OC191308

10 February 2020

[redacted]

withheld under s9(2)(a)

Dear [redacted]

I refer to your request dated 19 December 2019, pursuant to the Official Information Act 1982, seeking:

"…all documents relating to the modelling of the 40 percent reduction in deaths and serious injuries under the 'Road to Zero' policy. The reference in the document released on 19 December 2019 is as follows.

'We want to reduce annual deaths and serious injuries on our roads by 40 percent by 2030 (from 2018 levels). This is a challenging but achievable target, based on modelling of a substantial programme of road safety improvements over the next 10 years'."

The following documents contain information that fall within the scope of your request:

- OC190407 - Road Safety Strategy: Updated advice on the 2030 target setting (Appendix 2 – target A3)
- Background to the Integrated Intervention Logic Model for Purpose of Road Safety Strategy Discussion (29 April 2019)
- Draft Ministerial Advisory Group slidepack (3 May 2019)
- Draft Ministerial Advisory Group target A3 (3 May 2019)
- Draft Ministerial Advisory Group materials (30 April 2019)
- Draft Ministerial Advisory Group materials (29 April 2019).

(Please note the various drafts of the Ministerial Advisory Group materials were prepared for a meeting that did not eventuate.)

The information within scope of your request is enclosed. Certain information has been withheld under section 9(2)(f)(iv) of the OIA to protect the confidentiality of advice tendered

by officials, as it relates to a policy area where decisions have not yet been made by Ministers. With respect to the information that has been withheld, I do not consider that there are any other considerations, which render it desirable in the public interest to make the information available.

I have refused part of your request in reliance on section 18(d) of the Official Information Act as the information requested is publicly available. Specifically, the following document containing information within scope of your request is published on the Ministry of Transport website at www.transport.govt.nz/multi-modal/keystrategiesandplans/road-safety-strategy/more-information-on-the-road-safety-strategy/:

- OC190407 - Road Safety Strategy: Updated advice on the 2030 target setting.

Please note that the key piece of modelling – the Integrated Intervention Logic Model – is owned and held by Waka Kotahi New Zealand Transport Agency (Waka Kotahi). As such, I recommend that you contact Waka Kotahi directly at official.correspondence@nzta.govt.nz if you would like more detailed information on the Integrated Intervention Logic Model.

The Ministry publishes our Official Information Act responses and the information contained in our reply to you will be published on the Ministry website. Before publishing we will remove any personal or identifiable information.

Yours sincerely

Brent Johnston
Manager, Mobility and Safety

Initial modelling has helped us to build a sense of the scale of change and investment needed to meet different targets. It is not intended to provide sufficient detail to prescribe specific policy interventions or investments at the level of a business case. Depending on the level of ambition adopted for consultation, further work will be done to refine the modelling and to outline in more detail the proposed investment programme for the next 3 years.

Modelling suggests that a business as usual approach to road safety will only reduce deaths and serious injuries (DSI) by about 10% by 2030

If safety improvements to our roads, vehicle fleet and behaviour continue in line with past interventions and activity levels then in the year 2030 we would expect around 2,900 DSI (a 10% reduction). The modelling takes into account projected economic conditions, demographic changes and global factors (e.g. petrol prices), and assumes that existing trends in the safety of the vehicle fleet, roads and user behaviour will continue to incrementally improve, reflecting continued investment at previous NLTP levels in infrastructure improvements and enforcement etc.

The majority of the gains are likely to come from effort and investment in the following proven types of interventions:

- *infrastructure improvements* (e.g. median barriers, intersection treatments)
- *increased enforcement,* both automated (i.e. safety cameras) and police officer presence for speed, and enhanced roadside testing for alcohol
- *speed limit changes* in urban areas and on the highest risk parts of the network

Key risks:

- Infrastructure
  - Subject to capacity constraints and reliant on efficient delivery across the sector
  - Reliant on sufficient ring-fencing of safety spending and investment decision making frameworks (IAF/EEM) adequately prioritising safety
  - Strong interaction with the development of speed management plans
- Speed:
  - Requires both efficient limit setting processes and effective enforcement
  - Current back-office systems for automated enforcement are outdated and will require significant investment
  - Additional cameras, signage and education will require phasing in.

These risks are more pronounced for more ambitious levels of investment.

30%

2030:
113 fewer deaths (265 remaining)
840 fewer serious injuries (1,960 remaining)

Infrastructure, Speed and Enforcement: 10-15% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$7-8 billion over ten years (similar to current levels).

