Toward a National Infrastructure Plan

NEW ZEALAND INFRASTRUCTURE COMMISSION *Te Waihanga*

Geoff Cooper, Chief Executive

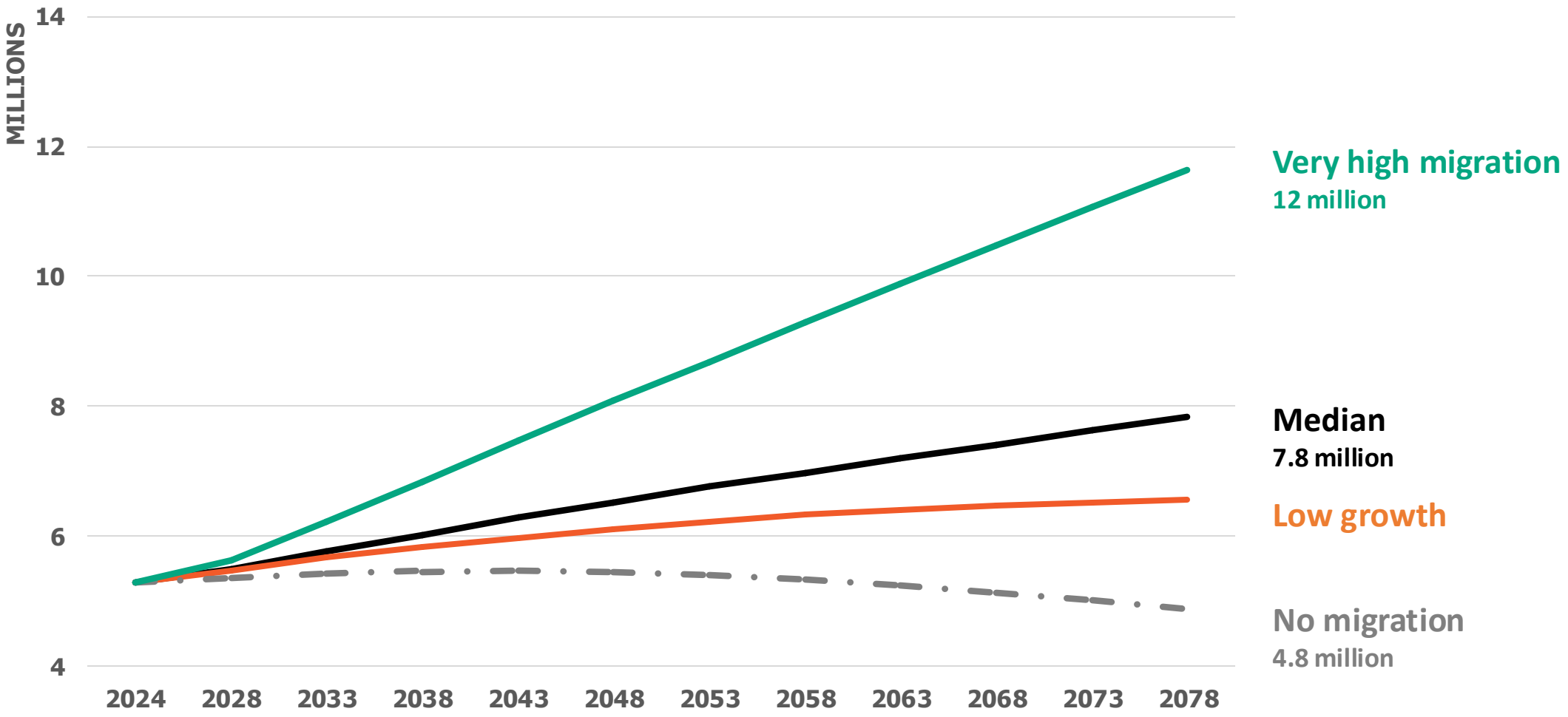
New Zealand Roading Forum

Te Kāwanatanga o Aotearoa
New Zealand Government

New Zealand is growing

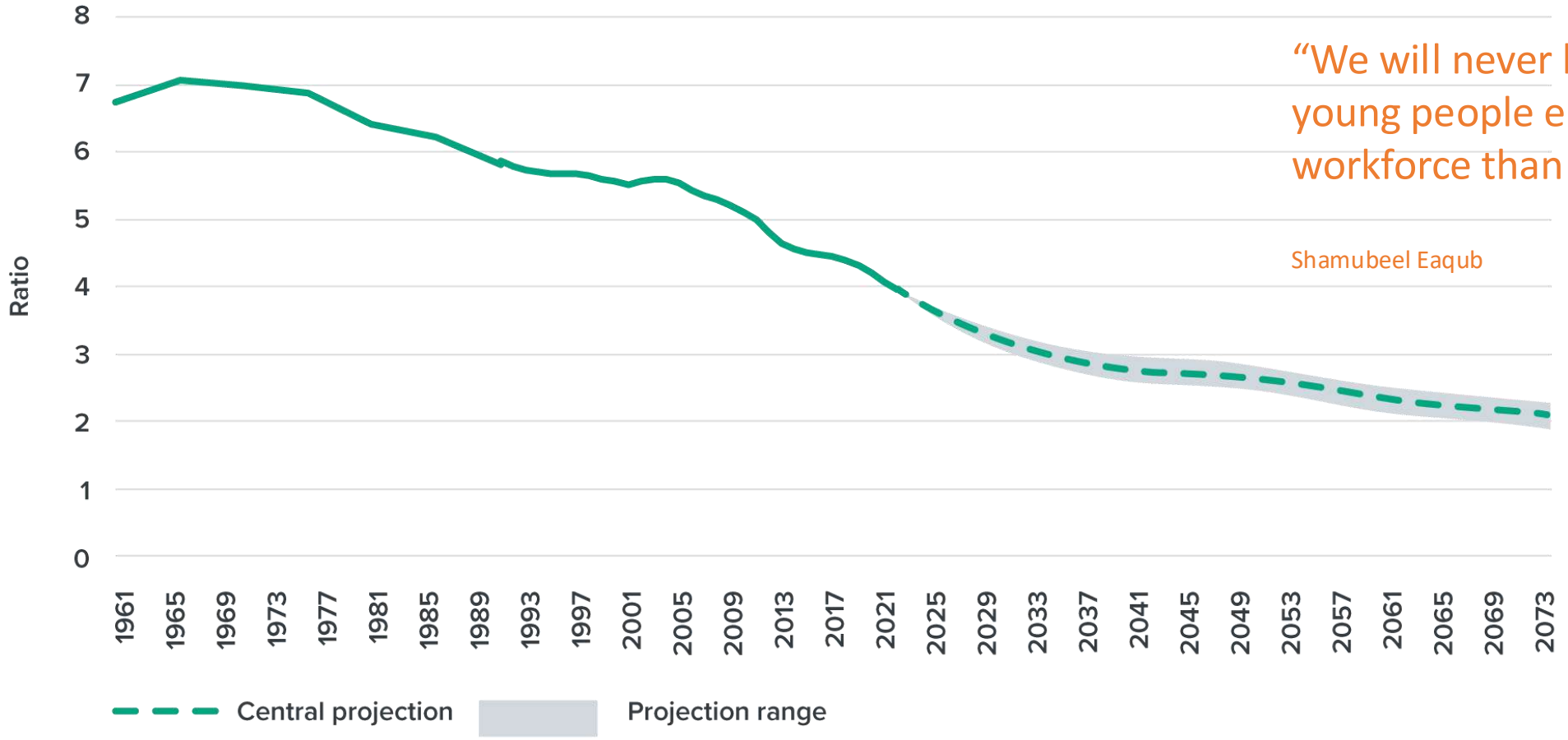
But there is uncertainty on how much and where

Population growth



We’re ageing

Ratio of working age to 65+



“We will never have more young people entering the workforce than retiring”

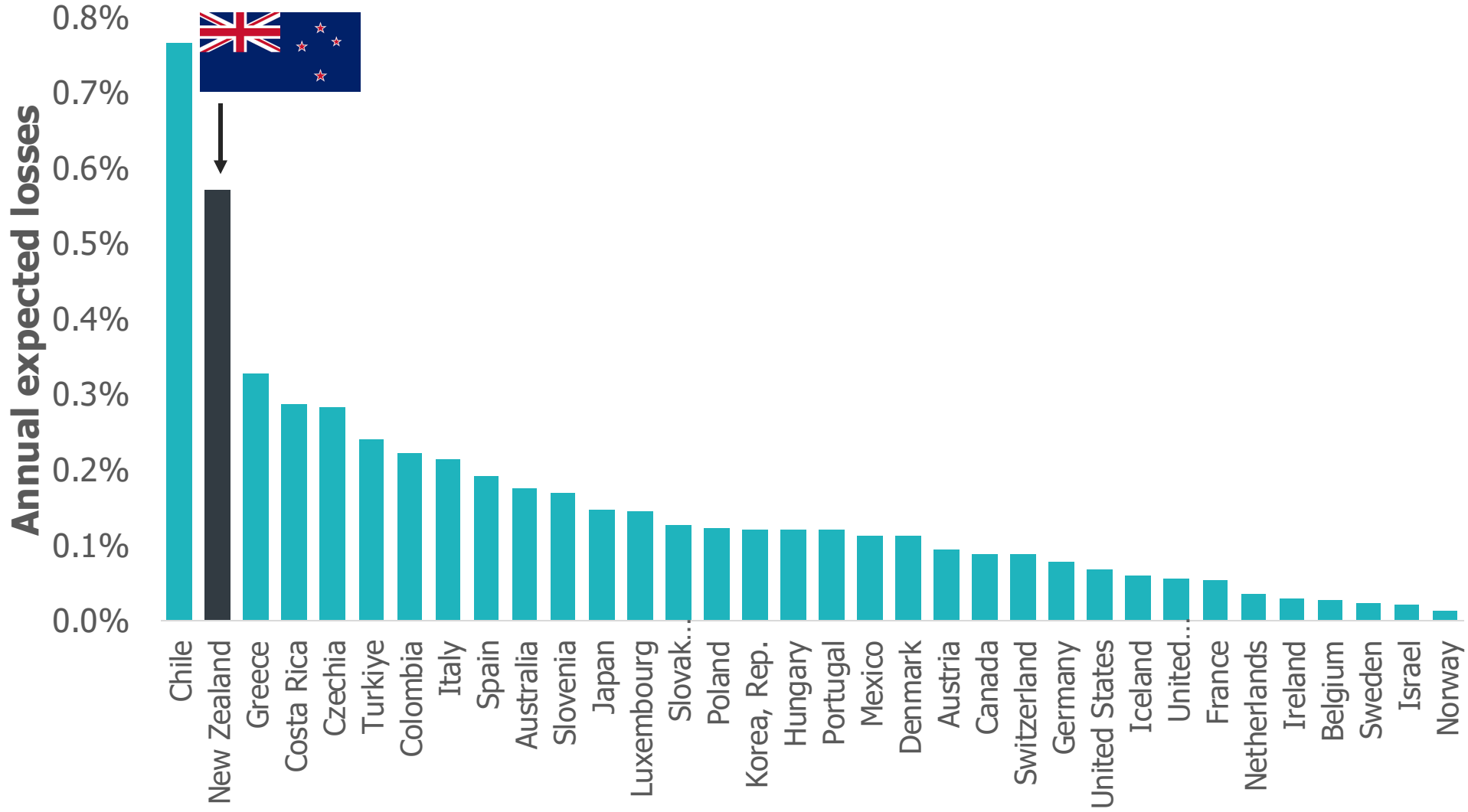
Shamubeel Eaqub

Source: Adapted from ‘Paying it forward: Understanding our long-term infrastructure needs’. New Zealand Infrastructure Commission. (2024).

