



TE MANATŪ WAKA  
MINISTRY OF TRANSPORT

# New ways to compare options: *assessing VKT reduction approaches to understand co-benefits and long-term value*

## A Generational Investment Case Study

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# The transport system is central to our wellbeing

- It connects businesses, markets, and regions.
- It shapes, and is shaped by, urban form and development and has major impacts on people's health.
- Our current system has served us well over the past 50 years, growing and expanding our access, connections and economic opportunities.
- But the next 50 years will be very different.



# [ We are entering a period of significant challenges & opportunities

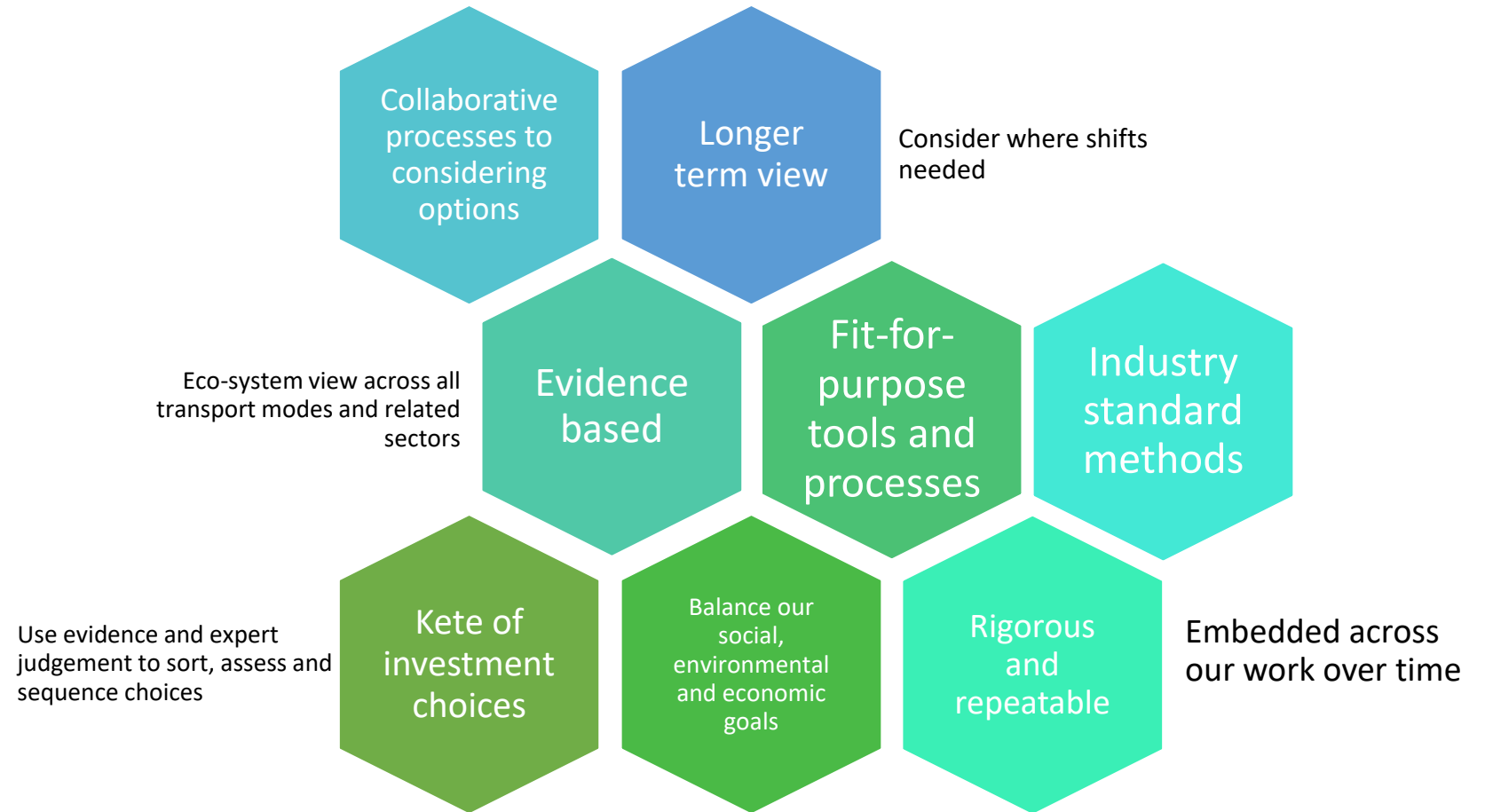
The transport sector currently faces a number of existing challenges that will force transport agencies to play a more active role than they have in the past.

