achieving them, and setting new targets

**Future Focus:**
Greater focus on commercial driving (ISO 39001), vulnerable users, alignment with environmental, public health and accessibility goals
How the Safe System Approach is applied in different jurisdictions: (2) Scandinavia – Norway

**Norway** adopted Vision Zero in 2001 – its geography, population and length of network all very similar to New Zealand

Fatalities have declined from 6.9 per 100,000 in 1997 to 2.3 per 100,000 in 2015 *(total deaths reduced from 303 in 1997 to 117 in 2015)*

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<th>Aspect</th>
<th>Norway</th>
<th>New Zealand</th>
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<td>Vision Zero commitment</td>
<td>Full commitment</td>
<td>To be determined</td>
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<td>Clear targets</td>
<td>No more than 500 deaths and serious injuries by 2024</td>
<td>No targets – DSI total for 2017 was 3,219</td>
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<td>Speed limits</td>
<td>Maximum speed 80 km/h unless the road has a median barrier</td>
<td>Most 100 km/h roads do not have median barriers</td>
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<td>Penalties for speeding</td>
<td>Start at 750 krone ($135) for 5 km/h over the limit</td>
<td>Start at $30</td>
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<td>Speed cameras</td>
<td>300</td>
<td>15 active, 40 more planned</td>
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<td>Blood alcohol limits</td>
<td>0.02% (20 mg per 100ml)</td>
<td>0.05% (50mg per 100ml)</td>
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<td>Minimum driving age</td>
<td>18 years</td>
<td>16 years</td>
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How the Safe System Approach is applied in different jurisdictions: (3) Netherlands

Sustainable Safety was launched in the Netherlands in the early 1990s. It’s vision was to prevent road crashes and if not, minimise death and serious injury from crashes.

• Achieving a safe road traffic system by tailoring the environment to human limitations and assisting the road user to perform traffic tasks
• Making the traffic system as independent as possible from individual road user errors.

A general proactive approach was needed which sought to integrate people, vehicles and roads into a safe system, requiring infrastructure to be designed to meet human capacities and limitations, vehicles designed to support the execution of traffic tasks and provide protection in the event of a crash. Road users needed to be well informed and willing to correctly execute the traffic task.
How the Safe System Approach is applied in different jurisdictions: (3) Netherlands

Key Interventions:

• Road Categorisation: Categorisation of roads based on traffic planning functionality.

• Implementation of 30km/h and 60 km/h zones at high risk locations.

• Addition of Sustainable Safety design supplements to regional infrastructural handbooks including ‘essential recognisability characteristics’ to improve the predictability of roads.

• Campaigns targeting various road user behaviours - seat belt use, red light running, alcohol impaired driving.

Future Focus:
The Netherlands have identified a number of specific areas of emphasis through the analysis of crash data. These include vulnerable road users, drivers that violate the speed limit and those that are impaired by drugs and alcohol, 50km and 80km roads, single person crashes and heavy vehicles. Targeted measures will be developed for these areas.
How the Safe System Approach is applied in different jurisdictions: (4) Australia

Australia was one of the first countries to formally adopt the safe system approach and has continuously achieved road safety gains from road improvements, safer vehicles, lower speed limits, graduated licensing and a range of successful programmes targeting drink driving, drugged driving, seatbelt usage and speeding.

The National Road Safety Strategy outlines the key Safe System principles as “a road safety approach which holds that people will continue to make mistakes and that roads, vehicles and speeds should be designed to reduce the risk of crashes and to protect people in the event of a crash”.

In 2016 the number of annual deaths per 100,000 population was 5.4 declining by a total of 18.7% from the 2008-2010 baseline.

