

National Infrastructure Plan

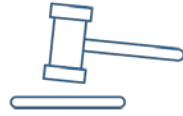
Mahere Tūāhanga ā-Motu

We have lots of competing needs

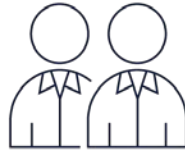
The NIP tracks 17 infrastructure sectors



Land transport



Law and public safety



Public administration



Gas



Water and wastewater



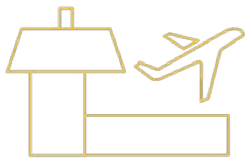
Flood protection



Telecommunications



Electricity



Airports



Education



Ports



Waste and resource recovery



Social housing



Defence



Irrigation



Corrections



Hospitals

We're planning more than we can afford

National Infrastructure Pipeline



\$275bn

value of projects in planning and delivery in the Pipeline



44

largely unfunded megaprojects each worth more than \$1 billion



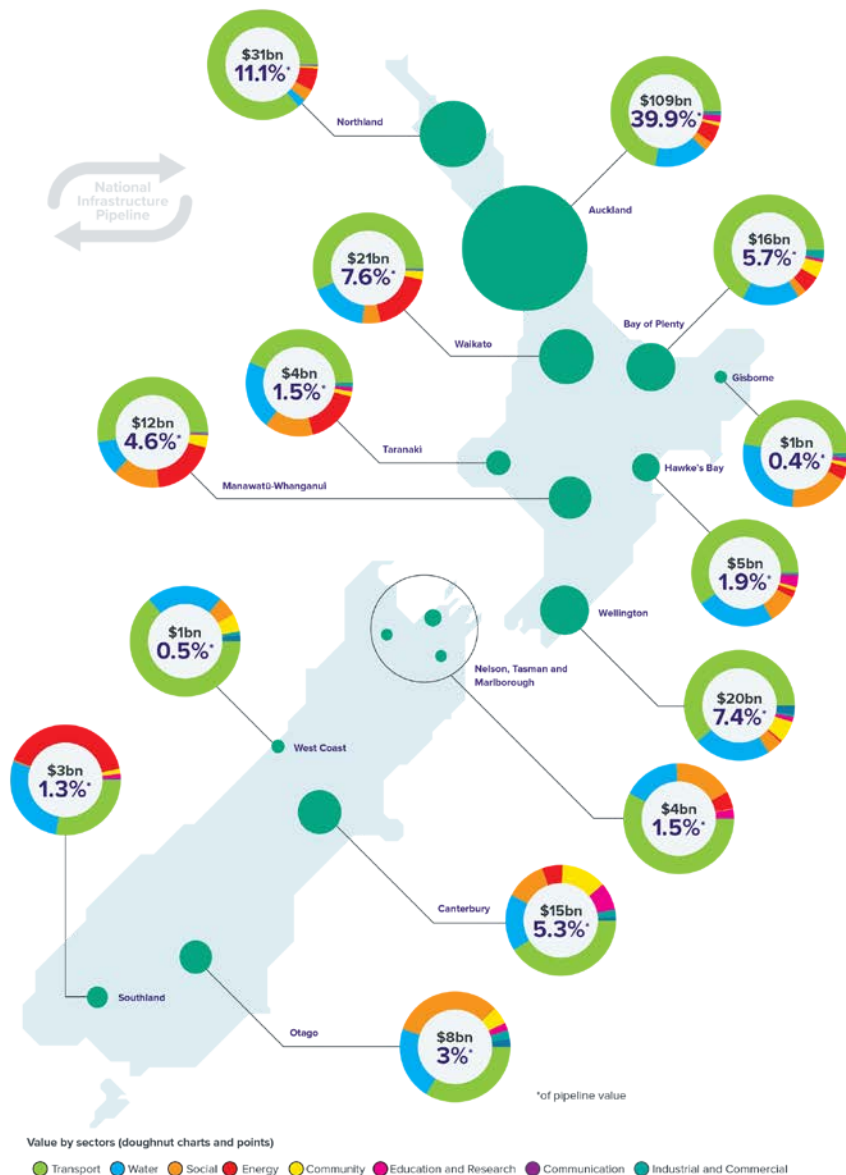
11,925

number of projects



98%

of projects are worth less than \$100 million





Building our way out seems difficult

