Ministry of Transport
TE MANATŪ WAKA

Ministry of Transport

Road Safety Strategy - Vehicles, Vehicle Standards and Certification Reference Group Outcomes Report

March 2019

PURPOSE

This report sets out the key challenges, strategic priorities and potential approaches identified by the Vehicles, Vehicle Standards and Certification reference group on the Road Safety Strategy.

CONTEXT

The Ministry of Transport is leading the development of a new road safety strategy and action plan

The Government has agreed to the development of a new road safety strategy for New Zealand, replacing the current Safer Journeys strategy, which ends in 2020. It will outline the steps New Zealand will take to meaningfully reduce deaths and serious injuries over the coming decade.

As part of the development of the strategy, the Ministry of Transport is investigating adopting the 'Vision Zero' approach to road safety thinking. This would set a long-term objective of eliminating deaths and serious injuries on our roads.

Reference groups were established to provide early input on the strategy and action plan

Intent and scope of reference groups

Five reference groups were established to discuss key road safety issues, and identify priorities and potential interventions. The purpose of the groups was to:

- provide key stakeholders with an opportunity to influence the development of the strategy at a relatively early stage
- build a better shared understanding of the challenges and opportunities for the new strategy.

However, the reference groups were not asked to reach a common position, or required to endorse recommendations or reports.

Each group focused on one of the following broad areas:

- Speed
- Infrastructure, design and planning
- Vehicles, vehicle standards and certification
- Road user behaviour
- Vehicles as a workplace.

All reference groups also considered a range of cross-cutting factors including the safety of vulnerable users, equity, technology, and rural and urban perspectives. They also considered links to broader health harms and social impacts.

The Vehicles, Vehicle Standards and Certification reference group examined issues to do with vehicle safety throughout their lifecycle

Scope

The Vehicles, Vehicle Standards and Certification reference group (the reference group) focused on:

- accelerating the uptake of safer (and cleaner) vehicles
- minimum vehicle standards at entry, including certification processes
- in-service safety – vehicle maintenance requirements
- removing less safe vehicles from the fleet
- promoting greater uptake of safety technology
- passive safety systems
- advanced driver assistance systems
- connected vehicle technology.

Membership and process

The group comprised of representatives from central government, local government and stakeholder groups.Appendix A outlines membership for the Vehicles, Vehicle Standards and Certification reference group.

The reference group was supported by:

- Chair: Brent Johnston
- Advisers from the Ministry of Transport and the NZ Transport Agency
- Expert adviser: Dr Kim Dirks.

The group held four half-day meetings between September and November 2018.

CURRENT STATE

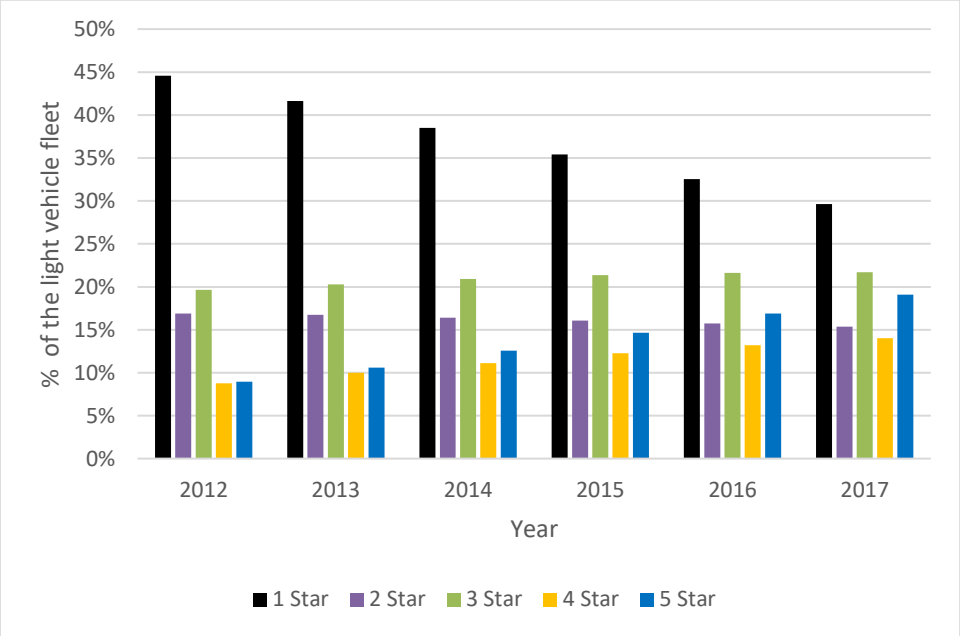
Evidence on the risks and harms in this area

