

Auckland Transport

Moving Auckland forward

February 2017



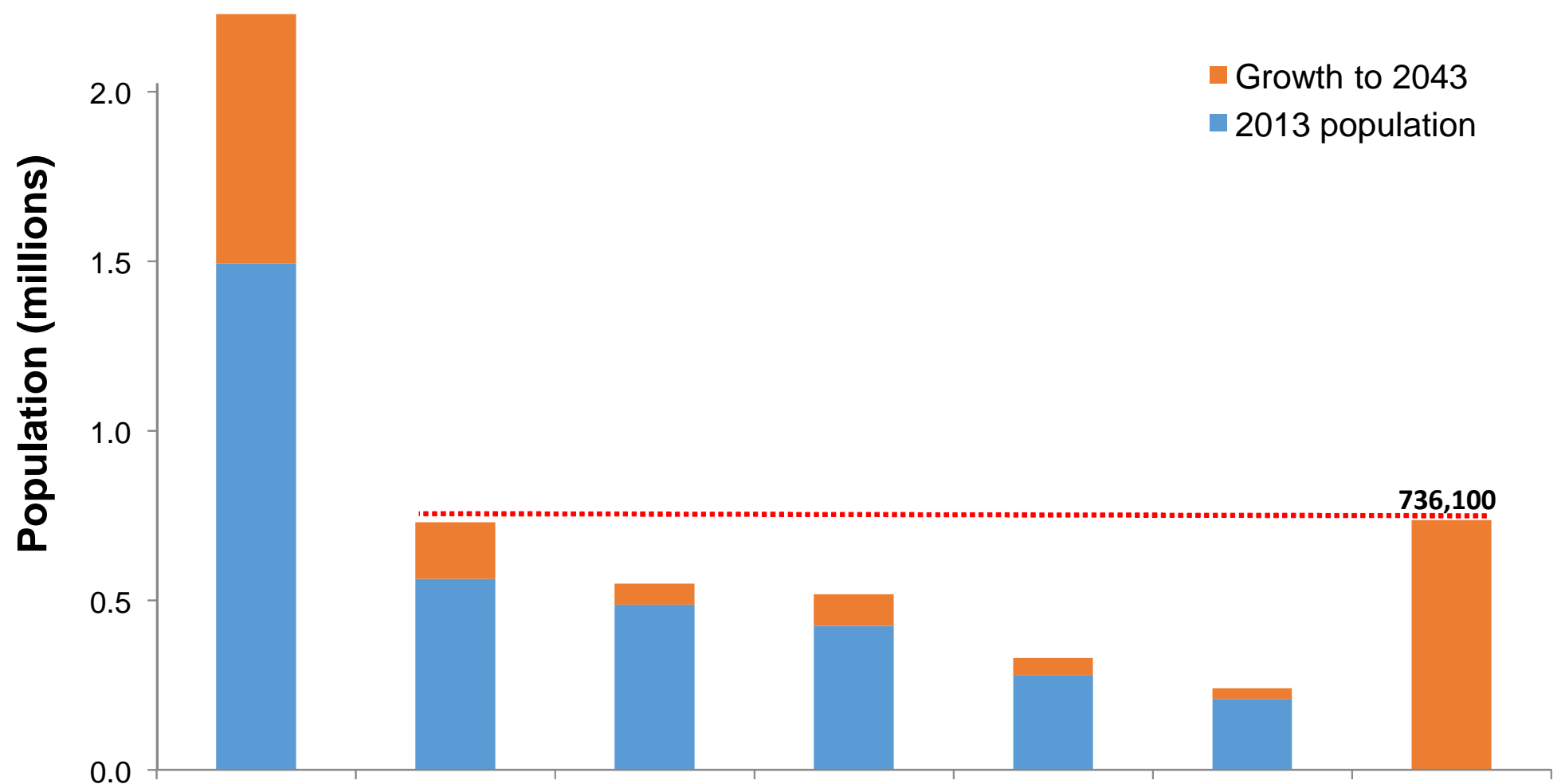
**Auckland
Transport** 
An Auckland Council Organisation