This, coupled with the changing objectives of government across a range of outcomes, will create both challenges and opportunities to develop more fit for purpose transport solutions that serve the needs of all New Zealanders.



# The transport sector needs need tools to better inform long-term decision making

## Generational Investment Approach



# GIA Evaluation Conference is a new tool to assess policy and investment options



Use Multi Criteria Decision Assessment approach with informed sector leaders



Rank and assess options against the Transport Outcomes and future impact criteria



Provide information on the total value of options, including co-benefits



Can provide new assessment of value for money



# Using the GIA tool to assess and compare VKT reduction options

**The Emission Reduction Plan calls for a 20 percent reduction in VKT to contribute to our emission reduction goals.**

*We wanted to know:*

What packages of interventions offer the best value for money while maximising emissions reductions and co-benefits?

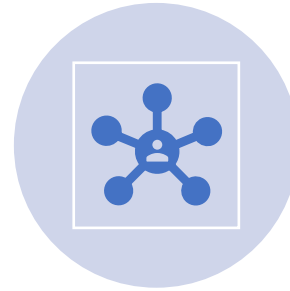
What are the key trade-offs, opportunities, sequencing considerations and alternatives decision makers should be aware of when choosing between packages?

What decisions will be required in the short, medium and long term in order to reach our emissions reduction targets?

# VKT reduction interventions chosen for the GIA Evaluation Conference



The Ministry undertook a literature review, and desk-based research, to identify a long list of interventions for potential inclusion, utilising the “Avoid, Shift, Improve” (ASI) framework



A total of 20 high-level interventions were chosen, each consisting of several individual interventions grouped together to reflect interdependencies



The interventions chosen were a mixture of existing (approved), proposed, explored, and new concepts



Whilst the focus was on VKT reduction, and interventions were predominantly about directly enabling more active and public transport trips, some “improve” interventions, including encouraging EVs and phasing out ICEs were also included as a comparator.



Options were assessed and ranked against the transport outcomes and future impact criteria within groups and then across groups.

Figure 1: Combined VKT reduction approaches for the evaluation process

Promote shift to active & shared transport	Promote shift to public transport	Other approaches
<b>Active Transport infrastructure</b> Increased funding to make active modes safer	<b>Reduce transport fares</b> Reduce public transport fares	<b>Integrate land and transport plans</b> Integration of land use and transport planning
<b>Safer and faster Active Transport</b> Changing national policy settings to make active transport safer and faster	<b>Zero Fares Public Transport</b> All public transport is free to use	<b>Amend speed limits in urban areas</b> Amend current speed limits in urban areas to 30km/h
<b>Fund on-demand and shared transport</b> Funding for on demand and shared transport services	<b>Improve buses</b> Increased funding to improve bus services	<b>Amend speed limits on highways</b> Amend current speed limits on highways to 80 km/h
<b>Commuter emission reduction</b> Supporting commuters to reduce their emissions when travelling to work or education	<b>Improve rail</b> Increase funding to improve rail capacity, frequency, and reliability	<b>Reduce ICEs</b> Reducing over time the sale and use of ICEs
<b>Mode shift planning</b> Mode shift strategizing and planning	<b>Rapid transit network in cities</b> Implement rapid transit network in New Zealand's major centres	<b>Incentivise transition to EVs</b> Incentivising the transition to EVs
	<b>Improve funding process</b> Improve the transport funding process	<b>Integrated payment app</b> National public transport and micro mobility transport integrated payment app
		<b>Parking regulation</b> Using parking as a demand management tool
		<b>Road pricing</b> Road pricing
		<b>Congestion charging</b> Congestion charges in high travel demand areas



