

New Zealand national cycling guidance: a tailwind for planners and designers

Presentation to Bike Futures
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ViaStrada Ltd

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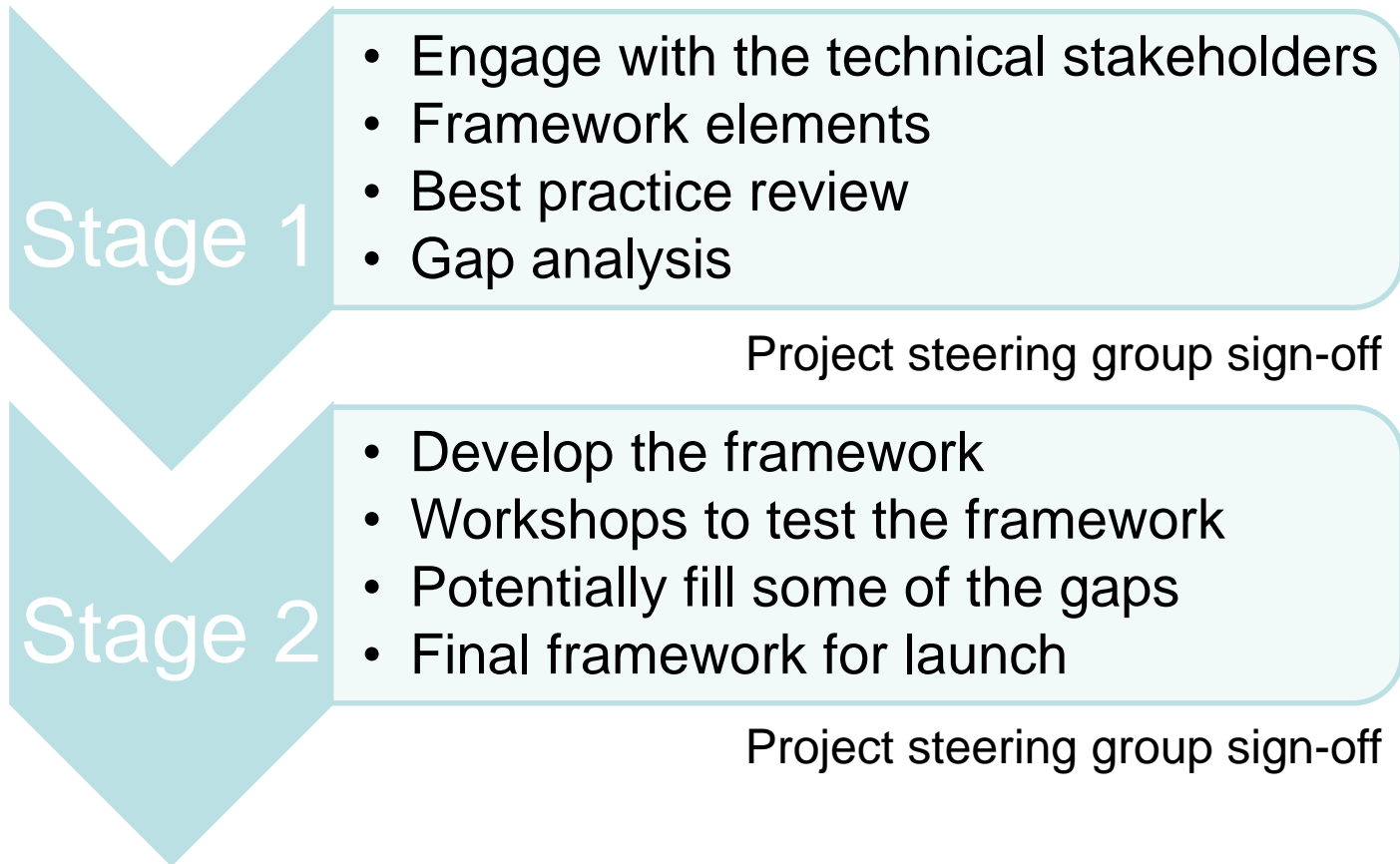


Cycling: New Zealand's new priority

- Cycling is one of the NZ Transport Agency's six priorities for 2015–19
 - Goal: 30% increase in cycling by 2019
- Unprecedented level of spending
 - NZ\$350m in the next three years
 - Step change in volume of implementation
- NZ planning and design guidelines under review