<table>
<thead>
<tr>
<th>Measure</th>
<th>Baseline (2008-2010)</th>
<th>2016</th>
<th>% Change</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of deaths resulting from road crashes</td>
<td>1,426</td>
<td>1,296</td>
<td>-9.1%</td>
</tr>
<tr>
<td>Number of road crashes resulting in deaths</td>
<td>1,297</td>
<td>1,203</td>
<td>-7.3%</td>
</tr>
<tr>
<td>Number of deaths per 100,000 population</td>
<td>6.6</td>
<td>5.4</td>
<td>-18.7%</td>
</tr>
<tr>
<td>Number of deaths per 100 million vehicle-kilometres travelled</td>
<td>0.63</td>
<td>0.52</td>
<td>-18.0%</td>
</tr>
<tr>
<td>Number of deaths per 10,000 registered vehicles</td>
<td>0.91</td>
<td>0.70</td>
<td>-22.5%</td>
</tr>
</tbody>
</table>
How the Safe System Approach is applied in different jurisdictions: (4) Australia

Key Interventions Include:

Safe Use:
- Drug and alcohol impaired drivers are subject to tough laws
- Roadside drug testing continues to increase
- Alcohol interlock programmes have been introduced in all jurisdictions

Safe Speed:
- Speed tolerance levels have been reduced and enforcement activities have increased.
- Point to point safety cameras are being trialled or operated in a number of jurisdictions
- Speed limits are being reduced in pedestrian and activity areas
- A speed limit hierarchy on both rural and urban roads is being developed

Safe Vehicles:
- Seatbelt reminder systems were made mandatory in 2013 for all new passenger cars, passenger vans and sport utilities.

Safe Roads:
- Extensive shoulder sealing and audio tactile line marking have been rolled out

Future Focus:
- Improve heavy vehicle safety – Autonomous Emergency Braking (AEB), licensing arrangements
- Continue to review speed limits on high risk regional and remote roads
How the Safe System Approach is applied in different jurisdictions: (4) Australian States - Victoria

Victoria has led the world in road safety by first introducing mandatory seat belts, random breath testing, bike helmet law and safety cameras significantly reducing their fatality rate. Their 2016 - 2020 Towards Zero Strategy and Action Plan sets an ambitious target to reduce the number of lives lost to fewer than 200 by 2020 - this is equivalent to a 20% reduction in deaths. Key focus areas fall within Safer Roads, Safer Speeds, Safer Vehicles and Safer Road Users with an emphasis on:

• More effort where most fatalities happen – on country roads installing flexible roadside and centreline barriers, rumble strips, sealing road shoulders and building more roundabouts. Setting appropriate speed limits and promoting travel at safe speeds that are right for the conditions.

• The people most likely to become road casualties – younger and older Victorians, motorcyclists, cyclists and pedestrians prioritised signals at intersections for cyclists, traffic calming in town centres, incentives for those who take up ABS technology for motorbikes.

• New technology to make our cars, roads and our own driving safer
Encourage and support parents, young people and private businesses to buy safe vehicles within their price range; Trial automated and connected vehicle technology.
How the Safe System Approach is applied in different jurisdictions: (4) Australian States - Victoria

Key Interventions Include:

**Impaired driving – alcohol interlocks**
- Victoria has expanded its alcohol interlock programme to apply to all convicted drink-drivers whose licence is cancelled.
- Legislation is expected to enter the Victorian Parliament to mandate interlocks for all drink driving offences.

**Interim Safety Measures – a safe system approach**
Prior to installation of centreline flexible safety barriers, work to address road safety risk on the Goulburn Valley Highway included: reducing the speed limit from 100km/h to 80km/h, installing centreline audio tactile line marking, and installing crash zone warning signs. In that same year, a robust program of community engagement commenced, to seek input to improve road safety on this section of the Highway.

**Future Focus:**
A working group involving health, road safety bodies and police are looking at better information on serious injuries, linking crash data to measure the type of injuries occurring in different types of crashes, and the long term impacts of road trauma.
How the Safe System Approach is applied in different jurisdictions: (4) Australian States - NSW

New South Wales are half way through implementing the NSW Road Safety Strategy 2012–2021. Their current action plan targets reducing fatalities by 30 per cent by 2021 (compared to average annual fatalities over 2008–2010). The Plan also aligns the Towards Zero vision with Future Transport 2056, which aims to have a NSW transport network with zero trauma by 2056.