1

Charge users

38% ↑

in household spending on infrastructure services

2

Charge all New Zealanders

21% ↑

in average income tax paid per taxpayer

3

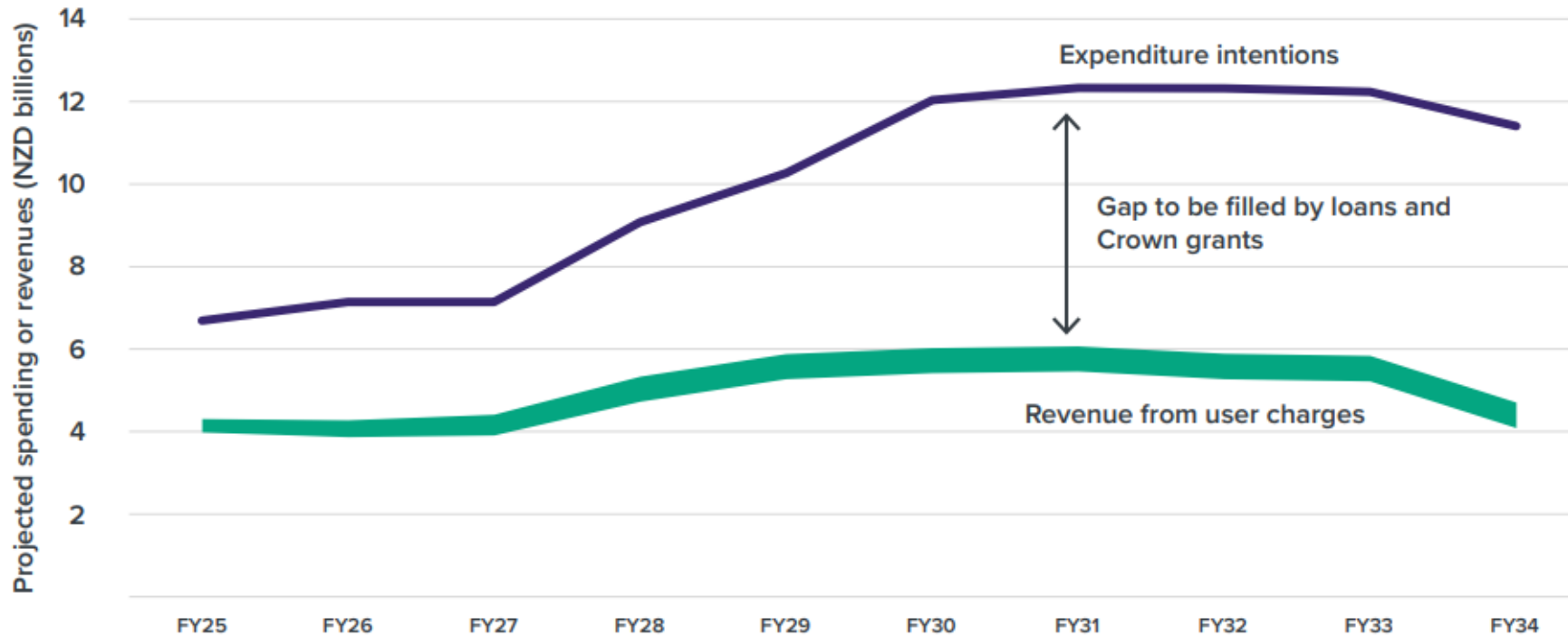
Charge future New Zealanders

98% ↑

in Crown debt-to-GDP ratio by 2051

Land transport faces a sizeable funding gap

Planning to spend more than users can fund



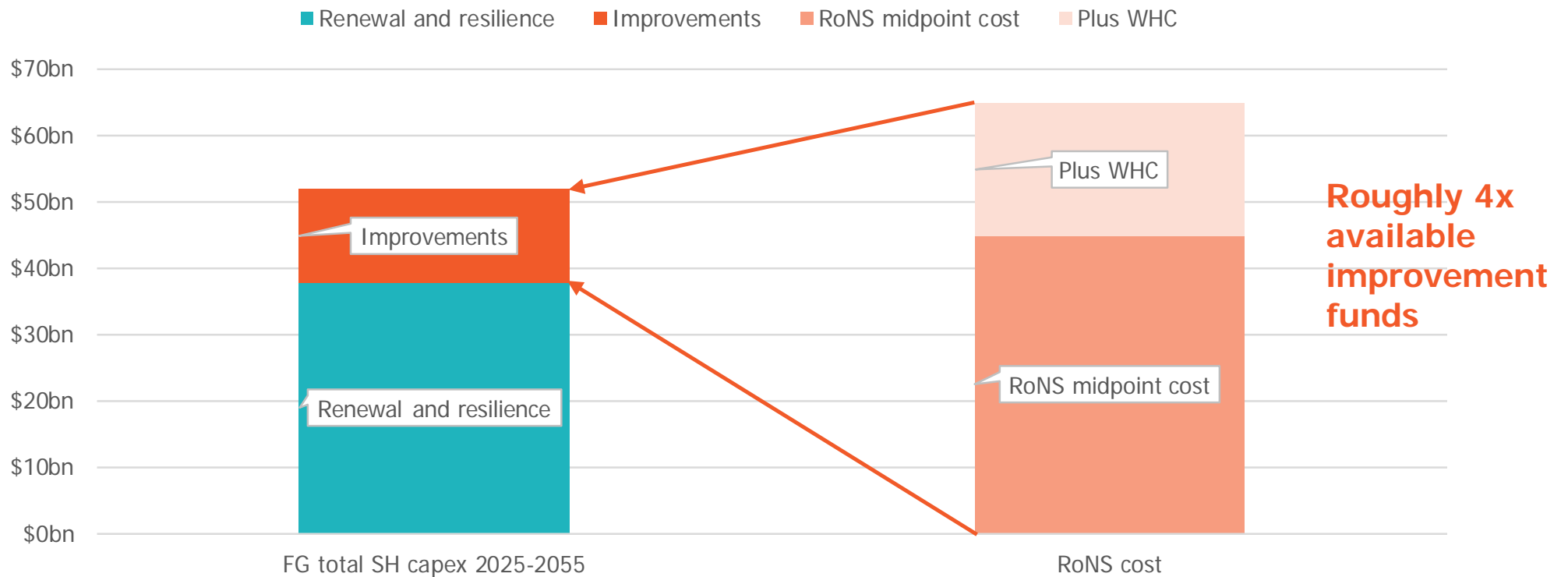
Source: NZTA National Land Transport Programme 2024–2027.

So what are the funding options?



This gap is represented in Forward Guidance

Major transport project capex against FG for SH capex



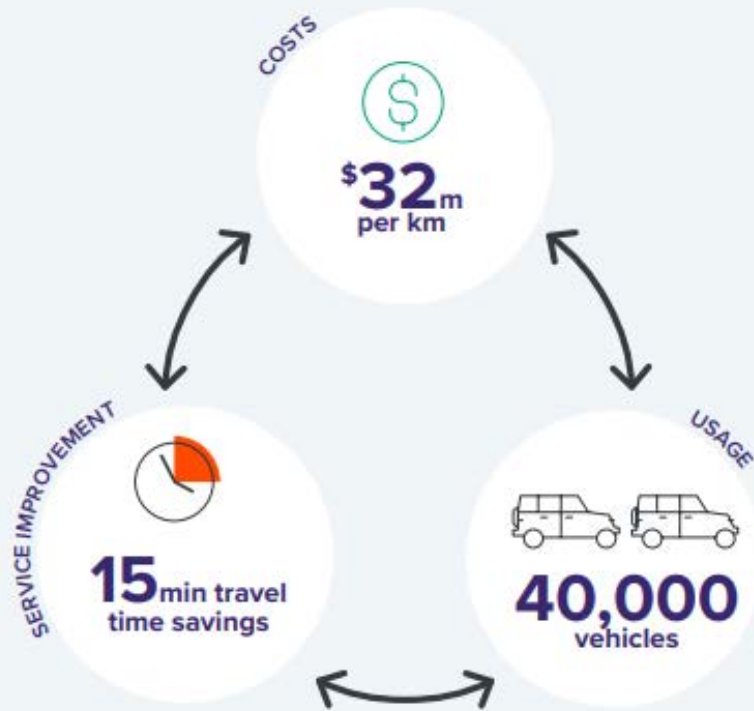
Note: Forward Guidance for SH investment is similar to NZTA view on investment programme if NLTF was limited to user revenues; leading to \$400-500m in annual state highway improvement capex.



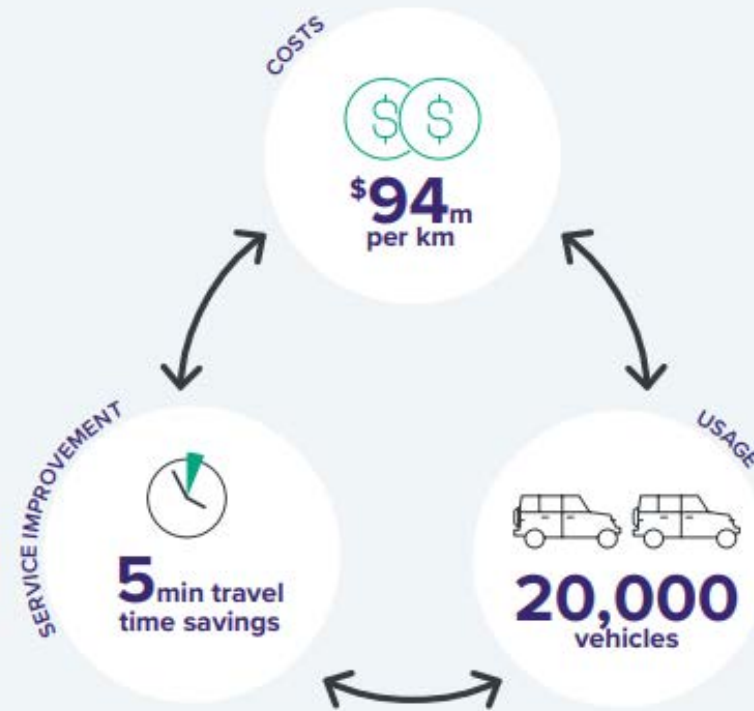
Could users of the asset pay more?

