

Palmerston North Urban Cycling Network Masterplan

John Lieswyn, PTP, MET
Transportation Group Conference 2020

VIASTRADA

TRANSPORT PLANNING AND DESIGN



Photo: Jack McKenzie

Overview

**EXISTING
CONDITIONS**

Subtopics...

**PLANNING
PROCESS**

OUTCOMES

CHALLENGES

EXISTING CONDITIONS

Parking / cycle lanes

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

Lots of green cycle lanes

PLANNING PROCESS

OUTCOMES

CHALLENGES



Photo: Jack McKenzie

EXISTING CONDITIONS

Disjointed quiet street network

PLANNING PROCESS

OUTCOMES

CHALLENGES

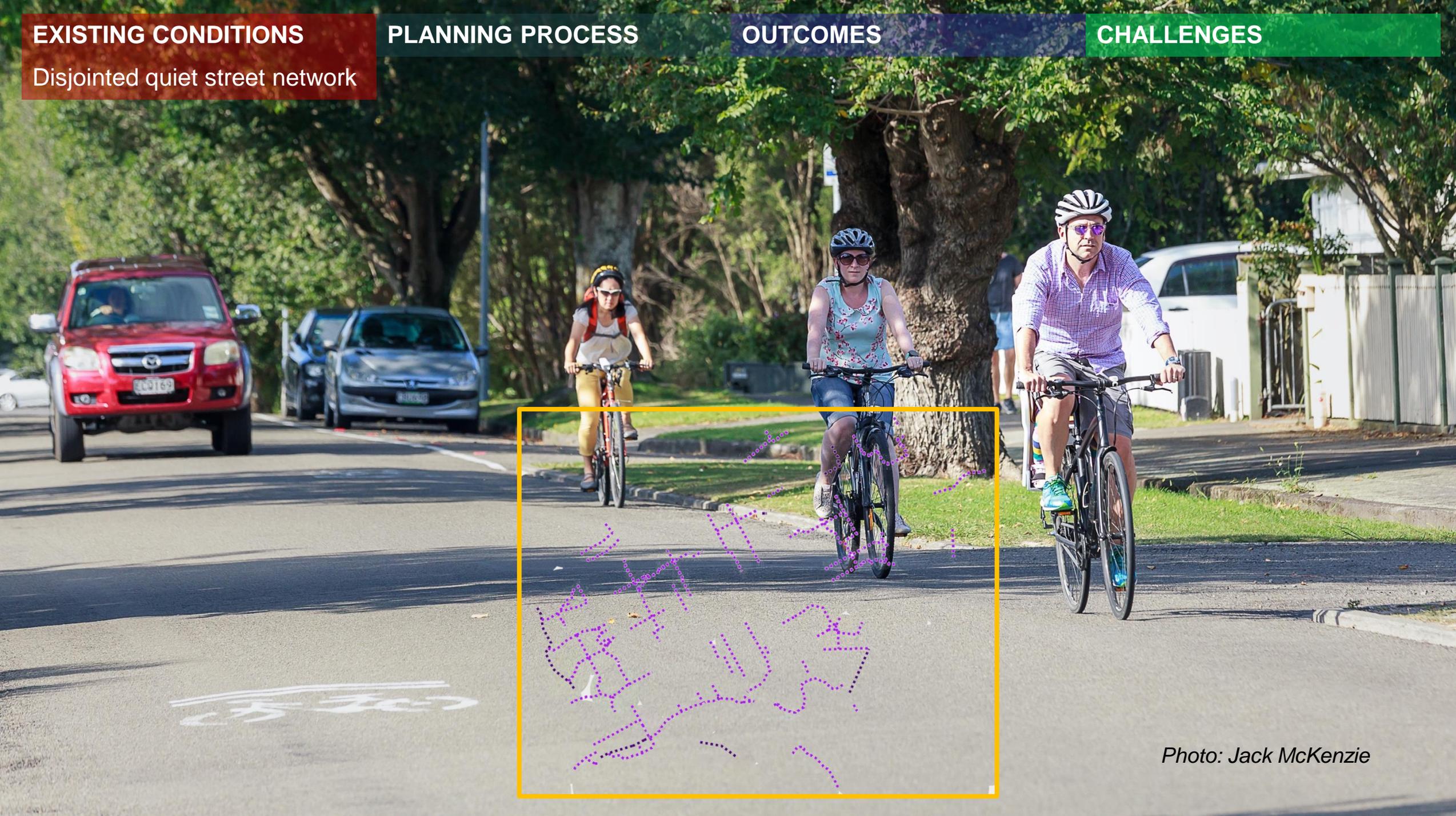


Photo: Jack McKenzie

EXISTING CONDITIONS

Some large roundabouts

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

Wide (4m) shared paths

PLANNING PROCESS

OUTCOMES

CHALLENGES



Photo: PNCC

EXISTING CONDITIONS

Narrower, rougher and unlit paths with access barriers

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

Limited use of traffic calming

