

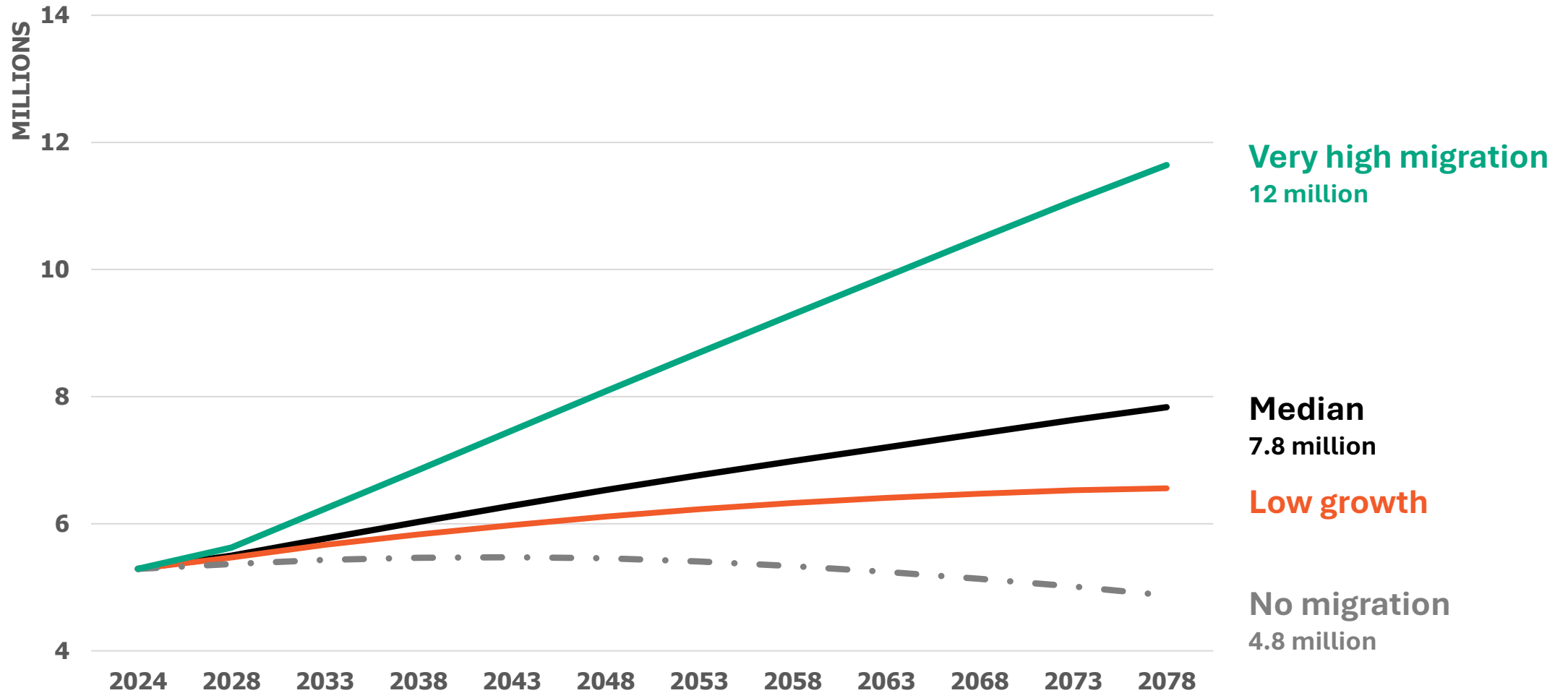


Resilience in the National Infrastructure Plan

New Zealand Lifelines Council

New Zealand is growing

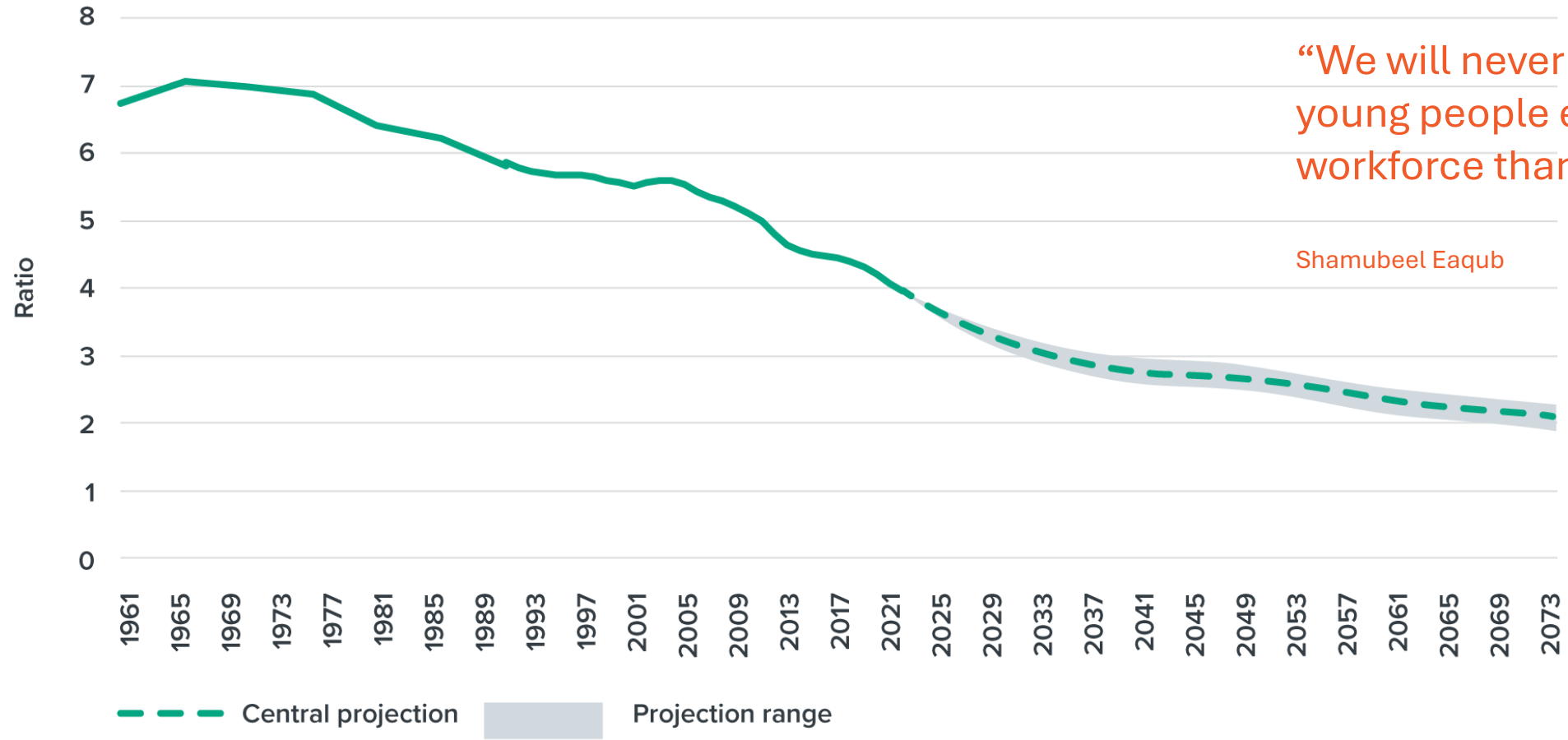
But there is uncertainty on how much and where