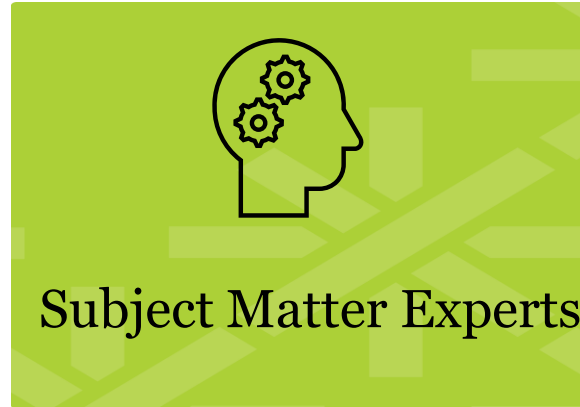
# Overview of the GIA Evaluation Conference

Overview of the purpose of the conference	Overview of interventions to be assessed	Overview of the value criteria	Assess interventions against the value criteria	Weight the value criteria as a group	Results are presented
<ul style="list-style-type: none"><li>- The facilitator, with assistance from the Generational Investment Unit, provided an overview of the purpose of the conference.</li><li>- Explained the MCDA methodology that would be used for the conference</li></ul>	<ul style="list-style-type: none"><li>- The Generational Investment Unit explained all the interventions that were to be assessed as part of the conference.</li><li>- Adjustments were made around the scope of some interventions.</li></ul>	<ul style="list-style-type: none"><li>- The Facilitator provided an overview of the value criteria. Value criteria are based on the Transport Outcomes Framework with an added Future Benefit Criterion.</li></ul>	<ul style="list-style-type: none"><li>- Evaluators ranked each intervention against each value criteria as group.</li></ul>	<ul style="list-style-type: none"><li>- Evaluators then ranked the Value Criteria from most important to least important.</li></ul>	<ul style="list-style-type: none"><li>- The facilitator and external contractors calculate the scores, weight them and then present a ranked list of interventions to the group.</li><li>- The facilitator then answers any questions and addresses any concerns that Evaluators may have.</li></ul>

# The roles



- A group of transport (and related sector) officials
- Tasked with evaluating transport interventions against a set of criteria
- Responsible for assigning relative ranking of options against all criteria