Develop best practice guidance – process



Outcomes

- Updated guidance
 - ‘Quick wins’
- Website that references guidance
 - ‘Framework’

Quick wins – definition

- Experienced practitioners agreeing on what represents current best practice
- New content developed where needed
- Some of that guidance already taught in industry training, and now documented as guidance <http://viastrada.nz/cycling-training>
- Subsequently, some gaps will be investigated further as separate research projects (including more work on quick wins)

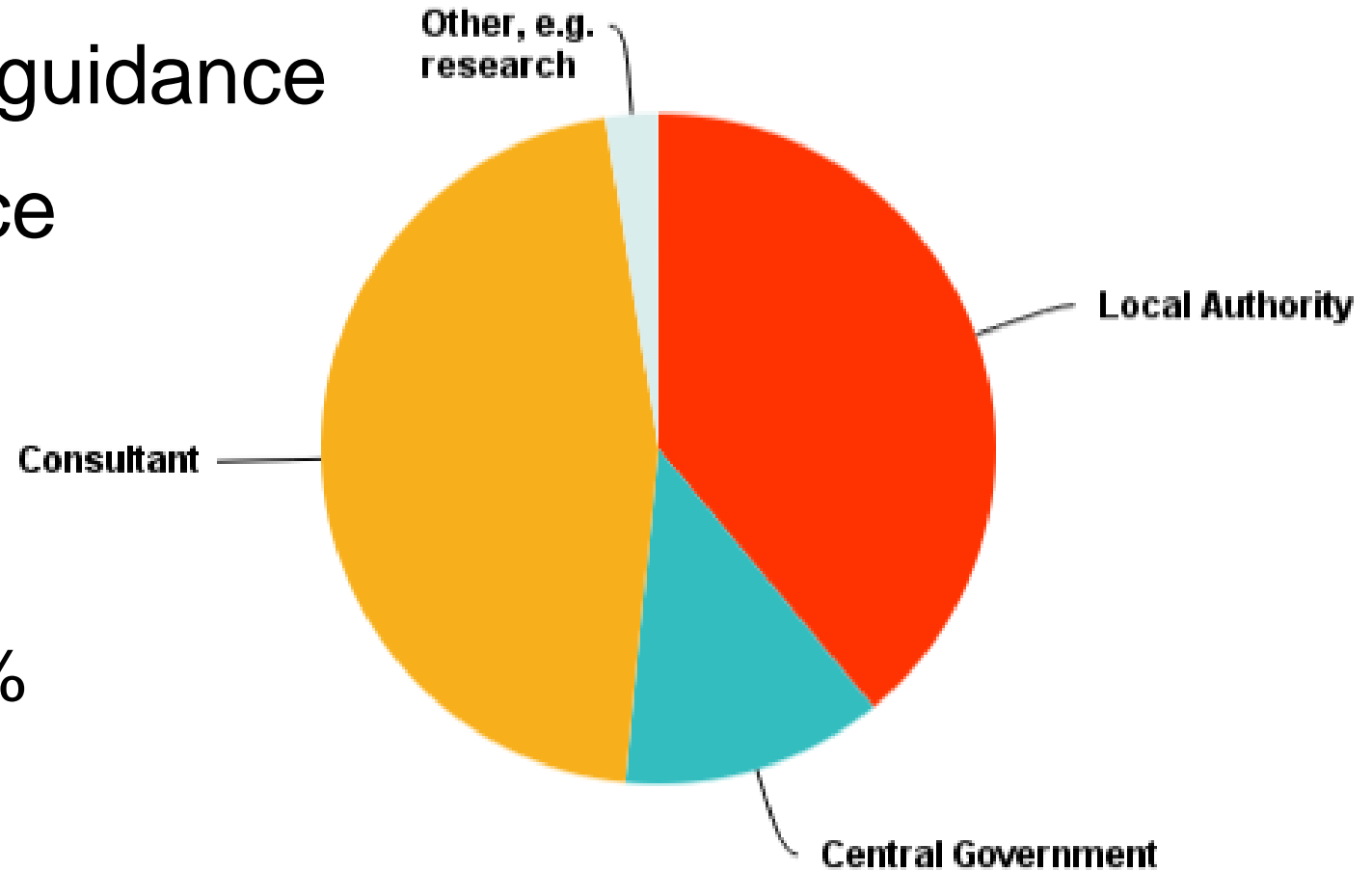
“Innovative best practice always precedes published guidance”