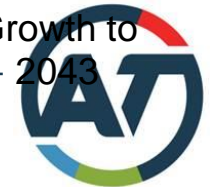
Enable and support growth



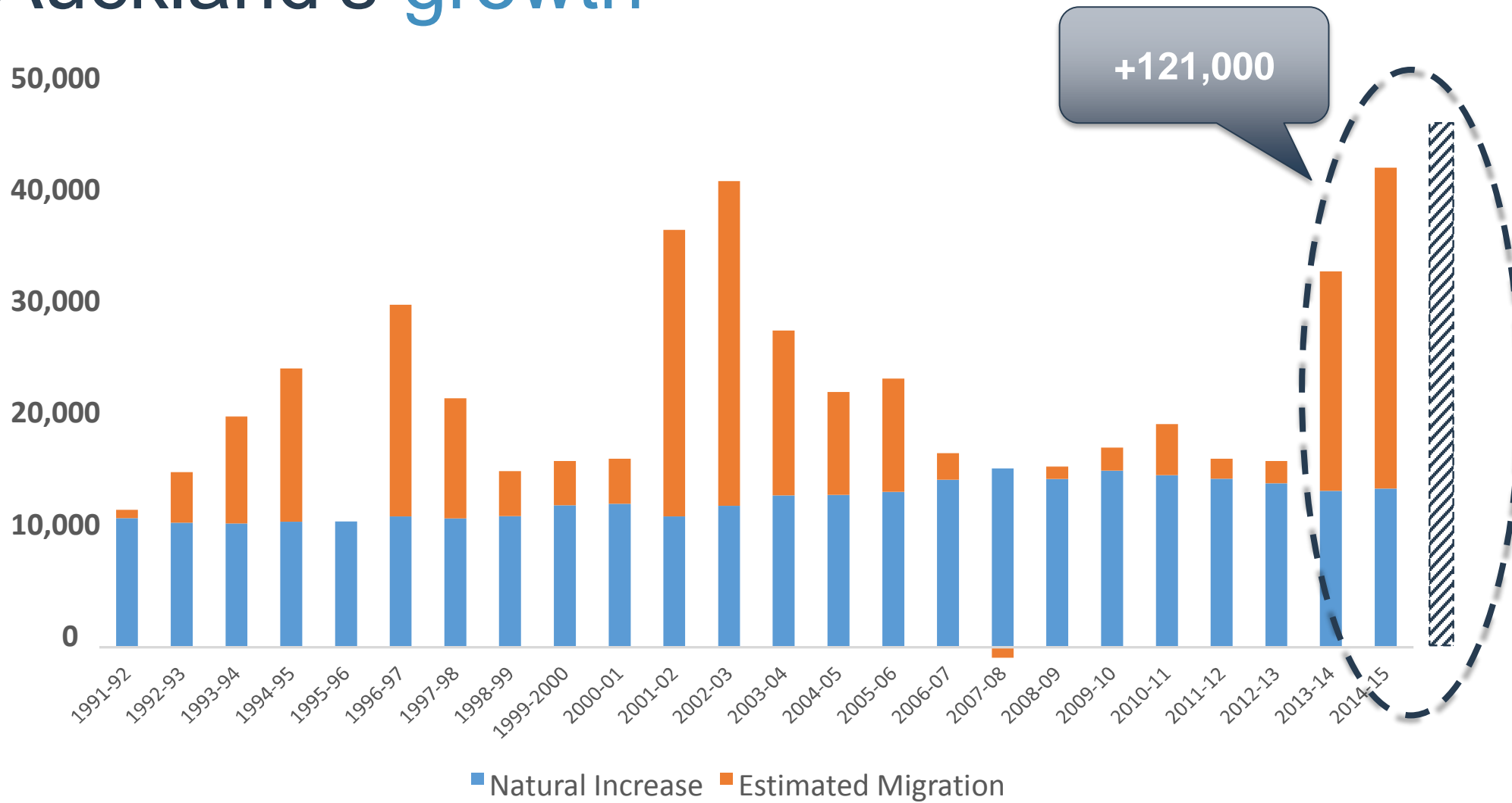
Auckland's growth



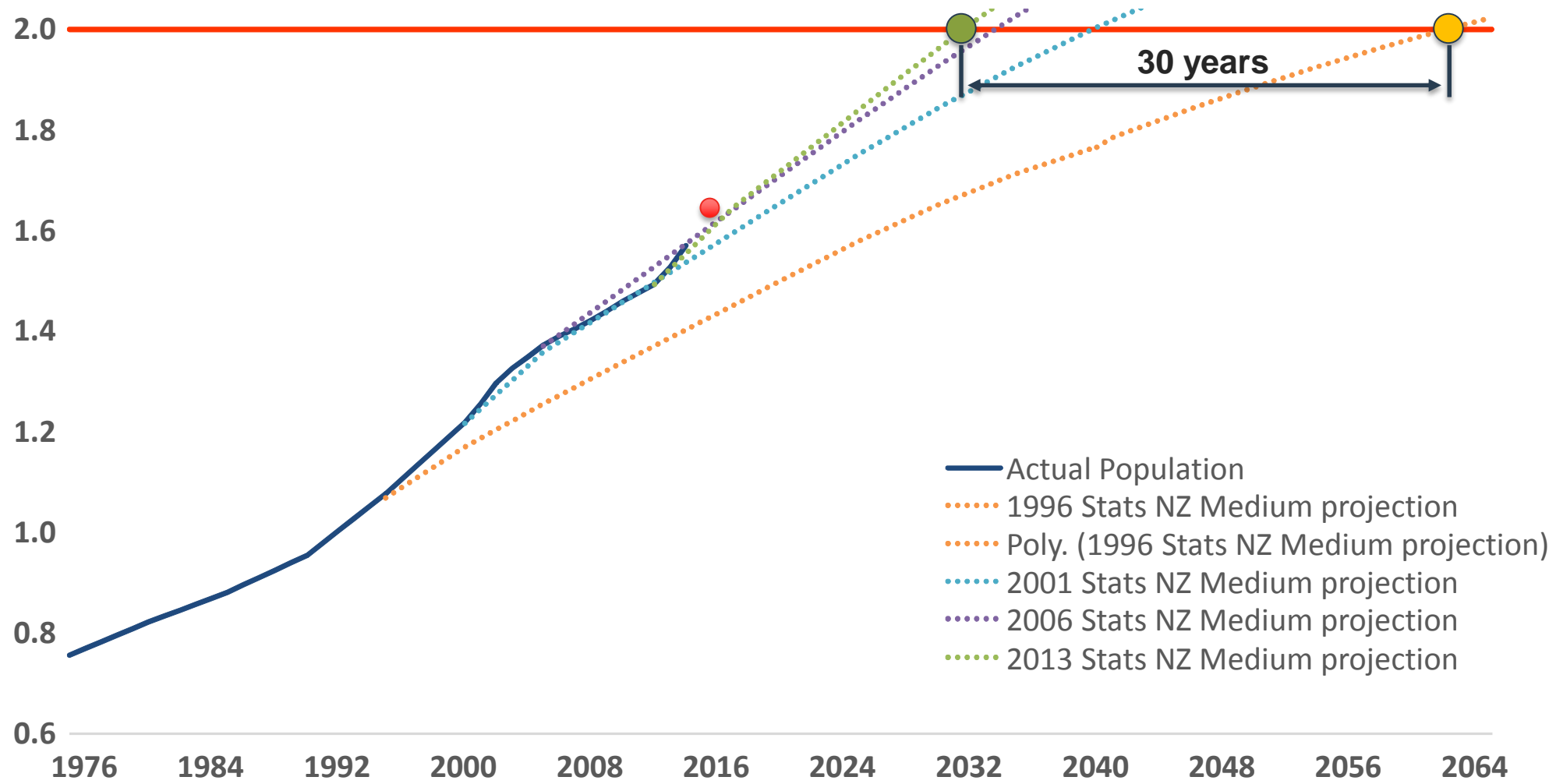
736,100
Auckland Growth to 2043



Auckland's growth

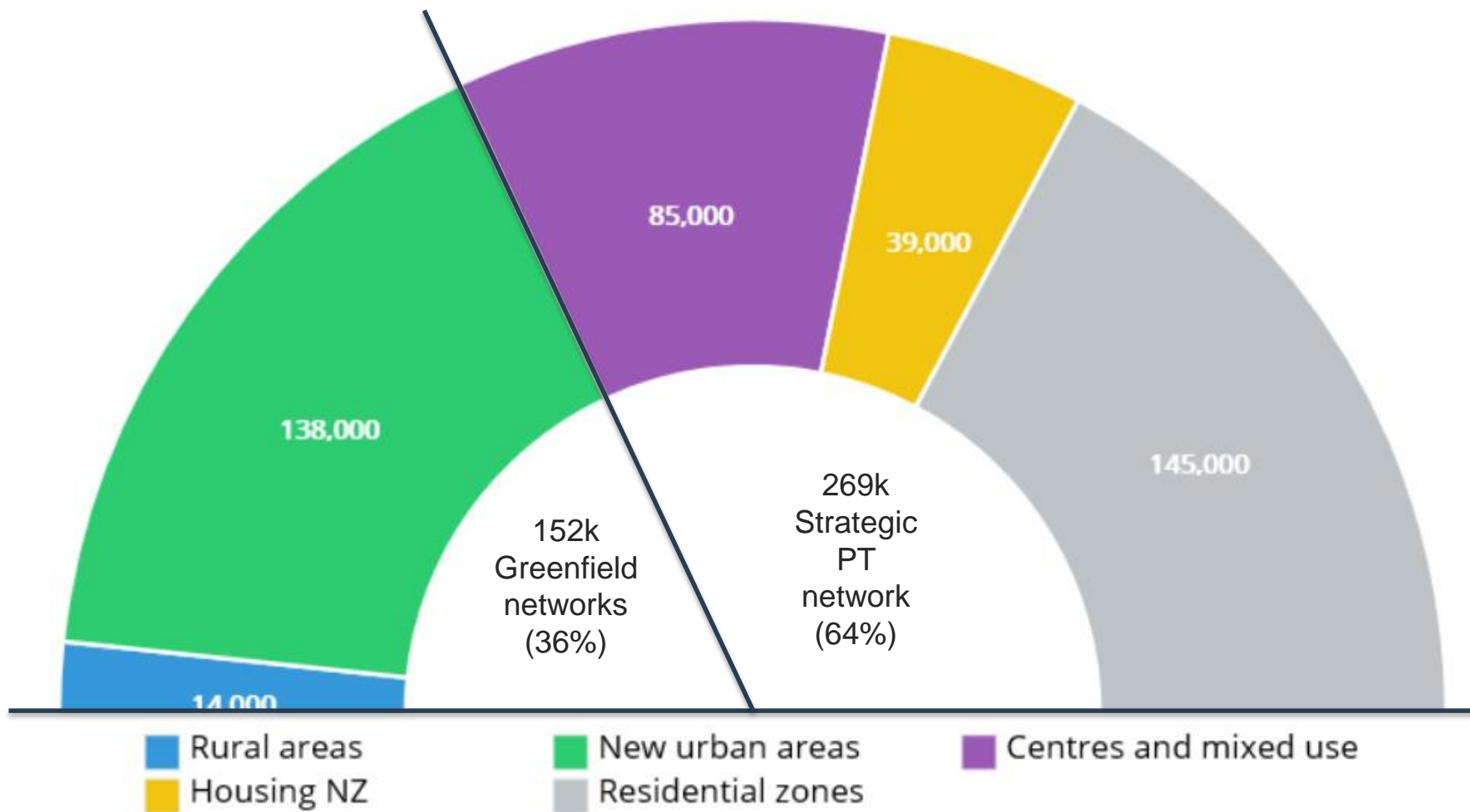


Auckland's growth

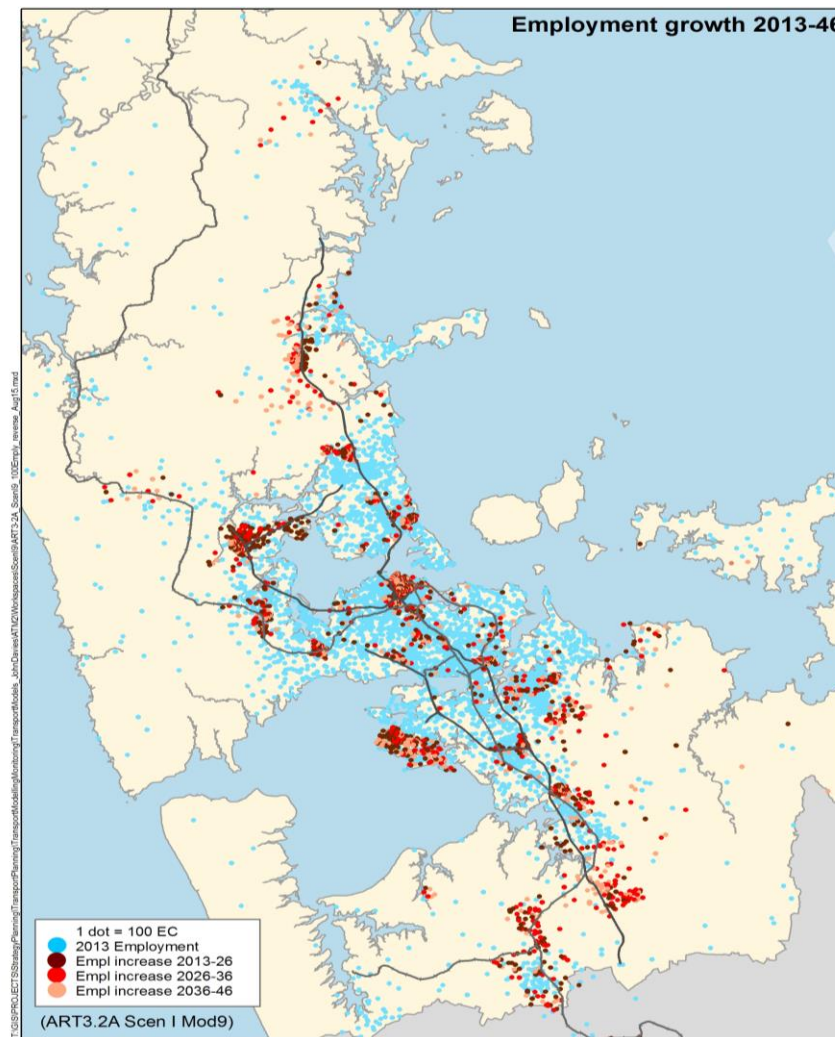
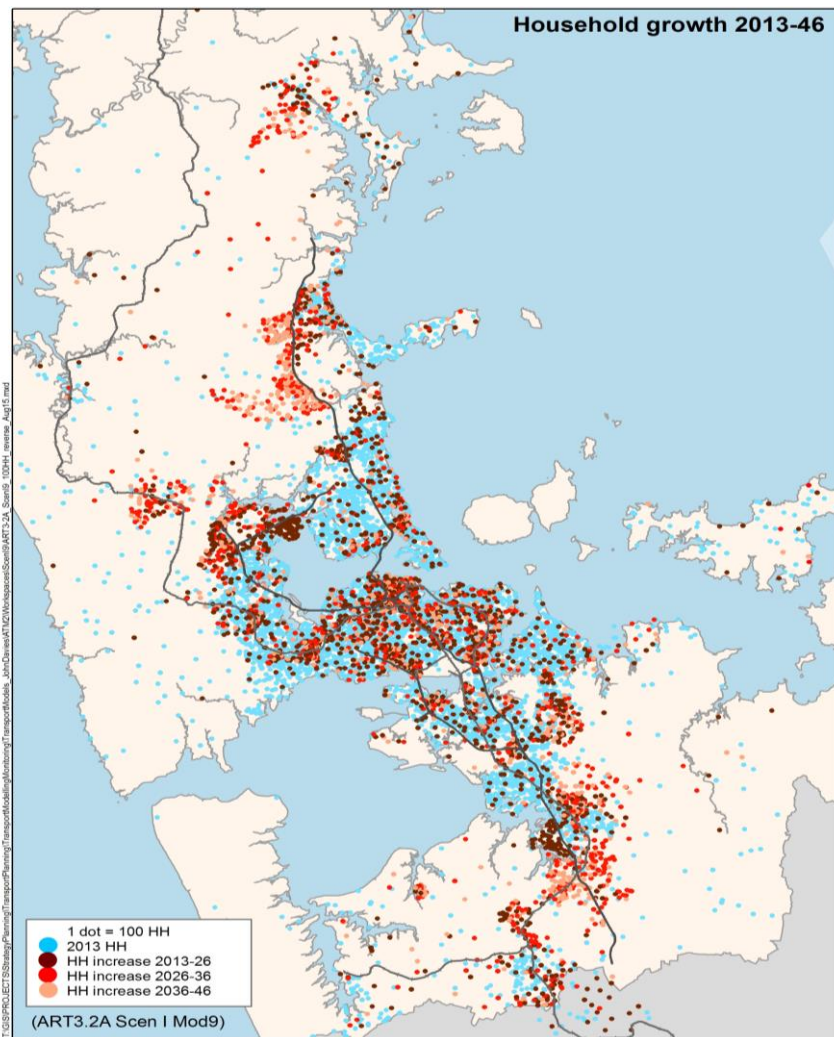


Auckland's growth







Feasible enabled residential capacity (421,000)



Auckland's growth



Auckland's growth – trends

Population growth (2013 – 2016)		+121,000 (8.1%)
People employed (2013 – 2016)		+102,000 (13.8%)
Total PT Boardings (2013 – 2016)		+15 million (22%)
Light vehicle fleet (2013 – 2015)		+122,000 (12%)
Vehicle kilometres travelled (2012 – 2015)		+1 billion (10%)
Regional fuel consumption (2013 – 2016)		+123 million (8%)

