Board workshop:

20 min

Objective: Seek approval of a preferred option as a general approach to planned speed reviews for the NLTP 2021-24 period, with flexibility retained on a case-by-case basis depending on local stakeholder risk and feedback on specific sections of the state highway

Workshop Process:

1. Each Board member to advise on their preferred Option
2. In the event there is not alignment across the Board, then a discussion to be held to **agree on which Option to be applied as a general approach**

The remainder of this presentation provides additional context and detail for the phased approach and options assessment to inform this workshop

Risk-based approach to inform speed review phasing

23 March 2022

WAKA KOTAHI
NZ TRANSPORT AGENCY

ROAD TO ZERO

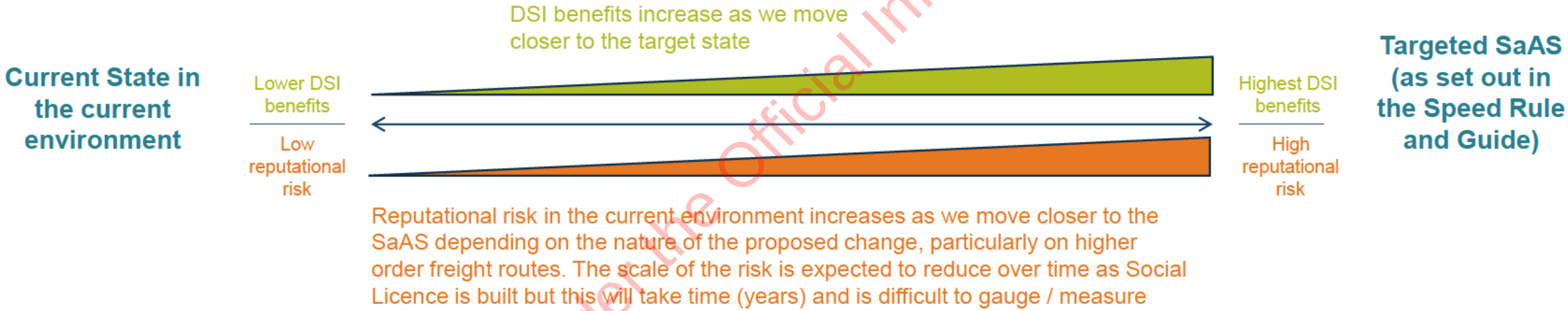
New Zealand Government

Our Speed Review challenge

We know what the problem is	We know technically what we need to do to solve this	But we don't yet have the social licence
There are an unacceptable number of people dying and being seriously injured on our roads	Evidence tells us that speed is our most cost-effective intervention and the implementation of SaAS alongside infrastructure will contribute 35% towards our 40% reduction target	Many of our public and stakeholders either don't think we have a problem, or don't agree with how the problem should be treated

Phased Speed Reviews

A phased approach means the steps taken to progressively move speeds limits across the New Zealand State Highway network towards the targeted Safe and Appropriate Speed (SaAS) limit, as set out in the new Speed Rule and Speed Rule Guide. This recognises the need to balance the pace of change alongside reputational risk as we build social licence.



A phased approach refers to taking steps on a path towards achieving the targeted end state (SaAS), which considers the use of interim speeds.

In March 2022, the Board approved the use of a pragmatic and 'phased' approach to speed reviews, including consideration of the interim use of 90km/h speed limits.