— *Tim Hughes, NZ Transport Agency*



Survey of technical stakeholders

- Identify strengths and weaknesses of current guidance
- Identify gaps in guidance
- Total of 160 responses
 - Consulting sector 46%
 - Local government 39%
 - Central government 13%



Main issues identified

Planning issues

80

Insufficient or inadequate guidance on how to assess demand for the network

73

Insufficient or inadequate wider transport policy to support development of a cycle network

Design issues

130

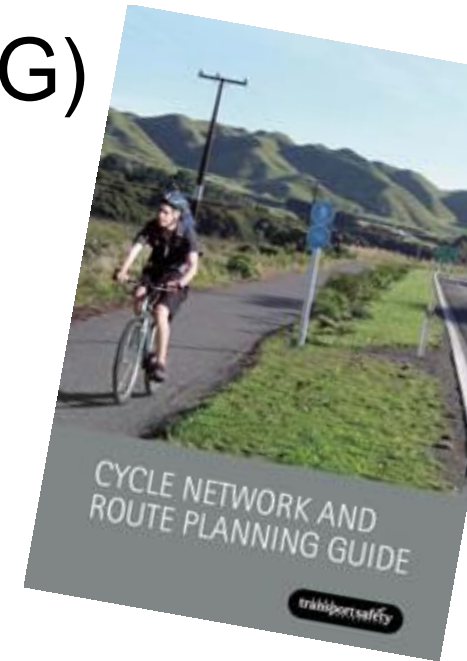
Road space allocation issues, e.g. parking removal

72

Insufficient or inadequate guidance on intersections

Feedback on good guidance

- Cycle Network and Route Planning Guide (CNRPG)
 - most of it, despite it being from 2004
- NZ Supplement to Austroads Part 14
 - Need to find a new home for Supplement guidance
- Christchurch and Auckland have developed guidance where there was none
- Road Controlling Authorities leading research such as sharrows



Lots of gaps in guidance identified

Type of Gap	Section (s)	Gap number and description	Policy or other action for Agency to consider outside of this project	Requires Research to determine best approach	Requires Legislation Review	Requires Approved Trial	Requires Full Guidance to be Developed	Quick Win
	6.5 Roundabouts	G64 Signalised Roundabouts. Matrix for when these may be applicable would be useful						Add to TCD Manual Part 4 that this type of roundabout exists and provide link to research/international guides
Not Considered Best Practice	6.4 Signalised Intersections	G47 Definition of cycle aspects and inclusion of directional cycle aspects, nearside signals trial			Underway?	Underway?		
	All	68 gaps in total						
	6.4 Signalised Intersections	G48 Definition of cycle aspects and inclusion of directional cycle aspects, nearside signals trial as a way to clarify give way rules						Add to TCD Manual Part 4
	6.4 Signalised Intersections	G49 Merits of different lane layouts						Add to TCD Manual Part 4
	6.4 Signalised Intersections	G55 All red time extension for wide signalised intersections. Austroads did not adopt approach outlined in the NZ Supplement to Austroads Part 14						Add to TCD Manual Part 4
	6.3 Priority/Uncontrolled	G46 Auxiliary lanes and slip lanes, guidance is required for what is not acceptable along key cycle routes						Add to TCD Manual Part 4

Including 39 “quick wins”, which are part of the stage 2 scope

Quick wins overview

- Quick wins relating to the planning process, i.e. the CNRPG (9 quick wins in total)
- Quick wins relating to the TCD Manual, in two parts
 - Part 4: TCDs for general use at intersections (16 in total)
 - Part 5: TCDs for general use between intersections (12 in total)
- Quick wins relating to neither the CNRPG nor TCD Manual thus requiring the development of interim guidance notes
 - Combined into a single interim guidance note (2 in total)

CNRPG = Cycle Network and Route Planning Guide
TCD Manual = Traffic Control Devices Manual