Population growth

We're ageing

Ratio of working age to 65+



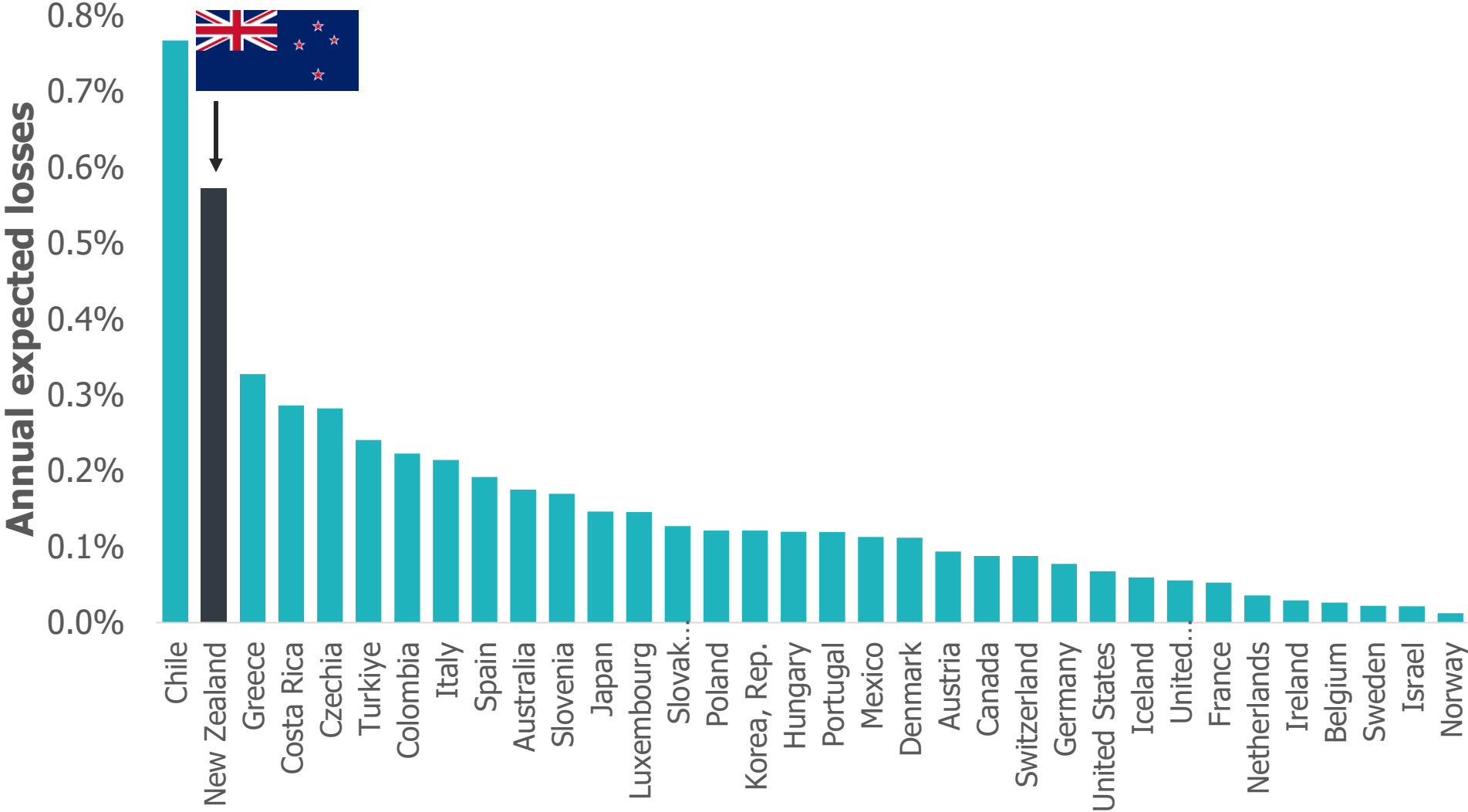
“We will never have more young people entering the workforce than retiring”

Shamubeel Eaqub

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

We're exposed

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

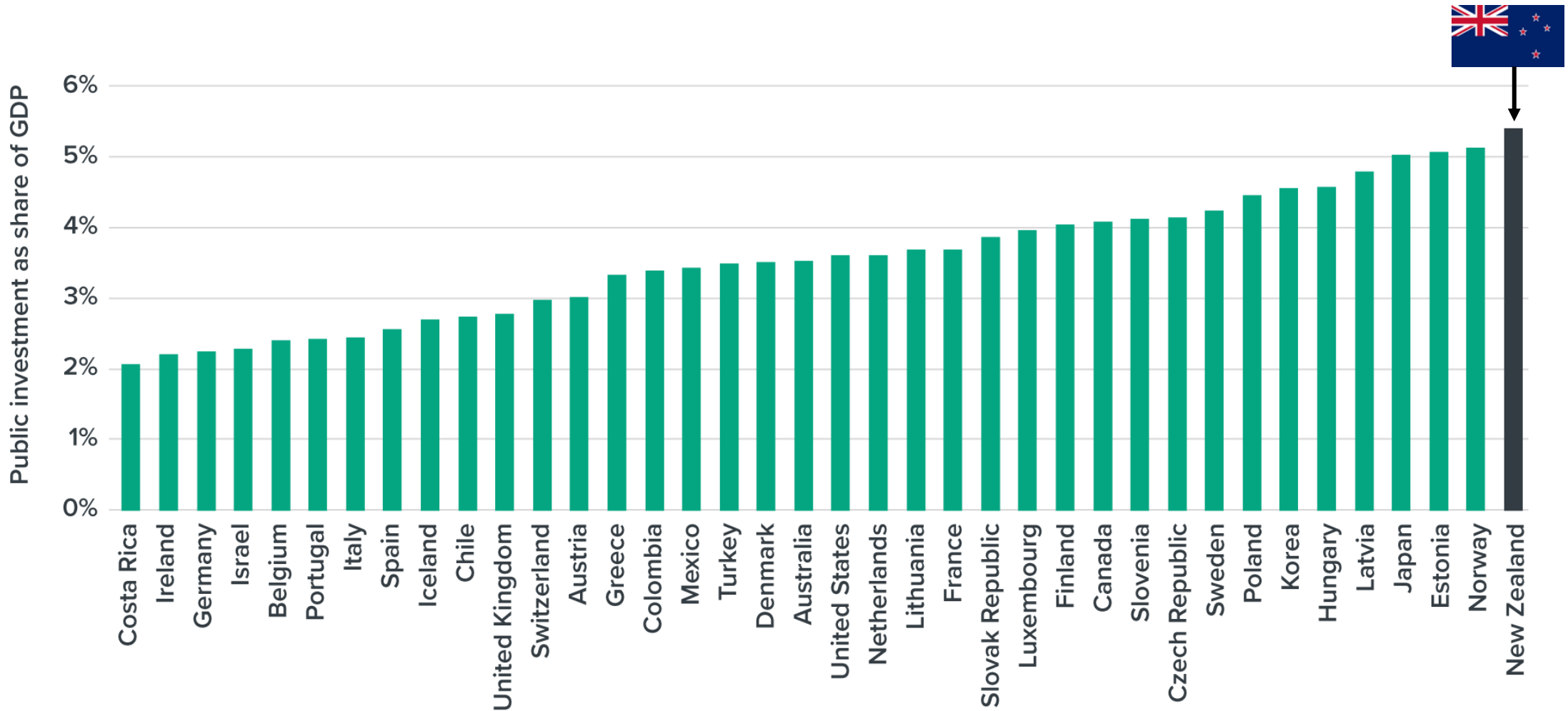


Source: Infrastructure Commission. 2025. *Invest or Insure?* <https://tewaihanga.govt.nz/our-work/research-insights/invest-or-insure>