NSW’s approach to applying the safe system has predominately been towards infrastructure retrofitting and new highways coupled with speed reduction measures that support all 4 pillars of the safe system. Of significance is the new requirement for the road development programme to:

- ensure that road safety benefits are a key consideration in the selection of projects;
- support the NSW Centre for Road Safety to develop and implement a method to forecast road safety outcomes of projects and programmes;
- implement a process to involve internal stakeholders at an early stage of project development and planning; and
- ensure specific road safety objectives are set for all major infrastructure projects.
How the Safe System Approach is applied in different jurisdictions: (4) Australian States - NSW

Key Interventions Include:

Safe Speed
• NSW continue to roll out 40 km/h zones in high pedestrian activity areas (over 900km) including the Sydney CBD. Evaluation of permanent 40 km/h zones has successfully reduced casualty crashes by 38 per cent.
• NSW has also had an overall reduction in speed at speed camera locations.

Safe Road Use
• NSW have included the use of mobile phones in their double demerit programme.
• NSW have tested a number of driver fatigue detection technologies including a trial of vehicle-based collision avoidance warning technology to reduce unintended lane departures associated with driver fatigue.

Future Focus:
• Explore road safety technologies
• Promote safer vehicles and better safety standards
• Address serious injury trends and post-crash care and response
Countries that don’t adopt the safe system approach

• Internationally there are a few countries with good road safety records that do not expressly embrace the safe system approach. Until 2015, the United Kingdom was one although its approach and policies were quite well aligned with the safe system. Now it officially endorses the approach in its Road Safety Statement (and has a fatality rate of 2.7 per 100,000 population).

• France performs near the European Union average of 5 deaths per 100,000 population. While it does not explicitly follow a safe system approach, there is strong leadership from the Prime Minister with courageous changes including strong enforcement via a high density safety camera network, and lowering of speed limits on unseparated national and secondary roads. New crackdowns on mobile phone use and recidivist drink drivers are also planned.

• Japan has a low level of road fatalities (3.7 per 100,000 population). Its road safety strategy is not based on the safe system, but does emphasise many of the same elements including safe vehicles, safe road environments, protecting vulnerable users through good design, and strong enforcement. Japan also focuses on the effectiveness of the emergency medical response system.
The Safe System approach – proven to be effective when implemented

- The safe system approach has full international endorsement from the United Nations, International Transport Forum, OECD, and World Health Organisation. It underpins the International Decade of Action on Road Safety.

- It incorporates the most impactful aspects of alternative/previous approaches to road safety, including:
  - The Three E’s (education, engineering and enforcement)
  - Integrated Safety Chain (emphasis on human error & vulnerability)

- ‘Sustainable & Safe’ World Bank review of 53 countries found that safe system countries were achieving best road safety outcomes and continuing to improve their performance.

- New Zealand is in its infancy in terms of implementing the approach; our new road safety strategy needs to inject a sense of urgency into implementation.
Overview of road safety in New Zealand

Enabling New Zealanders to flourish
Road deaths were declining but now trend upwards

Highlights:
- 42% reduction from 2008 to 2013
- lowest annual road toll (253) in 2013
- 52% increase since 2013
- currently the highest total since 2009
- Rolling total for last 12 months: 384
...other measures are following the same trend

Deaths, police reported serious casualties and people hospitalised for over one day: rolling 12 month totals

Current rates

- Crash hospitalisations rate up 28% from its low point in 2015.