QW example: 4 types of transportation cyclists

Strong & Fearless

Enthusied & Confident

Geller (2009) 4 Types of Transportation Cyclist

Interested but Concerned

No Way No How

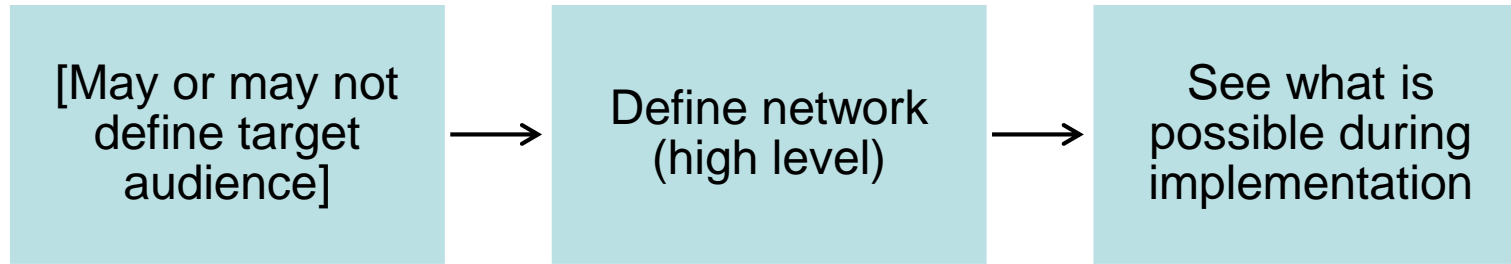
Geller typology replaces trip types

- Simpler (2 main types instead of 5)
- Old method was seldom used in practice
- Geller now forms the basis for much of the other guidance, e.g.
 - Network planning
 - Facility selection

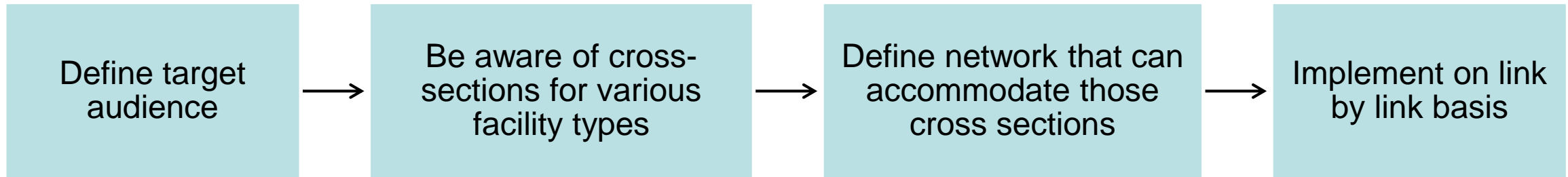
NEIGHBOURHOOD	COMMUTING	SPORTS	RECREATION	TOURING
To shops, school, or riding near home	To get to their destination efficiently	To be physically challenged	To enjoy themselves and get some exercise	To see new and enjoyable places and experiences