Exposure

New Zealand is committed to infrastructure

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

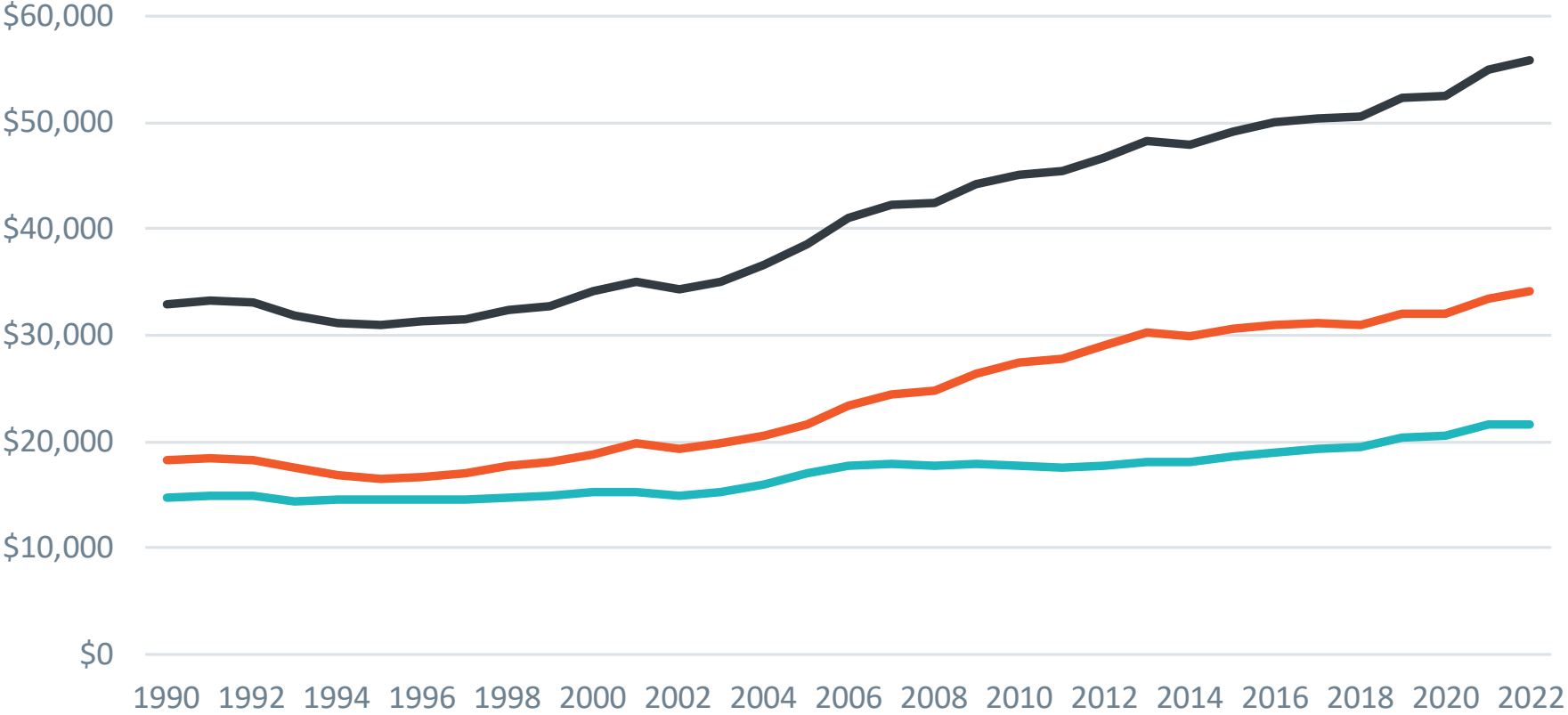


We have more of it than ever

Real value of infrastructure assets per capita

Nation Building

Capital stock per capita



TOTAL

HORIZONTAL

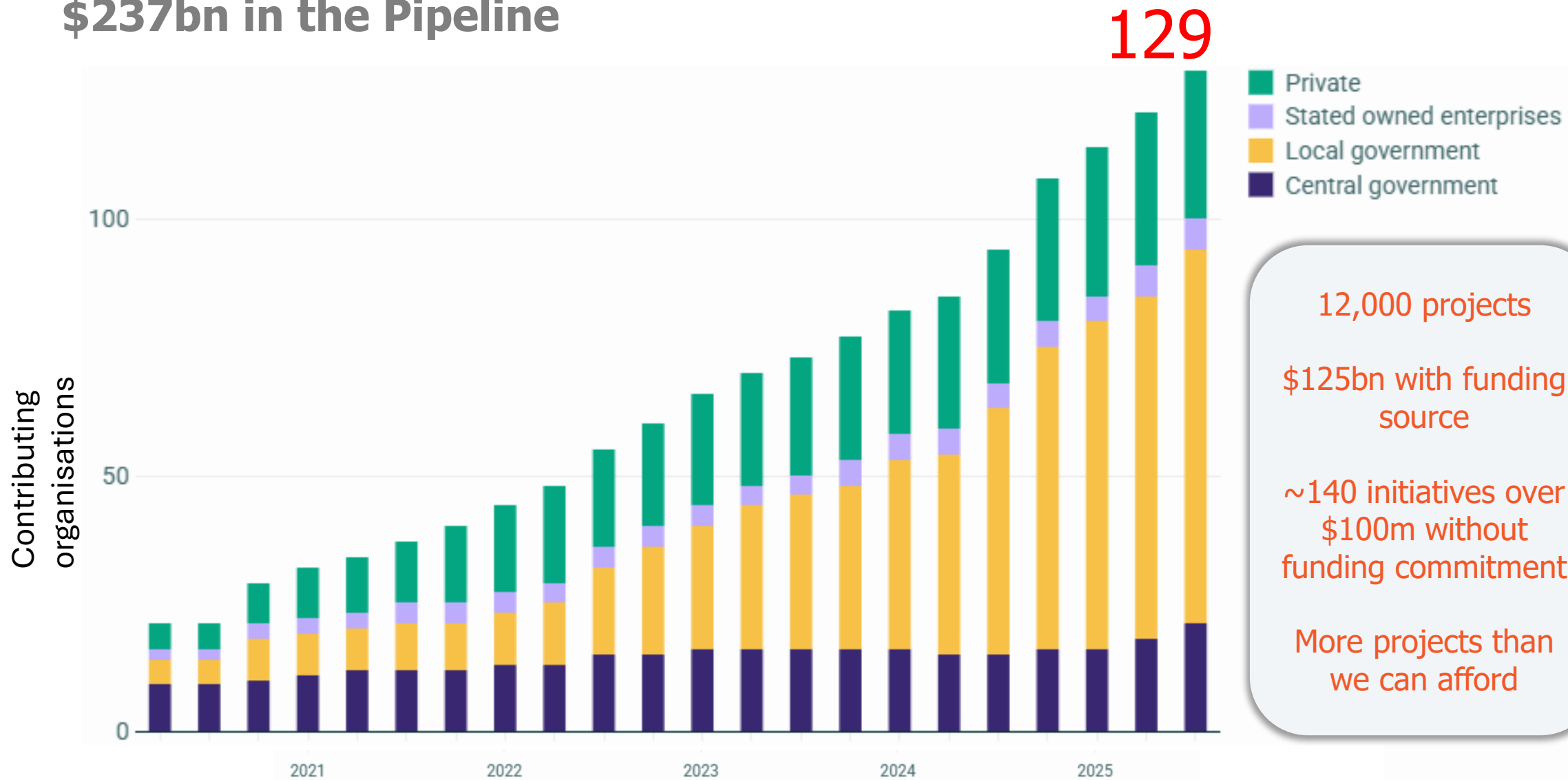
VERTICAL

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

With enormous plans for more

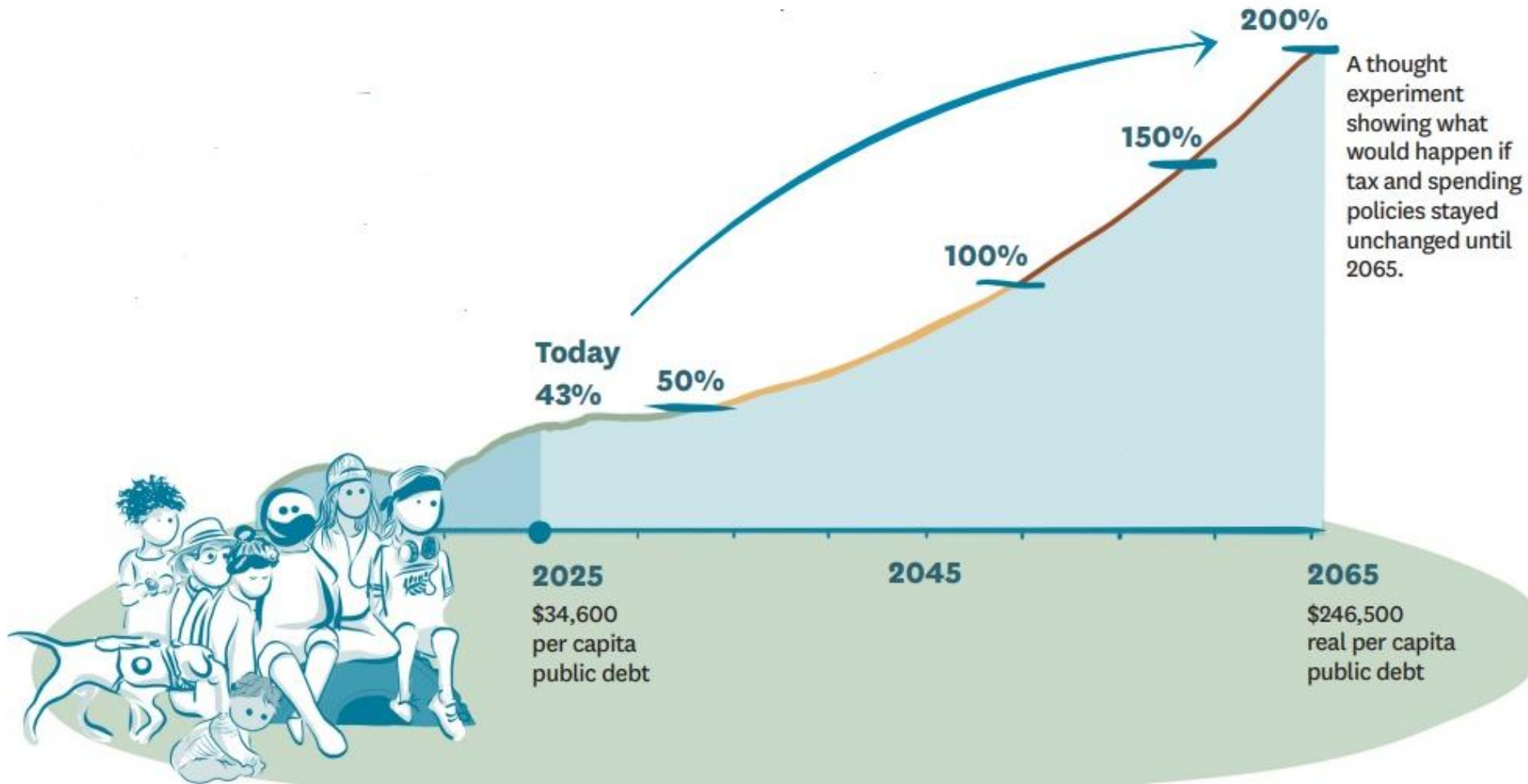
\$237bn in the Pipeline

National Pipeline



But future spending looks more constrained

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



Source: Treasury, Long-term Fiscal Statement, 2025

Local Government is also constrained

