

# Community Sentiment Mapping

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2015

# Minimal Viable Product

Briefing

Bike ride

Workshop



People + Experience

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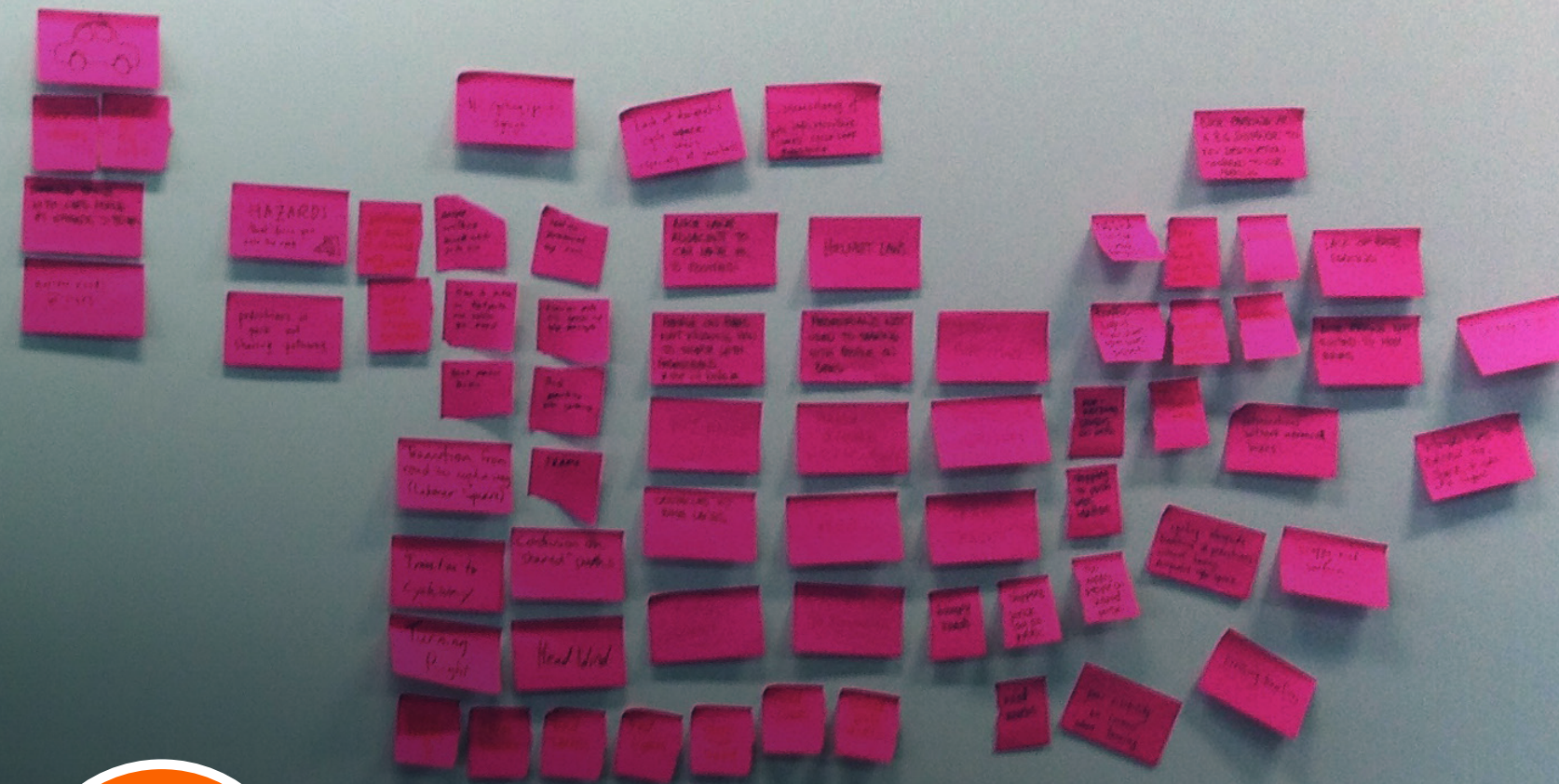
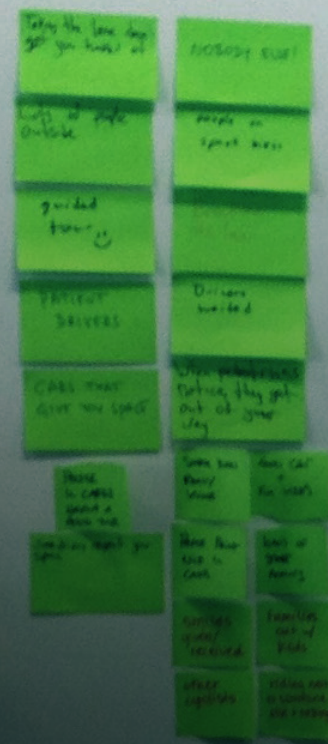
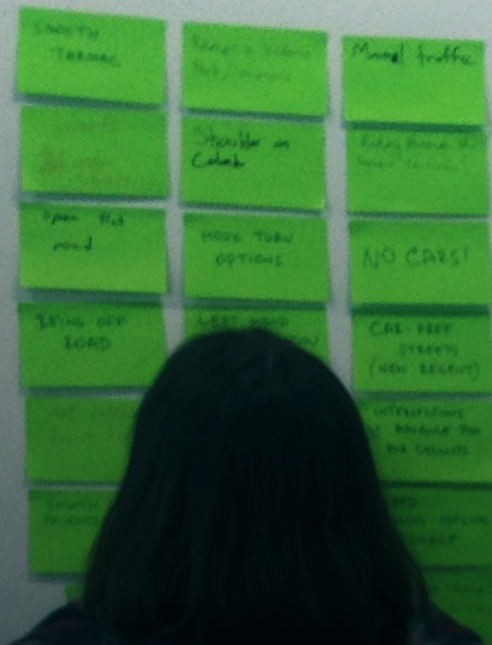
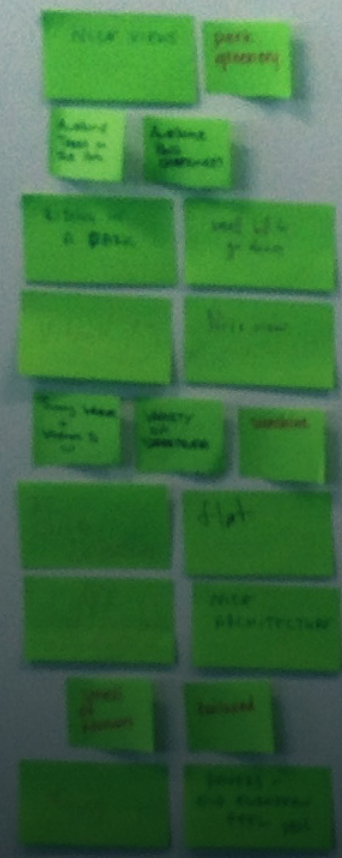
Purpose