QW example: Network / route planning

Old approach



New approach



Identifying target audience now fundamental part of route planning

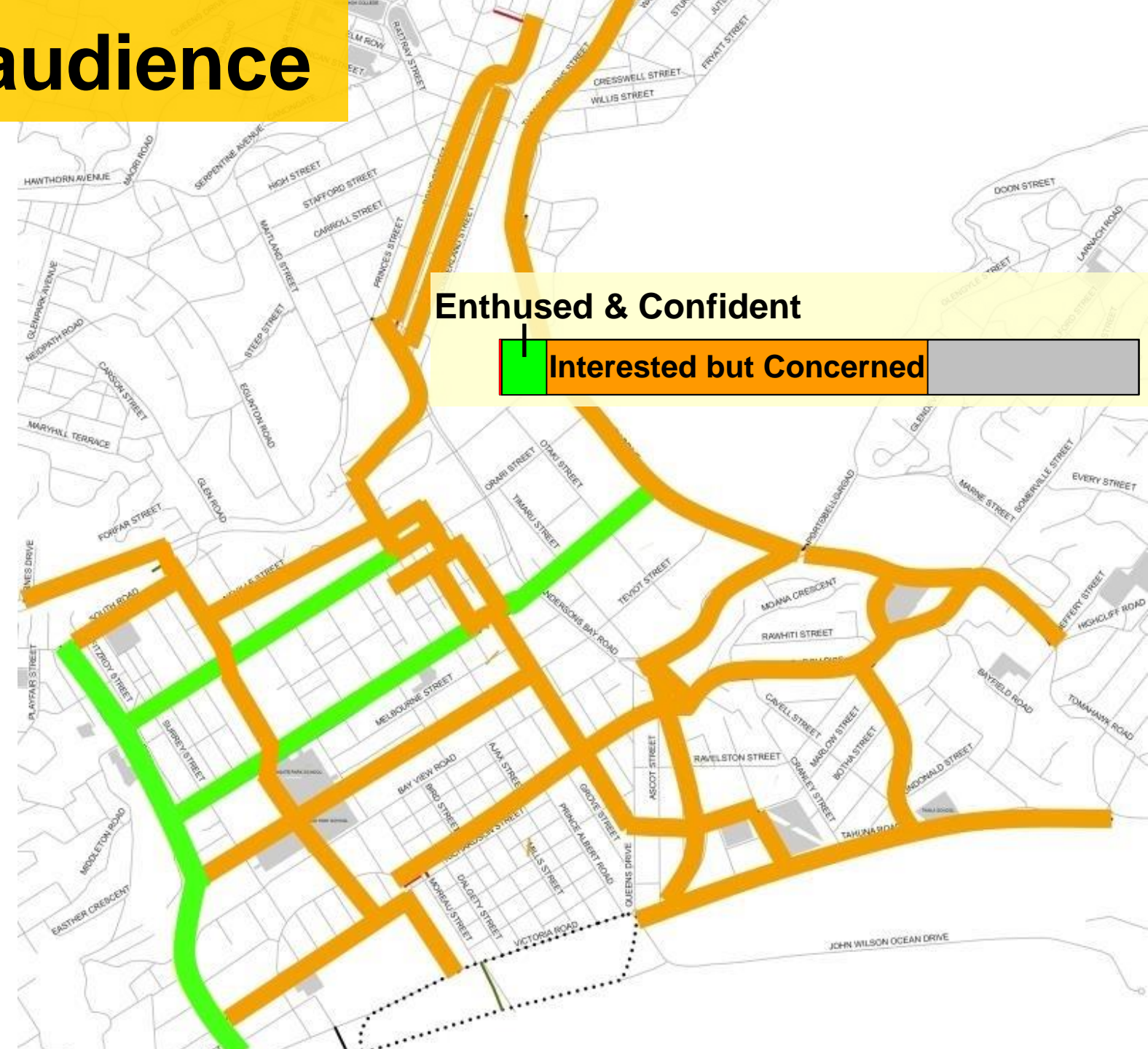
Key differences

- Be deliberate about target audience