A vehicle's ability to prevent a crash or protect its occupants is key to the outcome of any crash. The design of the vehicle, its structural integrity and the safety features or technology included as part of the vehicle are intended to lessen the risk to its occupants if a crash occurs (passive safety features), or in some cases, prevent a crash occurring (active safety features). While vehicle maintenance is important for road safety, the safety features of the vehicle are usually more important in determining outcomes.

In New Zealand, two main safety rating systems are used to measure the safety standards for light vehicles (cars): the Australasian New Car Assessment Programme (ANCAP) for new cars; and the Used Car Safety Rating (UCSR) for used cars. The ANCAP safety rating is based on crash testing vehicles in a laboratory in controlled conditions. The UCSR is based on the outcome in relation to injury severity to the occupants in the event of a crash, using statistics collected in Australia and

New Zealand. Ratings include outcomes for those outside the vehicle, as well as the presence of specific crash avoidance technology. Both are produced by the Monash University Accident Research Centres (MUARC).

Figure 1: Crash worthiness star ratings of the light passenger fleet



Nearly 90% of all new[1] (i.e. unused) vehicles entering the fleet now have a five-star ANCAP rating[2]. The introduction of recent health and safety legislation has influenced the purchase of higher safety rated vehicles for corporate and government fleets, and this has changed demand for safer cars in the new car market. Five-star safety rated cars are more likely to be equipped with active safety features that help drivers avoid crashes, such as autonomous emergency braking (AEB) and lane keep assist, as well as passive safety features that protect the occupants if a crash occurs, such as airbags and side intrusion bars.

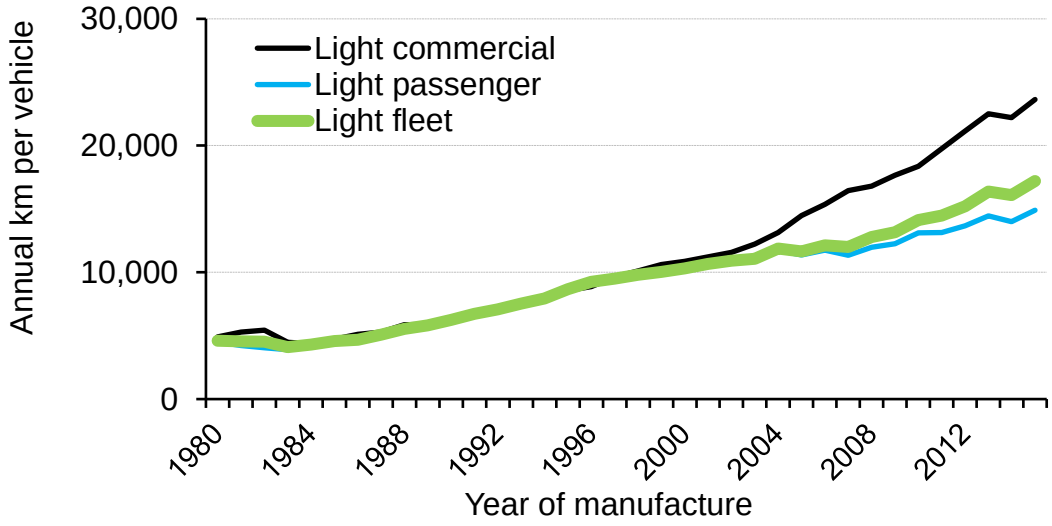
There are no safety rating schemes for heavy vehicles or other vehicle types, such as motorcycles.

Approximately 45% of the cars in New Zealand's fleet in 2017 had a crash worthiness rating of one or two stars. Vehicles with one- and two-star safety ratings generally lack the structural integrity, safety features or technologies that could either prevent the crash happening or lessen the severity of injury to the occupants in the event of a crash. These vehicles are over represented in New Zealand's annual road death statistics and account for approximately 65% of all deaths and serious injuries (DSI). These vehicles are typically driven by our younger drivers, who are also among our most high-risk drivers.

