

A Design Framework to streamline delivery

Speed and Infrastructure Programme,
Road to Zero

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Purpose of today's presentation

- The SIP programme
- Why is the Design Framework needed?
- What does the Design Framework cover?
- What have we heard from the industry?
- Looking ahead- what is next in the Design Framework?



Acknowledgements

Kotahitanga – it's a team effort, we are better together.

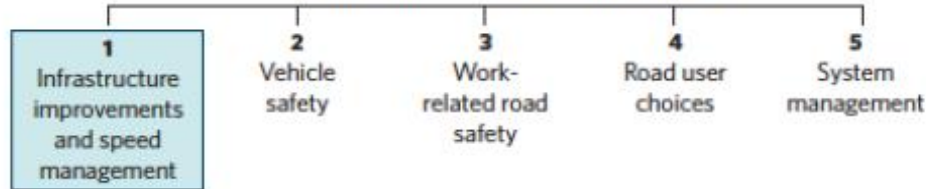
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Road to Zero sets us on a path to achieve Vision Zero - a New Zealand where no one is killed or seriously injured on our roads.

There are five focus areas in the strategy:



Our approach

Clear vision 'zero deaths and serious injuries'

Evidence driven speed and infrastructure programme

Working in **partnership** for a 'one network' view

Targeted investment making our highest risk roads safer



Our aim

As a step towards Vision Zero, the Road to Zero strategy sets an initial target to reduce deaths and serious injuries by 40% by 2030.

Speed management and infrastructure improvements aim to achieve around half of this target.



Imagine... ... **zero people killed on our roads each year**

People at the Heart

Waka Kotahi's **speed and infrastructure programme** puts people at the heart of road safety.

Safe speed limits and infrastructure improvements will save lives and reduce the number of people seriously injured on New Zealand's roads.