[redacted]

~$4 billion safety infrastructure
- At level of Safe Networks Package, including speed management costs

~$3.85 billion enforcement
- Ongoing operational improvements to officer-led road policing within projected spending levels

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

40%

2030:
151 fewer deaths (227 remaining)
1,120 fewer serious injuries (1,680 remaining)

Infrastructure, Speed and Enforcement: 15-20% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$9-10 billion over ten years (25% increase on current levels).

[redacted]

~$5 billion safety infrastructure
- Treatment of additional high risk corridors with median barriers, intersection improvements, wider centre lines etc.
- Speed management costs

$4.1 billion enforcement
- Ongoing operational improvements to officer-led road policing within projected spending levels.
- Substantial increase to automated enforcement by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

50%

2030:
189 fewer deaths (189 remaining)
1,400 fewer serious injuries (1,400 remaining)

Infrastructure, Speed and Enforcement: 25-30% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$11-12 billion over ten years (50% increase on current levels)

[redacted]

~$7 billion safety infrastructure
- Ambitious improvements indicatively including:
  - 850km additional median barriers
  - 3500 intersection treatments
  - Extensive other corridor treatments, including rumble strips, wider centre lines
- Speed management costs

~$4.6 billion enforcement
- Approximately doubling current levels of officer-led speed enforcement and roadside impairment testing by 2030
- Widespread automated enforcement network by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

60%

2030:
227 fewer deaths (151 remaining)
1,680 fewer serious injuries (1,120 remaining)

Infrastructure, Speed and Enforcement: 30-35% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$12-13 billion over ten years (65% increase on current levels)

[redacted]

~$8 billion safety infrastructure
- Ambitious improvements including:
  - 1000km additional median barriers
  - 4000 intersection treatments
  - Extensive other corridor treatments, including rumble strips, wider centre lines
- Speed management costs

Withheld under section 9(2)(f)(iv)

~$4.6 billion enforcement
- Approximately doubling current levels of officer-led speed and roadside impairment testing by 2030
- Widespread automated enforcement network by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.
- Additional speed reductions may be required.

There is also good evidence that reducing the number of less safe vehicles in the fleet would also significantly reduce deaths and serious injuries

Key risks

- Reliant on substantially increasing vehicle safety standards relatively early in the life of the strategy.
- Changes to vehicle standards will need to take account of any increases in vehicle costs, including social equity impacts.
- There are limited cost-effective options for removing less safe vehicles from the fleet.

Vehicle safety improvements: 10 – 15 % DSI reduction contribution

Key assumptions

- Safety requirements for new and used vehicles entering the fleet are increased, equivalent to preventing 1 and 2 star vehicles from entering the fleet from 2022.
- Antilock Braking Systems mandated for all new motorcycles from 2020 and used motorcycles entering the fleet from 2021.
- Take action where possible to reduce the number of less safe vehicles remaining in the fleet by 2030.

The remaining contribution could come from a range of other interventions that have not been modelled, but that are known to have an impact on road safety outcomes.

Key risks

- The scale of impact of each of these factors is much less certain.
- Mode shift impacts dependent on investment in other modes, including public transport and rail, and greater separation for active modes.
- While there are some opportunities to improve driver skills and education, evidence suggests these have relatively small impacts.

Other interventions and supporting factors: 5-15% DSI reduction contribution

- Mode shift to safer public transport, freight to rail and coastal shipping and corridor separation for action modes would have a positive impact on road safety over the next ten years, potentially increasing over the longer term, as well as delivering a range of broader benefits. We have assumed a moderate impact in the first ten years because we need to deliver substantial infrastructure and service deliver improvements and make sustained changes to transport choices on the part of road users.
- Any measures that reduce total vehicle kilometers travelled, including mode shift, can be expected to have a positive impact on road safety.
- Improvements in technology, including active driver assistance technology in vehicles, some level of vehicle automation and connected vehicle technology could have a significant impact on road safety. However the scale of these impacts and the pace of change is highly uncertain.
- A range of other initiatives, including strengthening work-related road safety, strengthening enforcement tools for drug driving, more effective penalties and remedies and improvements to licensing, training and education

Withheld under section 9(2)(f)(iv

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BACKGROUND TO THE INTEGRATED INTERVENTION LOGIC MODEL FOR PURPOSE OF ROAD SAFETY STRATEGY DISCUSSION

29 APRIL 2019

INTRODUCTION

The Integrated Intervention Logic Model (IILM) is a modelling tool currently being developed by the NZ Transport Agency (NZTA), in partnership with key road safety partners. It is used to calculate the potential reductions in deaths and serious injuries (DSIs) that could be achieved through a combination of evidence-based interventions that can be reliably modelled.