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

Many paths not all-weather

PLANNING PROCESS

OUTCOMES

CHALLENGES



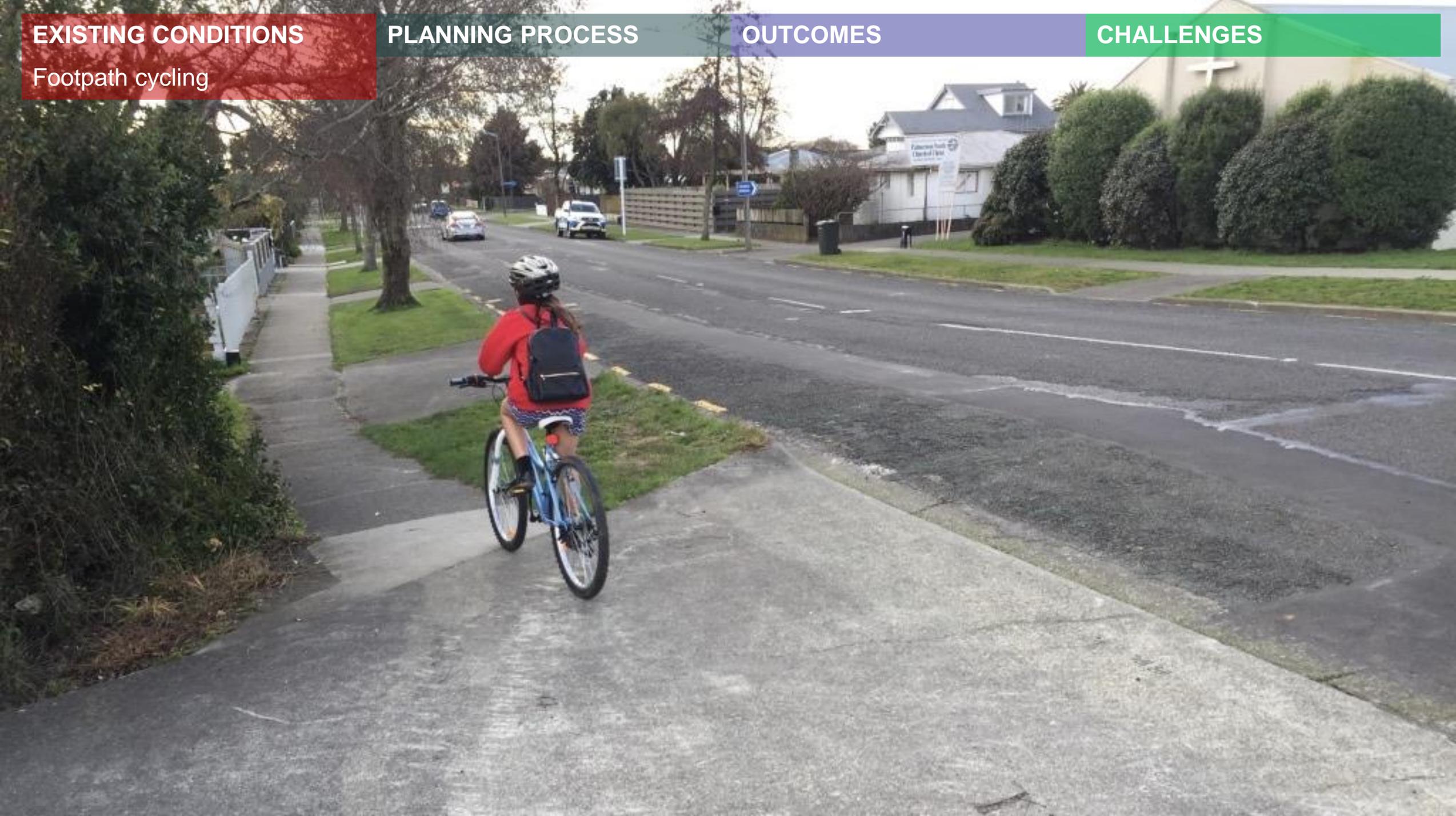
EXISTING CONDITIONS

Footpath cycling

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

New central city streetscape

PLANNING PROCESS

OUTCOMES

CHALLENGES



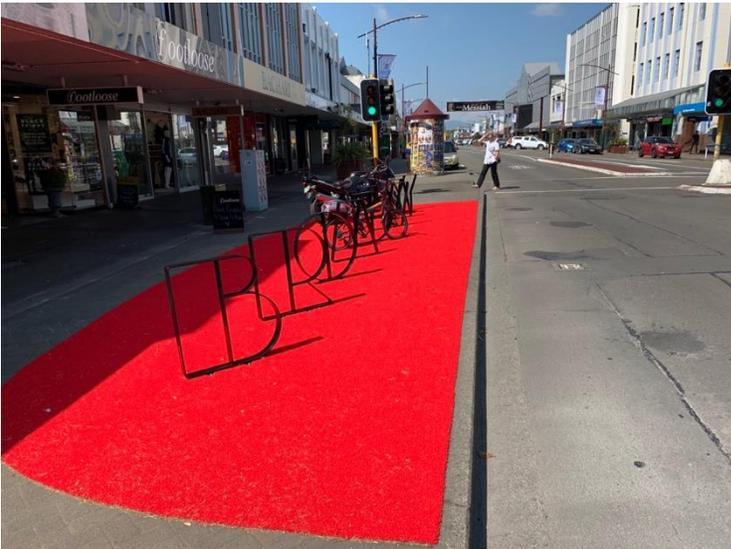
EXISTING CONDITIONS

Central city streetscape

PLANNING PROCESS

OUTCOMES

CHALLENGES



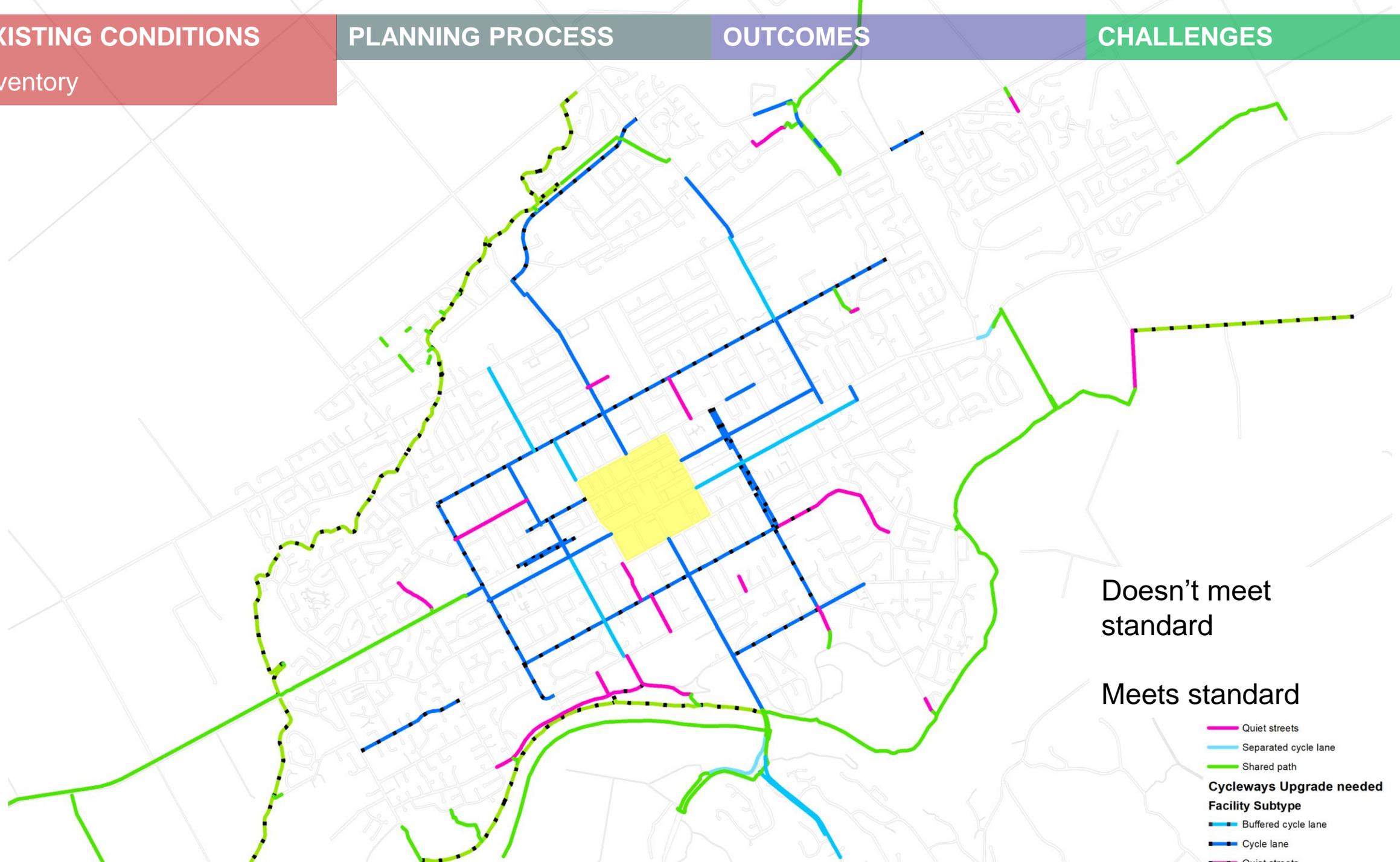
EXISTING CONDITIONS

Inventory

PLANNING PROCESS

OUTCOMES

CHALLENGES



EXISTING CONDITIONS

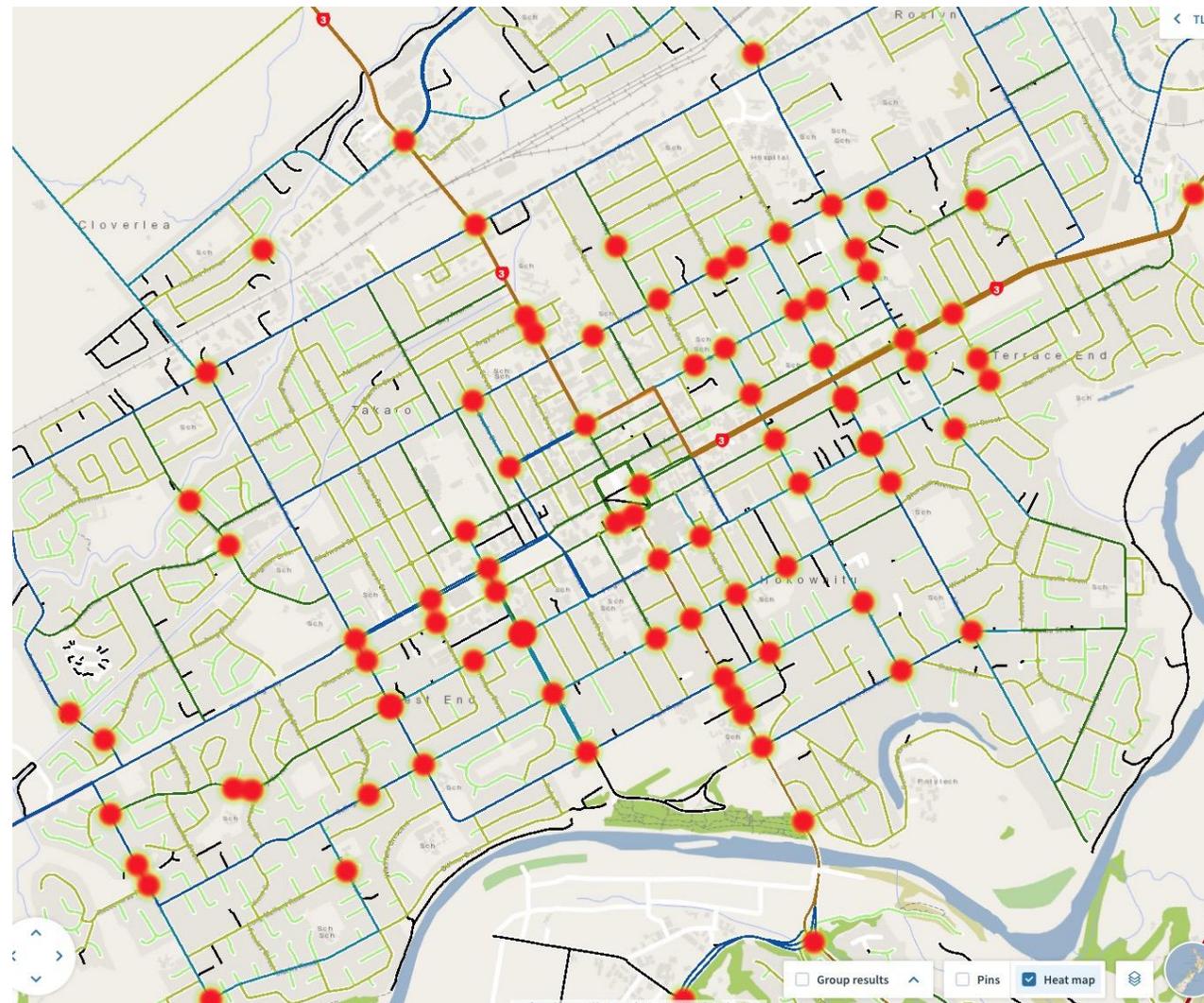
Reported crashes

PLANNING PROCESS

OUTCOMES

CHALLENGES

Intersection	Injury crashes (2014-18)
Church / Ruahine	10
College / Cook	9
Ferguson / Victoria	9
Church / Cook	6
Broadway / Victoria	5
Albert / Ferguson	4
Featherston / Russell	3
Plus key barriers	
Bourke / Featherston	2
Botanical / College	1
College / Fitzherbert	1