[1] In 2017, of the 334,445 light vehicles registered 47 percent (157,021) were new vehicles and 53 percent (177,424) were used vehicles.
[2] Of the remainder, less than nine percent are unrated by ANCAP. Less than two percent are rated as two or three star.

While one- and two-star cars are typically older, there are also older three- to five-star vehicles. A five-star vehicle, regardless of age, will provide better protection than a one-star vehicle. Therefore, it is important to note that age of the vehicle is not a good predictor of vehicle safety, nor of the likelihood of being involved in a crash. Older vehicles also tend to travel less than newer vehicles which lessens the comparative likelihood of being in a crash.

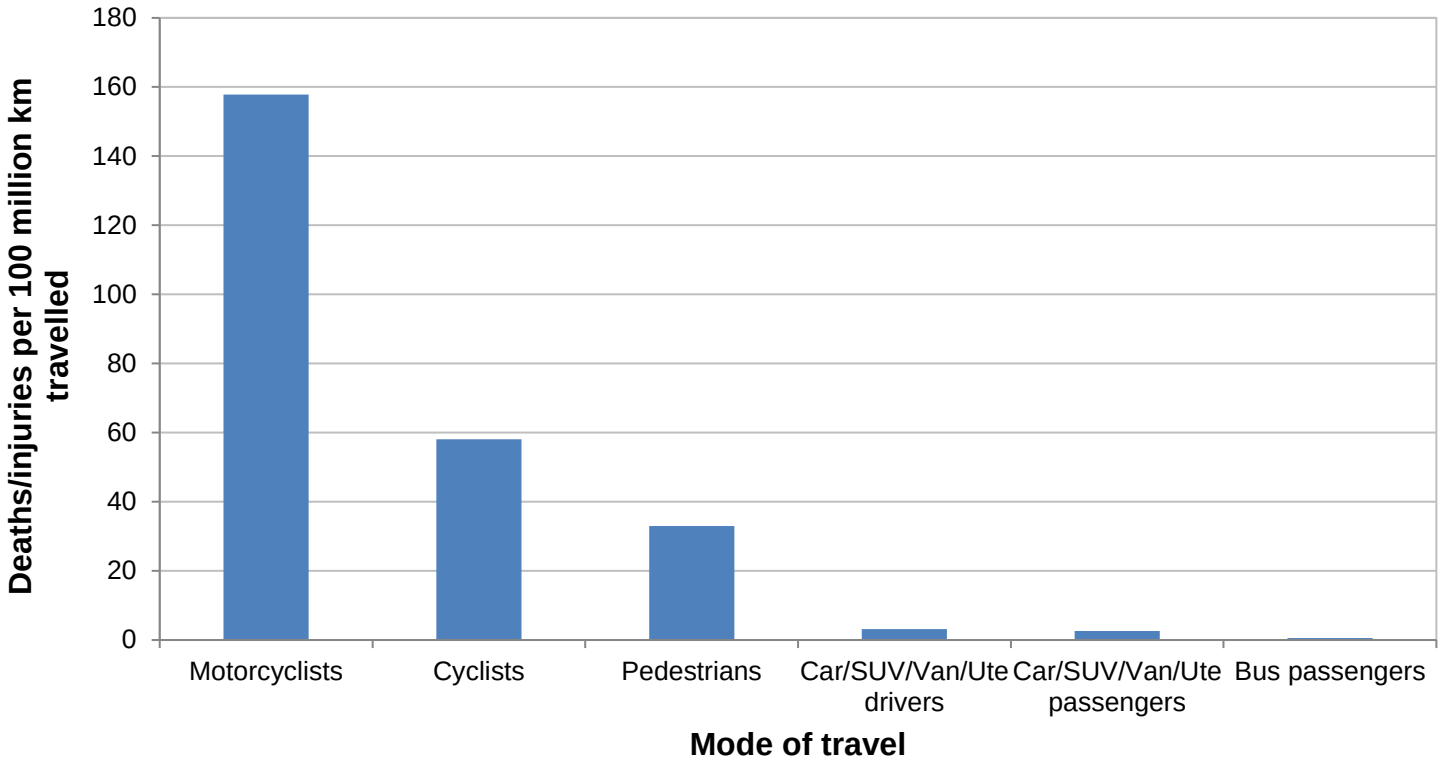
Figure 2: Light fleet average annual travel by vehicle age



Although in absolute numbers the number of DSIs involving light vehicles is most important, in terms of kilometres travelled, motorcycling is the most risky form of transportation, followed by cycling and walking.

