



# Auckland Vehicle Kilometres Reduction Programme (VKT-RP)

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Transportation Group Conference 2024

# 1 - The Challenge

# The Challenge

By 2035, The Emissions Reduction Plan sets out to...

The Emissions Reduction Plan sets these targets for transport by 2035.


Reduce total kilometres travelled by the light fleet by **20%**

**29% VKT target for Auckland**



The Emissions Reduction Plan sets these targets for transport by 2035.

Increase zero-emissions vehicles to **30%** of the light vehicle fleet



The Emissions Reduction Plan sets these targets for transport by 2035.

Reduce emissions from freight transport by **35%**



The Emissions Reduction Plan sets these targets for transport by 2035.

Reduce the emissions intensity of transport fuel by **10%**



The Decarbonising Transport Action Plan gives effect to the ERP through...

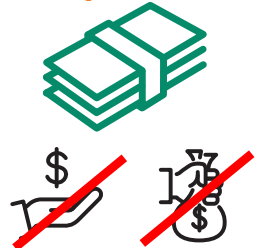
**Focus Area 1**  
Reduce reliance on cars and support people to walk, cycle and use PT

**Focus Area 2**  
Rapidly adopt low-emissions vehicles

**Focus Area 3**  
Begin work to decarbonise heavy transport and freight

**Focus Area 4** Advancing cross-cutting and enabling actions

Transport costs, not revenue, funding or consequential opex



Multiple Evidence



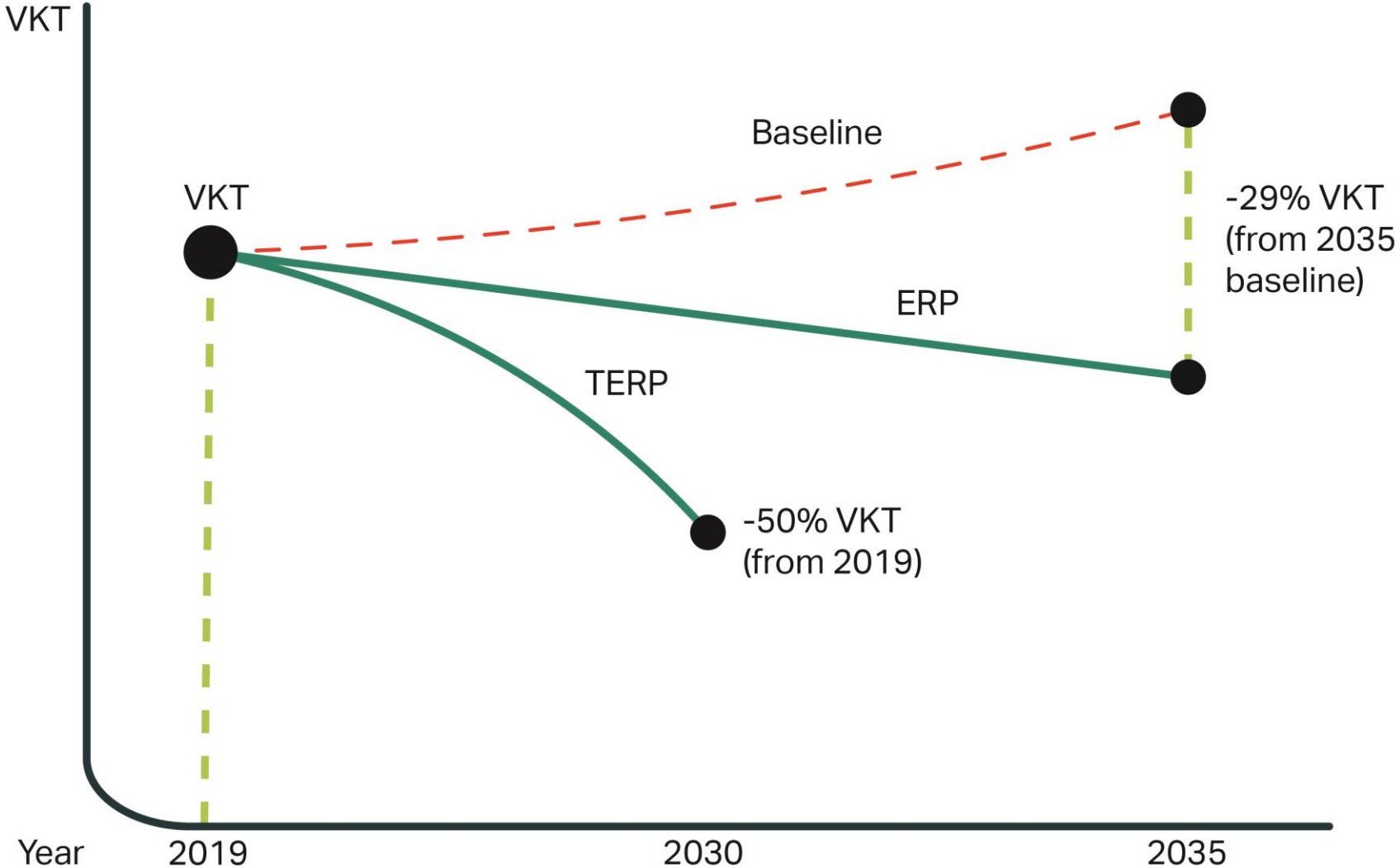
Just Auckland



PM engagement & land use



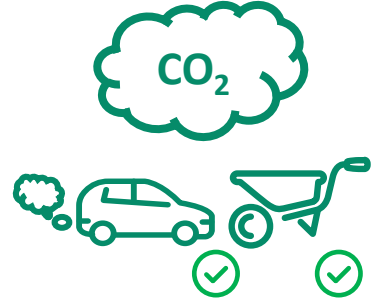
# More Challenge



Insights for LTP – 5mo, not 11mo



Net Carbon



# 2 – Our current trajectory

# The state of play

## International & National

**2015**  
The Paris Climate Agreement is Signed to limit warming to 1.5C



**2019**  
The 'Zero Carbon Act' is passed to meet net zero by 2050



**2020**  
The NZ Government declares a Climate Emergency



**2022**  
Te hau mārohi ki anamata (Emissions Reduction Plan)



## Tāmaki Makaurau



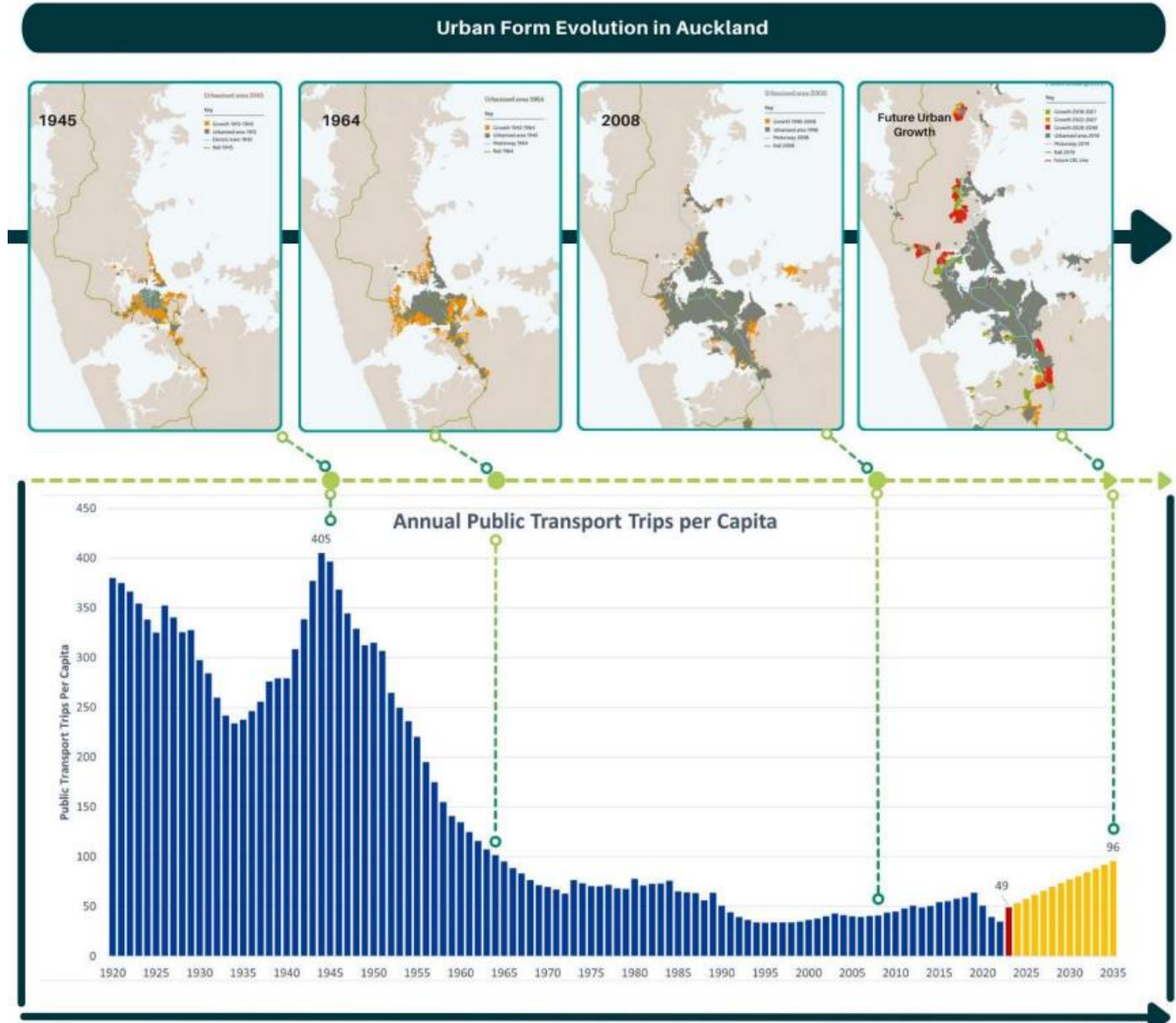
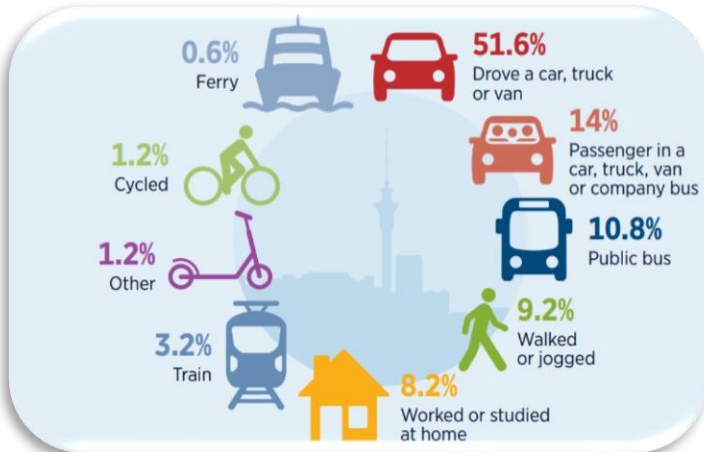
**2019**  
Auckland Council declares a Climate Emergency