Predicted cost recovery for new toll roads

Panel A: Factors needed for 100% cost recovery



Panel B: Factors needed for 10% cost recovery

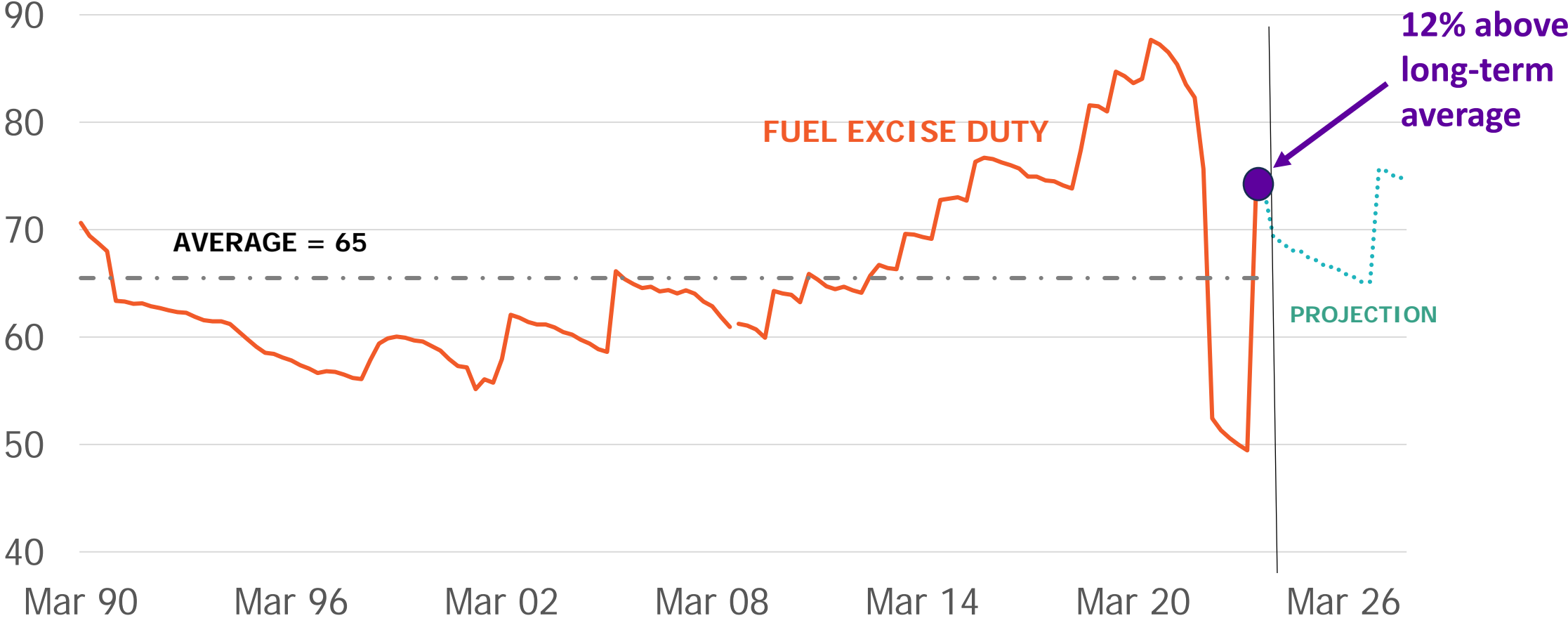


Source: New Zealand Infrastructure Commission modelling. ¹¹¹

What about other users on the network?

Fuel Excise Duty, 1990-2026 (inflation adjusted)

Cents per litre (\$2023)

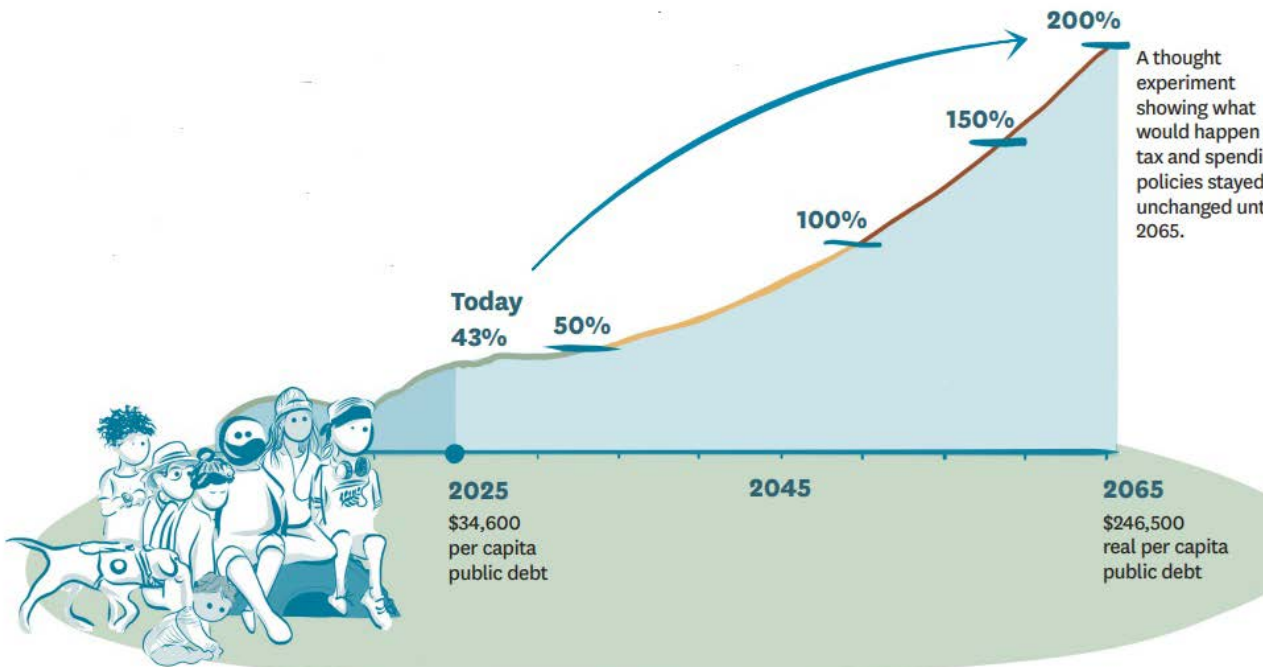


What about consolidated revenues?