Heavy vehicles are also disproportionately represented in fatal crashes. Deaths from crashes with trucks make up around 20 percent of deaths, but only six percent of the total distance travelled. Nearly 90 percent of those killed in heavy vehicle crashes are not the occupants, but the other road users involved (it should be noted that truck drivers have the primary responsibility for only about a third of the fatal crashes in which they are involved). This reflects the fact that, in a collision between a heavy vehicle and a light vehicle or vulnerable road user, there is a much higher probability of death or serious injury than in a collision involving only light vehicles. Around 20% of those killed by trucks are vulnerable road users.

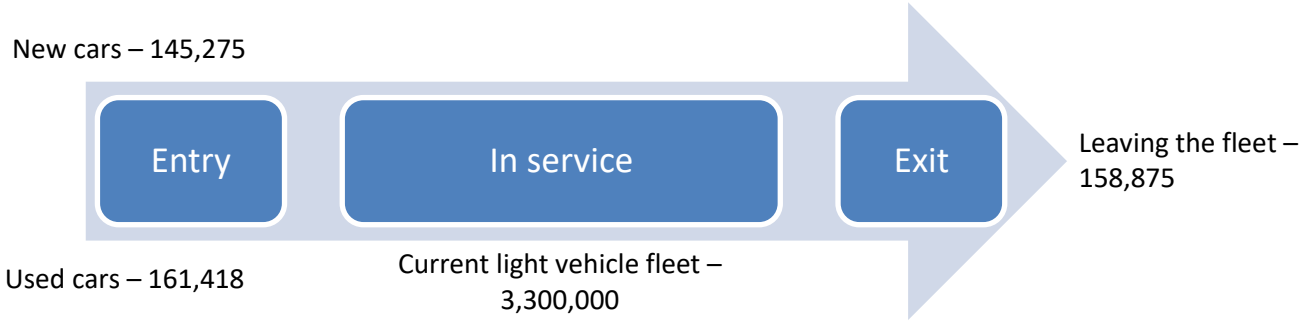
Figure 3: Deaths/serious injuries per 100 million km travelled (July 2010 to June 2014)



Current approach and regulatory framework

There are three broad points at which the Government can and does influence the composition of the New Zealand vehicle fleet. These are at entry, in service and at exit.

Figure 4: Changes to the New Zealand light vehicle fleet 2017



All vehicles entering the fleet must meet specified vehicle standards at time of entry, including locally assembled and modified vehicles. Setting higher standards at entry is usually the most cost-effective point for government to intervene to improve vehicle safety. As well as adopting international standards, the government can take part in influencing international vehicle design standards processes that affect vehicles before entry, though New Zealand has not taken part in these in recent years.

As well as meeting minimum design standards, the government requires detailed physical inspection at time of entry of all used vehicles that enter our fleet. It also makes a limited use of taxes, fees, and charges to encourage or discourage the inclusion of specific features at time of entry (e.g. it currently charges different registration fees for different engine sizes).

There are few options for governments to influence changes to the in-service fleet. The primary mechanism by which the government influences the safety of the in-service fleet is through the periodic safety inspections: Warrant of Fitness (WoF) and Certificate of Fitness (CoF). The inspections vary depending on the vehicle's age, size and use. The government mandates roadside inspections, mainly for heavy vehicles.

The government can also implement taxes, fees or charges to encourage or discourage the purchase or use of vehicles with specific features. These are not common, but include differential ACC levies based on crash worthiness data. It can encourage or require the retrofit of technologies although there are few recent examples of requiring a compulsory retrofit.

Vehicle owners, users and groups representing vehicle users have opportunities to influence the in-service vehicle fleet. Vehicle owners and those contracting, hiring or using in-service vehicles have the opportunity to require the supply of safer vehicles, including those with safety features or when purchasing vehicles. This can potentially include technologies that may not yet be mandated or part of the ANCAP requirements. An example of this would be requiring daytime running lights, which are not included as a requirement for a five-star rating in the ANCAP test. They can also determine how or where their vehicles, or those that they have control over through contracts, are used.

There are currently no specific policies, beyond in-service inspections, to encourage or address the permanent disposal of end-of-life vehicles.