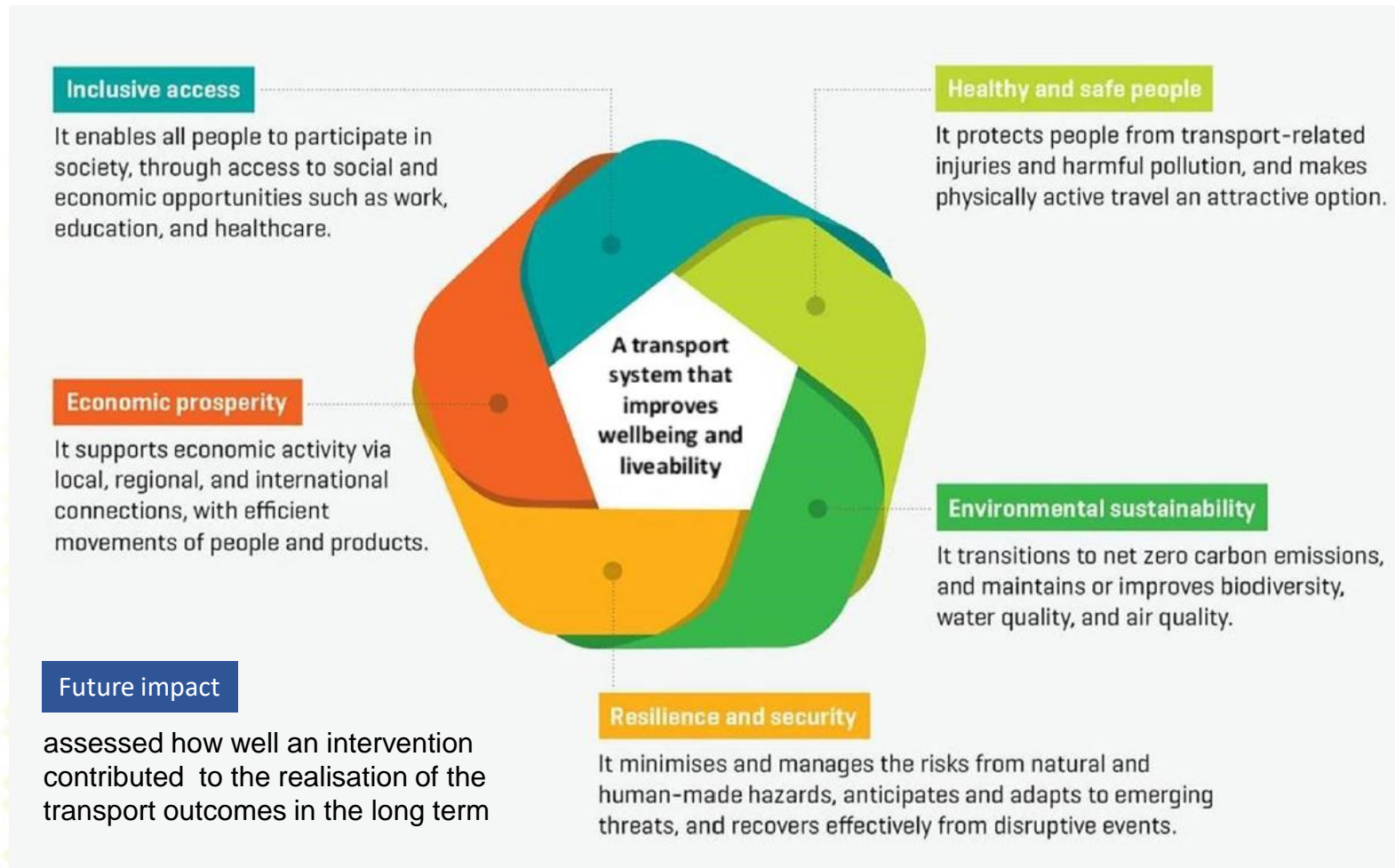


- Experts in certain transport (or related) fields
- Were present to answer any questions Evaluators may have