A key objective of the model is to show how investment in road safety through the National Land Transport Programme (NLTP) can be optimised, ie. to give greater assurance that we are investing in the right safety interventions, in the right combination and at the right levels.

The interventions modelled are in addition to existing levels of investment and effort in road safety.

METHOD

The model uses relevant data and evidence-based research to estimate DSI savings based on a specific dose of each chosen intervention working in synergy with other interventions.

Its purpose is to understand the combined effect of road safety interventions from a systems-based approach. A more basic model would look at the effectiveness of single interventions without assessing their combined impact when delivered at the same time.

The IILM is underpinned by a set of baseline influences, which reflect demographic, economic, travel and international changes, to account for underlying trends beyond the scope and control of a road safety system. From a number of possible variables and using a time-series modelling approach, we found that three factors, changes in population (particularly of young people), petrol prices and unemployment provided the most suitable explanatory factors for the underlying trend in road fatalities. These factors allow us to project a

baseline level of road trauma under a "business as usual" approach which is likely to continue to increase through to 2025.

The IILM models a set of interventions beyond business-as-usual.

ASSUMPTIONS, STRENGTHS AND LIMITATIONS

To be able to calculate the effect of an untested intervention, the model must make several assumptions about targets and timing. It also has various strengths and limitations that are explained below.

Assumptions

To assist in developing the Road Safety Strategy 2020-2030 we have assumed a target of a 50% saving in DSIs by 2030. This equates to approximately 1600 fewer DSIs than current levels (about 200 fewer deaths and 1400 fewer serious injuries). This is an annual social cost saving of about $1.9 billion in 2018 values.

We have also assumed that interventions will vary in both their cost and impact over time. For example, median barriers will be immediately effective where they are installed and continue to deliver benefits over many years but will also require sustained investment over time and ongoing maintenance costs. Others, such as speed limit changes will also be effective immediately and require relatively low ongoing costs. Others, such as reducing the proportion of 1- and 2-star vehicles from the fleet, will take longer to reach full effectiveness because every 1- and 2-star cannot be removed from the fleet on day 1.

It is important to look at the interventions as a package, rather than individually, as many of the interventions work synergistically, for example reducing speed limits is more effective if supported by enforcement. No single intervention will significantly reduce deaths and serious injuries on its own.

Strengths

An important innovation in this model is its ability to demonstrate the probable combined effect of multiple interventions. In doing this it:

- gives a guide to the optimum mix of modelled interventions
- shows the dose-response relationship of the interventions and their likely effect
- accounts for overlap in interventions ie. avoids double-counting of DSIs.

Double counting is a risk when the combined interventions all address a specific cause of DSIs eg. reducing the impact of head-on crashes can be achieved by introducing median barriers, speed management or improving the safety of vehicles. However, when the interventions are combined, the model adjusts total DSIs saved by eliminating the overlapping or 'double-counted' benefits.

Limitations

Interventions can only be modelled if there is robust data and analysis for the current state, as well as for the effectiveness of the intervention. The model therefore does not include all possible interventions. However, it does aim to include those interventions we know to be most effective, based on the best-available research.

It is important to note that the IILM that has been used to develop the following analysis is still under development.

PRELIMINARY RESULTS

Preliminary results from modelling suggest it is extremely ambitious but achievable to save 50% of current annual DSIs by 2030.

We predict we could achieve just over half of the target through a combination of infrastructure improvements (e.g. median barriers, intersection treatments), speed limit changes in urban areas and on the highest risk parts of the network and increased speed enforcement.

Around a quarter could be achieved by significantly lifting the safety performance of the light vehicle fleet and improving safety for motorcyclists through mandating ABS.

The remainder could potentially be achieved by a combination of other interventions, including alcohol interlocks and enhanced roadside testing for alcohol and drugs.

This would require at least a doubling of current investment in infrastructure improvements and enforcement.

INDICATIVE TARGET MODELLING

This section contains an indicative analysis of the interventions currently included in the model. The results are indicative only and assume the interventions are implemented at the scale and pace outlined below over a 10-year period leading up to 2030. This indicative analysis dialled-up each intervention until the overall annual DSI savings approached a target of 50% DSI savings from current levels, ie. from approximately 3,200 to 1,600 DSIs per year.