Gaps or weaknesses in the evidence base

The group expressed concern at the lack of explicit data around cause and effect – specifically what causes crashes and the effects any policies would have. There is a lack of data or research examining how specific technologies might have affected the outcome of a crash had they been fitted to the vehicle/s involved. This makes it difficult to determine which technologies should be promoted in New Zealand to reduce DSI.

There was also a strong desire for better data collection and sharing across government agencies and the transport sector. It was suggested that crash data from ACC, private motor vehicle insurance companies, and other relevant data collectors could be merged with the Crash Analysis System (CAS).

Links with other work streams

Vehicles as a workplace – The two vehicle-related reference groups *(Vehicles, Vehicle Standards and Certification* as well as *Vehicles as a Workplace*) both discussed how to introduce new safety

features and technologies to the vehicle fleet, including intelligent speed assistance, telematics, fatigue detection, and technology to improve visibility. Both groups discussed ways to increase the uptake of new vehicle technologies, either by incentivising customer demand or through the introduction of mandatory vehicle standards.

Speed – The Speed reference group was supportive of introducing new mandatory safety standards to the vehicle fleet, including intelligent speed assistance. The group also discussed how to undertake safety retrofits for the existing vehicle fleet, and both groups wanted to see consideration of the use of telematics to manage speed. Like the vehicle-related reference groups, the members of the Speed Reference Group were more supportive of incentivising rather than mandating changes, and felt that focussing on the heavy vehicle fleet was more viable for retrofitting technologies.

FEEDBACK FOR THE STRATEGY

Level of ambition required

The group was broadly supportive of the strategic concept of Vision Zero, and recognised that the recent and significant increases in deaths and serious injuries on New Zealand's roads required the Government to adopt a new approach. However, when presented with specific outcome proposals (e.g. that by 2025 nobody would be killed by, or die in, a vehicle that enters the New Zealand fleet after this date), the group did not reach a consensus as to what was an appropriate target specifically for the vehicles work stream. The group wanted more data to be collected so as to learn from other countries and cities in relation to overall targets.
The group recognised that the potential benefits to road safety through increasing the overall safety of the fleet is considerable. Data from NZTA indicates that if every light vehicle had a crash worthiness rating of five stars, this would result in 930 fewer deaths and serious injuries annually.

The group noted that some action to improve the safety of the fleet could be taken relatively quickly, but improving the overall safety rating of the fleet would be a long term process and would require Government action and leadership. This is because New Zealand (uniquely among OECD nations) imports a large number of used cars, though the average age of scrappage of approximately 19.5 years is comparable with most other jurisdictions.

To increase the number of vehicles exiting the fleet each year would require owners to scrap cars that, while not safe, may be otherwise functioning and supposedly fit for their current purpose. The group believed that any action to influence the removal of these cars would require a significant amount of political will and support. It was also noted that any action by the Government to compel individuals to scrap their vehicle would likely create social inequity, if it was not mitigated by other actions or interventions.

The group also raised a question around the level of ambition of the strategy. Specifically, whether the Government isprepared to review the entire regulatory system including the processes for setting minimum safety standards, or whether it intended to continue with the current system. There was also feedback from the group that the majority of the initiatives discussed were not new, and had been discussed in previous road safety forums.

Priority issues for the new strategy

The group as a whole agreed that the new road safety strategy should adopt a 'Vision Zero' type of approach. There was also a consensus that the new strategy needed to look beyond cars and other light vehicles to consider other road users (e.g. heavy vehicles, motorcycles, cyclists, pedestrians, scooters, etc), as well as the wider impacts vehicles have on New Zealanders' well-being (e.g. environmental and health-related harms).

While agreeing in principle to intermediary targets, the group did not agree to any specific targets for vehicles, outside of a general improvement in the safety of the fleet, and for a reduction in deaths and serious injuries. The group cited the influence that outside factors, such as infrastructure and speed limits, would have on any targets related to road safety.

Vehicle standards and safety ratings

There was a strong preference in the working group for the Government to take the lead through regulation to improve the safety of the fleet. Setting regulated standards was seen as the most effective tool available. Some participants believed regulation, particularly at entry, would create a level playing field for industry to operate in that could not be created by voluntary industry-led restrictions.