**2020**  
Auckland Council adopts Te Tāruke-ā-Tāwhiri (Auckland Climate Plan)

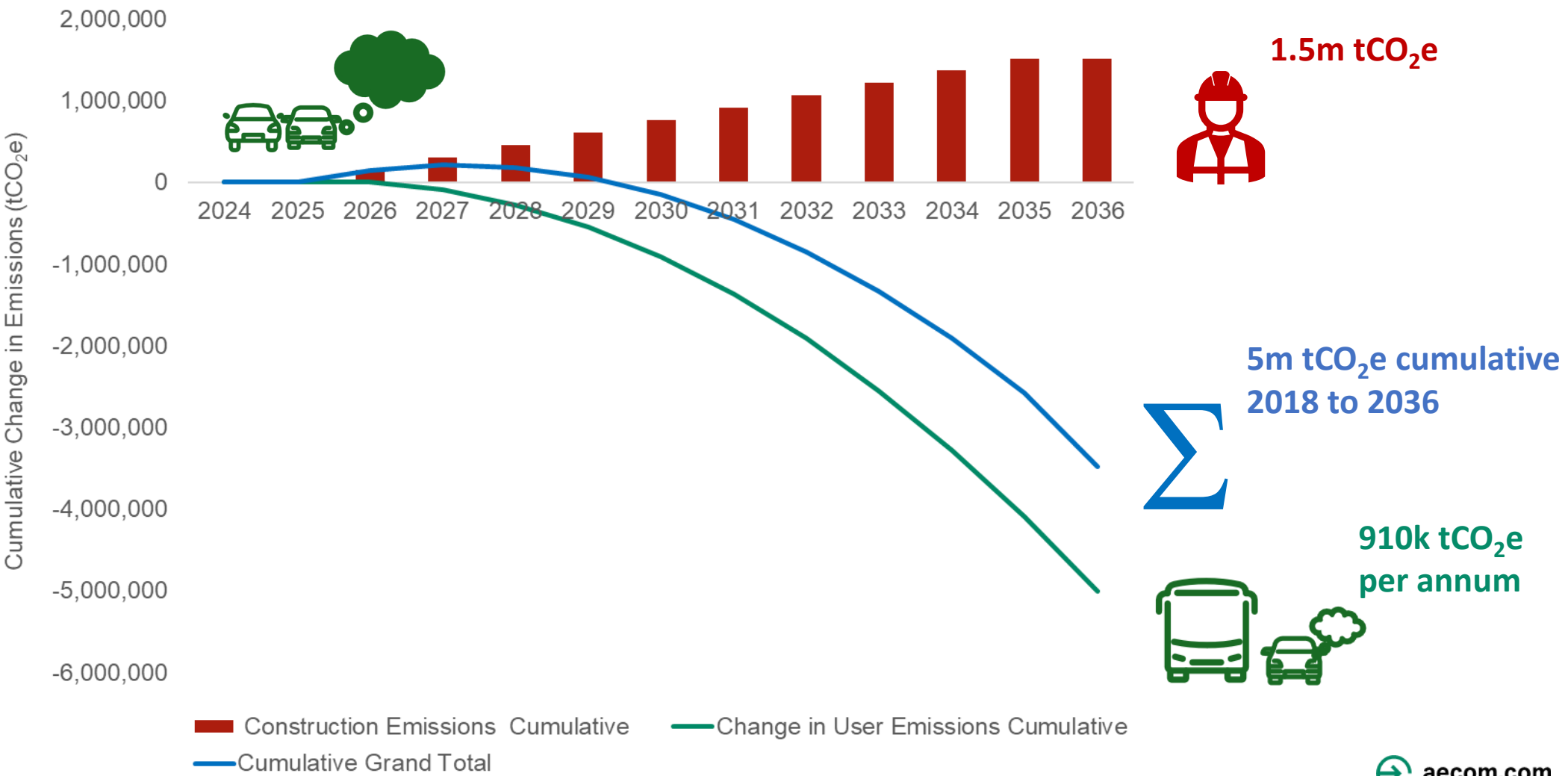


**2022**  
Council creates a pathway to reduce transport emissions (TERP)



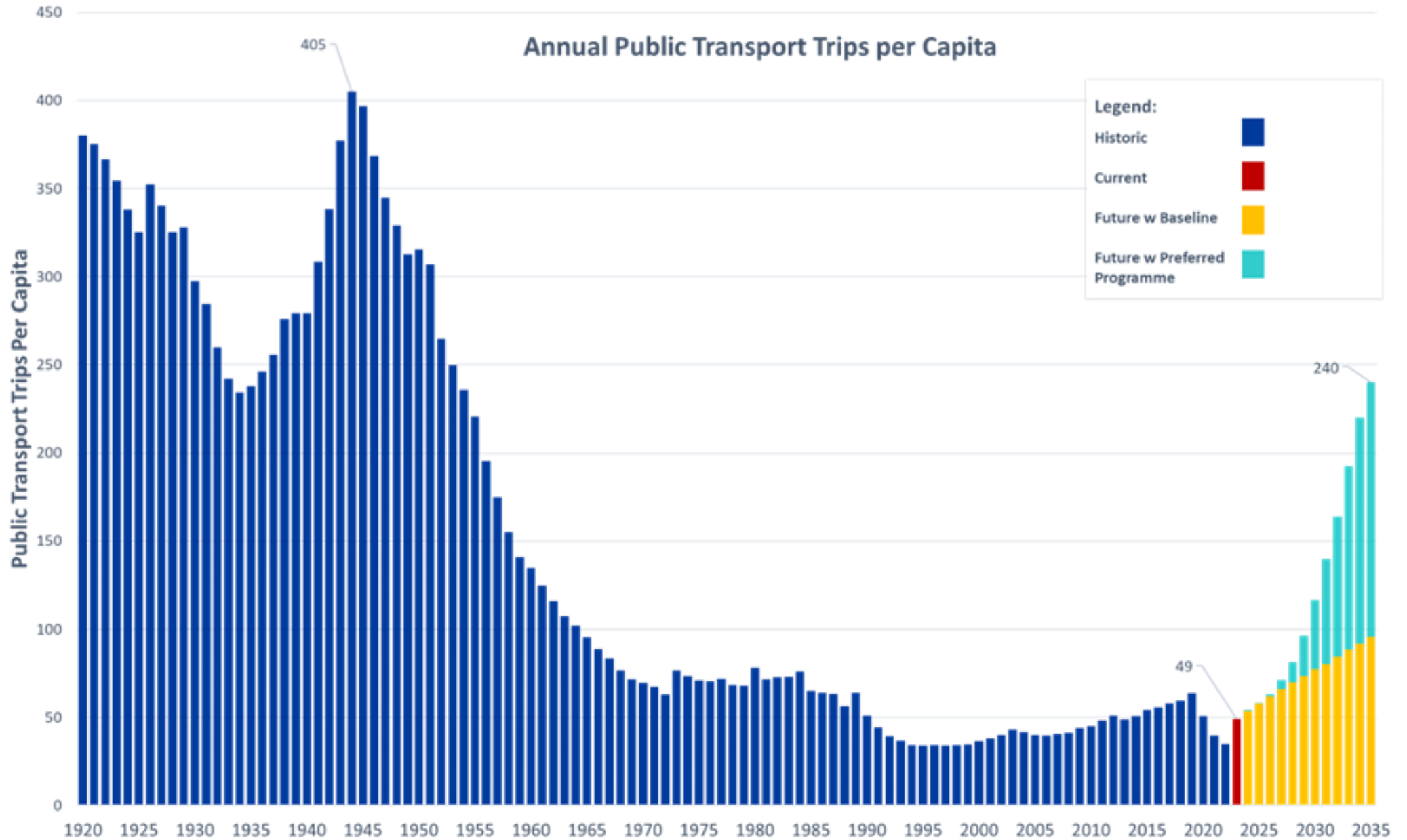
# 3 - Can it be done?