Benefits of a phased approach

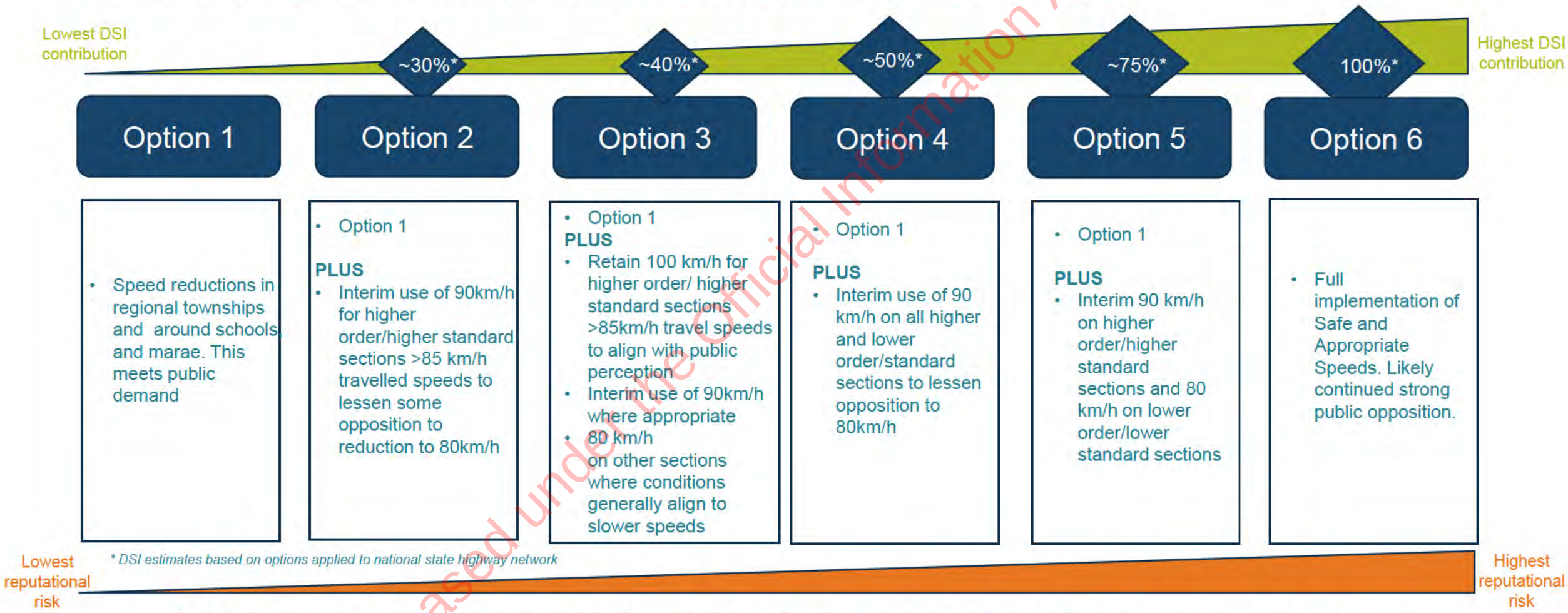
Taking a 'phased' approach allows Waka Kotahi to balance the pace of change alongside taking our communities and stakeholders on the journey with us. A 'phased' approach:

- section 9(2)(g)(i) [redacted]
- Responds to current (and strong) public and stakeholder feedback, in particular those pushing back on lower speeds
- Allows time for the new Speed Rule and Speed Rule Guide to come into effect, which will show the desired end state across the network for Safe and Appropriate Speeds
- Provides a pragmatic approach, which supports interim speed changes, as well as inputs into future Speed Management Plans
- Enables Speed Management Plans to continue to phase (where appropriate) in conjunction with a longer term combined view of speed, infrastructure and safety camera interventions on a path towards the SaAS end state

It is noted the new speed management plan process takes effect once the new speed Rule is passed in May 2022 making SaAS limits more visible. We expect this will create high levels of public interest.

Phasing options

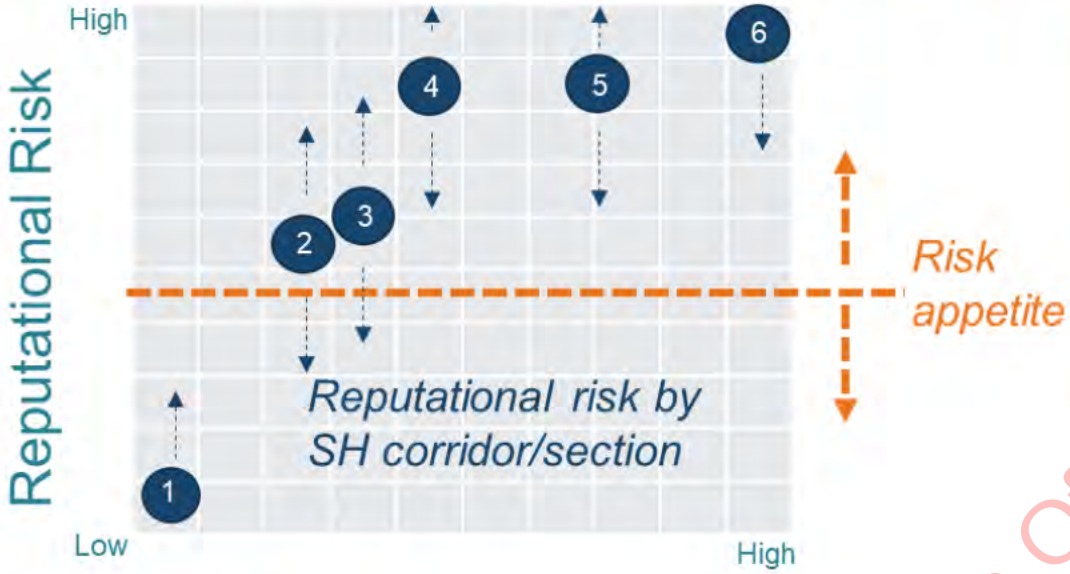
There are only a small number of initial phase options for State Highways



