The 100 year vision for Hamilton and Waikato

Hamilton Waikato Metro Spatial Plan Programme Business Case
Recommended programme

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Future Proof
Te Tau Tītoki

aurecon flow JASMAX MRCagney

Metro Spatial Plan Background 2019-20
Future Proof Transformational Moves

Iwi aspirations: enhancing the health and wellbeing of the Waikato River in accordance with Te Ture Whaimana, the Vision and Strategy, and iwi place-based aspirations

Putting the Waikato River at the heart of planning

A radical transport shift to a multi-modal transport network shaped around where and how communities will grow

A vibrant metro core and lively metropolitan centres

A strong and productive economic corridor at the heart of the metro area

Thriving communities and neighbourhoods including quality, denser housing options that allow natural and built environments to co-exist and increase housing affordability and choice

Growing and fostering water-wise communities through a radical shift in urban water planning, ensuring urban water management is sensitive to natural hydrological and ecological processes.

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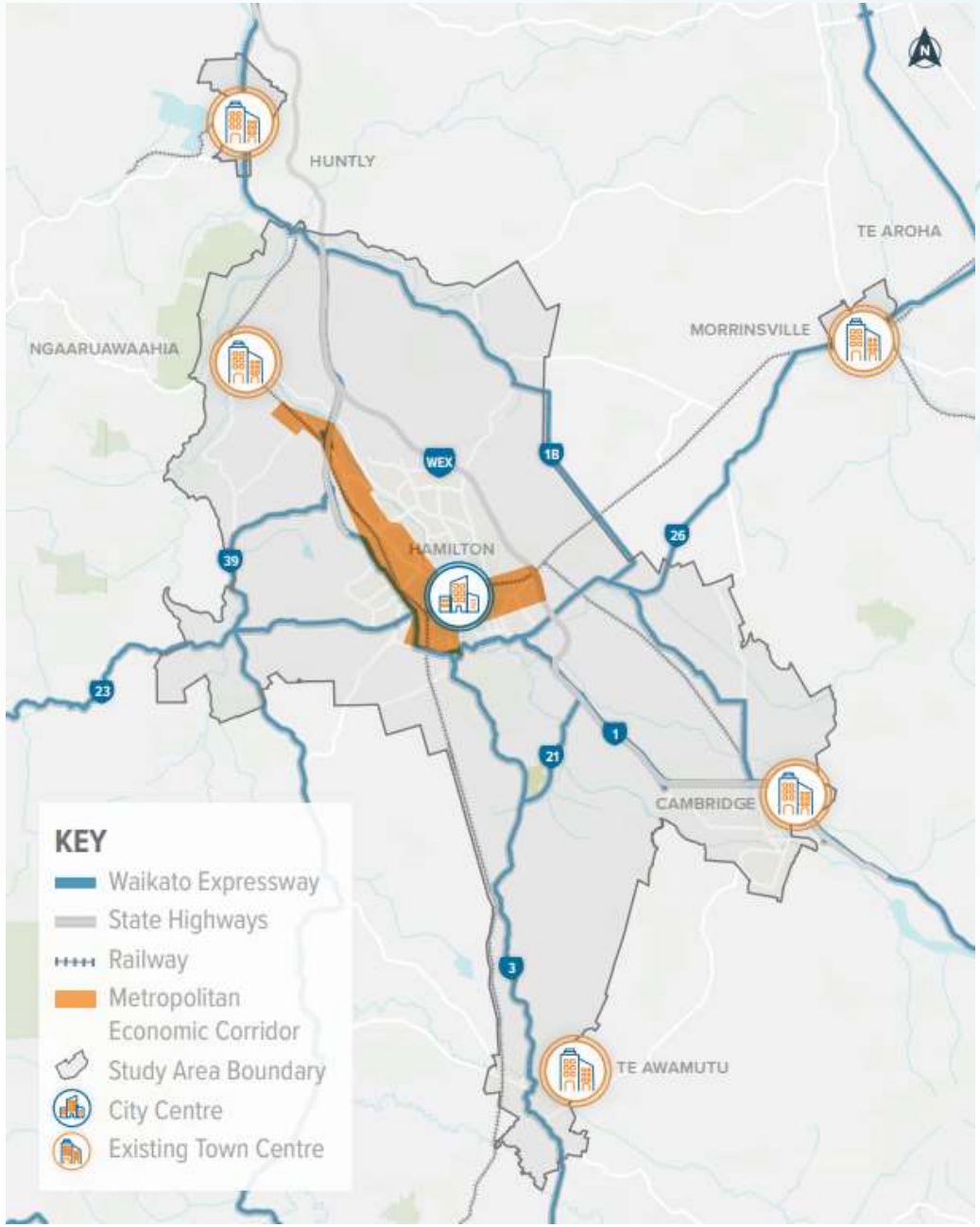
Vision statement

"Transit outcomes that promote, create and protect transport networks, which ensure equitable access, embraces kaitiakitanga, reflects our climate change challenges and promotes the urban form envisaged in the Hamilton-Waikato Metropolitan Spatial Plan"

Future Proof
Te Tau Tītoki

Context: “Hamilton-Waikato Metropolitan area”