# Operational carbon savings rapidly exceed physical works embodied carbon, suggesting reliable carbon neutrality before full delivery

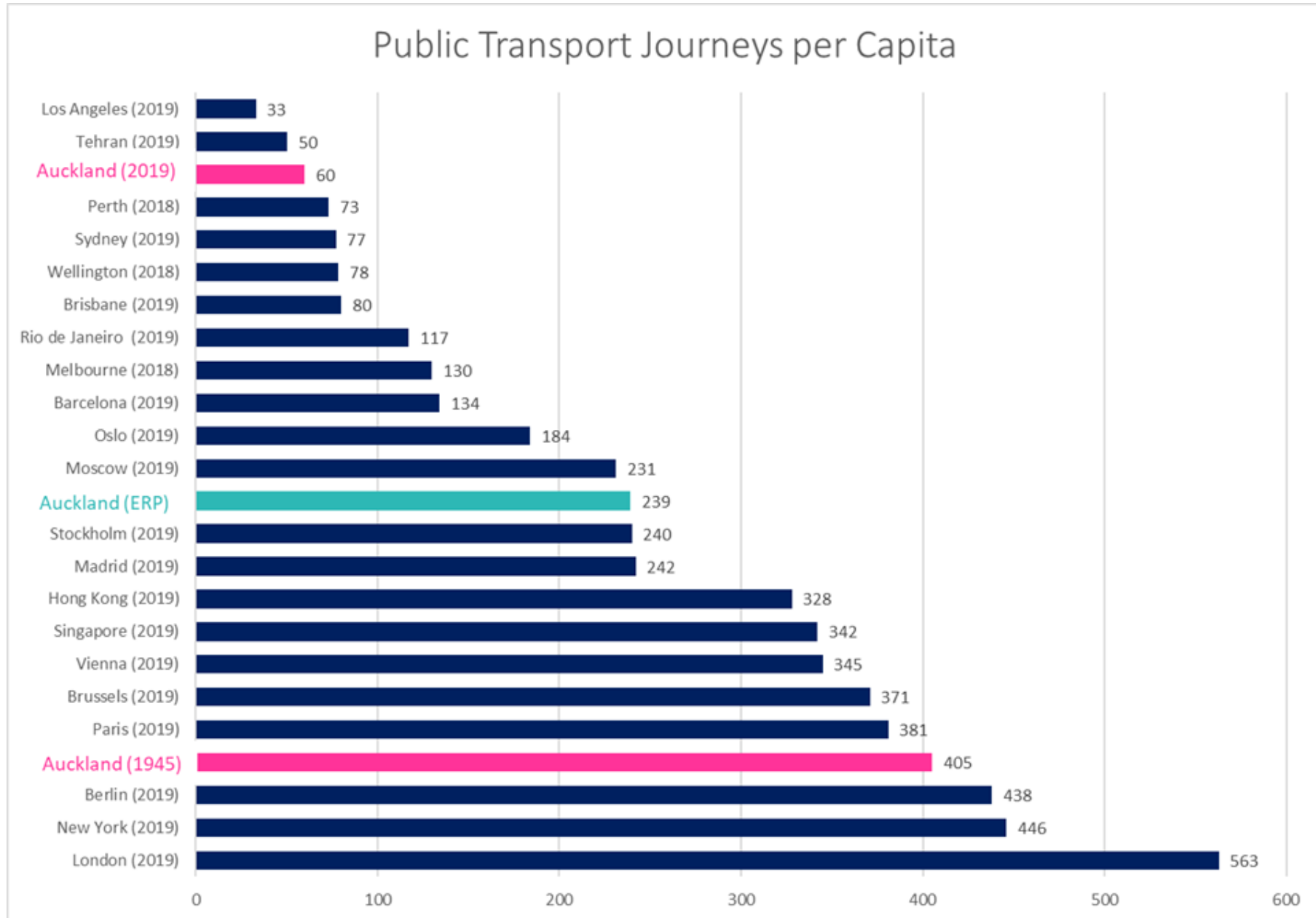




# Invigorated Public Transport Patronage with almost 5-fold trip increase



# Heading Back to the Future & International Credibility



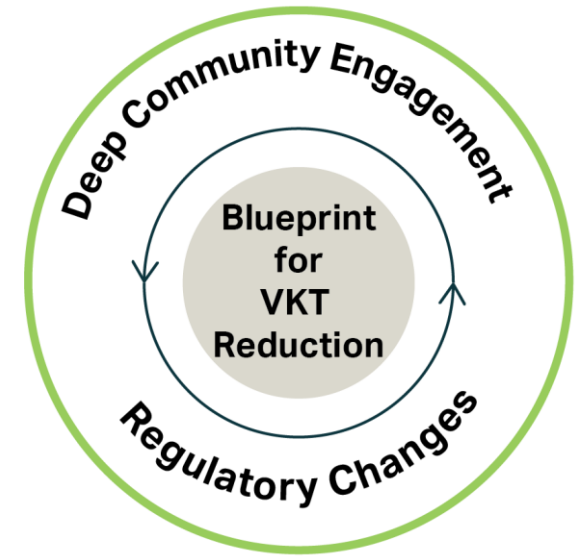
# 4 – The Plan

# 170+ interventions across 28 packages

## Strategic Shifts



## Key Enablers



# 5 – Transferable knowledge

# What now? Application beyond VKT reduction



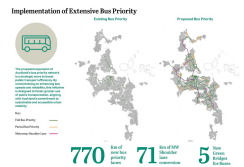
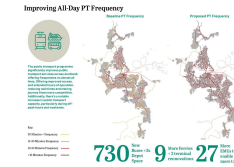
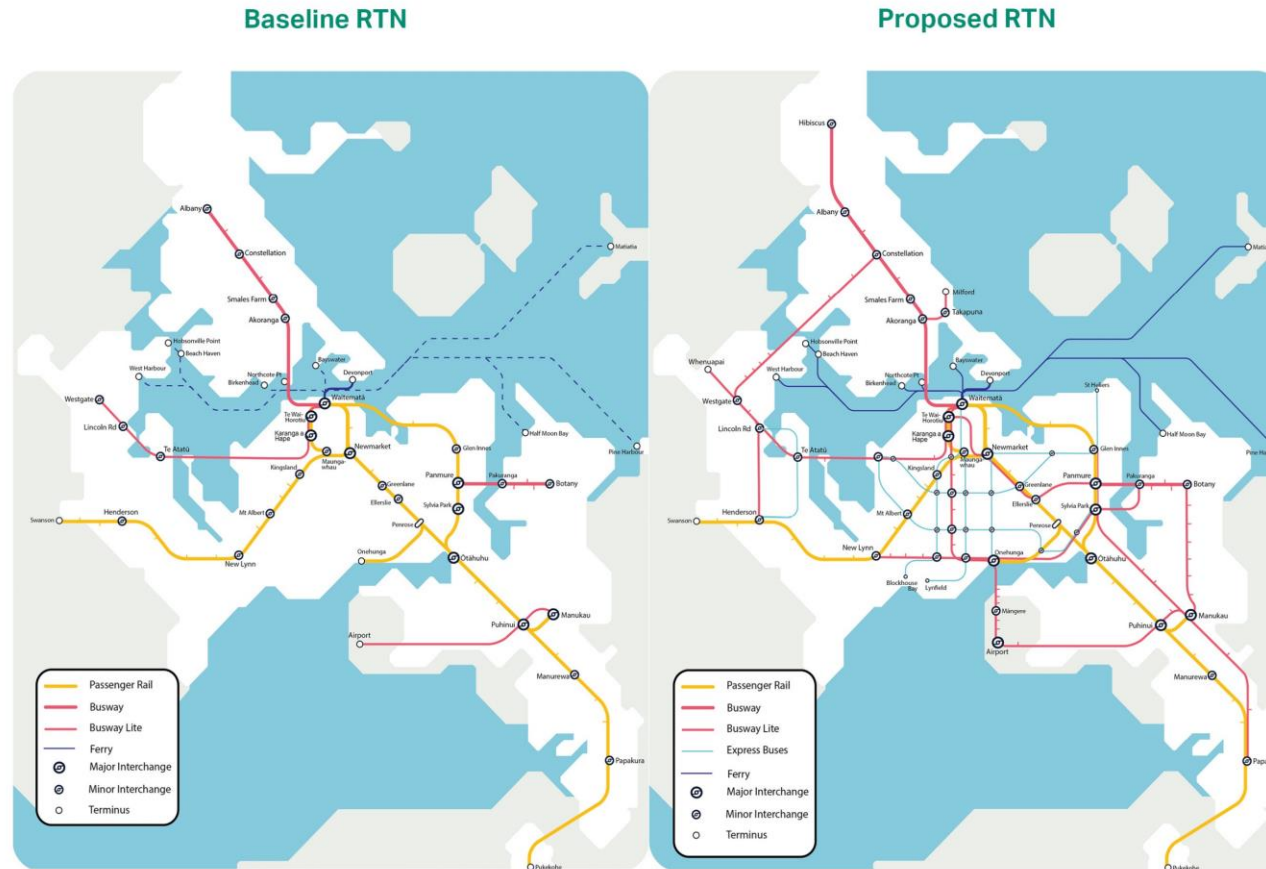
1. Public Transport
2. Amplifiers
3. Design & Delivery
4. Social license
5. Auckland Inc. & NZ Inc.

