TheNavigators

Understanding speed

Social research report
FINAL March 2024

Prepared for: Engagement and Partnerships, New Zealand Transport Agency Waka Kotahi
Prepared by: s 9(2)(a) and s 9(2)(a), The Navigators Ltd

Contents

1. Executive summary

The New Zealand Transport Agency (NZTA) Waka Kotahi supports drivers to adopt safer speed habits through communications, engagement, education and marketing activities and programmes. To deliver on this role, NZTA Waka Kotahi identified the need for a better understanding of speed.

The objectives of this research were to identify what people understand about speed, speed limits and the wider safe system, what is important to drivers (their values), and their beliefs and attitudes towards speed, to more effectively:

- increase driver intention to choose safe speeds and avoid low level speeding[1]
- increase driver willingness to accept speed-related safety initiatives.

The Navigators undertook a three-stage approach comprising:

- workshops to review existing data and confirm research scope and hypothesis
- six driver focus groups to understand attitudes to speed and how they are shaped
- ten driver focus groups and follow up interviews to identify core beliefs and how to influence them.

The research describes the current speed culture and identifies ways to improve this culture.

The current speed culture

The current New Zealand speed culture can be characterised as one where low level speeding is believed to be safe, acceptable, efficient and tolerated and where a range of competing factors work to reinforce these unhelpful beliefs. Drivers feel speed limits are mostly fine and safe as they are, with the exception of school zones. Drivers view system speed initiatives as more of a hindrance than something valued for individual and collective safety (especially safety cameras and speed humps).

Ways to improve speed culture

NZTA Waka Kotahi can improve speed culture by prompting drivers to more consciously reflect on speed choice. This can be achieved by introducing and elevating low level speeding as a key safety issue. Several pathways exist including challenging current unhelpful beliefs through the use of evidence and information, highlighting new people-centred approaches to speed limits, framing conversations in ways that value local community insights, and by broadening understanding of community impacts and consequences. Efforts to change beliefs will benefit from ensuring that they do not appear to be in conflict with the key values of efficiency and courtesy or are seen as attacking strongly held control beliefs or safe driver identities. Critically approaching speed as both a choice and a habit allows a more targeted approach to supporting drivers through stages of change as they are prompted to reflect on the consequences of low level speeding and their own speed choices.

[1] Note: The focus of this research was on low level speeding i.e. 5 to 10 km/h over posted speed limits, not excessive or reckless speeding.

The key findings of the research are that:

1. Drivers value **safety, efficiency** and **courtesy.** These values along with the dichotomy of **individualism vs collectivism** interact to shape core beliefs about speed, speeding and system settings. Considering these values when developing speed-related safety programmes is more likely to engage drivers attention: it's what they care about.

2. Drivers believe that low level speeding is **safe, efficient, acceptable and tolerated**. Informing these beliefs is important as they underpin intentions. To enable themselves to choose safer speeds, comply with current limits and accept system changes, drivers need knowledge and information to change these beliefs.

3. Core beliefs are shaped by (we are competing with) driver experience, perceptions of the system including trust and credibility, road safety communication, popular culture promoting speed as attractive, advocacy of driver training as a solution and a perceived lack of focus on speed within the road code.

4. Low level speeding is triggered by particular mindsets or moments:
   a. **Mindset triggers** include when drivers feel time pressure, impeded, competitive, bored, social pressure or feel expressive.
   b. **Moment triggers** include when driving alone on familiar, empty or wide open roads, with low chance of detection and/or on longer trips.

5. **Speeding is a habit and a choice.** Drivers describe their travel speed as both a conscious choice, a habit and an unconscious reaction to their surroundings. Acknowledging the fact that repeated unsafe speed choices can lead to entrenched speeding habits has important implications for the role of marketing, education and communication.

6. NZTA Waka Kotahi can support safer driver habits and choices (including speed intentions and acceptance of change and system initiatives) by targeting certain core beliefs:
   a. **Safety** by sharing new information that improves driver understanding of the impact of speed on survivability, of the impact of small changes in speed, and the characteristics of safe and appropriate speed limits.
   b. **Efficiency** by sharing information that highlights how the time gained by faster travel speeds is small and often overestimated.
   c. **Acceptability** by highlighting that *we now know better and need to do better* and need to put people at the centre of the rationale for change, by showcasing good driver behaviours to create a new social norm, and by activating a greater breadth of diverse voices in support of safe speeds.
   d. **Tolerance** by clarifying that drivers can be ticketed for low level speeding. Ideally, this is undertaken in parallel with addressing the belief that enforcement is misdirected and aimed at revenue raising.

7. NZTA Waka Kotahi can optimise efforts to inform beliefs by:

a. Making it attractive:

- Reflect shared values and beliefs to reduce the risk of rejecting new information.
- Reduce the emotion from the speed conversation by presenting cold hard facts; describing the consequences of speed in an overly emotional way can be overwhelming, confronting and easily rejected due to driver optimism bias.
- Avoid explicitly targeting driver judgement, skills and capability as this can be interpreted as an attack on strongly held control beliefs and can result in at best disengagement and at worst defensive and emotional reactions.

b. Making it easy:

- Target familiar moments and mindsets to help drivers avoid or mitigate the triggers that can lead to speeding.
- Increase the visibility of speed limit signage and indicators of changes to speed limits.
- Explain the rationale for change at specific locations so that drivers can understand why change is needed.

c. Making it social:

- Encourage collective mindsets where reduced speeds are about community benefits.
- Encourage driver courtesy and empathy for others in speed communications/education.
- Encourage public declaration of driver and community commitment to safe speeds.

d. Making it timely:

- Use timely reminders to prompt drivers to reflect on their speed habits.

8. NZTA Waka Kotahi can create and sustain safe speed choices by adopting a stages of change framework to understand how to create and maintain changes in behaviour and to develop tailored strategies to address people at different stages of the change process. The figure below summarises the key findings.

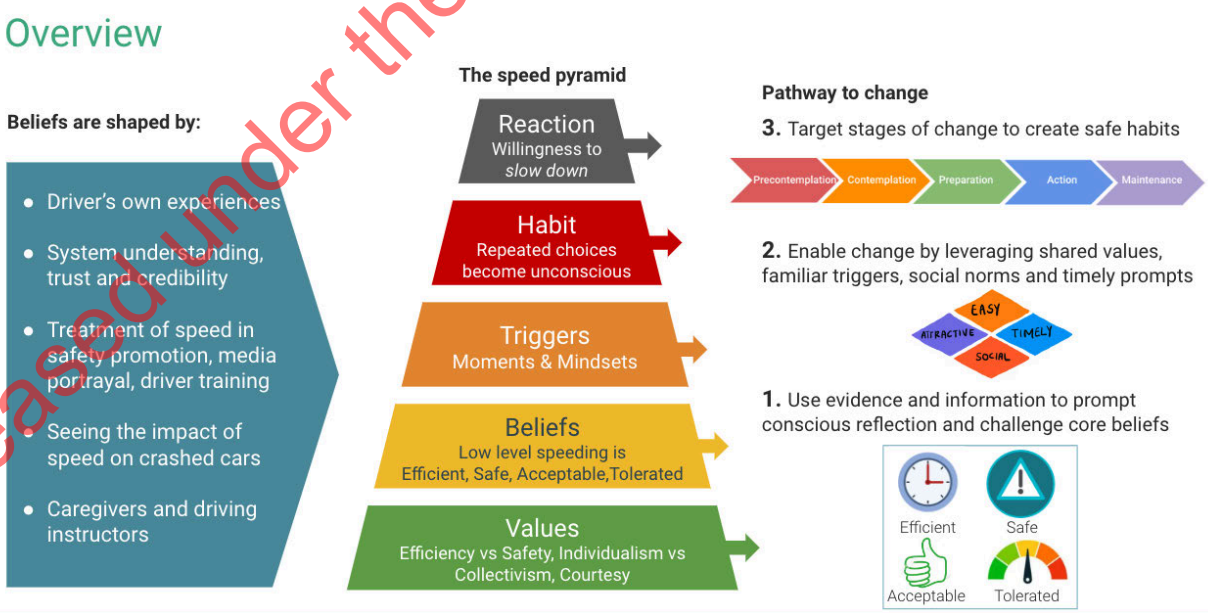


Figure 1: Summary of research findings and recommendations

2. Background: the problem of low level speeding

Exceeding posted speed limits even by a small margin (i.e. low level speeding) is a road safety risk, yet most drivers exceed speed limits at least occasionally and believe it is both safe for themselves to do so and socially acceptable. Data collected by NZTA Waka Kotahi supports this as outlined below.

2.1. Most drivers speed

Roughly 80 per cent of drivers self-report exceeding a speed limit, compared to less socially acceptable behaviours such as drink driving 13 per cent or mobile phone use at 40 per cent.

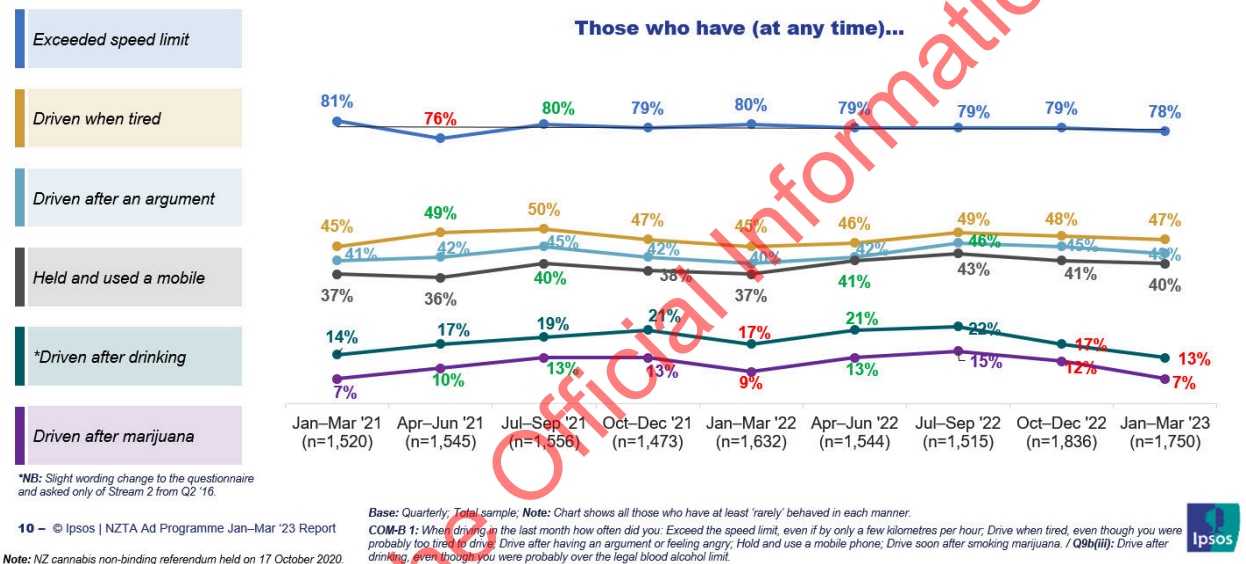


Figure 2[2]: Proportion of New Zealanders undertaking antisocial driving behaviours

2.2. Low level speeding is not seen as speeding

The chart below shows that almost half of all drivers (43 per cent) do not consider low level speeding (driving at 5 kilometres per hour above the limit) to be *speeding*. As such, calls to reduce speeding behaviours at these lower margins are less likely to be seen as relevant for this cohort.

[2] Source Ipsos | NZTA Ad Programme Jan–Mar '23 Report

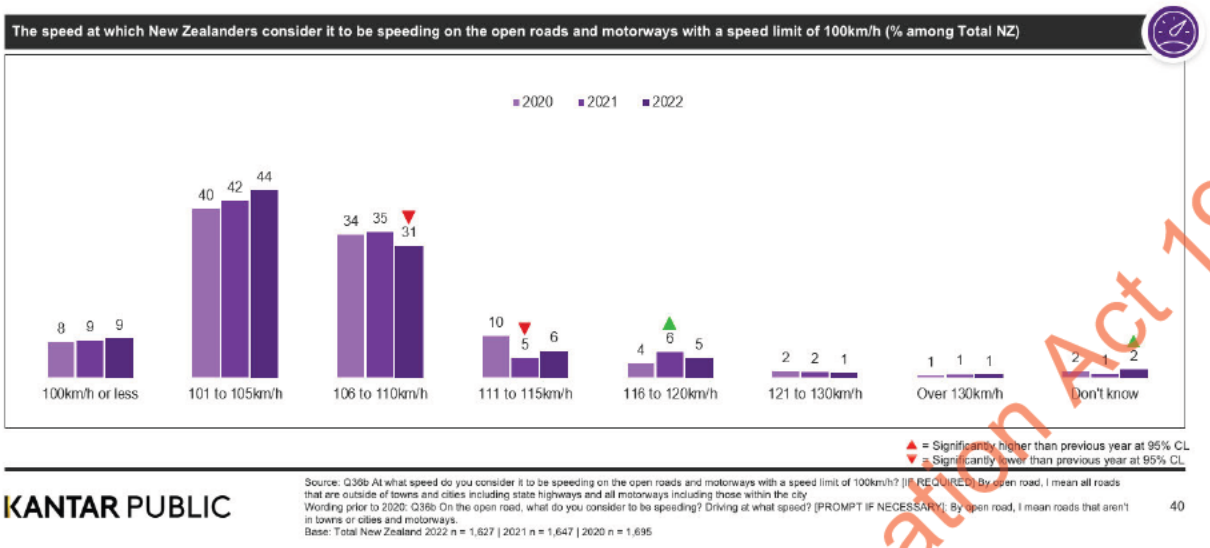


Figure 3[3]: Proportion of New Zealanders who consider different speed ranges to be speeding

2.3. Speeding is socially acceptable

The chart below highlights that many drivers believe speeding is socially acceptable despite most also believing it to be a safety risk. Most drivers (74 per cent) agree that higher speeds result in increased risk of crashing. Yet only 56 per cent agree that speeding is never acceptable compared to 96 per cent for drink driving, 92 per cent for not wearing seatbelt and 88 per cent for mobile phone use.

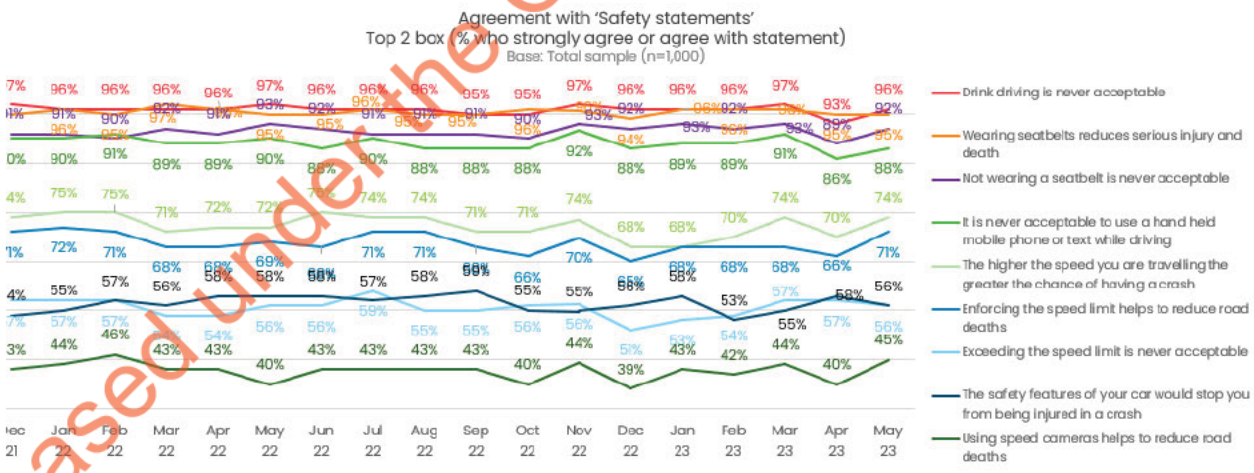


Figure 4[4]: Proportion of New Zealanders who agree with each driving safety statements

[3] Source Kantar Public Public Attitudes to Road Safety 2022 report
[4] Source Camorra Research Road Safety Attitudes and Behaviours 2023 report

2.4. Low support for limit reduction

Another key challenge is that while 90 per cent of our speed limits are not safe or appropriate, only 30 per cent of drivers support lowering speed limits to improve safety. The chart below highlights the disparity between attitudes towards lower travel speeds and less socially acceptable behaviours such as drink driving, seatbelt wearing and mobile phone use.