The fiscal challenge of spending more

Central Government

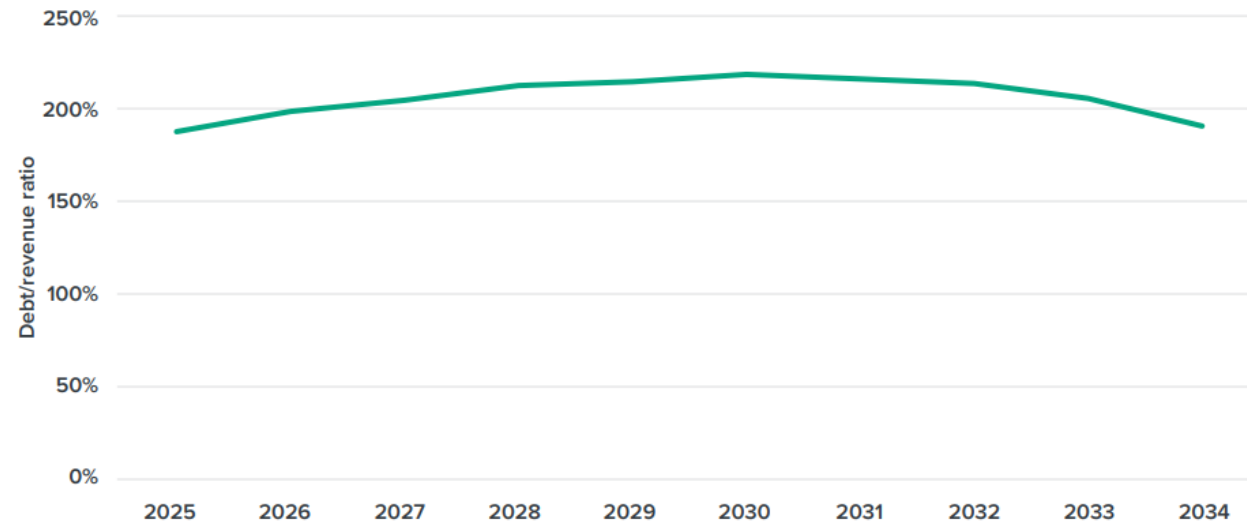
Net core Crown debt/GDP, 2020–2065



Source: Treasury, Long-term Fiscal Statement, 2025

Local Government

Debt to revenue, 2024 LTPs



Source: Adapted from 'Observations from our audits of councils' 2024-34 long-term plans'. Office of the Auditor-General. (2025).

What about reprioritisation from other sectors?

Most sectors in a similar position; capital allowance of \$3.7bn



"The Health Infrastructure Plan identifies the **more than \$20 billion** investment required to meet future health needs..."



"This new Defence Capability Plan contains \$12 billion of funding over the next four years, which includes **\$9 billion of new spending.**"

What about reprioritisation from other sectors?

Forward Guidance, National Infrastructure Plan

Sector	How to fund investment	Recent investment trends, % of GDP (2010–2022)	Forecast future investment demand, % of GDP (2024–2054)		Key drivers of future investment
Network infrastructure					
Land transport – road, public transport, rail	User charges and rates	1.3%	1.0%	↓	Decarbonisation, slowing income and population growth
Electricity and gas	User charges	0.8%	1.3%	↑	Decarbonisation, renewals
Water and waste	User charges and rates	0.6%	0.5%	↓	Renewals and natural hazards
Telecommunications	User charges	0.7%	0.7%		Renewals, stable outlook
Social infrastructure					
Education – primary/secondary	Taxes	0.4%	0.3%	↓	Demographic change
Education – tertiary	Taxes and fees	0.6%	0.5%	↓	Demographic change
Hospitals	Taxes	0.2%	0.4%	↑	Demographic change, renewals
Public administration and safety – government buildings, prisons, defence, justice	Taxes	0.9%	0.8%		Renewals, stable outlook
Social housing	Taxes and rents	0.3%	0.3%		Renewals and population growth
Other public capital	Various	0.2%	0.2%		Stable outlook



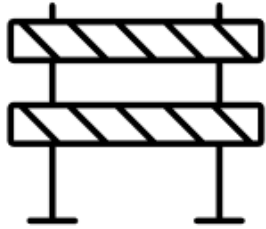
What about a staging approach?

Major road projects: Timing analysis



Demand

- **Key metric:** Average daily traffic exceeds estimated capacity of the current road layout.



Quality

- **Metric 1:** Death and serious injury crashes do not reduce following implementation of low-cost improvements
- **Metric 2:** Road closures due to natural hazards, crashes, etc, rise from current levels.



Cost

- **Key metric:** Unit cost of proposed project is lower than affordability benchmark.

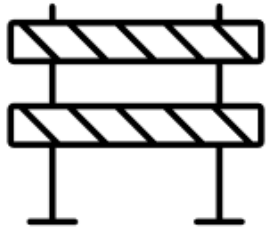


Major road projects: Timing analysis



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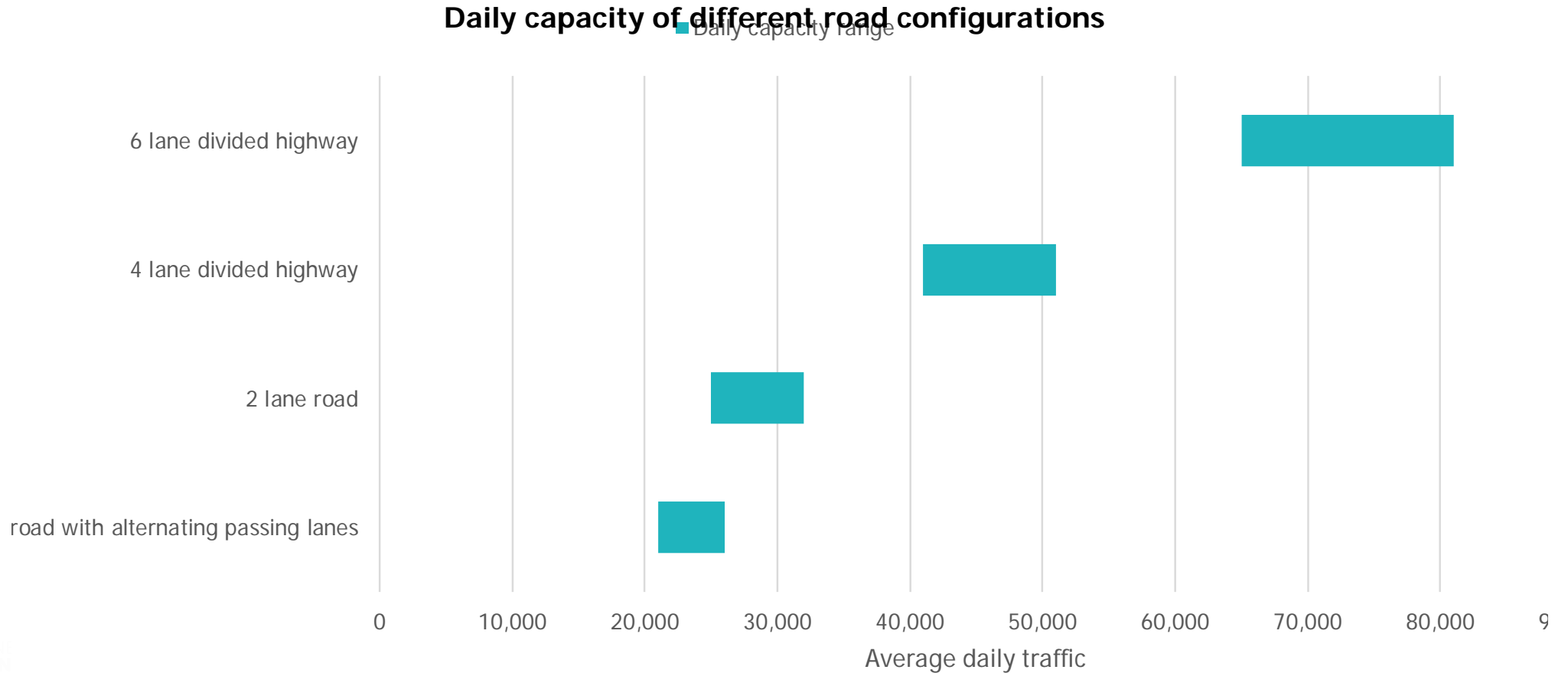
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Focus on these factors for high-level timing analysis