# PT – 3 ingredients – RTN mesh incl blue collar routes

## Aim to Expand Public Transport



The programme aims to rapidly extend Auckland's RTN network by introducing BRT (Bus Rapid Transit) Lite and express services. It utilises shoulder-running busways on State Highways and offers limited-stop express services, enhancing connectivity between key areas like West Auckland and employment hubs in South Auckland, including the airport.



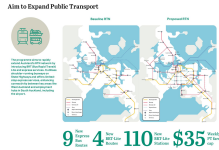
**9** New Express Bus Routes    **4** New BRT-Lite Routes    **110** New BRT-Lite Stations    **\$35** Weekly PT fare cap

# PT – All day high frequency – not just commuter peaks

## Improving All-Day PT Frequency



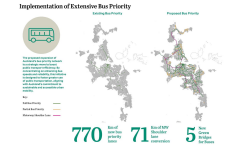
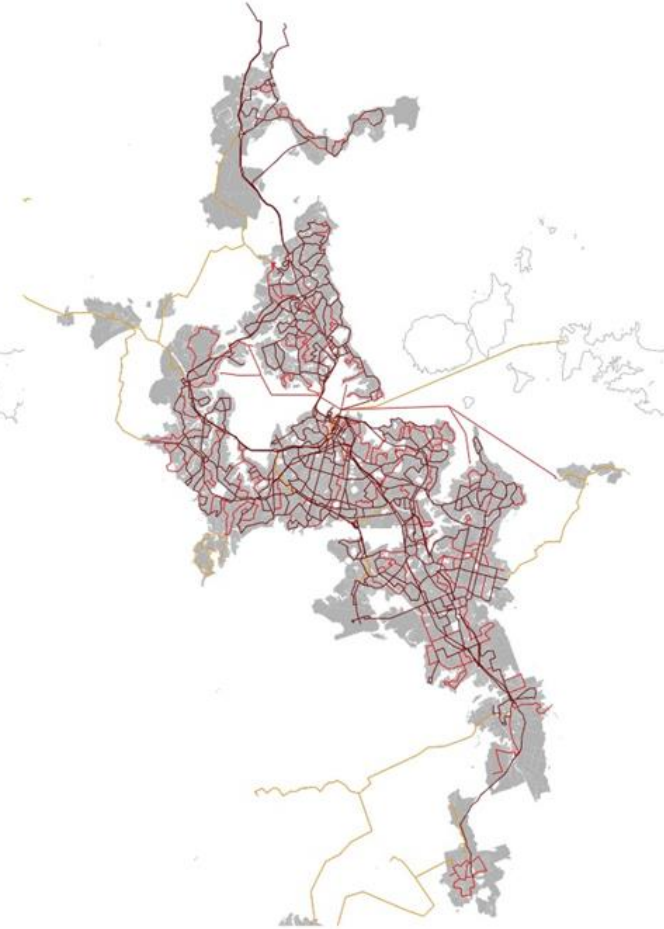
The public transport programme significantly improves public transport services across Auckland, offering frequencies on almost all lines. Offering improved access, and extended hours of operation, reducing wait times and making journey times more competitive. Additionally, there's a notable increase in public transport capacity, particularly during off-peak hours and weekends.



Baseline PT Frequency



Proposed PT Frequency



Key:

- 30 Minutes + Frequency —
- 15-30 Minutes Frequency —
- 10-15 Minutes Frequency —
- <10 Minutes Frequency —

**730** New Buses +3x Depot Space

**9** More Ferries + 2 terminal rennovations

**27** More EMUs to enable 2 more t/h

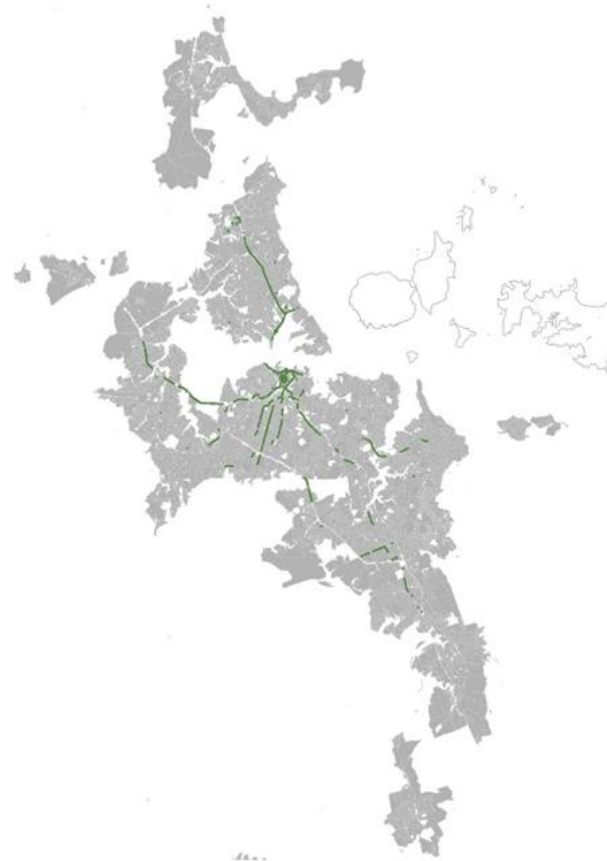


# PT – All day, connected priority – change focus ‘big infrastructure’ to ‘big service’

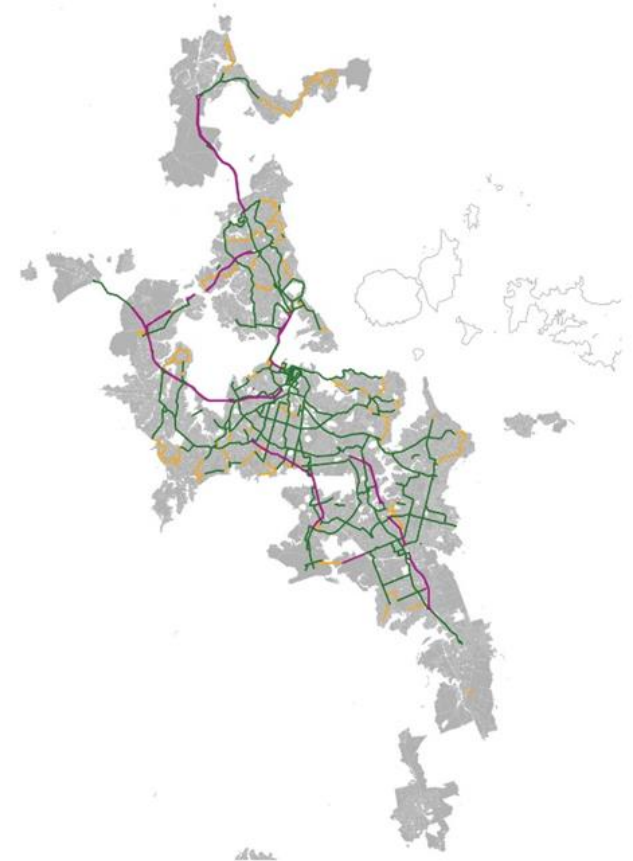
## Implementation of Extensive Bus Priority



Existing Bus Priority



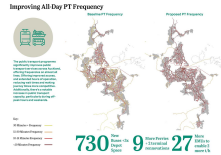
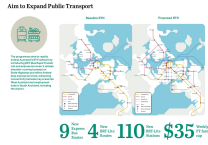
Proposed Bus Priority



The proposed expansion of Auckland’s bus priority network is a strategic move to boost public transport efficiency. By concentrating on enhancing bus speeds and reliability, this initiative is designed to foster greater use of public transportation, aligning with Auckland’s commitment to sustainable and accessible urban mobility.

Key:

- Full Bus Priority —
- Partial Bus Priority —
- Motorway Shoulder Lane —



**770** Km of new bus priority lanes

**71** Km of MW Shoulder lane conversion

**5** New Green Bridges for Buses

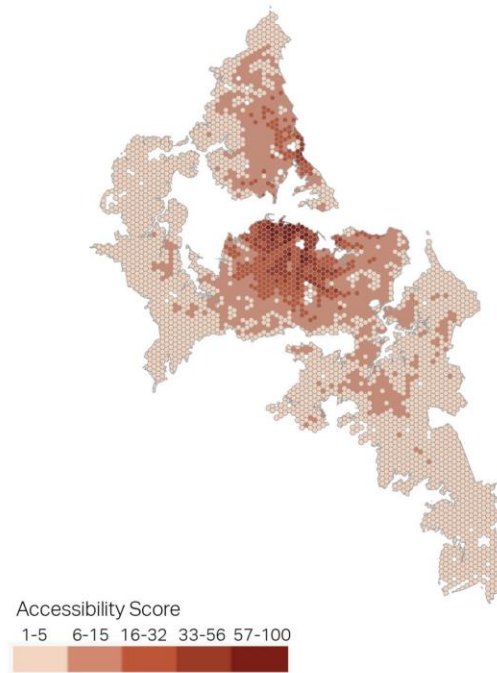
# Amplifiers – The single biggest step – up and not out

