New Zealand Cycling LoS
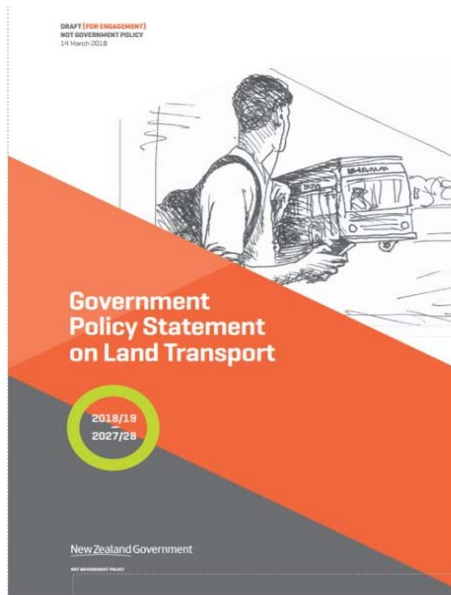
Peter Kortegast
Senior Transportation Engineer
Opus-WSP Consultants

Tim Hughes
Principal Safety Engineer (Active Modes)
NZ Transport Agency

Cycling is part of the transport system
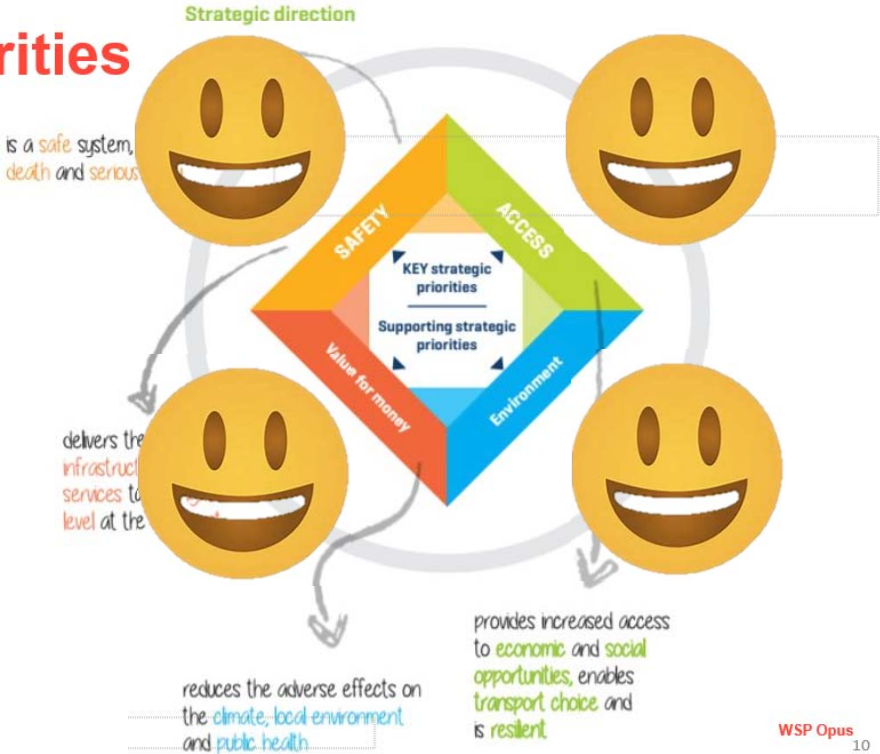
NZ is developing some world class and fun cycle networks

Uni Cycle MCR
Christchurch 2018
Supreme winner

Cycling a Key focus for Government GPS on Transport

Classification of facilities – www.nzta.govt.nz/cng

Classifying who is out there

Strong & Fearless

Enthused & Confident

Interested but Concerned

No Way No How

The Question is where to invest ? What is good and what is bad Infrastructure? What is value for money?

$2,500/km

$2,500,000/km (1,000 x more expensive)

2017 **WSP I Opus** were commissioned to develop a New Zealand Cycle LOS framework to answer this question ?