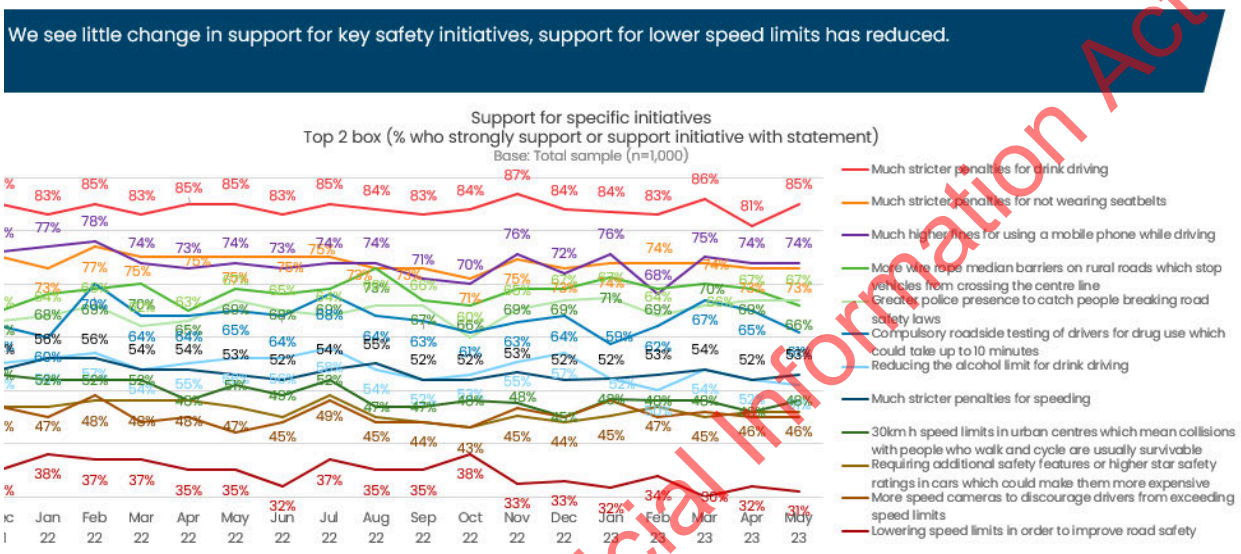


Figure 5[5]: Proportion of New Zealanders who support each safe driving initiative

2.5. Enforcement probability is low

Lastly, both attitudinal and operational data demonstrate that current enforcement practices support the social acceptability of low level speeding. Attitudinally, fewer than 30 per cent believe there is a high chance of being ticketed if exceeding the limit by 5 kilometres per hour.

[5] Source Source Camorra Research Road Safety Attitudes and Behaviours 2023 report

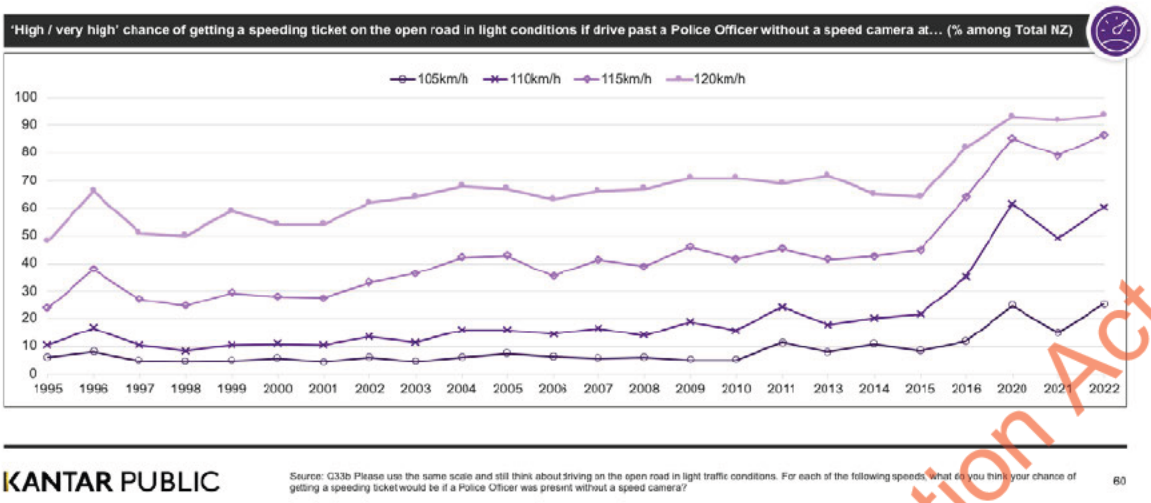


Figure 6[6]: Proportion of New Zealanders who believe there is a chance of a speeding ticket at each speed

Operational data from the last five years suggests acceptability beliefs are well founded, with the probability of being ticketed for low level speeding being less than 1 in 100[7]. That is, fewer than one per cent of tickets are issued for being 1 to 4 kilometres per hour over the limit, one-quarter of tickets for 5 to 10 kilometres per hour over the limit, two-thirds for 11 to 20 kilometres per hour over, and one in ten tickets for 20 kilometres per hour over.

[6] Source Kantar Public Public Attitudes to Road Safety 2022 report
[7] Source Internal NZTA operational report

3. Research objectives and approach

NZTA Waka Kotahi identified the need to better understand what people believe about speed, speed limits and the wider safe system, what is important to drivers (their values), and their beliefs and attitudes towards speed to more effectively:

- increase driver intention to choose safe speeds and avoid low level speeding (i.e. 5 to 10 kilometres per hour over posted speed limits)
- increase driver willingness to accept speed related safety initiatives.

This research focused on understanding low level speeding. This project was not about addressing excessive or reckless speeding.

The research had four key objectives:

Objective 1: To understand driver attitudes towards speed—to build a better understanding of driver beliefs and attitude to speed. This enables NZTA Waka Kotahi to address the right beliefs with the right messages targeted at the right way to the right audiences.

Objective 2: To understand the impact of the Safe System—to identify how the system impacts attitudes towards speed and how to better communicate the value and benefits of the Safe System and its speed-related initiatives.

Objective 3: To understand how to influence driver intention to choose safe speeds—to identify the values, attitudes and beliefs that can best be targeted to influence intention to comply with speed limits and to choose safe and appropriate speeds.

Objective 4: To understand how to influence driver acceptance of speed-related interventions—to identify the values, attitudes and beliefs that can be targeted to affect willingness to support changes to system settings (especially reduction in some speed limits).

The research has been guided by the Theory of Planned Behaviour and the concept of road safety culture that combines system influence, social context and values, beliefs and attitudes of road users.

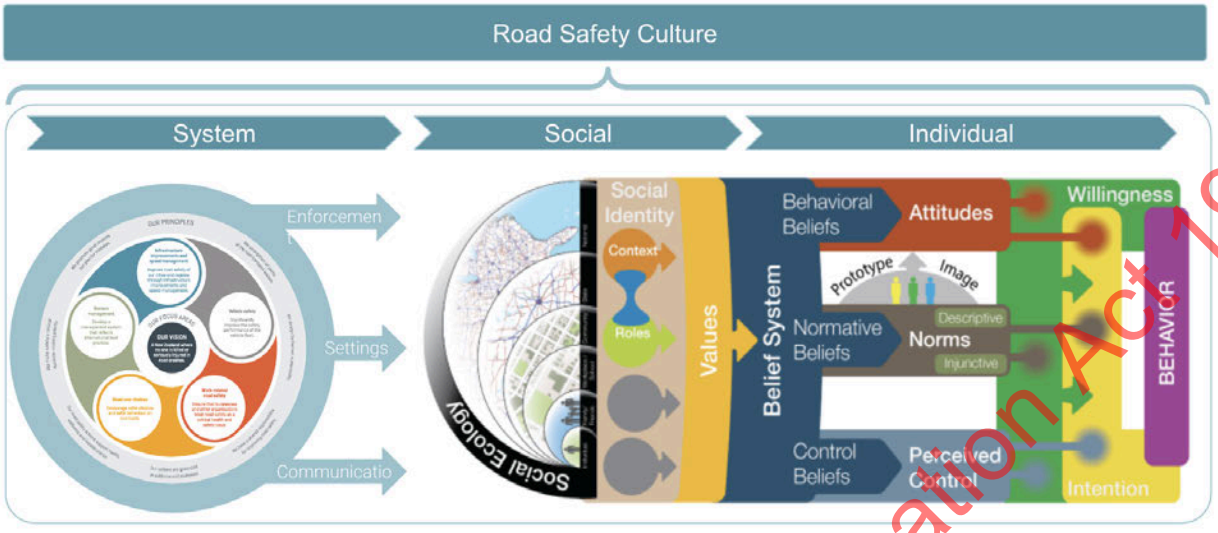


Figure 7: Theory of Planned Behaviour and Road Safety culture

In the research, The Navigators followed a four-phrase human centred design approach as follows:

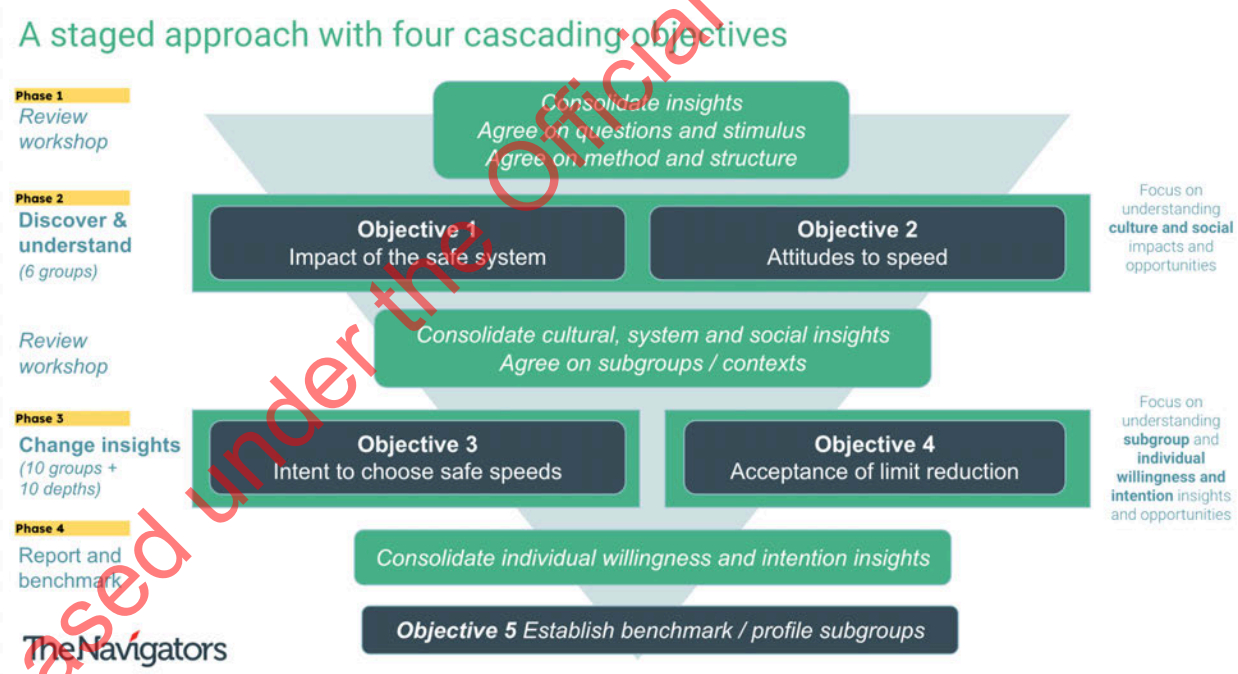


Figure 8: Phases of the research approach

The approach used in each of the phases is detailed below.

Phase 1: Review and confirm

The Navigators reviewed existing research to build a picture of what we know, what we think we know but might need to confirm, and what we need to discover. The findings were consolidated in a workshop with the NZTA Waka Kotahi project team with additional expert input. The outcomes from this stage were:

- a consolidated view of speed related insights
- a consolidated set of hypotheses, research questions and areas of enquiry
- refinement of the research approach.

Phase 2: Discover and define (Safe system impacts and attitudes to speed)

Following our review of evidence and after gaining agreement about questions in phase one, The Navigators conducted six focus groups to engage with road user audiences in phase two.

A funnel approach was applied to the enquiry, using phase two to start broadly to address **objectives 1 and 2**. Phase two focused on understanding road user culture, the relationship New Zealanders have with speed, and road user engagement with the Safe System principles and speed related interventions. Importantly, this phase created working definitions, parameters and contexts. It explored shared understanding of what 'speed' and 'speeding' mean, and specific contexts like urban vs rural settings, or moving within, to and through places, allowing us to anchor our subsequent conversations more effectively. This phase also explored how Safe System principles and interventions alongside the dominant culture impacts on understanding, beliefs and attitudes and ultimately intention and willingness (our behaviour-lead indicators).

The six focus groups were conducted in:

- Hamilton (North Island city location)
- Morrinsville (North Island rural location)
- Christchurch (South Island city location)
- Darfield (South Island rural location)
- Auckland (high Māori population location for the two Māori focus groups)

Each focus group included eight participants, with each participant being provided with a koha of $120 in return for their time.

The participants in the focus groups were selected based on driving a car at least three times a week and exceeding the speed limit at low levels at least some of the time. All research participants acknowledged they choose speeds between 5 to 10 kilometres over the limit across both 50 and 100 kilometre per hour limits at least some of the time, representing roughly 80 per cent of all New Zealand drivers. Those who were totally compliant to speed limits were not included in the research. Each focus group included a mix of:

- gender (four male and four female)
- age groups (18–25, 25–50, 50+ years)
- income levels

- ethnicities
- those who used a range of other transport modes
- those who drive with and without passengers and children
- those who do and do not drive as part of work
- road safety values (i.e. a mix of collective and individualistic midsets).

Phase 3: Deep dive

The stage two insights on speed and the Safe System were then taken into phase three to address **objectives 3 and 4**, focusing on the specifics of acceptance of speed limit reduction and motorist intent to choose safe speeds. This included the opportunity to test emerging messages or ways of reframing the speed conversation in phase 3, including specific information prompts and different lenses (e.g. movement and place vs safe speed limits).

Ten focus groups were undertaken in total with two focus groups in each location. In each location, one group focused on speed limits and the other focused on speed behaviours, allowing a deeper dive into these issues.