Project objectives - Problems

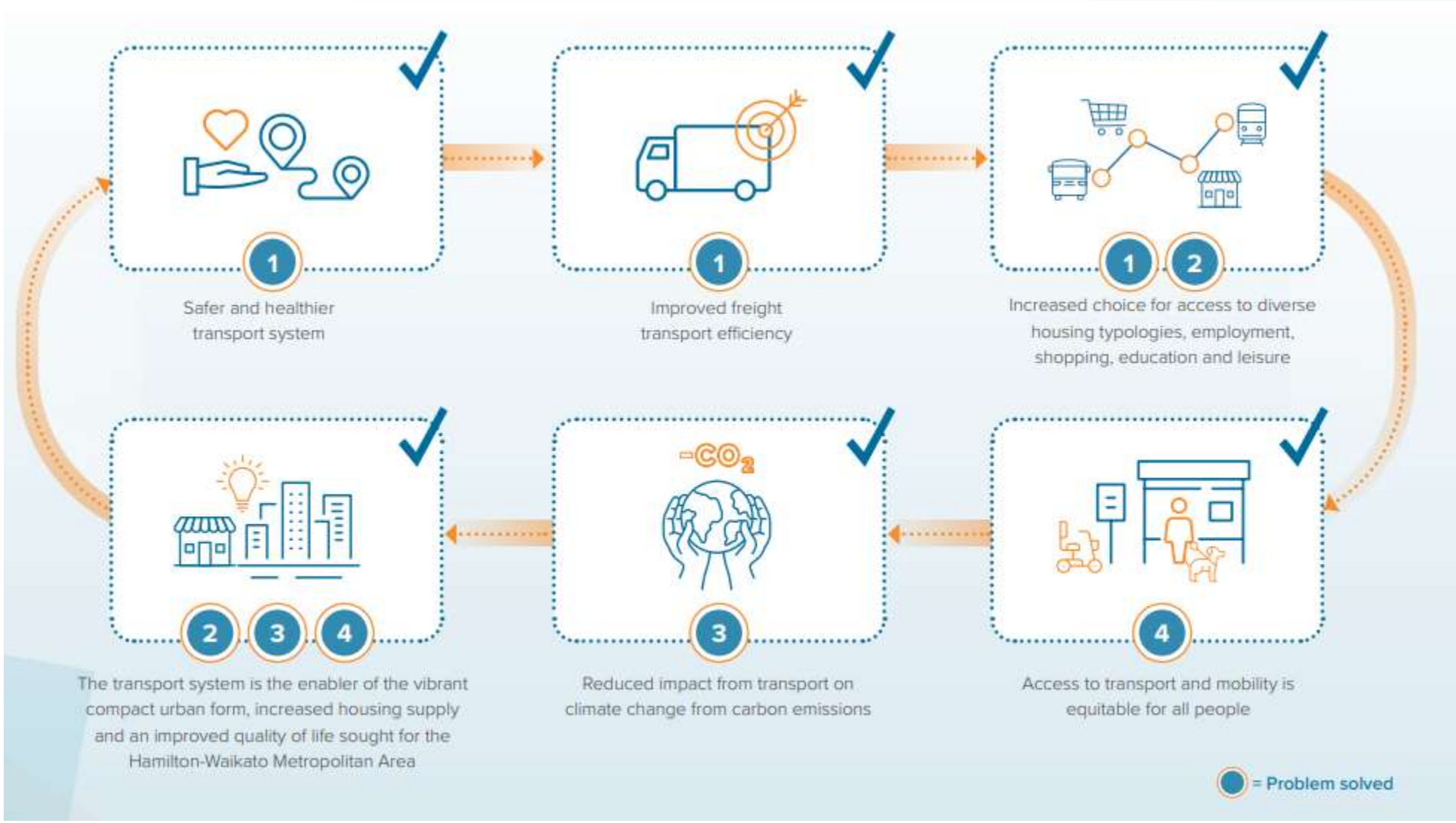
Problem 1: Poor alternatives to private vehicles create **high car dependence**, traffic centric design and congestion resulting in reduced access and safety for people and efficiency of freight.

Problem 2: The transport networks **do not support compact urban form** resulting in worsening environmental, health, wellbeing and housing outcomes.

Problem 3: The transport networks and MSP land use will result in **worsening climate change**.

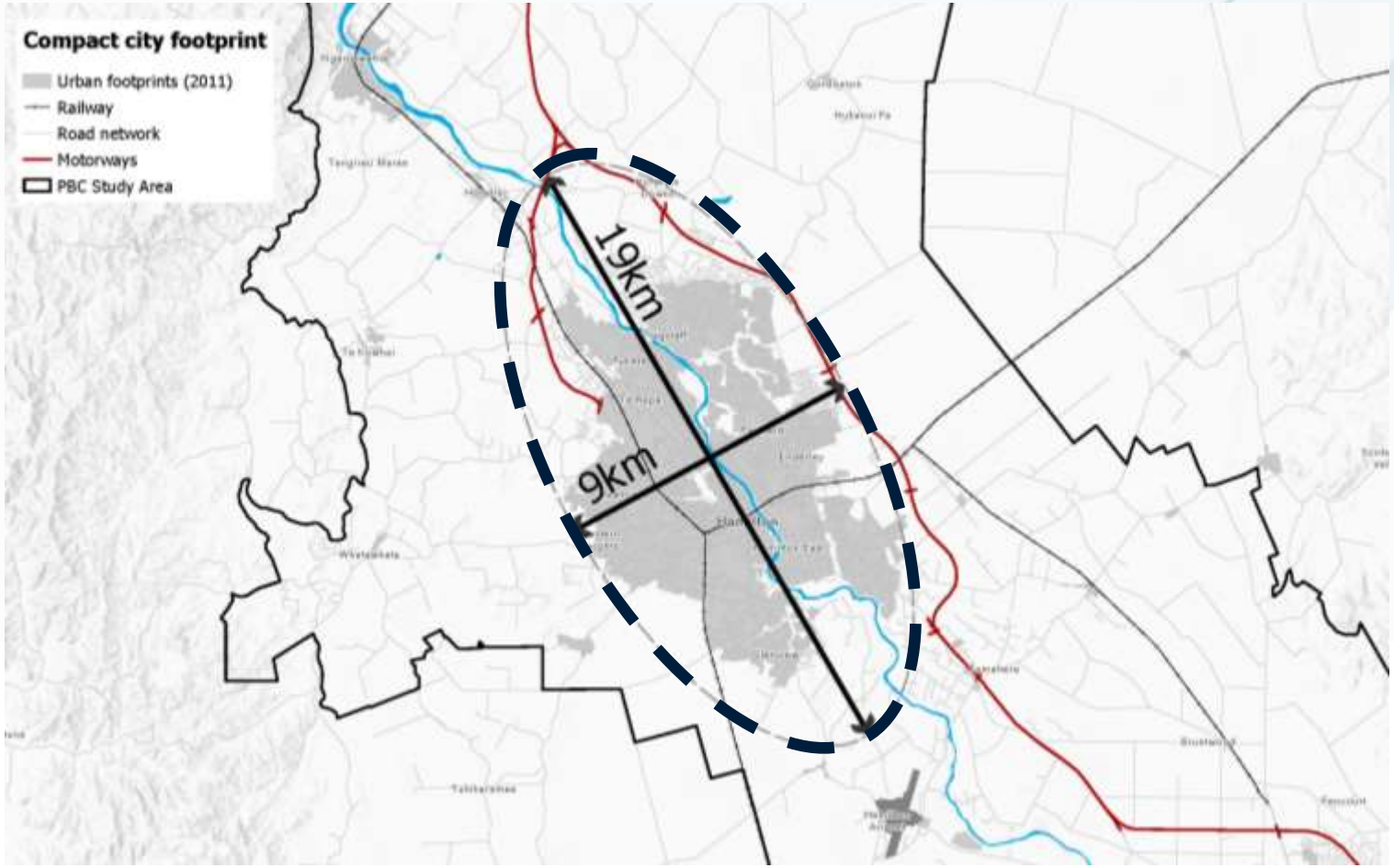
Problem 4: Lack of transport choice and **dispersed land use** will result in worsening equity in access to opportunities.