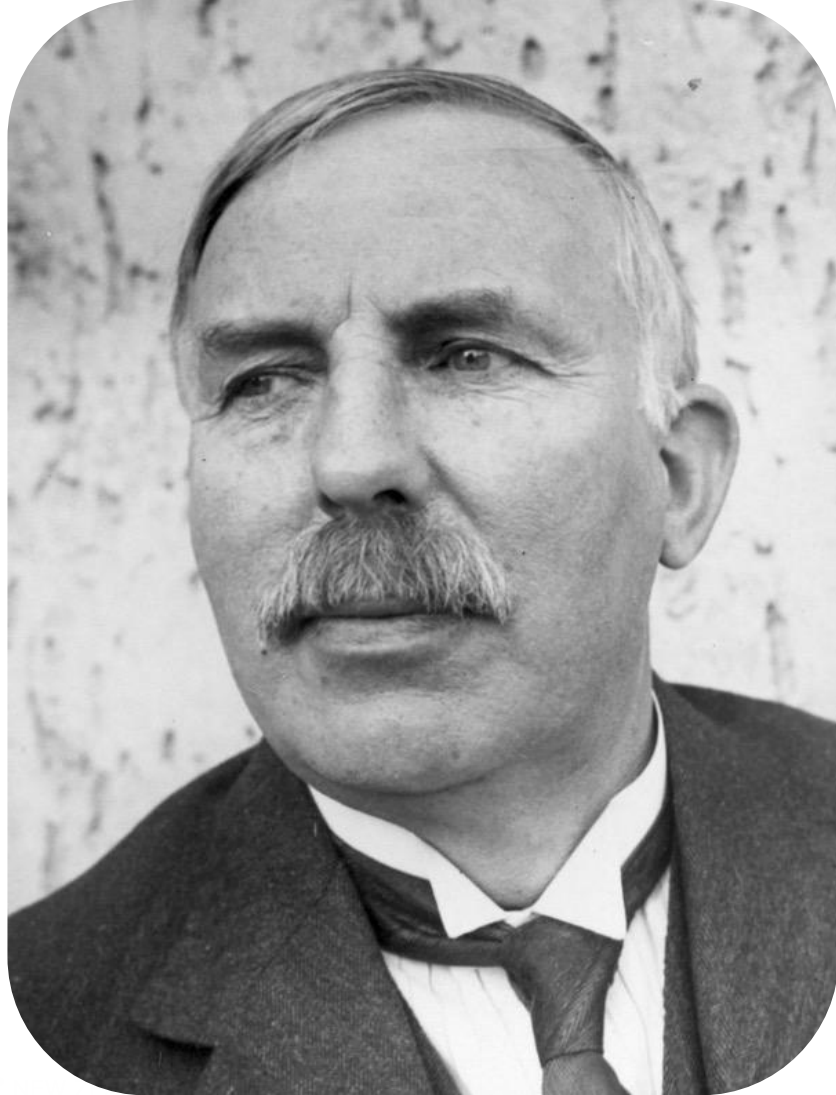
Of 18 councils that imposed double-digit rates, 13 have elected new mayors

“Those who have come in on a lower rates platform are going to find it really challenging to make a meaningful dent in rates because of the cost of water infrastructure.”

Sarah Thompson, Hamilton City Council

“it will be difficult to rein in spending and slow rates rises; the underlying cost increases for councils are 3.3 percent to start with, he notes, and long-term depreciation of capital assets essentially doubles that.”

John Hyndman, Marlborough District City Council



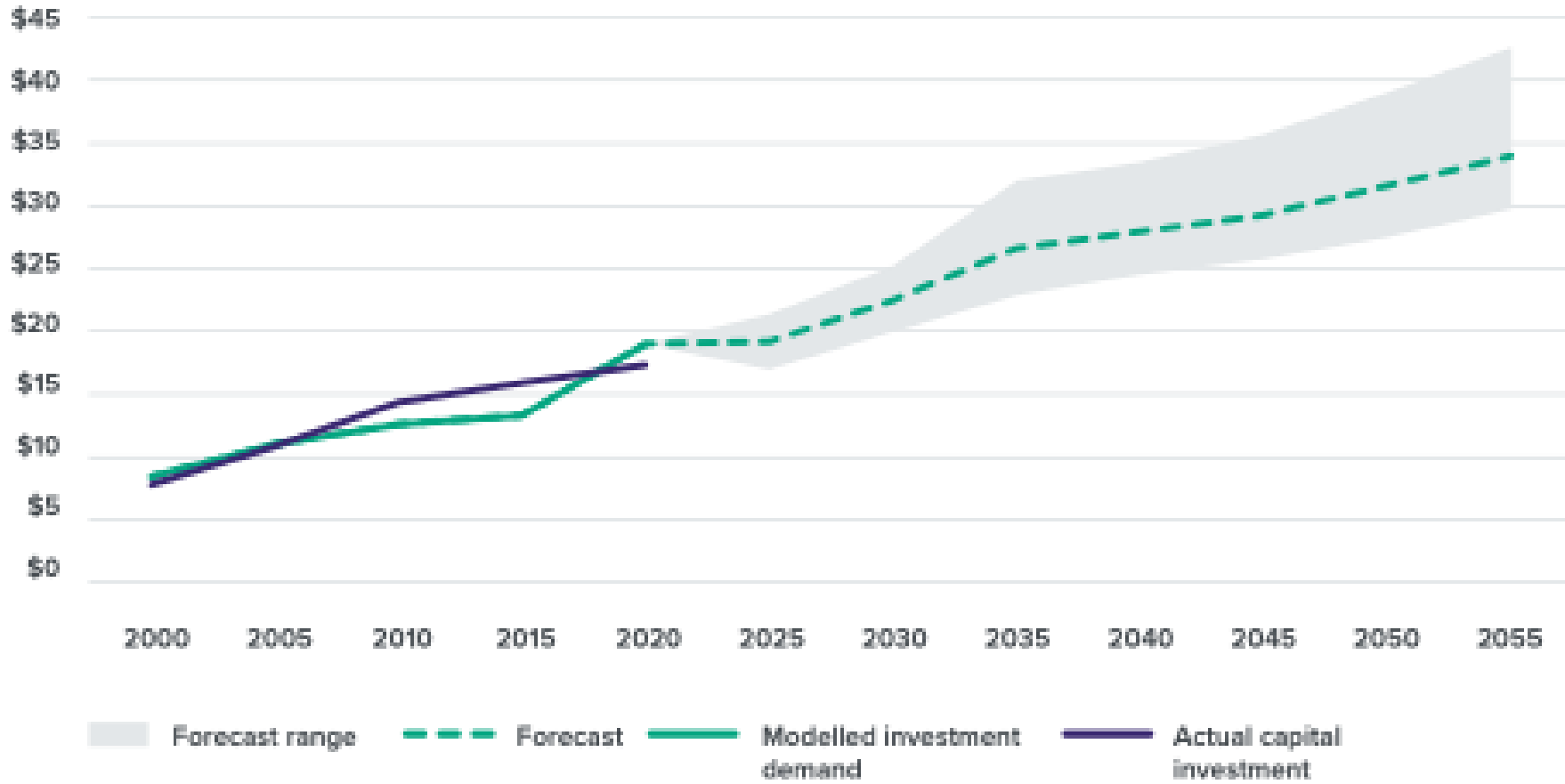
“We haven’t
got the
money, so
we’ve got to
think.”