The ten focus groups were conducted in:

- Auckland (North Island city location and high Māori population: two mixed ethnicity focus groups and two Māori groups were conducted)
- Kaitaia (North Island rural location and Māori population)
- Dunedin (South Island city location)
- Darfield (South Island rural location).

Each focus group included eight participants, with each participant being provided with a koha of $120 in return for their time.

The participants in the focus groups were selected based on the same criteria used for the phase two focus groups (see above).

Following the focus groups, a follow-up survey and six in-depth interviews were undertaken with those who had taken part in the focus groups. This allowed the participants a week or so to reflect on the information and discussion raised in the focus groups to identify what themes resonated with the participant and how their beliefs, attitudes or behaviours may have changed as a result. The follow-up interviews were conducted over Zoom and respondents were provided with $80 koha in return for their participation.

4. Research findings

Drivers' values and beliefs about speeding that ultimately determine the degree to which they respond to in-the-moment triggers or prompts to speed. Importantly, values and beliefs also act as a lens or filter, resulting in communication efforts being rejected if they appear to be in conflict.

Understanding values, existing beliefs and how to influence them is therefore critical and will enable more conscious reflection of speed choice and support efforts to disrupt unsafe speeding habits.

4.1. What do drivers value?

Values are the things relating to driving a car that a driver feels are important to them. Values are typically fixed or very slow to change and act as guiding principles that shape beliefs and behaviours. Understanding the values that might lead to unsafe speed habits and the rejection of safe and appropriate speeds are therefore critical. The research found that drivers' key values are safety, efficiency, courtesy, individualism and collectivism.

4.1.1. Safety

Safety is a core shared value for drivers. Drivers talked about the importance of safety in the context of their own safety and/or the safety of others. For many, safety is a hygiene factor: it satisfies a basic need. Drivers feel what they have in place, their driving behaviour and habits, are keeping them safe.

> *"I value safety, for everyone on the roads. Making sure your car's roadworthy and everybody's got their seatbelts on, just so that everyone can be as safe as they possibly can be." (Female, Morrinsville)*

> *"My first thing is, 'Am I safe?' Am I in a safe position on the road? Is the road I am driving on safe? Am I driving safely? All of those things." (Female, Morrinsville)*

When drivers consider safety, the condition of the roads and speed limit are key elements. They are conscious that some speed limits are too high for roads that are not being maintained. As a result, road conditions are blamed for safety issues, rather than speed.

> *"If it's 100 kilometre, open road, then it shouldn't have pot holes in it. It's so dangerous. The state of our roads really bugs me the most. It's about safety." (Male, Morrinsville)*

Safety values also strongly underpin drivers' sense of identity. Most drivers pride themselves as being safe drivers. When people feel their identity as a safe driver is diminished or criticised, again they can become defensive and emotional. Likewise, when drivers see what they consider to be unsafe behaviour in others, they can become angry, emotional and reactive.

Safety values tend to play more of a dominant role when:

- drivers are accompanied by passengers
- drivers encounter other road users they perceive as vulnerable (e.g. the young or elderly)
- a driver's own safety is compromised by other drivers
- drivers perceive system interventions as not considering safety.

However, while the safety value is broadly a shared one, there are key differences in beliefs around crash risk, the role of speed and what ultimately makes a driver safe or unsafe. So while safety is a shared valued, underlying safety beliefs are at the core of differences in attitudes and speed-related behaviours. These underlying beliefs are described in detail later in the report.

4.1.2. Efficiency

Driving is seen as the most efficient, convenient and easy way to get around. Drivers value the efficiency of driving and define this as being able to get where they need to go without congestion and at a speed or journey time they have come to expect.

Critically, making progress and the idea of arriving at a destination on time generate a compelling sense of anticipation as well as satisfaction or reward upon arrival. The efficiency value has strong cultural associations with *fast* being better than *slow*. Efficiency is closely linked to a person's sense of self, integrity and display of respect. If you turn up on time, you are a good person and conforming to what society expects of us. If you turn up late, you have failed. The value of efficiency underpins critical driver beliefs that:

- faster speeds are more appealing and more efficient (e.g. they reduce journey time, help recover lost time due to congestion, feel efficient and purposeful)
- slower speeds are less appealing and less efficient and act to reduce productivity.

"Being on time is about your integrity, your ability to show up on time." (Female, Auckland)

4.1.3. Safety vs efficiency

Safety and efficiency are valued by drivers and they strive for both.

"What's important to me about driving is the most direct and quickest route. I'm trying to get there on time and get home on time. And then I'm always looking for the safest route, which is the most well-maintained route." (Male, Morrinsville)

"After safety, it's what is the quickest, slash, most efficient way to get where I am going. Sometimes things can take a bit longer than I'm expecting and I'm in a little bit of a rush to get to the other side of Hamilton or the other side of the Waikato or wherever to get to an appointment on time." (Female, Morrinsville)

"If the roads are of a good standard and everyone is driving safely, everything will be efficient." (Male, Morrinsville)

However, the interplay, tension and apparent trade-offs between efficiency and safety values are a key challenge to calls for lower speeds because drivers feel low level speeding is safe and creates efficiency gains.

4.1.3.a Drivers can fixate on efficiency unwittingly at the expense of safety

Most critically, drivers are highly prone to target fixation whereby the anticipated satisfaction of arriving on time (efficiency) reduces driver awareness and conscious reflection of low level speeding.

The more drivers focus on the anticipated feeling of satisfaction when they arrive at their destination on time, the less they consider safety and the more they undertake low level speeding.

4.1.3.b Efficiency is regularly and consciously reinforced; safety is not:

While safety is valued, it tends not to frame the success of a typical journey. Arriving safely at a destination may overcome a range of risks and hazards, yet drivers tend not to consciously evaluate the trip based on avoidance of these. Efficiency (i.e. arriving on time, avoiding congestion, feeling the trip flowed well) on the other hand is more regularly considered. Perceptions of efficiency and the positive benefits of speeding are evaluated on almost every trip and as such the habit of speeding is reinforced regularly.

The satisfaction of arriving on time to a destination dominates the evaluation of a journey, as opposed to the idea of arriving safely which is taken for granted. This reinforces both speeding habits and the belief that low level speeding is efficient and safe and has led to drivers rejecting speed-related safety messages and interventions.

4.1.4. Courtesy

Being courteous to each other is important to drivers and behaviours that do not align to this social norm can easily generate anger and frustration and lead to aggressive driving. Courtesy is expressed primarily in the context of giving way, driving with the flow, or driving in a predictable manner.

Importantly, low level speeding is perceived to be courteous—as it is not slowing others down. Conversely, lower travel speeds are courteous to drivers wishing to progress. Being impeded behind slower drivers generates frustration (resulting in anger, tailgating, etc.) and is seen as not showing courtesy to others.

Although drivers value courtesy, in residential urban settings drivers tend not to think about the negative impact that slightly higher speeds can have on pedestrian comfort, confidence, sense of safety or freedom to share the road.

There is an opportunity to reposition safe and appropriate speeds and lower limits as courteous acts of safety for drivers, pedestrians and those wishing to share the road.

4.1.5. Individualism vs collectivism

The values of individualism vs collectivism are often in conflict and tend to polarise conversations about road safety. They underpin much of the variance in beliefs and attitudes towards the impacts of speed, the benefits/disadvantages of lower speeds, and who is ultimately responsible for improving road safety.

The research found that drivers can hold both individualist and collectivist values, but what tends to dominate as a reaction in speed conversations is their individualist value before their collectivist value.

Individualism places the responsibility of safety onto the individual driver or more alarmingly onto the vulnerable road user (e.g. pedestrians). Those drivers who highly value individualism in the context of road safety tend to be more resistant to calls for them to adjust their own driving behaviour and are less accepting of changes to safety or speed related settings. Some expressed a fatigue of 'being told what to do' and lament a perceived lack of individual responsibility across a range of social issues, road safety included. Individualism protects their enjoyment and expression of freedom or the power that speeding can provide.

"I'm actually a little bit tired of looking after the person that's going to walk out in front of my car. I'm tired of being such a safe driver that I have to constantly wonder what everybody else is going to do." (Female, Darfield)

"Don't slow me down! Going my speed is freedom. I feel powerful." (Female, Auckland)

The research highlighted the important role that the individualism value plays in supporting driver control beliefs and social norms. Importantly, it identifies how different messages either align to or are in conflict with the individualist value. Communication that does not take into account this strongly held value can be interpreted as paternalistic or patronising and is instantly rejected by the driver.

Collectivism tends to be expressed as a concern for the common good or the value of shared responsibility. This value when activated tends to open up drivers to broader considerations of how speed impacts go beyond individual drivers' needs, but to other drivers, vulnerable road users and the community at large. Drivers who hold collective values are more likely to understand and embrace the need for system change (i.e. everyone slowing down and working together to keep roads safe). They are also more likely to express empathy for vulnerable road users and be less defensive towards calls for lower speeds.

Generally Māori drivers and those from rural areas had a more collective mindset compared to the general population. Māori in Auckland were more favourable to the philosophy of working together and doing the right thing for the community. They responded more favourably to the

community and health benefits of slower speeds. In Kaitaia, the importance of engaging with iwi on the issue of speed, and gaining iwi help to share information on speed limit change rationales and new knowledge on speed, were seen as vital—the local community/collective approach was seen as the best way forward. In Kaitaia, it was also raised that ticketing is not the best approach for speed enforcement for their community as many cannot afford the tickets so it generally does not stop speeding behaviours. A more collective approach was suggested as the solution where instead of ticketing individuals, community service should be an option and could incorporate education sessions on the consequences of speed.

The research highlighted opportunities to strengthen the collective value in the driver population, either bringing out the collective voice in those who straddle individualism and collectivism values and supporting strong collectivists to share their voice. As discussed later in the report, ways to do this could be to highlight the impacts on the health system that affect all New Zealanders, the benefits of lower speeds to community health and wellbeing, creating empathy by bringing to life the experience of other drivers.

Key takeaway: The experience of making progress or sensation seeking and the anticipation of arriving at a destination on time are almost always more compelling and enjoyable than arriving safely. This anticipation of success creates target fixation which 'pulls' the driver towards a perceived reward and away from a more conscious reflection of safe speed choice. The concept of courtesy guides driver interactions, yet needs to be extended beyond other drivers and faster speeds, safer speeds for drivers and the broader community of pedestrians and vulnerable road users. Balancing individualism with collectivism is important to ensure core values do not conflict with calls for safer speeds.

4.2. What do drivers believe?

While values are important guiding principles, beliefs about a specific issue ultimately determine the behaviour.

Drivers choose to speed at low levels because they believe it to be **safe**, **efficient**, **acceptable** and **tolerated**. These beliefs are reinforced on every journey where speeding occurs without incident, resulting in even more commitment to them and in deeply anchored speeding habits.

4.2.1. Low level speeding is **safe**

Drivers believe low level speeding is safe. Safety is a critical driving value resulting in this belief being particularly important. Drivers believe that speed is not the most important crash risk, that they are more competent than other drivers, that they already make good judgements about speed, they can safely control their vehicles at higher speeds, legacy limits must be safe, and it is safer to travel with the flow than slow down to the speed limit.

4.2.1.a Crash risk beliefs: Drivers underestimate the risk of low level speeding compared to other risky driving practices or road factors. Drivers believe that other factors such as mobile phone distraction, impaired or reckless driving, or road conditions are more important risk factors compared to speed.

Drivers do not believe (or at least did not strongly believe) that current speed limits or low level speeding are important crash risks. Instead it is poor choices by bad drivers (e.g. drinking driving, reckless behaviours, distraction, poor skills) that are the top-of-mind crash causes.

For many, it is media reporting of other risky driving practices (i.e. distraction, impaired driving, lack of restraints) that has pushed speed down the perceived *safety hierarchy*. In addition, drivers see public campaigns relating more to the risk and impacts of higher speeds as opposed to low level seeding. *Faster the speed the bigger the mess* is a familiar safety message; however, it tends to be framed as an issue with higher reckless speeds as opposed to *everyday*, *casual* or *low level* speeding.

A compounding factor to this is that determining the role that speed plays in crashes and injuries is complex with multiple factors at play. As a result, the evidence and statistics on crash causes can vary. This results in diverse and conflicting opinions being shared resulting in calls for slower speeds to be easily rejected and beliefs that speed is not the main cause being easily reinforced. (A recent case study highlights the challenge in attributing crashes to speed[8]).

Furthermore, drivers' own experiences lead them to believe that if they were to crash it would be due to reasons other than low level speeding (e.g. being distracted, under the influence or poor road conditions).

[8] Job, R.F.S and Brodie, C (2022) Understanding the role of speeding and speed in serious crash trauma: A case study of New Zealand, Journal of Road Safety, 33(1), 5-25

Drivers also feel that their current speeds are safe for the roads, and instead it is the poor condition of the roads (e.g. potholes, poor road surfaces) that create the higher risk. Many drivers felt that the roads should be better maintained, rather than speed limits lowered due to poor roads.

"I don't think lower speeds are so much safer. I think we're at a reasonably adequate speed, for the roads that are built for those speeds, if they keep them to the standards that they used to be. Now the chip seal they put down is just ridiculous. The roads aren't as safe as they should be is probably the key problem." (Male, Auckland)

4.2.1.b Relative competency beliefs: Drivers believe they are safer drivers than others, including their average driving counterparts.

Drivers find it very easy and are very comfortable pointing to other drivers as being less skilled, competent, experienced or attentive as they themselves are. This belief allows some to reject speed safety messages as not being relevant to them.

"Me driving a few kilometres over the limit to get where I need to go is not a problem. It's the idiots on the road that's the problem." (Male, Ranfurly)

4.2.1.c Judgement beliefs: Drivers believe they make sound judgments in relation to speed choice.

Drivers point to their ability to drive at speeds above the limit without incident or to choose lower speeds in specific contexts (e.g. around schools) as evidence of good judgement. They believe they frequently display this good judgement and as a result tend to reject calls for drivers to make better judgements about speed. Drivers can easily recall scenarios where they feel they already exercise good judgement such as driving:

- around schools or where children play
- around shopping areas or in the vicinity of pedestrians
- through narrow carriageways or parked cars
- on unfamiliar roads
- through adverse weather and road conditions.

4.2.1.d Control beliefs: Drivers believe they can control their vehicles safely when low level speeding.

Past experience and confirmation bias support a strongly held control belief amongst most drivers. Most drivers have not experienced a car crash and have been able to speed at low levels with no negative consequences. In the context of low level speeding, there is a very high control belief with drivers simply not associating low level speeding as *fast* or *risky* especially on familiar or wide open roads.

4.2.1.e Legacy limits beliefs: Drivers believe that the speed limits they use to guide their speed choice are safe and appropriate.

Drivers assume that current speed limits are safe and based on established scientific evidence. There is low awareness or understanding that many speed limits in New Zealand are neither safe nor appropriate. Additionally, it is not well understood what *safe and appropriate* means for a particular road. Without this understanding, calls for reduced limits are seen as value based and unwarranted.

4.2.1.f Safer to go with the flow: Drivers believe that if the traffic is moving at a speed above the speed limit (e.g. 5 to 10 kilometres over) it is safer to go with the flow, than to slow everyone down to the speed limit.

Drivers feel that going with the flow avoids making other drivers feel frustrated or angry, or tempted to pass at dangerous times, and it's just a good courteous act.