Below is a summary of the various underlying assumptions for each intervention that were adopted for the purpose of this indicative analysis:

1. Increase officer-based speed enforcement

- assumes doubling officer-based enforcement of speed over the first three years

2. Increase automated speed enforcement
   - assumes installation of 500 speed cameras over the first four years
3. Implement the top 10 percent speed management opportunities
   - assumes that the government's priority 10% speed management opportunities are implemented over the first three years
4. Increase installation of median barriers
   - assumes installation of 1,000km of median barrier over the 10-year strategy duration
5. Increase number of intersection safety treatments
   - assumes upgrades to more than 300 high risk intersections over the 10-year strategy duration
6. Reduce urban speed limits to 30km/h
   - assumes that lower urban city centre and school speed limits are implemented over the first four years
7. Mandate ABS for motorcycles
   - assumes uptake of ABS over the first four years
8. Remove 1- or 2-star vehicles from the fleet
   - assumes blocking the entry of 1&2-star vehicles from 2021, followed by a reduction from 1.2 million vehicles currently to zero by 2030 at an annual rate of 10%
9. Increase coverage of compulsory breath testing for drink-driving
   - assumes doubling enforcement of alcohol from the first year
10. Increase the use of alcohol interlocks
    - Assumes a substantial increase in alcolocks over the 10-year strategy duration

A summary of the preliminary results shown in this table suggests that fully implementing these interventions approaches the desired annual DSI target (1,545) by 2030.

Intervention Group	Intervention	Yr 1	Yr 2	Yr 3	Yr 4	Yr 5	Yr 6	Yr 7	Yr 8	Yr 9	Yr 10
		Assumed intervention uptake rates									
Infrastructure & Speed	1. Speed enf.	33%	67%	100%	100%	100%	100%	100%	100%	100%	100%
	2. Auto enf.	25%	50%	75%	100%	100%	100%	100%	100%	100%	100%
	3. Top 10%	33%	67%	100%	100%	100%	100%	100%	100%	100%	100%

	4. Median	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	5. Intersections	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
	6. 30km/h	25%	50%	75%	100%	100%	100%	100%	100%	100%	100%
Vehicles	7. M/C ABS	25%	50%	75%	100%	100%	100%	100%	100%	100%	100%
	8. 1&2 Star	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Safe Road Users	9. DUI enf.	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%
	10. Alcolocks	10%	20%	30%	40%	50%	60%	70%	80%	90%	100%
Totals	DSI Savings	356	625	901	1,060	1,141	1,221	1,302	1,383	1,464	1,545
	Social Cost Savings ($M)	425	746	1,075	1,265	1,361	1,458	1,555	1,651	1,748	1,844

	Cumulative Total over 10 years
DSI Savings	**10,997**
Social Cost Savings ($M)	$13,127