- Serious Injuries rate +44% from its low point 2013, and at its highest rate in 10 years.
Road deaths are increasing faster than the population

Index of Trends: Population, Gross Domestic Product, Vehicle Kilometres Travelled, Deaths and Serious Injuries and Deaths (Indexed equal to 1000 at end of 2008)

Indexed Change from End of 2008 through to End of 2017

- Population Growth: + 13%
- Gross Domestic Product Growth: + 25%
- Vehicle Kilometres Travelled: + 12%
- Deaths and Serious Injuries: + 8%
- Road Deaths: + 3%
...and increasing as other countries plateau.
NZ is in the bottom quarter of the OECD

International comparison of deaths per 100,000 population (2016)

Deaths / 100,000 population
Some modes of transport have higher numbers of deaths and serious injuries

Deaths and Serious Injuries by Mode of Transport

- Cars
- Cyclists
- Motorcyclists
- Other
- Pedestrians
- Trucks
- Buses
There is a wide variation by region

Deaths and serious injury by region per 100000 people

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</table>
Crashes occur on both urban and open roads

Crashes with Deaths and Serious Injuries by Road Type, by Year

- Unknown
- Minor Urban Road
- Major Urban Road
- Other Open Road
- Open Road State Highway
- Urban State Highway
- Motorway
Road infrastructure has a clear link to safety outcomes.

**Actual Injury Crash Rates Associated with Each Star Rating Category**

(Based on 100 m sections)

- **1st Star Rating**: High injury crash rate
- **2nd Star Rating**: Medium injury crash rate
- **3rd Star Rating**: Low injury crash rate
- **4th Star Rating**: Very low injury crash rate
- **5th Star Rating**: Minimal injury crash rate

Injury Crash Rate (crashes per 2.5 Million Vehicle Kilometres of Travel)

Star Rating
Crashes have a social cost

Social cost includes a number of different elements: loss of life and life quality, loss of output due to temporary incapacitation, medical costs, legal costs and property damage costs.

Loss of life is estimated by the amount New Zealanders would be willing-to-pay for safety improvements that result in the avoidance of a premature death.

The price of $2m per fatality was established in 1991. The most up-to-date price stands at $4.7m as at June 2017. These prices are regularly updated.

Estimated annual social cost of crashes
($ billion, at June 2017 prices)
Attitudes to road safety issues need improving

Not much chance of an accident if careful when...

- speeding
- driving after drinking

The risk of being caught is small

- if not wearing a safety belt
- if speeding
- if drink-driving
Attitudes towards personal safety on modes of public transport is largely one of “it’s safe”...

How safe are you feeling?

Personal Safety on Public Transport... (2016)
Over the past decade speed was a major contributing factor in deaths or serious injury crashes...

Driving too Fast for the Conditions is defined as both driving at “excess speed” which refers to instances when vehicles travel in excess of the legally declared speed limit and “inappropriate speed” which refers to instances when vehicles travel at a speed which is unsuitable for the prevailing road and traffic conditions.
...and speed contributes to the severity of crashes

Percentage of Crashes with Deaths and Serious Injuries with respect to the Speed Limit (year 2008 through 2012)

- Non DSI Percent
- DSI Percent

Percentage of Crashes with Deaths and Serious Injuries with respect to the Speed Limit (year 2013 through 2017)

- Non DSI Percent
- DSI Percent

Refer back to slide #12
Speed limits do not match the risk and function of our roads

A significant number of speed limits in New Zealand do not reflect the safe travel speeds for our roads

Waikato Region
Percentage of road at safe and appropriate travel speeds compared to current speed limits (based on NZ Transport Agency’s Speed Management Guide)

<table>
<thead>
<tr>
<th>Existing speed limit (km/hr)</th>
<th>Percentage of road with appropriate travel speed per speed bracket</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>110</td>
</tr>
<tr>
<td>Rural 100</td>
<td>0</td>
</tr>
<tr>
<td>Rural 80</td>
<td>2%</td>
</tr>
<tr>
<td>Urban 100</td>
<td>6%</td>
</tr>
<tr>
<td>Urban 80</td>
<td>44%</td>
</tr>
<tr>
<td>Urban 50</td>
<td>2%</td>
</tr>
</tbody>
</table>