"I will drive at 110 kilometres to keep up with everybody. You have to keep up with everybody. It creates risk if you go slower." (Male, Auckland)

4.2.2. Low level speeding is **efficient** and satisfying

Efficiency is a key transport value and is also a key belief relating to speeding. There is a strong belief that low level speeding delivers tangible time saving to drivers and that higher travel speeds are simply more productive (both at an individual and system level). Low level speeding feels satisfying as it is believed to shorten journey time or makes it more likely for a driver to arrive at a destination on time. Importantly, regardless of the actual journey duration, low level speeding feels efficient.

4.2.2.a Efficiency belief: Drivers exceeding the speed limit feel efficient.

Drivers tell us that exceeding the limit by small amounts feels productive, purposeful, and feels like a gain. Low level speeding is also a way to make up time when needed.

"Most people only drive because they want to get somewhere. Usually when we're in our car, we need to actually get from A to B. So that would definitely stop me from driving 20 kilometres per hour slower." (Female, Auckland)

4.2.2.b Productivity beliefs: Drivers believe faster speeds are good for the economy.

Drivers tell us that moving freight and people round the country at higher speeds is more productive and better for the economy.

4.2.3. Low level speeding is **acceptable**

Low level speeding is seen as socially acceptable and desirable.

4.2.3.a Social norm beliefs: Drivers believe that low level speeding is socially acceptable.

Drivers see other drivers speeding by small amounts and consider it to be *something we all do*. Drivers also feel little shame or reluctance in publicly acknowledging they *casually* speed.

There are some notable scenarios where slower speeds are more acceptable and where drivers are given permission to remain at or below posted limits. These include:

- when the driver is obviously elderly
- when the diver is L plated
- when the driver is driving a GPS speed monitored vehicle
- particular movement and place scenarios (e.g. schools, retail areas, etc.)
- in poor weather and road conditions.

4.2.3.b Status/power beliefs: Some drivers see speeding as desirable and a symbol of power or status.

Some drivers see exceeding speed limits as a display of personal power and status. Remaining consistently at a posted limit can be seen as a signifier of driver incompetence, laziness, inattention or even selfishness.

4.2.4. Low level speeding is **tolerated**

Drivers feel low level speeding is tolerated by authorities, they are unlikely to be ticketed, and some state their speedometers provide a threshold between the reading and their actual speed.

4.2.4.a Enforcement beliefs: Drivers believe the probability and consequences of getting caught at low levels of speeding is small and minor.

Drivers believe the risk and consequences of getting caught low level speeding are low. (e.g. $30 for doing 57 kilometres in a 50 kilometre zone).This is supported by enforcement data with penalties issued for speeding by 5 kilometre per hour being significantly lower than other infringements despite drivers readily admitting to low level speeding.

4.2.4.b Tolerance belief: Drivers believe that low level speeding is tolerated by law enforcement.

There is a shared belief that low level speeding (within 5 kilometres per hour) is officially tolerated by authorities and therefore safe. Drivers recall police and media promotion of zero speed tolerance over holiday periods as evidence that under normal circumstances authorities *do tolerate* low level speeding. Essentially when tolerances are specifically highlighted as being tightened during special circumstances, this reinforces the belief that low level speeding is *normally* tolerated.

4.2.4.c Speedo calibration beliefs: Some believe their speedometers are set high.

Some drivers believe that the indicated speed on their vehicle's speedometer is higher than the actual travel speed. Based on this belief, drivers increase their speeds by around 5 kilometres per hour to counter this, assuming this will have them at the correct speed. Some point to driving through automated speed detectors, noting the indicated speed and comparing this to their speedometer as evidence of this. Some state that car manufacturers do this for liability reasons.

> *"I think all cars show the actual speed as slightly lower. I always generally aim at 5 k's over or a little bit more because I assume the speed limit means the actual speed." (Female, 31 years, Auckland)*

4.2.5. Low level speeding has **few barriers**, if any

Because drivers believe low level speeding is safe, efficient, acceptable and tolerated, they point to few, if any, barriers to doing so.

> *"I go a little bit faster because I think I can." (Female, 31 years, Auckland)*

Drivers also note that it is easy and feels right to go faster in modern cars.

> *"Cars are built pretty well these days; they go quite nicely. Not good when you are crawling along." (Male, 69 years, Auckland)*

Some of the few barriers to low level speeding they do experience are speed bumps, GPS monitoring and car voice reminders. City drivers noted that they are seeing more speed bumps around and they are an effective means of slowing themselves and other drivers down well below speed limits. Those who drive work vehicles noted that their GPS speed monitoring ensures they drive below the speed limit, but while they do this in the work vehicle they do not abide by limits in their private vehicles. Lastly, vocal reminders from their vehicle when they are going over the speed limit are also a deterrent (sometimes) or at least a reminder of the speed limit for those who have this technology.

The significant barriers to speeding that were raised in the focus groups tend to relate to higher or **excessive** speeding (above 10 to 20 kilometres per hour). Drivers describe a range of barriers to excessive speeding including:

- regret avoidance—not wanting to be the person that causes others harm
- social expectations—not wanting to be stigmatised or being seen as 'that speeding person' especially in small communities
- fear of penalties—not wanting to be penalised via fines or loss of demerit points
- passenger comfort—not wanting passengers feeling unsafe.

Key takeaway: By targeting the core beliefs of safety, efficiency, acceptability and tolerance NZTA Waka Kotahi can enable drivers to consciously reflect on and reconsider their speed habits and choices.

4.3. What is informing driver beliefs?

Drivers primarily point to their own experiences as the source of their beliefs around speed, low level speeding and speed limits. However, discussions show that perceptions of the system, road safety communication, media portrayal of speed, and driver training also influence driver beliefs.

4.3.1. Beliefs are informed by a driver's individual experience

Individuals reflect on their own lack of crashes, their perceived ability to judge safe speeds and their observations of other drivers as evidence that they can speed safely, all of which ultimately shapes their beliefs about the safety of low level speeding.

Critically, drivers tend to be optimistic about their own skills and risk of crashing and find it difficult to consider collective or system risk when considering travel speeds.

Drivers who also cycle or are active pedestrians do tend to have a more collective or common good mindset when it comes to consideration of speed-related risk. These drivers are more likely to have experienced *near misses* with vehicles and are more likely to have a first-hand view of what it is like to share the road with fast moving traffic.

4.3.2. Beliefs are informed by caregivers and driving instructors

Drivers reflect on how the people who taught them to drive had a strong influence on their beliefs around speed. However, young drivers can experience very different training experiences. Some will be taught by professional driving instructors while others will rely on friends or whānau and are at risk of not having safe speed beliefs ingrained in their early driver training.

Parents do talk to their children about safe speeds, both during training as well as part of day-to-day conversations (especially in response to media or publicity about crashes). Several expressed the desire for more information they can use to explain safe driving practices and safe speed choices.

4.3.3. Beliefs are informed as a result of seeing crashed cars

Some drivers said their beliefs about high speed were formed from seeing displayed crashed cars at their school when they were young or from seeing crashed cars on the side of the road. This reminds them of the risks involved with high speed, but they do not associate them with low level speeding.

4.3.4. Beliefs are informed by the system

How drivers perceive the road safety system is a key determinant of beliefs towards speeding and the acceptability of speed related interventions. Many drivers lack trust in the speed initiatives they see in the system, which in turn impacts their beliefs on speed. System settings,

enforcement and communication are having an impact on drivers' speed beliefs and highlight the following issues.

4.3.4.a Proposed changes appear to lack explanation or rationale

The rationale for changes to speed limits or infrastructure is not well explained or understood by drivers and acts as a key barrier to understanding about low level speeding. Without these explanations, system changes do not match with driver beliefs. The changes are not seen as necessary for safety and are just seen to reduce efficiency.

4.3.4.b Safety targets appear unrealistic

Road to Zero, when presented as a target, is seen by some drivers as ambitious and unrealistic, and this acts to undermine the credibility of safety programmes and engagement with safety messages.

4.3.4.c The idea of safe system stakeholders working together is not compelling

The idea of *everyone working together,* in the context of transport stakeholders cooperating, is not an engaging idea for drivers. In contrast, the idea of *drivers* and *communities* working together (i.e. sharing the road, being courteous to each other, helping each other get to where they need to go, communities collaborating and contributing to safety changes that are fit for purpose) tends to emerge as a stronger theme and does resonate more drivers.

4.3.4.d Inactive road works and temporary speed signs reduce driver sensitivity and diminish speed limit credibility

Speed signs that appear to be associated with inactive road work sites create an environment of uncertainty and frustration, and work to reduce driver sensitivity to speed limits. Drivers describe slower temporary limits being active on roads that appear unattended for long periods of time; they can't see the risk and so drive above the temporary speed limit. Reduced temporary limits need clear reasoning and purpose.

> *"Another area where they unnecessarily reduce the speed is on roadworks when there are no road workers working. So you're driving 80 kilometres per hour and then it says drive at 30 kilometres… but there's no one working." (Female, Auckland)*

4.3.4.e Reduced limits around schools during school holidays and weekends were also raised as being unnecessary by some

Drivers suggested that intelligent digital speed limit signs are preferable, so the limits were lowered while children were at school and were back to normal when children were not present.

4.3.4.f Enforcement is seen as revenue raising

Perceptions that safety cameras are positioned to generate revenue as opposed to improve safety is a challenge to trust and credibility and acceptability of speed-related messaging.

4.3.4.g Roading improvements have led some to feel they can drive faster on better roads

Some drivers have indicated that their comfort driving faster has increased following the movement of some of the roads they use. This has translated into beliefs about the safety of higher speeds resulting in some drivers choosing higher speeds more often.

4.3.4.h The apparent focus of road safety efforts

Driver perceptions that the focus of safety promotion is on other crash risks and that enforcement does not target low level speeding has created the belief that low level speeding is acceptable and tolerated.

4.3.5. Beliefs are informed by road safety communication and media promotion

Promotion of other crash causes and media commentary has led to a road safety hierarchy dominated by the big three issue 'brands' (restraints, distraction and impairment) where drivers mostly discount speed as a leading risk factor.

Campaigns focusing on crash factors that do not directly relate to speed have helped create and confirm beliefs that speed is not the main problem to be solved. Campaigns that target drivers' individual control beliefs are easily rejected and can have the opposite effect of confirming the belief that speed is not the key issue. This can reinforce the belief that slower speeds are not the solution to increased safety, and it is a driver's skills or poor decisions that need to be the focus of road safety efforts.

Even when speed is a feature of a road safety campaign, drivers draw on their beliefs that other factors are to blame (e.g. lack of skill, or fault of other driver, distraction). While there is some recognition of the idea of 'the faster you go the bigger the mess', the role that speed plays in the context of lower speeds or small speed differences is less well known or understood.

Public statements about limit reductions are seen to lack context in terms of road type, road risk, safety benefits, road use or surrounding activities. Importantly, these are the factors that actually determine a speed limit; however, they tend to be absent in the narratives recalled by drivers.

Some drivers were aware of the publication of driver attitudes and sentiment towards speed limit reduction. Drivers who noticed these reports in the media prior to the groups suggested that reporting of this nature reinforced their view that speed limit reductions are not popular or are unwarranted. However, these public survey questions did not specify road type, road risk, improvements in survivability, etc. In the absence of this degree of detail, these types of public survey results are likely to continue to reinforce polarisation of the issue.

4.3.6. Beliefs are informed by the positive portrayal of speed in popular culture

Speed, power and control are celebrated in movies, in motorsport and in the portrayal of attractive vehicle and driver attributes.

4.3.7. Beliefs are informed by the public's focus on driver training as a solution

Drivers believe the main cause of crashes is poor choices made by poor drivers and speed is not the problem. As such, a commonly held belief is that improving driver training is the answer to reducing deaths and serious injuries, not lower speeds. This belief extends to the idea that well-trained drivers have the skills and capability to drive at higher speeds safely. Media or expert commentators supporting the idea for more advanced or defensive driver training, essentially reinforces the beliefs that individual drivers are to blame for crashes, that safe drivers can speed safely and that reducing limits is an attack on good drivers and will not improve safety.

4.3.8. Beliefs are informed by a lack of focus on speed within the road code

Some drivers were quick to point out that information relating to the impact of speed on survivability, especially to vulnerable road users and pedestrians was not a topic covered in the road code. While drivers did recall stopping and following distances, they felt that understanding the nature and consequences of speed, and in particular low level speeding impacts, was a critical driver capability and that current driver training did not adequately address the topic.

One discussion highlighted the fact that the road code highlights the need to give way to vehicles wishing to pass from behind. This was seen as a reinforcement of the social norm that low level speeding is acceptable.

Overall, drivers felt the material covered in the focus groups relating to speed limits not always being safe and appropriate, the survivability impacts of small increments in speed, the value of courtesy and the impacts of speed on others (including broader community enmity impacts) should be given more prominence in driver training.

Key takeaway: NZTA Waka Kotahi competes with a range of voices and messages that can create or reinforce unhelpful beliefs.

4.4. Is speeding a choice, a habit or both?

Drivers describe their travel speed as both a conscious choice, a habit and an unconscious reaction to their surroundings.

For the purposes of exploring driver beliefs, we will not attempt to describe unconscious driver reactions.

Instead our focus is on the two separate but related concepts of choice and habit:

- **Speeding as a conscious choice** whereby drivers are speeding with an awareness of why they are speeding and have undertaken some mental process to make that choice.
- **Speeding as a habit** whereby choices have been positively repeated to such an extent, that they now occur with little consideration, awareness or intention.

These are important distinctions as they imply the need for different approaches to driver engagement.

4.4.1. Speeding can be a habit

Understanding speed choice through the lens of habit or an automatic behaviour is an important consideration and highlights some of the challenges in understanding why drivers speed. John Bargh (1994)[9] suggested that four characteristics usually accompany a habit or automatic behaviour:

- **Low awareness:** A person may be unaware of the mental process that is occurring. While drivers typically are aware of *when* they are speeding, drivers often describe finding themselves travelling at higher speeds without really understanding *why*.
- **Low intentionality:** A person may not intentionally initiate a choice process. Drivers again describe speeding without a conscious decision to do so. It can just happen.
- **High efficiency:** Automatic mental processes tend to have a low cognitive load, requiring relatively low mental resources. Drivers described driving above a limit as *easy to do.* It requires cognitive effort to consciously diagnose and then choose a lower less habitual speed. Emotional, anxious or distracted mental states reduced the availability of mental resources to make conscious speed choices.
- **Low controllability:** A person may not have the ability to stop or alter a process after initiation. Once a habit forms, it is not easy to break from it either in the moment of speeding nor across subsequent journeys.

These characteristics (also known as the *four horsemen of automaticity*) were all described to various degrees by our research participants. Where drivers are habitually speeding, they need an initial prompt to consciously reflect on their speed choice before they can become aware of their choice or even the beliefs that underpin that choice. Once this conscious reflection occurs, then the opportunity arises to break the loop of habit reinforcing high speed choices by addressing the underlying beliefs that lead drivers to see speeding as a satisfying, efficient, acceptable or fulfilling act.

[9] John A Bargh. "The Four Horsemen of Automaticity: Awareness, Intention, Efficiency, and Control in Social Cognition". New York University.

4.4.2. Speeding can be a choice, albeit an easy one to make

Drivers were also sufficiently self-aware of making the choice to speed. They were able to describe triggers that led them to a conscious awareness and intention to choose higher speeds both prior to a particular journey as well as during their journey.