Demographics

We're exposed

Annual expected losses (% GDP) from natural hazards, 1960-2022

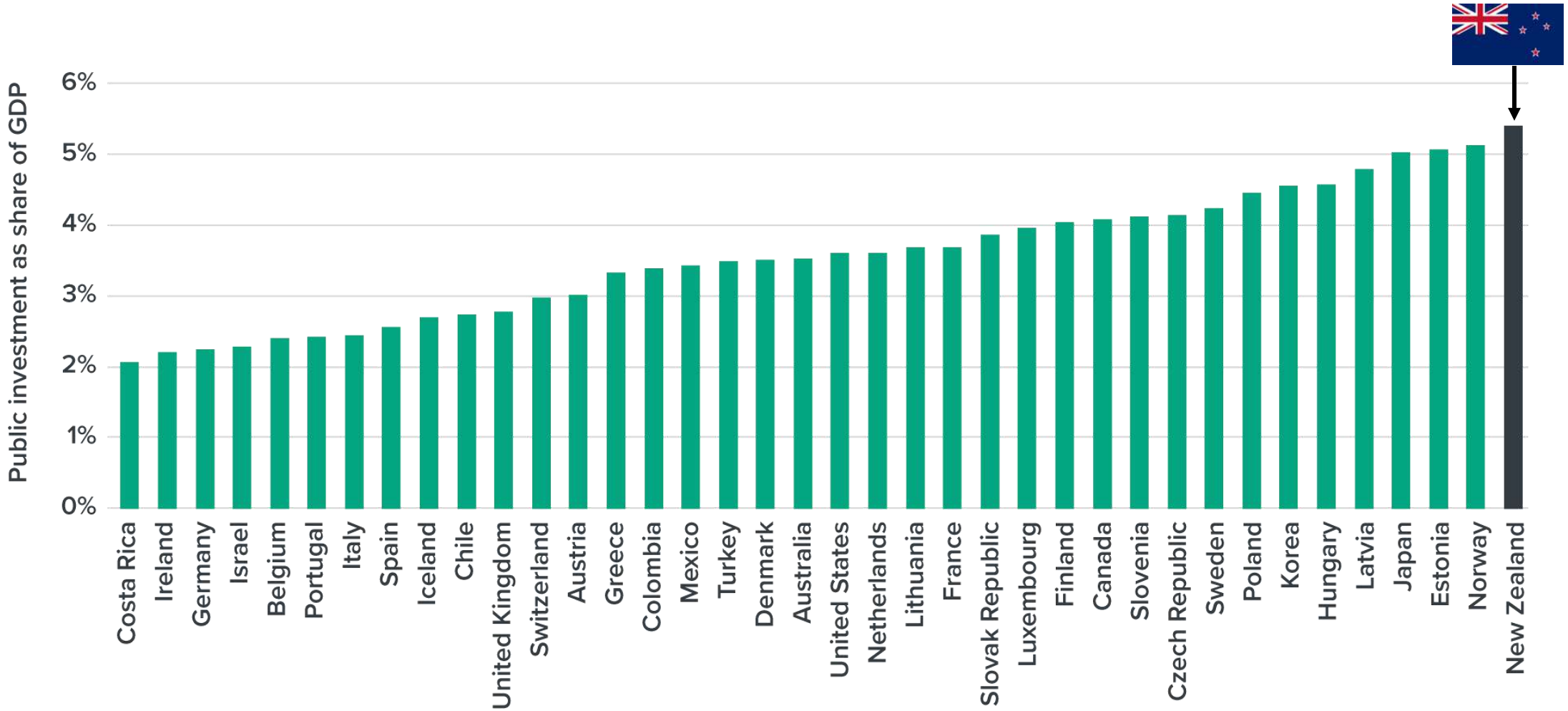


Source: Infrastructure Commission. 2025. *Invest or Insure?* https://tewaihanga.govt.nz/our-work/research-insights/invest-or-insure

Exposure

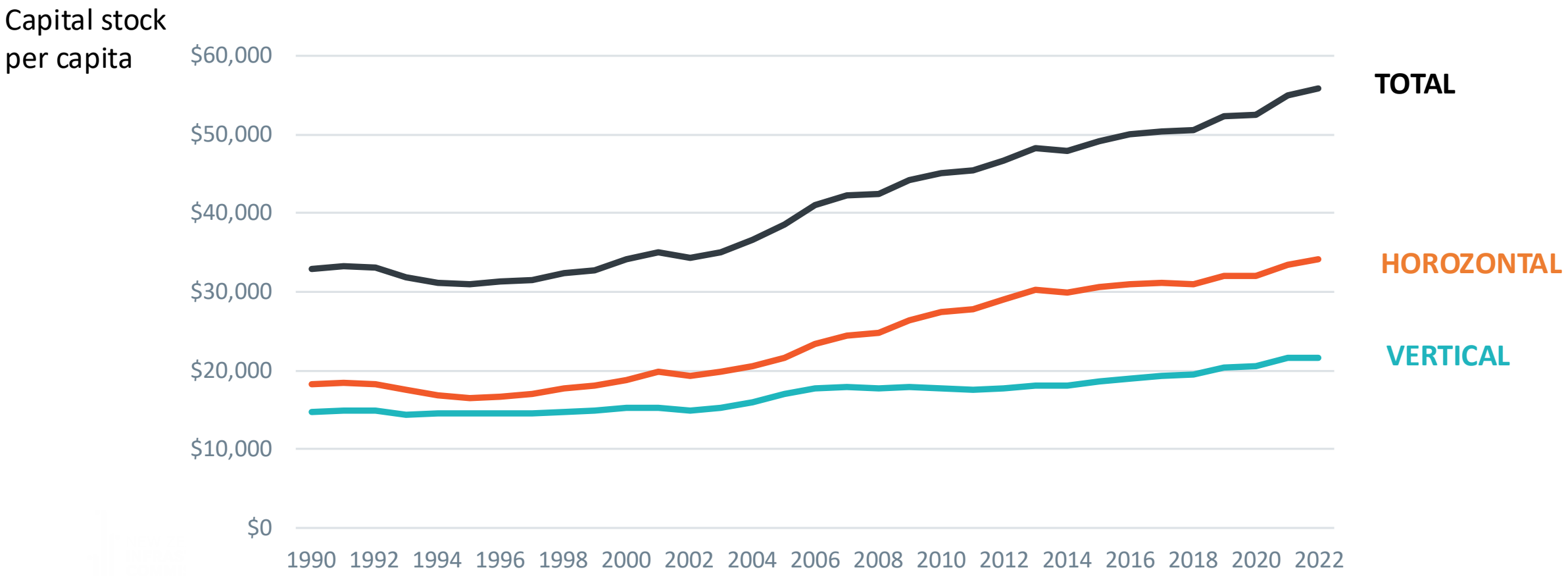
New Zealand is committed to infrastructure

Public infrastructure spend as a share of GDP, 2010–2019



We have more of it than ever

Real value of infrastructure assets per capita

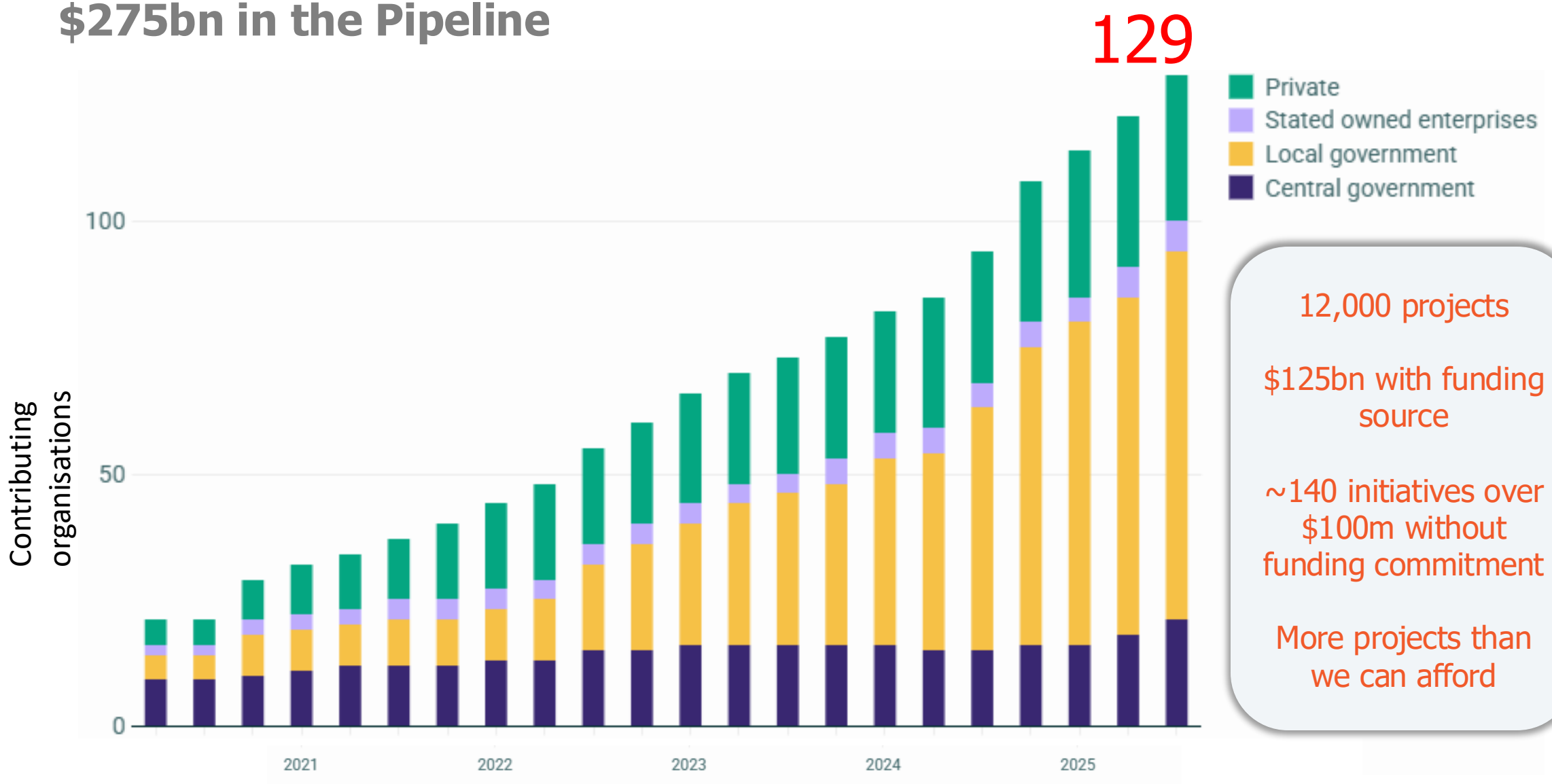


Source: Infrastructure Commission. 2024. *Build or Maintain?* https://tewaihanga.govt.nz/our-work/research-insights/build-or-maintain

With enormous plans for more

$275bn in the Pipeline

National Pipeline



12,000 projects

$125bn with funding source

~140 initiatives over $100m without funding commitment

More projects than we can afford

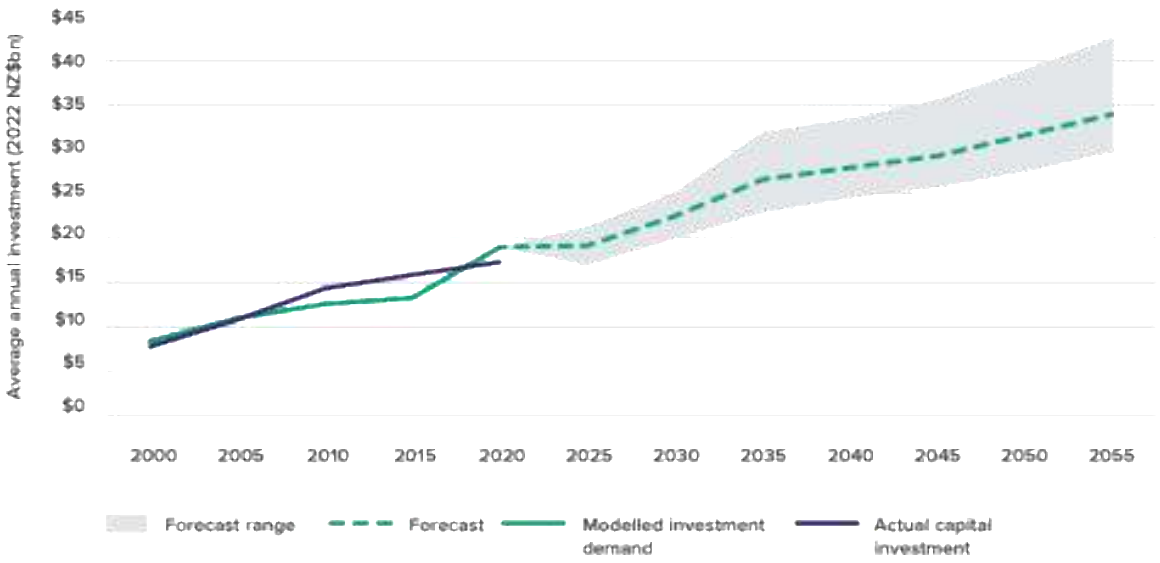
Source: Infrastructure Commission. National Infrastructure Pipeline https://tewaihanga.govt.nz/the-pipeline/search-the-pipeline