Auckland's growth

Figure 1: Change in total VKT and VKT per capita since 2001

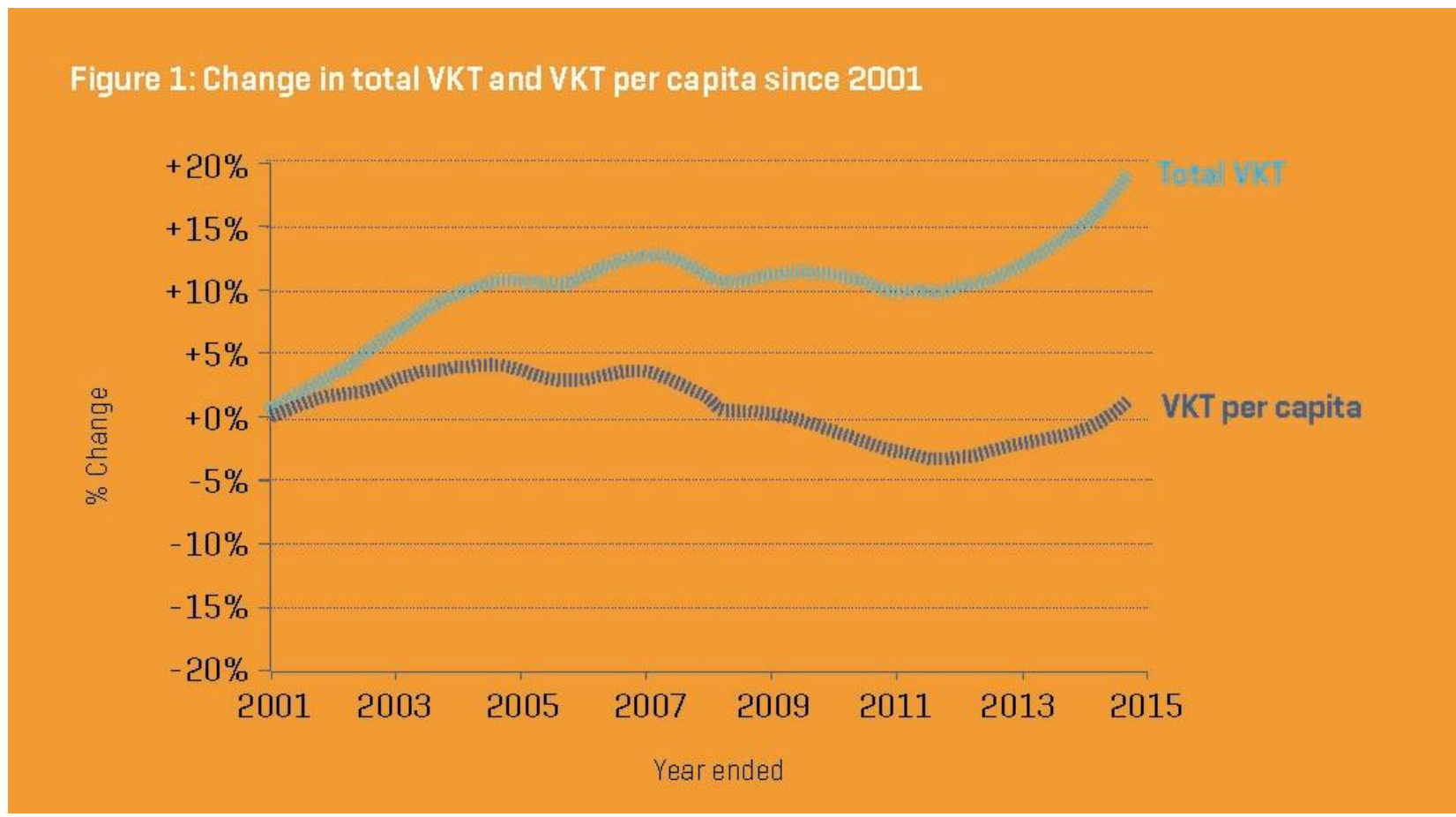


Chart from Draft 2017 GPS (for all New Zealand)



Auckland's transport challenges

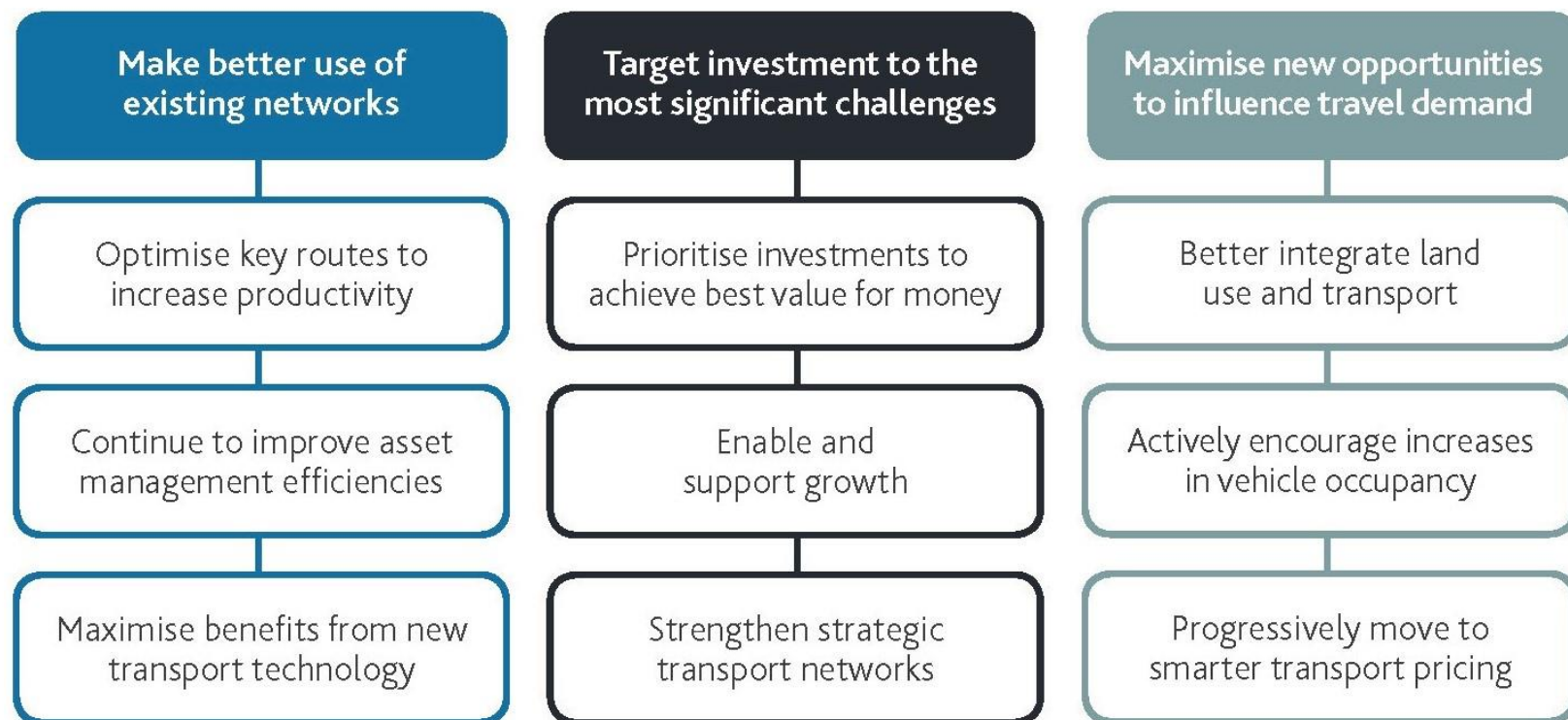
- How to support faster rate of housing growth
- How to prevent a decline in access to jobs (west and south)
- How to slow the increase in congestion on the motorway (peak and other times)
- How to increasing public transport mode share, particularly along high volume, congested corridors.