Drivers acknowledge a range of triggers that lead them to make conscious decisions to speed or to continue to choose higher speeds through a journey.

4.5. What triggers speeding?

Understanding the moments and mindsets that trigger speeding behaviour will help NZTA Waka Kotahi better inform, educate and encourage drivers to be more conscious of these triggers and how to mitigate them.

4.5.1. Mindsets that can trigger speeding

The mindsets that can trigger speeding include when drivers:

a. feel time pressure—they increase speed in the belief that it will shorten their journey time
   "Sometimes things happen [in your day] that are out of your control and then you have less time. So you need to bend the [speed] rules slightly. Otherwise, it is going to disrupt your whatever it is that you have to do that day." (Female, Auckland)
b. feel impeded—they increase speed in the belief that it will recover time lost to slow moving traffic
c. feel competitive—they increase speed as a competitive response to keep up with or pass another vehicle
d. feel social pressure—they increase speed to conform with a perceived social norm i.e. to go with the flow of faster moving traffic, especially when they are being tailgated
   "I don't like tailgaters, they force me to drive faster." (Male, Auckland)
e. feel anxious, excited or expressive—they increase speed because it matches their mood or they are sensation seeking
f. are not concentrating e.g. due to a route they take often or on longer road journeys.
   "Sometimes when I come to a 50k zone, I just absentmindedly forget. And I'm like 'Oh, it's 50!' I might go like 55 or close to 60 sometimes." (Female, Auckland)

Drivers explained that when they are in some of these mindsets they are being *selfish*: they are thinking about themselves and not others.

"Before going to the focus group, I was selfish. It was all about me, me, me. That other people are idiots and they are not my problem. Human nature is fight versus flight, but I really need to combat that." (Female, Auckland)

4.5.2. Moments that can trigger speeding

The moments that can trigger speeding include when drivers are:

a. driving alone, with no passengers—in the belief that they are not putting others at risk

b. driving on familiar roads—in the belief that they are more aware of hazards, road conditions and layout
c. on roads with little or no other traffic (i.e. at night time)
d. on wider, more open roads with clear visibility
e. on longer journeys (i.e. needing to cover longer distances over longer durations)
f. more confident that detection is unlikely
g. not aware of what the speed limit is because they haven't seen a sign
h. driving at their usual speed out of habit or impatience after a speed limit reduction
i. driving an electric vehicle.

"I innocently went over [the limit] when I switched from a petrol to a hybrid car because it's a bit quieter." (Female, Auckland)

4.5.3. Moments and mindsets that limit low level speeding

Conversely, there are moments and mindsets that limit low level speeding, including when drivers:

a. are in a more relaxed mindset
b. are driving with passengers, especially children
c. suspect or see police or a safety camera
d. are on unfamiliar roads
e. are faced with bad weather (wet, windy)
f. are faced with poor road conditions (surface, width)
g. are near schools or see children or elderly by the roadside
h. see people who are trying to cross the road
i. are sharing the road with cyclists
j. are in high-pedestrian areas such as shopping areas
k. are on narrow roads or roads with lots of parked cars
l. find that everyone is driving at the speed limit

"It's easy to stay at the speed limit when everyone else is." (Female, Auckland)

m. are reminded of the speed limit or prompted with their current speed by signage, active speed signals, or internal vehicle speed warnings.

"I get the voice that says 'please obey all traffic regulations." (Female, Auckland)

Some drivers acknowledge their speeding has reduced over time, most often due to having:

a. had children
b. experienced a close call or a vehicle accident
c. become more mature and relaxed.

Key takeaway: By acknowledging that speed is both habitual and conscious, triggered by a set of familiar mindsets and moments, NZTA Waka Kotahi has the opportunity to develop strategies and tools that encourage more conscious reflection of speed habits and address the mindset and moment triggers that lead to higher speed choices. It should also be noted that it is beliefs about low level speed that allow these habits to form and choices to take place.

4.6. How do drivers react to the idea of *slowing down?*

The proposition that *slower is safer* generates a range of both positive and negative responses.

4.6.1. Drivers can feel uncomfortable

Becoming conscious of an unconscious habit can be disrupting. Due to the habitual nature of speed choice, some drivers struggle with the apparent disruptive nature of being asked to become more conscious of their speed choice. Essentially, they are describing the *centipede effect*, a term coined by psychologist George Humphrey from the following parable[10] that occurs when a normally unconscious activity is disrupted by a conscious reflection on it.

> *A centipede was happy – quite!*
> *Until a toad in fun*
> *Said, "Pray, which leg moves after which?"*
> *This raised her doubts to such a pitch,*
> *She fell exhausted in the ditch*
> *Not knowing how to run.*

Drivers trying to change speeding habits often point to this effect in the context of having to take their eyes off the road and onto the speedometer to check their speed. Or they describe the discomfort they feel travelling at a speed that is uncharacteristically or *painfully* slow compared to their habitual speed.

This research highlights the habitual nature of speed choice and identifies the need and difficulty in generating sufficiently conscious reflections, by creating awareness of the issue, elevating its importance and providing drivers with the tools and encouragement to overcome strongly entrenched habits.

4.6.2. Drivers can feel confused

Drivers typically have a low level of understanding about why lower speeds are needed. This includes the following reactions:

4.6.2.a Current limits are believed to be safe

In the absence of conflicting data, drivers reasonably believe that any specific current limit they encounter is safe. Many express the belief that current limits must be safe because in their mind they are told to trust and obey them; they are based on a government approved *scientific method* and there is no additional signage or indication to suggest otherwise. Understandably, drivers are often surprised to learn that many speed limits they would be likely to encounter are no longer considered to be safe or appropriate for the road.

[10] Humphrey, George (1923). The story of man's mind. Boston: Small, Maynard and company. p. 109.

4.6.2.b Changes are not seen as necessary

There is low awareness or understanding of how speed limits are currently set, nor which limits on which roads should be considered unsafe. In the absence of this understanding or explanation, changes to limits are seen as unnecessary. Drivers simply do not understand why a change is needed, when and where they should be applied and what they take into account.

This is not always the case, however, with drivers being able to recall a road that might benefit from lower speeds, although this was often in the context of schools or when visiting drivers are needing to slow down.

4.6.2.c Changes are not adequately explained

When speed limit reductions are put in place, drivers can perceive a lack of accompanying explanation or rationale about the change. Drivers point to a lack of credible evidence provided around the current risk and the expected benefits, at least not in sufficient visibility or detail.

4.6.2.d Changes can be seen as blunt or taking a blanket approach

Drivers with negative reactions to lower speeds frequently describe conversations about speed limit reductions as taking a 'blanket approach'. A *blanket approach* is described as not taking into account local communities needs or experience. Some drivers believe that decisions are being made by what one described as *ideological desk-bound central government officials* who do not understand local road conditions nor the communities affected.

Drivers are more open to accepting lower travel speeds when presented with a specific road and rationale for why a speed on that road is not safe or appropriate, as opposed to being asked to accept lower travel speeds across the network.

4.6.3. Drivers can feel angry, annoyed and defensive

For many, slowing down goes against a driver's identity, values and beliefs. Drivers who have the strongest negative reaction to the suggestion of lower speeds tend to:

4.6.3.a Identify as highly skilled

Competent and experienced drivers, often driving larger, more powerful and modern vehicles and often driving as part of their job or regularly driving long distances, tend to be the most resistant. They see slower speeds as not addressing the real cause of crashes, notably the lack of skill in others.

4.6.3.b Value individual responsibility and accountability over the idea of reducing speed for the safety of all drivers.

The concept of *slowing down* can be seen as patronising and not recognising the skills and competence of drivers nor the real cause of crashes. They see speed reduction interventions as punishing the good driver for the sins of the poor driver.

4.6.3.c Value efficiency

Drivers often relying on their vehicles for longer journeys, their daily commute, their work or keeping to busy schedules where timely trips are required (shopping, keeping appointments, taxiing kids to and from activities etc) are often more resistant.

4.6.3.d Be more fatalistic

Drivers may see crash harm as an inevitable and unavoidable consequence of vehicle use. Their view being that crashes will always happen and that any speed can still cause harm.

4.6.3.e Not fully understand survivability at different speeds

> *"When the road to Ahipara changed from 100 to 80, I was very resistant. I though 'I'm just going to still do it and everyone else felt the same too. It's been 100 for 100 years! Where was the community consultation? Why was it changed?" (Female, Kaitaia)*

4.6.3.f Distrust the intent and capability of the system

Drivers react negatively if they believe central government decisions to reduce limits are not credible in that they are:

- focused on revenue raising
- disconnected from communities
- an excuse for not investing in road maintenance
- misguided in that they will not improve safety, that other factors are more important.

4.6.4. Drivers can feel positive

Drivers that have a more positive reaction to the suggestion of lower speeds and speed limits tend to:

- be parents of young children or of young adults that drive
- be more likely to cycle as well as drive
- be more community minded
- have shorter commutes and do not require driving as part of their job
- be already familiar with and have a good understanding of the *physics of speed* and prioritise this
- believe that society in general would benefit from slowing down.

Key takeaway: When drivers are asked to slow down they can feel patronised, irritated and attacked. These emotional reactions act as significant barriers to engagement and efforts to inform drivers.

4.7. What beliefs should we address and what works?

Drivers are **comfortable** with their low level speeding habits because they are **confident** in their beliefs (low level speeding is safe, efficient, acceptable and tolerated).

There is therefore a need to both prompt more conscious reflection of speed habits and challenge strongly held beliefs and build driver understanding that low level speeding:

- **is not safe**—even small increases in speed lead to big increases in harm
- **is not significantly more efficient**—lower speeds do not add significantly to journey time
- **is not socially acceptable**—most drivers do comply, that low level speeding affects others and is not socially unacceptable
- **is not tolerated**—low level speeding is not officially tolerated and will likely attract a penalty.

To identify the type of information, messages or evidence that might prompt conscious reflection and create new understanding and beliefs about speed, a range of ideas were initially shared with focus group participants. These ideas were discussed further during a follow-up interview conducted up to 10 days following the group discussion to explore any sustained impact on attitudes of driving behaviours.

It should be noted this was not a formal concept testing exercise. Instead we used a range of high-level ideas and evidence to initiate conversations and explore current beliefs and how entrenched these beliefs were. We explored the type of conversations that might lead to conscious reflection and a shift in beliefs both during the immediate focus group discussion and in our subsequent follow-up interviews.

This research highlighted the following potential information and communication pathways to achieve change and support safer speed habits.

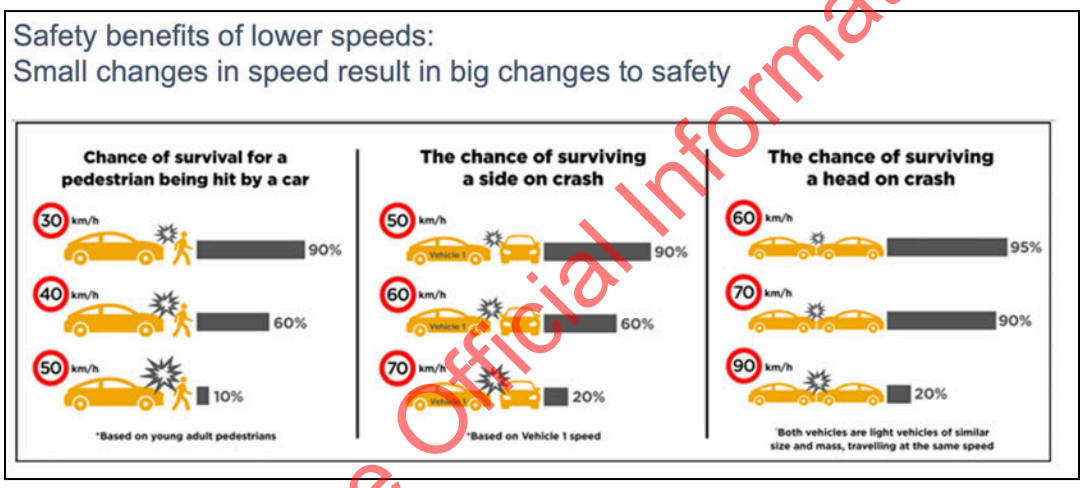
4.7.1. Inform safety beliefs by making drivers aware of the impact of **small and relatable differences in** speed

Drivers are already familiar with the idea that *faster speeds lead to bigger mess*. The issue is that they do not currently associate low level speeding as a safety issue. Continuing to focus on this type of speed message is unlikely to be seen as new or novel information and is therefore unlikely to generate the level of conscious reflection required to challenge the confidence in currently held beliefs and create engagement. This is a key barrier to drivers choosing safer speeds.

Making drivers aware of how *small speed differences have a big impact on survivability* was described as new information for many and was clearly effective in creating both conscious reflection as well as shaping new beliefs and understanding about the safety risks of low level speeding.

By focusing on the *survivability consequences of small speed increments* as opposed to targeting the skill of the individual driver or their ability to avoid a collision, this approach also minimised rejection caused by high control beliefs.

The image below had the greatest impact across all groups and was reported by drivers in the follow up interviews as the most memorable and effective information provided. Drivers reacted most strongly to the large changes in survivability caused by relatively small yet familiar changes in speed. The information also provided a clear rationale for the allocation of different speeds to specific scenarios (pedestrian, side on and head on). For most drivers, this was new information and provided a useful and easily understood rationale for why certain speeds are safe and appropriate for certain settings.



"Slowing down by 10 kilometres is so little, but has a huge impact. That 10 kilometres can be a life or death situation, and all that is required of me is taking my foot off the accelerator." (Male, Auckland)

Importantly the above image tended not to trigger the type of defence control beliefs seen in response to graphs depicting stopping distances (see below) where drivers became defensive believing that they would be able to stop in time and avoid a collision.

Likewise while drivers understood the effect of speed on peripheral vision, many felt the risk did not apply to them and that they were alert and skilled enough to stop in time.

4.7.2. Inform safety beliefs by acknowledging that legacy speed limits are not fit for purpose and they need to change and become human centred

Drivers tend to believe current limits are safe and appropriate. They assume that existing limits have been set using an evidence-based scientific method with a focus on safety.

Introducing the idea that 90 per cent of speed limits on New Zealand roads are neither safe nor appropriate is new information and generates both a heightened appreciation of the risk of exceeding them and an openness for a new approach to setting limits.

In parallel, the idea that *we now know better and need to do better* was compelling for many drivers and tended to create a more receptive, open-minded approach and willingness to consider the benefits of lower speeds.

"This is them explaining that they are not changing things for the sake of it. They are saying we got it wrong. It's logical, it's good to hear, and it's about, 'Don't you want to be safe?'" (Female, Kaitaia)

This proposition also provided drivers with the rationale for changes that they have already seen on the roads they use. Prior to this explanation, drivers voiced frustration with changes indicating that they did not understand why changes were being made. Presenting the need for change in this way created an understanding and rationale that drivers could relate to.