Featherston / Rangitikei	0



- Improved accessibility by cycling
- More transport choices
- Fewer killed & injured
- Better health outcomes
- Environmental and resource sustainability

Review previous work

- PNCC Street Design Manual 2013: great ideas, but implementation challenges
- Some missing elements; major advances since then led by NZTA:
 - One Network Road Classification (ONRC)
 - Cycling Network Guidance (CNG)
 - MegaMaps – safety risk
 - Policy, legislation, and economic changes

Street Design | Summary

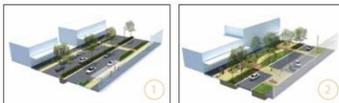
16

Arterial



City Centre

1. City Centre Movement Street
2. City Centre Movement / Place Street
3. City Centre Place Street 1
4. City Centre Place Street 2



Commercial

1. Commercial Collector
2. Commercial Local



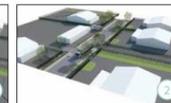
Residential

1. Residential Collector
2. Residential Local



Industrial

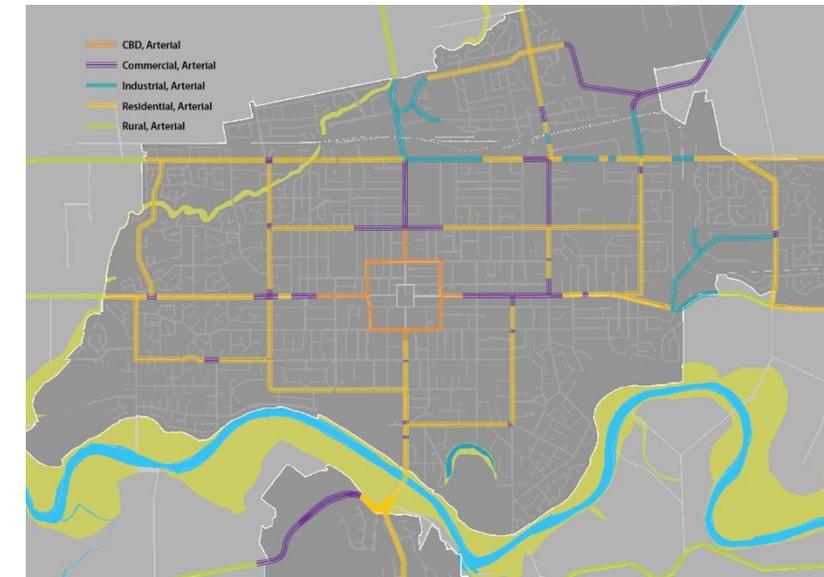
1. Industrial Collector
2. Industrial Local