Growth
Auckland with 2.2 million people

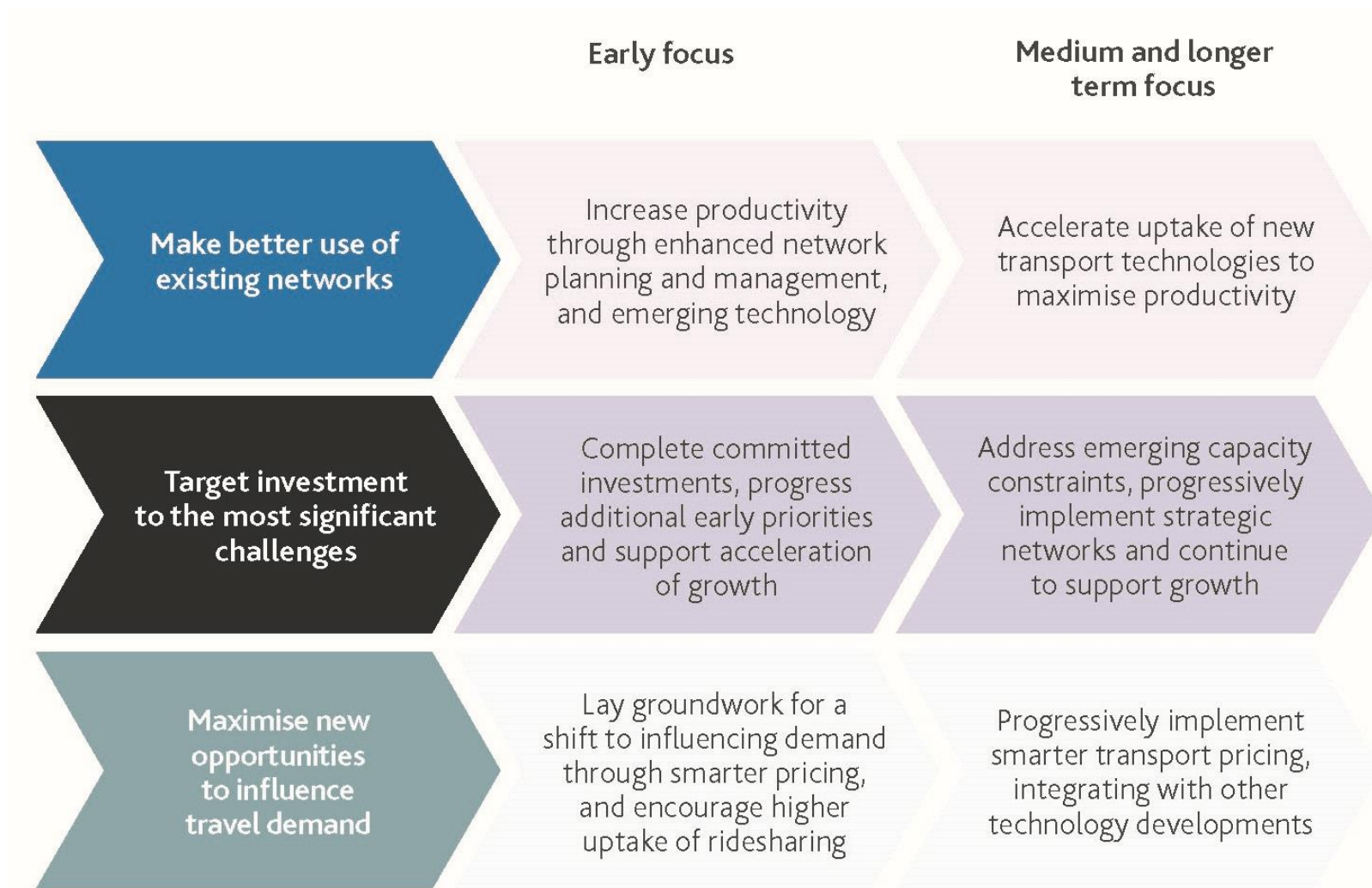


Council and Government agreed strategic direction

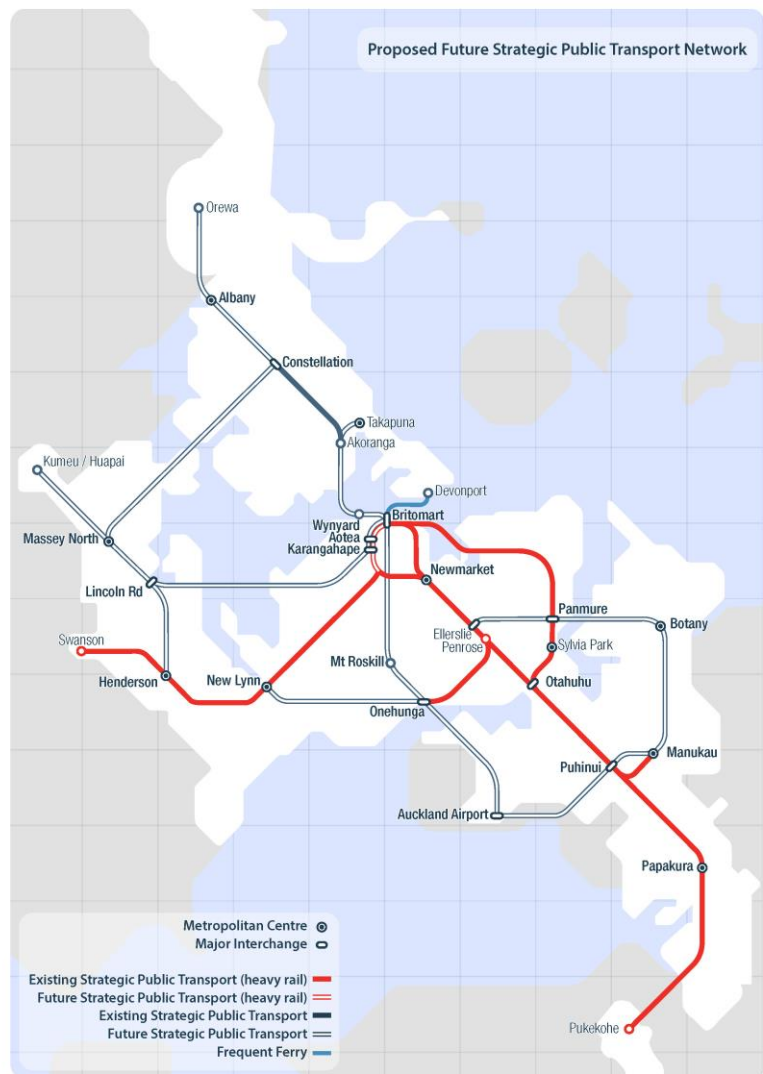
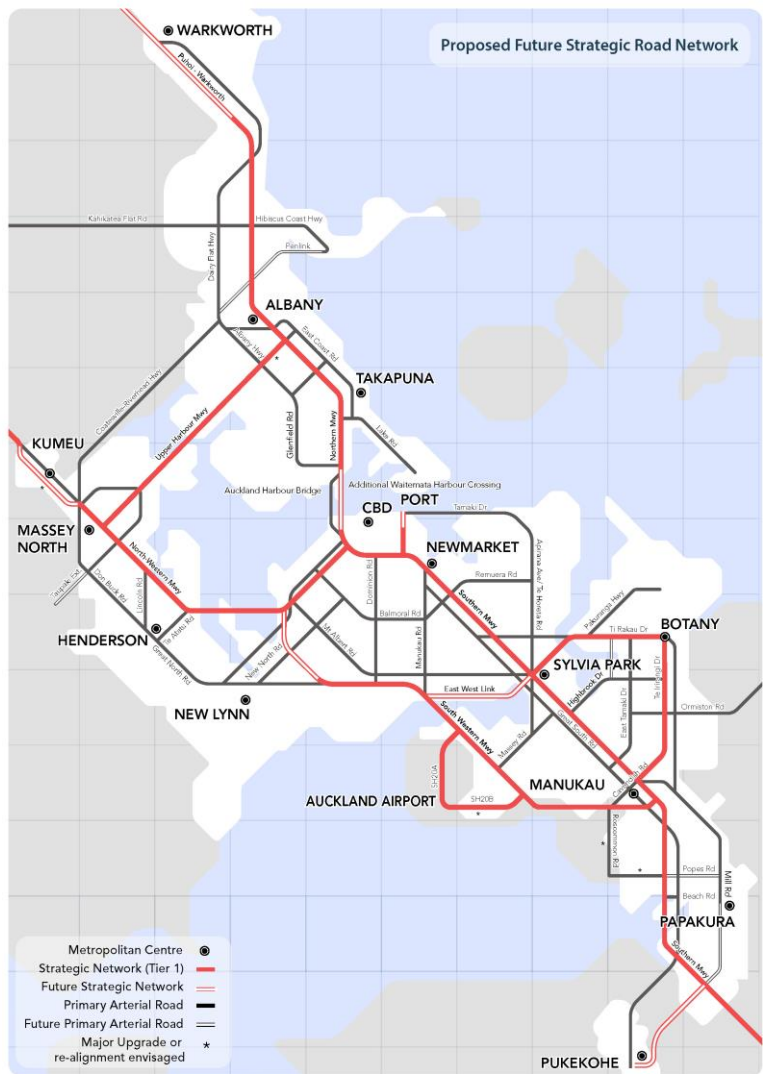
Recommended strategic approach



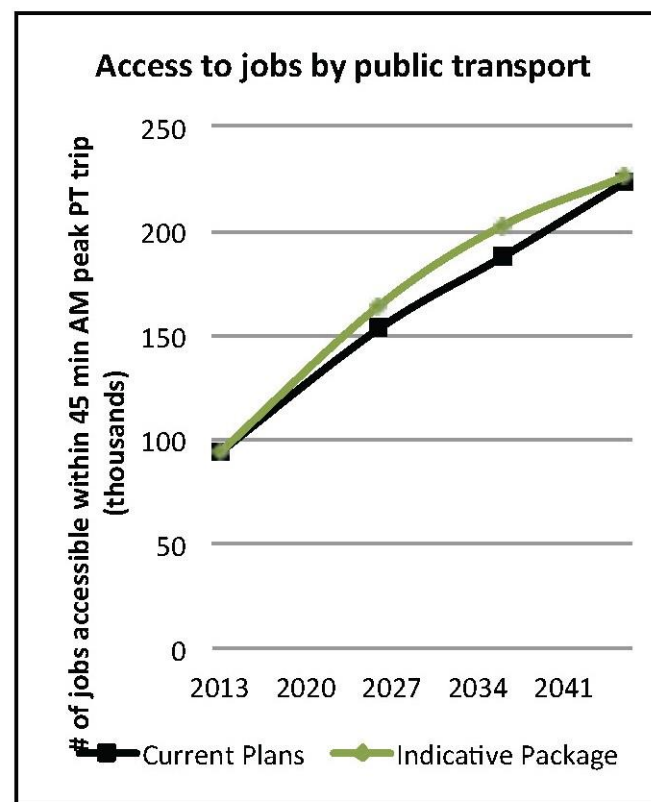
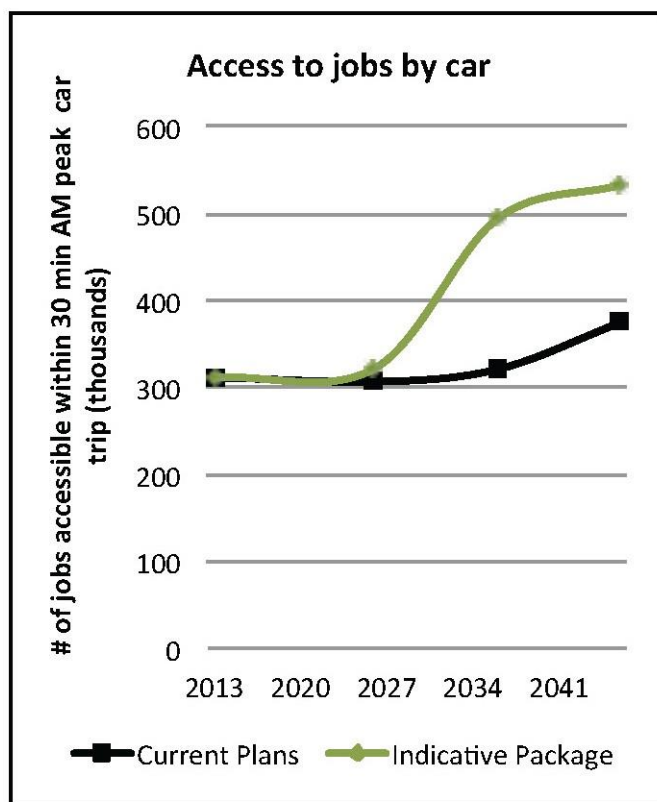
Recommended strategic approach