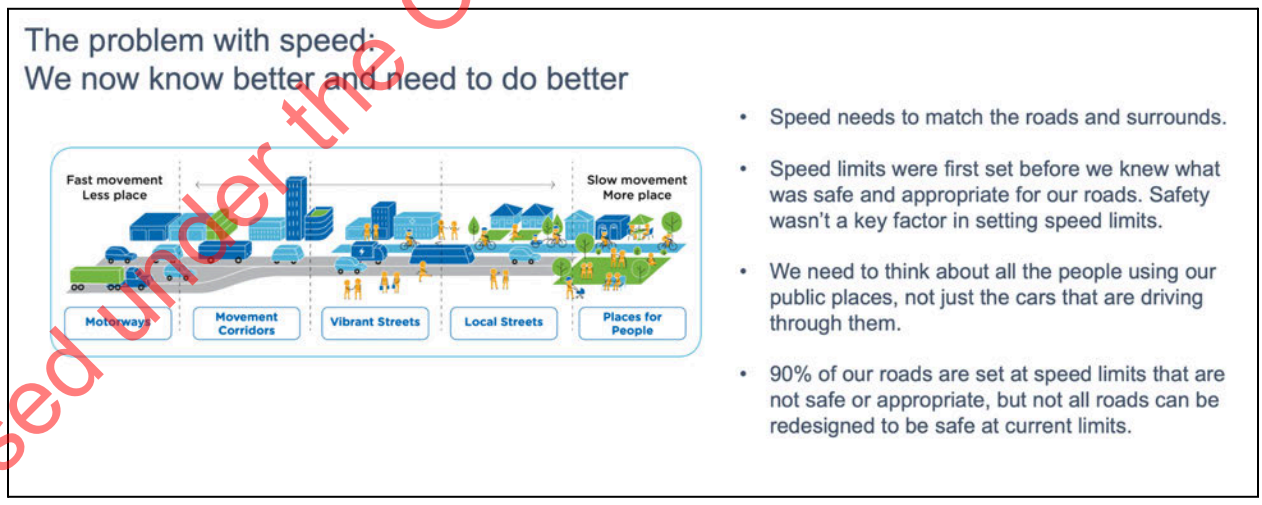
Drivers agree that travel speed and speed limits should be fit for purpose. Highlighting a new approach based on new understanding tended not to be seen as a direct challenge to self-identification as a safe driver or to deeply held control beliefs.

The shared belief that speeds should be fit for purpose combined with being made aware of a new approach to setting limits supported the idea that speeds should match the road and take into account vehicle movement, people and place. This shared belief provided the rationale of (and palatability for) roadworks and the need for road improvements to travel at the legacy speed limits. In turn, while waiting for these road improvements, lower speeds were seen as a way to keep themselves and their community safe.

"Lowering our speeds means we can do something now!" (Female, Kaitaia)

This idea appears to also encourage more of a common good mindset and appreciation of the impact of travel speeds on the broader community. Following exposure to this idea, drivers reported becoming less fixated on journey progress and more aware of the purpose of a road and empathetic to the people and activities surrounding the roads they used.

"Instead of watching the clock and the car in front, I now just enjoy the journey more." (Male, Dunedin)



An example of why it is important to explain this new movement, people and place approach to speed management is provided by this driver below rejecting the need for change because of their belief that risk assessment should be determined by crash statistics as opposed to road risk. This driver simply cannot understand why changes need to be made to a road with no recent crashes.

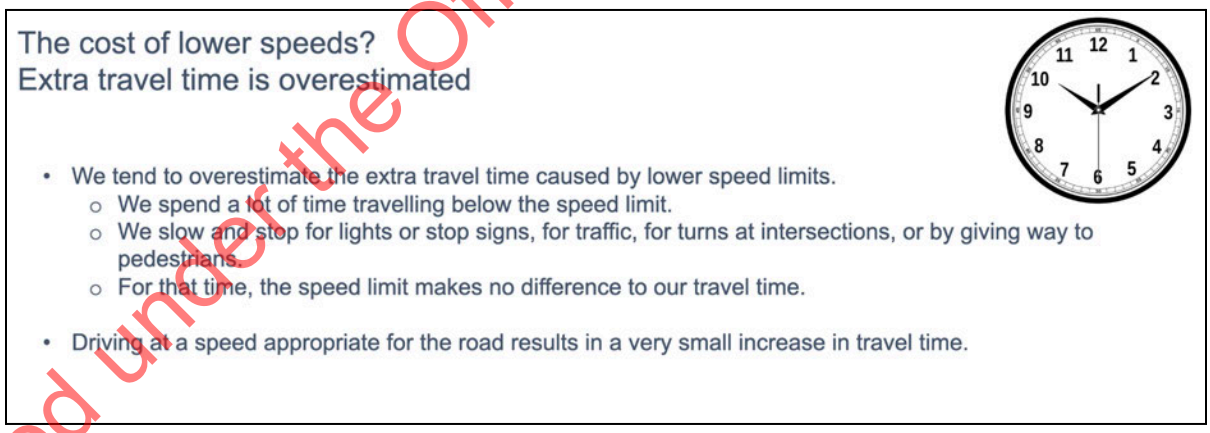
"To make this credible, you need numbers, you need statistics. Can you show me that on Greendale Road, there's ever been an accident, not a head-on at 100 when somebody died, just an accident? Where somebody has pulled out and somebody has run into them? There is no point saying to everybody that has driven this road for the last 20 years to slow down when the only accident was someone getting a puncture and running into a fence. Why do you want to drop it to eighty? It does not make any sense." (Female, Darfield)

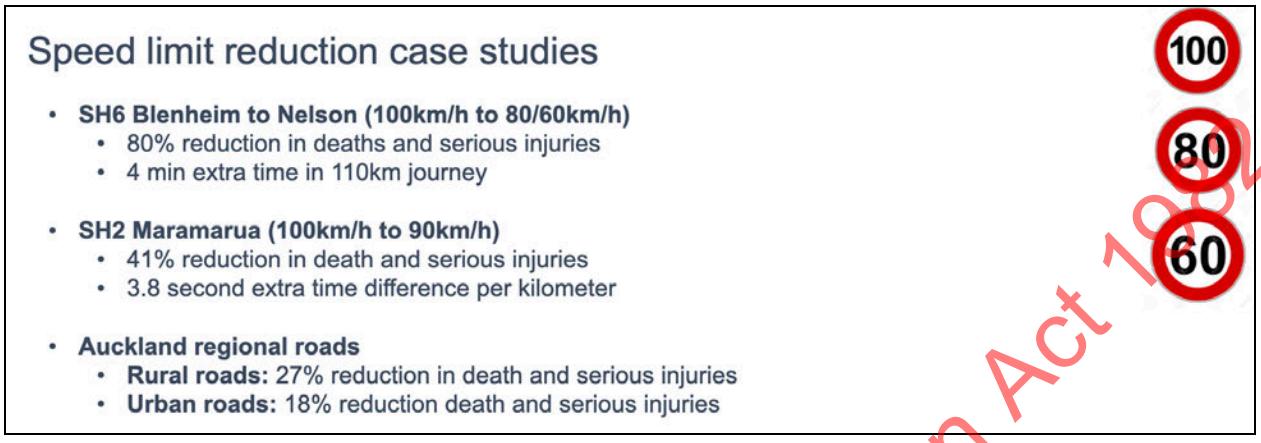
4.7.3. Inform efficiency beliefs by showing drivers how lower speeds add little time relative to the degree of safety improvement

Drivers value speeding because it feels satisfying, efficient and productive. Yet many drivers in the groups acknowledge that speeding is not that efficient in reality; they often end up arriving at a similar time as other speeding drivers they shared their journey with. When the reality of how little time is added to a journey is combined with the safety benefits of staying at a limit, drivers tell us their beliefs about the benefits and attitudes to low level speeding do shift.

In our follow up interviews, drivers reported changes to their attitudes to travel time. Some had made a conscious decision to plan ahead and allow more time for their journey. By leaving earlier, they reported reduced anxiety and pressure to speed.

Others described becoming more confident in the idea that lower speeds would not lengthen their arrival time significantly. This left them feeling more relaxed and more comfortable driving at the speed limit or at lower speeds.





4.7.4. Inform acceptability beliefs by shifting the social norm

Drivers believe speeding at low levels is acceptable because they see other drivers speeding and tend not to see or understand the impacts that their speeding has on others. While addressing the safety risk of speed will go some way to change this belief, a harder challenge is to make speed limit compliance an accepted social norm.

NZTA Waka Kotahi can address this by showcasing safe driver choices, introducing broader community impacts of speed and empowering a range of diverse voices.

Showcasing good driver choices

Reinforcing the idea that most drivers are good drivers who value safety and make safe speed choices is important to help establish a clear picture of what normal speed choice looks like. While even good drivers can make mistakes, take on bad habits or underestimate risk and overestimate safety, it is important to position safe speed choice as the social norm.

Most drivers believe they make good speed choices every day: assessing road conditions, assessing roadside risk and watching out for hazards and adjusting their speed accordingly. However as we have identified, most do not consider low level speeding as speeding.

NZTA Waka Kotahi can reinforce social norms by highlighting the fact that staying at the limit is a safer speed choice and by reflecting on the actions that people are taking to help themselves stay at or below a posted limit.

Drivers report a range of practices they use to help them avoid speeding triggers; these include:

- planning their trip by leaving earlier / with more time
- being conscious to reject the feeling of efficiency to drive faster if running late
- rejecting the social pressure to speed up if an impatient driver is close behind them
- using podcasts or music to help them relax or reduce boredom.

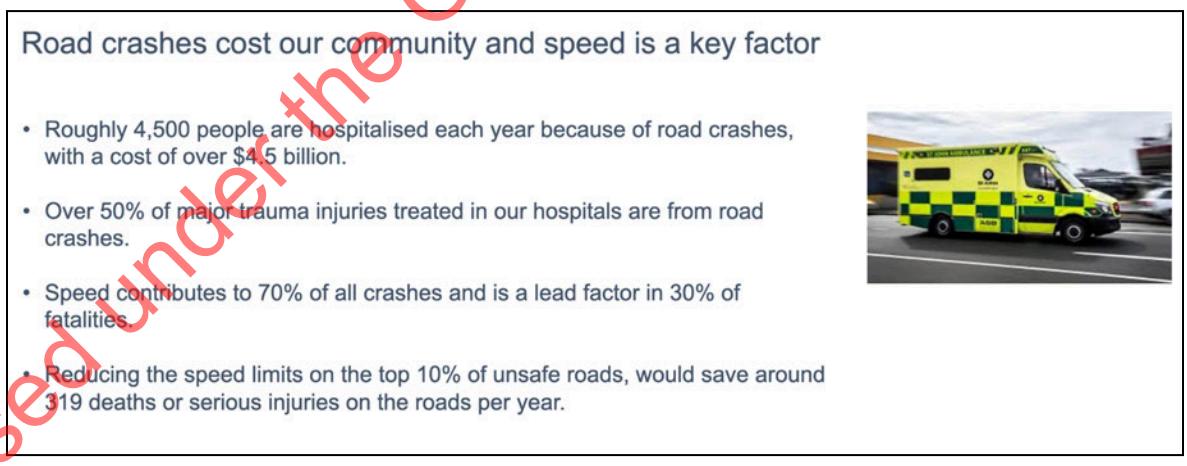
"[After being in the focus group] I went from moaning to 'I get it'. I got the facts. You can't tell me now that everything is cool. I'm getting ready earlier, and I'm focusing on driving more relaxed. If a car is tailgating me, I just pull over where it's safe. It's frustrating but I think, 'well I know something that you don't'. And who cares if I am running late? I don't care. I'm only going to be five minutes late and I just think 'right, safety first'... I tap into it. I think about my children." (Female, Kaitaia)

Introduce broader community impacts of speed into the conversation of speed-related consequences.

Focusing on individual crash events can lead to drivers rejecting the relevance of the message to themselves and blaming the individual, especially when an individual driver's story is depicted in detail in road safety communication. This approach tends to reinforce an individualistic mindset as opposed to a more constructive common-good mindset.

Broader community impacts do resonate however and work to create more of a common good mindset. While drivers may reject calls for lower speeds and continue to blame the individual for crashes, some identify with and respond to the *downstream* effects of crash trauma or other negative impacts on communities. Drivers highlighted that detail relating to the burden placed on the health system as helping them better understand the need for safer speeds. In the context of a health and hospital system capacity emergency, drivers were surprised by the level of burden caused by vehicle trauma.

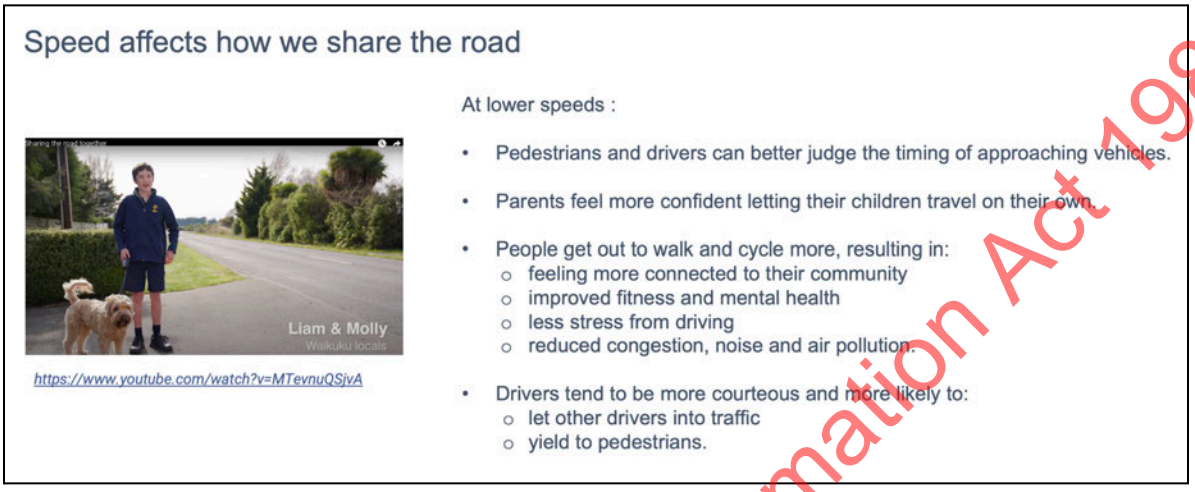
A clear gap in the information shared was the proportion of crashes, deaths and serious injuries caused by low level speeding. This information would support the belief that low level speeding is unsafe and an important crash risk.



The slide below provided a range of community impacts and was effective at communicating the idea that speed has an impact on how the community uses and shares the road.

While this information was not as compelling as the survivability and efficiency themes, it was an important counterbalance to the individualistic vs collectivist values tension. It introduces impacts of speed that did not focus on individual driver skill and did not highlight the emotional

consequences of speed-related crashes and allowed speed to be discussed in a way that most drivers could empathise with and relate to.



4.7.5. Inform **tolerance** beliefs by correcting misconceptions around enforcement

Clarifying that low level speeding can be a punishable offence will directly address the misconception that low level speeding is tolerated. Importantly, this will also require building system trust and credibility by addressing the belief that enforcement is misdirected and aimed at revenue raising.

Highlighting the enforceable nature of low level speeding penalties will need to go hand in hand with information that describes why low level speeding is an important safety issue and the consequences it creates from both a safety and amenity perspective. This explanation and rationale will be critically important to support driver acceptance of any expansion of speed cameras or any possible adjustment to safety camera tolerance settings.

Key takeaway: There is a need to prompt conscious reflection on speed choice and to shift core beliefs. Information that was seen as new, compelling, personally relevant and credible was the most effective.

4.8. How can we support drivers to make safe speed choices?

Low level speed has simply not had the focus that other speed related safety issues have had. Drivers tend to associate *problem* speeding with reckless or extreme speeds. There is an opportunity to position low level speeding as a more top-of-mind safety issue. This could be achieved both by incorporating speed across other safety issues (i.e. no *matter what the cause speed always determines the outcome of a crash*) or by simply elevating low level speeding within the portfolio of safety issues.