* *DSI estimates based on options applied to national state highway network*

Note: that the above options can still allow for flexibility to enable a more conservative approach for a specific roading corridor/section. Similarly, where there is minimal push-back, a move direct to the SaAS can be achieved. .

An understanding of the Board's risk appetite and an understanding of stakeholder buy-in at a regional level is key



DSI benefit

1. Implement speed reviews where there is strong stakeholder support, i.e. regional townships, schools, marae only.
2. Implement (1) plus interim use of 90km/h for higher order/higher standard sections >85km/h travelled speeds
3. Implement (1) plus 80km/h on lower order/lower standard roads ≤ 85km/h and interim use of 90km/h where appropriate
4. Implement (1) plus interim use of 90 km/h on all higher and lower order/standard sections
5. Implement (1) plus interim 90 km/h on higher order/higher standard sections and 80 km/h on lower order/lower standard sections
6. Full implementation of Safe and Appropriate Speeds

Reputational risk will differ by corridor/section basis depending on level of stakeholder support for the change. Local understanding is required to inform this position.

Informed by regional speed review teams

An understanding of the Board's Reputational Risk appetite is required to assess which options become viable for implementation.

Informed by the Board

Northland Speed Review Applied Example

Purpose: To determine preferred Option for general application

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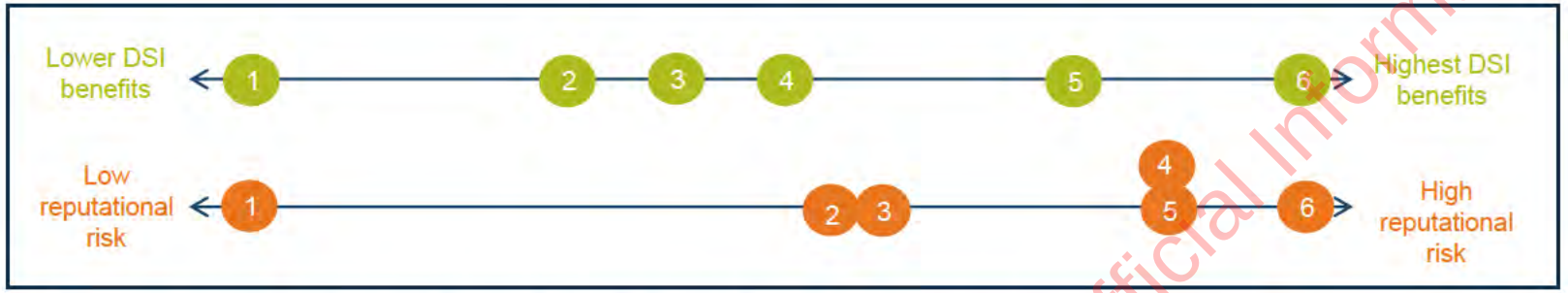
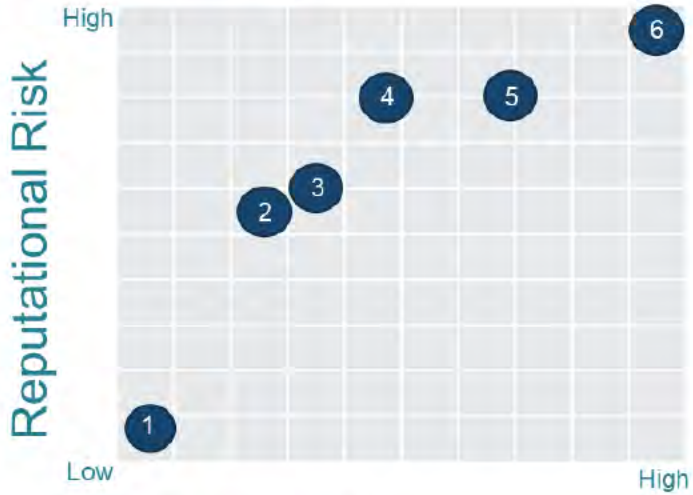
Risk Appetite Assessment - Northland Test Case