Project objectives - Benefits

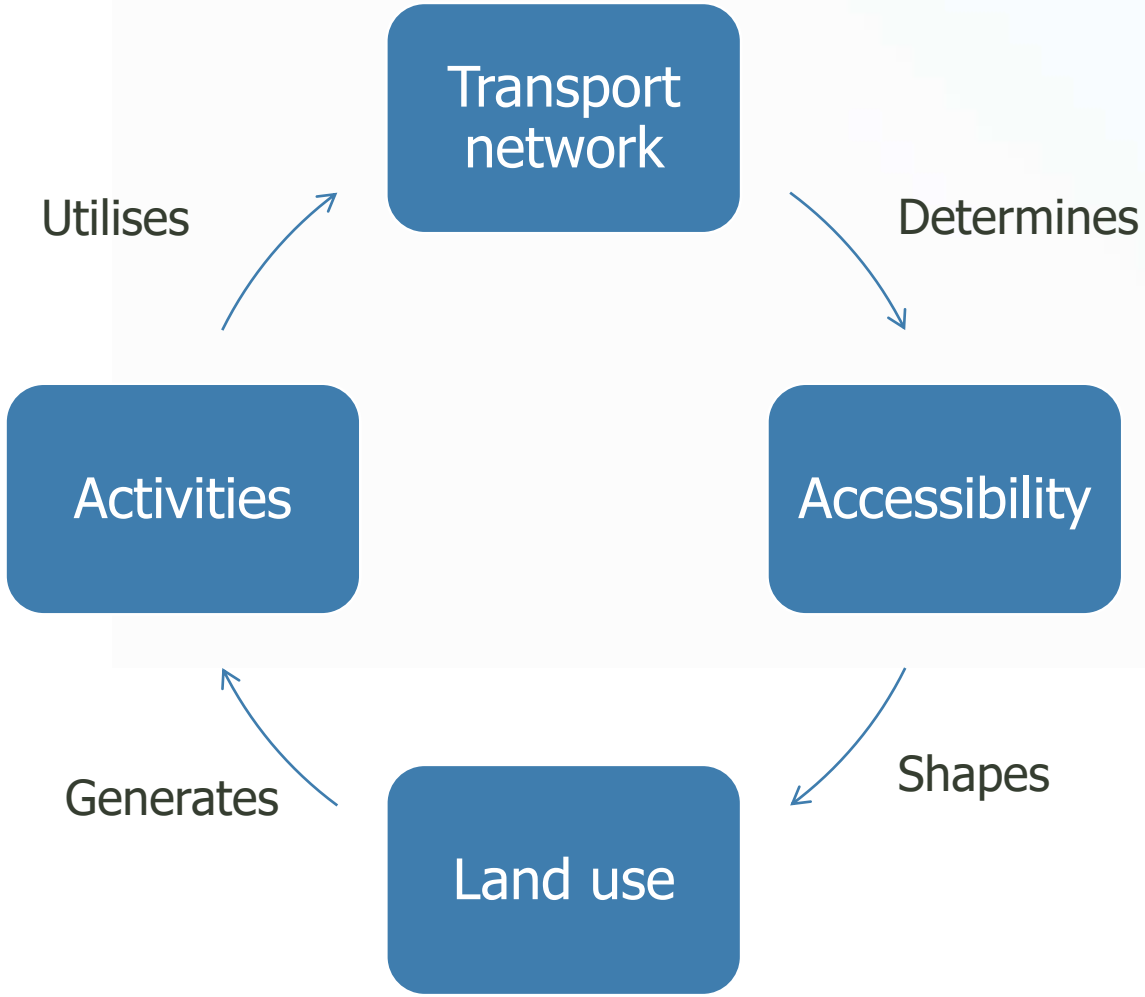


Context – A compact city

- The geographical extents of the city of Hamilton are 19km at its length and 9km at its width – inclusive of the future development areas in the north, south and east.
- Hamilton is already a reasonable example of a compact city - over 40% of trips are under 5km and nearly 7.5% of trips are under 1km (2021)