How we approached this:

- Steering Group- form a committee and have meetings

- Literature review of existing LOS systems

- Selected 6 routes two Auckland, two Wellington two Christchurch to cover a variety of facilities

- Had about 10 volunteer riders, ride each route (63 riders total) with our Opus Instrumented bicycle to rate 5 attributes of each section in NZ live traffic environments.

- 1,074 people undertook, on-line surveys of facility ratings using 77 live video clips of facilities, recorded on above rides. Each person rated a random sample of 10 clips.

- Asked:

  "As a cyclist how comfortable would you feel riding here?" (Six-point scale -3 to +3)

  "Would you cycle here?" (Yes/No)

Research in the field

- Six routes across Christchurch, Wellington and Auckland.
- 63 volunteer riders.
- Instrumented bicycle and surveying at checkpoints.
- Six-point Likert scale rating across multiple criteria
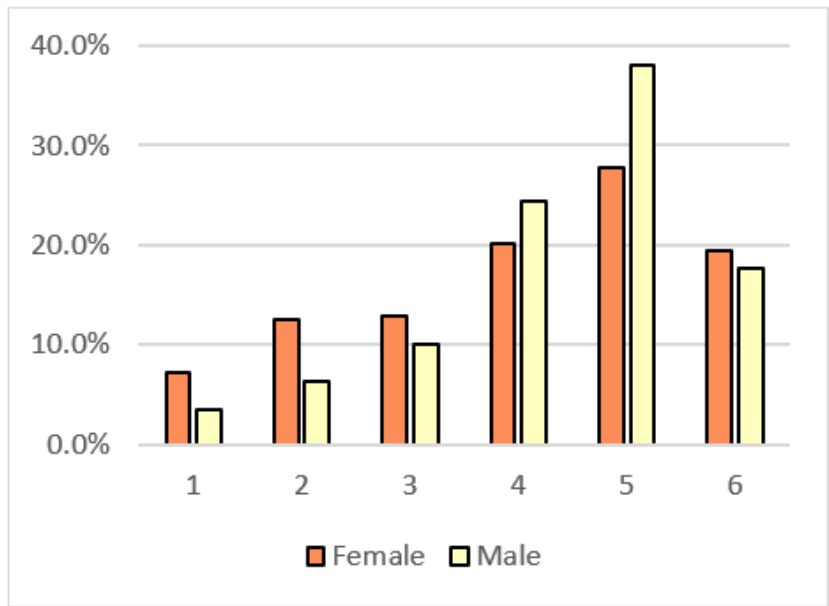
NZ Results