Ernest Rutherford

Forward Guidance on infrastructure investment

A new capital budget of \$127bn

Annual average investment (\$bn)



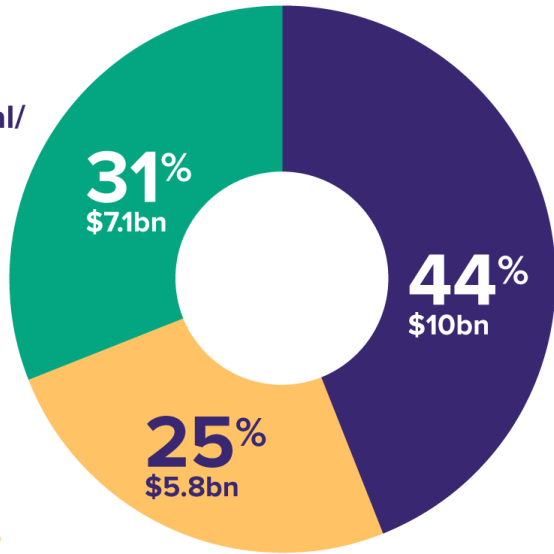
Source: 'Draft Infrastructure Needs Analysis'. New Zealand Infrastructure Commission. (2025).

To enable a proactive portfolio approach

Sectoral investment, 2025–2055



Commercial/
Private



Central
Government



Local
Government



Land transport

Main providers

Central and local government

How to fund investment

User charges and rates

Forecast future investment demand, % of GDP (2024–2054)

0.8%

Key drivers of future investment

Decarbonisation, slowing income and population growth



Electricity and gas

Main providers

Commercial sector

How to fund investment

User charges

Forecast future investment demand, % of GDP (2024–2054)

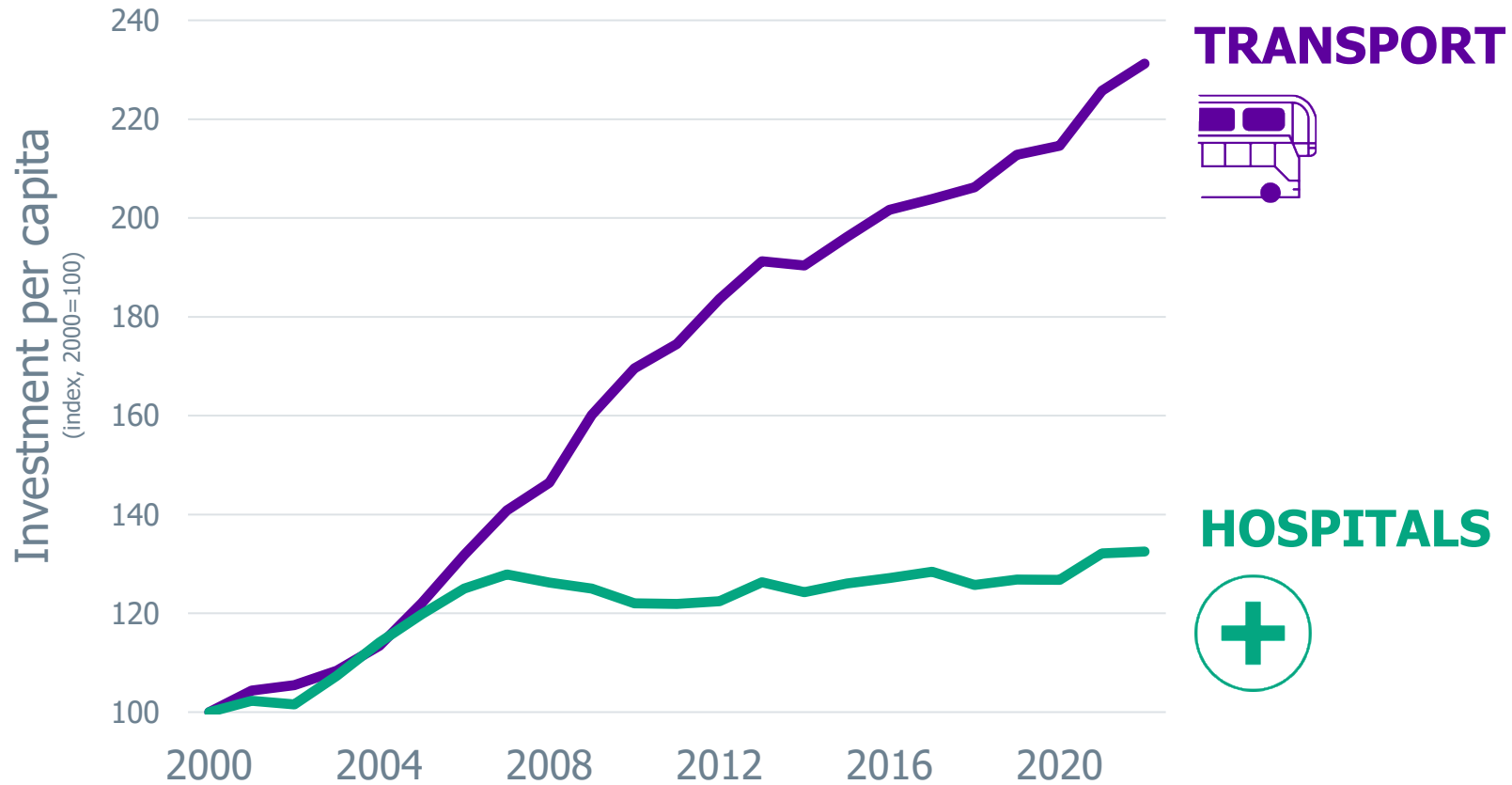
1.4%

Key drivers of future investment

Decarbonisation, renewals

And think about investment mix

Investment per capita, transport vs hospitals, 2000–2022

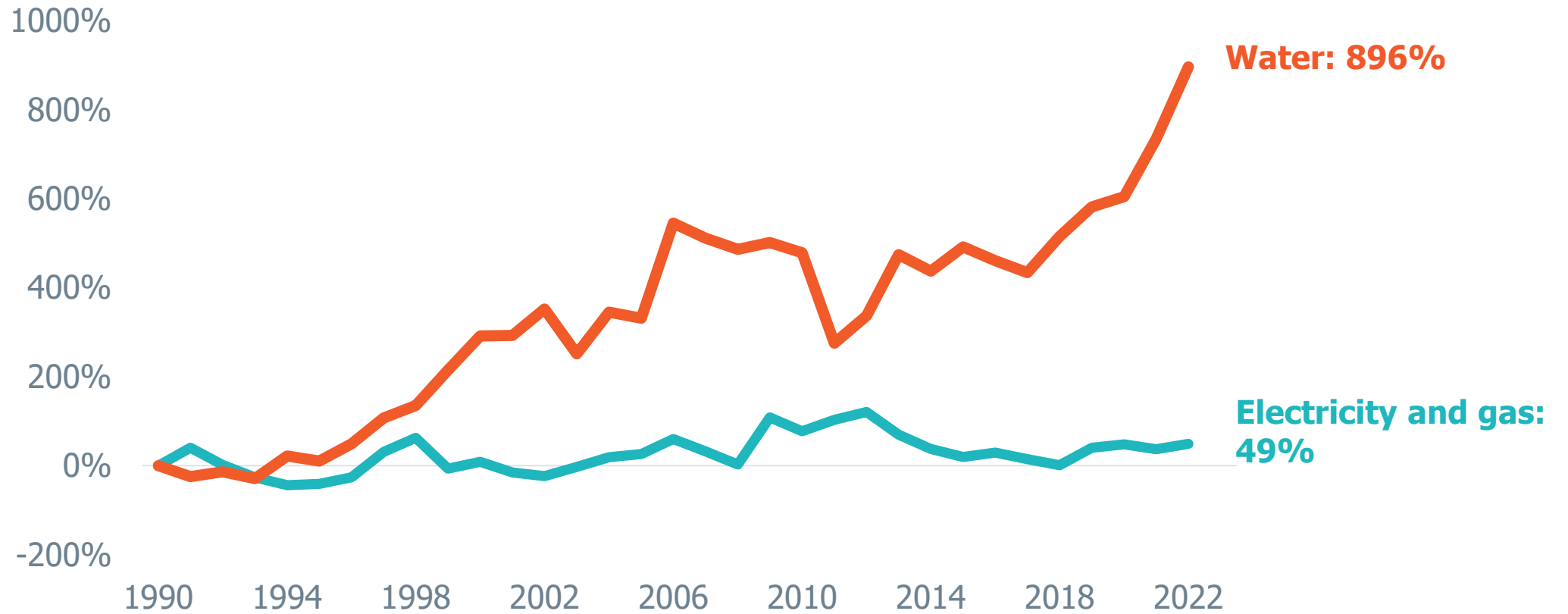


Investment mix

To optimise around an affordable spending envelope

Per capita investment by sector (inflation adjusted)