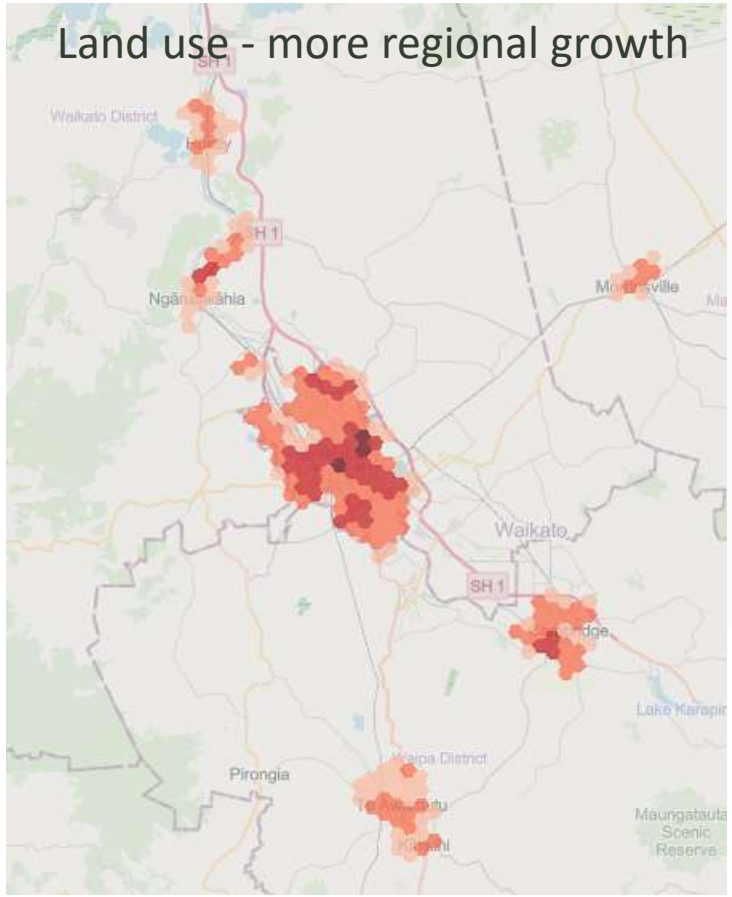


Land use and transport integration analysis – options development

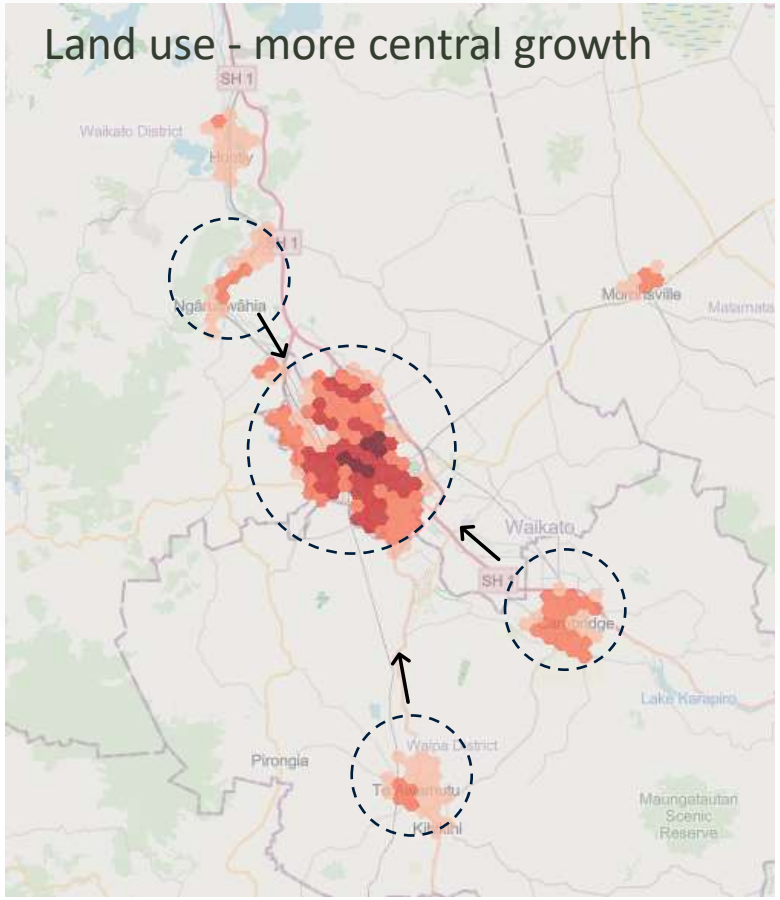


Land use and transport integration analysis – options development

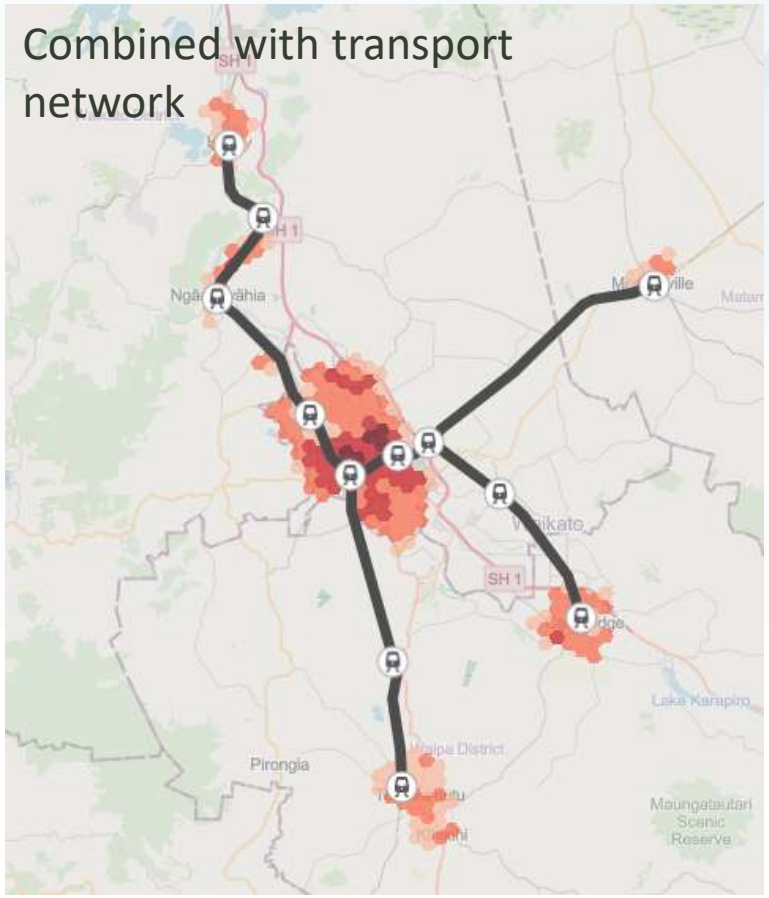
Land use - more regional growth



Land use - more central growth



Combined with transport network



Land use and transport integration analysis – options development