Drivers have also become desensitised to the idea that the *higher the speed the bigger the mess*. It is easy for drivers to reject emotional messages relating to high speeds and its dramatic consequences. A fresh message that highlights the dangers of low level speeding is required.

However, while raising the profile of low level speeding is needed, core beliefs can be incredibly hard to change. People form beliefs based on values, experience, emotions and unconscious bias; new information does not always change people's minds. For many people, information that challenges their values and beliefs feels like an attack on their personal identity and can cause them to harden their position and reject new evidence.

Negative reactions by some drivers in this research highlights what can happen when new information challenges strongly held efficiency and individualistic values and individual control beliefs. Drivers simply reject evidence that challenges driver capability as they strongly believe that they can speed safely.

As such, while it is important that this research identifies **what** beliefs to target, understanding **how** to best to influence them is critical. To do this, we have identified several opportunities to avoid the risk of rejection and open drivers up to new information without challenging values or core beliefs.

This research highlights the opportunity to support drivers to choose safe speeds by making them attractive, easy, social and timely.

4.8.1. Make lower speeds attractive

4.8.1.a Provide new information to shape new beliefs and reinforce commitment to existing positive beliefs

So what benefit is there in providing new information in the face of conflicting values and beliefs? Critically, new information can build new understanding and renewed commitment. It can support those already predisposed to certain behaviours to feel more confident and committed to the beliefs that underpin them.

In this research, facts about the safety of legacy limits and the increased risk of small differences in speed provide clear and accessible touchstone evidence that builds driver confidence and commitment to the belief that lower speeds are appealing. This confidence and

commitment in turn builds the potential for more visible advocacy and allows drivers to deflect social pressure to speed and ultimately create new social norms.

Following presentation and discussion of new information about the risk of low level speeding, many drivers in the follow-up interviews reported becoming more sensitive to their speed and the speed of surrounding vehicles. They indicated that they had also become more aware of pedestrians and more mindful of their surroundings on lower speed roads. Some described this new information about the risk of low level speeding and need for safe limits as akin to a set of touchstone facts or a set of memorable reference points that had stayed with them, allowing them to be more committed to staying at the limit and advocate for safe speeds.

"If you had told me that they're going to bring the speeds from 100 to 80 without mentioning any facts, obviously that's just absolute bullshit. But now hearing that it doesn't actually make that much difference to my time, that it could save somebody else's life, that is quite huge." (Female, Darfield)

"The information in the focus groups hiked up my empathy and compassion for others. It made me think about my moving vehicle at speed, which weighs a tonne. I'm now sticking to speed limits. I'm more aware of hazards and strictly driving on the left. I'm just more polite. I'm focusing on not getting distracted. I say to myself 'right now I am driving and I'm focusing on this.' I'm allowing more time to get places, like I allow an extra 10 minutes for parking if I'm going to an unknown place. Or if I'm running late, to say to myself 'It's okay if I take an extra ten minutes.' I let people know if I'm running late. I thank them for being patient. I'm transparent. The old me does come back, but I'm catching myself when it happens." (Female, Auckland)

Many drivers in the focus groups, while disengaged at the beginning, become highly receptive to the information that was shared. This indicates an underlying openness and curiosity. The material shared was considered new, relevant and important for drivers to become more familiar with. Drivers suggested the information provided new insights and understanding of the safety implications of speed choices, particularly in the context of low level speeding.

While not all drivers accepted that the information would change their behaviour, most reflected on the ability of New Zealand drivers to accept and adapt to change, particularly when change was accompanied by both social marketing and enforcement. Two examples were provided:

- change to the left turn – right turn give way rule in 2012
- changes to restraint and drink driving legislation.

Many drivers, even those resistant to change beliefs around safety or control beliefs, indicated that while they may not support the idea of lower speeds, they would accept changes to limits that were adequately explained.

"Just do it, but explain what and why!" (Male, Dunedin)

4.8.1.b Highlight *we now know better and need to do better* as a rationale for change

The acknowledgement that the understanding of what speeds are safe and appropriate has changed and that a new way of thinking about speed that now considers human vulnerability and survivability and the context of movement, people and place was a compelling overarching idea that allowed even critical divers to lean into the speed conversation. The proposition did not

attack or criticise driver skill, nor is it seen to be in conflict with key values of efficiency (in fact, some drivers saw the movement, place and people concept as supporting the efficiency value, seeing it as a logical fit-for-purpose consideration).

4.8.1.c Reflect shared values and beliefs to reduce the risk of rejecting new information

Understanding existing core beliefs and values and presenting information in a way that does not threaten or challenge them makes it more likely for people to accept new information and form new beliefs.

Identifying shared values (that both safety and efficiency are priorities in safety planning) and using familiar scenarios (making visible the triggers that commonly lead to speeding) can help shape more effective safety messages that do not appear to threaten or conflict with a person's values and beliefs.

4.8.1.d Avoid highly emotive or dramatic content from the speed conversation

Approaching the human consequences of speed in an overly emotional way can be overwhelming, confronting and easily rejected due to driver optimism bias, anxiety avoidance and representation bias whereby drivers attribute blame to the individual affected.

4.8.1.e Avoid singular targeting of driver judgement, skill or ability

Targeting individual skills can be interpreted as an attack on strongly held control beliefs and can result in drivers becoming defensive, emotional and disengaged from the topic. Targeting individual capability also has the effect of reinforcing the belief that others are to blame for crashes.

4.8.2. Make lower speeds easy

4.8.2.a Target familiar triggers that lead to low level speeding

Targeting *moments* and *mindsets* that are familiar to a broad section of drivers can act as a way into new conversations about speed and act as a prompt to help drivers avoid or mitigate the triggers that can lead to speeding.

4.8.2.b Increase the visibility of speed limit signage and indicators of changes to speed limits

Many drivers said they are often not sure of the speed limit on a particular road because they had not seen a recent speed limit sign and the limits are becoming more varied across roads. Drivers who want to travel at the right speeds get annoyed when they eventually come across a sign and realise they were travelling over the speed limit e.g. 100 kilometres in an 80-kilometre zone. Many drivers voiced the need for more speed limit signs to help them travel at the appropriate speed.

Drivers also talked about the value of the range of methods used on the roads to indicate speed limits. As well as the use of the standard signs, they found it easier to navigate speed limits where signs advise the speed limit is about to change, and where there are larger signs and/or painted colour bands and limits on the road at the entrance to urban areas. They felt there should be more of these indicators of speed limits to make it easier to adhere to limits.

4.8.2.c Be specific with locations and the rationale for change so that drivers can understand why change is needed

Local context was identified as being an important component of any communication or engagement with communities. Unique safety challenges relating to speed were identified in each of the focus group locations. Local drivers tend to be acutely aware of these and are likely to reject initiatives that do not reflect the realities of the local conditions, for example:

- Dunedin drivers point to the hilly terrain as a complicating factor when choosing safe speeds. Drivers tend to let speeds get away from them down hills and often accelerate above posted limits uphill to gain momentum.
- Drivers in Darfield point to the long straight roads as a key speed risk with drivers losing concentration and failing to reduce speeds when approaching intersections.
- Drivers in Ranfurly describe tourists failing to slow down as they enter the township and failing to take a key bend that they believe is not clearly sign posted.
- Drivers in Kaitaia are annoyed and confused at why the road to Ahipara has been recently reduced from 100 to 80 kilometres per hour. Most drivers said they and others are still driving the road at 100 kilometres per hour because they have not heard and see no reason for it to be 80 kilometres per hour.
- Drivers in Hamilton were concerned about the safety risks with pedestrian crossings being recently added at the entry and exit points of roundabouts. They rejected the idea that this improved safety. They had witnessed pedestrians being hit and near misses. They felt strongly that it was not good safety management given a driver is needing to focus on other vehicles on entry and exit of the roundabout; to also have pedestrian crossings at the same location was seen as a huge safety risk.
- Drivers in Morrinsville spoke about speed limits being too high in areas which are becoming more residential (peri-urban) or locations that attract a lot of tourists. This is an example where they see change is needed but it is not being implemented.

4.8.3. Make lower speeds social

4.8.3.a Encourage a more collective mindset

There is an opportunity to shift driver mindset from a **driver/vehicle/road** focus, where individual driver skill is the priority and efficiency is the dominant value, towards a **people, place and movement** focus where appropriate (fit for purpose) speeds that consider the common good and shared use are the priority and where safety, efficiency and courtesy are shared values.

4.8.3.b Encourage driver courtesy and empathy for others

An interesting feature of the focus group process was humanising drivers who otherwise might be in conflict with each other on the road. At the beginning of the group discussion, drivers were quick to criticise other drivers for being too slow, unskilled or reckless; however, after sharing experiences and beliefs about speed and safety, participants created a level of shared understanding and empathy. Drivers acknowledge that they get frustrated and choose faster speeds when they come across others in slow cars and judge them in terms of perceived competency as opposed to their vulnerability.

One exchange included a driver indicating that she did not feel safe on certain roads and that her newly licensed daughter was also very cautious. Another driver who had previously been openly critical of slow drivers acknowledged that knowing this would change his assumptions about why drivers choose slower speeds in future.

4.8.3.c Encourage public declaration of driver and community commitment to safe speeds

Drivers appear to respond positively to declarations of commitment to safer speeds. Several drivers indicated that their attitudes to slower drivers change if they see that the slower vehicle they are travelling behind is having its speed monitored via GPS tracking for example.

Likewise, drivers indicated that they approach rural towns differently, choosing lower speeds if they see a community declaration of safe speeds upon entrance to the town.

These public declarations of a commitment to safe speeds have the effect of establishing and reinforcing social norms.

4.8.3.d Encourage a range of diverse voices into the conversation about speed related consequences

NZTA Waka Kotahi can influence acceptability beliefs and build stronger social norms by encouraging and curating more diverse expert and community led voices. Raising the visibility of supporting voices by providing evidence in a local context, acknowledging barriers, making visible social norms and recognising the diversity of road users.

Drivers told us they would be most receptive to particular voices:

- Emergency response professionals such as police and ambulance were seen to be credible spokespeople. However, some are not as relatable due to their professional status. Some drivers believe that the impact they can generate is reduced because it is part of their job to respond to crashes.
- Volunteer firefighters were identified as a compelling voice as they are everyday people forced to confront the impact of speed.
- Pedestrians, residents, parents, young people and kids were identified as being able to provide an authentic view of the impact of higher travel speeds on community well being.

Drivers also spoke about the need to see the facts on speed and reasons for speed limit changes in more places. People become shocked and defensive when a speed limit is suddenly changed with no prior warning, no explanation or no obvious reason. Drivers suggested the following channels would be most effective for communicating speed facts and reasons for limit reductions:

- local community pages on social media
- school newsletters for roads in the area
- iwi communications (in areas with high Māori populations)
- schools, wānanga and kaupapa units
- community newspapers
- signs and billboards
- TV and radio.

4.8.4. Make lower speeds timely

4.8.4.a Use timely reminders to prompt drivers to reflect on their speed habits

Drivers described the value of using timely reminders of travel speed as a prompt for choosing safer speeds. Many pointed to variable speed signs as a useful indicator of speed and a reminder to slow down. Others highlighted the value of heads up display of travel speed used in some modern vehicles as a useful prompt.

There is an opportunity for NZTA Waka Kotahi to leverage specific times in its marketing and communication e.g. key events, holiday seasons, days of the week or times of day when speeding behaviour is most common. Again these calls should be encouraging and not overly critical. They should highlight the value of being courteous and sharing the road as well as dispelling the myth that speeding saves time and most importantly be specific that speeding includes low level speeding.

"This stuff needs to be everywhere, seen everywhere. It needs to be on my socials. It needs to be in the newspaper and on TV for my parents, showing the same facts in different ways. So there's lots of ways to understand it. Lots of information and reminders. You're not aware of the consequences [of low level speeding] until you are made to think about them. And catch phrases work…use catch phrases…my friends and I say them…'Don't be another statistic this summer'…and I say to myself 'Don't let driving distract you'."
(Female, Auckland)

4.9. How can we create and sustain safe speed habits?

Speeding is both choice and habit. Habits are essentially choices that have become automatic through a cyclical process of positive reinforcement. For many, speeding has become a habit. Habits are hard to change and easy to default back into.

The Transtheoretical Model (stages of change model) is a useful framework for understanding how to create and maintain changes in behaviour. Importantly, it acknowledges the need for tailored strategies to address people at different stages of the change process.

This model is highly relevant to the issue of speeding where drivers have various levels of understanding and beliefs about speed, speeding and speed limits and over time are likely to default to old habits.

Below is an example of how the stages of change model can be applied to supporting drivers along the safer speed journey to create safer speed habits based on the insights from this research.

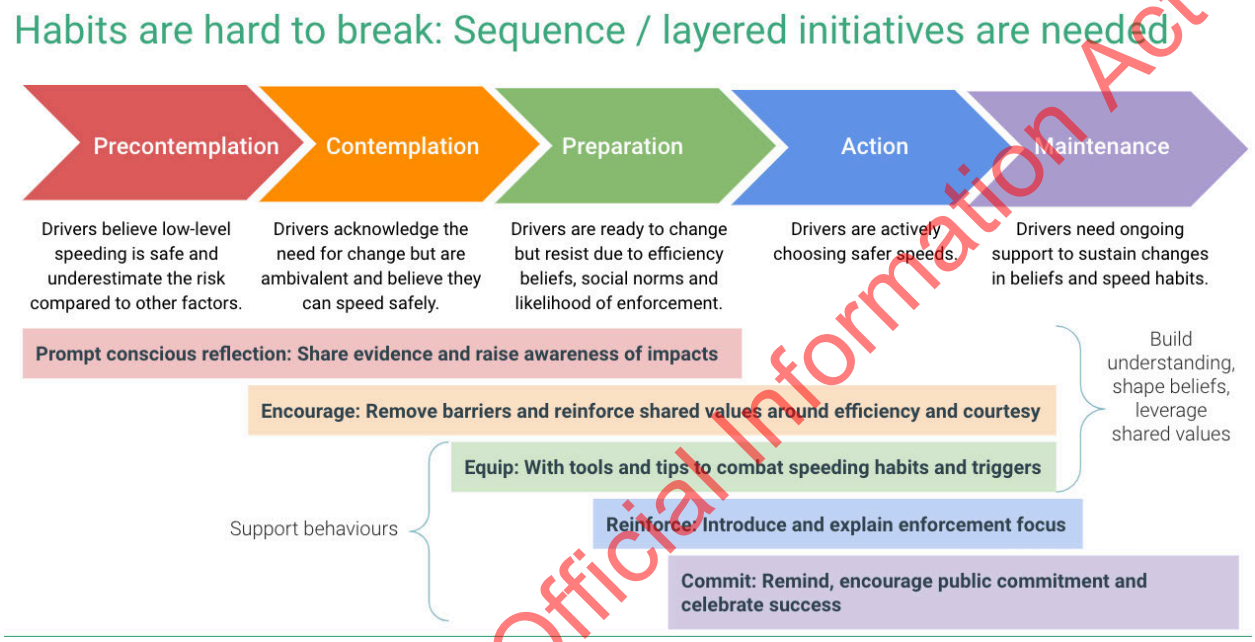


Figure 9: Stages of change

4.9.1. Precontemplation: Prompt conscious reflection

Definition: Drivers believe low level speeding is safe and underestimate the risk compared to other driving practices. This is the stage where most drivers would be. The primary challenge is therefore to prompt conscious reflection. Critically, there is already an audience ready and willing to accept new information and accept change. Providing information to this group simply reinforces beliefs but also provides a useful touchstone of scaffolding that creates mental reference points and enables them to advocate or champion lower speeds.