There was near universal support for raising standards of vehicles entering the fleet. This was expressed both in terms of fewer unsafe vehicles (i.e. one- and two-star vehicles) entering, or by adding new technical standards that vehicles had to comply with to make them safer.

The group emphasised that changes to legislative processes were likely to be needed to enable or require the faster uptake of new standards and technologies.

The group noted that the European Union was in the process of seeking to mandate fifteen new safety standards. The priority standards identified for adoption in New Zealand were:

- Autonomous emergency braking (AEB) (including low-, high- and pedestrian detection variants)
- lane departure warning
- fatigue/distraction warnings
- intelligent speed assistance
- reversing cameras
- Electronic stability control for heavy vehicles.

There was strong support for requiring labelling of vehicles at time of sale with star ratings based on the used car safety assessment. This would raise awareness of the impact vehicles have on the outcome of crashes and influence demand for safer vehicles. The preferred option was for a label similar to the existing fuel consumption label. This could be displayed on cars and through online adverts when a vehicle is purchased, but other options included putting the rating on the existing 'rego' label, or encouraging websites such as Trademe to promote vehicle safety through their search functions and filters.

Other suggestions put forward by members of the group included direct financial penalties or rewards to encourage the purchase of safer vehicles. These would be most effective for vehicles entering the fleet, but could also encourage the scrappage of less safe vehicles. These could be through a range of tools, including direct subsidies, reduced ACC payments or reduced insurance payments.

There was also a range of further suggestions around other ways to limit or ban potentially less safe vehicles from entering the fleet. Some proposed banning registration of older vehicles (20+ years) and for restricting or banning the registration, or re-registration, of vehicles that had been written off previously. The group noted the fact that many Land Transport Rules relating to vehicle standards have a 20-year limit restriction. This means vehicles outside this timeframe do not have to comply with some standards, allowing for less safe vehicles to continue to enter New Zealand.

These proposals were not intended to include proven collectibles or vintage vehicles, but were instead focused on commercial quantities of older vehicles being brought in for commercial sale.

Safety of in-service vehicles

Several members of the group suggested evaluating the effectiveness of the current WoF/CoF systems to ensure they remain fit-for-purpose. Some key points raised by the group included:

- update the inspection process to better address both new vehicle technology and new vehicle testing technology
- introduce scan tools (on-board diagnostics) to diagnose electronic faults on vehicles
- introduce new inspection tests, with mentions of shaker pads and roller brake testing for a wider range of vehicles
- different tests for different vehicle ages, appropriate to the level of use and the technology on the vehicle, though others noted that key safety faults such as tyre tread, working lights are universal.

The group recommended providing greater incentives for ensuring vehicles remained safe between inspections, especially for heavy vehicles, but also getting owners of light vehicles to take responsibility for checks. As well as looking at potential financial incentives these could include greater use of roadside inspections and using new technology, for example tyre tread scanners, to measure safety.

The group also raised the idea of whether there should be separate inspection facilities for motorcycles and heavy vehicles, as the inspection requirements for these vehicles should be more specialised.

It was also noted that there is a growing problem with access to proprietary technical data needed to carry out repairs, and potentially inspections. Repairing a modern vehicle requires access to on-board vehicle data. There was a concern that car companies may be reluctant to share this with repair services outside of their own network or would charge a fee for access.

Several members of the group suggested a need for greater oversight of the inspection providers, to ensure that they are impartial and consistent. There was concern about the potential for conflicts of interest, and some suggested separating inspection from repair and service.

Although most members supported in-service inspections, there was also a discussion as to whether vehicle faults were a sufficiently important contributor to road safety to justify the costs of the current WoF/CoF regime. It was noted that some jurisdictions with good safety records do not have in-service inspection, or have less frequent inspections. There was some support for investigating whether the current system supports road safety, and if other methods could be used to improve or maintain safety outcomes.

A new area that was raised, but where evidence was not available to make any recommendations, was any potential safety benefits or risks from increased use of ride-sharing services. New models of vehicle use and vehicle ownership may allow greater access to safer vehicles, especially in urban environments.

The fact that public transport was also much safer than private motor vehicle use was mentioned as a road safety tool. Buses are between seven to ten times safer per kilometre than private motor cars, yet parents often prefer to drive their children to school.

As part of a discussion on preventing the re-registration of vehicles that have been written off, was the suggestion New Zealand should have a register for all vehicles damaged and then repaired, rather than only recording those that were imported in a damaged state. However, some thought that this was an issue more related to consumer protection than to roadsafety.