- Speed could go up
- Speed is appropriate
- Speed is inappropriate
Cars with fewer safety features are over represented in serious crashes
New Zealand’s vehicle fleet is older

Note: In New Zealand about 50 percent of the light vehicle fleet is 13 years or older, which is older than many other OECD countries.
Older vehicles travel less, and are in more serious crashes

Vehicles older than 13 years make up:

- 50% of the fleet
- BUT ... only travel 40% of the distance travelled by the whole fleet
- AND ... account for over 65% of the vehicles in which someone is killed or seriously injured
Contributing factors to crashes leading to deaths and serious injuries

**Contributing Factors to Crashes Leading to Deaths and Serious Injuries 2008**

- Lost control, 15.1%
- Inattention or attention diverted, 13.5%
- Did not see other party, 12.4%
- Too fast for conditions, 10.0%
- Alcohol and drugs, 7.2%
- Inexperience, 6.0%
- Following too close, 3.8%
- Driver tired or fell asleep, 3.6%
- Misjudged other vehicle, 2.6%
- Too far left, 2.6%
- Other Factors, 8.3%

**Contributing Factors to Crashes Leading to Deaths and Serious Injuries 2017**

- Lost control, 14.0%
- Too fast for conditions, 10.8%
- Did not see other party, 10.7%
- Failure to give way or stop, 13.2%
- Other Factors, 8.1%
- Too far left, 7.4%
- Failure to keep left, 6.0%
- Driver tired or fell asleep, 3.4%
- Inattention or attention diverted, 11.0%
- Alcohol and drugs, 6.9%
- Inexperience, 5.7%
- Following too close, 2.9%
The cause of nearly all deaths and serious injury crashes is driver error.

Percentage Contribution of Factors to Death and Serious Injury Crashes between 2008 and 2017
Over the past decade the vehicle movements leading to crashes haven’t changed much

Top 5 vehicle movements leading to crashes on urban roads

<table>
<thead>
<tr>
<th>Rank</th>
<th>Year 2008</th>
<th>Year 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>pedestrians crossing road: leftside</td>
<td>right turn against: making turn</td>
</tr>
<tr>
<td>2</td>
<td>right turn against: making turn</td>
<td>cornering: lost control turning right</td>
</tr>
<tr>
<td>3</td>
<td>crossing: right angle collision</td>
<td>crossing: right angle collision</td>
</tr>
<tr>
<td>4</td>
<td>cornering: lost control turning right</td>
<td>lost control: off roadway to left</td>
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<tr>
<td>5</td>
<td>cornering: lost control turning left</td>
<td>cornering: lost control turning left</td>
</tr>
</tbody>
</table>

Top 5 vehicle movements leading to crashes on open roads

<table>
<thead>
<tr>
<th>Rank</th>
<th>Year 2008</th>
<th>Year 2017</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>cornering: lost control turning right</td>
<td>cornering: lost control turning right</td>
</tr>
<tr>
<td>2</td>
<td>cornering: lost control turning left</td>
<td>cornering: lost control turning left</td>
</tr>
<tr>
<td>3</td>
<td>lost control: off roadway to left</td>
<td>lost control: off roadway to left</td>
</tr>
<tr>
<td>4</td>
<td>head on: lost control on curve</td>
<td>head on: on straight</td>
</tr>
<tr>
<td>5</td>
<td>lost control: off roadway to right</td>
<td>head on: cutting corner</td>
</tr>
</tbody>
</table>

- On urban roads crashes commonly occur when cornering and at intersections.
- On open roads crashes commonly happen when the driver loses control, especially when cornering or at intersections.

Source: CAS 2013 to 2017
Young men have higher numbers of deaths and serious injuries on the road.
..and Maori are over represented in traffic crashes.