The Northland Speed Review provides an opportunity to test the Board's maximum acceptable reputational risk appetite





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5. Implement (1) plus interim 90 km/h on higher order/higher standard sections and 80 km/h on lower order/lower standard sections
6. Full implementation of Safe and Appropriate Speeds

Impact of phased approach for all State Highways	Benefits Realisation (% DSIs saved)
# 2 - 90km/h on qualifying sections	~ 30%
# 3 - 80km/h on other sections	~ 40%
# 4 - 90km/h on all sections	~ 50%
# 5 - #2 plus 80km/h on other sections	~ 75%
# 6 - full implementation of SaAS	100%

Option 1

- Speed reductions in regional townships and around schools, and marae

Narrative positioning

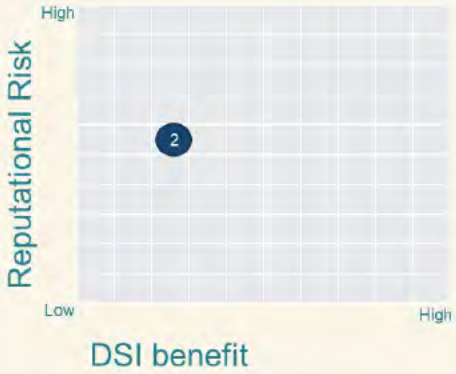
Risk of this option narrative signals us stalling on signalled speed changes. To strengthen this story we'd need clear timings on the next phase

** estimate not yet calculated*

- Targets sections where there has been strong community and stakeholder support
- Defers majority of speed changes on sections where community and stakeholder opposition has been received (100km/h sections)
- Considerable DSI risk remains on the network in the short term until a further phase can be rolled out

Option 2

- Speed reductions in regional townships and around schools, and marae
- Interim use of 90km/h for higher order/higher standard sections >85km/h travelled speeds



Narrative positioning

Strong pathway position for higher order roads, but difficult to justify lower order roads at higher speed. Signalling 'interim' higher speed may help, as well as being clear on next phase timings.

* based on estimate for national state highway network

~30% DSI* reduction contribution

- Targets interim reduction of 90km/h on higher order/higher standard road sections where majority of community and stakeholder opposition has been received
- Still delivers a DSI reduction
- Leaves large sections of Northland at 100km/h, primarily on lower order roads with lower traffic volumes (windy rural road sections) and lower operating speeds

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Option 3

- Speed reductions in regional townships and around schools, and marae
- Retain 100km/h for higher order/higher standard sections >85km/h travelled speeds, i.e. no change
- Interim use of 90km/h where makes sense
- 80km/h on all other sections, i.e. lower order/lower standard roads ≤ 85km/h

Narrative positioning

Strong lower order road positioning, with difficulty defending no change to higher order roads. Signalling 'interim' higher speed may help, as well as being clear on next phase

* based on estimate for national state highway network

~40%
DSI* reduction contribution

- Retains 100km/h (i.e. no change) higher order/higher standard road sections where majority of community and stakeholder opposition has been received, plus 90km/h interim speed use where it makes sense
- Achieves the 80km/h end state for all lower order roads where traffic volumes and operating speeds are generally lower and where conditions generally align to lower speeds
- Retains high DSI risk on high volume strategic sections
- Delivers reductions where there is public demand and reduces reputational risk of blanket reviews