Major road projects: Timing analysis

Demand vs capacity analysis

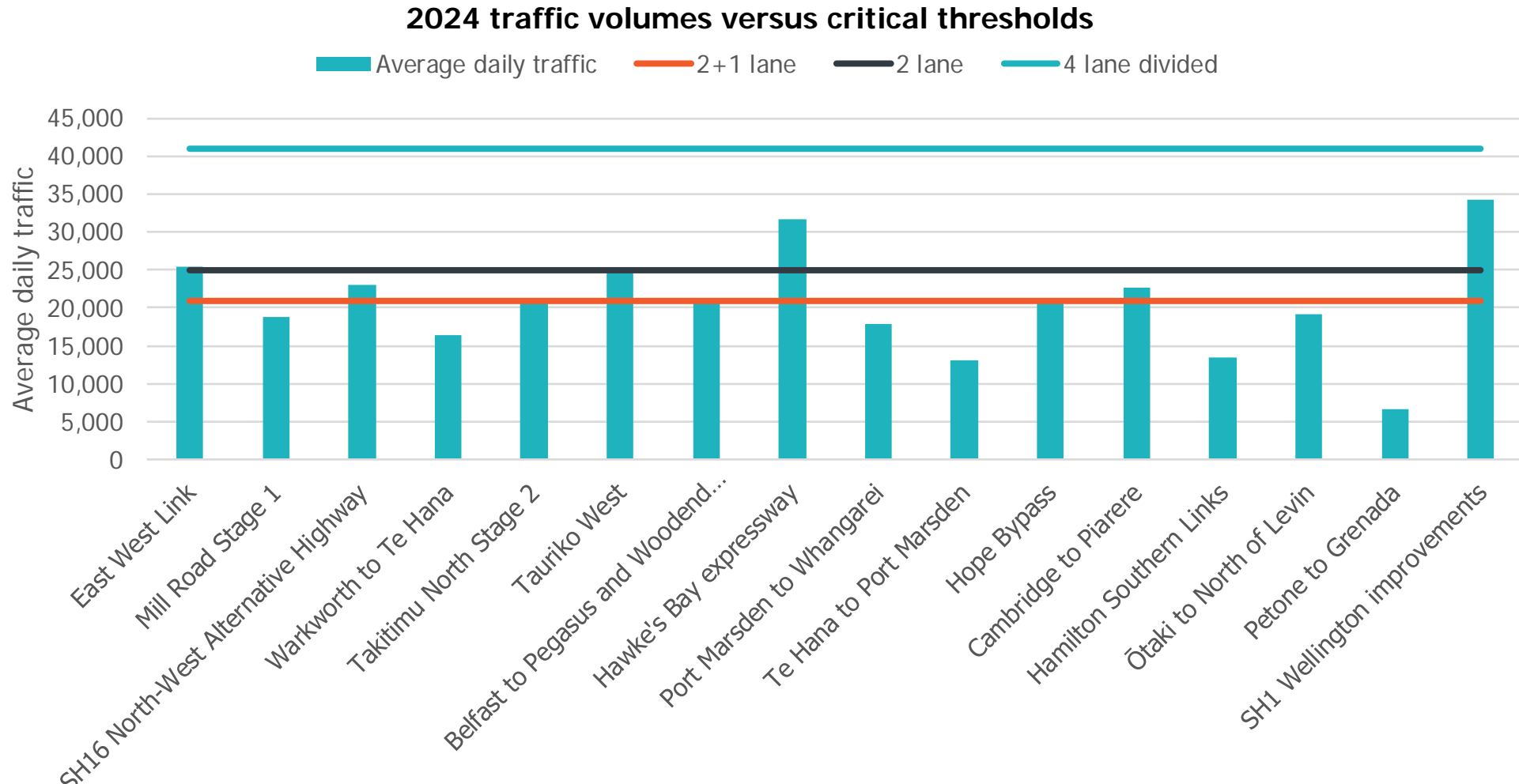


Notes: Capacity assumptions assume no excess speed reduction (beyond LOS C); ranges reflect different assumptions about degree of peak spreading. Upper end of range can be exceeded with increased peak spreading or further speed reduction.



Major road projects: Timing analysis

Demand vs capacity analysis



Notes: Closest available/relevant traffic counting site used for each proposed new road. Petone to Grenada volumes estimated based on business case information suggesting building the road would result in a 6600 vehicle per day reduction on SH1/2.