Rural



17



EXISTING CONDITIONS

PLANNING PROCESS

Facility type expectations
Shared paths

OUTCOMES

CHALLENGES

SAFETY	
PARKING IMPACT	none
ENCOURAGES CYCLING	 
MOBILITY SCOOTERS	
URBAN AMENITY	

Up to \$550 / m

Image:
Rotorua



EXISTING CONDITIONS

PLANNING PROCESS

Facility type expectations
Greenways / quiet streets

OUTCOMES

CHALLENGES



\$50 - 75 / m

Pt. England, Auckland

SAFETY	😊😊
PARKING IMPACT	Minimal
ENCOURAGES CYCLING	😊
MOBILITY SCOOTERS	No change
URBAN AMENITY	😊

EXISTING CONDITIONS

PLANNING PROCESS

Define and determine Quality of Service

OUTCOMES

CHALLENGES

Buffered (wide)
Cycle lanes
\$

Post &
Paint
\$

Simple kerbs
\$\$

Island kerbs &/or
inset parking
\$\$\$

Full street
reconstruction
\$\$\$\$



EXISTING CONDITIONS

PLANNING PROCESS

Policy & scope

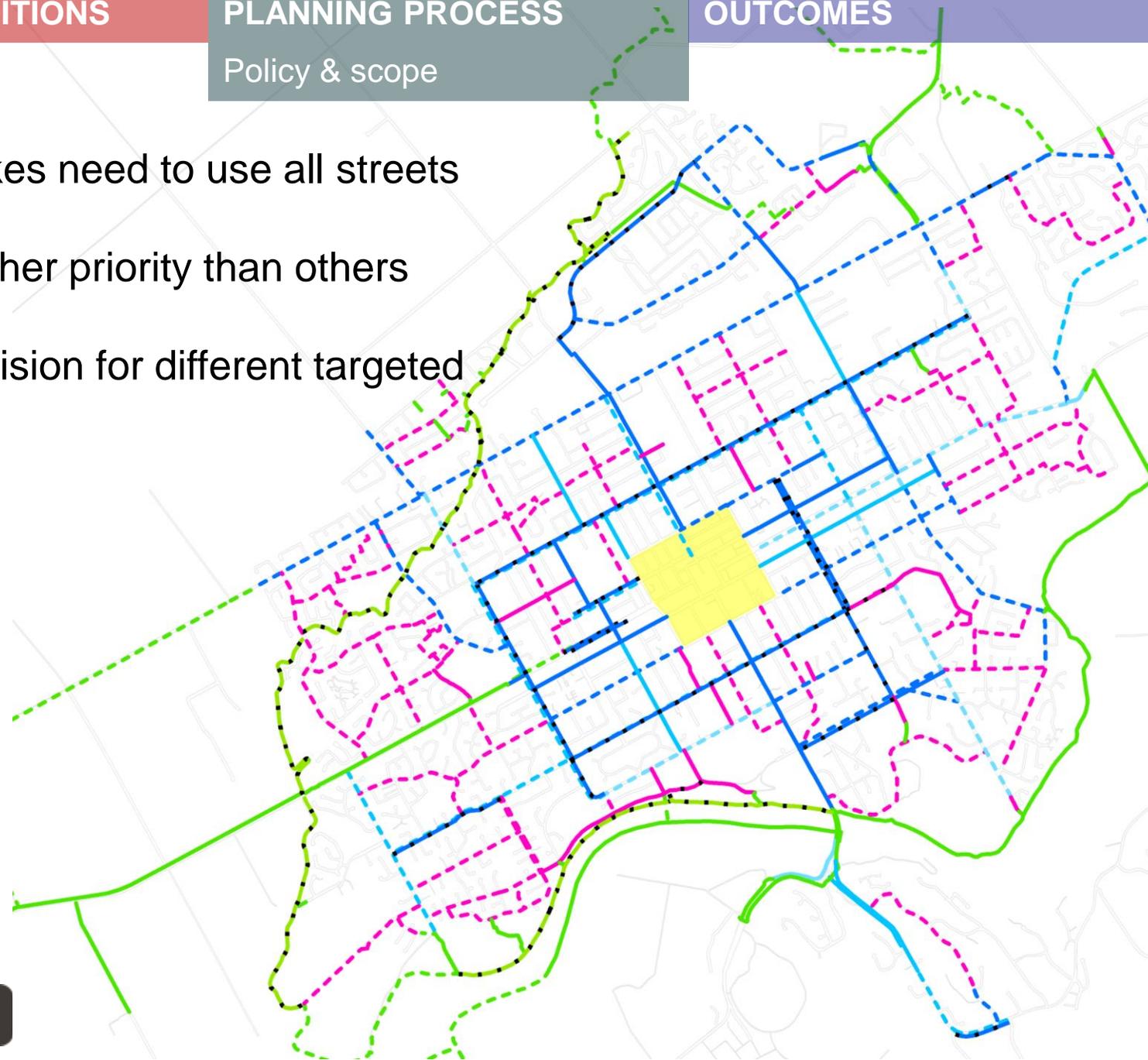
OUTCOMES

CHALLENGES

People on bikes need to use all streets

Some are higher priority than others

Different provision for different targeted users



Cycleways Existing

- Buffered cycle lane
- Cycle lane
- Quiet streets
- Separated cycle lane
- Shared path

Cycleways Upgrade needed

- Buffered cycle lane
- Cycle lane
- Quiet streets
- Separated cycle lane
- Shared path

Cycleways Proposed

- Buffered cycle lane
- Cycle lane
- Quiet streets
- Separated cycle lane
- Shared path
- City Centre

EXISTING CONDITIONS

PLANNING PROCESS

Find people to tell the story

OUTCOMES

CHALLENGES

WORK COMMUTES

GRAHAM

Bus driver

Rides to depot via Highbury Avenue, Botanical Road, and Tremaine Avenue.



EVERYDAY TRIPS

JOE

Contractor

Bikes to daycare and then to job site.



SCHOOL TRIPS

ELSE

School student

Rides Fitzherbert Avenue every day to Palmerston North Intermediate Normal School.



RECREATION, FITNESS

RAEWYN

Online learning specialist

In her spare time, Raewyn coordinates the iBike4kids and women's skills programme; helps people get confident and out biking



Exercise at work is very slim so I bike to work to keep trim. As I drive my bus I pass cyclists without a fuss.

Figure 13: These Palmerston North locals are currently riding and are role models