# First Encounter Enquiry



# Mechanism to gather sentiment





# FLUFFY + - TECHNICAL

People being nice  
Nice Weather  
Smell of flowers  
Smiles

Crappy road surface  
No advance boxes  
Traffic lights with bikes priority  
Cycle lane to nowhere



# The Detonator

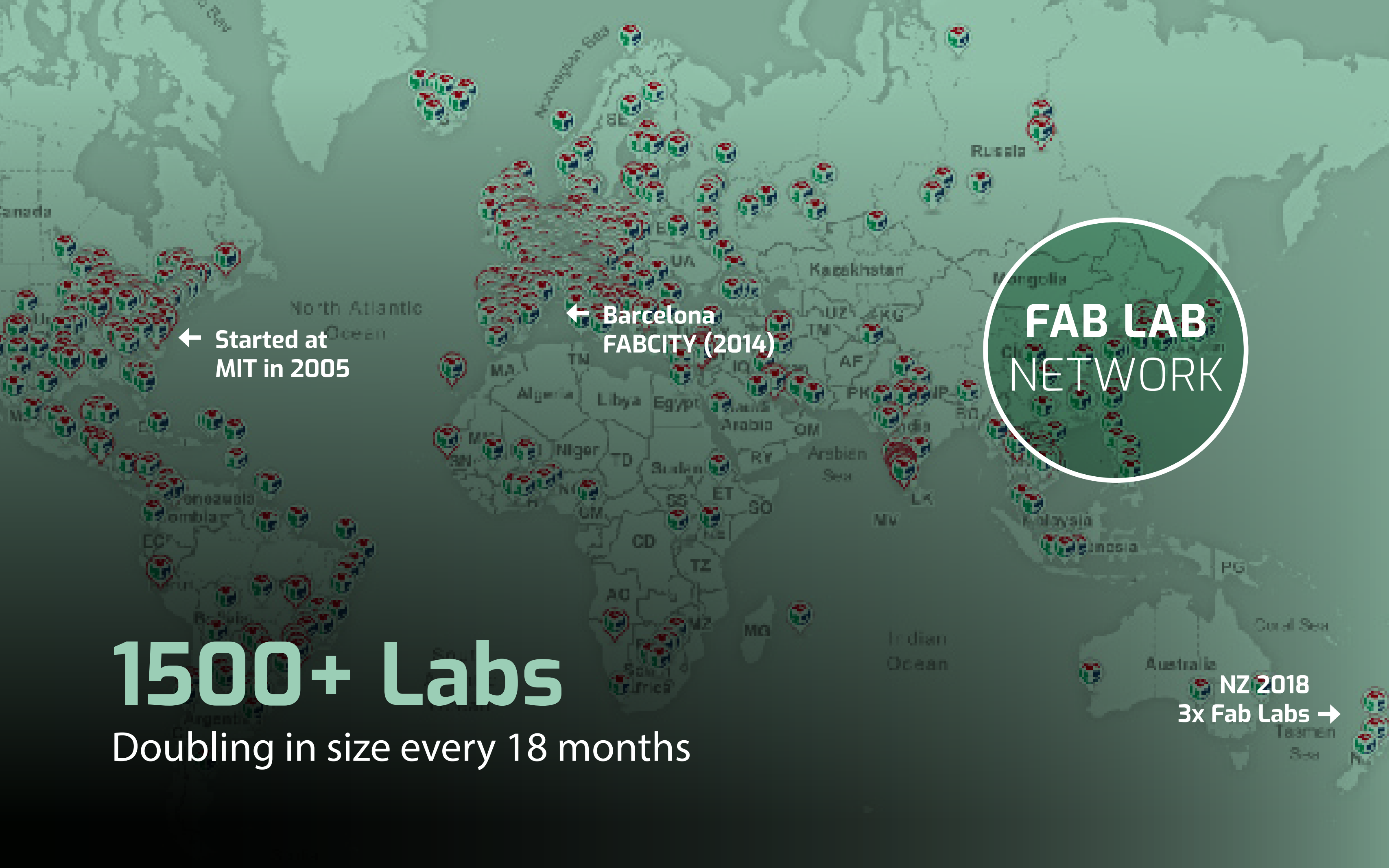
2015

8 Weeks

10 x units

25 people

**RAPID  
PROTO-  
TYPE**



**FAB LAB  
NETWORK**

← Started at MIT in 2005

← Barcelona FABCITY (2014)

NZ 2018  
3x Fab Labs →

**1500+ Labs**  
Doubling in size every 18 months



An aerial night view of Christchurch, New Zealand, showing the city lights and the illuminated Christ the Redeemer statue. Overlaid on the image are two logos: a blue square on the left with the text 'FAB LAB CHCH' and a multi-colored hexagon on the right with the text 'FAB CITY'. A white arrow points from the blue square to the hexagon.