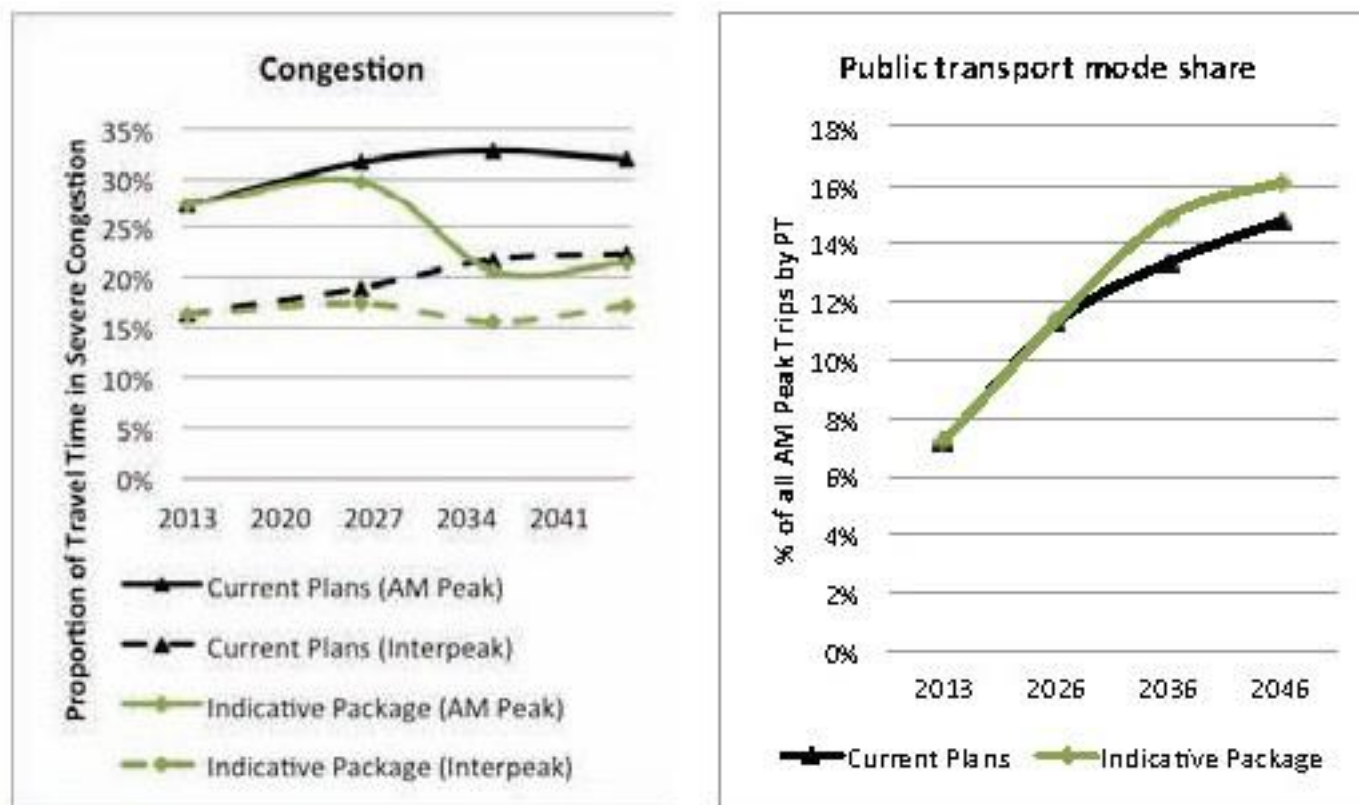
Recommended strategic approach



Recommended strategic approach



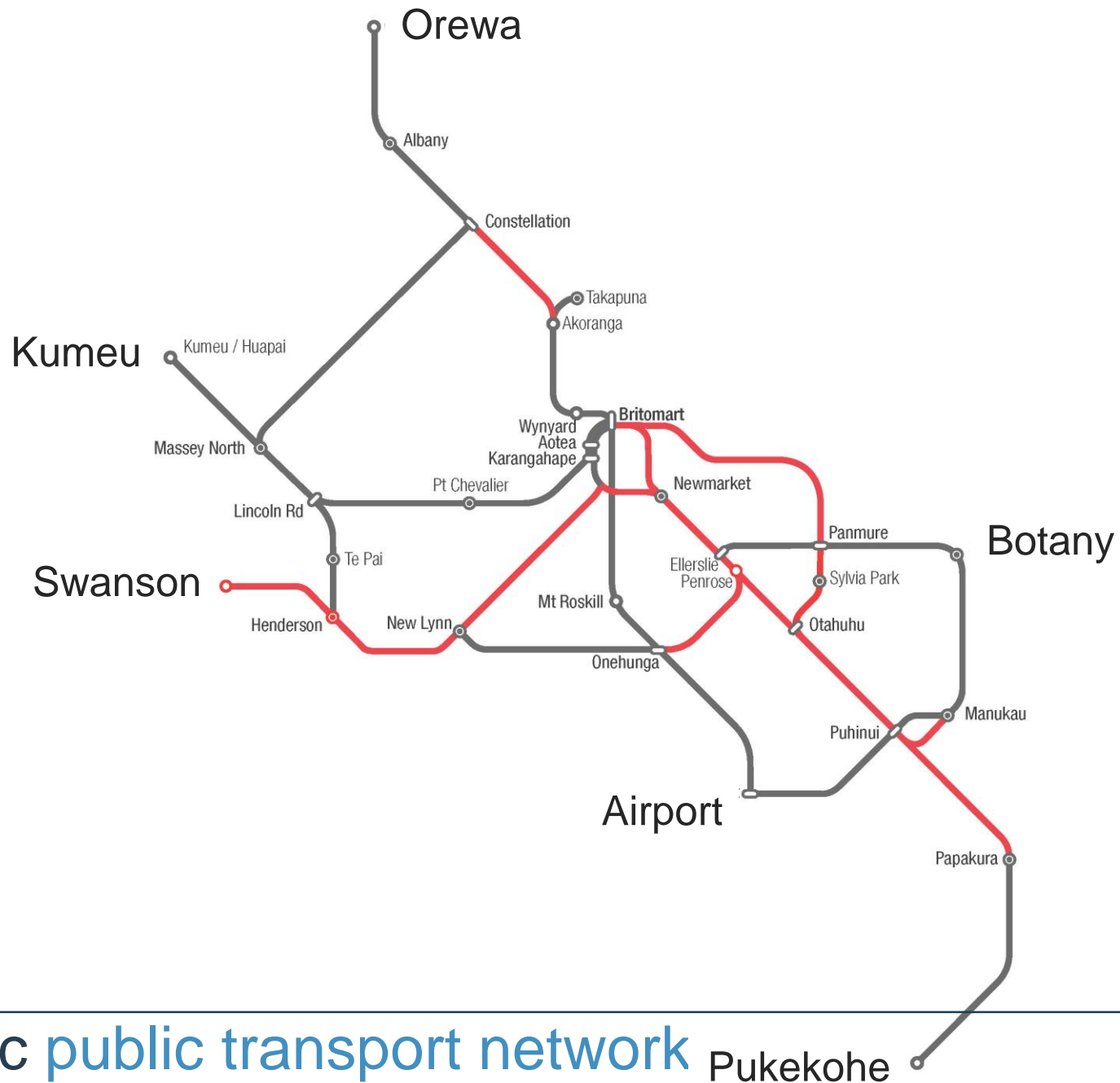
Recommended strategic approach



Growth
Auckland with 2.2 million people

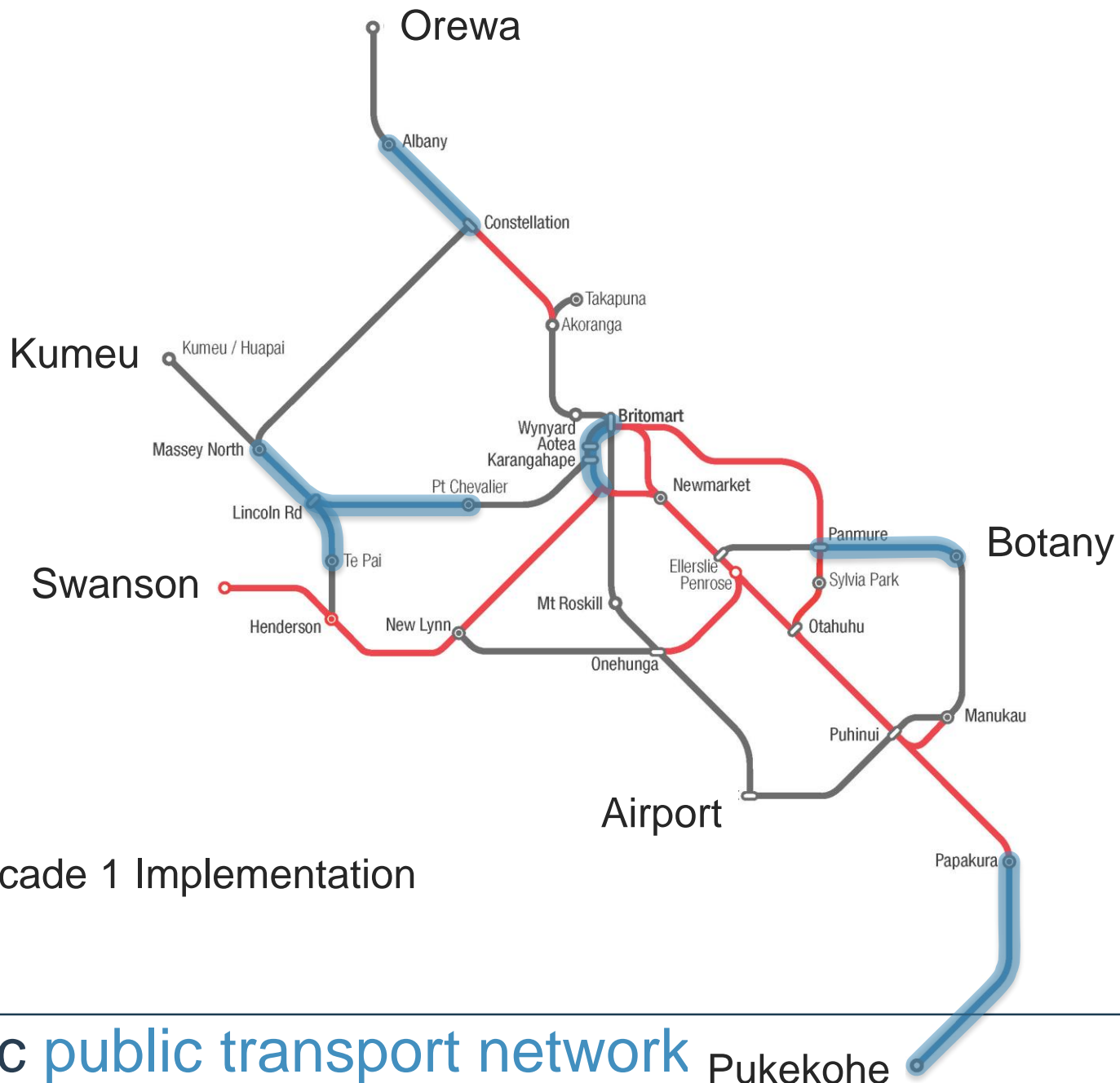


Development of the strategic public transport network



Strategic public transport network

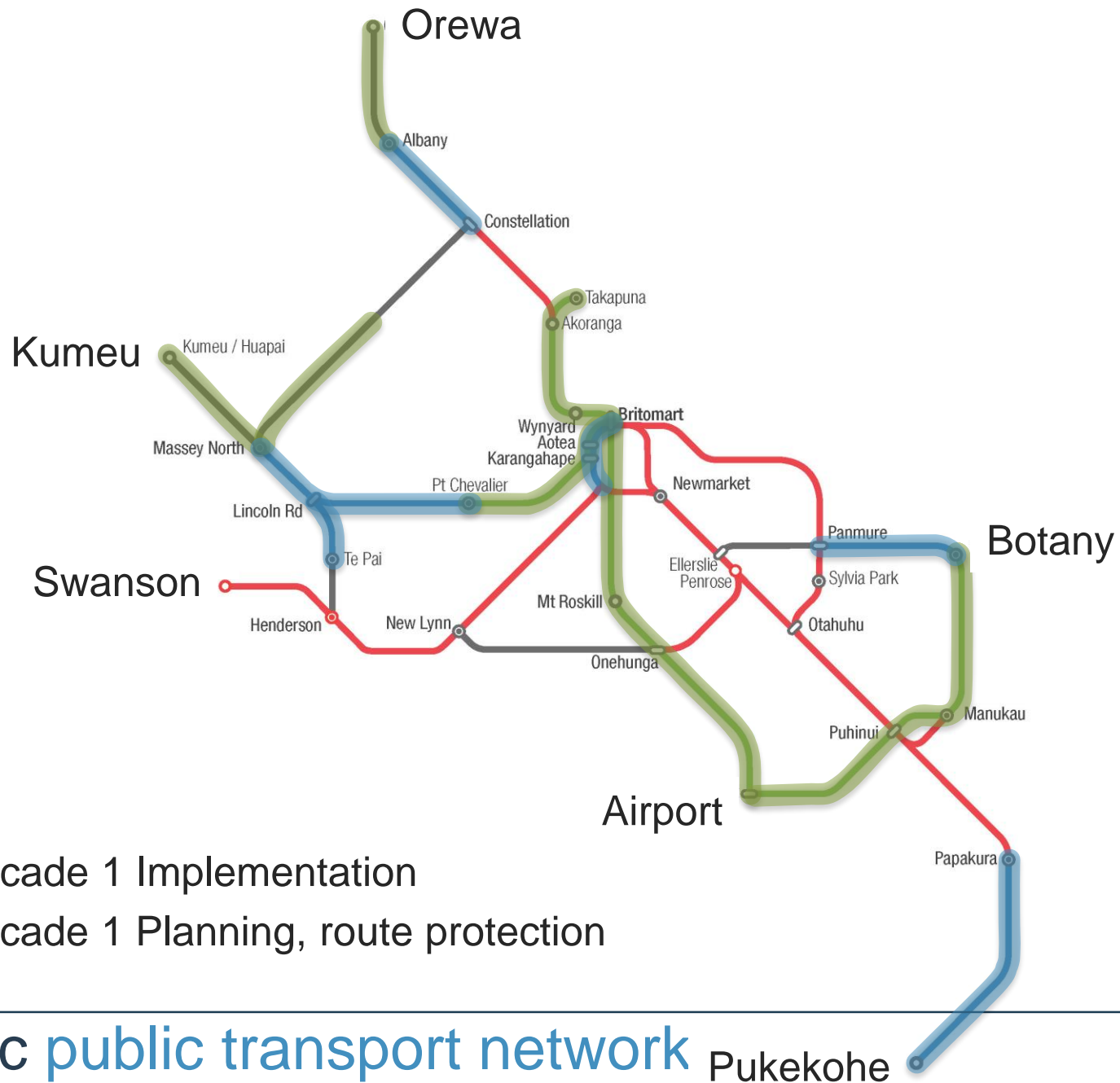




Decade 1 Implementation

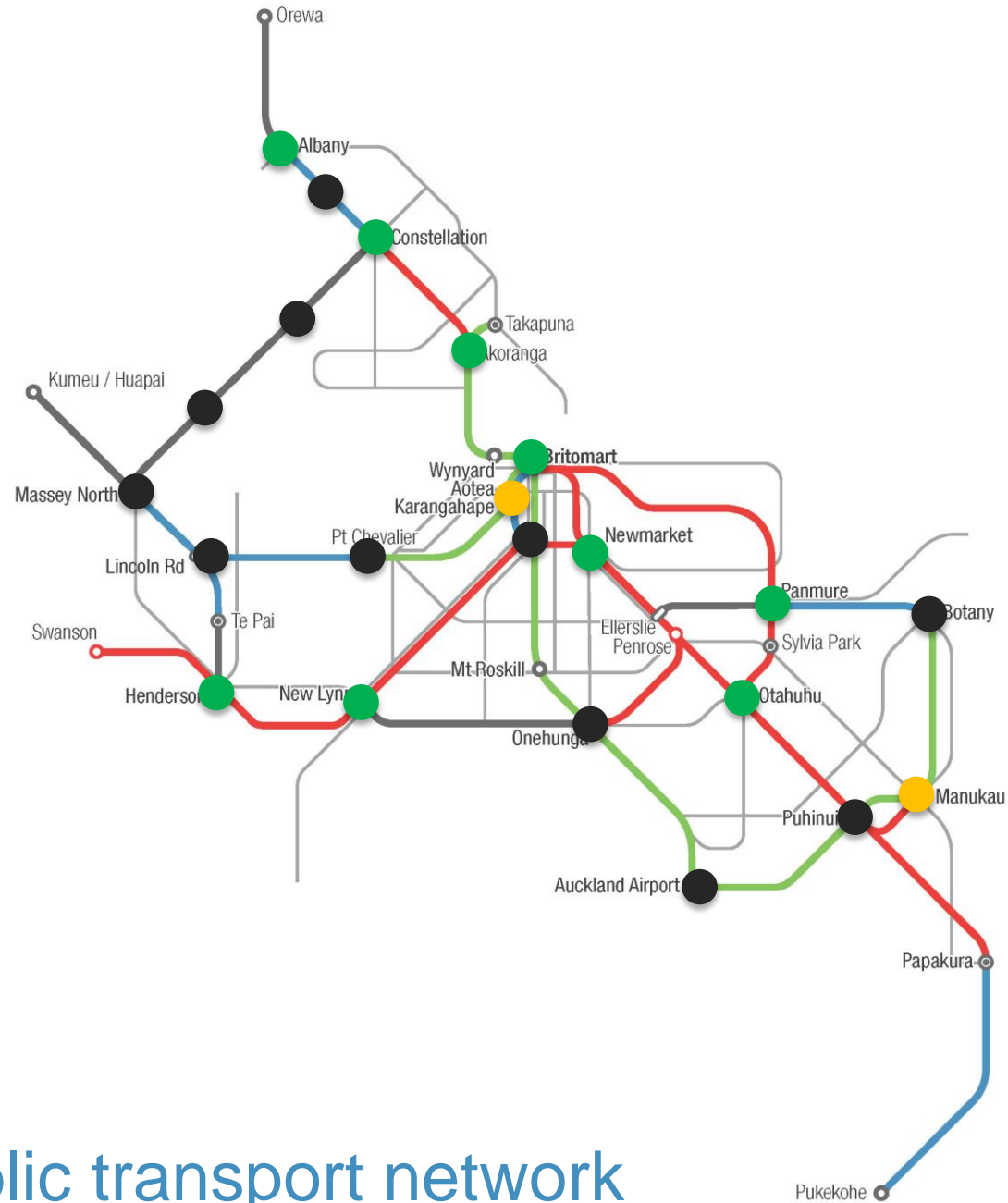
Strategic public transport network





Strategic public transport network





Strategic public transport network



Enabling easy connections



Strategic public transport network



Enabling easy connections



 EXISTING RAILWAY NETWORK 

Strategic public transport network



Key highlights 2016



84.8 million boardings on PT network (+3.9%)

- 60.6 million on bus (0.2%)
- 18.1 million on rail (+17.8%)
- 6 million on ferry (5.6%)