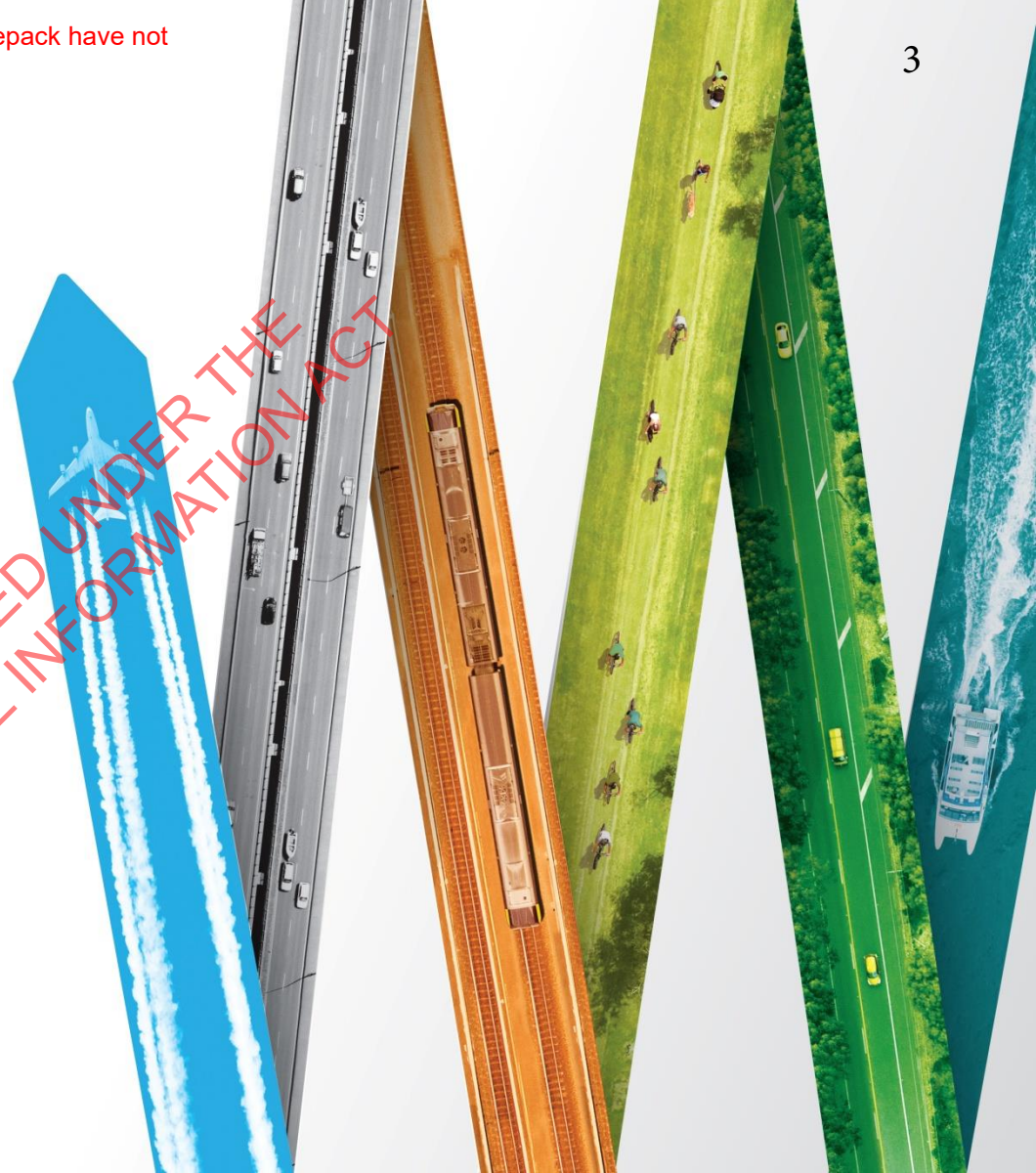
	Cumulative DSI Savings Over 10 years	
Infrastructure & Speed	6,231	57%
Vehicles	3,036	28%
Safe Road Users	1,731	16%
Total	**10,997**	100%

The modelled scenario suggests that a 50% target would be ambitious but achievable, particularly as some interventions have yet to be modelled, and the existing ones could be scaled-up if investment was available. For example, the IILM does not yet include the full range of automated enforcement camera options, such as point-to-point and red-light cameras, increasing the effectiveness of roadside testing for drugs or strengthening best practice for work-related travel. Similarly, if the assumed uptake of an intervention is considered too ambitious, such as the removal of 1&2-star vehicles, then other interventions, such as infrastructure and speed cameras could potentially be scaled-up to make up the shortfall in DSI saving. Tighter regulation and higher penalties also offer further potential DSI savings.

Note

NZTA is preparing a more detailed presentation for the Associate Minister's office on the details of a possible safety investment package for the new strategy.

Note: Information contained in slides 1-5 and slides 7-18 of this slidepack have not been included for release as it is outside the scope of the request.



Ministry of Transport
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Road Safety Strategy

May 2019 | MAG meeting

2030 target: What can the initial modelling tell us?

It is important that any target we set is ambitious but achievable – to that end the target options I am proposing have been informed by indicative modelling (see attached A3 on targets). Modelling won't tell us the exact policy interventions required over the next 10 years, but can provide a sense of the scale of change and investment required.

Modelling of various road safety interventions is being developed between NZTA and MOT.

- Modelling has focussed on key interventions where there is robust data and analysis for the current state, as well as for the effectiveness of the intervention.
- It also accounts for the combined effect of multiple interventions, avoiding double-counting of DSI savings.

This modelling only includes key proven interventions.

- The model is currently limited to modelling the impacts of known or proven interventions where there is robust data, interventions that each have significant potential to reduce national DSI levels (indicatively by at least 5%), and their cumulative impacts.
- Interventions currently being tested include: officer-based speed enforcement, removal of unsafe vehicles, installation of additional safety cameras, implementation of alcohol interlocks and motorcycle ABS, 30km/h urban streets, top 10% speed management, installation of median barriers and intersection improvements.