Right-size investment

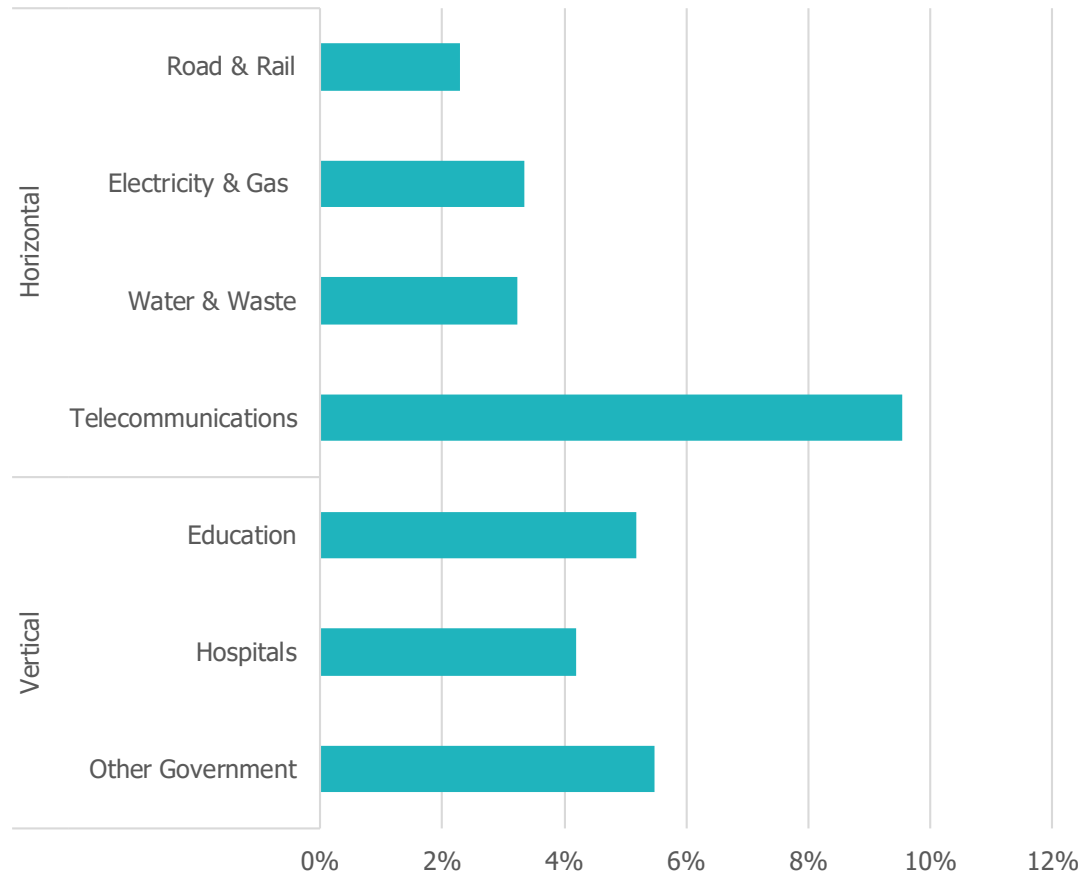


Infrastructure Commission. 2024. Build or Maintain? New Zealand's infrastructure asset value, investment, and depreciation, 1990–2022.

Start with maintenance and renewal

Every year, ~\$15 billion of assets depreciate

Depreciation rates signal long-term renewal and replacement needs

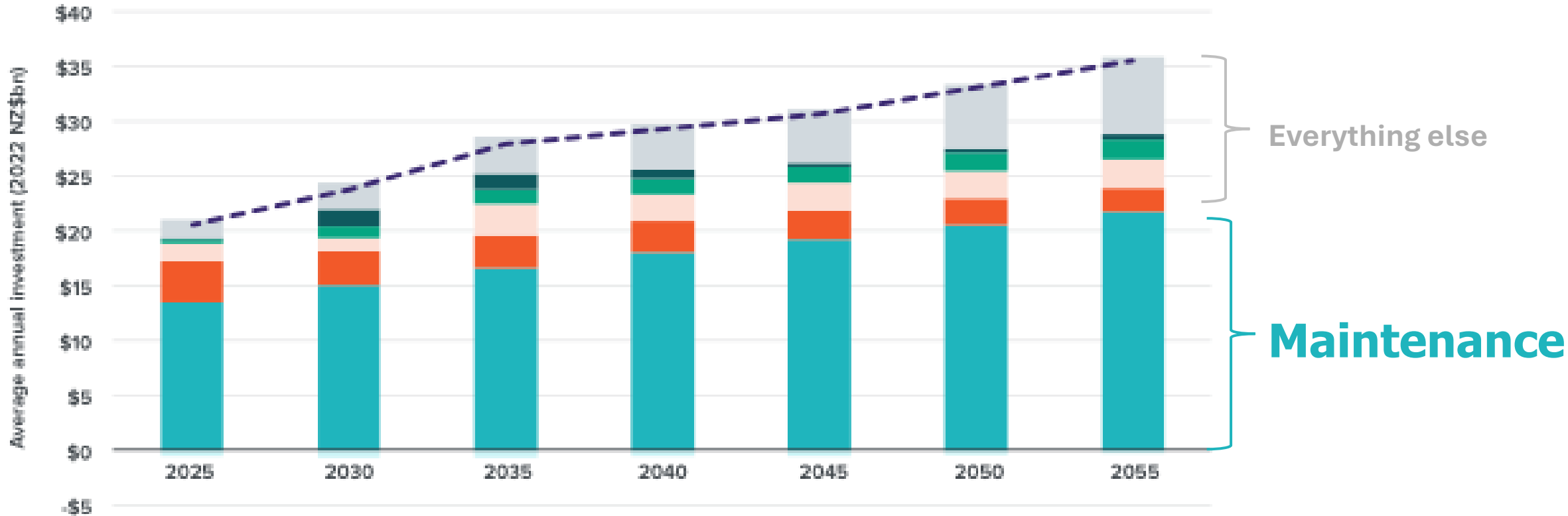


“A flaw in the human character is that everybody wants to build, and nobody wants to do maintenance”