Sustainable funding

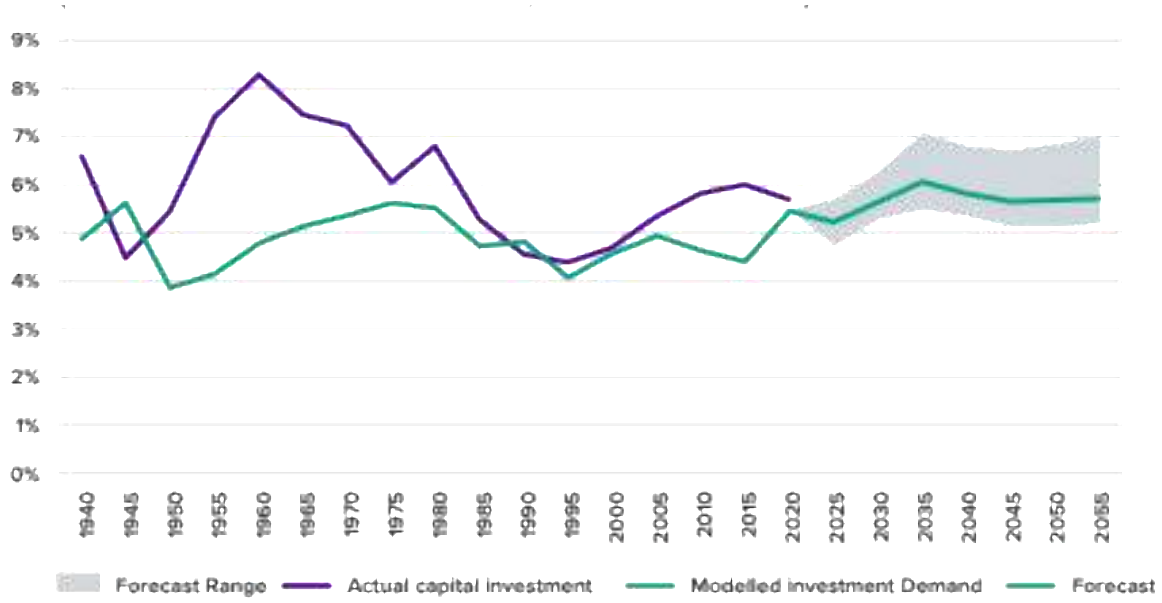
But we have speed limits

Forward Guidance on infrastructure investment, 2025–2055

Annual investment



Percentage of GDP



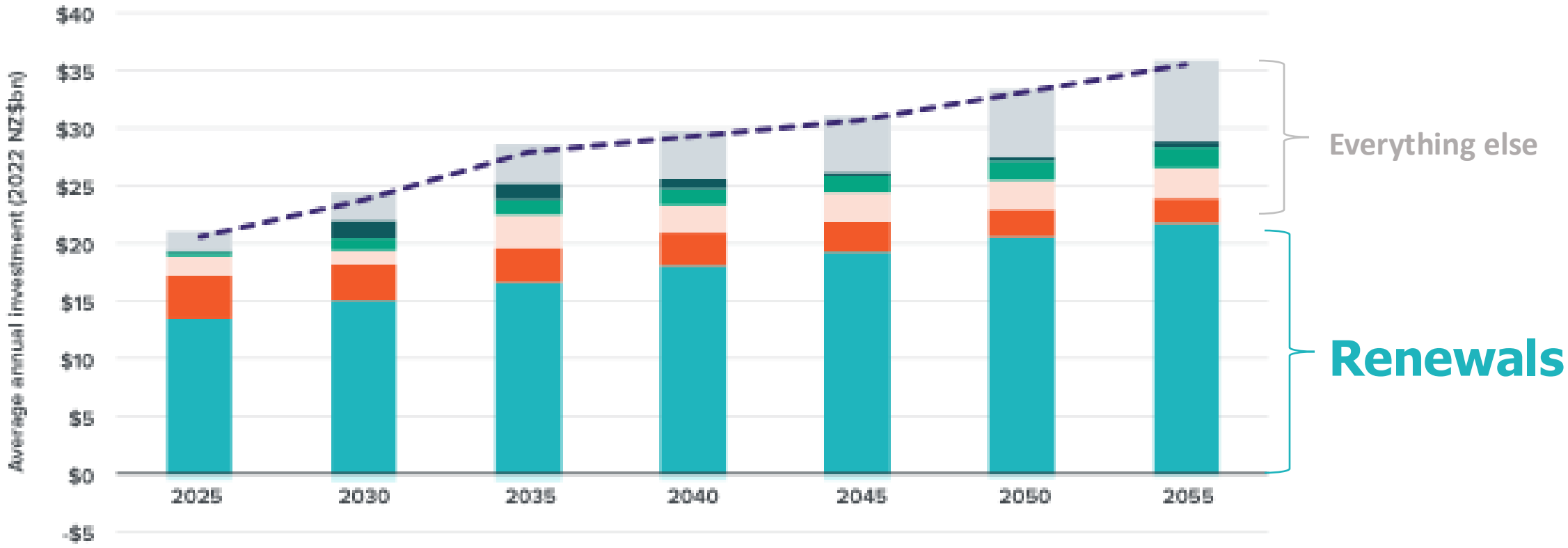
Source: 'Draft Infrastructure Needs Analysis'. New Zealand Infrastructure Commission. (2025).

And many needs

Sector	Main providers	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	Central and local government	User charges and rates	1.2%	0.8%	↓	Decarbonisation, slowing income and population growth
Electricity and gas	Commercial sector	User charges	0.8%	1.4%	↑	Decarbonisation, renewals
Water and waste	Local government	User charges and rates	0.6%	0.4%	↓	Renewals and natural hazards
Telecommunications	Commercial sector	User charges	0.7%	0.7%		Renewals, stable outlook
Social infrastructure						
Education – primary/secondary	Central government	Taxes	0.4%	0.3%	↓	Demographic change
Education – tertiary	Central government	Taxes and fees	0.6%	0.5%	↓	Demographic change
Hospitals	Central government	Taxes	0.2%	0.4%	↑	Demographic change, renewals
Public administration and safety – government buildings, prisons, defence, justice	Central and local government	Taxes	0.9%	0.8%		Renewals, stable outlook
Social housing	Central and local government	Taxes and rents	0.3%	0.3%		Renewals and population growth
Other public capital	Central and local government	Various	0.2%	0.2%		Stable outlook

Renewals are our largest capital challenge

Forward Guidance for infrastructure investment, 2025–2055

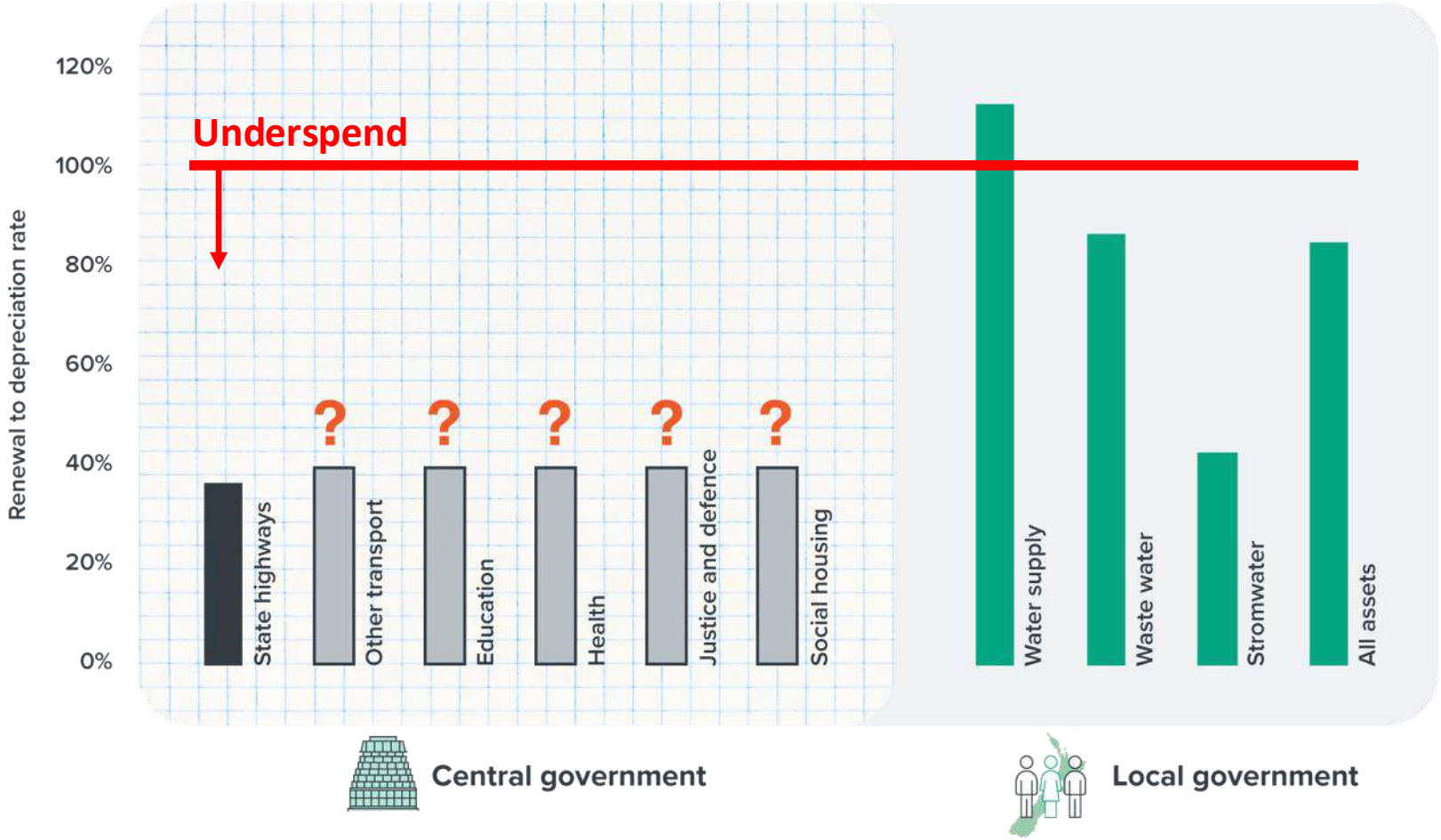


Maintenance

Which requires a lift in Asset Management

Renewal to depreciation ratios

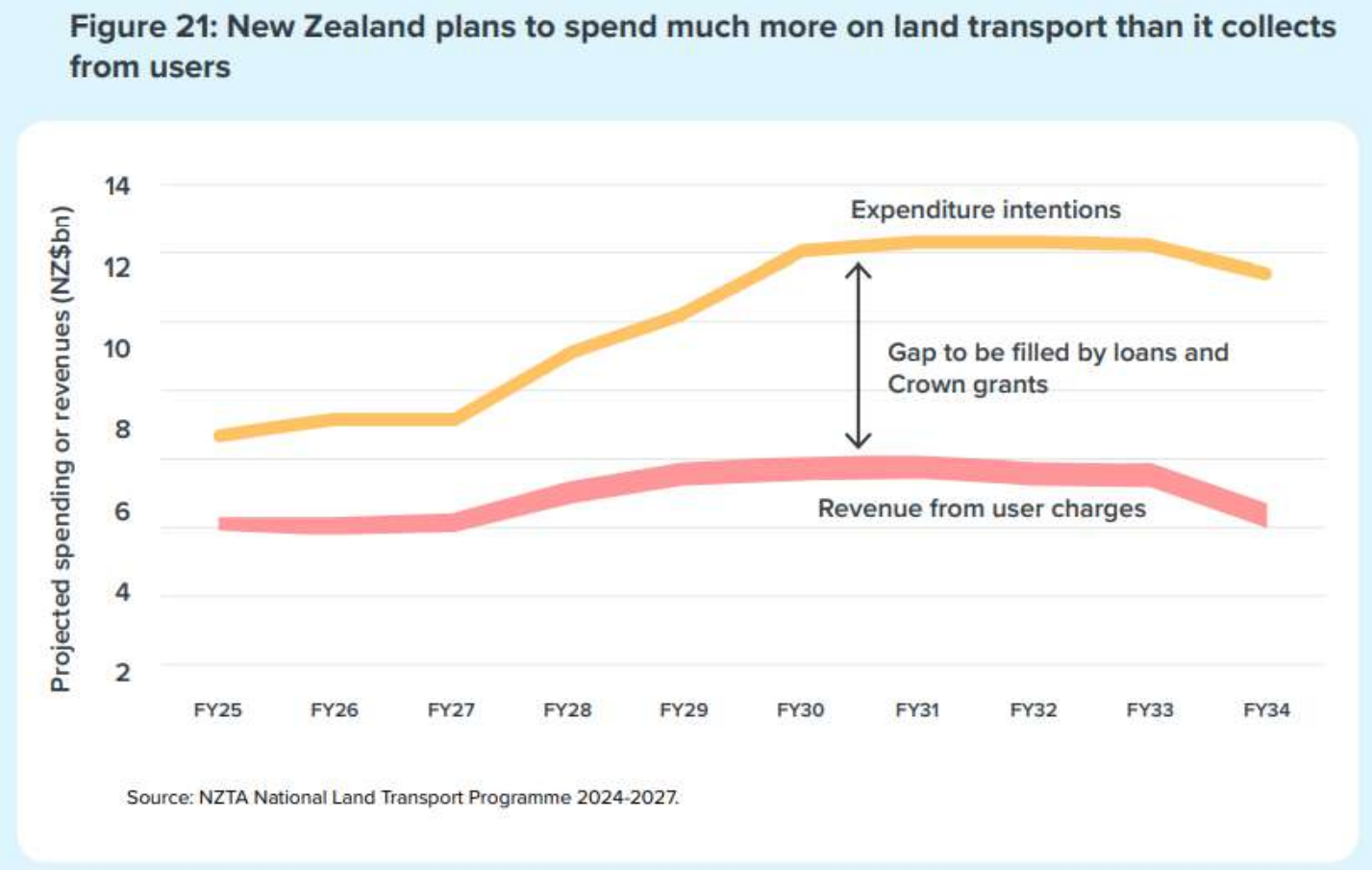
Maintenance



"A flaw in the human character is that everybody wants to build and nobody wants to do maintenance"