It does not tell the full story. We know that some interventions and broader factors that have not been modelled also have a impact on road safety outcomes. These include benefits associated with mode shift, longer-term technological change, and improvements to work-related road safety. The impact of these factors has been incorporated into the proposed 2030 targets.

Initial modelling has helped us to build a sense of the scale of change and investment needed to meet different targets. It is not intended to provide sufficient detail to prescribe specific policy interventions or investments at the level of a business case. Depending on the level of ambition adopted for consultation, further work will be done to refine the modelling and to outline in more detail the proposed investment programme for the next 3 years.

The majority of the gains are likely to come from effort and investment in the following proven types of interventions:

- *infrastructure improvements* (e.g. median barriers, intersection treatments)
- *increased enforcement,* both automated (i.e. safety cameras) and police officer presence for speed, and enhanced roadside testing for alcohol
- *speed limit changes* in urban areas and on the highest risk parts of the network

Key risks:

- Infrastructure
  - Subject to capacity constraints and reliant on efficient delivery across the sector
  - Reliant on sufficient ring-fencing of safety spending and investment decision making frameworks (IAF/EEM) adequately prioritising safety
  - Strong interaction with the development of speed management plans
- Speed:
  - Requires both efficient limit setting processes and effective enforcement
  - Current back-office systems for automated enforcement are outdated and will require significant investment
  - Additional cameras, signage and education will require phasing in.

These risks are more pronounced for more ambitious levels of investment.

40%

Infrastructure, Speed and Enforcement: 15-20% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$9-10 billion over ten years (25% increase on current levels).

[redacted]

~$5 billion safety infrastructure
- Treatment of high risk corridors with median barriers, intersection improvements, wider centre lines etc.
- Speed management costs

~$4 billion enforcement
- Sustained increases to officer-led speed and roadside impairment testing
- Substantial increase to automated enforcement by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

50%

Preferred option

Infrastructure, Speed and Enforcement: 25-30% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$11-12 billion over ten years (50% increase on current levels)

[redacted]

~$7 billion safety infrastructure
- 850km additional median barriers
- 3500 intersection treatments
- Extensive other corridor treatments, including rumble strips, wider centre lines
- Speed management costs

~$4.5 billion enforcement
- Approximately doubling current levels of officer-led speed enforcement and roadside impairment testing by 2030
- Widespread automated enforcement network by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

60%

Infrastructure, Speed and Enforcement: 35-40% DSI reduction contribution

Key assumptions:

Order of magnitude safety spend: ~$12-13 billion over ten years (65% increase on current levels)

[redacted] Withheld under section 9(2)(f)(iv)

~$8 billion safety infrastructure
- 1000km additional median barriers
- 4000 intersection treatments
- Extensive other corridor treatments, including rumble strips, wider centre lines
- Speed management costs

~$4.5 billion enforcement
- Approximately doubling current levels of officer-led speed and roadside impairment testing by 2030
- Widespread automated enforcement network by 2030

Speed regulatory changes
- Speed reductions to highest risk part of the network and in high active mode areas, including urban centres and around schools.

There is also good evidence that reducing the number of less safe vehicles in the fleet would also significantly reduce deaths and serious injuries

Key risks

- Reliant on substantially increasing vehicle safety standards relatively early in the life of the strategy.
- Changes to vehicle standards will need to take account of any increases in vehicle costs, including social equity impacts.
- There are limited cost-effective options for removing less safe vehicles from the fleet.

Vehicle safety improvements: 10 – 15 % DSI reduction contribution

Key assumptions

- Safety requirements for new and used vehicles entering the fleet are increased, equivalent to preventing 1 and 2 star vehicles from entering the fleet from 2022.
- Antilock Braking Systems mandated for all new motorcycles from 2020 and used motorcycles entering the fleet from 2021.
- Take action where possible to reduce the number of less safe vehicles remaining in the fleet by 2030.

The remaining contribution could come from a range of other interventions that have not been modelled, but that are known to have an impact on road safety outcomes.

Key risks

- The scale of impact of each of these factors is much less certain.
- Mode shift impacts dependent on investment in other modes, including public transport and rail, and greater corridor separation for active modes.
- While there are some opportunities to improve driver skills and education, evidence suggests these have relatively small impacts.