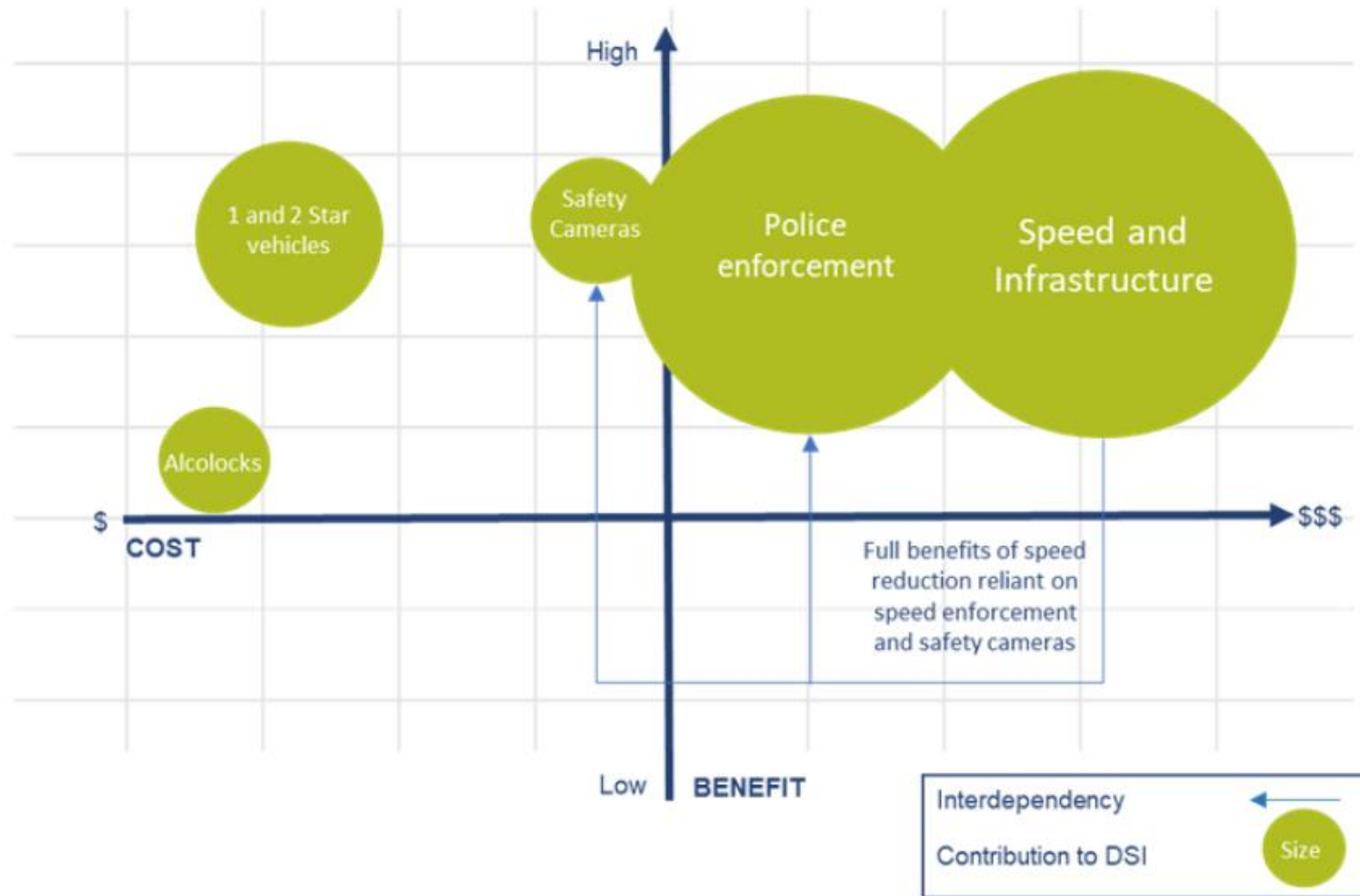
Safe system approach

To achieve Vision Zero we need to create a safe transport system; one that recognises humans make mistakes and is designed so that our mistakes do not cost us our lives.



Road to Zero 2030 target

Breakdown of intervention / programme contributions



Why did we need a framework for the Programme?

- A pragmatic and affordable approach that has the 'Safe System' balance.
- Current design guidance in Austroads not appropriate (Brownfield sites)
- Maximise DSI return
- Simplify approaches to deliver at scale and pace.



Road to Zero Speed and Infrastructure Programme Design Framework

DRAFT

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What does the Design Framework cover?

Introduction and context

Design Principles

Standards and
Guidance

Audits, Assessments
and Whole of Life

What is success?

From a Programme perspective



A typical retrofitted corridor



A greenfield road upgrade

What we are sometimes working with...

Project Scoping



Design Framework Principles

Principle 1: Installation of median barriers should be considered on all roads satisfying the following conditions:

- a posted speed limit of 90km/h or 100km/h and traffic volumes above 6,000 vehicles per day and
- a posted speed limit of 80 km/h and traffic volumes above 10,000 vehicles per day.

Principle 2: Interventions should be designed to minimise earthworks and land purchase

Principle 3: Single lane roundabouts are considered as the most cost-effective Safe System intersection treatment

Principle 4: Turnaround facilities should be corridor-specific

Principle 5: Minimise impact on nearby or associated structures

Principle 6: Passing Lanes should be retained where practicable

What do you see?



SH1 Dome Valley (Warkworth to Wellsford)



What have we heard from industry?

- Detour routes
- Over-dimension routes
- Repairs to barriers
- Vegetation management
- Other maintenance activities such as overlays



Other (wider) themes of interest:

- Applying minimum cross sections
- Perception of safety and operational impacts
- Co-ordination with other works & maintenance
- Whole of life safety by design
- Corridor use – adapting to the changes
- Communication and engagement



Centennial Highway

An example of potential pull over areas in constrained environments



Looking Ahead- Accelerated Delivery Principle

Increasing the roll-out of key interventions

Simplify & phase

- Identify what sections of projects we can progress now that don't need detailed design
- Treatment length approach - break up projects to do the 80%, so the 20% doesn't hold everything up

Pragmatic design

- Clearer guidance to enable repeatable design elements
- Designers not designing from scratch every time

Unlock funding

- Unlock funding now to enable earlier construction (imp and property)
- Beyond this NLTP, move to SIP being funded as a Programme, not individual projects

Procurement

- In 2023/24 procure regional construction frameworks for 10-year partnerships
- Drive more certainty and security to invest in resources to support delivery at the correct scale and pace

Construction

- Improve construction safety for our contractors, lower the unit cost & increase productivity on site through targeted state highway closures
- Closures for weeks rather than 5 years of TTM

Benefits Realisation – sharing the success

So what's next for the Design Framework?

- Staged construction
- Hierarchy of access for turnarounds, including distances between facilities
- Further cross-section guidance
- Seal widening framework
- Property & Maintenance considerations
- Reference to new Safe System Audit process



Key Messages

The design framework helps to limit variance in design advice

We need to improve buy in and understanding

The design framework remains a live document

The design framework will improve timely decision making

Sets expectations for enduring benefits

Keep in mind - what do we do now vs what is a future opportunity

Check it out, it's worth a read

<https://nzta.govt.nz/assets/resources/road-to-zero-speed-and-infrastructure-programme-design-framework/Road-to-Zero-Speed-and-Infrastructure-Programme-Design-Framework-draft.pdf>

Version 2 coming out soon... watch this space