Kurt Vonnegut

And creates challenges for new services



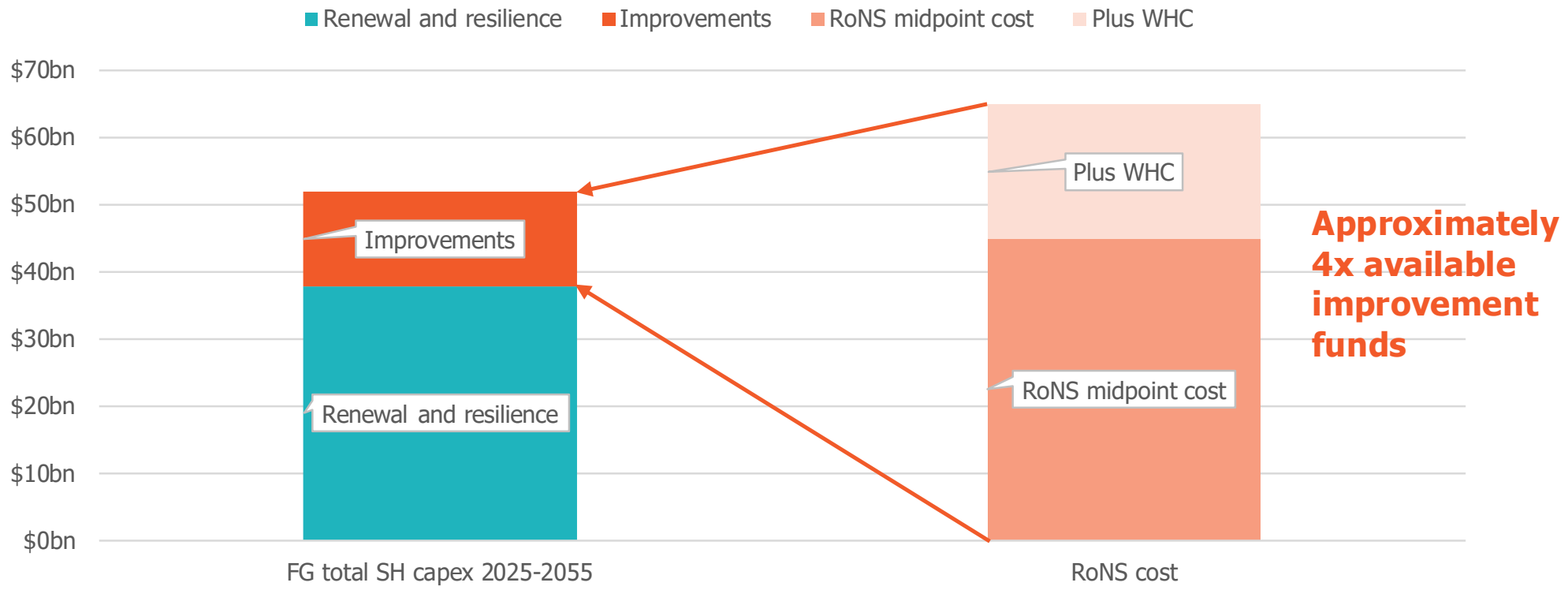
Planned expenditure continues to exceed total revenue
Cumulative gap over 10 years exceeds $30bn

Funding the RoNS from user-charges would require a 70% rise in FED ($0.70/litre to $1.19/litre).

https://nzta.govt.nz/planning-and-investment/national-land-transport-programme/2024-27-nltp

Where expectations are high

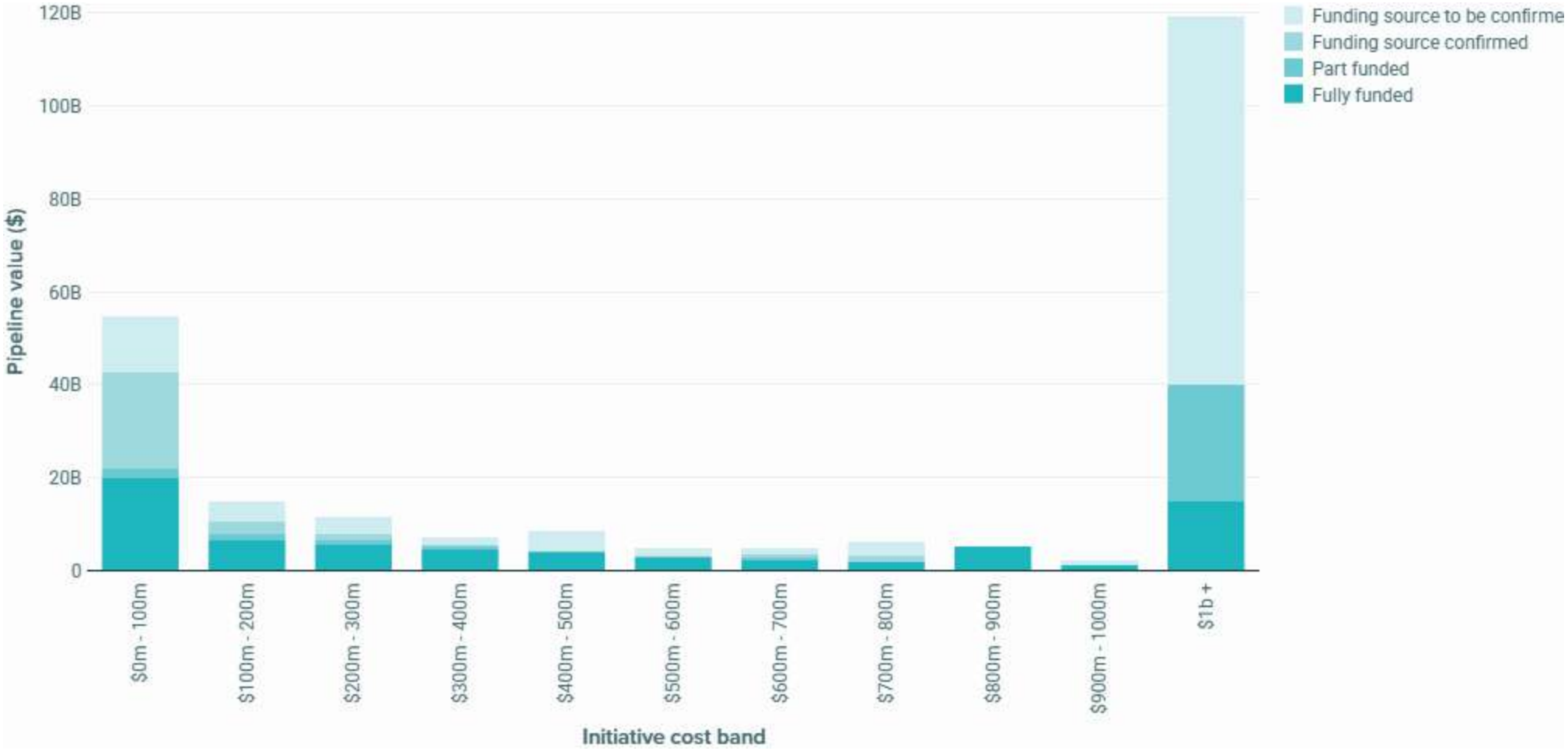
Major transport project capex against FG for SH capex



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.

This matters for all infrastructure services

National Infrastructure Pipeline by project size and funding status



https://tewaihanga.govt.nz/the-pipeline/pipeline-snapshot

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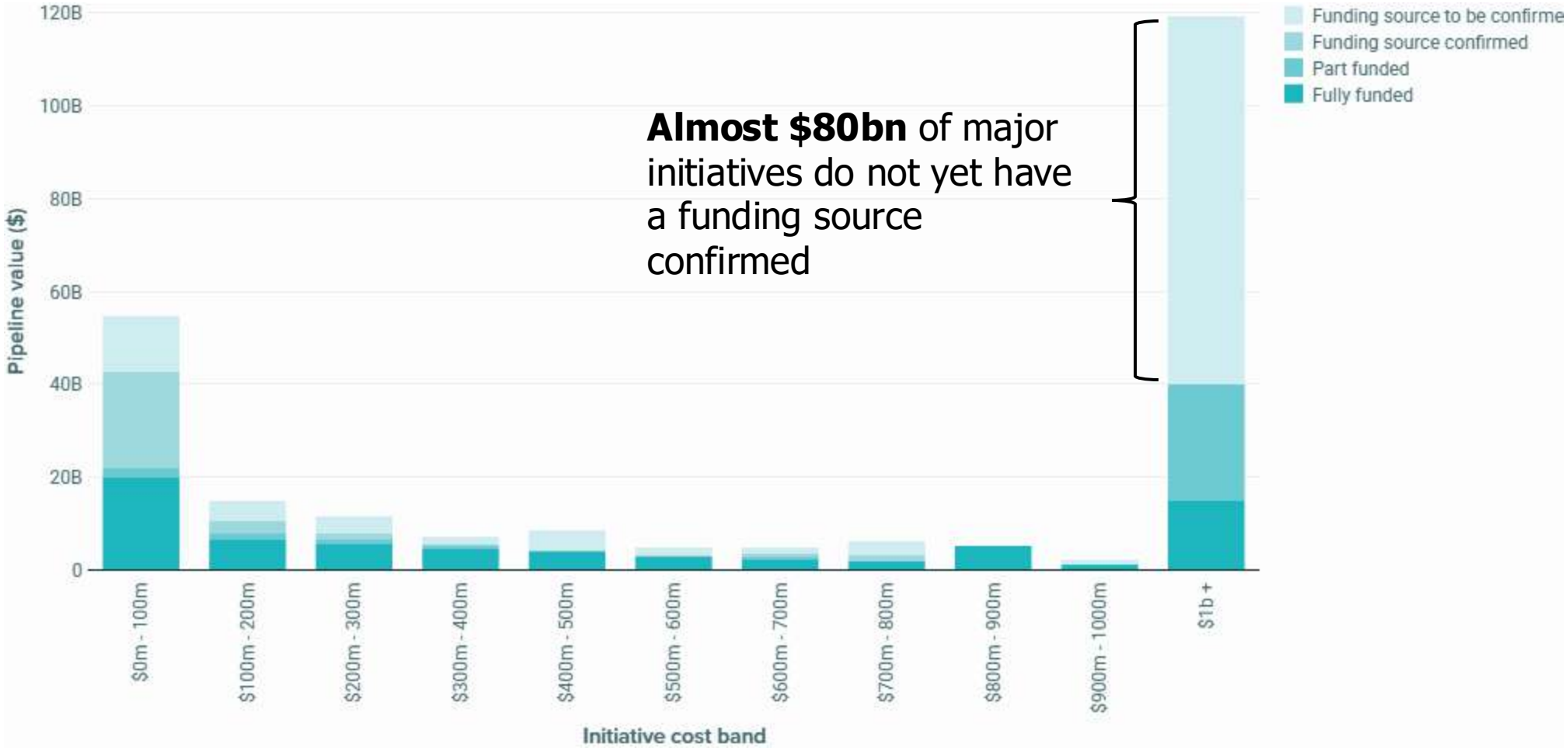