Other interventions and supporting factors: 5-15% DSI reduction contribution

- Mode shift to safer public transport, freight to rail and coastal shipping and corridor separation for action modes would have a positive impact on road safety over the next ten years, potentially increasing over the longer term, as well as delivering a range of broader benefits. We have assumed a moderate impact in the first ten years because we need to deliver substantial infrastructure and service deliver improvements and make sustained changes to transport choices on the part of road users.
- Any measures that reduce total vehicle kilometers travelled, including mode shift, can be expected to have a positive impact on road safety.
- Improvements in technology, including active driver assistance technology in vehicles, some level of vehicle automation and connected vehicle technology could have a significant impact on road safety. However the scale of these impacts and the pace of change is highly uncertain.
- A range of other initiatives, including strengthening work-related road safety, strengthening enforcement tools for drug driving, more effective penalties and remedies and improvements to licensing, training and education

Indicative impacts over 10 years	40% DSI reduction by 2030	50% DSI reduction by 2030	60% DSI reduction by 2030
Estimated deaths prevented	760 fewer people would be killed over the next ten years. 152 fewer in 2030	950 fewer people would be killed over next ten years. 190 fewer in 2030.	1140 fewer people would be killed over the next ten years. 225 fewer in 2030.
Estimated serious injuries prevented	5600 fewer people seriously injured	7000 fewer people seriously injured	8400 fewer people seriously injured

Initial analysis suggests that the level of investment associated with meeting any of the potential levels of targets would have a positive BCR based solely on the current value attributed to the social cost of road crashes. The benefit is likely to be materially higher, once other co-benefits are fully accounted for, including health benefits associated with reduced burden on the health system and with supporting greater uptake of active travel, environmental benefits associated with improvements to the vehicle fleet and mode shift, and economic benefits associated with reductions in crash related congestion. We note that the current value of a statistical life is lower than a number of other jurisdictions and is in the process of being updated (this will likely increase estimated net benefits). Any particular policy or investment proposal would be subject to normal regulatory or investment assessment processes before approval. Withheld under section 9(2)(f)(iv)

[redacted]

Note: Information contained in slides 1-4 and slides 10-21 of this slidepack have not been included for release as it is outside the scope of the request.

Ministry of Transport
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Road Safety Strategy

May 2019 | MAG meeting

2030 target: Why is a target important?

Setting a target:

- drives and focusses effort
- makes it clear what success looks like
- is in line with international best practice
- was recommended in an interim review of *Safer Journeys* (the existing strategy).

It is important that any target we set is ambitious but achievable – to that end the target I am proposing has been informed by modelling.

Modelling won't tell us the exact policy interventions required over the next 10 years, but ensures we have a sense of the scale of change and investment required.

2030 target: a 50% reduction in DSIs

Initial analysis suggests that reducing our current number of deaths and serious injuries by 50% over the next 10 years is highly ambitious but achievable. Other Vision Zero jurisdictions (e.g. Sweden) have typically aimed for 50% reductions in every 10 year period.

Steady progress towards this target would mean approximately **950 fewer people would be killed and 7000 fewer would be serious injured** on our roads over the next ten years.

This would **reduce the total social cost of road crashes on New Zealanders by approximately $12 billion and the direct economic cost of road crashes by approximately $1 billion, including costs to ACC.**

2030 target: What can the initial modelling tell us?

Modelling of various road safety interventions has been led by the NZTA, alongside partner agencies.

- Modelling has focussed on key interventions where there is robust data and analysis for the current state, as well as for the effectiveness of the intervention.
- It also accounts for the combined effect of multiple interventions, avoiding double-counting of DSI savings.

This modelling does not include all possible interventions.

- The model is currently limited to modelling the impacts of known or proven interventions where there is robust data, each have significant potential to reduce national DSI levels (indicatively by at least 5%), and their cumulative impacts.
- Interventions currently being tested include: officer-based speed enforcement, removal of unsafe vehicles, installation of additional safety cameras, implementation of alcohol interlocks and motorcycle ABS, 30km/h urban streets, top 10% speed management, installation of median barriers and intersection improvements.

The model does not include the impacts of reducing VKT (vehicle kilometres travelled) and modal shift, enforcement of drug driving, increasing penalties or demerits, or impacts of new or emerging technologies, or potential changes in travel patterns over the next decade.

2030 target: What would it take to get there?