32.4 million boardings on the rapid and frequent network

Approximately 1,200 buses in the fleet

Strategic public transport network



Electric buses: trial

Trial 2 buses

Range = approx. 250 km

**Lithium iron phosphate
battery**

6h for full charge

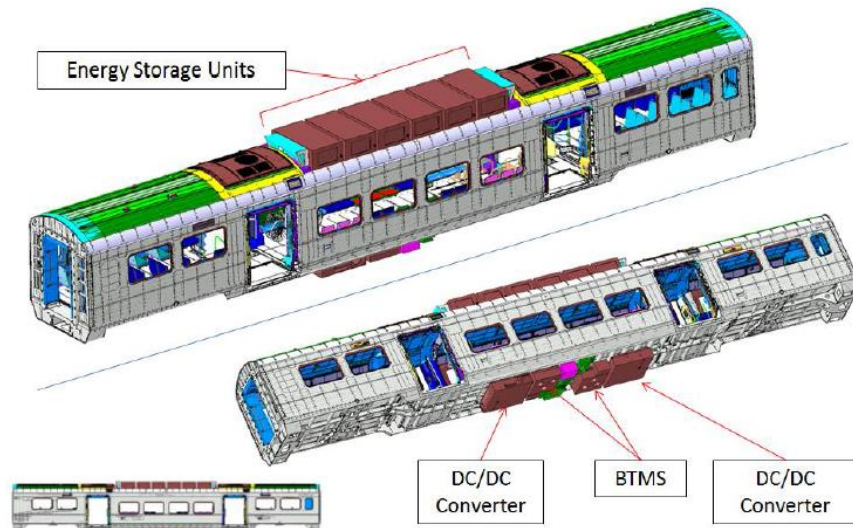
3 hr for fast charge



Strategic public transport network

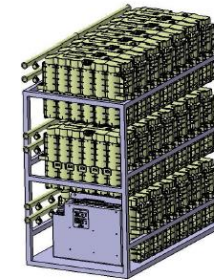
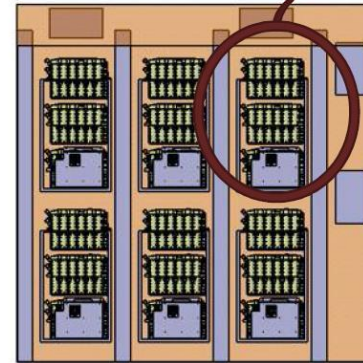


Independently powered EMU



ESU: Energy Storage Unit

- The ESU cubicle will be installed inside the vehicle
- The ESU cubicle houses the energy components.
- 132 kWh per ESU



- 6 energy branches per ESU.
- Each branch 22 kWh
- Liquid cooled
- Each branch is composed of:
 - 20 energy modules
 - Control electronics
 - Electro-mechanical structure

- Papakura to Pukekohe?
- Restrict to 70 km/h (key trade-off mixture of energy and power)
- Order time 1 – 3 years
- Concept phase only – some international trials.