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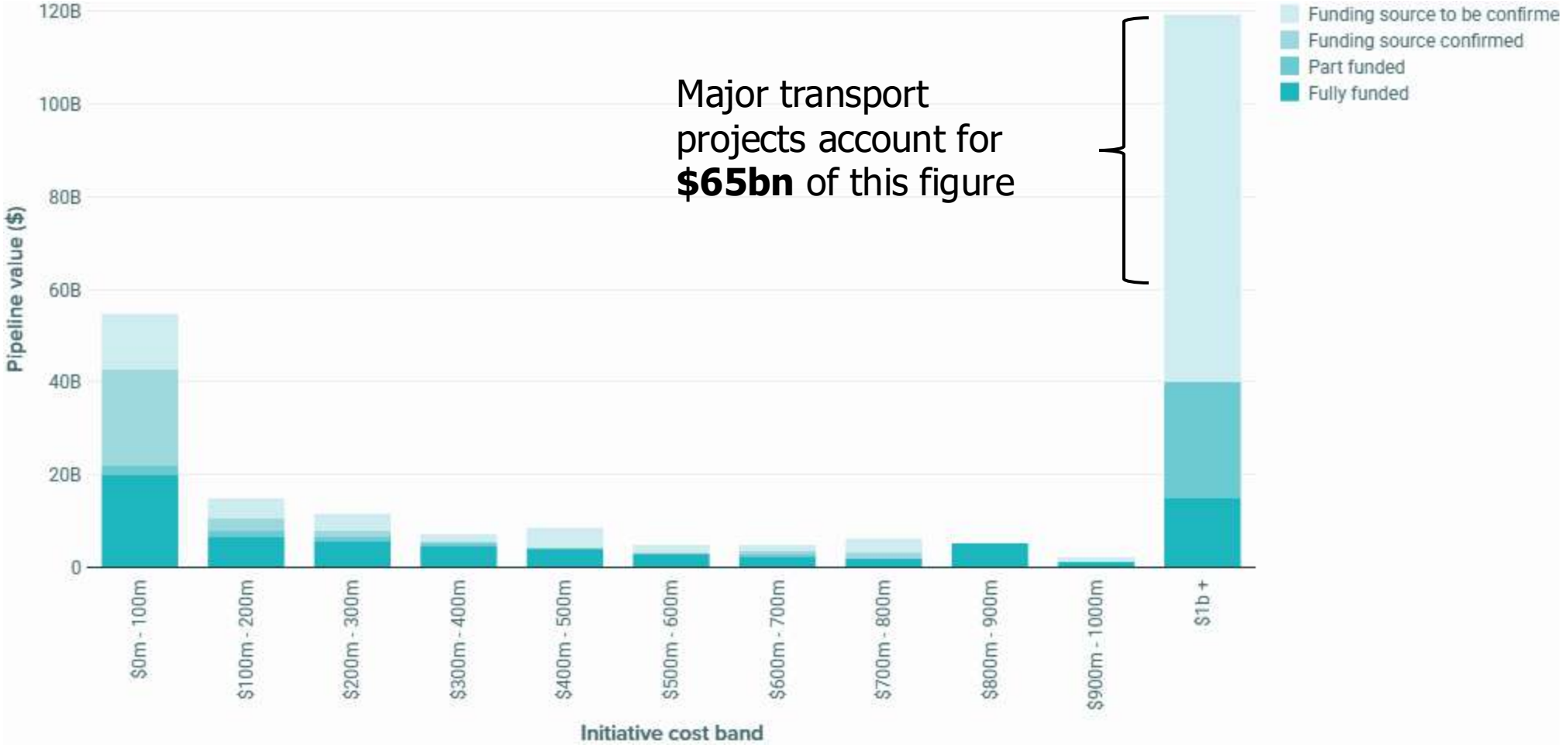


https://tewaihanga.govt.nz/the-pipeline/pipeline-snapshot

Where’s the money going to come from?

Three broad options for paying:

- **Option 1**: General tax revenues allocated through the annual Budget
- **Option 2**: New revenue opportunities, like tolls or value capture levies
- **Option 3**: Ring-fenced transport user revenues in the National Land Transport Fund, phase and stage.

Option 1: General tax revenues

- **Budget capital allowances** outline how much money is available annually for new central government investment, funded from general taxes.
- The 2025 Budget sets aside **$3.5 billion** annually for 2026, 2027, and 2028 Budgets.
- **The NLTF sits outside this framework.** Capital allowances are intended to pay for other types of investment, from health to schools to defence estate to prisons to IT systems.

https://www.treasury.govt.nz/publications/fiscal-strategy-report/fiscal-strategy-report-2025

Looking across other sectors

Option 1: General tax revenues

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

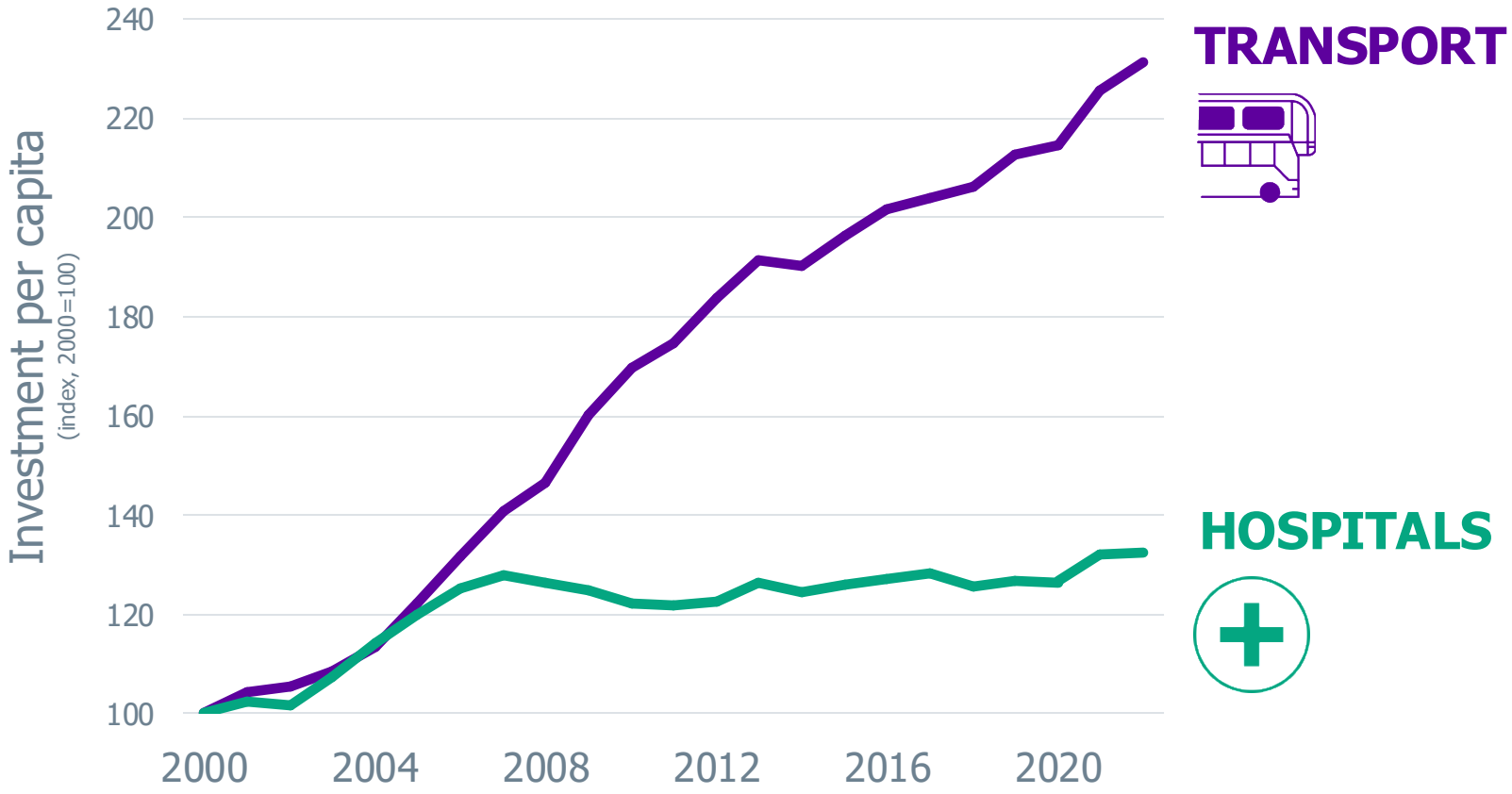
"This new Defence Capability Plan contains $12 billion of funding over the next four years, which includes **$9 billion of new spending**."

https://www.beehive.govt.nz/release/health-infrastructure-plan-released
https://www.beehive.govt.nz/release/multi-billion-dollar-defence-plan-unveiled