If we rely on the interventions that have been modelled alone, indicative modelling suggests that:

Just over half of the target could be achieved through a combination of:

- ***infrastructure improvements*** (e.g. median barriers, intersection treatments)
- ***speed limit changes*** in urban areas and on the highest risk parts of the network
- ***increased speed enforcement,*** both automated (i.e. safety cameras) and police officer presence

Up to **a further quarter** could be achieved by ***lifting the safety performance of the vehicle fleet*** and ***mandating ABS for motorcycles***.

The **remaining quarter** would need to be achieved by a combination of other interventions, including:

- ***alcohol interlocks***
- ***enhanced roadside testing.***

2030 target: What would it take to get there?

A bold, step-change in approach would be needed to achieve the target. This would involve actions such as:

- Significantly **increasing our investment in road safety** to support the changes we need to improve infrastructure, roll out camera network and speed changes, and enforcement (IILM modelling suggests doubling our current investment – TBC following NZTA briefing)

- **Regulatory changes**:
  - to lift minimum standards for vehicles coming into the fleet
  - to enable speed limits to be changed quicker on the highest risk parts of the network
  - to allow for the introduction of point-to-point safety cameras
  - to strengthen the deterrence effect of penalties based on risk.

- **Actions in areas that have not yet been built into the current modelling, including:**
  - a focus on effective system management
  - ensuring businesses and work places treat road safety a critical health and safety issue
  - supporting a shift to healthier and safer modes of travel.

Without this level of commitment, we will not be able to achieve a 50% DSI reduction, and will need to scale back the target for 2030.

Note: Information contained in slides 1-4 and slides 8-20 of this slidepack have not been included for release as it is outside the scope of the request.

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Road Safety Strategy

May 2019 | MAG meeting

2030 target

Additional slide to come with further context on purpose of target, and the role that the IILM modelling does and does not do in relation to informing the target

2030 target: a 50% reduction in DSIs

Modelling of various road safety interventions is being developed by the NZTA, alongside partner agencies.

- The modelling will typically focus on those interventions that each have significant potential to reduce national DSI levels (indicatively by at least 5%), and their cumulative impacts.
- Interventions currently being tested include: police officer speed enforcement, removal of unsafe vehicles, safety cameras, alcohol interlocks, motorcycle ABS, 30km/h urban streets, top 10% speed management, median barriers, and intersection improvements.
- Note this modelling does not include all possible interventions.

Initial modelling suggests that reducing our current number of deaths and serious injuries by 50% over the next 10 years is ambitious but achievable. Other Vision Zero jurisdictions (e.g. Sweden) have typically aimed for 50% reductions in every 10 year period.

Steady progress towards this target would mean approximately **990 fewer people would be killed and 7810 fewer would be serious injured** on our roads over the next ten years.

This would **reduce the total social cost of road crashes on New Zealanders by approximately $10.5 billion and the direct economic cost of road crashes by approximately $1 billion, including costs to ACC.**

2030 target: What will it take to get there?

Modelling suggests that we could achieve **just over half of the target** through a combination of:

- ***infrastructure improvements*** (e.g. median barriers, intersection treatments)
- ***speed limit changes*** in urban areas and on the highest risk parts of the network
- ***increased enforcement,*** both automated (i.e. safety cameras) and police officer presence

Up to **a further quarter** could be achieved by ***lifting the safety performance of the vehicle fleet*** and ***mandating ABS for motorcycles***.

The **remaining quarter** could be achieved by a combination of other interventions, including:

- improving safety for motorcyclists through ***rider training***
- enhanced ***drug driver testing***
- ***alcohol interlocks***
- ***strengthening penalties*** and ***road user education***
- supporting a ***shift to safer and healthier modes of travel***.

2030 target: What will it take to get there?

A step-change in approach would be needed to achieve the target, in particular:

- Approximately **doubling our current investment in road safety [TBC]** for infrastructure improvements, camera network and speed changes, and enforcement

- **Regulatory changes**:
  - To lift minimum standards for vehicles coming into the fleet
  - To enable speed limits to be changed quicker on the highest risk parts of the network
  - To allow for the introduction of point-to-point safety cameras
  - To strengthen the deterrence effect of penalties based on risk

These actions will need to be underpinned by a focus on effective system management, ensuring businesses and work places treat road safety a critical health and safety issue, and supporting a shift to healthier and safer modes of travel.

Without this level of commitment, we will not be able to achieve a 50% DSI reduction, and will need to scale back the target for 2030.