- More upfront planning effort

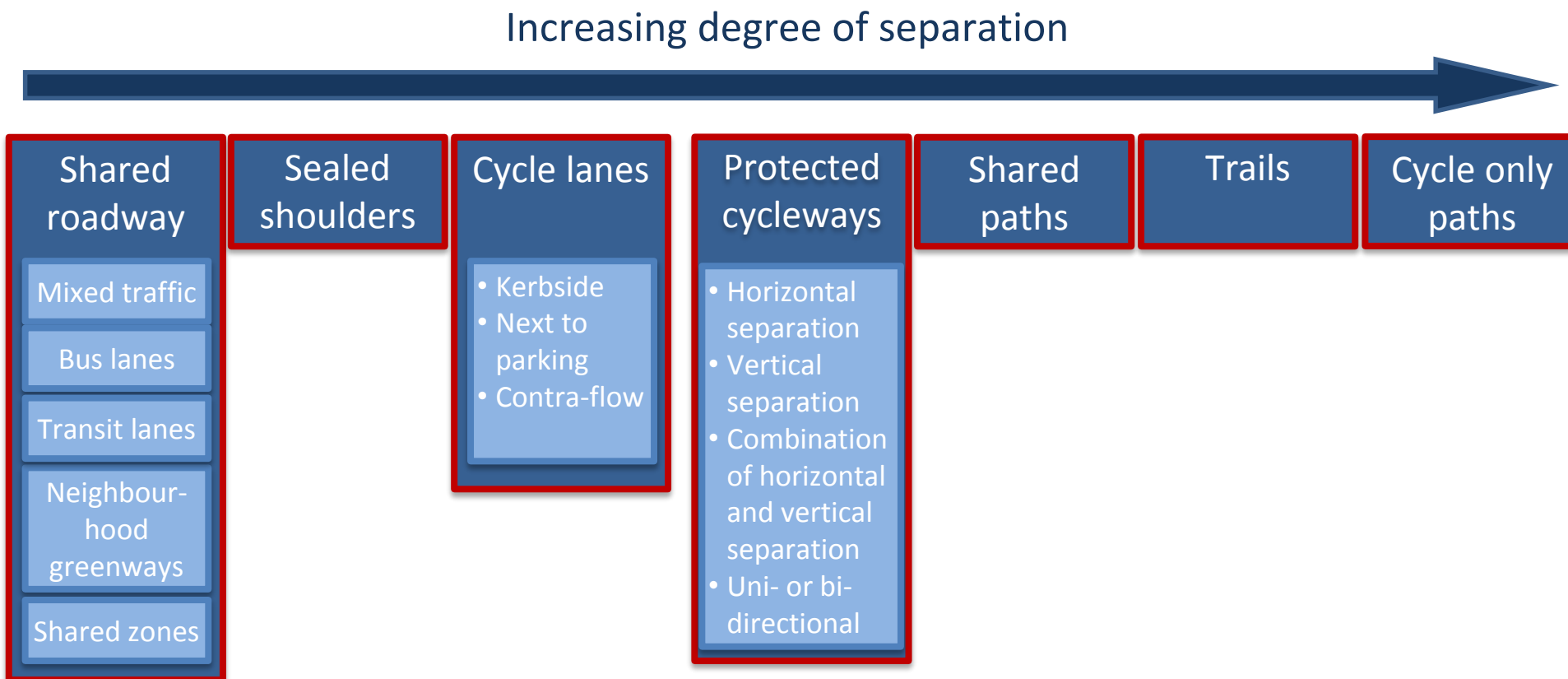
Network by target audience

- Example of network planned by target audience
 - Note more than one target audience
- Presented at 2014 Velo-city Adelaide