Sustainable funding

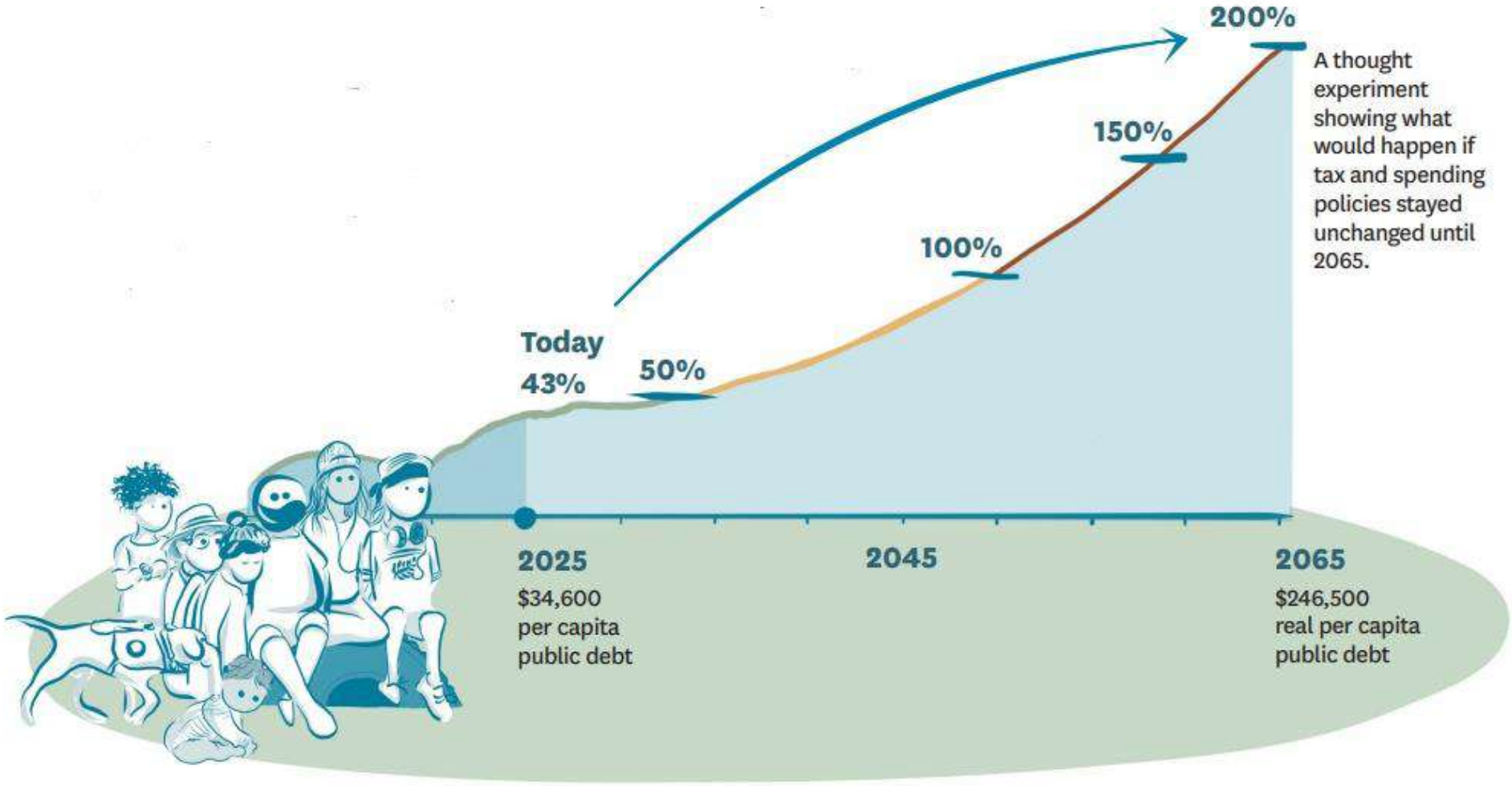
Where there are genuine choices

Investment per capita, transport vs hospitals, 2000–2022



Expect fiscal pressures to intensify

Net core Crown debt to GDP, 2020–2065: No change scenario



Source: Treasury, Long-term Fiscal Statement, 2025

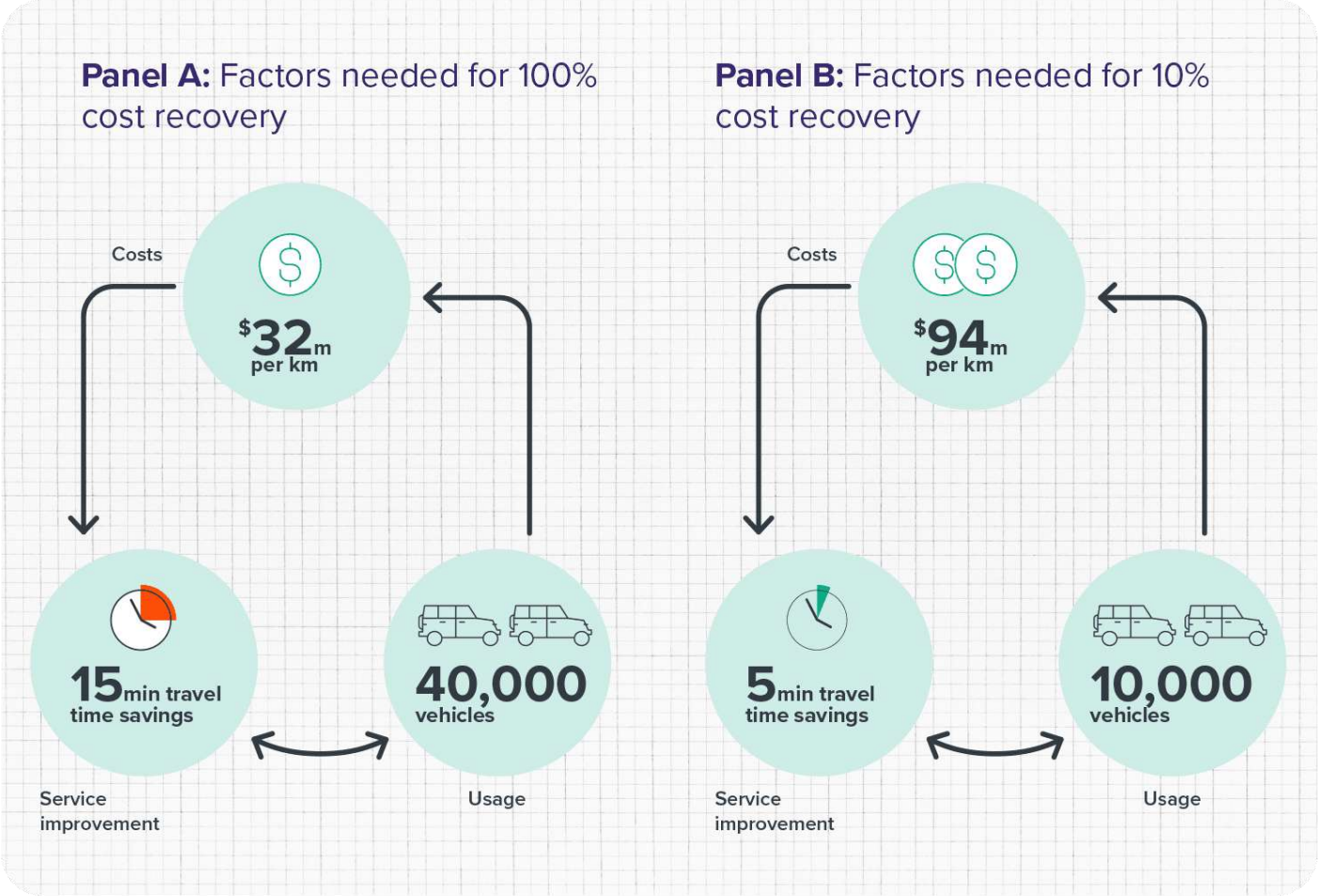
Fiscal Pressure

Option 2: New revenue opportunities

- Ways to raise money from new projects:
  - **Tolls** – a direct charge on users
  - **Value capture levies** – a charge on surrounding landowners
  - **Fiscal gain** – indirect increases in government tax revenues from new activity.
- These can help but the bar is high for full cost recovery
- Realistically, we might cover 10-20% of the cost of a large project through these sources

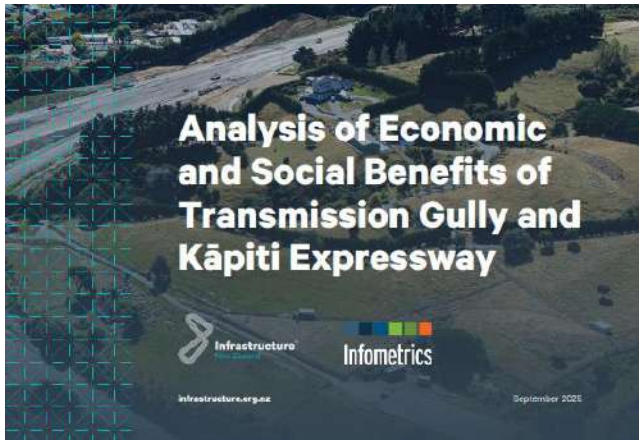
https://tewaihanga.govt.nz/our-work/research-insights/buying-time-toll-roads-congestion-charges-and-transport-investment
https://tewaihanga.govt.nz/our-work/research-insights/paying-it-back-an-examination-of-the-fiscal-returns-of-public-infrastructure-investment

Project quality and going above budget



Infrastructure Commission. 2024. Buying time.

Economic or social?

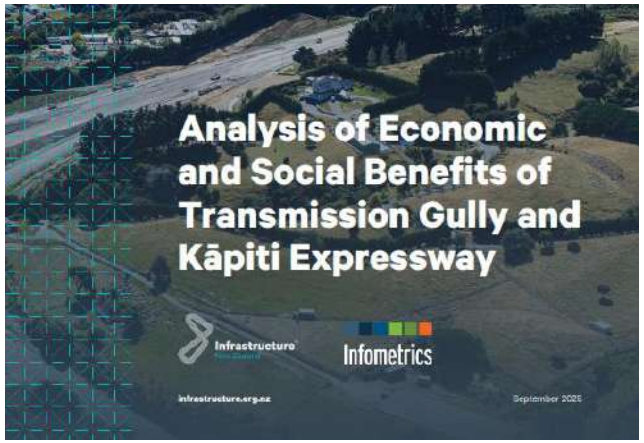


Combined benefit of $79m from Transmission Gully

Transmission Gully provided a combined benefit of $79m in 2024, made up of travel time savings of $94m, partially offset by higher vehicle operating costs of $15m. Vehicle operating costs on Transmission Gully are higher due to faster travel speeds and a hillier route, but that is offset by faster travel times. Although Transmission Gully is much safer than the old route, deaths and serious injuries have continued on the old route, meaning that the cost of deaths and serious injuries has not changed.

https://infrastructure.org.nz/wp-content/uploads/2025/09/INZ-Transmission-Gully-Report_DIGITAL_Final_16.09.25.pdf
https://businessdesk.co.nz/article/infrastructure/two-highway-ppps-cost-226m-a-year

Economic or social?



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BusinessDesk

Infrastructure

Markets Opinion On the Money Business Economy Finance Primary Sector Infrastructure Investments

Home / Business / Infrastructure / Oliver Lewis

Two highway PPPs cost $226m a year

According to figures provided by the transport agency, it pays an average annual unitary charge of $113m a year for Transmission Gully, plus a further $16m for operating and maintenance costs.

https://infrastructure.org.nz/wp-content/uploads/2025/09/INZ-Transmission-Gully-Report_DIGITAL_Final_16.09.25.pdf
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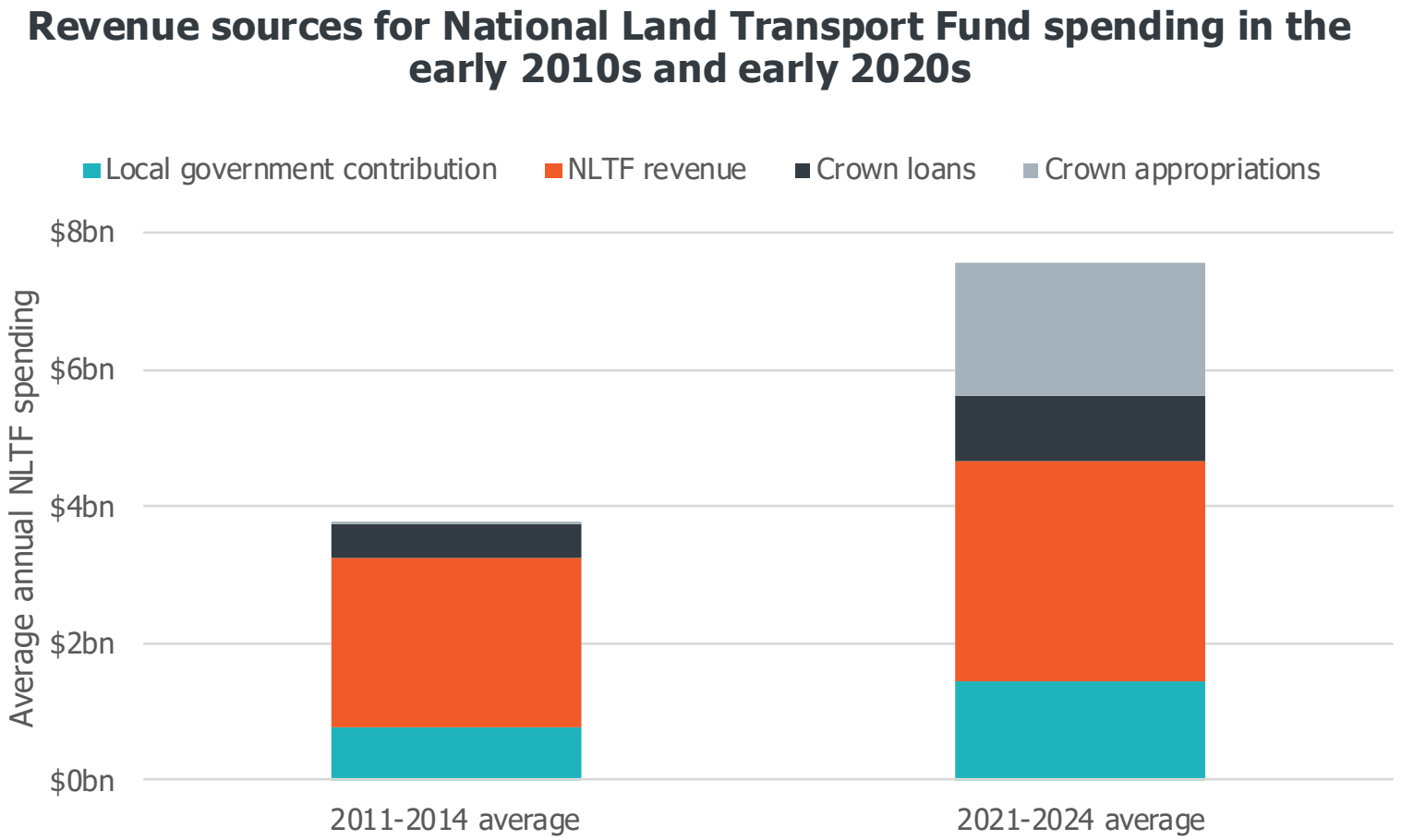
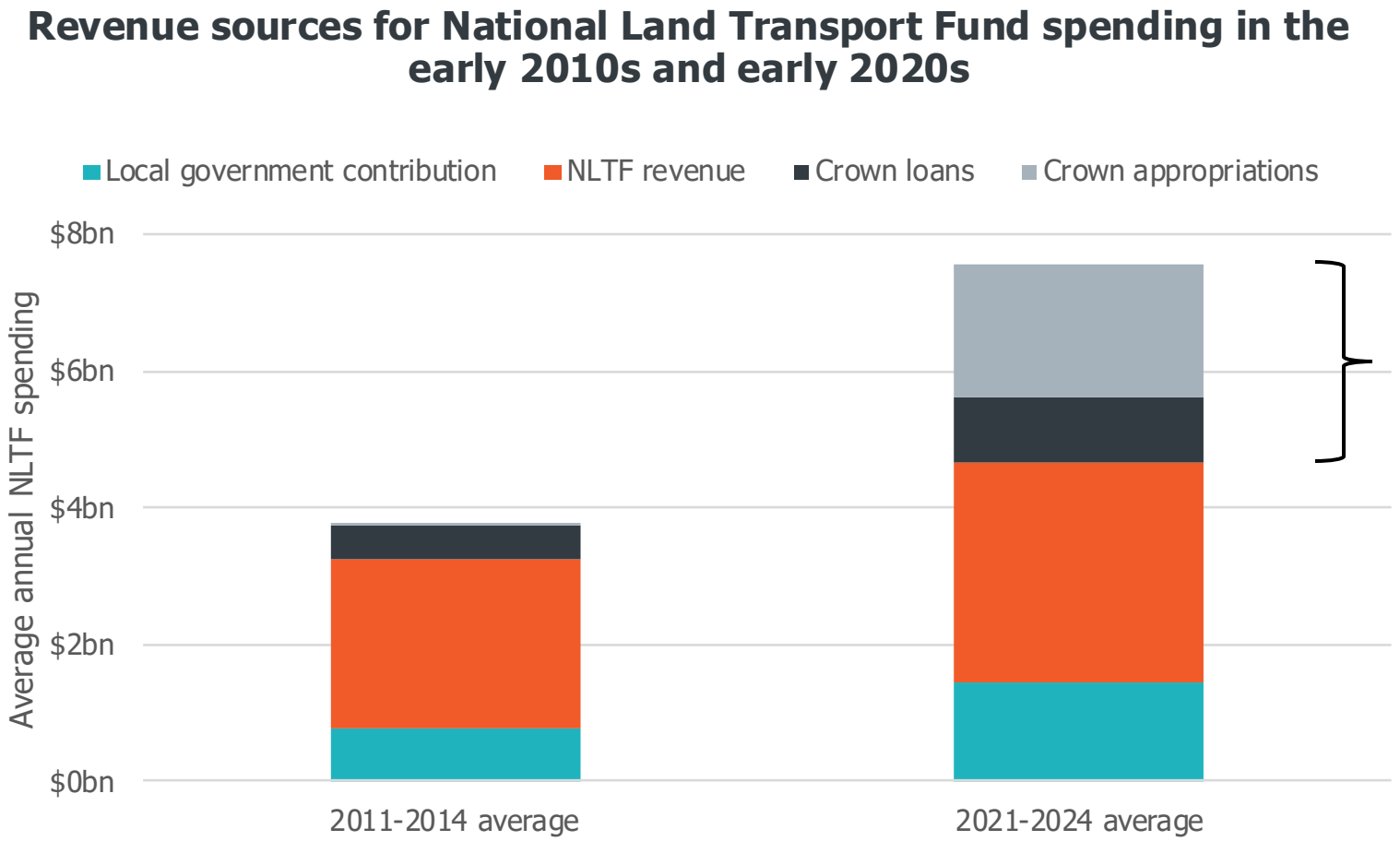
Option 3: Ring-fenced user revenues; phase and stage