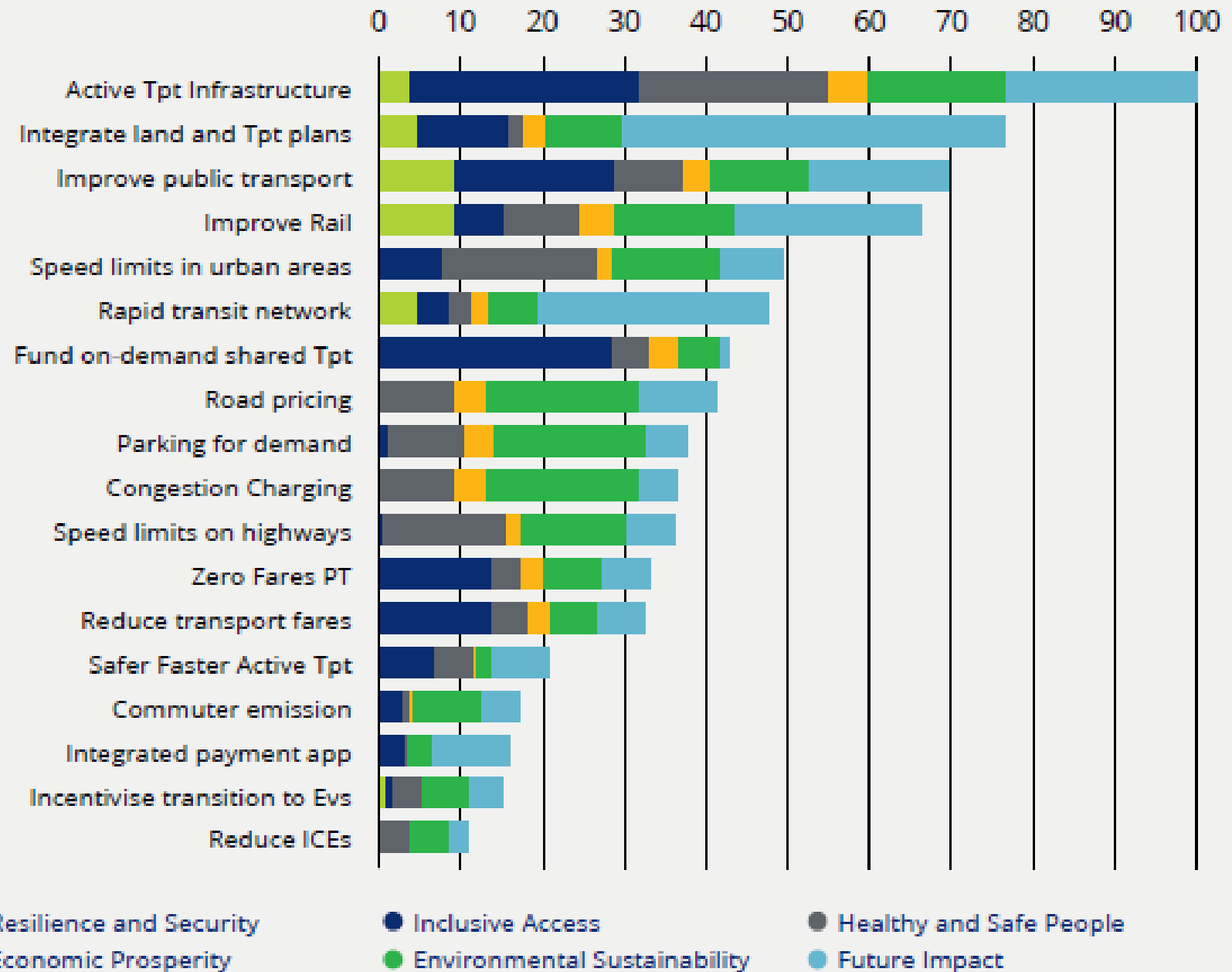
- Ran the group through the MCDA based assessment conference
- Explained rationale behind the method
- Supported Evaluators to come to a consensus
- Compiled and presented results