## Towards a Compact Urban Form

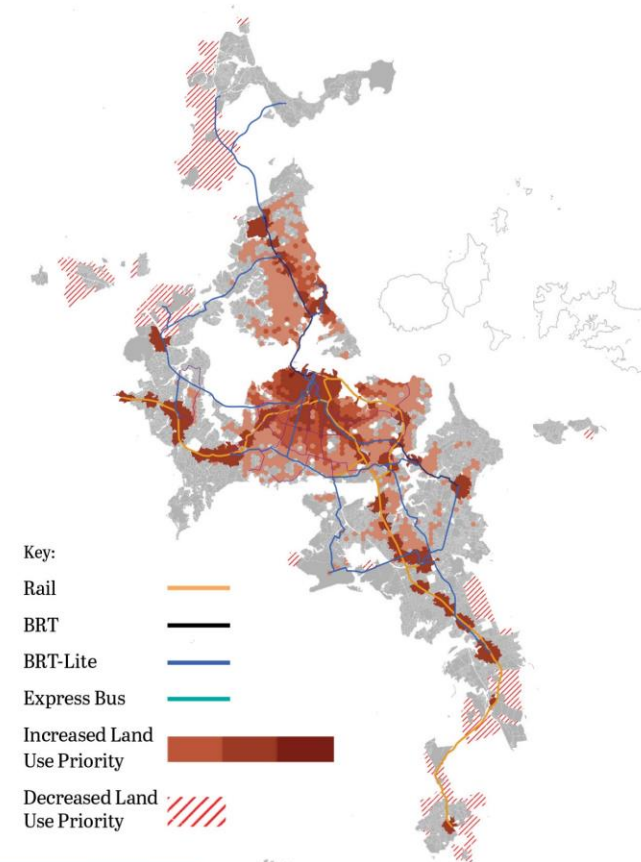


This strategic shift aims to enable more people to live in areas with good access to public transport and active modes. This will allow more people to have access to sustainable travel options and be less dependent on cars for transport. It aims to build up instead of out and enable a more well-functioning urban environment by limiting high carbon growth in areas with insufficient transport access, essential amenities and employment opportunities.

Urban Accessibility Score



VKT-RP Land Use Scenario



Northcote Redevelopment (Source Kainga Ora)



Maungawhau Station TOD (Source, CRL)



Hobsonville Point (Source, HPLC)

# Amplifiers – road re-purposing – supply & demand

## Repurposing Road Space



As Auckland grows, the adaptability and efficiency of its streets are paramount for meeting the needs of current and future communities. This requires transforming the form and function of numerous roads in Auckland and reallocating space to bus lanes, high-occupancy vehicle lanes, cycling networks and enhancements in walking infrastructure and public spaces. This approach is the most rapid, eco-friendly, and cost-effective.

Key:

- Full Bus Priority ———
- Partial Bus Priority ———
- Motorway Shoulder Lane ———
- Protected Cyclelanes ———

### Proposed Protected Cycling Network



Quay Street Cycleway Extension (Source, AT)

### Proposed Bus Priority Network



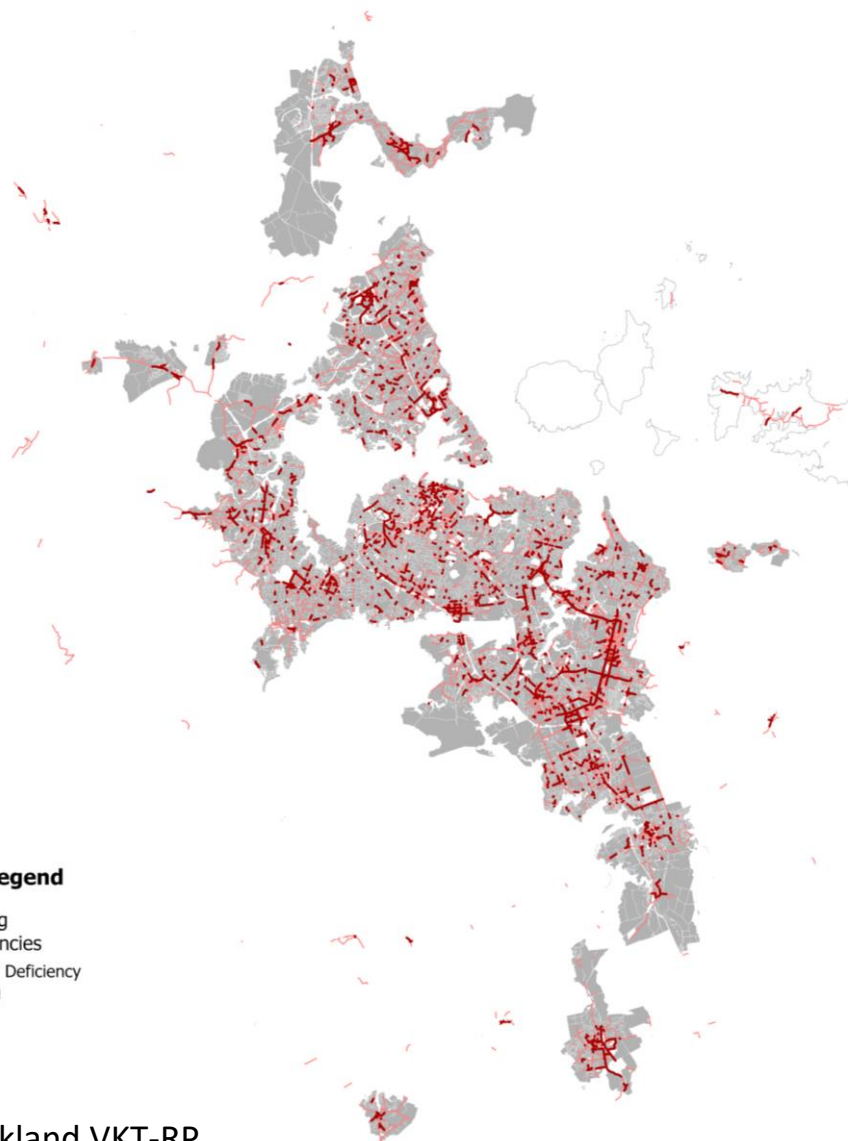
Van Ness BRT-Lite project (Source, MARTA)



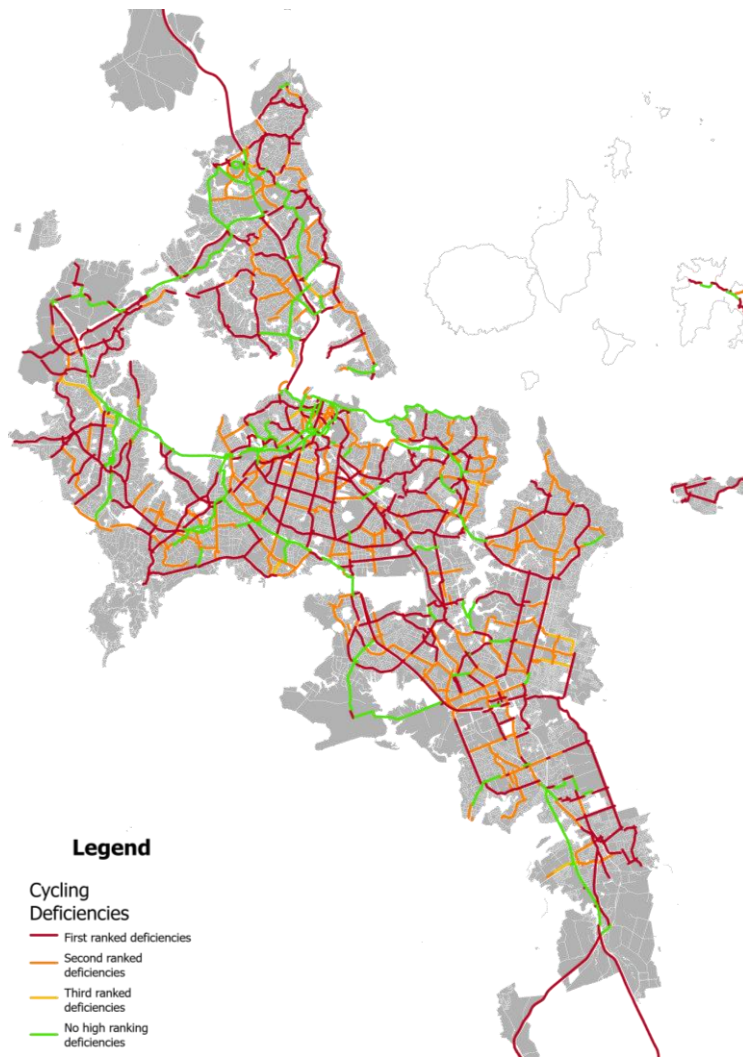
North-West Bus Improvements (Source, WK)