**FAB  
LAB  
CHCH**

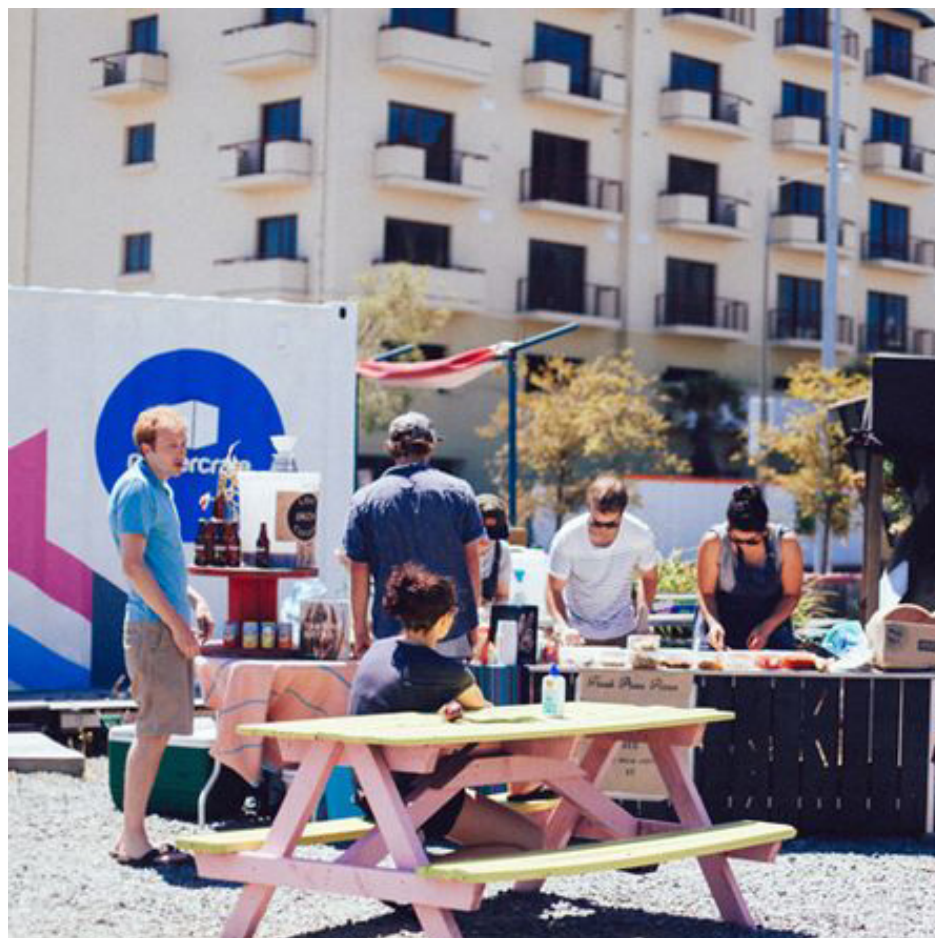


**FAB  
CITY**

# Participation

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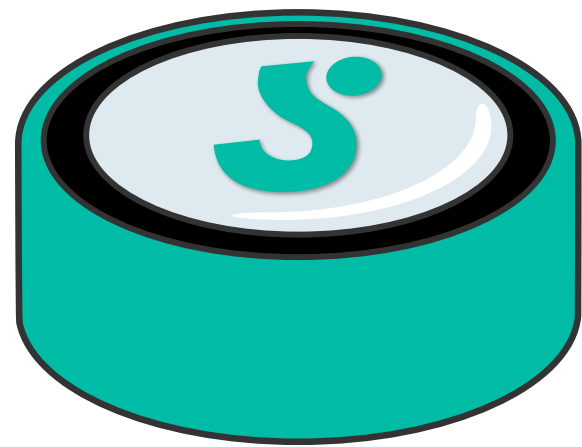


# Engagement

*Charleston*  
★ BIKE CLUB ★

# 1. Capture

Positive or negative experiences are lodged on a bell-like device

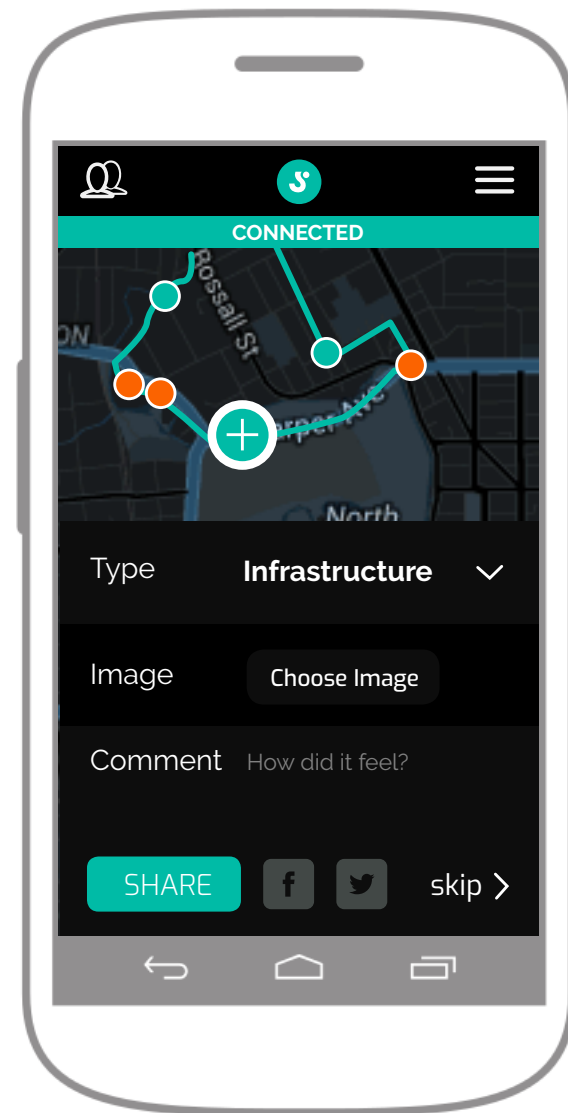


SENSIBEL

Bluetooth enabled  
Sensibel device.