# We established a GIA value criteria based on the Transport Sector Outcomes + a Future impact factor



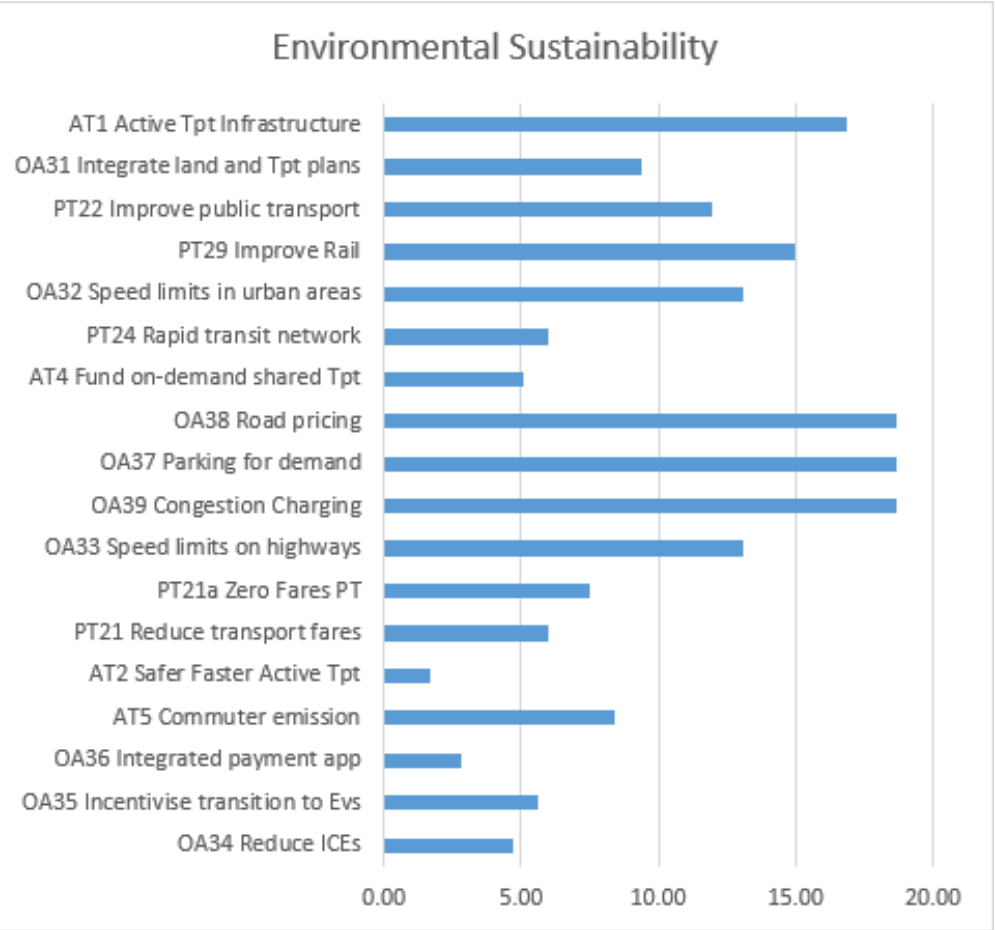
The process resulted in ranking of options by total benefits