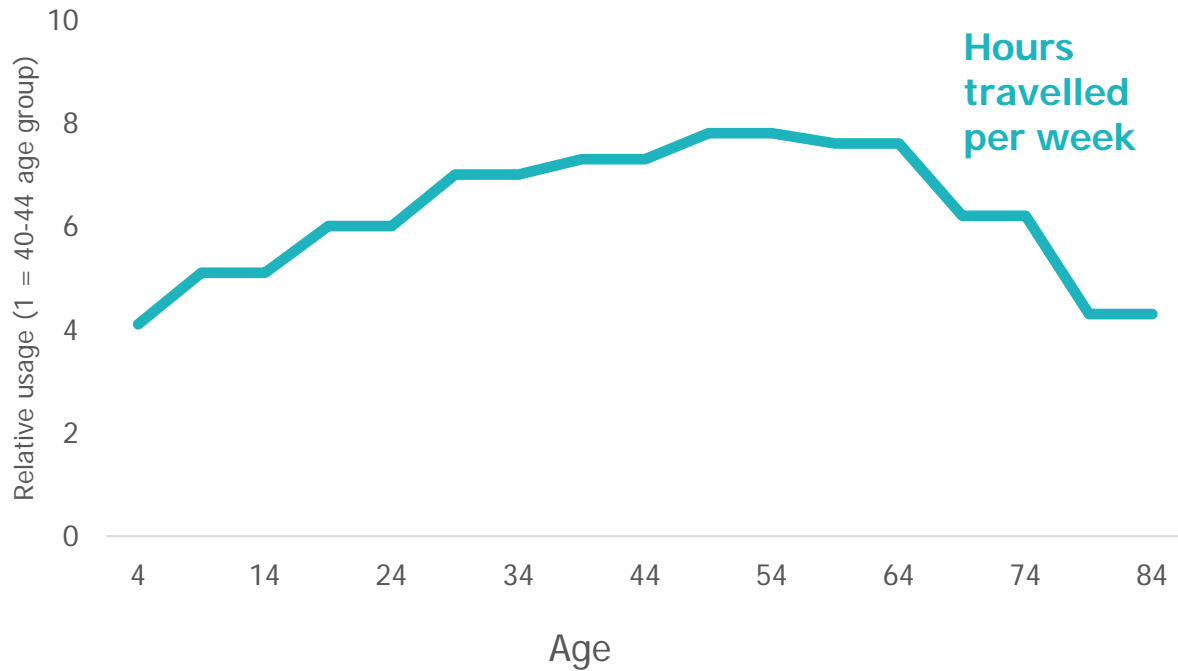
Major road projects: Timing analysis

Demand vs capacity analysis

Demographics will impact demand

VKT is moderating

Average annual growth in vehicle kilometres travelled



HISTORICAL

PROJECTED

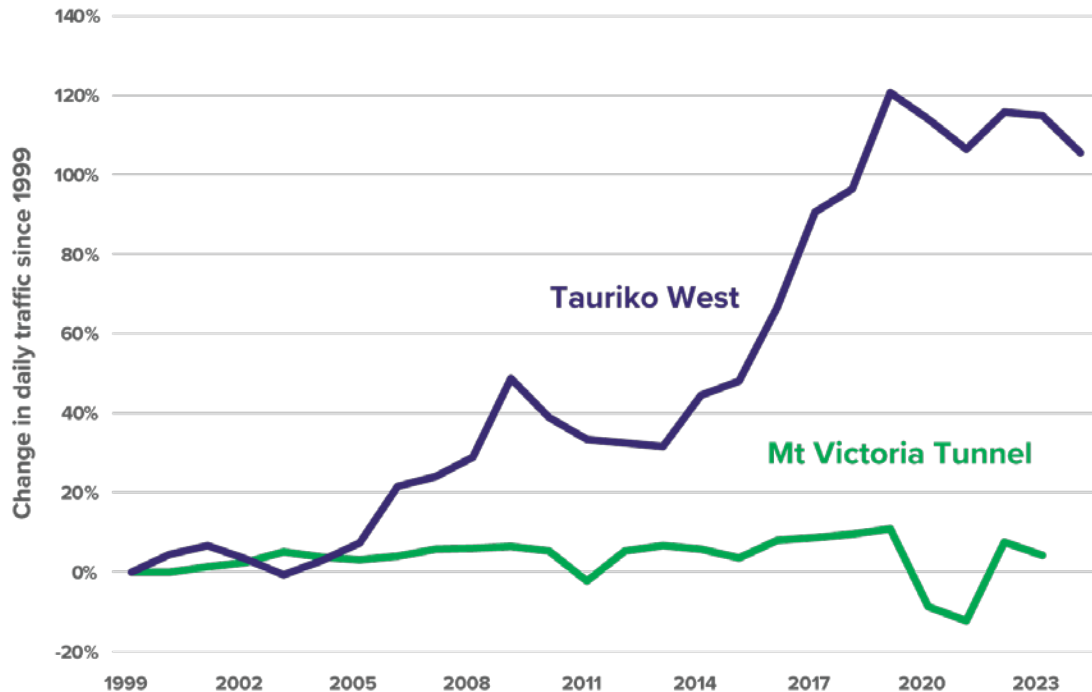
Source: "Understanding capacity upgrade pressures across infrastructure networks".
Infrastructure Commission. 2026.