# 2. Annotate

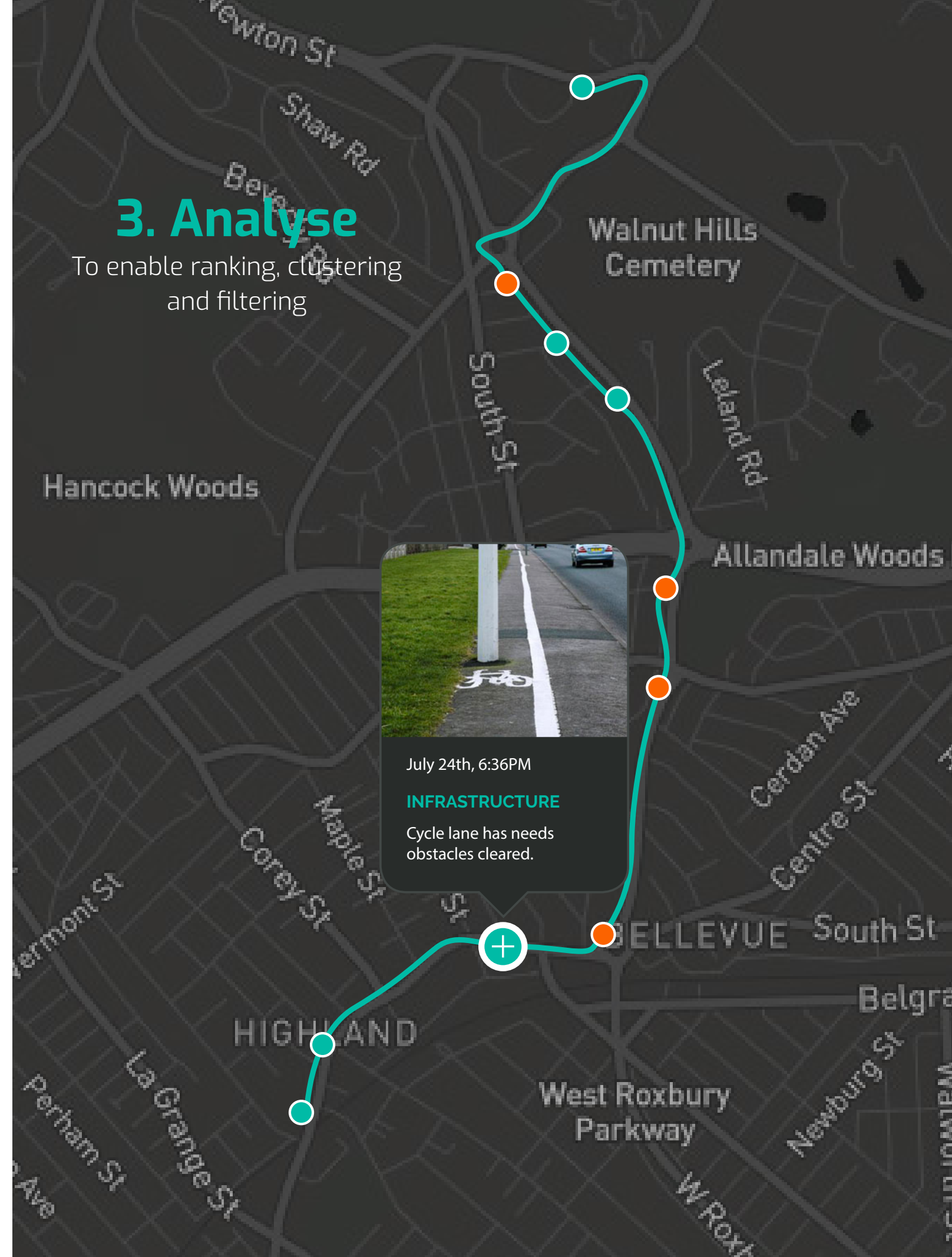
Which can be annotated, categorised and socially shared.