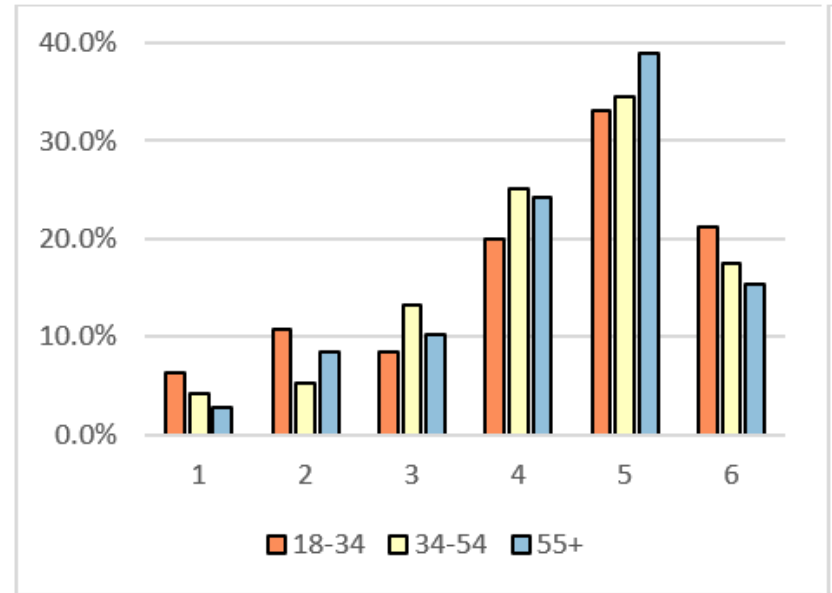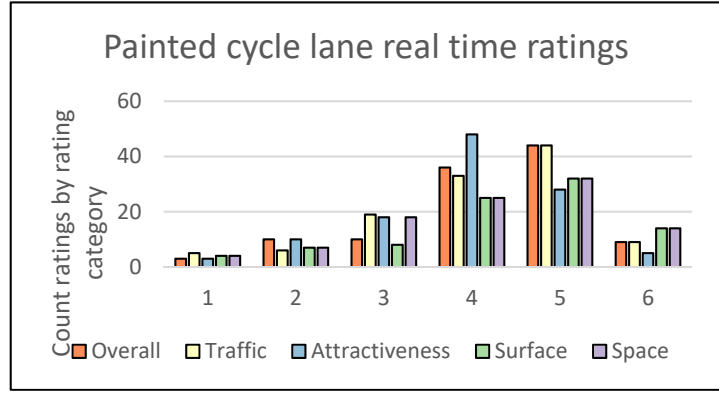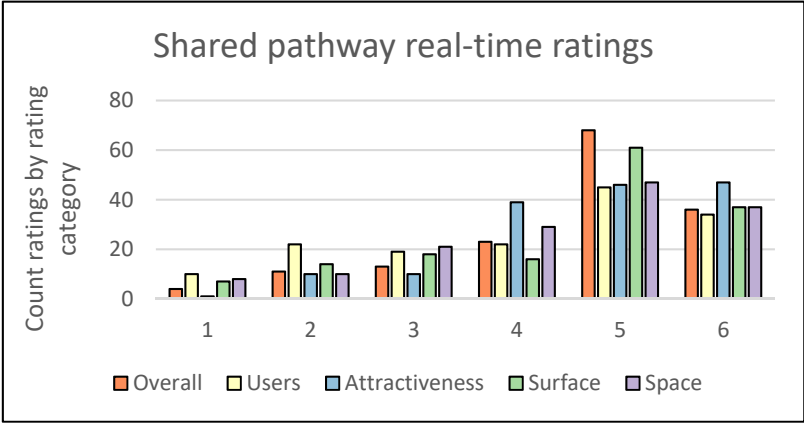Figure·5-1:·Distribution·of·overall·perception·ratings· by·gender·for·real-time·rides¶

Figure·5-3:·Distribution·of·overall·perception·ratings· by·age·group·for·real-time·rides¶