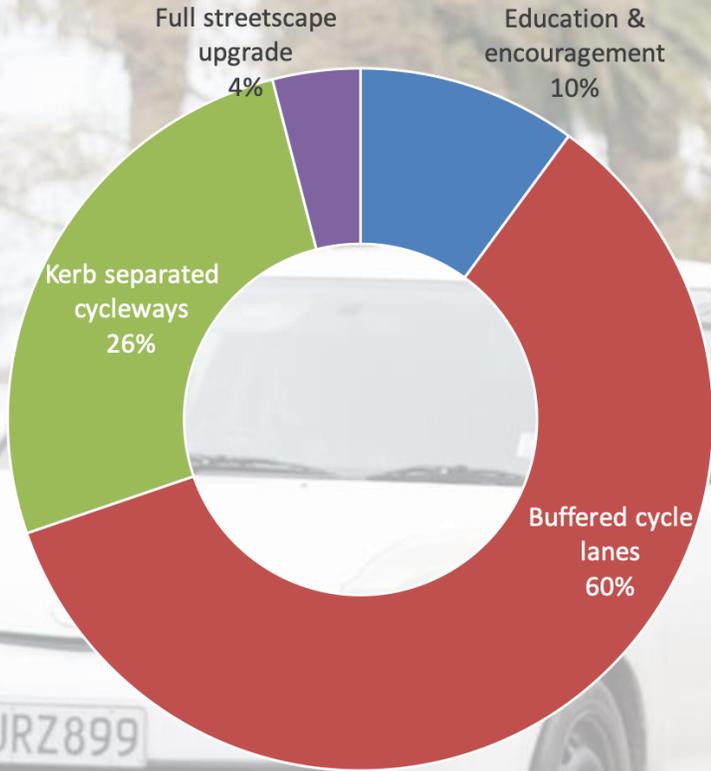
EXISTING CONDITIONS

PLANNING PROCESS

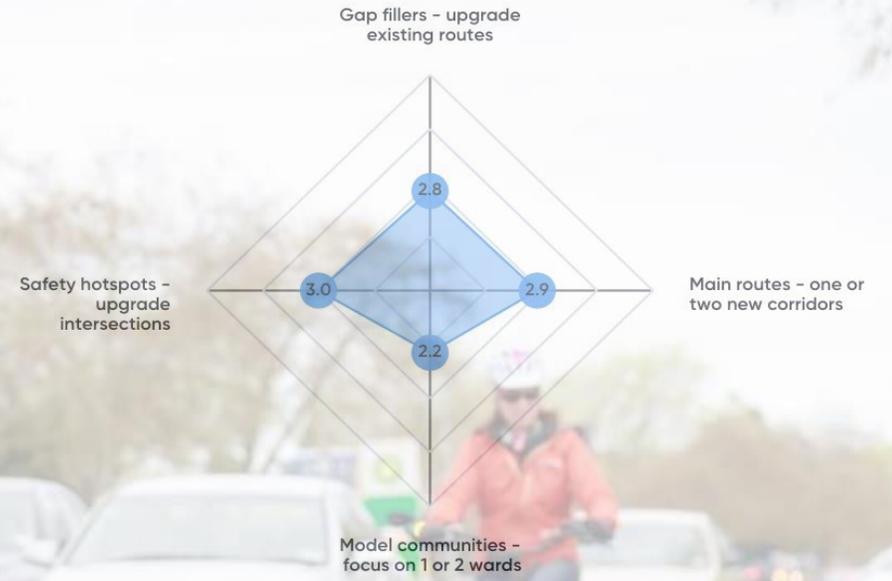
OUTCOMES

CHALLENGES

Optioneering



What level Quality of Service?



What strategic alternative do you prefer?



How much of the budget should go to education and encouragement?