<http://viastrada.nz/node/1992>



QW example: Facility types and target audience

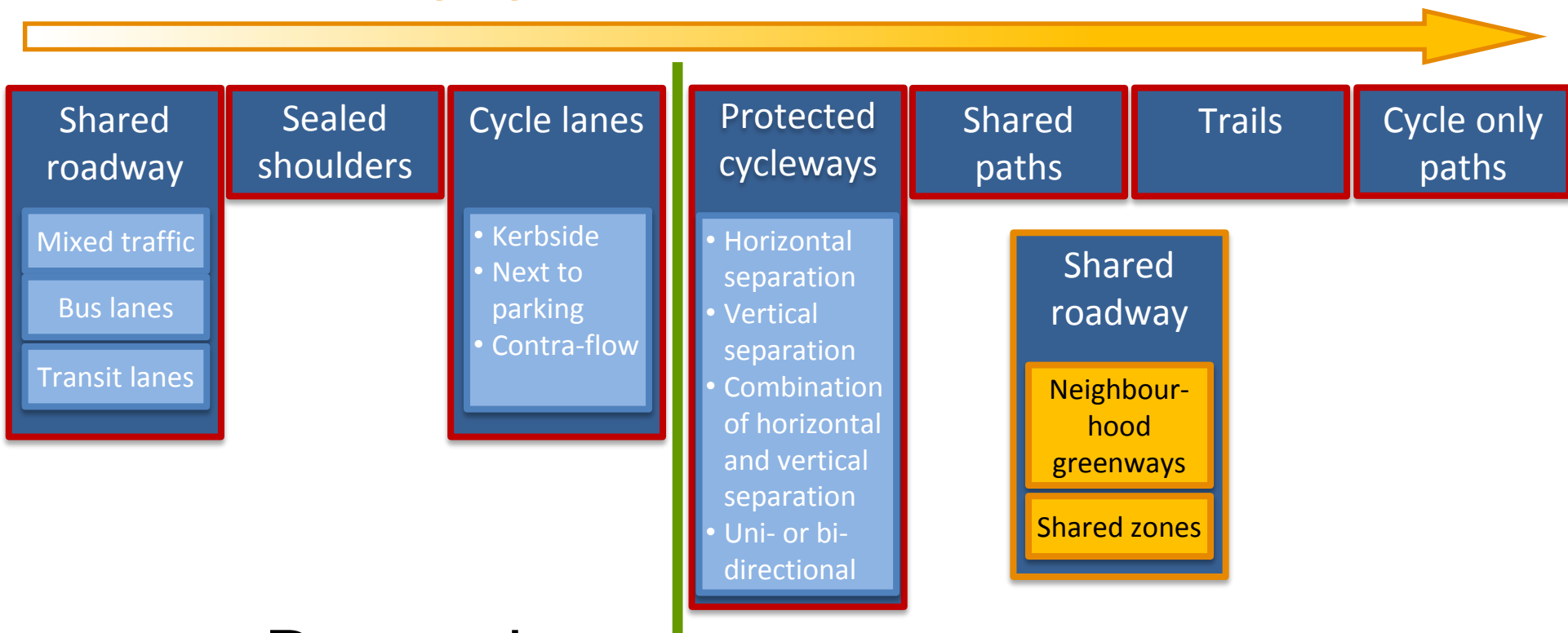


Remember:

- Separation comes in varying degrees and styles

QW example: Facility types and target audience

Increasing degree of comfort for *interested but concerned*



Remember:

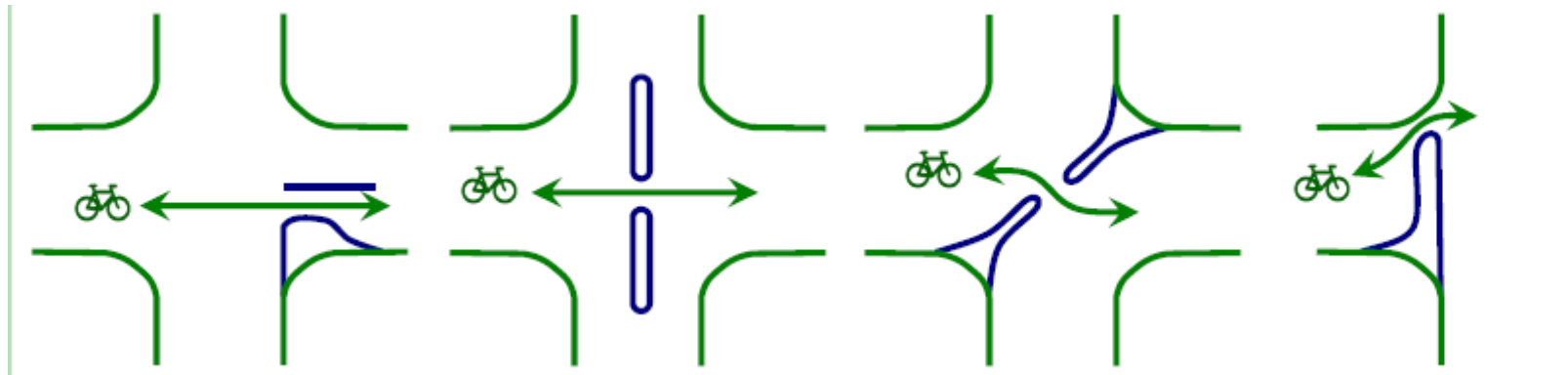
- “shared roadway” (i.e. non-separated) may still be ok for *interested but concerned*!

QW example: Neighbourhood greenways

- Useful tool where backstreet routes can form part of a formal cycle network
- Not defined in Austroads
- Useful guidance in NACTO
 - Traffic volume and traffic speed



Walker, et al (2009)



QW example: Facility selection tool

- Often difficult to choose between protected cycleway options
 - Bi-directional versus uni-directional facilities
 - Contra-flow movement has higher crash risk
 - But how to account for number of driveways / side streets / commercial driveways / larger car parks?
- Spreadsheet tool under development
 - Relative risks defined for various conflict points



QW example: Facility selection tool

North side:

- 39 residential driveways (66 properties)
- 1 side street with high volumes
- 1 side street with low volumes (cul-de-sac)

Various options at major intersection also factored into decision



2-way protected cycleway on south side determined to be the safest option

South side:

- 6 residential driveways (13 properties)
- 1 side street with high volumes (to be signalised)
- 2 commercial driveways with heavy vehicles
- 2 driveways to sporting facilities

Summary

- NZ planning and design guidelines under review
 - 68 guidance gaps identified
 - 39 of those are ‘quick wins’
- Key quick wins include:
 - Geller typology for network planning and facility choice
 - Neighbourhood greenways
 - Spreadsheet-based facility selection tool
- Web-based ‘framework’ for best practice guidance
 - Launch in early 2016

<http://tinyurl.com/pmgxf4n>



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