Separated cycle lane real-time ratings

Shared pathway real-time ratings

Painted cycle lane real time ratings

Shared Roadway → Painted cycle lane → Shared pathway → Separated cycle lane

NZ TRANSPORT AGENCY WAKA KOTAHI

New Zealand Government

NZ Results

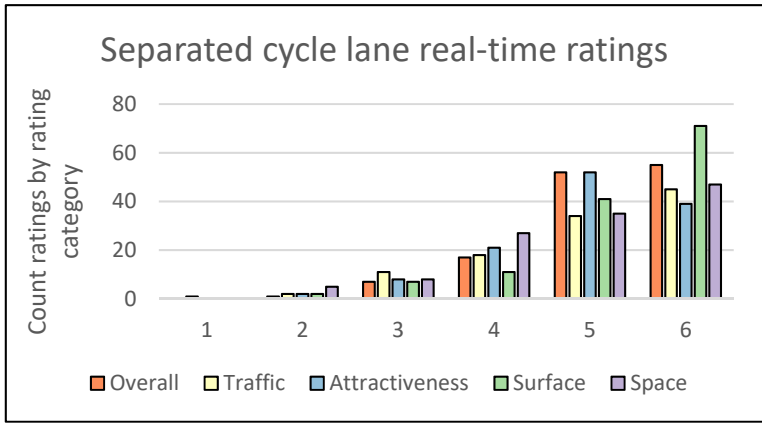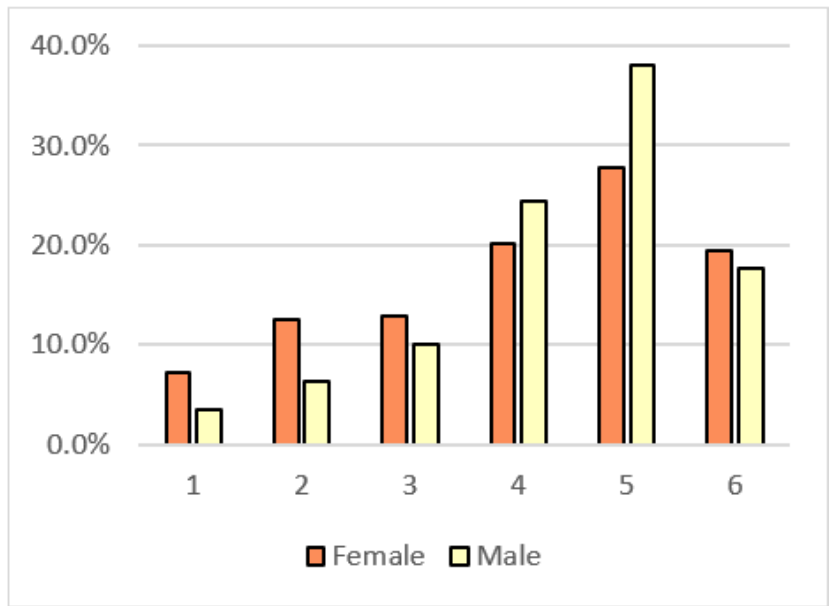Figure·5-1:·Distribution·of·overall·perception·ratings· by·gender·for·real-time·rides¶
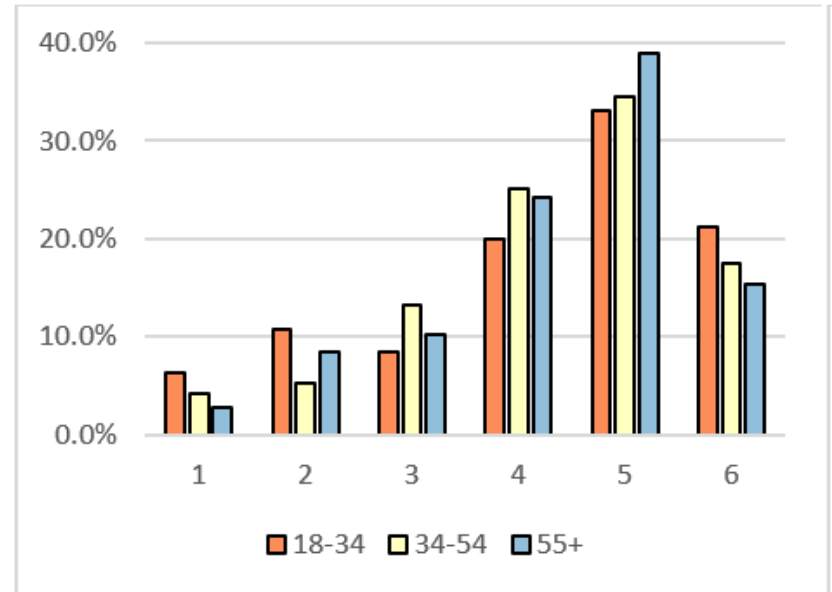

Figure·5-3:·Distribution·of·overall·perception·ratings· by·age·group·for·real-time·rides¶