Sensibel App

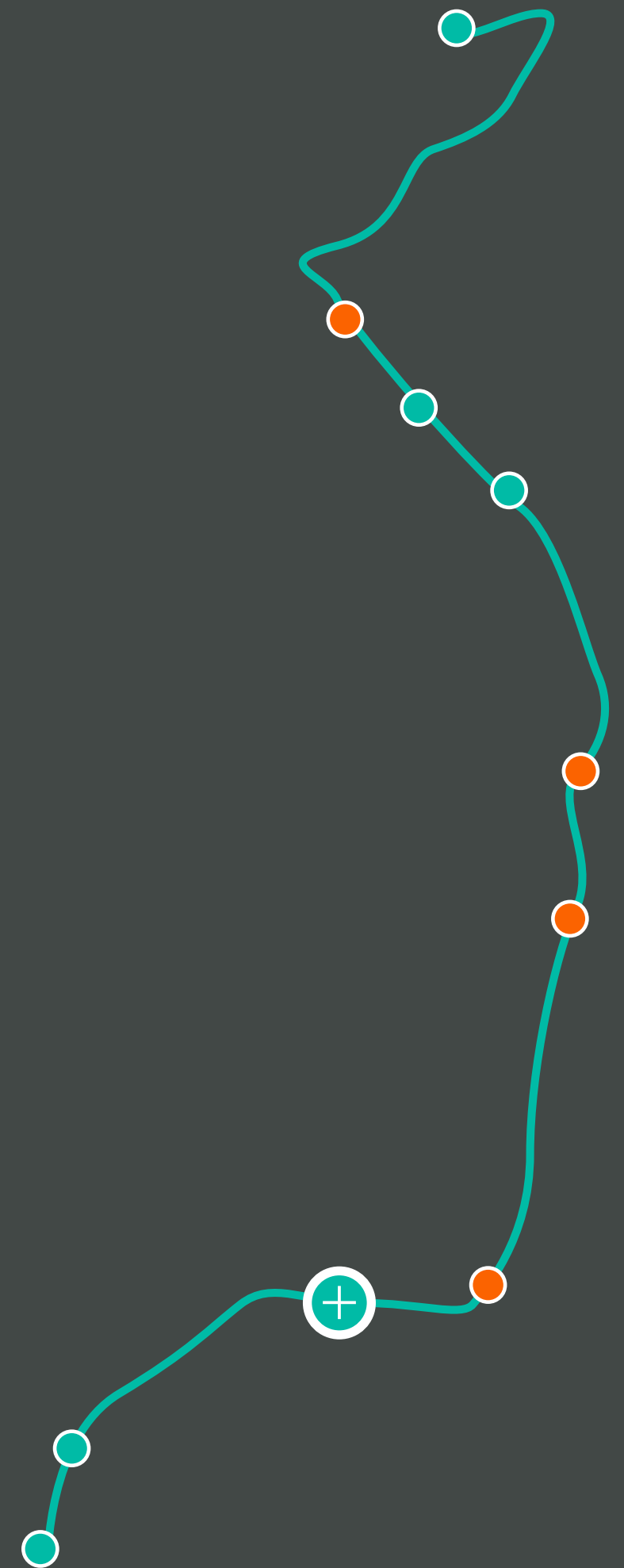
# 3. Analyse

To enable ranking, clustering and filtering



## The Other Problem

Community  
engagement  
is hard work!



Design Principle	Criteria	QoS1	QoS2	QoS3	QoS4
Safe-infrastructure type suitable for street conditions	A. Traffic speed (signposted speed unless observed speed is significantly different)	<30km/h	<30km/h	<31-50km/h	50km/h
		<30km/h	31-50km/h	51-60km/h	61km/h
		NA	NA	NA	NA
	B. Traffic volume (AADT)	<1,000	1,001-2,000	2,001-4,000	4,001+
		<2,500	2,501-5,000	5,001-15,000	15,001+
		NA	NA	NA	NA
C. Number of street traffic lanes (per direction)	1	1	2	3+	
	NA	NA	NA	NA	
Safe-appropriate facility dimensions	D. Cycle lane/path width (per direction)	2.1m+	1.8m- 2.1m	1.2m- 1.8m	<1.2m
		4.0m+	3.0m- 4.0m	2.0m- 3.0m	<2.0m
		NA	NA	NA	NA
Safe-potential conflicts minimilised	E. Cycle lane blockage by traffic (commercial/ town centre areas)	Not Possible	Rare	Frequent	Very Frequent
		NA	NA	NA	NA
		NA	NA	NA	NA
F. Interaction with on-street car parking	Car parking separated from cycle facility by horizontal surface treatment	1.0m+	1.0m	0.6-0.8m	<0.6-NA
		NA	NA	NA	NA
		NA	NA	NA	NA
G. Interaction with transit stops (criteria only applicable where average weekday transit vehicle frequency >4 vehicles/hour.)	Cycle facility passes behind transit stop				
		NA	NA	NA	NA