Source: New Zealand Infrastructure Commission analysis of NZTA transport funding data and Treasury Budget data.

https://tewaihanga.govt.nz/our-work/research-insights/buying-time-toll-roads-congestion-charges-and-transport-investment

Option 3: Ring-fenced user revenues, phase and stage



The ring-fenced model is leaking: Almost $2bn in Crown grants and $1bn in Crown loans per year

Source: New Zealand Infrastructure Commission analysis of NZTA transport funding data and Treasury Budget data.

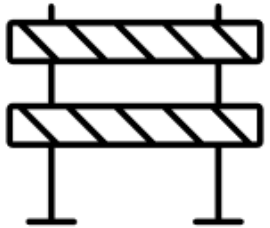
https://tewaihanga.govt.nz/our-work/research-insights/buying-time-toll-roads-congestion-charges-and-transport-investment

Major road projects: Timing analysis

Key decision thresholds

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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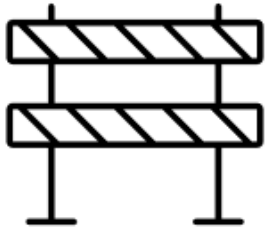

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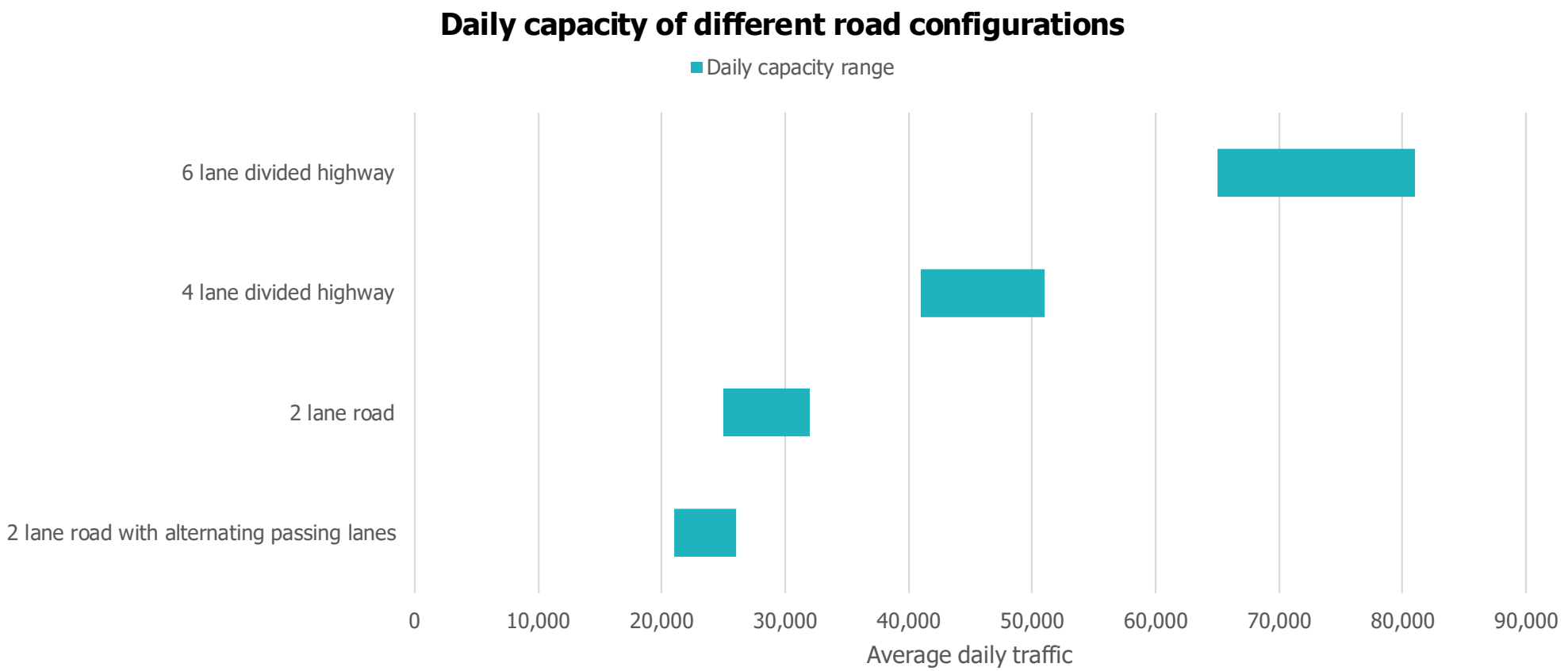
Focus on these factors for high-level timing analysis