Figure out the investment mix

Infrastructure



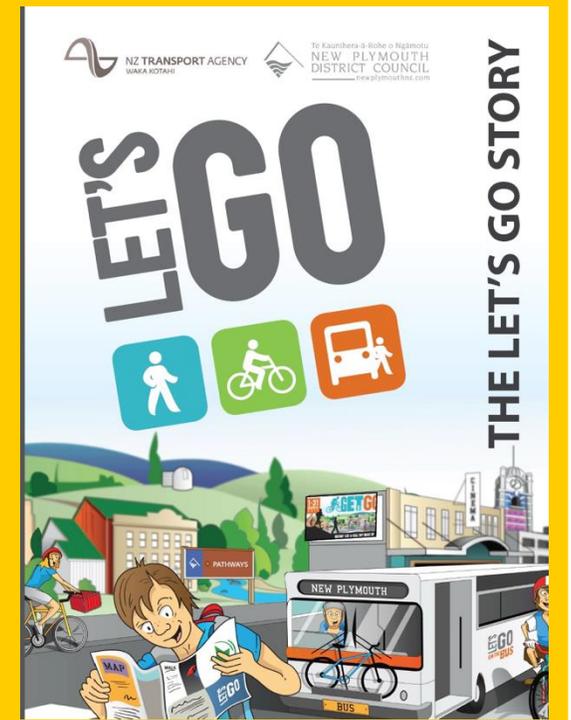
Enforcement



Education

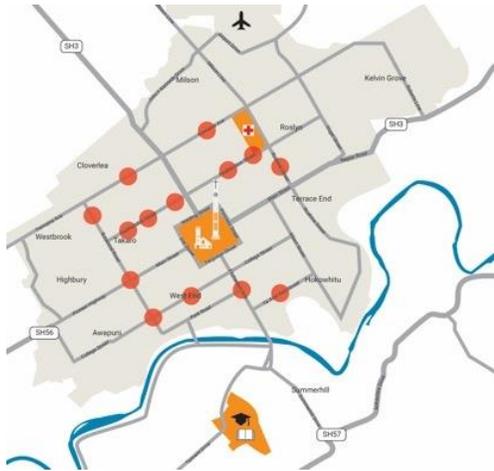


Information



Strategic alternatives

Intersections



Model communities



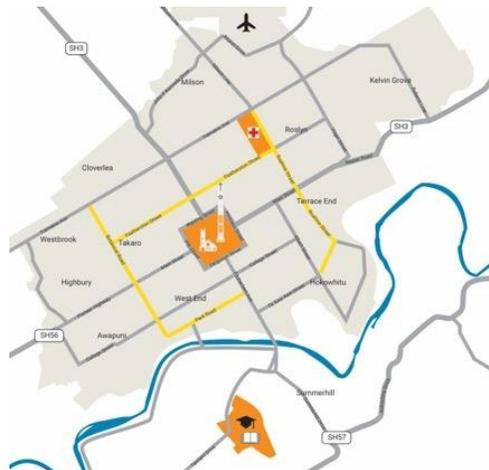
Schools focus



Gapfillers



Arterial routes



Local streets



Prioritisation guidance



Multi-criteria analysis: a manual



Multi Criteria Analysis for Transport Business Cases

February 2017

Guidance document



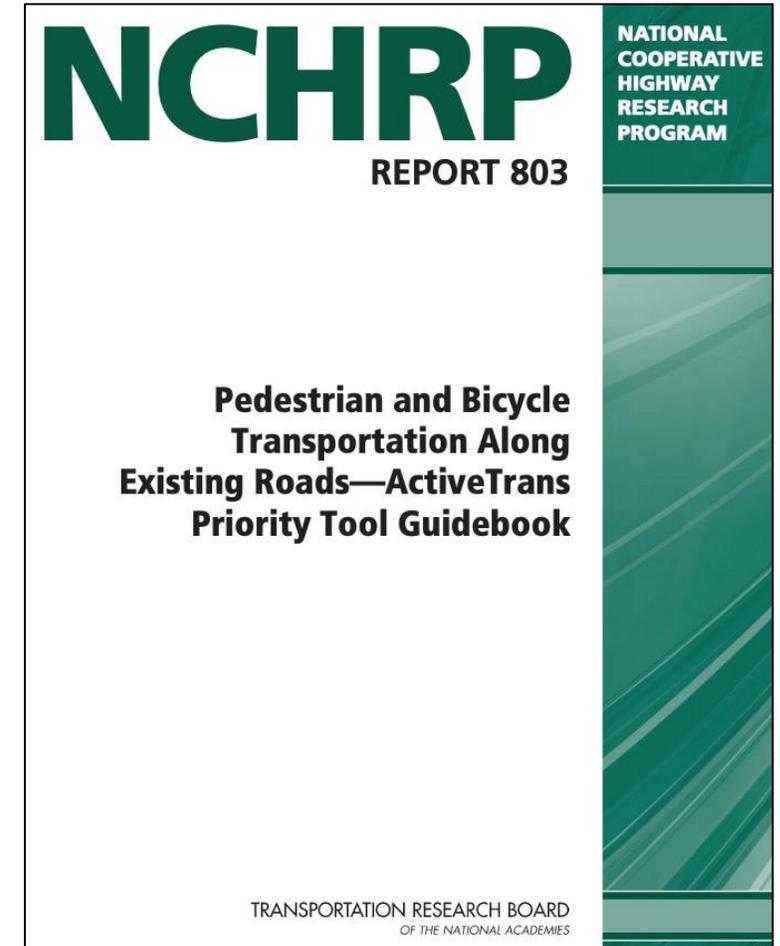
New Zealand Government

- Quiet streets
- Separated cycle lane
- Shared path
- City Centre



ActiveTrans Priority Tool

- Tool developed based on experience of 50+ US cities in planning walking and cycling networks



Factors included in the prioritisation method

Feasibility



- Business and resident parking impacts can be mitigated
- Network operations (traffic signals, maintenance) can be mitigated
- Ease of constructability (right of way, road profile)
- Consultation requirements

Cost



Rough order capital cost is lower

Asset management



Higher priority if cycleway can be part funded through planned road surface, kerb and channel or sub-surface pipe renewals

Safety



- Reported crashes involving people on bikes
- Heavier traffic routes

Demand



- Number of residents served
- Number of age 10+ school students served

Connectivity



Leverages previous investments in cycling network and/or connects to key activity centres / central city

Equity



Areas of high need as defined by the NZ social deprivation index

Modal conflict



Routes that are not freight or motor vehicle priority routes (unless there is more than enough width)