# Design & Delivery – carefully use existing knowledge / tools with innovative technology (eg GIS)

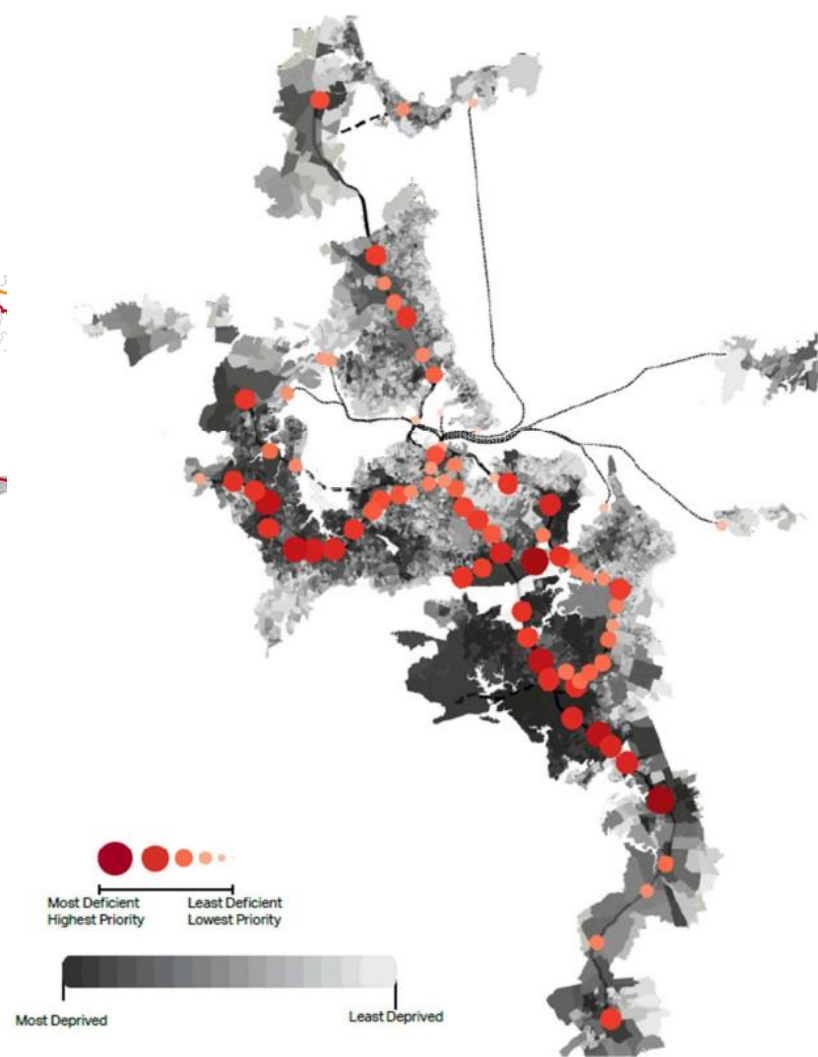
## Walking Deficiencies



## Cycling Deficiencies



## Poor Station Access & Social Deprivation



# Design & Delivery – reduce network fragmentation, at pace, with simpler kit – mass action synergies with maintenance

## Active Mobility Programme



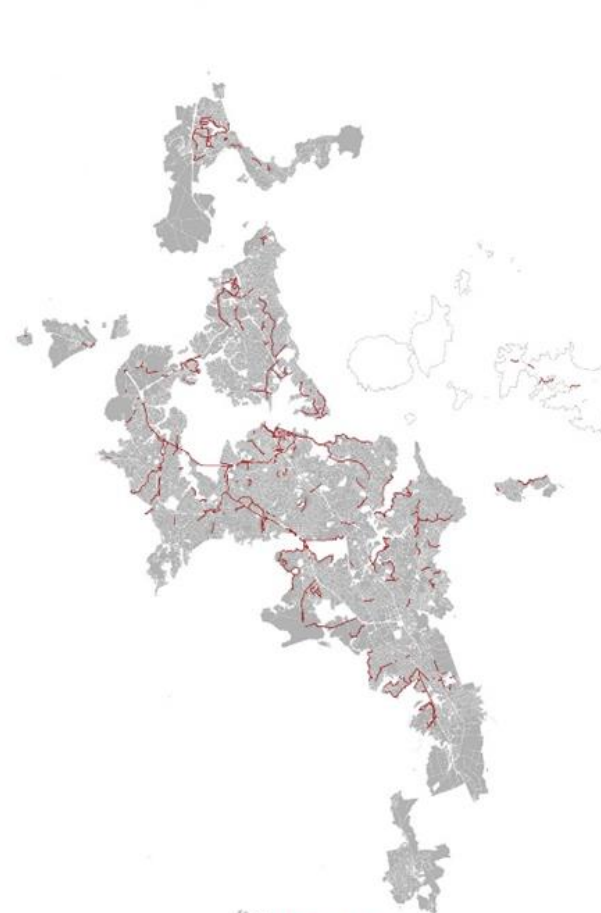
This package significantly improves the safety, quality, and coverage of infrastructure dedicated to walking, cycling, and other forms of micro-mobility.

Highlights of this package include:

- ~880km of more protected cycleways
- Harbour Bridge two lane cycleway
- 10 active mode bridges
- 315 Bike Hubs in town centres, bike shops, schools and marae
- 120,592 bike parks (incl. 9,200 e-bike)
- ~73.5km new footpath
- ~500km of narrow footpath widening
- ~2,800 new or improved pedestrian crossings
- ~First & final leg initiatives around stations
- 87 low traffic neighbourhoods
- ~25,000 streetlights upgrade one level (20%)
- 3 more animal control officers

Key:  
Protected Cycle Lanes or Shared Path

Existing Cycling Network



**880** Km of protected cycle lanes

Proposed Cycling Network



**500** Km of footpath widening

**10** Active mode bridges

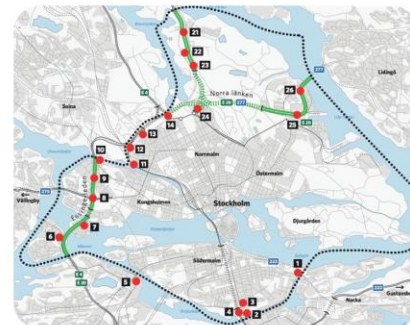
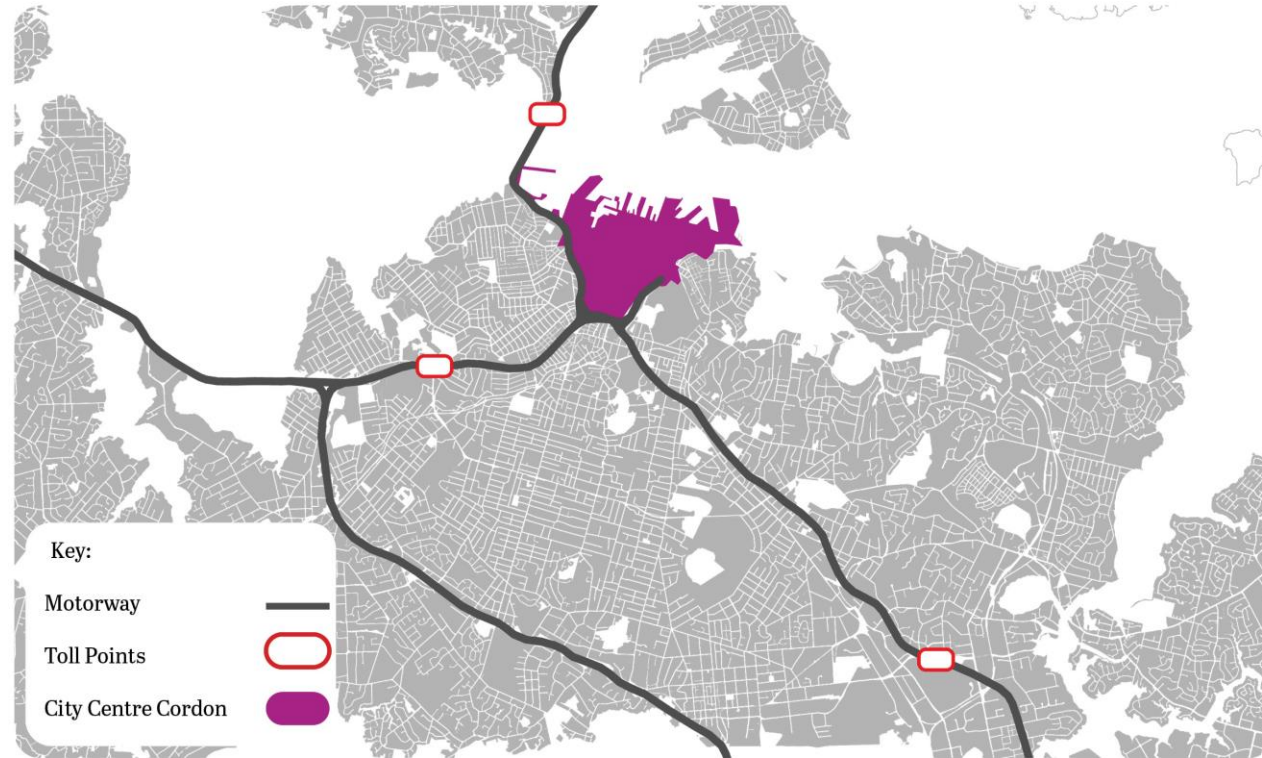
# Design & Delivery – constant evolutionary change – no silver bullet

## Motivate People to Travel Differently



This programme focuses on influencing travel behaviour through various methods. It includes managing car parking and vehicle use, employing different pricing tools, and providing incentives for using public and active modes. Additionally, it includes educational and communication initiatives and travel planning programs

- E-bike subsidy –Community Service Card (CSC) holders and general public
- Car and bike sharing subsidies –target 20% of population
- Regional fuel tax period extended
- Distance-based cost of driving of 10c per km
- CBD Congestion charge & Motorway tolls: \$4.06 peaks, \$1.74 Inter-peak
- Funding travel plans for 200 workplaces, 180 schools, stadiums and events, community
- Travel planning services for PT cards, walking school bus, bike month, bike challenge, guided rides
- Funding for Transport Management Associations
- 10 Mobility Hubs



Stockholm Congestion Charge Cordon



Mangere Bikeshare Programme (Source, AT)



Gold Card on HOP Subsidy (Source, Te Waha Nui)

# Social License – don't know the 'why' – don't like parking loss or pricing

## Engagement with Aucklanders-the Voice of the Customer

### PT Interventions



45% opposed to removing parking on arterial roads for bus lanes

71% support for doubling PT services

65% support investment into new PT infra

72% support PT fare discounts

### Active Mode Interventions



45% opposed to removing parking on arterial roads for bike lanes

58% support investment into walking & cycling infrastructure

### Land Use Interventions



67% support for 15-minute cities

### Pricing Interventions



57% against congestion charging

65% against a road user charge to fund network improvements

55% against increasing cost of parking

### Incentives Interventions



57% support Govt subsidy for EV purchases

### Online Interviews

1000 Responses  
Quantitative Approach

Corporate  
7 In-depth Interviews

### SMEs

2 Focus Groups  
7 In-depth Interviews

"Congestion charging preferred over VKT charge because it affects fewer people & you change your behavior to avoid charges".