Hamilton-Waikato Metro Spatial Plan Programme Business Case

The MSP Vision | What is a PBC? | Process | Land Use Options | Transport Network Options | Next Steps

Option A/B: Proposed Bus Network

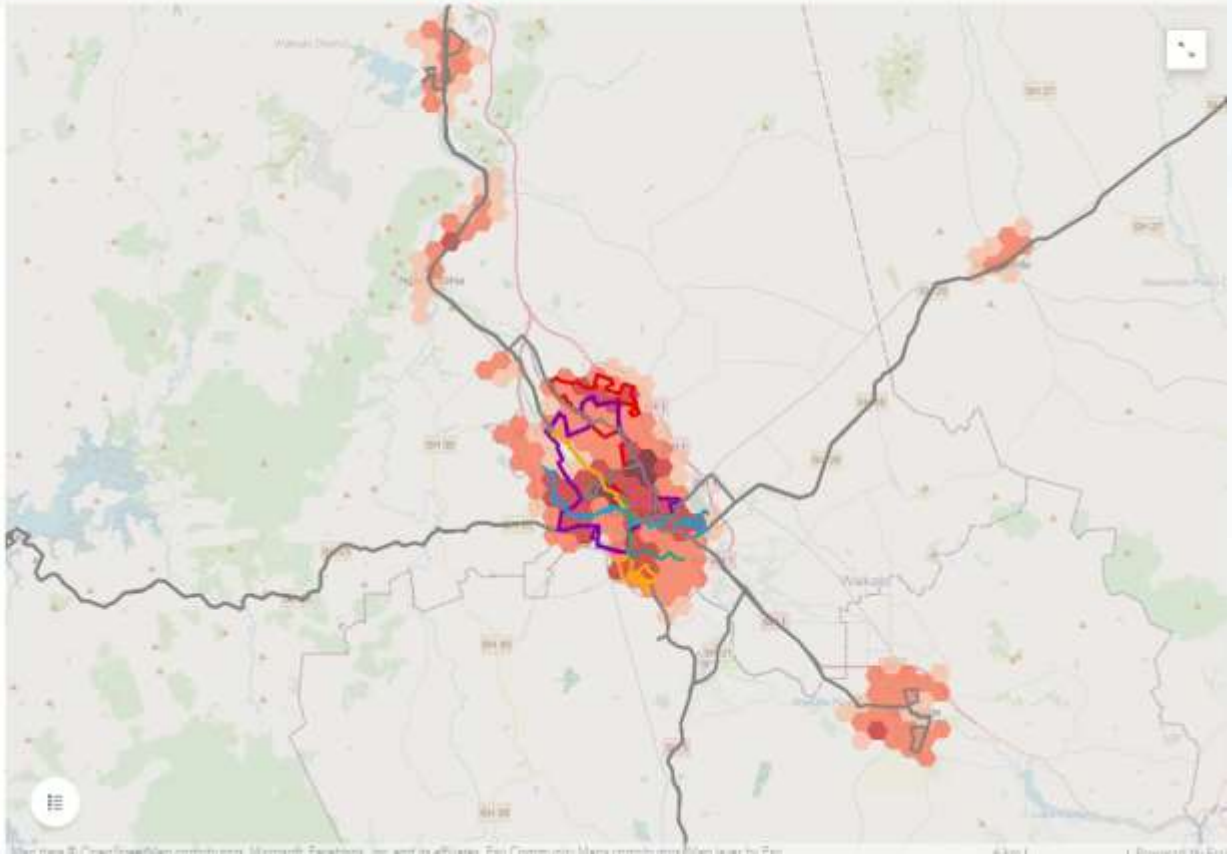
Frequent service provision

- Comet - 10 min frequency at peak times
  Meteor - 15 min weekday frequency
  Rototuna to CBD - 15 min weekday frequency
  Orbiter - 15 min weekday frequency
  Peacockes - frequent route