Design Principle	Criteria	QoS1	QoS2	QoS3	QoS4
Direct	H. Treatment at driveway intersections	Raised table, limited or few right turns into driveway	Clear surface markings across driveway, corner radii and ramp profile slows turning vehicles	No surface marking or raised table	No surface marking or raised table, frequent conflicts with turning traffic into driveway
		Clear surface markings across driveways, limited or few right turns into driveway, corner radii and ramp profile slows turning vehicles	NA	NA	NA
		NA	NA	NA	NA
Comfortable	I. Geometric directness	Route minimises geometric directness between intersections	Minor deviations from most direct route	Obvious deviation from most direct route	Major deviation from most direct route prompting frequent bypassing of route by cyclists
		Facility provides access to the most significant street-level destinations	Facility provides access to some street-level destinations	Access to most significant street-level destinations requires circle-back or walking	Facility provides limited access to street-level destinations
		NA	NA	NA	NA
Comfortable	J. Access to local destinations	<100	100-500	150-300	800+
		NA	NA	NA	NA
		NA	NA	NA	NA
Comfortable	L. Gradient	0-3% (uphill)	3-7% (uphill)	7-10% (uphill)	>10% (uphill)
		0-10% (downhill)	10-15% (downhill)	10-15% (downhill)	>15% (downhill)
		NA	NA	NA	NA
Comfortable	M. Social Safety	Frequent sections with human activity, or buildings overlooking path. Good path lighting. Clearly identifiable escape routes	Some human activity or buildings overlooking path. Good path lighting. Escape routes available	No human activity. Path is visibly blocked from buildings by walls or cegetation. Adequate path lighting. No escape route available	No human activity. Path is visually blocked from buildings by walls or vegetation. No path lighting. No escape route available

Mixed Traffic Cycle Lane Protected Cycle Path Shared path

\*QoS 1 and 2 scores represent a facility that is likely to attract the widest range of cyclists. QoS 3 and 4 scores represent a facility with a design feature(s) that is likely to detract some types of users.

Design Principle	Criteria	QoS1	QoS2	QoS3	QoS4
Safe-infrastructure type suitable for street conditions	A. Traffic speed (signposted speed unless observed speed is significantly different)	<30km/h	<30km/h	<31-50km/h	50km/h
		<30km/h	31-50km/h	51-60km/h	61km/h
		NA	NA	NA	NA
	B. Traffic volume (AADT)	<1,000	1,001-2,000	2,001-4,000	4,001+
		<2,500	2,501-5,000	5,001-15,000	15,001+
		NA	NA	NA	NA
C. Number of street traffic lanes (per direction)	1	1	2	3+	
	NA	NA	NA	NA	
Safe-appropriate facility dimensions	D. Cycle lane/path width (per direction)	2.1m+	1.8m- 2.1m	1.2m- 1.8m	1.0m- 1.2m
		4.0m+	3.0m- 4.0m	2.0m- 3.0m	1.5m- 2.0m
		NA	NA	NA	NA
Safe-potential conflicts minimilised	E. Cycle lane blockage by traffic (commercial/ town centre areas)	Not Possible	Rare	Frequent	Very Frequent
		NA	NA	NA	NA
		NA	NA	NA	NA
	F. Interaction with on-street car parking	Car parking separated from cycle facility by horizontal surface treatment	Car parking separated from cycle facility by horizontal painted buffer of 0.8-1.0m	Car parking separated from cycle facility by horizontal painted buffer of 0.6-0.8m	Car parking separated from cycle facility by horizontal painted buffer of <0.6-0.8m
		NA	NA	NA	NA
		NA	NA	NA	NA
G. Interaction with transit stops (criteria only applicable where average weekday transit vehicle frequency >4 vehicles/hour.)	Cycle facility passes behind transit stop	Cycle facility may pass in front of transit stop but doesn't share carriageway space with transit vehicle. Conflicts managed by design and signage	Cycle facility shares carriageway space with transit vehicle	Cycle facility shares carriageway space with transit vehicle	
	NA	NA	NA	NA	



Design Principle	Criteria	QoS1	QoS2	QoS3	QoS4
Direct	H. Treatment at driveway intersections	Raised table, limited or few right turns into driveway	Clear surface markings across driveway, corner radii and ramp profile slows turning vehicles	No surface marking or raised table	No surface marking or raised table, frequent conflicts with turning traffic into driveway
		Clear surface markings across driveways, limited or few right turns into driveway, corner radii and ramp profile slows turning vehicles	NA	NA	NA
		NA	NA	NA	NA
Direct	I. Geometric directness	Route minimises geometric directness between intersections	Minor deviations from most direct route	Obvious deviation from most direct route	Major deviation from most direct route prompting frequent bypassing of route by cyclists
	J. Access to local destinations	Facility provides access to the most significant street-level destinations	Facility provides access to some street-level destinations	Access to most significant street-level destinations requires circle-back or walking	Facility provides limited access to street-level destinations
Comfortable	K. Frequency of pedestrian flows (on path during weekday peak-hour pedestrian flows)	<100	100-500	150-300	800+
		NA	NA	NA	NA
		NA	NA	NA	NA
Comfortable	L. Gradient	0-3% (uphill)	3-7% (uphill)	7-10% (uphill)	>10% (uphill)
	M. Social Safety	Frequent sections with human activity, or buildings overlooking path. Good path lighting. Clearly identifiable escape routes	Some human activity or buildings overlooking path. Good path lighting. Escape routes available	No human activity. Path is visibly blocked from buildings by walls or cegetation. Adequate path lighting. No escape route available	No human activity. Path is visually blocked from buildings by walls or vegetation. No path lighting. No escape route available