Vulnerable users

The group expressed strong support for adopting new vehicle technology that would improve safety of vulnerable users. AEB systems, speed limiting devices, and technologies such as cameras and other proximity sensors that reduce blind spots or otherwise detect vulnerable users around vehicles, were raised. The adoption of safety technologies could have a significant impact.

The group agreed that some of these technologies may be cost effective to retrofit and this should be explored further.

To improve the safety of motorcyclists, there was clear support for mandating anti-lock braking systems (ABS) and to incentivise additional new technology for improving safety outcomes. Other safety features that were suggested included mandating cornering ABS and traction control, as well as mandating additional protective equipment and safer helmets for motorcyclists. Some members of the reference group also suggested requiring better safety clothing and helmets for e-bike users, given how fast they can travel.

To reduce the amount of vehicle crashes with pedestrians and cyclists, the group recommended increasing the uptake of AEB and setting frontal design standards to improve visibility, especially in heavy vehicles, along with the fitment of active safety features across the fleet generally. Underrun protection (front, rear and side) was also mentioned.

Environmental and health impacts from vehicles

There was an acknowledgement from the group that there are significant impacts on the environment and health of citizens from motorised vehicles, particularly in urban environments. There was strong support for investing in alternative transport options to reduce the impact of vehicles on the environment. Some members also expressed a desire for government regulation to target after-market equipment (e.g. brake pads) to reduce chemical runoff. The Ministry understands that this issue is currently being considered by the Ministry for the Environment.

Issues around encouraging the uptake of electric vehicles, recycling initiatives for scrap metal and old parts, and finding sustainable ways to dispose of tyres were also raised. There was recognition from the group that the Government would need to set ambitious targets in order to address these issues.

The group favoured a mixture of regulatory and financial incentives to target the environmental impact of vehicles. Incentives for improving the uptake of electric vehicles were noted, along with an ambitious government target. Other initiatives included using regulatory means to decrease the amount of motorised traffic in urban areas.

End of life vehicles

There was strong support in many sessions for programmes designed to promote or require the removal of less safe vehicles from the fleet. The group suggested implementing a scrappage scheme that encourages or incentivises people to permanently dispose of vehicles, and especially less safe vehicles, that have reached the end of their economic life. However, it was noted that a difficulty in designing such a scheme is the current lack of information regarding vehicle owners' motivations for permanently disposing of vehicles (i.e. scrapping) if the vehicle was otherwise operating.

Any potential costs or trade-offs

The group noted that any regulatory intervention into the fleet would likely take time to have an impact on road safety outcomes and could create additional costs for New Zealand consumers. There was an acknowledgement that any decision to regulate vehicles in fleet could have equity impacts and impose additional costs that were not able to be considered without further investigation and information.

There was some discussion around the possible costs and benefits of allowing older used vehicles built to lower standards than new vehicles to enter the fleet. Some argued that used vehicles replace less safe cars, while others considered all vehicles entering New Zealand should meet the highest available standards. Any decision to mandate a specific standard needs to factor in the impact on the used vehicle market and the associated risks. If the standard is unduly restrictive, people will hold onto less-safe vehicles for longer.

Potential approaches and initiatives for consideration

Based on feedback from the workshops, the advisers presented participants at the final session with a list of the interventions that had received the most support at previous workshops. The group was asked to prioritise 11 interventions on the basis of the potential impact on reducing DSIs. After refining the options and adding a further one, the group used online voting software to identify the top five inventions they would like to see prioritised as part of the new road safety strategy.

These were:

- preventing unsafe light vehicles from entering the fleet by banning one- and two-star vehicles **or** by raising standards
- actively promoting and enabling the adoption of vehicle features that help protect vulnerable users (e.g. pedestrians, cyclists, motorcyclists and scooter riders) from death or serious injury if hit by a vehicle
- accelerating the removal of unsafe vehicles from the fleet
- implementing new (higher) safety standards for heavy vehicles, including promoting retrofitting of safety technologies where appropriate
- introducing an enabling regulatory framework that enables faster uptake of new standards and technologies.