Casualties hospitalised for road crashes for more than one day (2013 to 2017, inclusive)

Ethnicity of NZ at Census 2013
Fewer people who are stopped have been drinking but it differs by age

Data from regular roadside alcohol measurement operation. Compulsory breath test operations are carried out at the same sites and times of night for each year’s operation. The operations are held 10pm to 2am on non-holiday weekends from February to May.

Breath alcohol levels for drivers aged 20 and over, by Year

Breath alcohol levels by driver age in Year of 2017

Refer back to slide #12
Drink driving may have declined over the past decade, however it still remains an issue, along with drug driving.

Over the past decade, it has been observed that the proportion of drivers involved in crashes leading to deaths, suspected or confirmed levels of alcohol and/or drugs, has stubbornly remained at around the 30% levels.
Most people wear seatbelts, but those who don’t are significantly over-represented in crashes.
Distraction is an issue but hard to monitor

Deaths and serious injuries in crashes with driver attention diverted between 2008 and 2017

International research suggests that the contribution of diverted attention in crashes may be underrepresented in police-reported crash systems.
Older men are disproportionately represented in motorcycling statistics

Motorcyclist deaths and injuries by age group

- 2015-2017 4 in 5 motorcyclists injured were male (83%)
- 2015-2017 9 in 10 motorcyclists killed was male (91%)
The number of drivers not holding valid licences and involved in crashes leading to deaths or serious injuries fluctuates.

Percentages of forbidden, disqualified, expired, never licensed or wrong class drivers involved in crashes leading to deaths and serious injuries has varied between 5% and 7%.
Overseas drivers are not the main issue

Overseas licence holders as a percentage of all drivers involved in crashes 2013-2017

<table>
<thead>
<tr>
<th>Top crash driver country of origin (2012-2016)</th>
<th>Percentage of all crashes</th>
</tr>
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<tbody>
<tr>
<td>New Zealand</td>
<td>95.90</td>
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<tr>
<td>Australia</td>
<td>0.57</td>
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<tr>
<td>China</td>
<td>0.55</td>
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<tr>
<td>Germany</td>
<td>0.49</td>
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<tr>
<td>India</td>
<td>0.41</td>
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<tr>
<td>UK</td>
<td>0.38</td>
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<tr>
<td>USA</td>
<td>0.33</td>
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The case for tackling unsafe speeds
What are the types of issues that will need to be tackled in adopting Vision Zero?

- There are three key pillars of road safety which New Zealand has yet to make significant progress on: investment in safety infrastructure, risk-based speed limits and improving the vehicle fleet through safety standards.

- The countries that have adopted Vision Zero and have been successful in achieving significant improvements in road safety outcomes have tackled these issues. None of these issues are easy to address, however, there are learnings that we can draw from other Vision Zero countries to support changes in New Zealand.

- Speed has been identified for early consideration as there is a well developed approach which could be applied based on a strong national evidence base and significant international experience.

- Advancing work on speed limits so that they match the form and function of the road could be advanced relatively quickly, compared to the other key pillars. While we have started to make changes to our approach to infrastructure investment, and are considering changes to vehicle standards, both will take a long time to flow through to real improvements in road safety.
Why is there a need to focus on speed?

• In 2016, travelling too fast for the conditions was the second highest contributing factor to fatal and serious injury crashes in New Zealand. In the event of a crash, regardless of its cause, the speed of impact is the most important determinant of the severity of injuries sustained and the probability of death.