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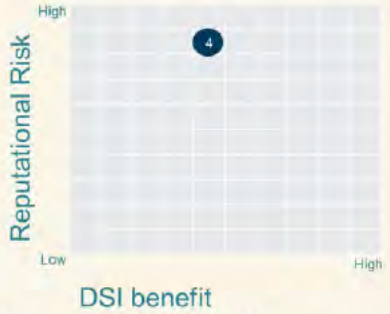
Option 4

- Speed reductions in regional townships and around schools, and marae
- Interim use of 90km/h for higher order/higher standard sections >85km/h travelled speeds
- Interim use of 90km/h on all other sections, i.e. lower order/lower standard roads ≤ 85km/h



Narrative positioning

Strong pathway position for all rural roads. Signalling 'interim' higher speed may strengthen and signal future change, as well as being clear on next phase timings.

* based on estimate for national state highway network

~50% DSI* reduction contribution

- Targets interim reduction to 90km/h on all routes
- Perception of 'blanket' approach, however, softens the impact of a direct shift to 80km/h
- Still likely to be strong opposition to reduction on what are perceived to be safer, straighter sections, however, removes the freight/economic argument

Option 5

- Speed reductions in regional townships and around schools, and marae
- Interim use of 90km/h for higher order/higher standard sections >85km/h travelled speeds
- 80km/h on all other sections, i.e. lower order/lower standard roads ≤ 85km/h

Narrative positioning

Strong pathway position for higher order roads, with end state achieved for lower order roads. Outcomes will be immediately demonstratable once implemented.

* based on estimate for national state highway network

~75% DSI* reduction contribution

- Treats all existing 100km/h sections
- Targets interim reduction of 90km/h on higher order road sections where majority of opposition received
- Achieves the 80km/h end state for all lower order/lower standard roads on roads
- Delivers a strong DSI reduction
- Lower order roads subject to 80km/h are generally more windy and narrow with lower existing operating speeds

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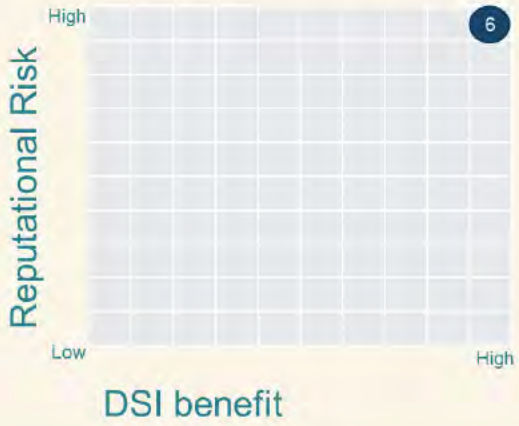
Option 6

- Full implementation of Safe and Appropriate Speeds



While strong 'Road Safety story', difficulty in public understanding the 'why' in the current climate. Outcomes will be immediately demonstratable.

* based on estimate for national state highway network

100%
DSI* reduction contribution

- Treats all existing 100km/h sections
- Results in large areas of the network reduced to 80km/h, with no interim use of 90km/h
- Achieves target SaAS end state for Road to Zero
- Likely significant public opposition and reputational risk

Applying flexibility

Under any option we can still retain the right to consider routes by exception / on a case-by-case basis

Below are two examples identified in the Northland region, where flexibility could be applied:

In progress and planned state highway Speed Reviews as of 9 March 2022

Region	SH	Project name	km	Predicted DSI/annum	Next Stage	Potential Phased Approach	Freight Route	Contention RAG status	Maps/SaAS
Auckland	SH16	Wellsford to Waimauku	73	1.6	Consultation 2022	Yes	Yes		Link
Auckland	SH1	Te Hana to Warkworth	23	0.4	Consultation 2022	Yes	Yes		Link

Under Option 4, these corridors would be candidates for 90km/h, but could be considered for interim 100 km/h speed limits

Under Option 5, these corridors would be candidates for 80km/h, but could be considered for interim 90 km/h speed limits

Appendix 1:

Current Public Attitudes and Sentiment

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Public attitudes survey

Public Attitudes to Road Safety Report (Published February 2022)

15% of New Zealanders have heard or read about Road to Zero

And….

Only 47% of New Zealanders think zero deaths from road crashes is acceptable

88% of New Zealanders understand the higher the speed you are travelling, the greater the chance of having a crash and the more serious the injuries (97%)

But….