EXISTING CONDITIONS

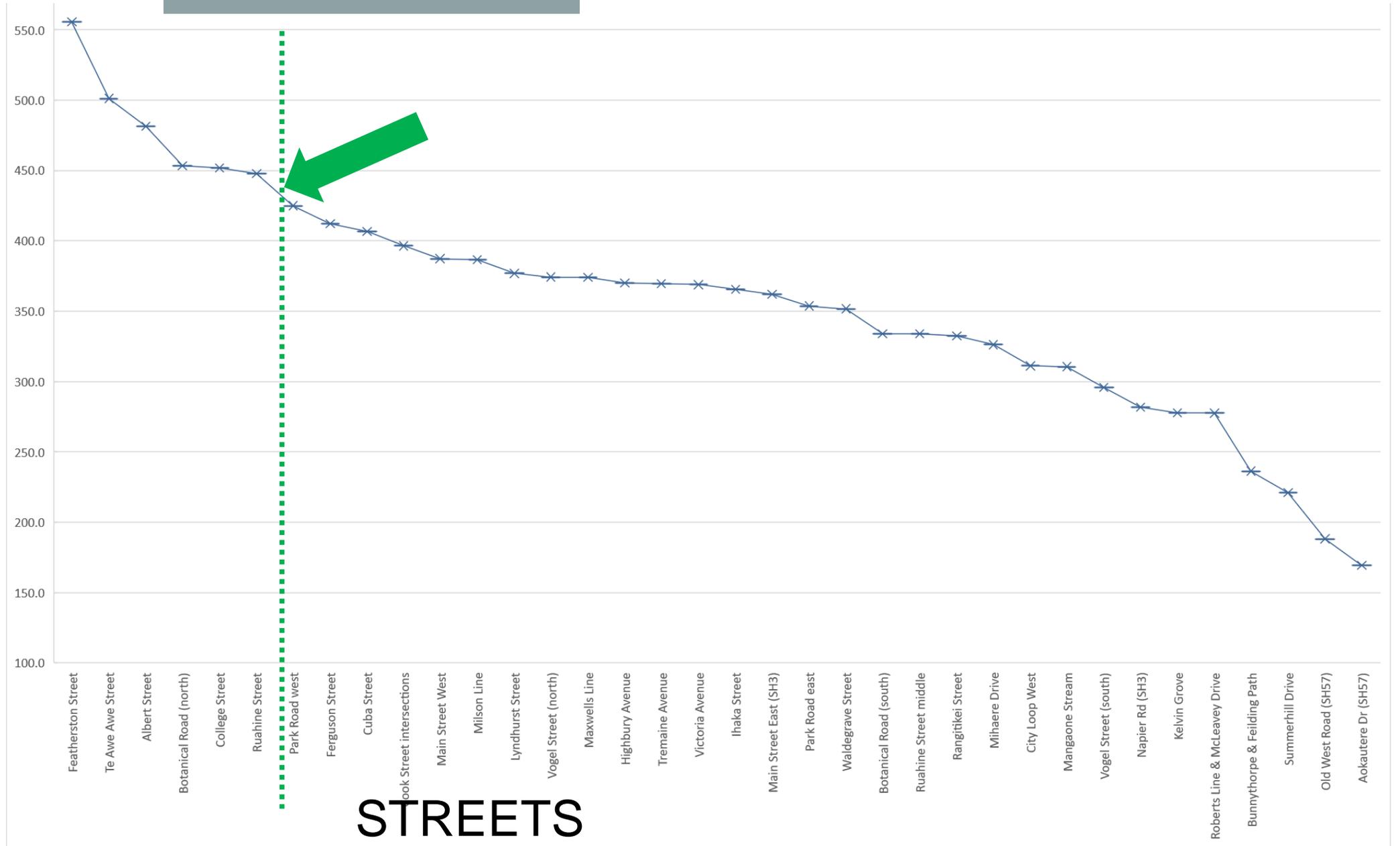
PLANNING PROCESS

Prioritisation results

OUTCOMES

CHALLENGES

POINTS



STREETS



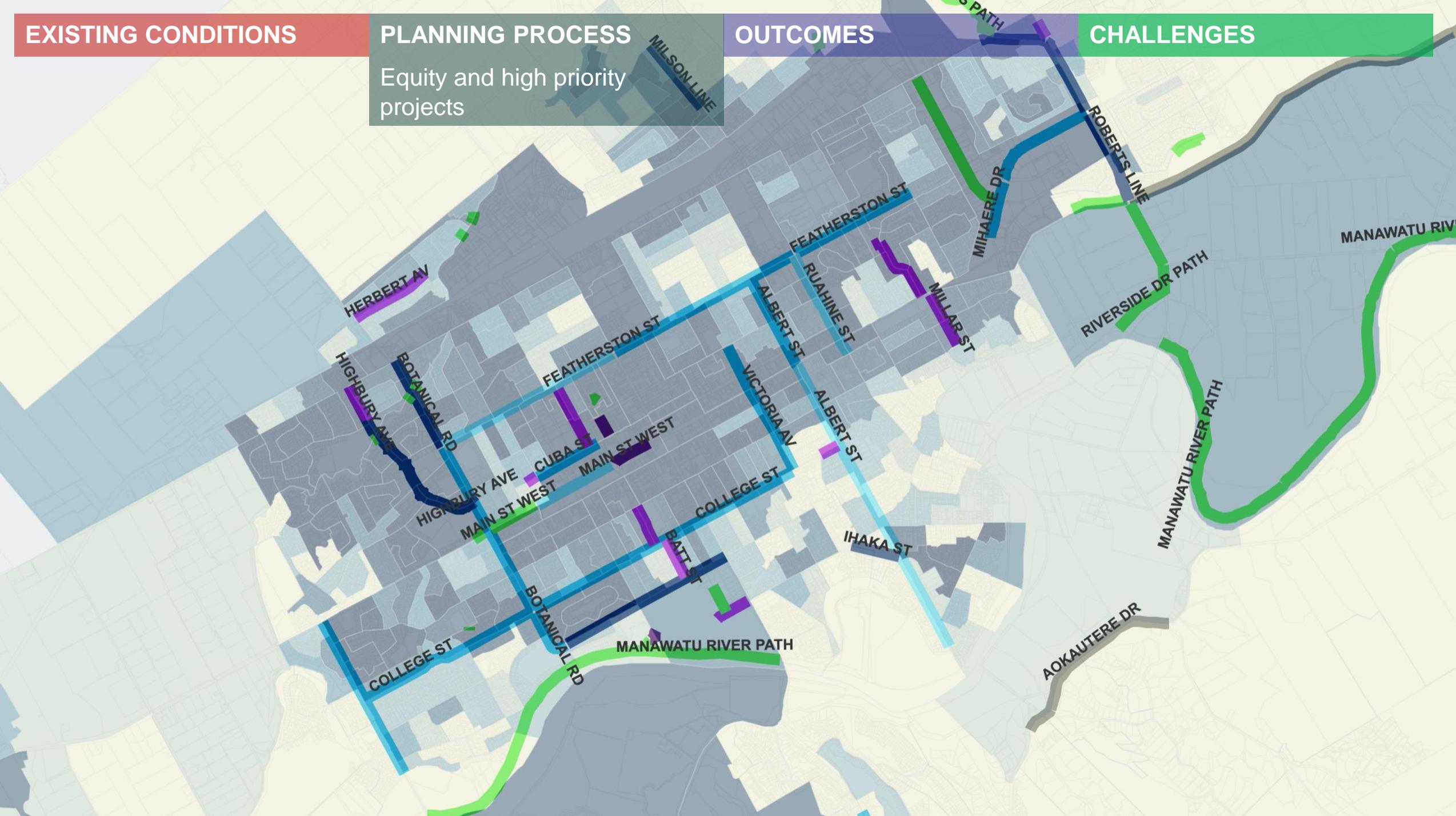
EXISTING CONDITIONS

PLANNING PROCESS

Equity and high priority projects

OUTCOMES

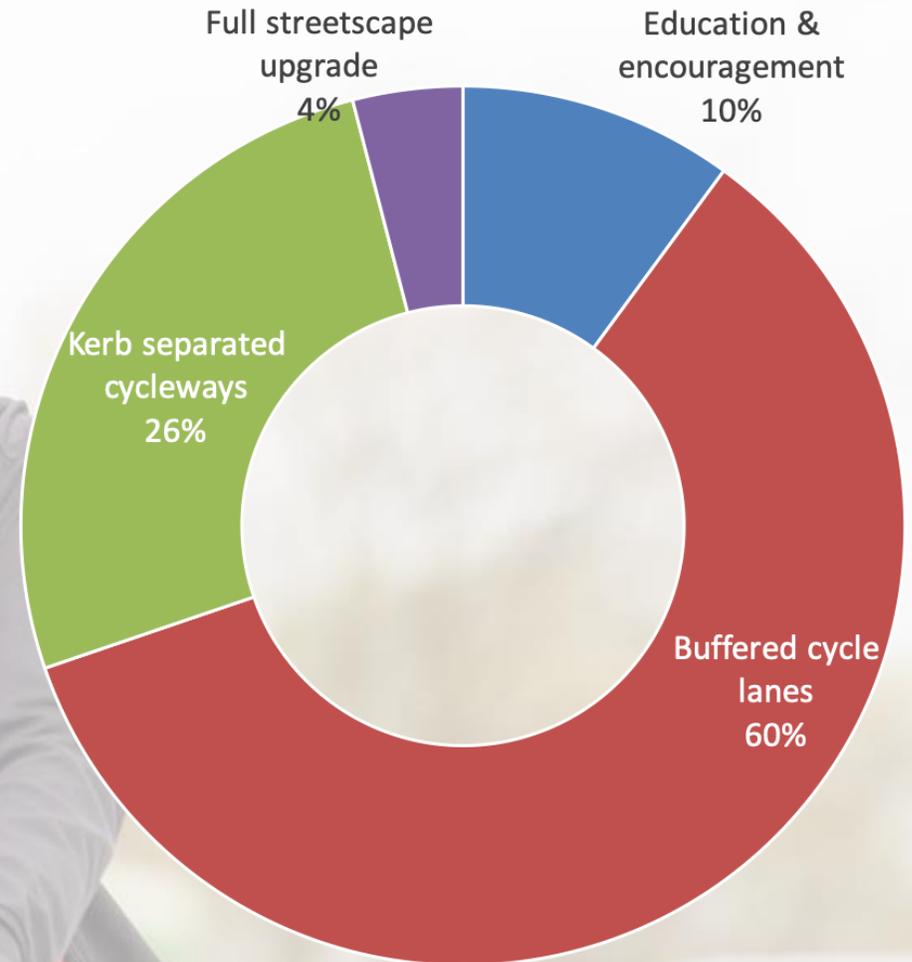
CHALLENGES



- Public facing plan (32 p)
- Online interactive plan & map (11 p)
- Business case (140 p)



- Aim for all ages and abilities, within network and transport mode constraints
- Equal emphasis on intersections and mid-block cycleways
- Support physical works with robust marketing & communications plan



3 How to provide for people on bikes

4 Separated cycleways on a major arterial

5 Separated cycleways on a minor arterial

6 Neighbourhood greenways on local streets

7 Current network: existing facilities & those needing upgrade

8 Near term: top priority projects

Thirty-six corridors have been evaluated. To build all of them would cost about \$30M and will take time and funding. Council has allocated \$2.9M for first phase implementation.