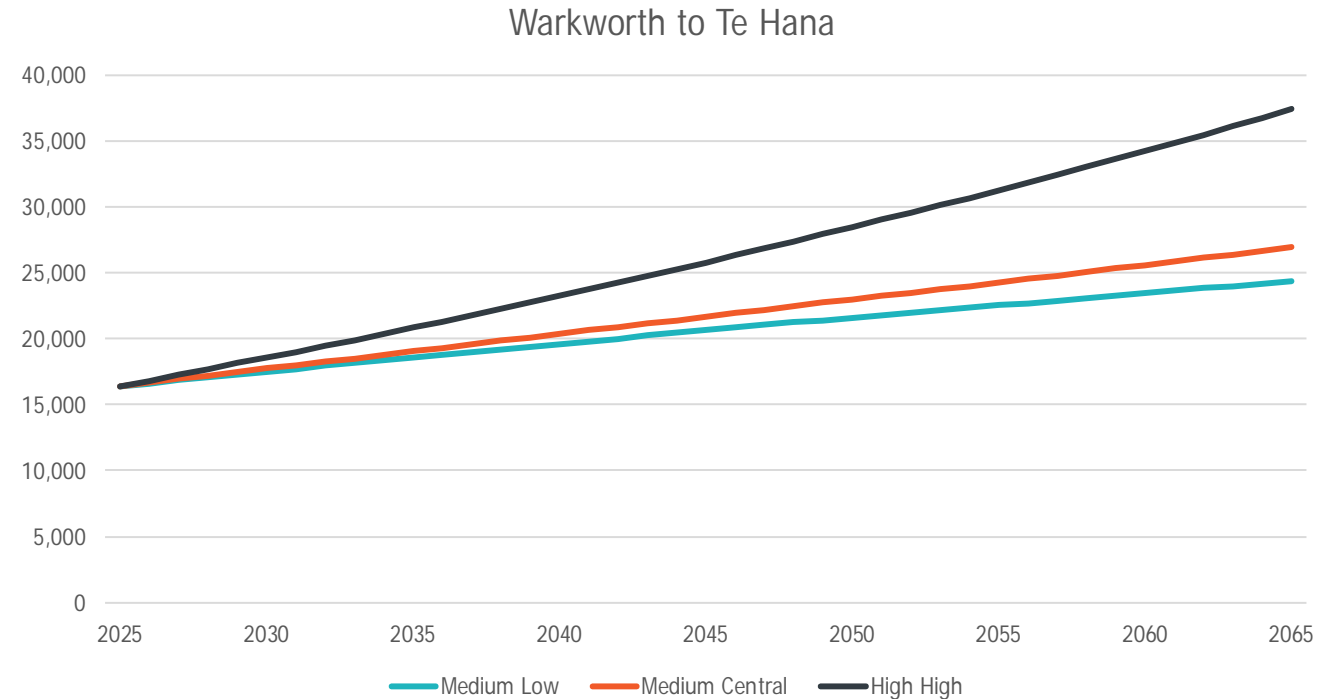
Major road projects: Timing analysis

Demand vs capacity analysis

Past growth rates



And plausible future projections

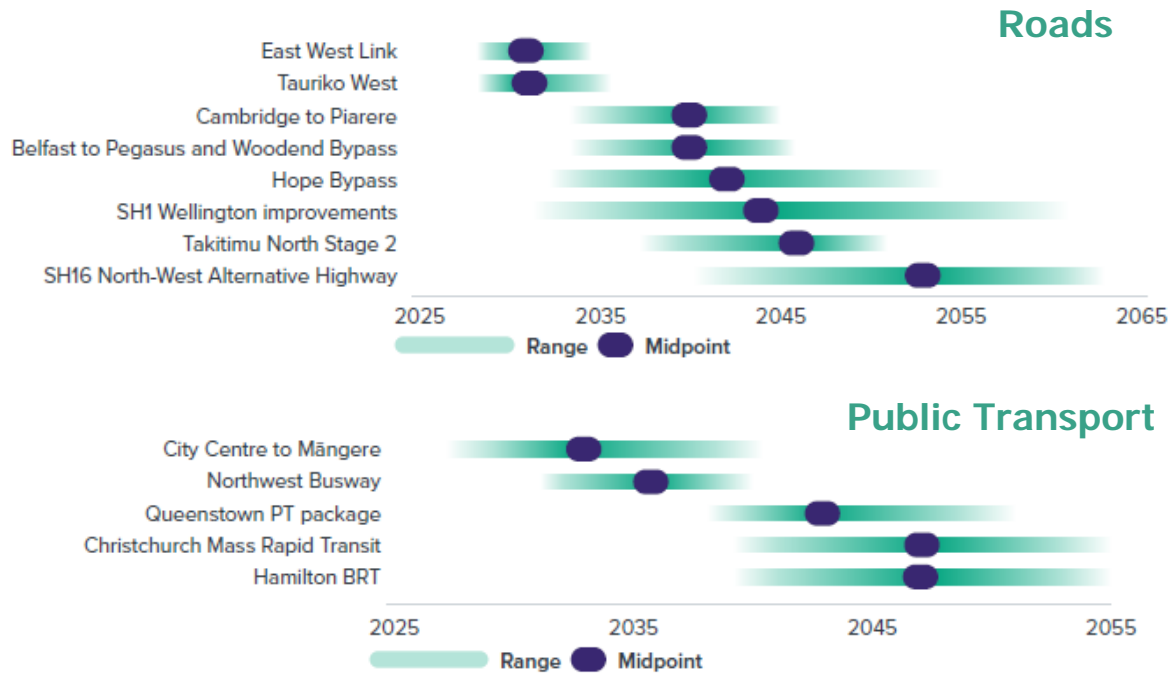


Notes: Scenarios based on combined impact of SNZ regional population projections (medium/low/high) and VKT per capita growth assumptions (0% pa, 0.25% pa, 0.75% pa).

Prioritise and sequence major transport projects

Sequenced capacity upgrades

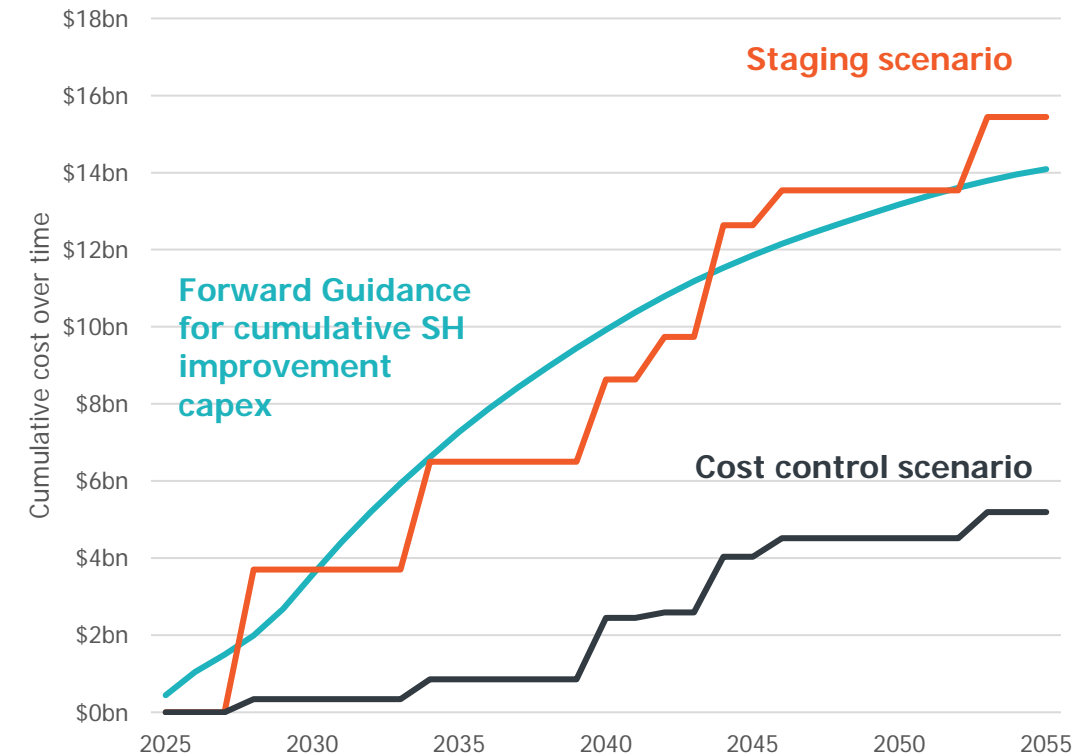
Estimated date range for exceeding capacity of current infrastructure



Notes: This high-level analysis focuses on the need for capacity upgrades, where expected peak volumes cannot be served by existing infrastructure, rather than improvements to speed, reliability, safety, or resilience, which are also considered in investment decisions. Some corridors not listed on these charts could also reach capacity prior to 2055, but this is not the most likely timing scenario.