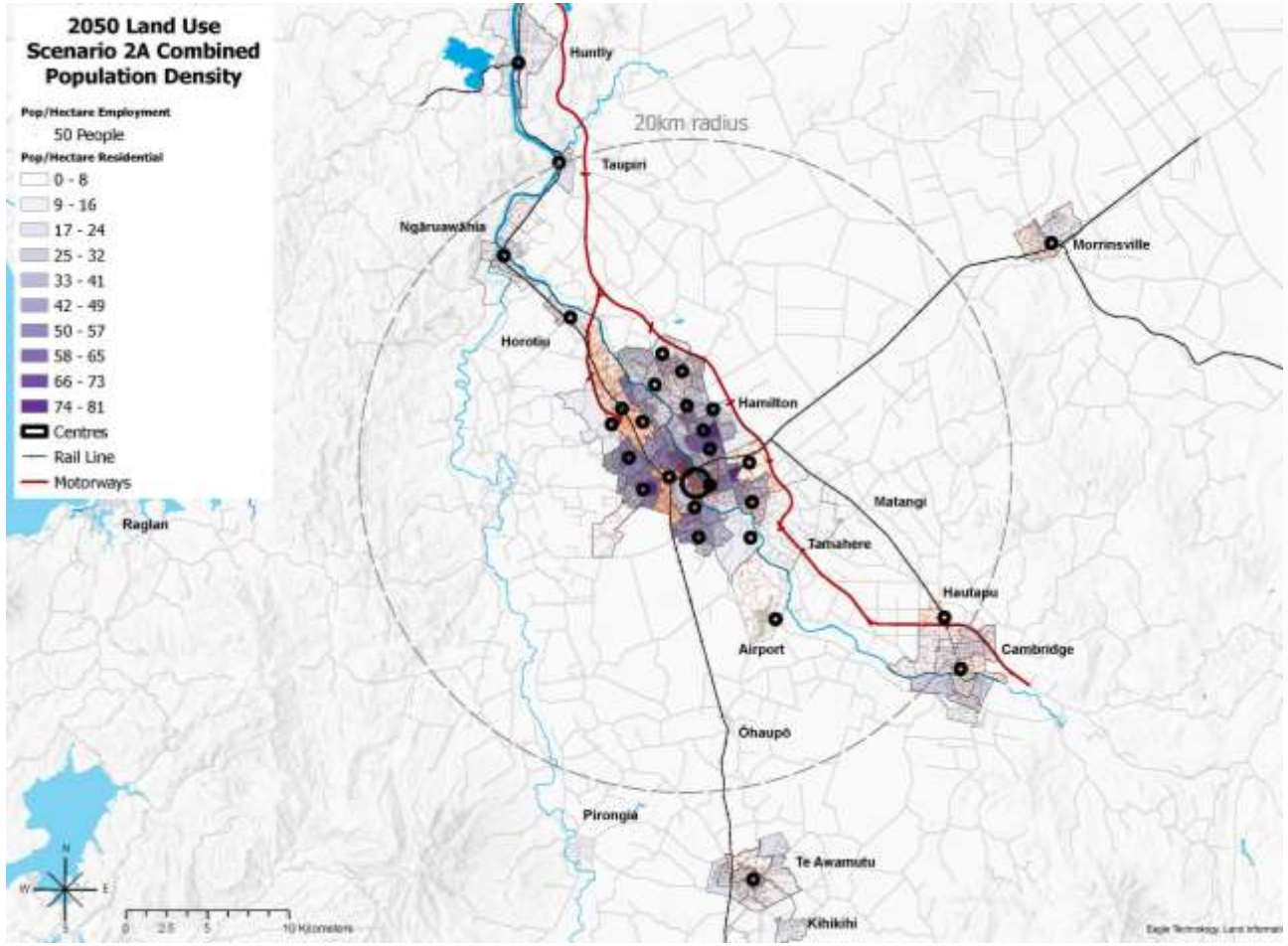
Supporting **Regional services** at lower frequency

Option B provides bus priority for all frequent routes.

Note: Alignment provided as example and is indicative only.