• With higher driving speeds, the number of crashes and crash severity increase disproportionately. A 1% increase in average speed results in approximately a 2% increase in injury crash frequency, a 3% increase in severe crash frequency, and a 4% increase in fatal crash frequency. Reducing speed by a few km/h can greatly reduce the risks of and severity of crashes, particularly the likelihood of fatal crashes.
The International Transport Forum’s (ITF’s) 2018 report on speed and crash risks suggests that most unprotected road users survive if hit by a vehicle at up to only 30 km/h, a modern car can protect occupants up to 50 km/h in a side collision, and a safe car can protect occupants up to 70 km/h in a head-on collision. Consequently, the report considered the following speed limits to be reasonable:

<table>
<thead>
<tr>
<th>Environment</th>
<th>Speed limit</th>
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<tbody>
<tr>
<td>Built up areas where there is a mix of vulnerable road users and motor vehicle traffic</td>
<td>30-40 km/h</td>
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<tr>
<td>Areas with intersections and high risk of side collisions</td>
<td>50 km/h</td>
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<tr>
<td>Rural roads without median barrier, presenting a risk of head-on collisions</td>
<td>70-80 km/h</td>
</tr>
</tbody>
</table>

Other research supports the ITF’s recommendations, and there is general agreement that 100 km/h is a safe and appropriate speed limit on roads where there is no possibility of a side impact or frontal impact with other vehicles (i.e. roads with lanes separated by a median barrier, where any impact would likely be with roading infrastructure).

### Case studies with speed limit reductions:

<table>
<thead>
<tr>
<th>Country</th>
<th>Year(s)</th>
<th>Road type</th>
<th>Speed limit reduction</th>
<th>Mean speed change</th>
<th>Change in road casualties</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>Urban environments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Hull (UK)</td>
<td>1994-2003</td>
<td>Highly pedestrianised urban environments</td>
<td>30 mph (48 km/h) → 20 mph (32 km/h)</td>
<td>Unknown</td>
<td>-90.0% (deaths &amp; serious injuries)</td>
</tr>
<tr>
<td>Portsmouth (UK)</td>
<td>2007</td>
<td>Highly pedestrianised urban environments</td>
<td>30 mph (48 km/h) → 20 mph (32 km/h)</td>
<td>-6.6%</td>
<td>-21.0% (deaths &amp; serious injuries)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Rural environments</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Norway</td>
<td>2001</td>
<td>High-risk open roads</td>
<td>90 km/h → 80 km/h (on 393 km of road)</td>
<td>-5.4% (90 → 80 km/h)</td>
<td>-85.8% (deaths) and 87.0% (serious injuries)</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>80 km/hr → 70 km/h (on 741 km of road)</td>
<td>-3.4% (80 → 70 km/h)</td>
<td>-70.4% (deaths) and 68.0% (serious injuries)</td>
</tr>
<tr>
<td>Adelaide (Australia)</td>
<td>2002</td>
<td>Arterial rural/semi-rural roads</td>
<td>100 km/h → 80 km/h</td>
<td>Unknown</td>
<td>-15.0% (serious injuries only)</td>
</tr>
<tr>
<td>Sweden</td>
<td>2008</td>
<td>Rural/open roads</td>
<td>90 km/h → 80 km/h</td>
<td>-3.1%</td>
<td>-41.0% (deaths only)</td>
</tr>
</tbody>
</table>

### Future speed limit reductions:

<table>
<thead>
<tr>
<th>Country</th>
<th>Year</th>
<th>Road type</th>
<th>Speed limit reduction</th>
</tr>
</thead>
<tbody>
<tr>
<td>France</td>
<td>1 July</td>
<td>Rural/open roads (without median barriers)</td>
<td>90 km/h → 80 km/h</td>
</tr>
</tbody>
</table>

### Speed limits are also increasing with engineering

Countries recognise that roads can be engineered up to support existing or higher speed limits. For example, Sweden invested in engineering up a number of motorways across the country. In 2008, speed limits on these motorways were increased from 110-120 km/h to align with the safety classification of these high standard roads. This led to a 3.4% increase in mean speeds, but no significant change in the number of road fatalities.
If we want to adopt Vision Zero we need to tackle unsafe speeds

• The speed limits on our network do not fit the form and function of our roads, or reflect the road safety risks they present.

• The NZ Transport Agency’s speed mapping tool estimates that 87% of the network does not currently have safe and appropriate travel speeds.