Interventions:

There are many ways to *cut through;* however, this is often achieved by delivering new news or reframing existing messages in new or novel ways:

- Raising awareness of the specific risks of low-level speeding by sharing evidence and statistics worked to both prompt conscious reflection as well as shift safety beliefs.
- The research identified other ways to prompt conscious reflection. These included introducing the idea that *we now know better and need to do better*, raising awareness

of the problem with legacy speed limits, introducing the new *movement and place* approach to setting speed limits, and developing new understanding of speed impacts.

4.9.2. Contemplation: Encourage change by addressing barriers

Definition: Drivers may acknowledge the need for change but still believe in the safety of their current speeding behaviour and may be ambivalent or uncertain about reducing their speed. They may resist due to conflicting beliefs about crash risk, road quality, efficiency, social norms and the likelihood of enforcement.
Interventions: Address the key belief barriers including:

- the efficiency belief by demonstrating how lower travel speeds and limits do not result in significant extra travel time
- the safety belief by providing information on the role of speed in crashes, addressing the complexities of crash attribution and promoting the benefits of reducing speed and the potential positive outcomes
- the acceptability belief by making visible a range of supporting voices from experts and sharing stories from drivers, residents and pedestrians who have experienced negative consequences due to low-level speeding
- the tolerance belief by reminding drivers of enforcement intention and the importance of following speed limits (in concert with introducing the *movement and place* rationale for local road changes or speed limit changes, alongside speed related messages).

4.9.3. Preparation: Equip with tools and tips to combat triggers and break habits

Definition: Drivers are ready to change but need support and strategies to do so.
Interventions: Equip drivers with ideas around how to avoid speeding triggers, these include:

- planning their trips by leaving earlier/with more time
- being conscious to reject the urge to drive faster if running late, sensation seeking, anxiety, etc.
- rejecting the social pressure to speed up if an impatient driver is close behind them
- using podcasts or music to relax and reduce boredom.

4.9.4. Action: Reinforce safety and role of enforcement and change

Definition: Drivers in this stage are actively choosing safer speeds and are seeking positive confirmation that they are doing the right thing.
Interventions:

- communicate the safety role of enforcement measures such as speed cameras and increased police presence
- provide positive reinforcement through rewards or recognition for safe driving behaviours

- emphasise the importance of adhering to posted speed limits, especially where new limits have been put in place.

4.9.5. Maintenance: Encourage commitment and celebrate success

Definition: Drivers need ongoing support to sustain changes in beliefs and behaviours.
Interventions:

- continue awareness campaigns highlighting the correlation between low level speed and safety
- reinforce positive behaviours through regular reminders and positive reinforcement
- continue to address specific moments and mindset triggers where drivers may be tempted to revert to old habits
- provide timely reminders to reinforce the importance of consistent safe speed driving habits
- encourage public declarations of commitment and active participation in promoting safe speeds in communities.

4.10. Who should we target?

A key principle of marketing is to identify and target key audiences. This process usually requires some form of profiling, prioritisation and selection. While segmenting the driver population from a speed perspective is outside the scope of this project, it is useful to provide some dimensions that might be effective in grouping drivers for future investigation.

There are many ways to segment or to describe unique personas. Ideally segmentation or personas are based on dimensions that differentiate drivers based on important attributes. In this case, there is an opportunity to segment based on values, beliefs, openness to change or by some other demographic or behavioural category.

Critical dimensions identified in the research include:

- safety vs efficiency
- collective vs individualistic
- open vs closed to change
- multimode vs motor vehicle reliant
- families vs empty nesters
- solo vs passenger
- new driver vs experienced driver
- open road vs urban
- powerful performance vehicles vs less powerful commuter vehicles
- shorter vs longer travel journeys.

Potential personas therefore could include:

1. **Willing segments**
    - **Mindful carers:** Consciously reflect on speed and safety of self and others
    - **Go with the flows:** Consciously reflect on speed but heavily influenced by speed of others.
2. **Open segments**
    - **Against the clock:** Efficiency fixated, speeding is a habit, rarely consciously reflects on speed
    - **Huff and puff:** Competitive and fixated on courtesy, hates being impeded, highly individualistic.
3. **Closed segments**
    - **System cynics:** Higher seeds may be unconscious but closed change due to strong individualism and rejection of system interventions
    - **Sensation seekers:** Higher speeds are conscious choices, most motivated by enforcement risk.

Examples of personas included:

Simon (from *Against the clock* to a *Mindful carer)* undertakes long commutes and prior to the group was happy exceeding the speed limit on a regular basis with the belief that it reduced his time on the road. Simon also indicated that he was prone to speeding when his mind wandered or he felt anxious or frustrated.

Following his experience in the focus group and exposure to new information about speed impacts, Simon reported becoming more aware of his own speeds and of the speeds of other drivers. Simon highlighted that he was more aware of other drivers speeds and had begun to perceive the driver differently. He began to reflect on what was influencing the driver to exceed the limit. He reflected on the mindset of that driver, asking himself were they anxious, what was putting them under pressure. He describes the change being akin to empathising with the other driver's mental state.

Simon was unable to associate this change to a specific piece of evidence, but rather he suggested it was a combination of understanding the impact of speed, the need for change and the low impact on time saved.

Scott (System cynic) is an experienced driver who drives as part of his job. Fiercely independent, he prides himself on his ability to drive in all conditions and believes he can speed safely. Highly resistant to calls for lower speeds, he is concerned about the impact it would have on his productivity and laments the lack of accountability, describing attempts to lower speeds as the act of a nanny state.

Gemma (Go with the flow) feels the social pressure of the faster cars she shares the roads with. Gemma often drives with her young family and is uncomfortable with the higher speeds she travels at but is conscious of needing to go with the flow. She sees staying at the speeds of

cars around her as both an act of courtesy (not holding them up) but also an act of safety (minimising the differences in relative speeds).

Christine (Huff and puff) is a caring grandmother who after driving 60 years has never had a crash except being rear ended at a stop sign. Cautiously driving her EV while being very conscious of consumption, she is an outright rejector of lower speed limits and if someone walks out in front of her or is hurt in a crash it is their own silly fault. She cannot see a reason for slowing down and the idea makes her uncomfortable. She is irritated by the actions of other drivers and she laments the lack of personal responsibility.

5. Conclusions

NZTA Waka Kotahi has an opportunity to improve road safety by influencing driver speed-related beliefs, addressing speeding triggers and prompting conscious reflection on what is at best, an easy choice to make or at worse, an entrenched habit.

The core issue is that many drivers believe that *low level* speeding is safe, efficient, acceptable and tolerated. When drivers regularly choose higher speeds and do so without incident, these beliefs are reinforced with many drivers forming unsafe speeding habits.

Drivers are committed to these beliefs to varying degrees, resulting in some being far more susceptible to a range of triggering mindsets (e.g. they are in a hurry, they feel social pressure, they sensation seek, etc.) and moments (e.g. they are driving alone, on familiar roads, etc.).

Critically, speed-related beliefs are influenced not just by the reinforcing experience of speeding without safety, social or legal consequence; they are shaped by interactions with and perceptions of the road transport system and the way speed is treated in the media, safety promotion and driver training. Each of these elements works to reinforce existing beliefs about the safety, efficiency, acceptability and tolerance of speeding.

When drivers' speed beliefs are dislodged, willingness to slow down or accept speed interventions improves. NZTA Waka Kotahi has an opportunity to reshape speed beliefs and help drivers overcome their unsafe habits through communication, marketing and education. The figure below provides an overview of how beliefs are formed; how values, beliefs and triggers all contribute to speed choices and habits; and the pathways to change.

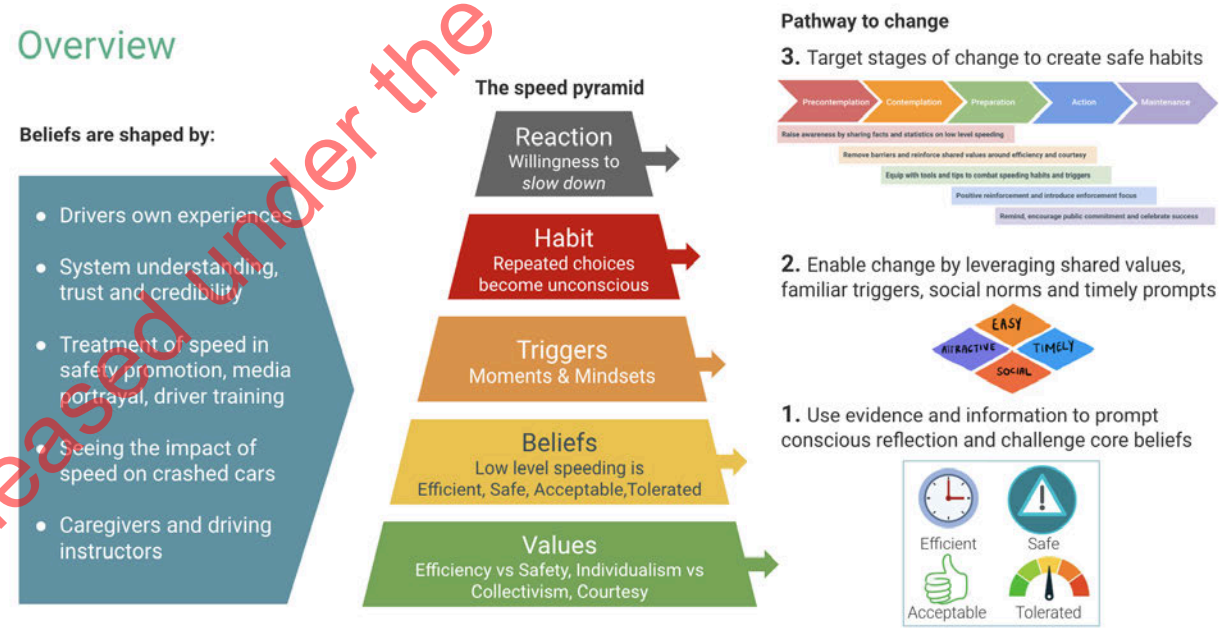


Figure 10: Summary of research findings and recommendations

The research has identified three related pathways to change.

5.1. Smash the 4 big belief rocks

The first pathway to change is the need to address the core beliefs that underpin speed choice, smashing the big 4 rocks of perceived safety, efficiency, acceptability and tolerance. Challenging and changing underlying and entrenched beliefs is difficult and likely a long term aspiration; however, this research has identified information themes that can both prompt conscious reflection and shift underlying beliefs. Essentially, this requires focusing on low level speeding impacts, challenging efficiency assumptions, introducing broader community impacts and supportive voices (based on Movement and Place philosophy), and resetting enforcement and tolerance.

5.2. Make it EAST (easy, attractive, social and timely)

The research has identified several guiding principles that we have aligned to the established EAST behaviour change model. We can optimise efforts to change beliefs by making choices:

Easy:

- by increasing visibility of speed signage
- by targeting familiar speeding triggers and providing tips and tools to mitigate these
- by providing clear locally based explanations of changes or interventions relating to speed.

Attractive:

- reflecting drivers' shared values of efficiency benefits alongside safety considerations
- by providing new information that focuses on low level speeding and impacts on survivability: despite this evidence being familiar to experts, these impacts are new news for many drivers particularly in the context of low levels of speeding that are currently simply not considered to be unsafe
- by highlighting the Movement and Place approach to safe speeds as one that also addresses the legacy issue of most roads in New Zealand being unsafe at current limits
- minimising overly dramatic or personal attacks on driver control briefs.

Social:

- by encouraging diverse voices to reflect community commitment to safe speeds
- by encouraging driver courtesy and empathy for others including pedestrians
- by encouraging a collective mindset and continuing the shift in focus from *me* to *we*.

Timely:

- by using timely reminders to prompt drivers to reflect on their speed habits.

5.3. Shift away from the speed habit loop towards conscious reflection and safe choices

In the absence of intervention there is little to prevent unsafe speed choices continuing. Regular unsafe speed choices create and reinforce unsafe speed habits.

We want speed to become more of a conscious choice where drivers regularly reflect on and feel uncomfortable with their low level speeding. We want speed to be a choice supported by beliefs that are anchored in the reality of speed risk, social impacts and consequences—not a habit.

To do this we need to acknowledge how easy it is to form habits and how difficult they are to break. The stages of change model provides a useful framework. It requires us to prompt conscious reflection, encourage, equip, reinforce and maintain—and to do this until safe speed choice becomes the new habit.

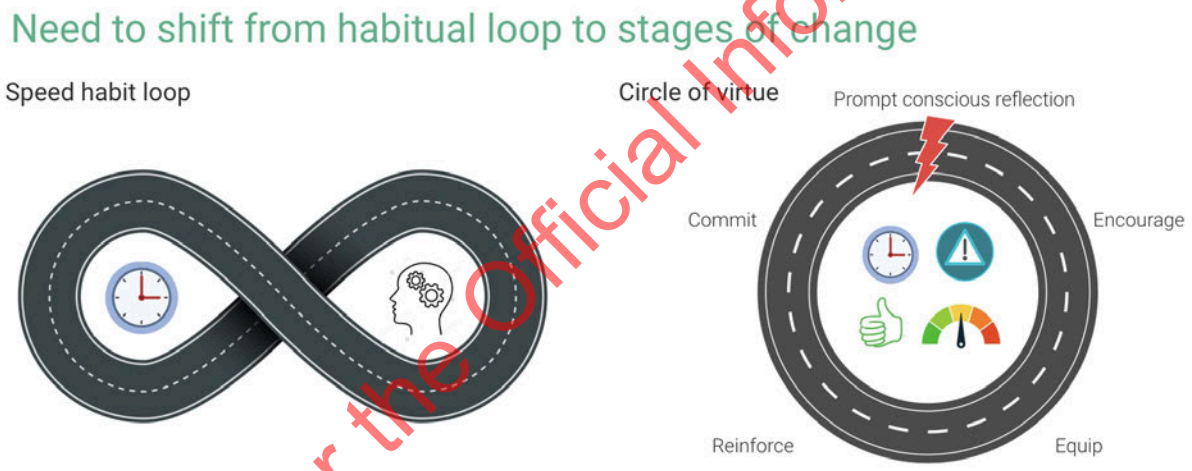


Figure 11: The shift from habit to change

5.4. Closing statement

Drivers value safety. They judge others and pride themselves on safety, yet they are rarely rewarded for safety. Instead, it is speed that delivers the reward via feelings of efficiency, progress, control and sensation. These feelings are formidable competitors to efforts aimed at slowing drivers down. Yet there are ways to cut through and to prompt conscious reflection. Once that door is ajar, there are also ways to encourage and equip drivers with the tools to choose safer speeds and reject speeding triggers.

Ultimately there is no silver bullet: changing speed beliefs and behaviours will require a concerted, integrated effort that recognises the diversity of driver values, beliefs and stages of change and the competing and sometimes contradictory forces at play in the social and media environment.

Cleary not all drivers will respond to the same prompts in the same way. Some won't respond at all. Yet there is clearly an opportunity to do better. And that is an opportunity that might lead to more New Zealanders who start their journey with the best intentions getting to go home.