"The pricing charges need to go hand-in-hand with PT improvements to get behavior change and be more ethical"

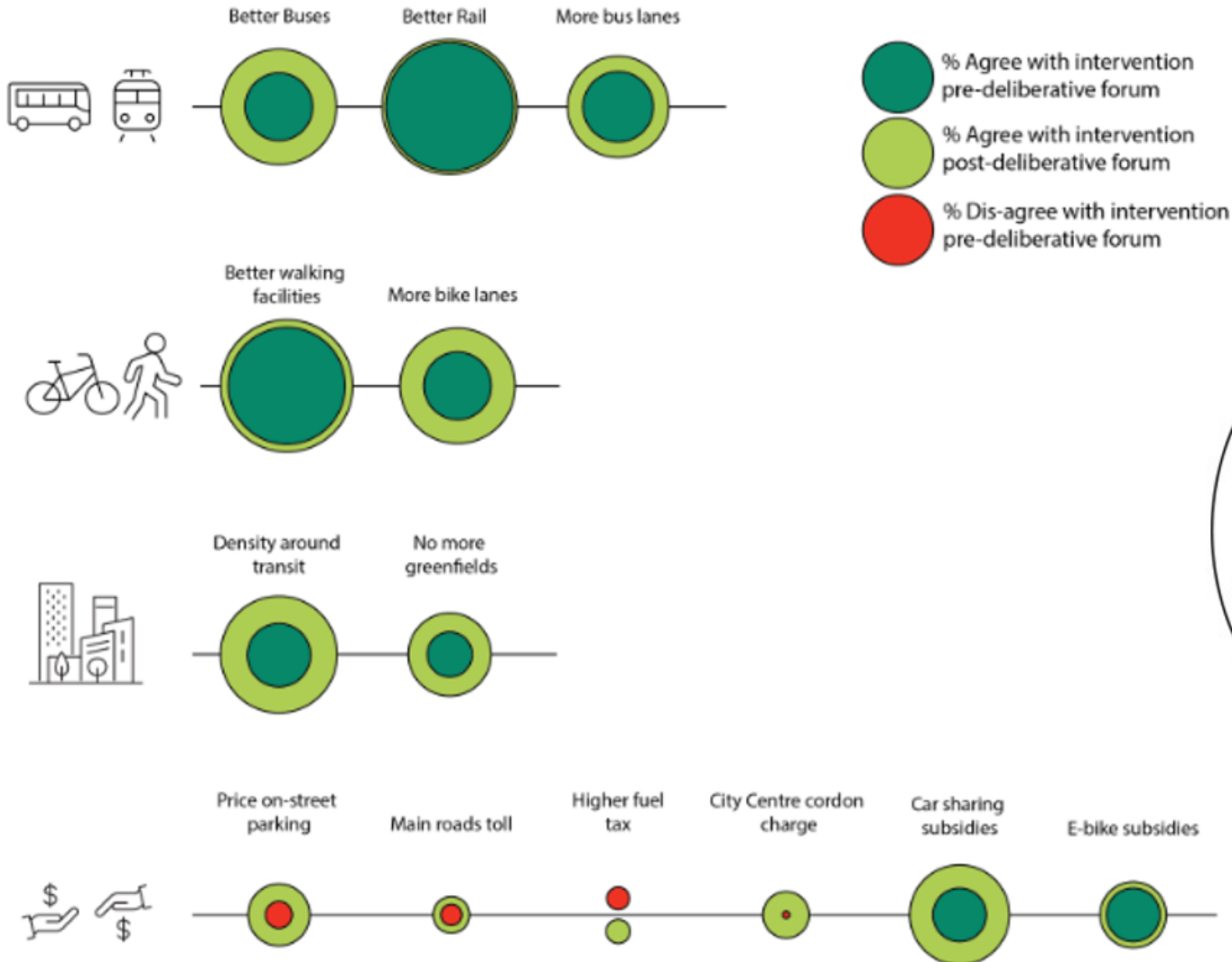
Aucklanders already pay enough in petrol/tax. This adds even more financial burden on households. I will take my car anyway"

"Need a rail system for all Aucklanders and ferries that service the Eastern Bays and all those on the shore"

A reliable, far reaching, comprehensive, fluid, & safe PT system – that is heavily subsidized".

# Deliberative Forum – independent experts + peer discussion = shift

## Engagement with Aucklanders - Deliberative Forum



**Our engagement approach and key learnings**

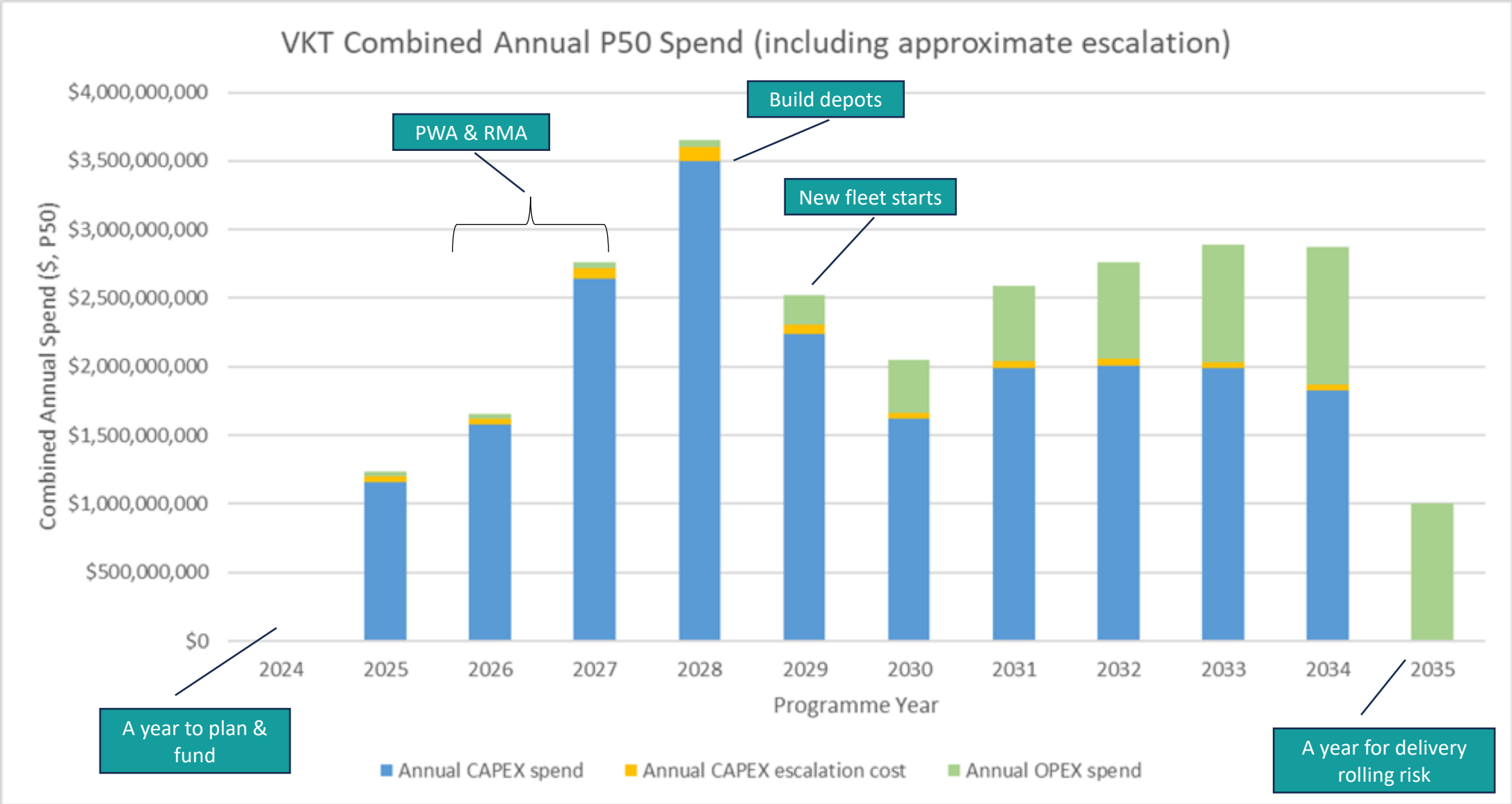
A shift in the participants' views and the support for (some of) the proposed changes occurred after learning from experts, listening to each other, and carefully considering the trade-offs. This approach also provided deeper insights into learning and reasoning that led to the change of view