Kurt Vonnegut

60 cents in every infrastructure dollar

Forward Guidance for infrastructure investment, 2025–2055

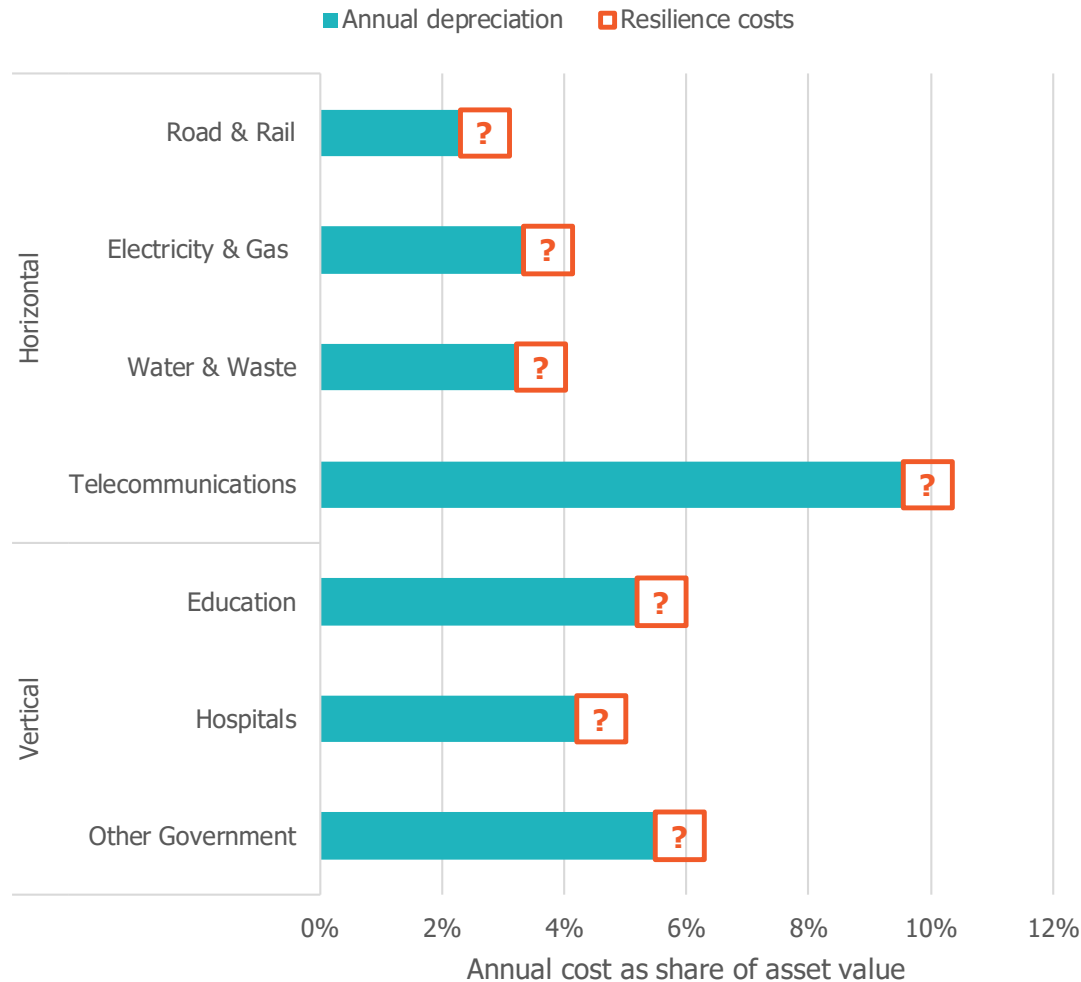


Maintenance

Maintenance

Everything else

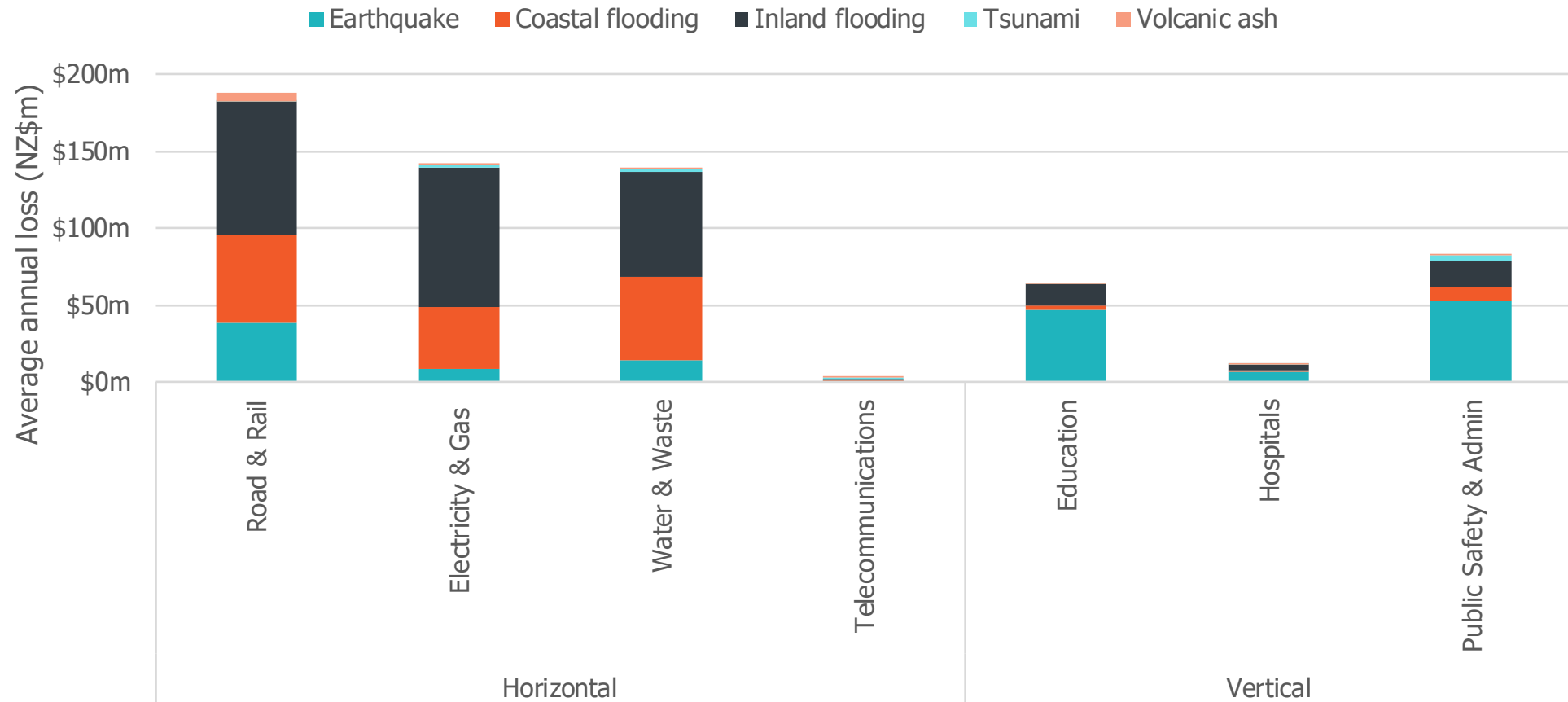
What about natural hazards and other risks?



- **Renewal** investment responds to predictable wear-and-tear on assets
- **Resilience** investment responds to damage from events that may or may not occur in a given time period, like earthquakes

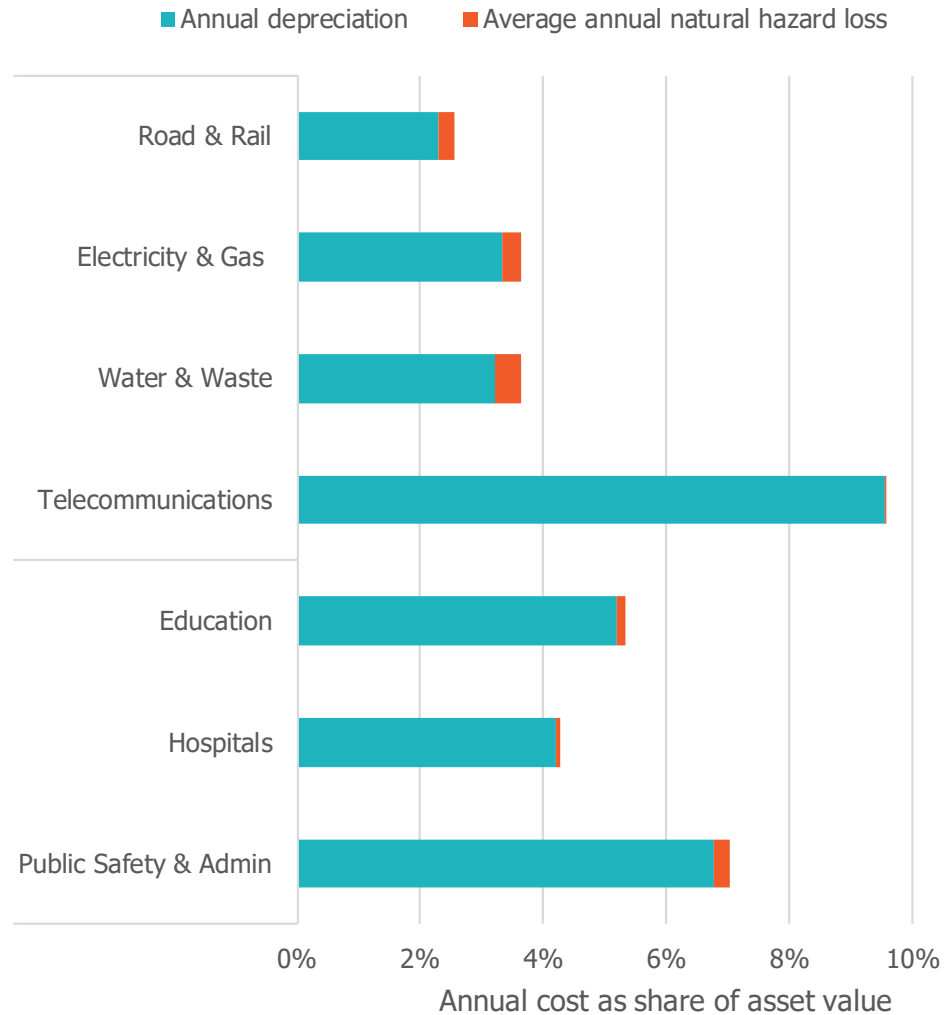
Average annual losses to infrastructure

Impacts by sector and type of risk



What about natural hazards and other risks?