Growth

Auckland with 2.2 million people



Expand road and PT networks in greenfield areas

The Auckland Unitary Plan identifies

over 15,000 hectares

of land as

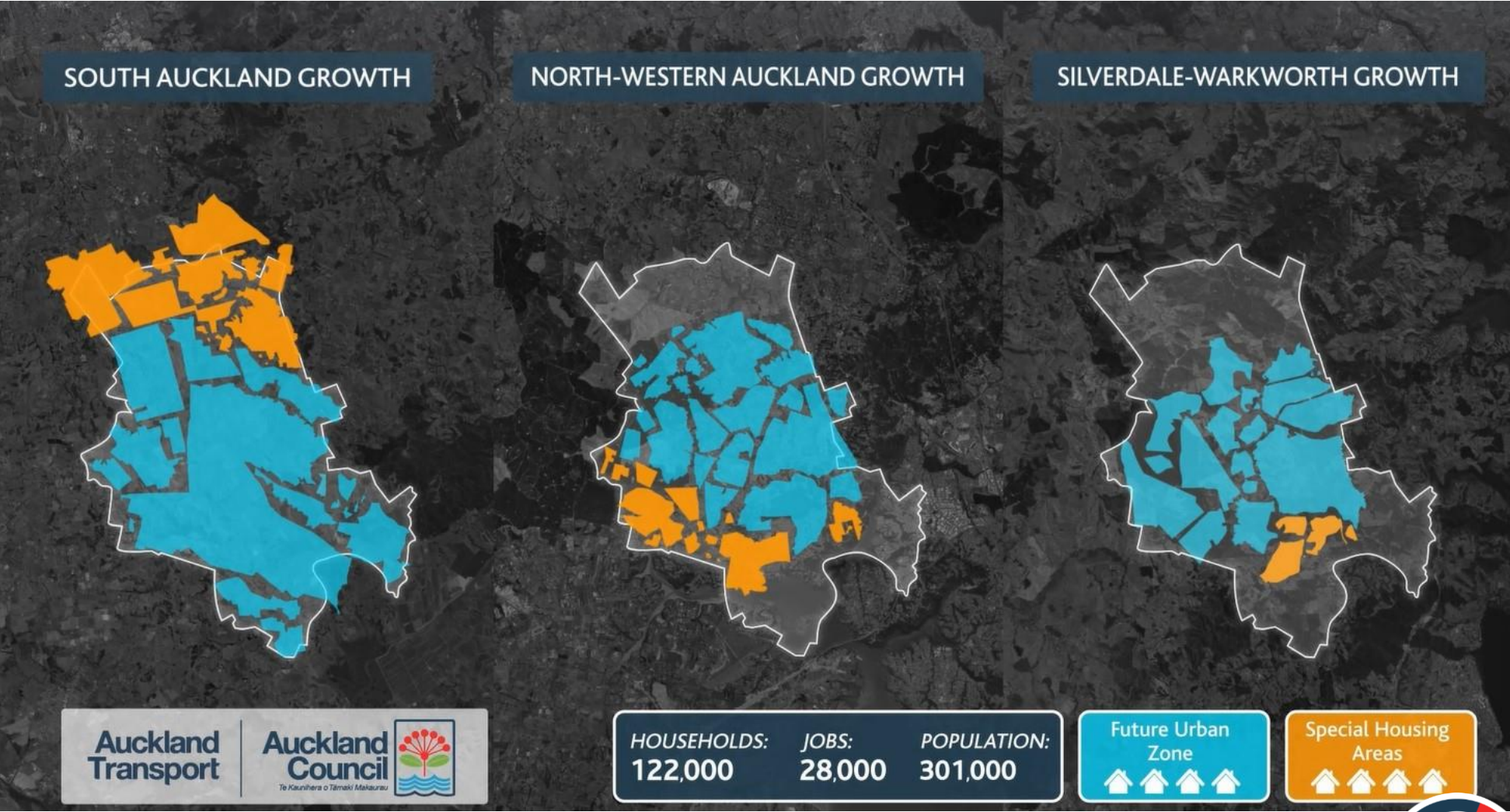
future urban

(potential to accommodate 150,000 dwellings)