Figure 2: Ranking of options by derived benefits

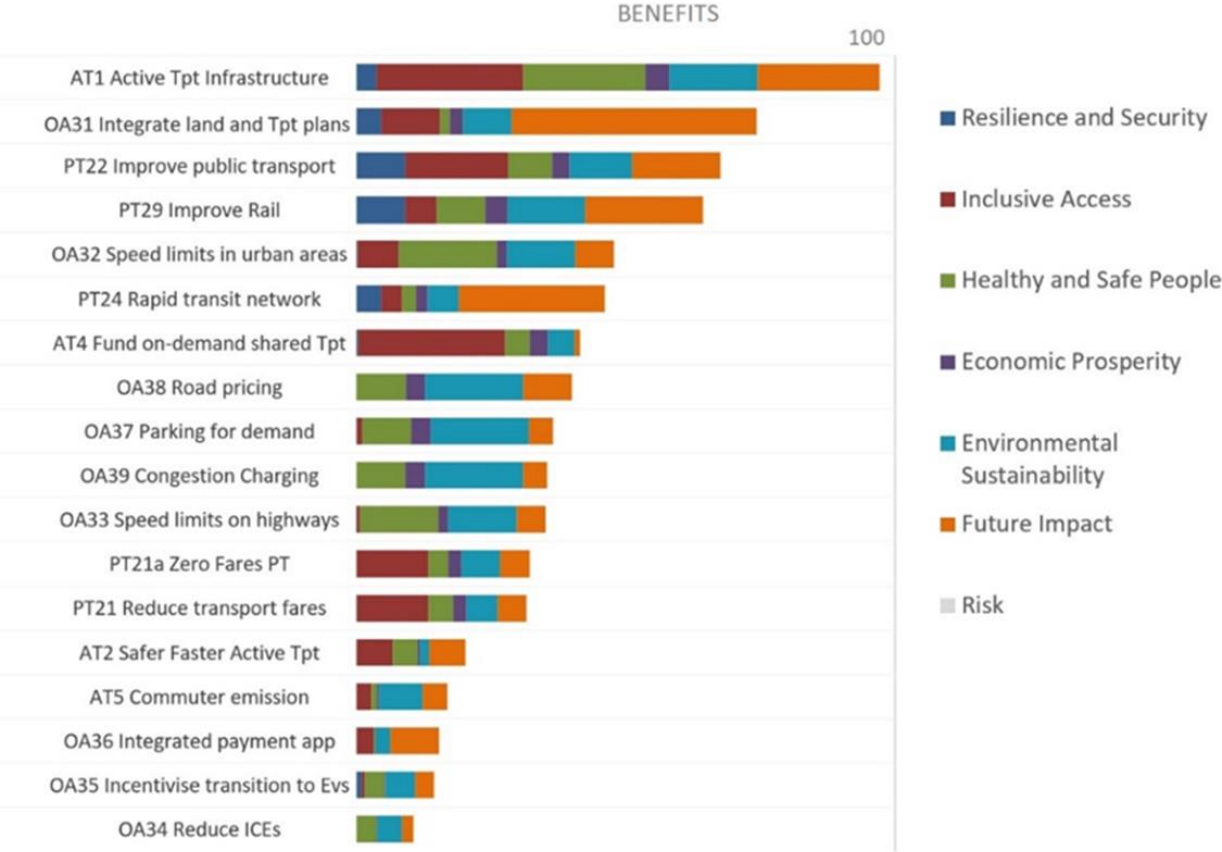


# Consider prioritising investments on their ability to deliver multiple long term benefits

Isolated environmental benefit



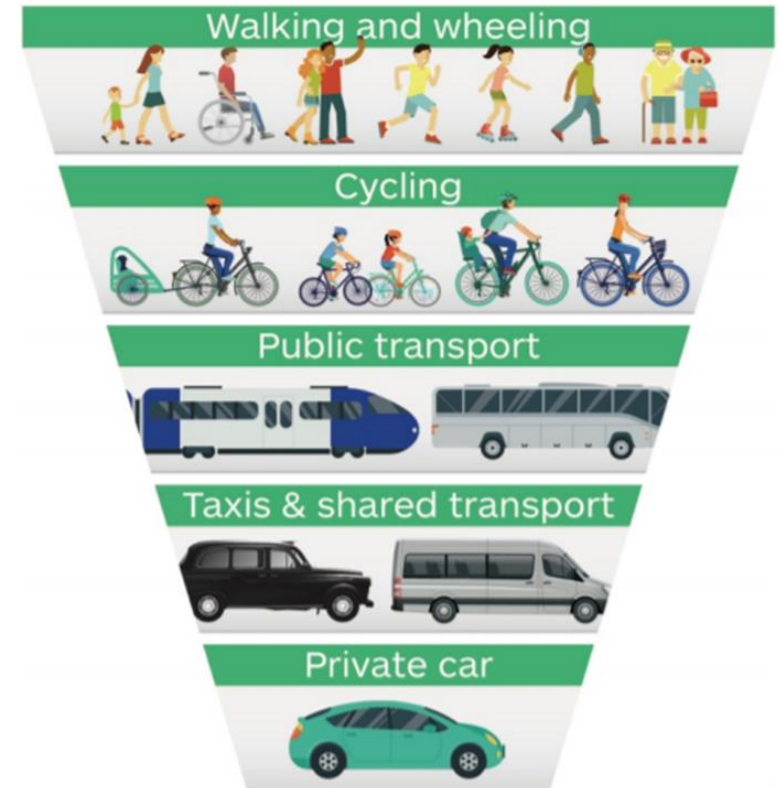
Overall benefit



# Observations

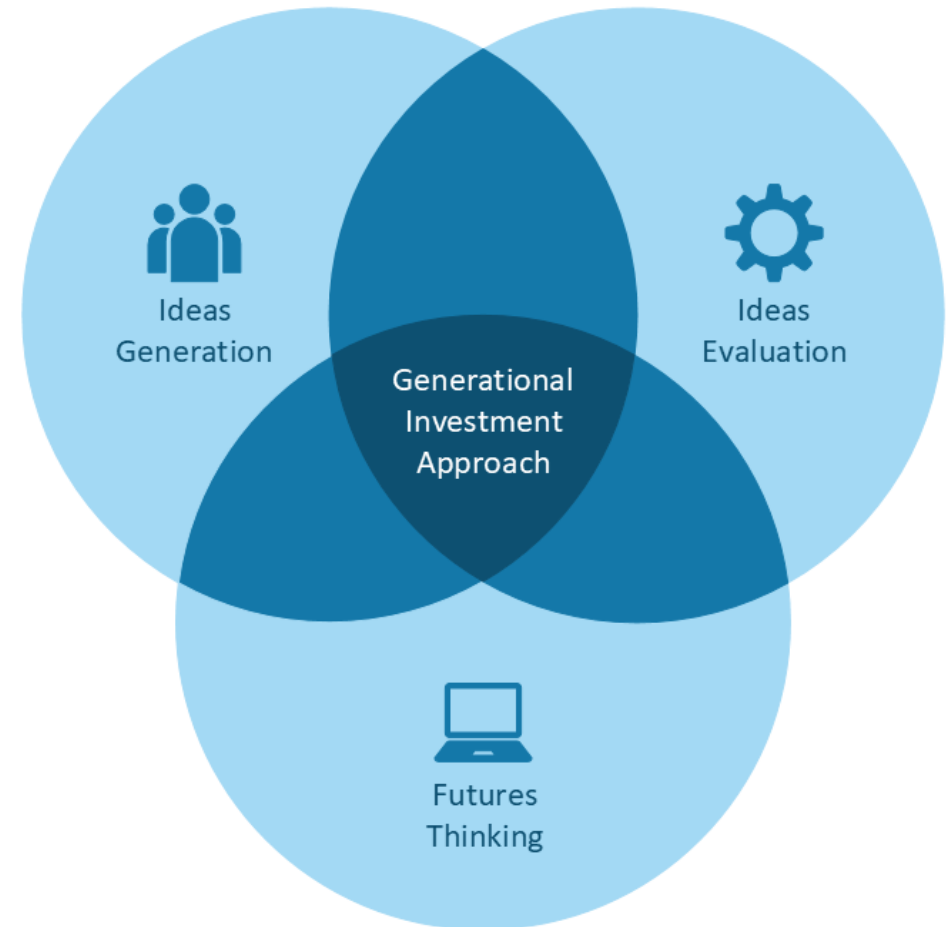
- Prioritise actions that deliver wider co-benefits than emissions reduction alone
- Consider prioritising active and public transport spending and integration with land use changes, and “avoid” opportunities
- Consider prioritising investments based on their ability to deliver multiple long-term benefits
- Carefully consider the sequencing of interventions including how low-cost/short-term interventions can lay the groundwork for higher-cost/longer-term interventions to maximise benefits
- Carefully consider how high-cost interventions can be phased over time, and consider alternative applications to maximise value for money

## Prioritising Sustainable Transport



# Continuing the journey

- The GIA Evaluation conference is not the only tool used as part of the Generational Investment Approach. The team are currently developing a Strategic Toolkit which can help other teams and agencies with futures thinking, idea generation and evaluation.
- If you are interested in learning more about our recent GIA Assessment Conference, or would like more information about our Strategic Toolkit please get in touch.



Ngā mihi  
Thank you