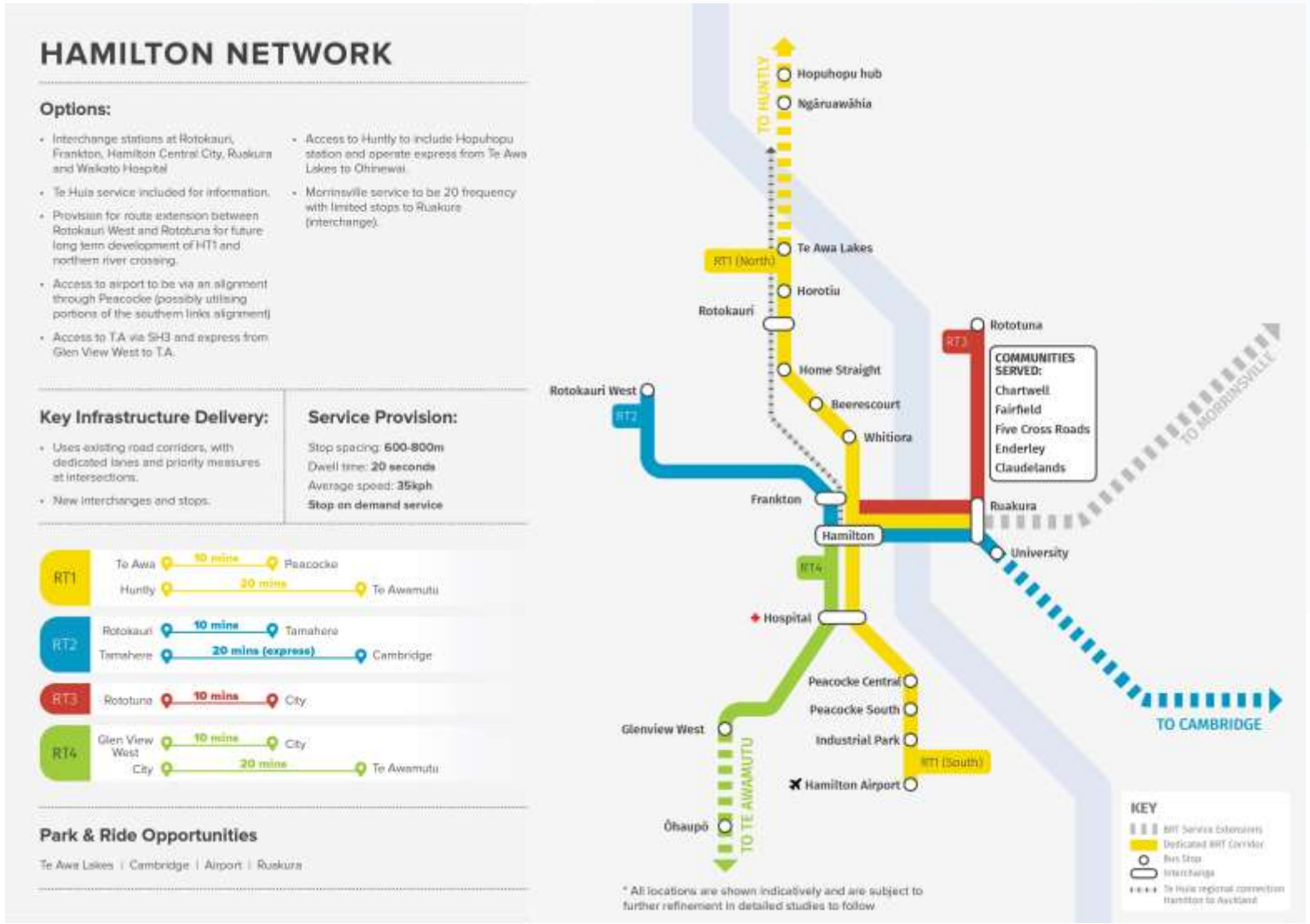
The preferred land use scenario



Target population of 550,000

- **Preferred Land Use "City Shaping Intensification"** for both the climate change response as well as maximising demand for the public transport.
  - **70% population growth in Hamilton** [25% city expansion (green field) and 75% intensification]
  - **30% regional nodes**
- The land use supports intensification of **existing greenfield areas i.e. Rotokauri, Peacocke.**
- Early investment in **micromobility** and frequent public transport will reinforce and support the **commercial viability** of higher levels of intensification

The preferred rapid transit routes



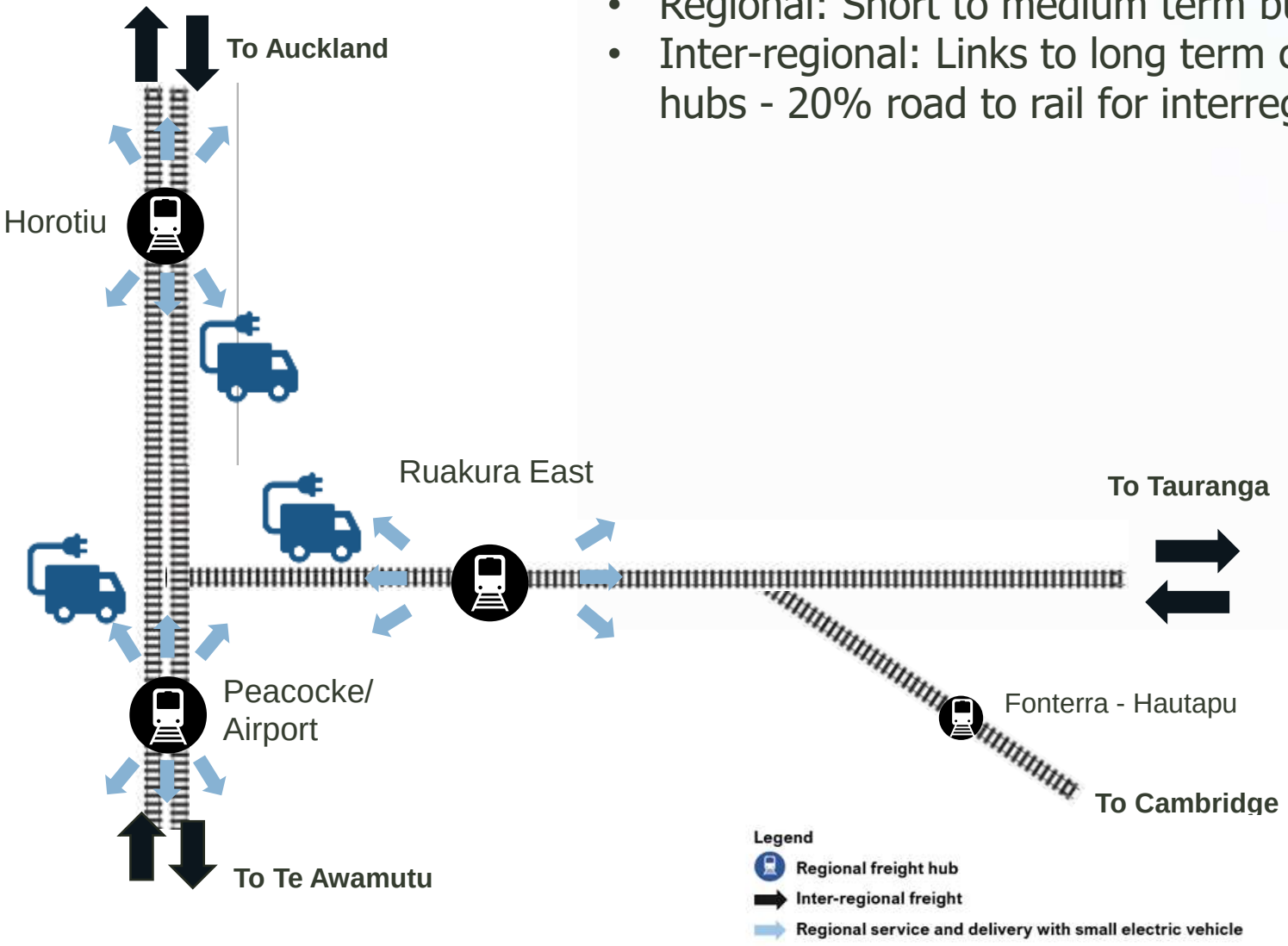
- Most critical - **RT1 north route**, facilitating intensification along the existing corridor and provide for the expansion and intensification of the greenfield areas i.e. Rotokauri
- Next priorities will be the RT1 south and RT1 east (Ruakura including university) connections
- Routes evolves overtime – bus service, bus services with bus lanes and priority, full bus rapid transit

Mode Decision – Bus Rapid Transit

- Bus and BRT options operating on existing road corridors (utilising road space reallocation and new infrastructure) enables the ***greatest opportunities for scalability and stagibility.***
- Network design to deliver accessibility and transport network density while providing the best frequency of services which will be able to compete with or 'simulate' car based journeys - ***Frequency is king – while capacity is the death of frequency.***