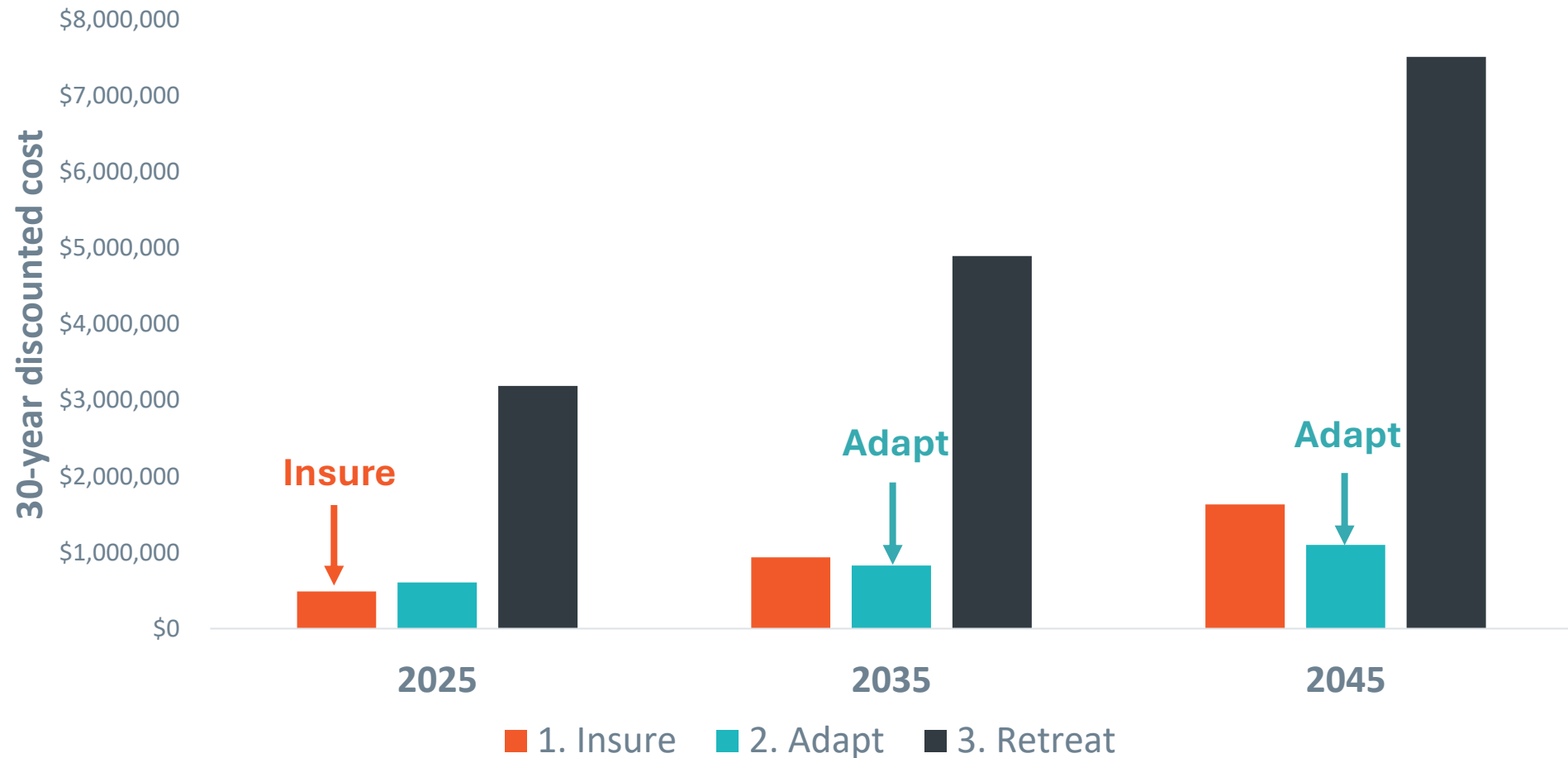
Resilience



What is the lowest cost approach?

Insure, adapt, retreat.

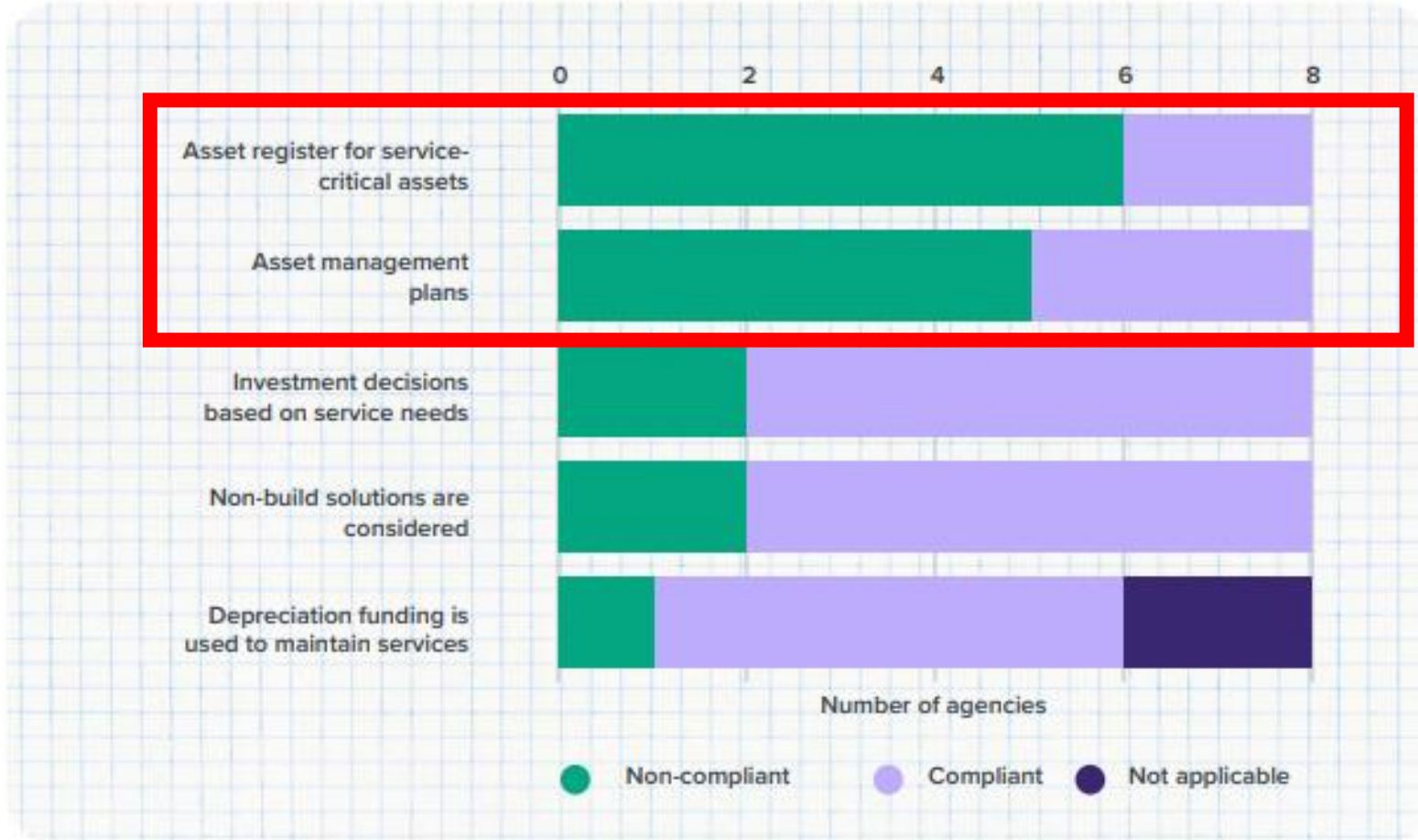
Lowest cost approach



Medium residential property inflation, no increase in flood risk

Asset dependent: So what do we know about them?

Capital intensive self-reported compliance with CO23/9



Source: The New Zealand Infrastructure Commission analysis of June 2024 CO (23) 9 chief executive attestation statements. Note: We have excluded requirement 3.3 from our analysis due to technical issues with the Public Service Intranet over the reporting period.