To maintain affordability

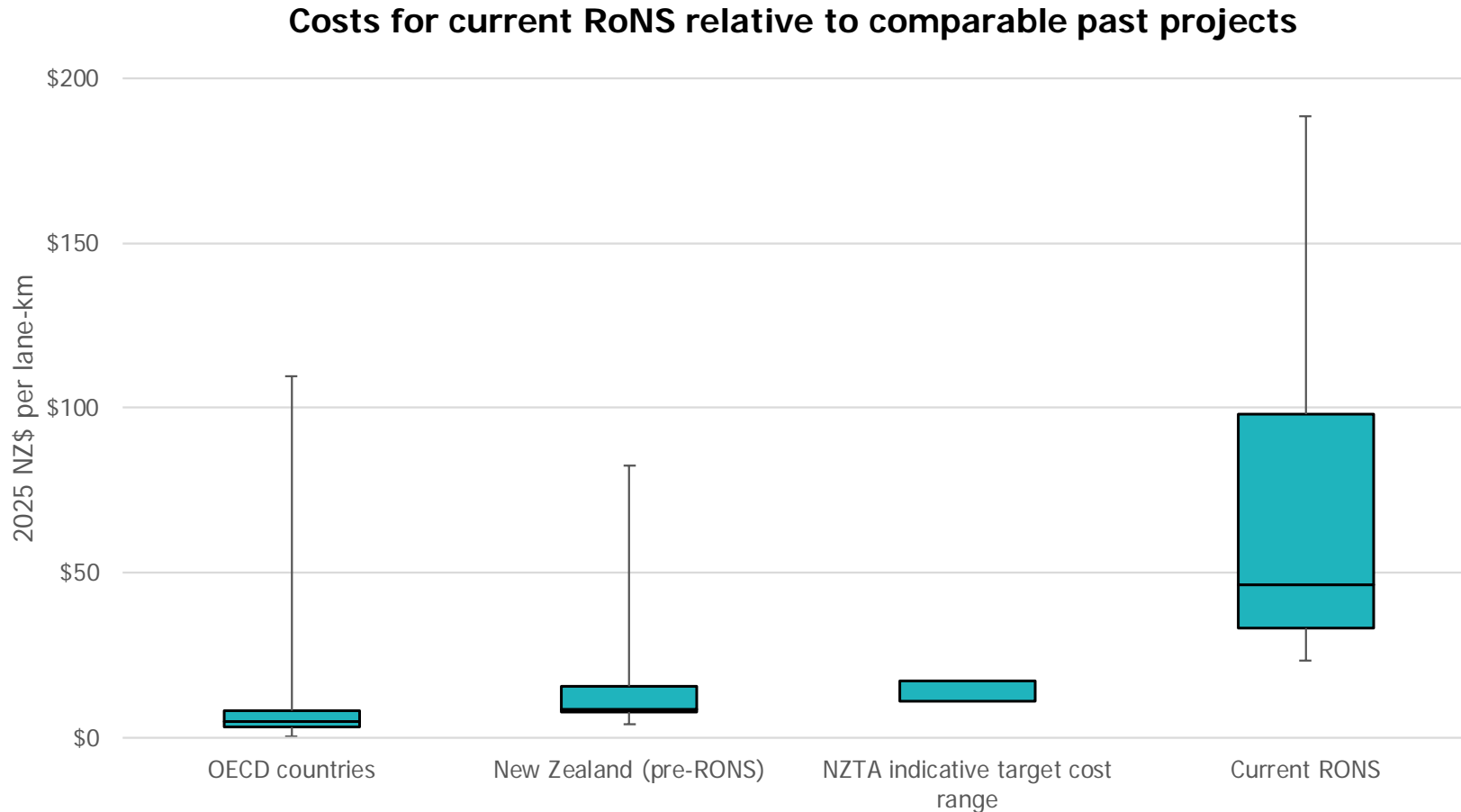
Staging spend against Forward Guidance





Cost management stands as a critical issue

Cost affordability analysis



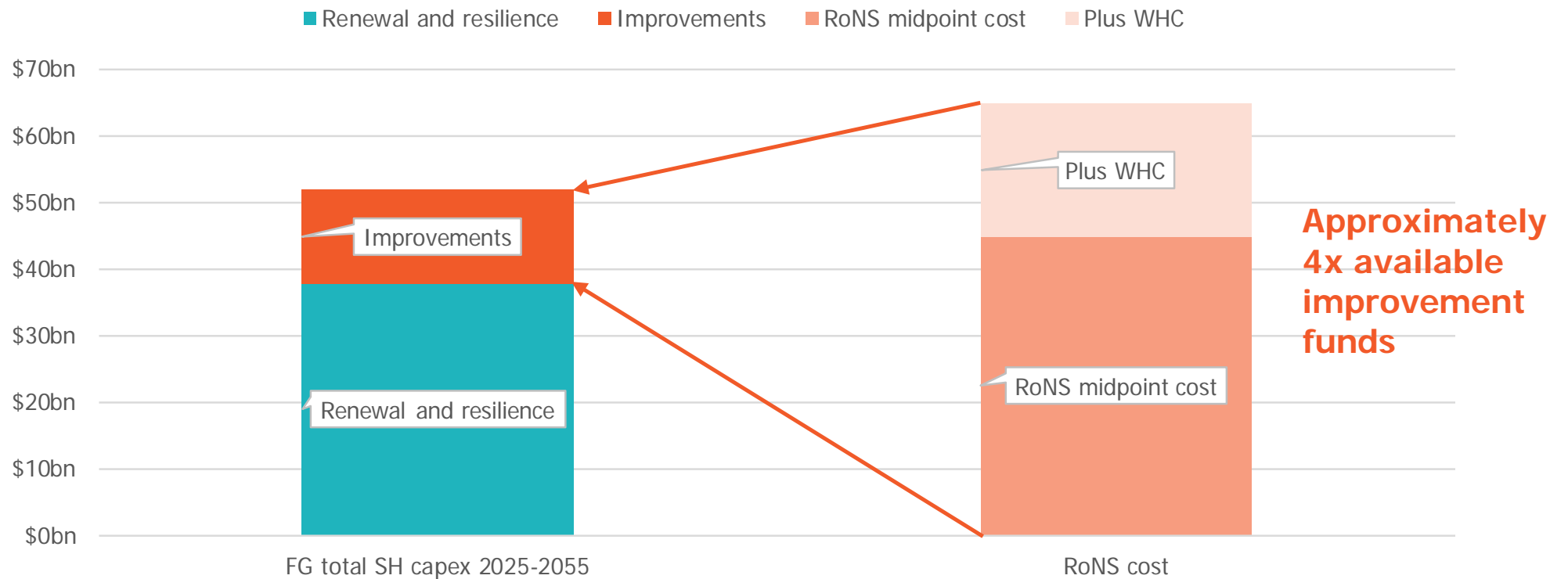
Notes: Box and whisker plot showing cost range for current and past motorway/expressway projects

Source: "Understanding capacity upgrade pressures across infrastructure networks". Infrastructure Commission. 2026.



What about the harbour crossing?

A narrow path under current funding settings



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The NIP identifies 10 priorities for the decade

Acting on the Forward Guidance



1. Lift **hospital** investment for an ageing population.



2. Complete catch-up on renewals in the **water** sector and restore affordability.



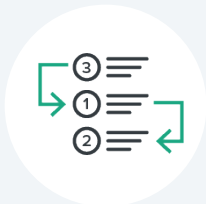
3. Implement **time-of-use charging** and fleetwide road user charges.



4. Prioritise and sequence major **land transport** projects.



5. Manage assets on the **downside**.



6. Prioritise adequate **maintenance and renewals**.



7. Identify cost-effective **flood risk** infrastructure.



8. Commit to a durable **resource management** framework.



9. Commit to **upzoning** around key transport corridors.



10. Take a predictable approach to **electrify** the economy.

Many are directly relevant to land transport

Acting on the Forward Guidance



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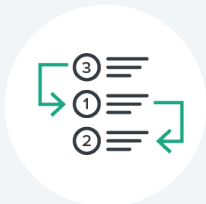
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Long-term system shifts

16 NIP recommendations to improve infrastructure



Planning what we can afford

1. Needs-based capital allowances.
2. Land transport funding and oversight.



Looking after what we've got

3. Long-term investment planning.
4. Predictable Government funding signals.
5. Multi-year budgeting.
6. Asset management performance reporting.



Prioritising the right projects

7. System-wide assurance.
8. Asset management assurance.
9. Investment readiness assurance.
10. Project information coordination.



Making it easier to build better

11. Stable resource management framework.
12. Integrated spatial planning.
13. Optimised infrastructure use.
14. Accelerated electricity investment.
15. Coordinated workforce development.
16. Public sector project leadership.

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Land transport oversight and regulation

EXAMPLE: Office of road and rail

Independent economic and safety regulator for Britain's railways; regulate performance and efficiency on England's strategic road network.



- **Autonomy and oversight:** Light regulation and pricing tension
- **Long-term planning:** U.K Highways 5-year Plan
- **Shifting mix:** Away from new services to maintenance, renewal and asset management
- **Above budget:** When users can pay – Lower Thames Crossing
- **Capability:** In-house asset management function

A Plan for New Zealand

Ki a koe tētahi kīwai,
ki a au tētahi kīwai

For you one handle of the
basket and for me the other