Major road projects: Timing analysis

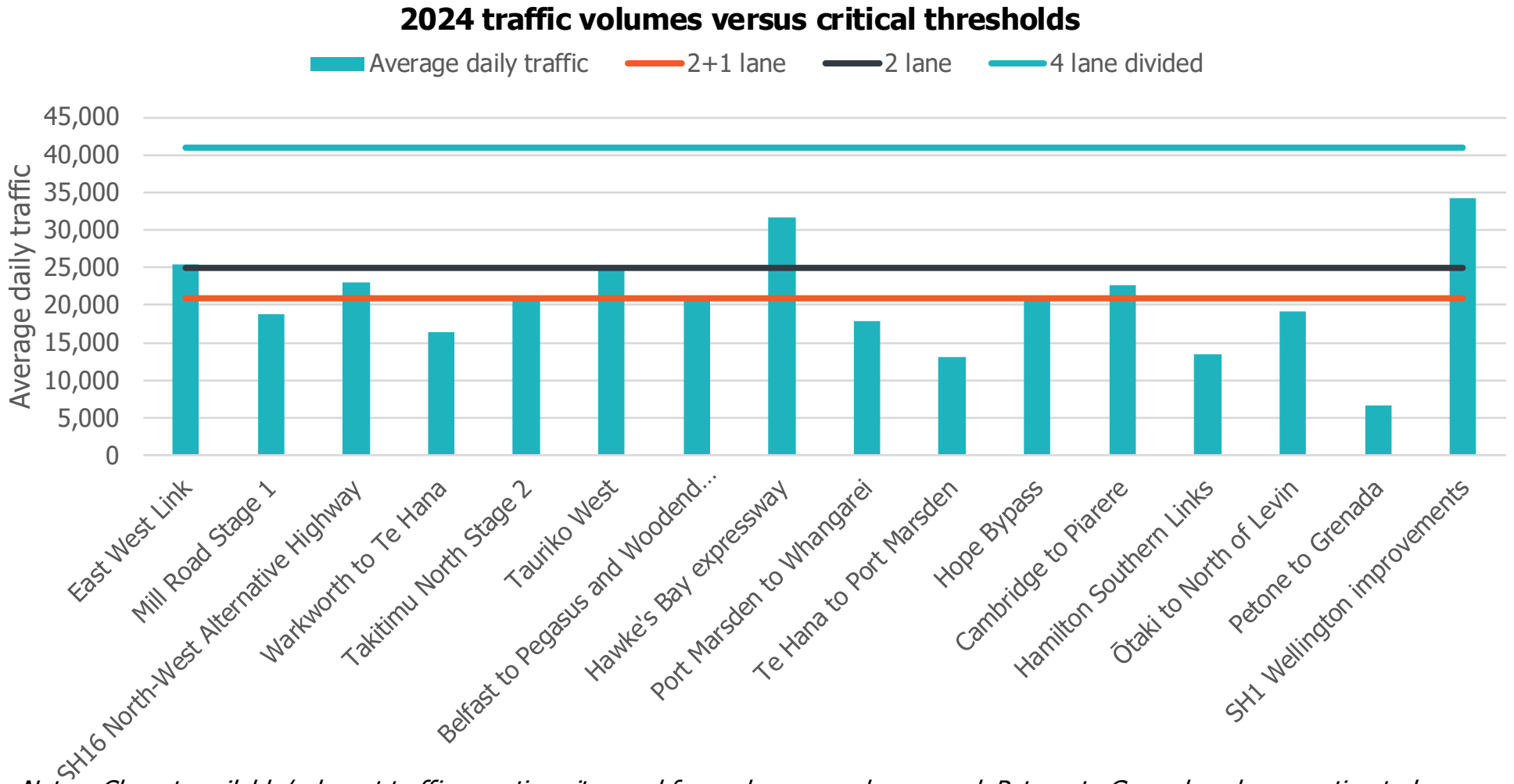
Demand vs capacity analysis



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

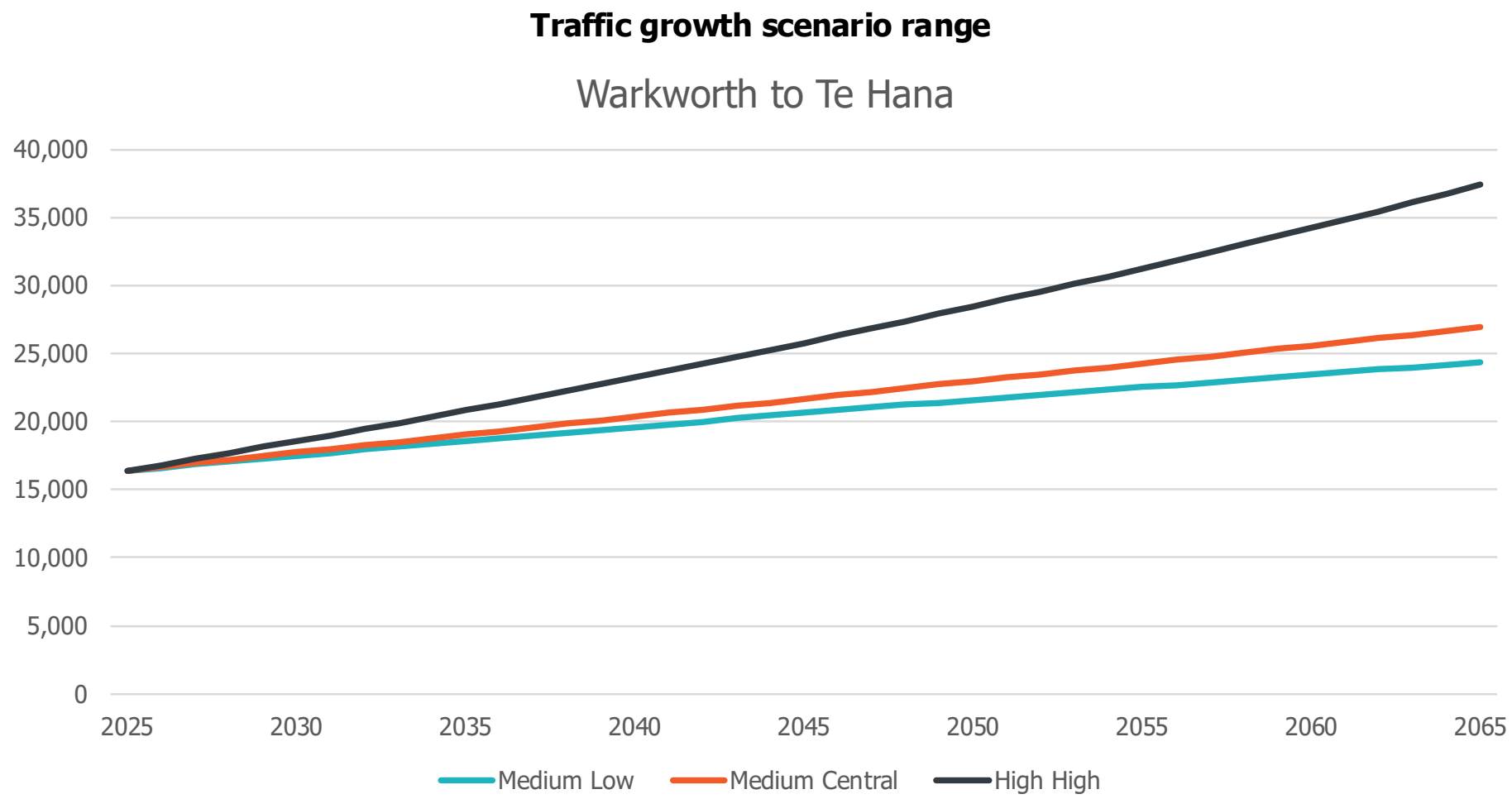
Demand vs capacity analysis



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

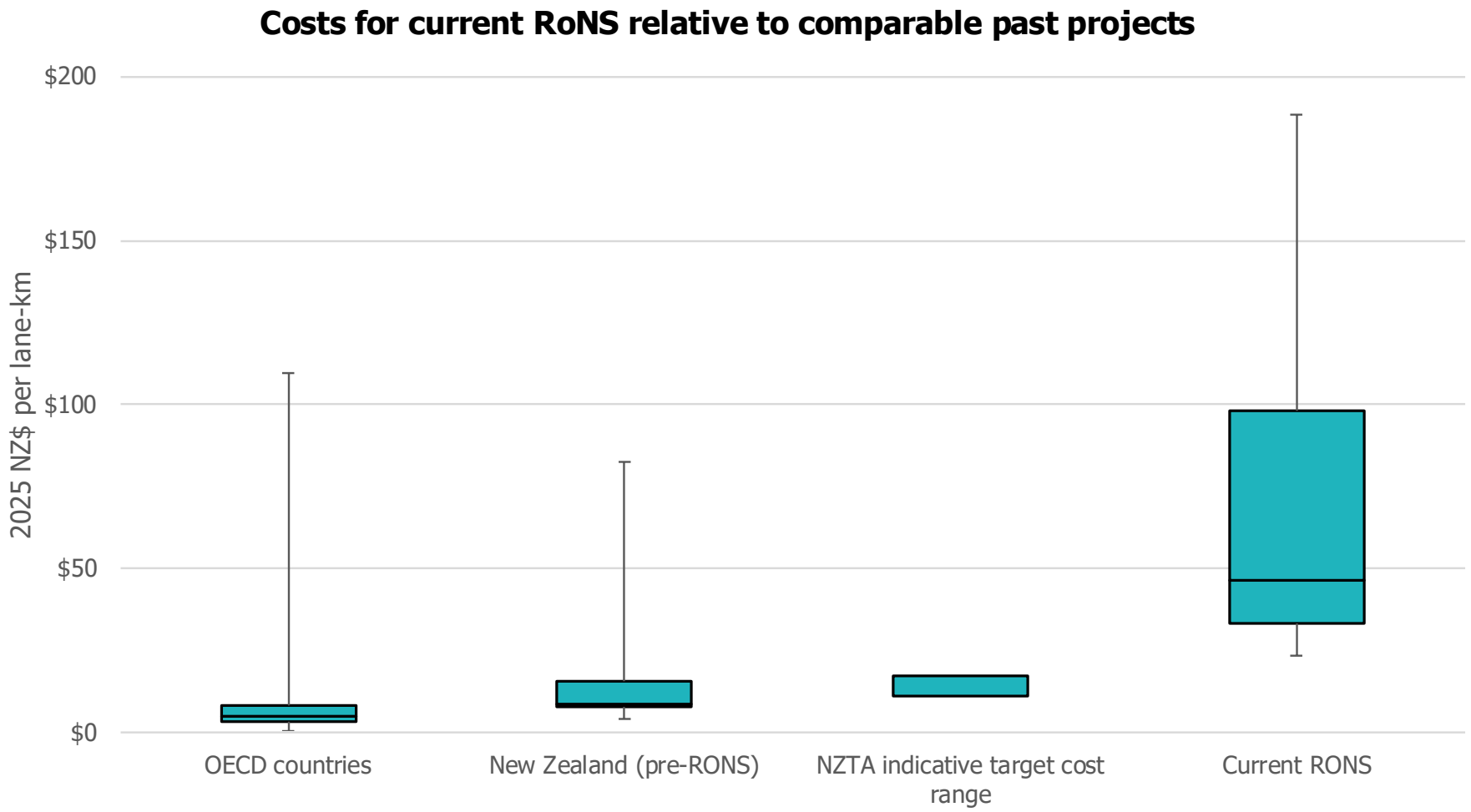
Demand vs capacity analysis



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).

Major road projects: Timing analysis

Cost affordability analysis



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

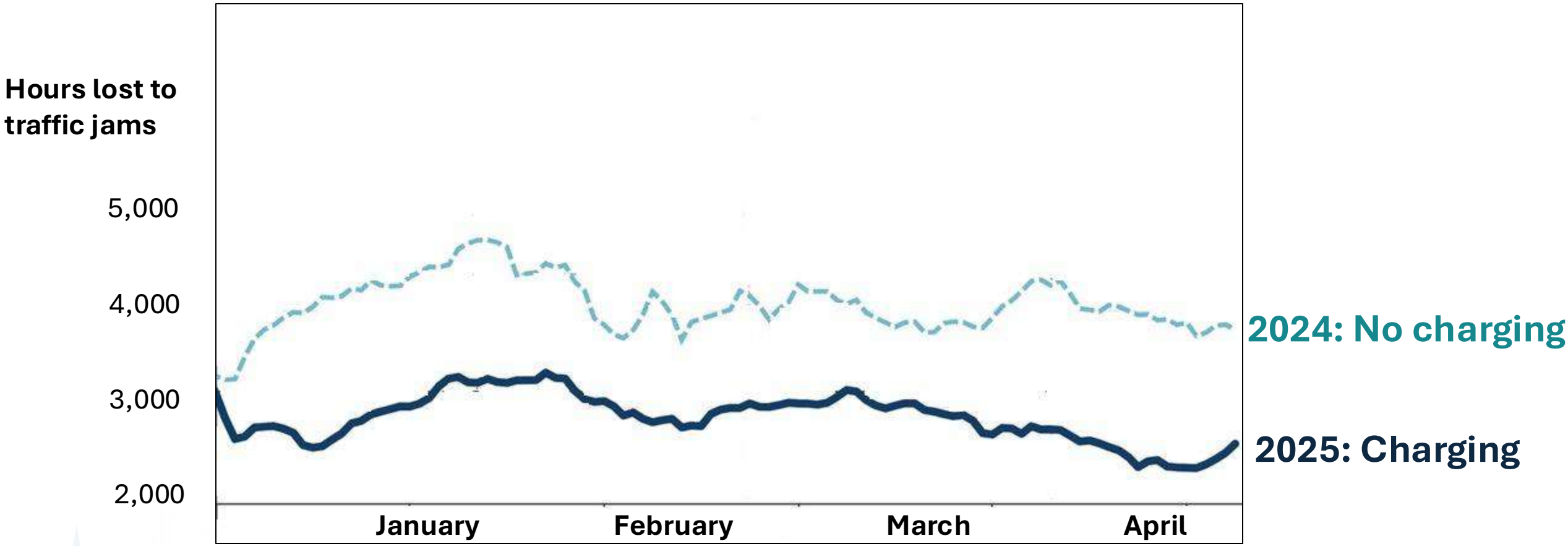
Major road projects: Timing analysis

Key findings

- It is possible for a prioritised programme to fit within Forward Guidance
- **Key actions:**
  - **Optimise project timing:** Build major new roads when demand thresholds are reached; use low-cost upgrades to manage safety and speed issues prior to then
  - **Optimise costs:** Review alignment and specifications to find solutions that are in line with past projects and NZTA target cost guidance.
  - **Demand management:** spread peak load and increase asset utilisation

Time of use pricing: New York

25% reduction in congestion



Some key questions to ask

Navigating the choices ahead

- **Can users pay more?** Higher charges, whether from FED/RUC or tolls, would be needed to pay for more projects under the traditional ring-fenced NLTF model.
- **What are our priorities?** Funding roads out of general taxes means trade-offs with other types of infrastructure, like hospitals and schools.
- **Can we optimise costs?** Lifting productivity or choosing low-cost solutions could help.
- **Do we have timing choices?** Staged delivery might help to balance funding availability.
- **Demand Management:** Can we spread demand to defer capital needs?

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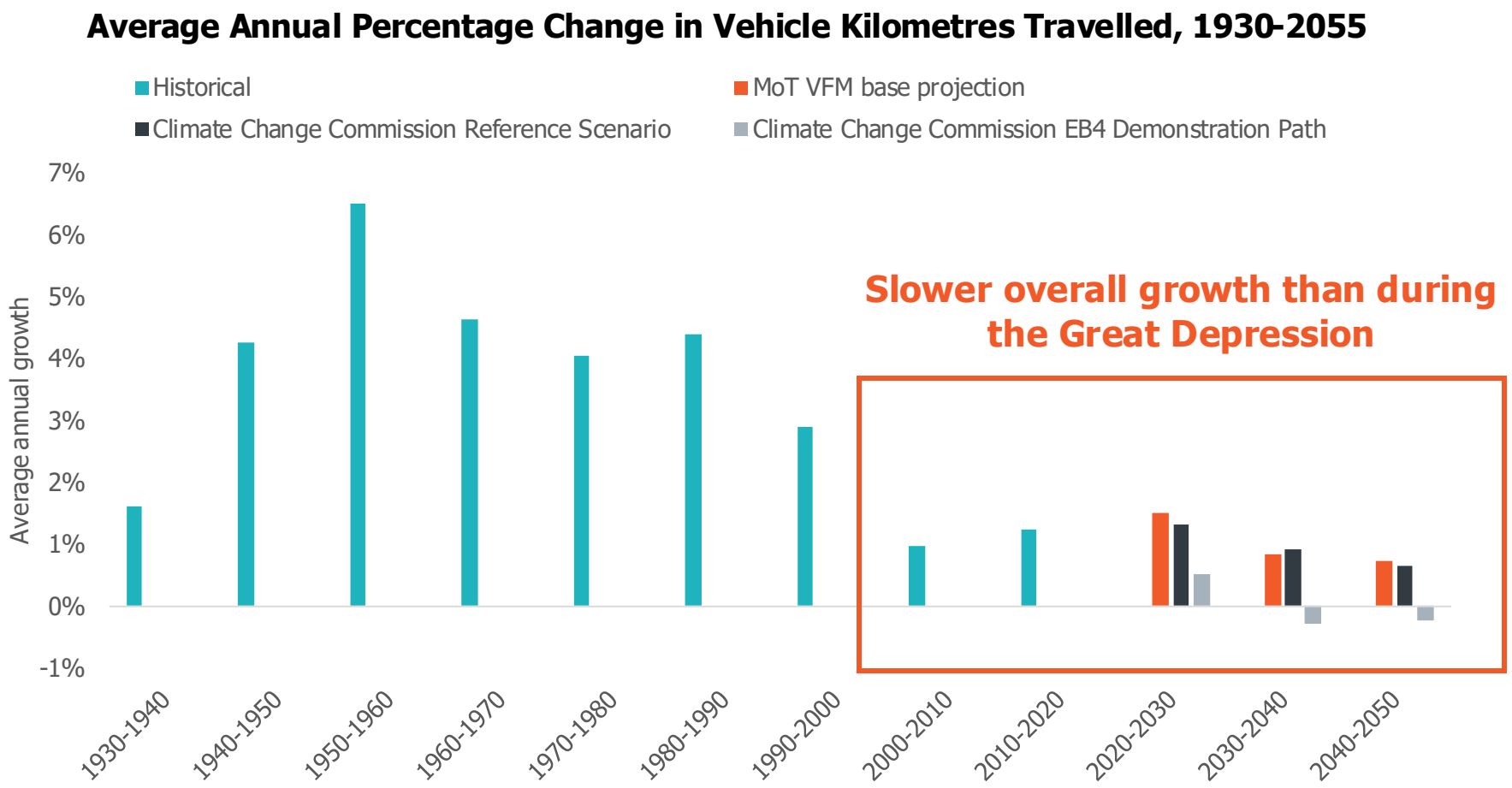
COMMISSION
Te Waihanga

Thank you! Questions?

Context

Demand outlook



Source: Ministry of Transport, Climate Change Commission EB4 advice, and Te Waihanga analysis of historic New Zealand Yearbooks