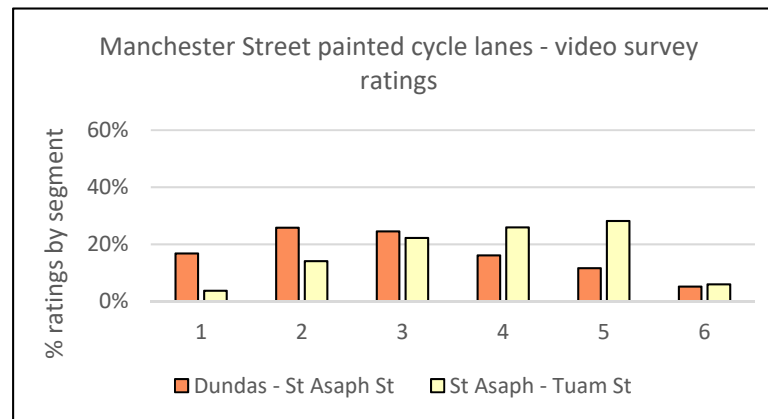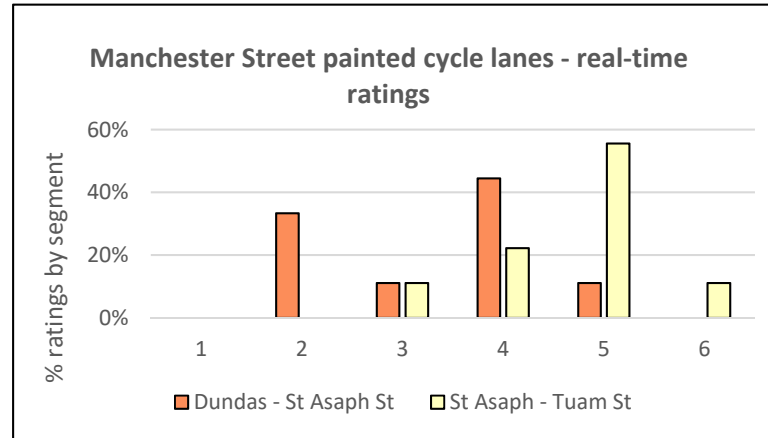# Results

Mean real-time ratings for Wellington waterfront segments
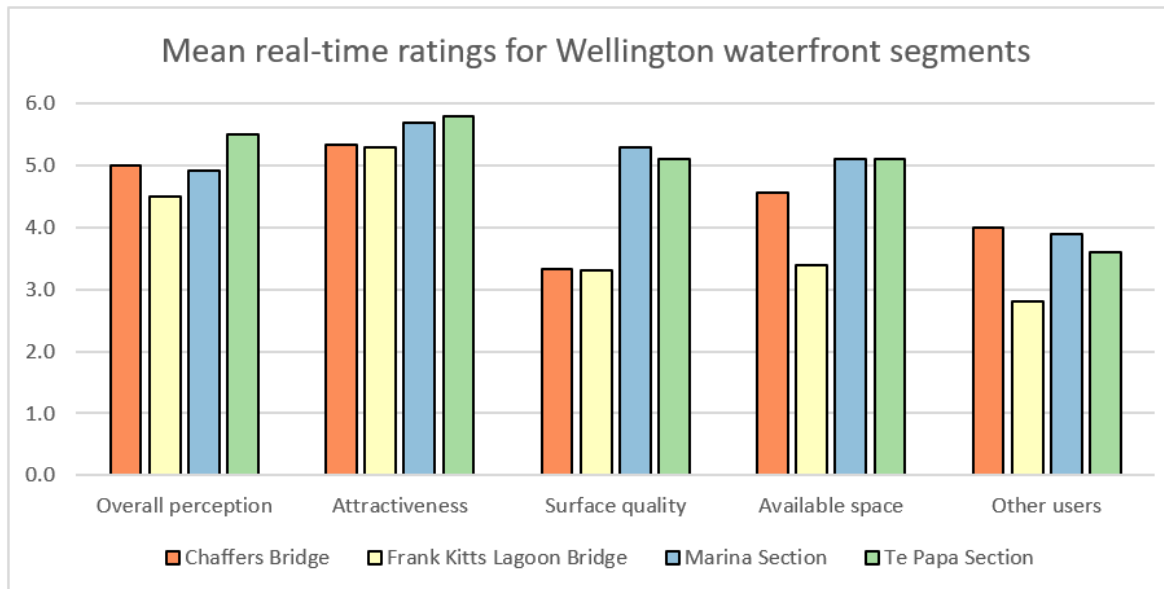
Dundas to St Asaph Street