Freight considerations

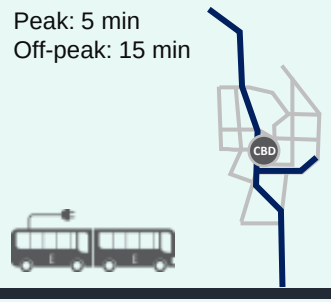
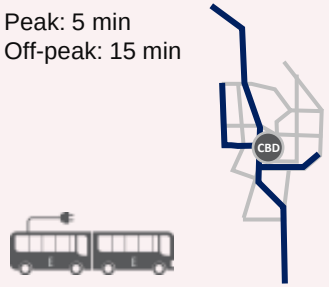
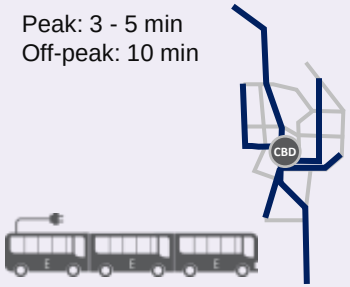
- Regional: Short to medium term bus/freight lanes on key corridors
- Inter-regional: Links to long term change to rail for freight and freight hubs - 20% road to rail for interregional freight



Other Programme Elements

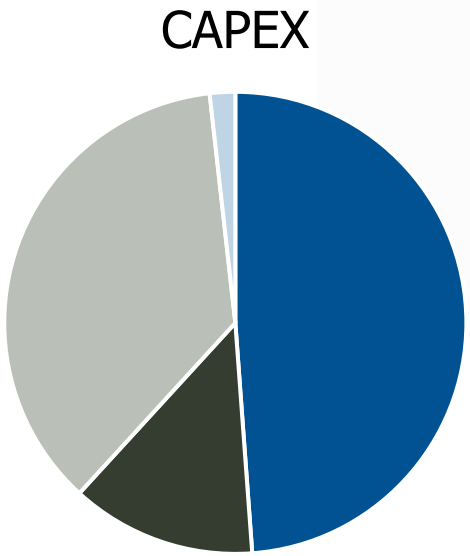
- **Park and Rides** to access BRT network – premised on the fact that the 'travel demand management' and the parking costs in the city and towns would be amended to 'push' demand to public transport / create mode shift *(future study required)*
- **Demand optimisation initiatives** e.g. traffic signal network optimisation, parking interventions, T2/T3 HOV lanes, freight lanes, bus lanes
- **Regional and rural access initiatives** such as partnering with DHB's and MOE for opportunities for future public transport services and demand responsive (incl. ride share) transport
- Considering **new delivery structures** (e.g. delivery alliances, delegations, collaboration models including PPPs)

Recommended Programme | Staging and Performance

		YEARS 1 - 3	YEARS 3 - 10	YEARS 10 - 15	YEARS 15 – 20	YEARS 20 – 50+
Infrastructure and operations	**PT Operations** **Span, frequency, vehicle type**	**Bus service** **19 hour (12 hours peak)** Peak: 15 min Off-peak: 20 min	**Bus service + priority** **19 hour (12 hours peak)** Peak: 10 min Off-peak: 15 min	**BRT (RT1)** **24 hour (19 hours peak)** Peak: 5 min Off-peak: 15 min	**BRT (RT1, RT2)** **24 hour (19 hours peak)** Peak: 5 min Off-peak: 15 min	**BRT (RT1, 2, 3, 4)** **24 hour (19 hours peak)** Peak: 3 - 5 min Off-peak: 10 min
	Infrastructure **Bus Priority** **BRT**					
PT Performance	**Patronage** (AM peak/direction/hour) • **Airport to Hamilton** • **Te Awa to Hamilton** • **Hamilton to Ruakura**	**-**	**930** **650** **1400**	**1450** **1000** **2150**	**1650** **1150** **2500**	**2250** **1550** **3350**
	PT Travel Time **(savings compared with general traffic)** • **Airport to Hamilton** • **Hamilton to Ruakura**	**23 min** **19 min**	**22 min (-1 min)** **10 min (-9 min)**	**22 min (-3 min)** **10 min (-13 min)**	**22 min (-6 min)** **10 min (-17 min)**	**22 min (-10 min)** **10 min (-22 min)**
	PT Reliability	Low	Medium	High	High	High
Micro-mobility	**Micro-mobility network**	**Early implementation**	**10% of cycle network** • Biking and micro-mobility 10 year programme • Develop city centre traffic circulation plan and low traffic neighbourhoods • Facilitate safe and easy active mode access to stations	**40% of cycle network** • Extend cross city connections to more peripheral centres and growth cells – Rototuna, Dinsdale, Rotokauri, Peacocke and R2. • Begin to fill out network with build-out of cross city connections, community links and local links. • Improve Te Awa River Ride cycle path to Ngāruawāhia and Cambridge.	**70% of cycle network** • Active mode network in town centres and growth cells • Continue build-out of cross city connections, community links and local links	**100% of cycle network** • Complete build-out of cross city connections, community links and local links

Total Costs and Benefit Cost Ratio

The total recommended programme costs for the 30 year investment period (2024 – 2054) are **$2.8bn CAPEX and $1.2bn for OPEX' for a TOTAL COST of $4.0 billion** (*assuming a 50th percentile infrastructure cost estimate*)



- Bus infrastructure
- Walking and cycling
- Property
- Park and ride

Parameters:
Time Zero: 1st July 22
Evaluation Period: 60 years
Discount Rate: 4%

NPV Costs:
$1.2B
NPV Benefits:
$2.1B

Benefit Cost Ratio = 1.70 to 1.83

Where are we now?

Delivery of the programme

Undertaking BRT concept strategy

Freight study by AECOM

Future transport pathways project implemented by WRC

Thank You

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