• The majority of the current misalignment between speed limits and safe and appropriate travel speeds is on rural roads without median protection that are not safe at 100 km/h, and urban residential streets that are not safe at 50 km/h. The default 100 km/h limit also applies to large sections of unsealed roads, which includes beaches where the road surface can change with the tide.

• We need to ensure that speed reductions are credible to the public and achieve ‘buy-in’.

• While tackling unsafe speeds is a difficult and often highly controversial issue, it is one of the few key levers where changes can be made relatively quickly to significantly improve road safety.
We need to make changes in line with other Vision Zero countries, such as Sweden and Norway, where speed limits match the risks posed to road users, based on the form, function and use of roads. We also need to engineer up strategically important roads to match the current or higher travel speeds.

We have already started making changes in this direction. The new Land Transport Rule: Setting of Speed Limits 2017 came into effect last year, along with a new Speed Management Guide. This Rule, along with the Guide, adopt a new regulatory and risk-based approach to setting speed limits.

The new Rule and Guide encourage road controlling authorities (largely NZ Transport agency and councils) to review speed limits on roads based on the design, use, form and function of the road, and the risk posed to the road user.

The new Rule also allows for road controlling authorities to set a 110 km/h speed limit where justified by the road’s design and use, and when it is safe and appropriate to do so.

This has been implemented with the Tauranga Eastern link and the sections of the Waikato Expressway increasing to 110 km/h.
What’s already happening in New Zealand?

Case study – State Highway 1 (Centennial Highway)

• A 3.5 km long median safety barrier was installed on SH1 Centennial Highway, just north of Wellington, in 2005. This was a particularly treacherous piece of road – in the 4 years to 2000 it recorded 8 fatalities, 2 serious injuries and 7 minor accidents. Between 2001–2004, the passing lanes were removed and road markings, reflectors and signs were increased yet it still saw 4 fatalities, 2 serious injuries and 2 minor injury accidents.

• In the 13 years from 2005 to 2017, following the installation of a flexible median safety barrier and lowering the speed limit to 80 km/h, there were no fatal crashes, and only 3 serious and 13 minor injuries on the road.

Case study – Hamilton Safer Speed Areas

- In 2011-12, Hamilton City Council introduced 40 km/h Safer Speed Areas. Since their initial introduction, the 40 km/h Safer Speed Areas have been extended to significant residential areas across the city. In these areas, mean speeds have dropped and, in the first year after the 40 km/h speed limit was implemented, there was a 35 percent reduction in crashes. Hamilton City now has 40 km/h speed limits outside all schools.

Source: Hamilton City Council
The current approach won’t lead to changes fast enough

- The draft Government Policy Statement on Land Transport (draft GPS) signaled support for the NZ Transport Agency and councils to accelerate implementation of the new approach to speed limit setting, and address the top 10% highest risk parts of the network as quickly as possible. The NZ Transport Agency is increasing its resourcing and support for road controlling authorities to tackle this part of the network, in particular to support changes in Auckland, Waikato and Canterbury.

- Local councils are a key partner in speed management and introducing the new approach to speed limit setting.

- However, the current approach expects road controlling authorities (NZ Transport Agency and councils) to invest significant time and resource to reviewing and agreeing changes to speed limits on a piecemeal basis. Road controlling authorities need to undertake significant engagement and consultation on any changes and consider a broad range of factors when setting speed limits.

- Road controlling authorities are then need to set speed limits through making a bylaw, which is an administratively burdensome and drawn out process. It can also result in unsafe speeds being maintained due to local interest group ‘capturing’ decision makers.

- Many road controlling authorities do not have the resources or expertise to undertake speed limit reviews. There was significant feedback from Local Government and other interested parties on these issues at the Local Government Summit, and in the consultation on the draft GPS.

- Given these issues, implementing the new approach to speed limit setting will take many years and will be very costly for local councils.