TIC – 4 April 2024



# NZ Inc – Value for Money

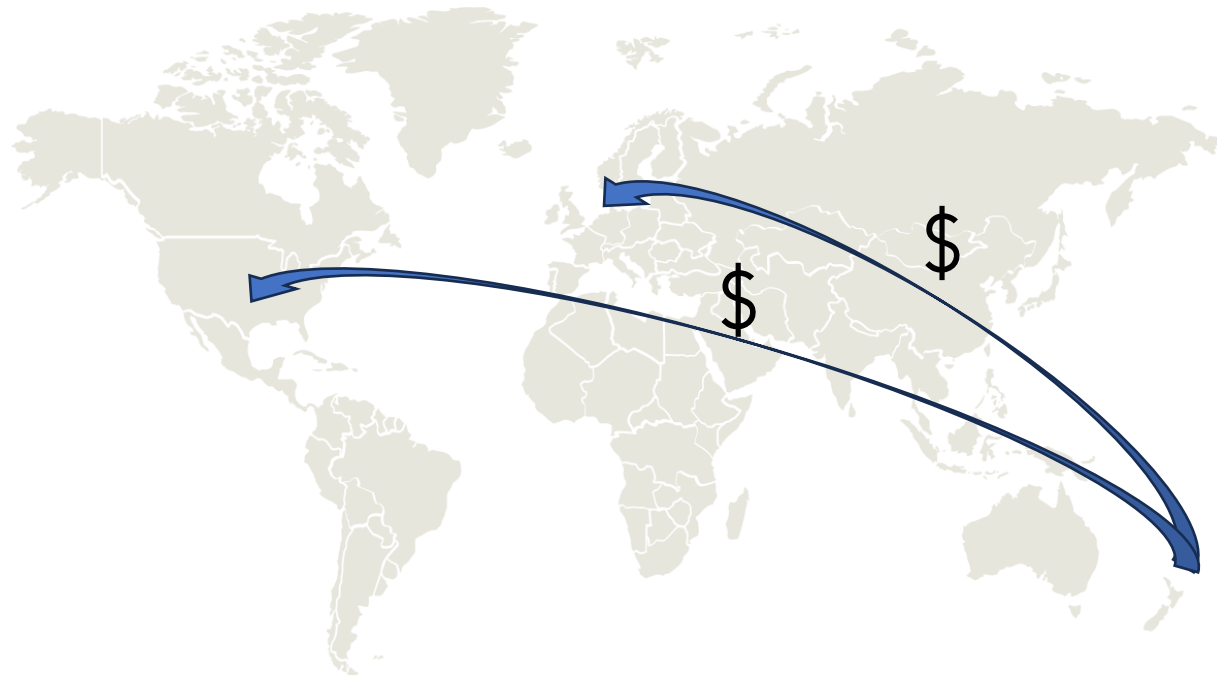


-40%



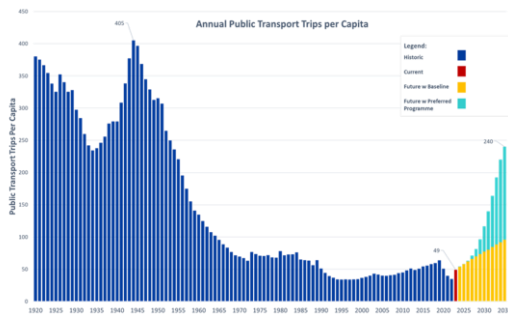
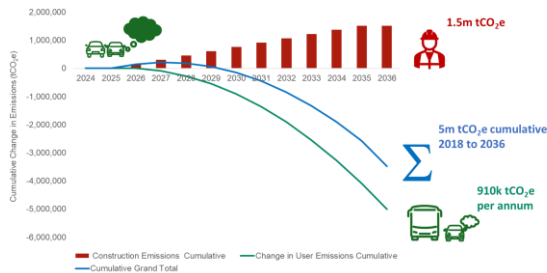
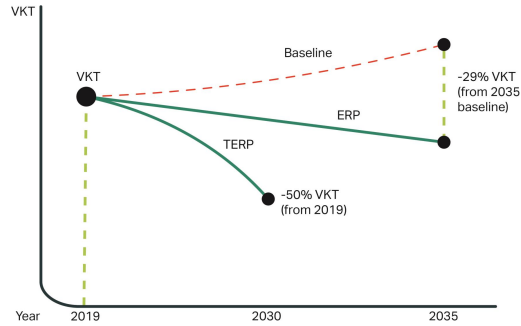
## NZ Inc – better quality of life & more productive

- **\$70bn in health benefits by 2050 (AC Chf. Econ.)**
- **27% safer**
- **20% better on average trip times – including for residual / commercial traffic**
- **24% less fuel per day – energy security & domestic wealth**



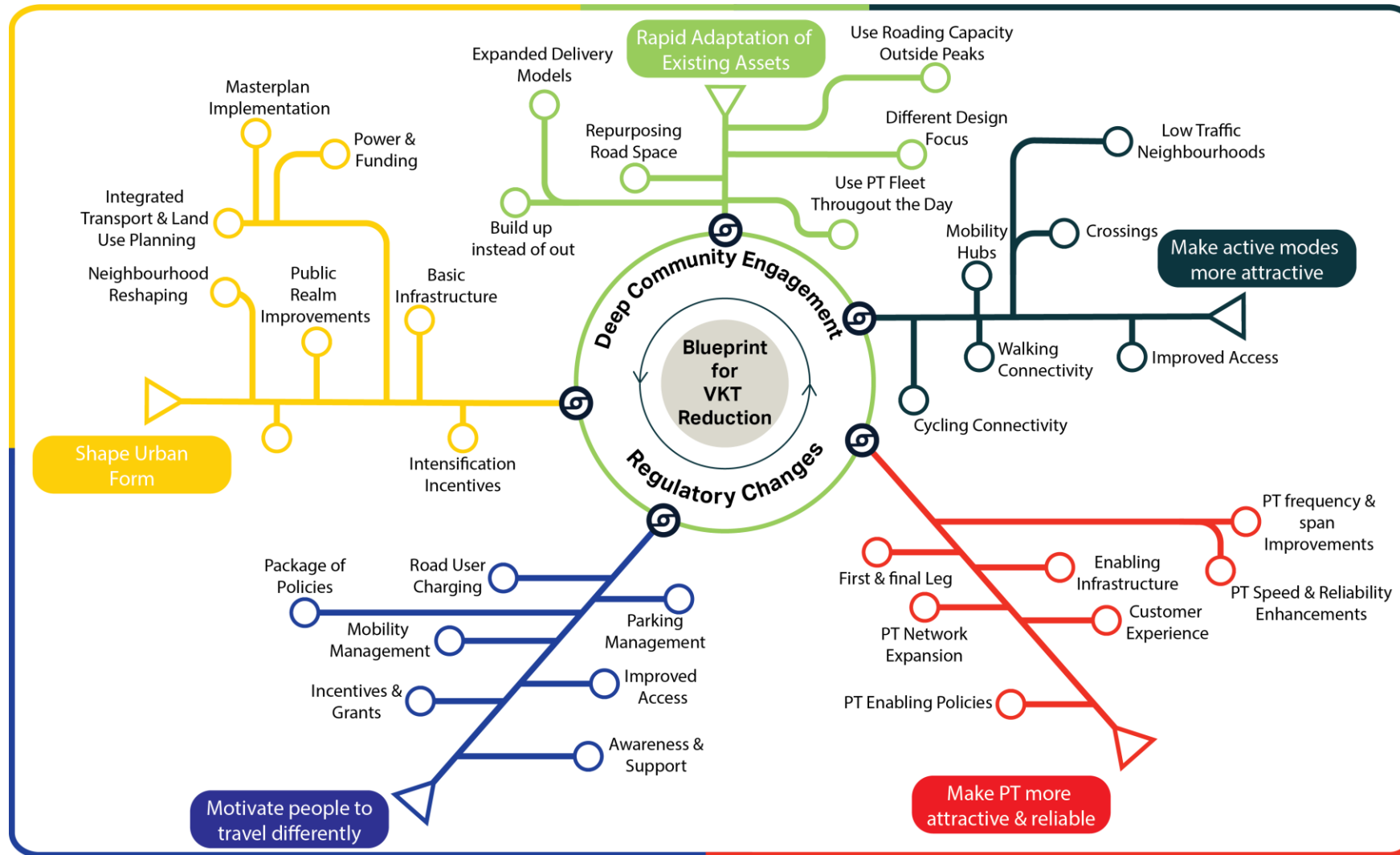
# 5 – In summary

# There is a credible, but challenging path, to equitably meet ERP goal of 29% reduction by 2035



- Moves net carbon fast
- PT growth plan
- Transferable insights
  - PT growth – RTN mesh + all day FTN + all day priority
  - Amplifiers – road re-purposing & intensification
  - Delivering differently – mass action at pace; big service, not big infrastructure; evolution, not revolutionary tech, data or project
  - Social licence – the ‘why’ to match the ‘what’
  - Better NZ Inc. – better value; more productive, healthy & safe

# Thank you!



**TIC workshop presentation – see AC website for Dec 2023 minutes, extra attachment (12.2Mb)**

**TIC final report – see AC website for April 2023 minutes, attachment (155Mb)**

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