St Asaph to Tuam Street

Manchester Street painted cycle lanes - real-time ratings

Manchester Street painted cycle lanes - video survey ratings

Proposed Painted Cycle lane Factors

Vehicle volume	Overtaking gap & Vehicle volume	
Vehicle speed	Overtaking gap & Vehicle speed	
Heavy vehicles	Parked vehicle interactions	
Parked vehicles	Driveways/Sideroads & Vehicle volume	
Effective lane width		
Overtaking gap		
Driveways and Sideroads		
Gradient (up and downhill)		
Surface quality		
Social safety		

What Next

This research did not get us all the way to a new Cycling LoS tool.

We have good data for most situations with little traffic.

We have lots of useful insights, but need to use more data:

Need more evidence especially for the effect of variations in traffic speed, traffic volume, and adjoining access.

Reviewing the data and results from other studies -USA, Denmark and NZ 2005.

Collecting more data:

If you are collecting cyclist perceptions data - please use the same scale as us and compatible questions.

 - Crowdsourcing options

Bel

Simple single button remote with fully customisable 3D printed case.
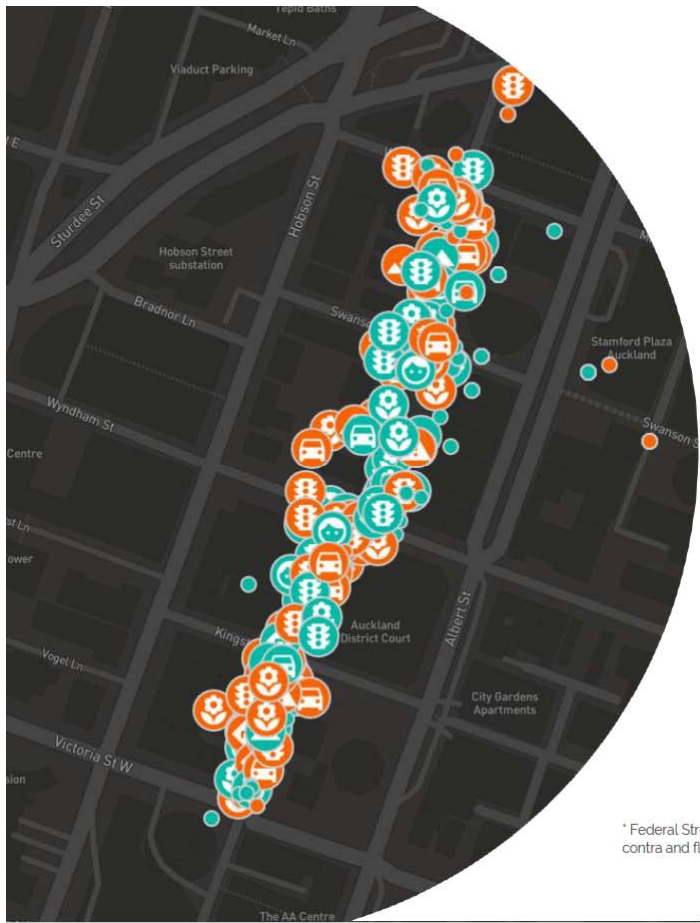
App

Free, geo-location App that provides online and offline sentiment data capture.

Map

Crowd-sort you profiling projects with our simple trip analysis tool.

SENSiBEL

Working the crowd.

The objective of Sensibel is to crowdsource human-centred feedback and provide dense data to analyse and cluster into key trends.

* Federal Street audit. 12 Profilers, 3 trips contra and flow, over 1 hour.

Biking to the Future together

THANK YOU