23% of New Zealanders think there is not much chance of a crash if you are careful when you speed

79% of New Zealanders consider our roads to be at least fairly safe to travel on

So it's no wonder….

73% of New Zealanders think 100km/h speed limits on the open road should be left as is

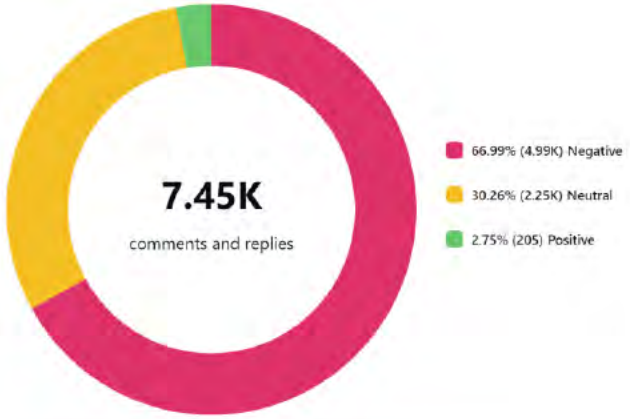
We need to help the public to:

1. Buy into the belief that it is unacceptable for people to die or be seriously injured on the roads
2. Understand we have a collective problem
3. Support what is required and what role they play in solving that problem

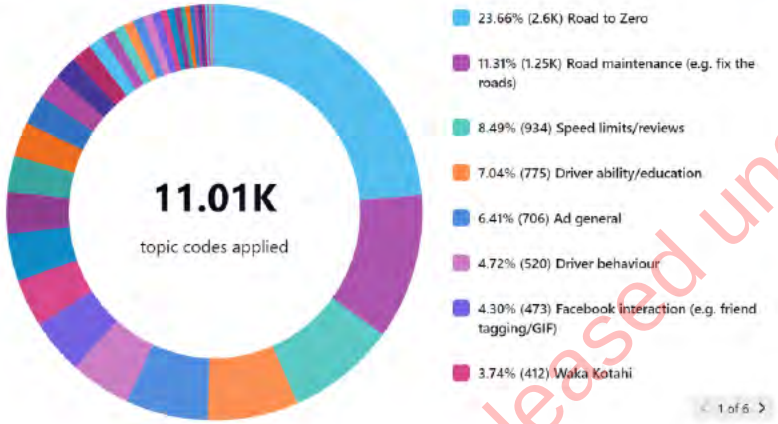
Current public sentiment and conversation

Public Sentiment Monitoring Report (18 March 2022)

Campaign sentiment



Common topics



- Current Public Sentiment in response to the new Public Awareness Campaign shows that it will take time to change public sentiment
- The audience is critical of the ‘vision’, its achievability, and some Safe System elements such as ‘speed’
- Pre-existing grievances have come out, including (lack of) road maintenance, speed reviews and need for more and ongoing driver education
- While next steps for the campaign remain key, the journey to shift current attitudes and perceptions, and build social licence, will take some time

Appendix 2:

Auckland Transport Speed Review Programme Findings to date

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Auckland Transport's Speed Review programme is delivering outcomes

- Auckland Transport is undertaking an aggressive programme to implement Safe and Appropriate Speeds
- In 2021, there was a 60% increase in deaths on Auckland's roads as compared with 2020 and the highest road trauma since 2017
- Roads where speed limits were changed on 30 June 2020, have reported a **47% reduction in fatalities** in the 18 months following the changes, a reduction in crashes of 25%, and over 15% reduction in serious injuries
- Rural roads where speed limits were changed on 30 June 2020 have reported a **71% reduction in fatalities** and a more than 25% reduction in serious injuries
- A similar number of crashes on rural roads occurred prior to implementation, with a reduction in overall severity rates

Safe and Appropriate speeds deliver a direct and immediate deaths and serious injury reduction benefit

Partial speed changes, even if successfully implemented, will unlikely quickly change the outcome at an overall level

Appendix 3:

Co-benefits of moving towards Safe and Appropriate Speeds

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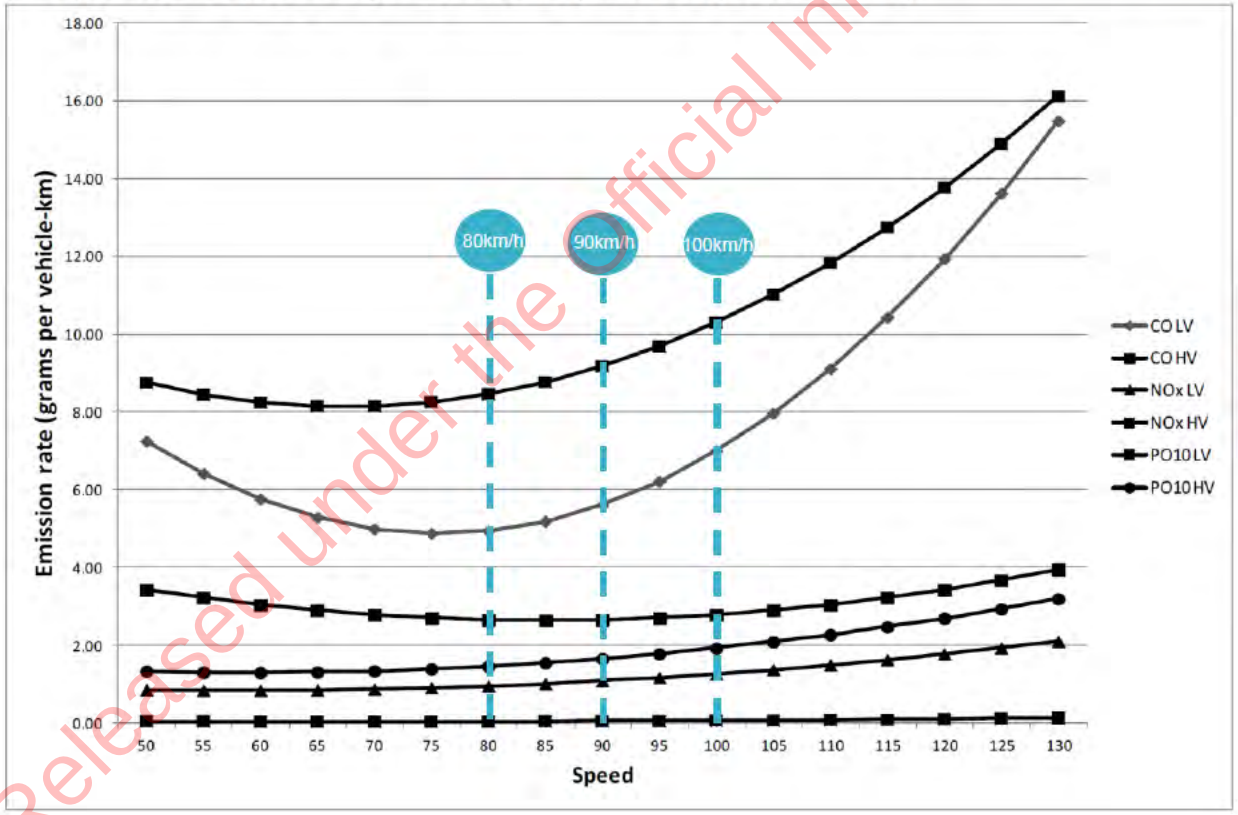
Co-benefits of Safe and Appropriate Speeds

Moving the network towards safe and appropriate speed is one of the most effective ways to improve safety, preventing loss of life and debilitating injuries. *Reducing speeds also generates multiple other benefits fundamental to sustainable mobility: reduced climate change impacts of road transport, increased efficiency (fuel and vehicle maintenance), improved inclusion and walkability* (World Bank, 2020).

www.roadsafetyfacility.org/publications/road-crash-trauma-climate-change-pollution-and-total-costs-speed-six-graphs-tell-story

Figure 1a: Emission rates of carbon monoxide (CO), nitrogen oxides (NO_x) and particulates (PO_{10}) related to speed of light vehicles (LV) and heavy vehicles (HV)



Source: Economic Analysis of Optimum Speeds on Rural State Highways in New Zealand
www.nzta.govt.nz/resources/economic-analysis-of-optimum-speeds-on-rural-state-highways-in-nz/