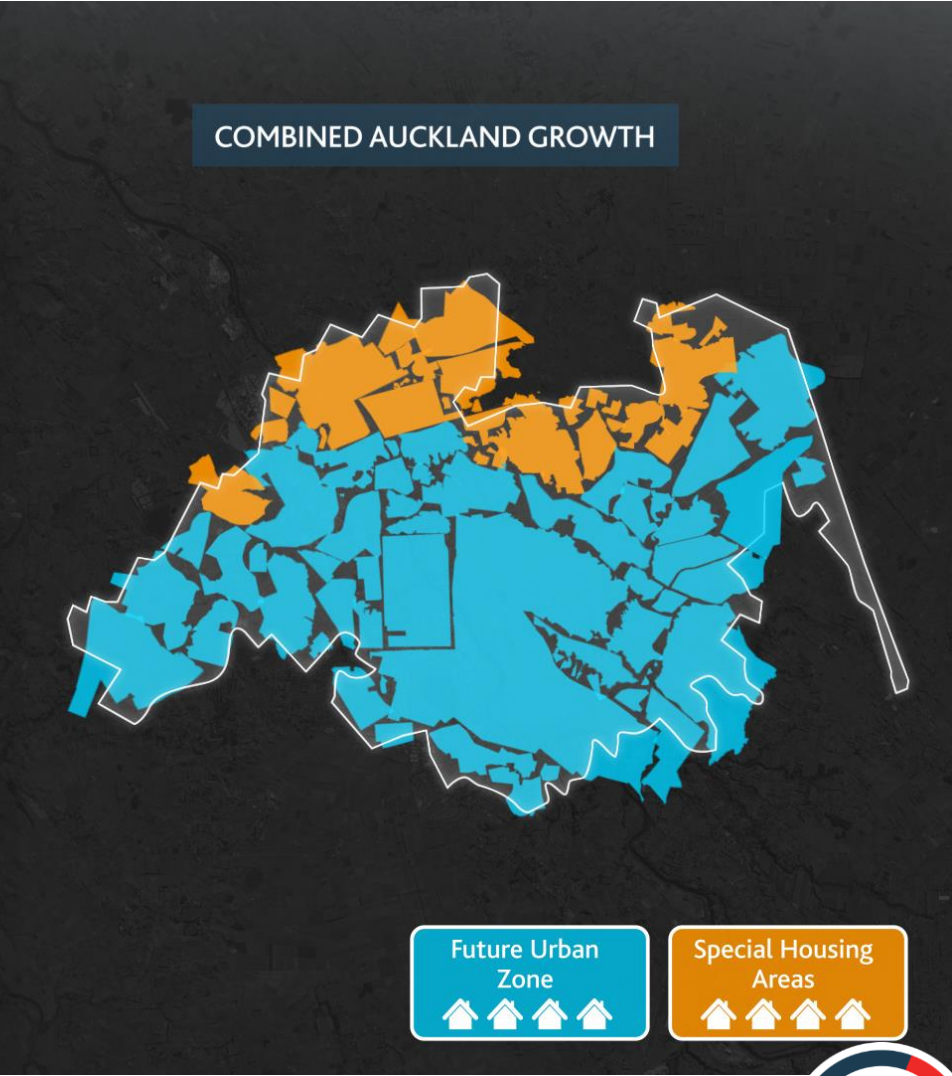
Expand networks in greenfield areas

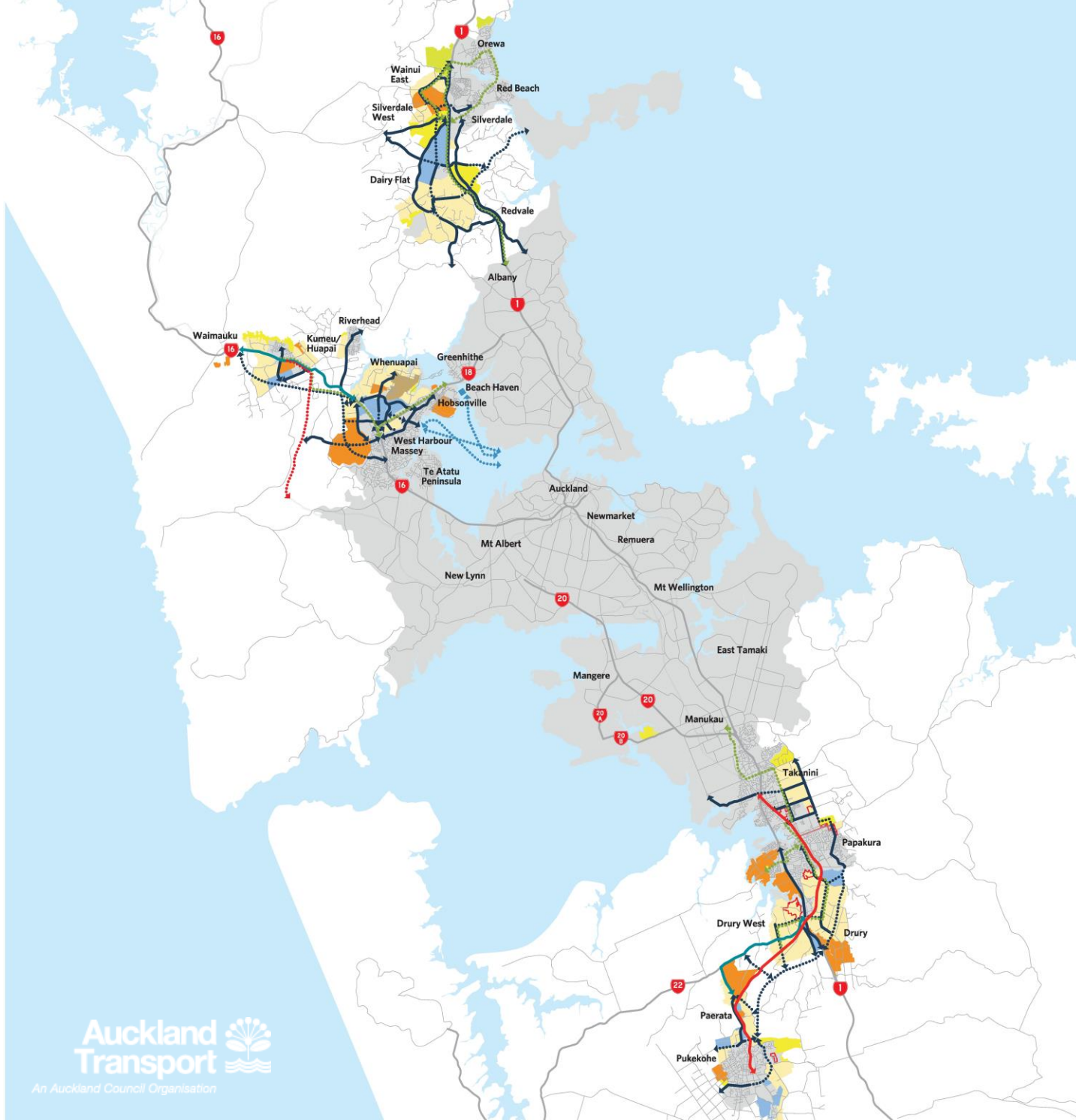


Expand networks in greenfield areas

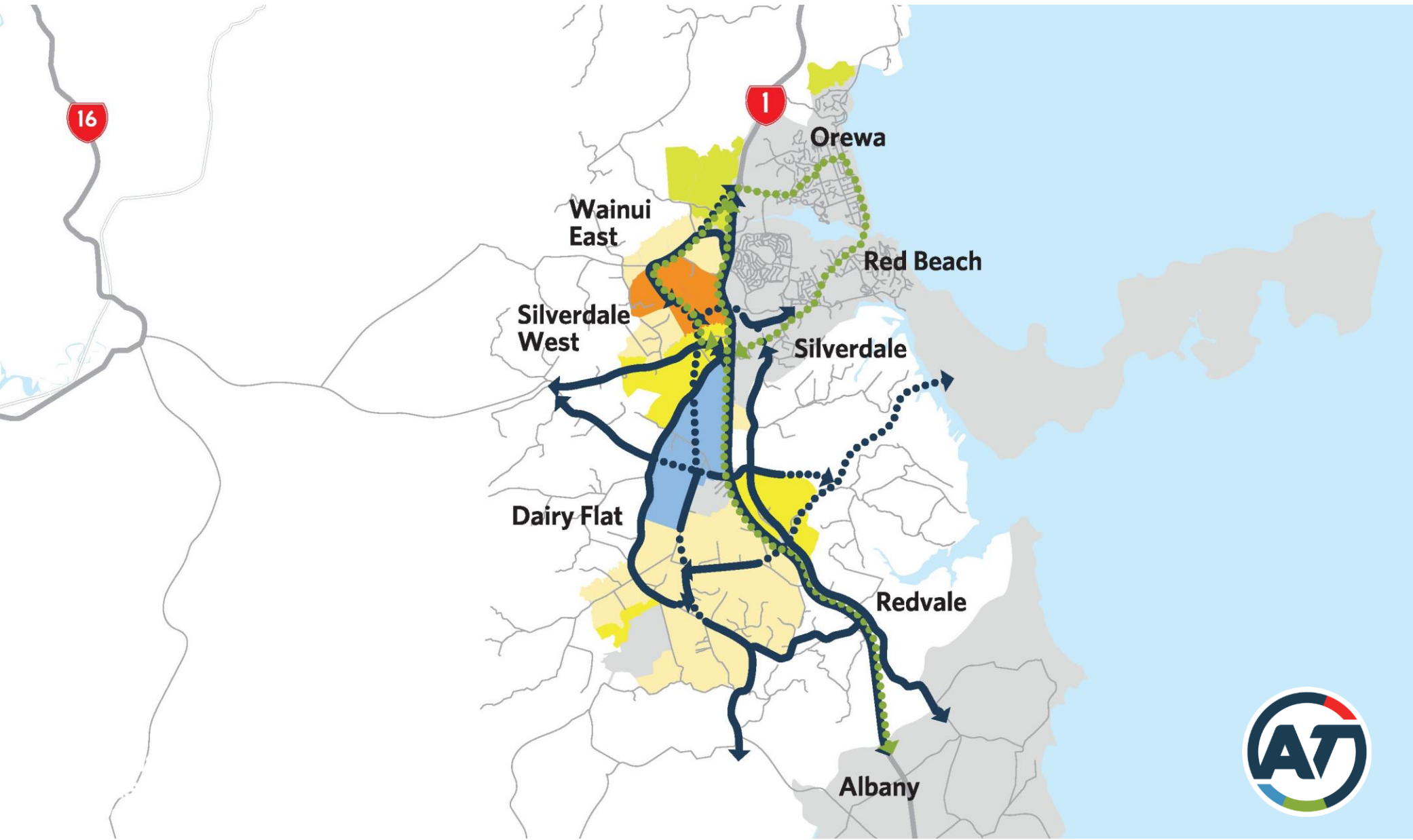


Expand networks in greenfield areas

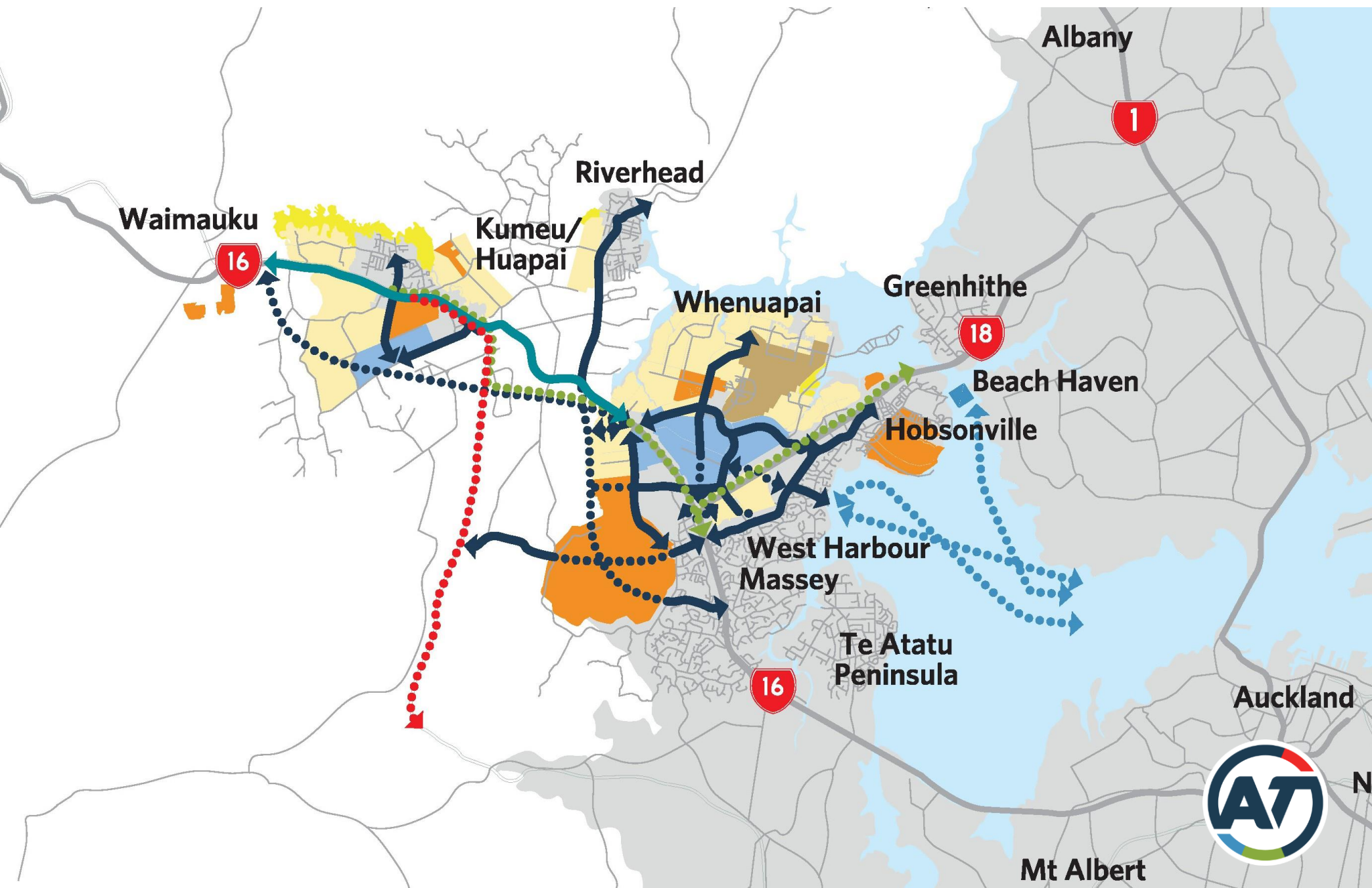




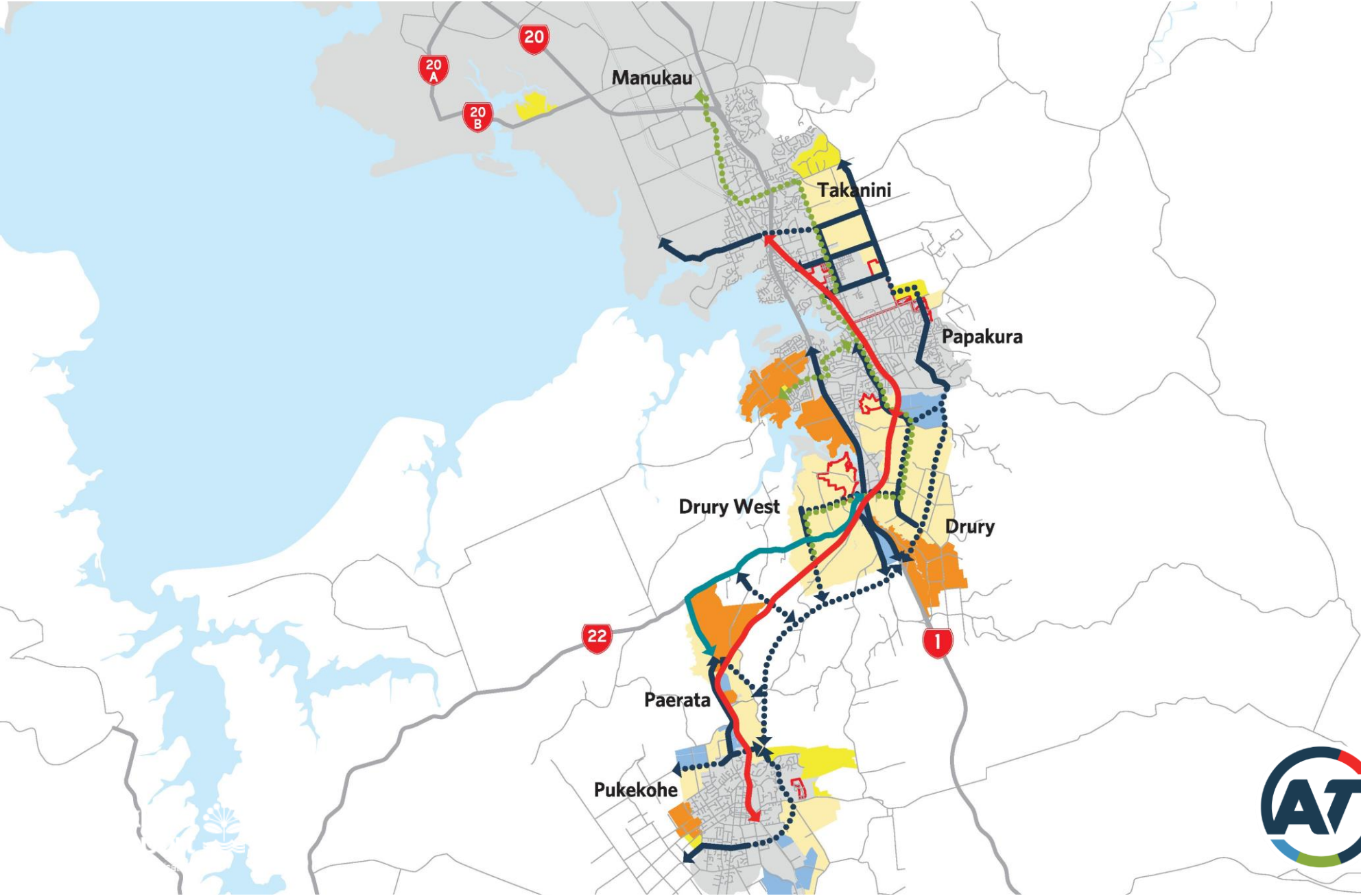
Networks in northern greenfield areas



Networks in north-western areas



Networks in southern greenfield areas



Next priorities in transport infrastructure for Auckland



Thank you.