The remaining interventions were:

- actively promoting and enabling adoption of vehicle types (e.g. hybrid/electric) that help protect people in the community from the adverse effects of air pollution, environmental noise and DSI
- influencing organisations or businesses that purchase transport services (such as supermarkets, councils and other government agencies) to require the provision of safe vehicles through procurement or contract conditions
- using financial incentives for interventions (e.g. reduced ACC, insurance or road user charges, or direct subsidies)
- requiring a reassessment of the WoF/CoF regime to ensure it is fit-for-purpose
- introduce vehicle inspection of vehicle safety in addition to the WoF/CoF inspection process (e.g. roadside inspections, sensors).
- banning the re-registration of insurance write-off and other damaged vehicles (from both New Zealand and overseas) and registration of vehicles more than 20 years old from overseas (with an exception for classic/antique cars)
- coordinate greater collection and sharing of data on vehicle equipment as a contributor to road safety.

There was a consensus in the group that stopping unsafe vehicles from entering the fleet should be the Government's first step. The group felt that this would allow the Government to focus more effectively on the longer-term task of incentivising the removal of less safe vehicles from the fleet.

Issues not considered

Autonomous vehicles

There was some discussion around next generation intelligent vehicles, and the need to have a regulatory system that will allow these vehicles to operate in New Zealand. However, the group did not discuss in detail how intelligent transport systems and autonomous vehicles could improve road safety.

While this was not considered as a separate topic with the group, there was agreement that emerging technology would need to be considered as part of the strategy, including autonomous vehicles.

Vehicle classification

The Ministry and the NZ Transport Agency noted that the current vehicle classification system is sometimes unable to classify new vehicle designs and has not kept up with technological change. Whilst there was an interest within the group to discuss this issue, we were unable to schedule a discussion in the final meeting due to time constraints.

Climate change

The reference group touched upon the contribution of vehicles to environmental and health harms. However, carbon emissions were largely out of scope as they were being addressed through other forums.

Appendix A: Membership of Reference Groups

Focus area	Speed	Infrastructure, design and planning	Vehicles, vehicle standards and certification	Road user behaviour	Vehicles as a workplace
Chair	Kirstie Hewlett, MoT	Harry Wilson, NZTA	Brent Johnston, MoT	Sandra Venables, Police	Robert Brodnax, NZTA
Advisers	MoT, NZTA, ACC	Auckland Transport, NZTA, MoT, ACC	MoT, NZTA	MoT, Police	MBIE, WorkSafe, MoT, NZTA
Expert Advisers	Dr Hamish Mackie	Dr Simon Kingham	Dr Kim Dirks	Dr Samuel Charlton	Dr Felicity Lamm
Other members	• Police • Ministry of Education • Auckland Transport • Hamilton City Council • Christchurch City Council • Automobile Association • Road Transport Forum • NZ School Speeds • Cycling Action Network • Rural Women NZ • NZ Institute of Driver Educators • Living Streets Aotearoa • Sport New Zealand • ACC • Transportation Group New Zealand • Students Against Dangerous Driving	• Police • Ministry of Health • Wellington City Council • Dunedin City Council • Timaru District Council • Automobile Association • Living Streets Aotearoa • Disabled Persons Assembly • Greater Auckland • New Zealand Planning Institute • Bike Auckland • Road Transport Forum • Civil Contractors NZ • Generation Zero • Transportation Group New Zealand	• Police • ACC • Ministry of Business, Innovation and Employment • Ministry of Health • NZTA • Automobile Association • IAG Insurance • Brake • Motor Trade Association • Motor Industry Association • VIA • Motorcycle Safety Advisory Council • Bus and Coach • Uber • Vehicle Inspection NZ • Institute of Road Transport Engineers	• Police • NZTA • ACC • Ministry of Education • Ministry of Justice • Auckland Transport • Waikato Regional Council • Safe and Sustainable Transport Association • Motorcycle Safety Advisory Council • Automobile Association • Health Promotion Agency • Plunket • Brake • NZ Institute of Driver Educators • Cycling Action Network • Rental Vehicle Association • Disabled Persons Assembly • Living Streets Aotearoa	• Police • WorkSafe • NZTA • Ministry of Business, Innovation and Employment • Automobile Association • Road Transport Forum • Bus and Coach • Business NZ • Business Leaders' Health and Safety Forum • FIRST Union • NZ Professional Firefighters Union • NZ Tramways & Public Transport Employees Union • E Tu • IAG Insurance • Taxi Federation • Uber • ERoad