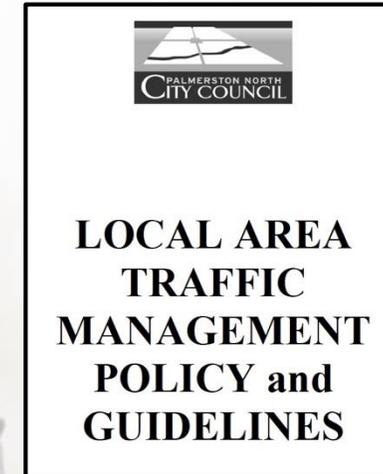
Initially, the plan suggests:

- Cook Street already has buffered cycle lanes - all this is required to complete the corridor is provision of cycle-friendly roundabouts and improved, safer access across Park Road into the Esplanade to connect to the Te Ara Kotahi bridge
- Broadway Avenue: subject to funding confirmation, Council proposes a safety-focused review of the street. Consideration should be given to the roundabout lane widths, balancing approach visibility, and potentially marking the roundabouts with sharrows and cycle lane merge treatments.
- Summerhill Drive: buffered cycle lanes are completed to link between IPU, residential areas, and the newly completed buffered cycle lanes on the hill part of Summerhill Drive.
- College Street cycleways are completed (this may not require funding from the Urban Cycleways Masterplan as funding has been separately sought from the NZTA)
- Botanical Road (College Street to Park Road): to better link to the newly opened Te Ara Kotahi bridge, cycleways are completed where options have already been discussed with school leaders and will be refined for further community discussion.
- Te Awe Awe Street cycle lanes are currently discontinuous and require people on bikes to swerve into traffic when cars are parked in the space usually used for riding. Investigation and consultation will be undertaken first to determine how to better link the existing cycle lanes, with construction following likely in year 3.
- Main Street West: separated cycleways connect the Pioneer Highway Shared Path with the central city. This will include cycling facilities at Botanical / Main signals and Pitt / Main signals.
- Campbell Street or Waldegrave Street (or both): a neighbourhood greenway is developed to include upgraded crossings of Featherston Street.
- Featherston Street: Council will be consulting on and designing the entire corridor; the first part (east of Ruahine Street) is developed.
- Old West Road and Aokautere Drive: the NZ Transport Agency plans to widen shoulders, providing a safer place for people riding and safer journeys for drivers as well.
- The Manawatu River Path downstream of the new bridge is sealed with concrete to reduce ongoing flooding-related maintenance costs and provide an all-weather surface for commuting. The length (extent) of this sealing work is to be determined, but will go at least as far as the end of Dittmer Drive.

9 Medium term projects



- Funding is constrained
 - Unless re-prioritise transport programme
- Intersections: no lead-in cycleways
 - Unless we reallocate space or widen streets
- Local streets: LATM Policy is dated (2003)
 - Review and adopt updated policy
- Parking: no current city-wide policy
 - Build on 2016-2018 parking plan



Continually
improve
public
engagement

EXISTING CONDITIONS

PLANNING PROCESS

OUTCOMES

CHALLENGES

Culture



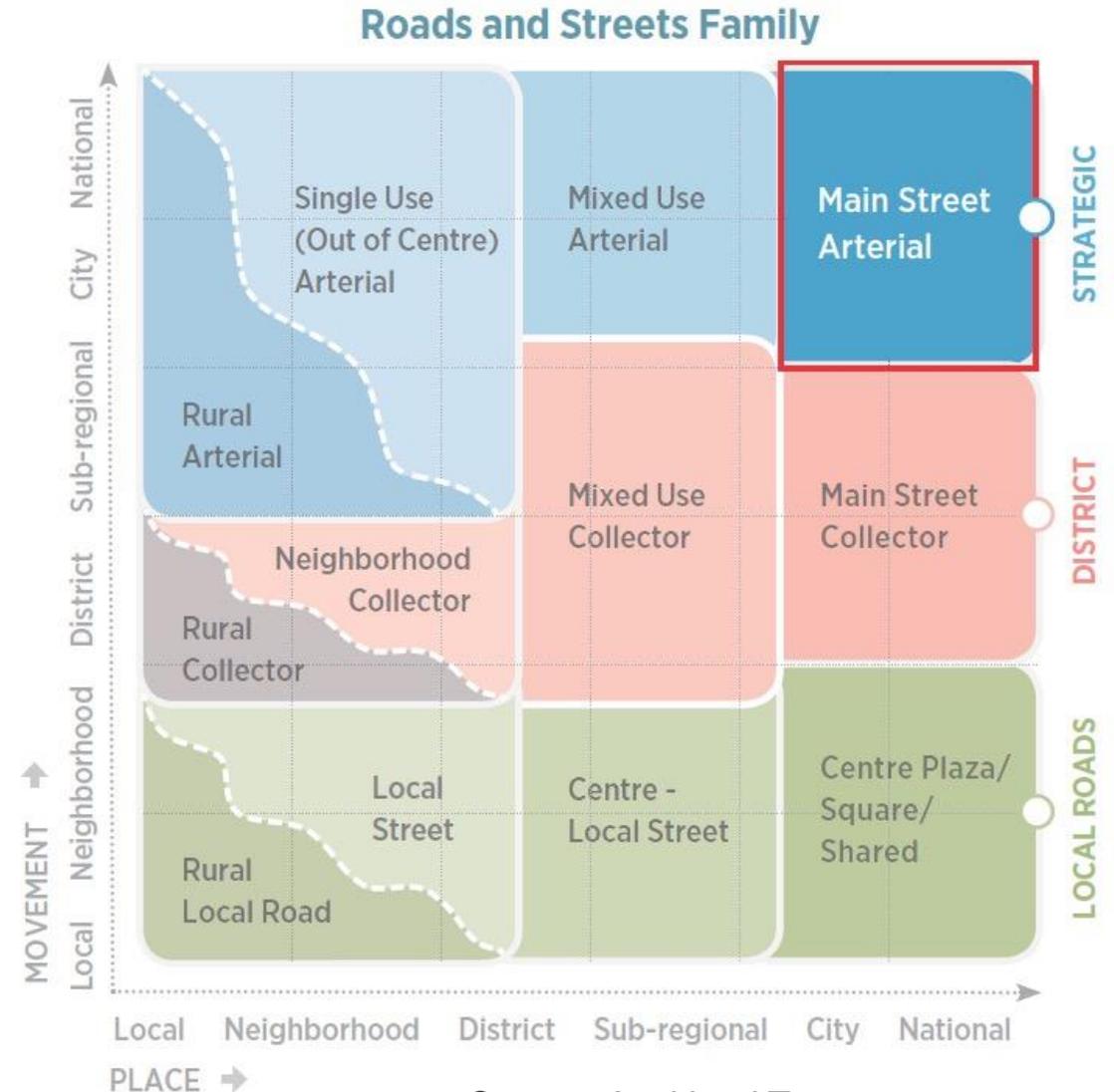
safety habit

perceptions
convenience

effort funding bias
 fear destination services
 non social norm street infrastructure
 ancool parking is free and easy competing priorities
 do what others do
 busy lifestyle
 end-facilities
 prefer walking
 lazy
 parents view of safety
 unpleasant experience
 inconvenient
 feel unsafe
 helmets
 vehicle convenience
 safety perception
 use to driving

culture

- Classify streets not only by car movement but also place value
- Inform future street design and renewals
- Cycleways plan will prioritise work that should not conflict with emerging framework



Source: Auckland Transport

CONCLUSIONS

1. My paper has detail, including why, in the era of Roads and Streets Frameworks and arterial masterplans, doing plans and business cases for individual modes remains important
2. We've heard David Sims to Daniel Newcombe there remains a view that paint-only cycle lanes are ineffective. But we also heard from Tim Hughes that recent NZ CLOS research shows they are appreciated by our customers and should be in our toolbox.
3. Telling stories helps
4. Prioritisation can be difficult and contentious
 - but there are tools to help
5. Building infrastructure is only one part of the solution

Thanks!



john@viastrada.nz

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Photo: Jack McKenzie