Mixed Traffic Cycle Lane Protected Cycle Path Shared path

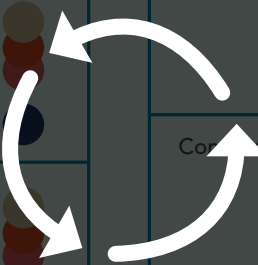
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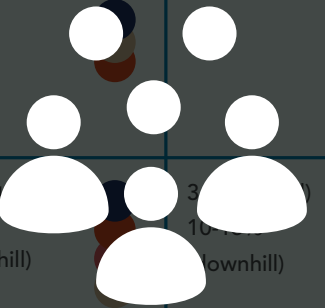
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		NA	NA	NA	NA
B. Traffic volume (AADT)		<1,000	1,001-2,000	2,001-4,000	4,001+
		<2,500	2,501-5,000	5,001-15,000	15,001+
		NA	NA	NA	NA
C. Number of street traffic lanes (per direction)		1	1	2	
		NA	NA	NA	NA
Safe-appropriate facility dimensions	D. Cycle lane/path width (per direction)	2.1m+	1.8m- 2.1m	1.2m- 1.8m	
		4.0m+	3.0m- 4.0m	2.0m- 3.0m	<2.0m
		NA	NA	NA	NA
Safe-potential conflicts minimilised	E. Cycle lane blockage by traffic (commercial/ town centre areas)	Not Possible	Frequent	Frequent	Very Frequent
		NA	NA	NA	NA
		NA	NA	NA	NA
F. Interaction with on-street car parking	Car parking separated from cycle facility by horizontal surface treatment	1.0m+	1.0m	0.6-0.8m	<0.6-NA
		NA	NA	NA	NA
		NA	NA	NA	NA
G. Interaction with transit stops (criteria only applicable where average weekday transit vehicle frequency >4 vehicles/hour.)	Cycle facility passes behind transit stop	NA	NA	NA	NA
		NA	NA	NA	NA
		NA	NA	NA	NA



Any Time



Continuous



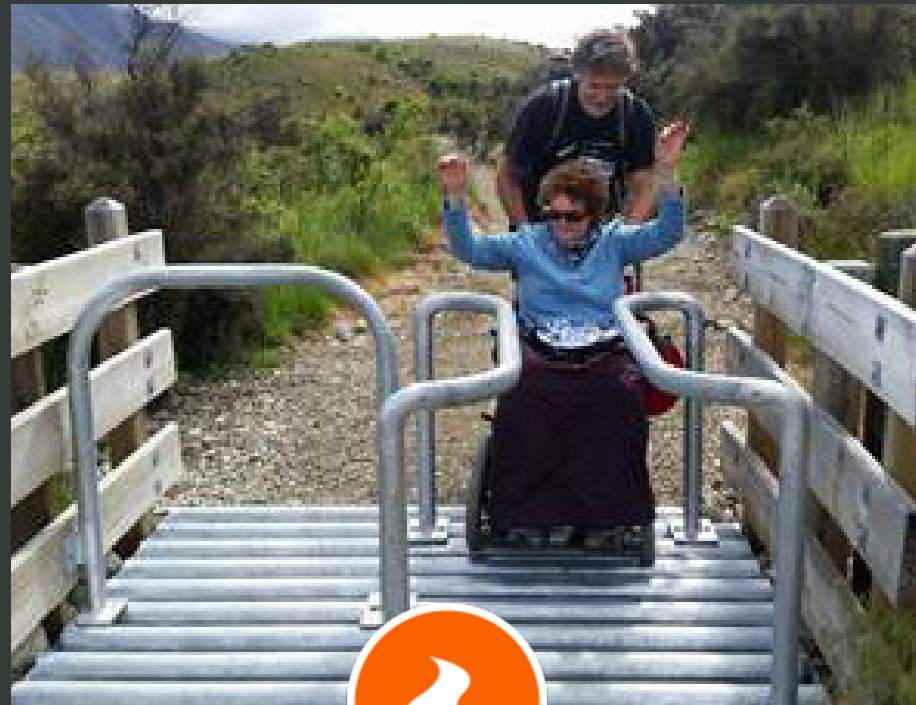
Crowdsourced

Design Principle	Criteria	QoS1	QoS2	QoS3	QoS4
H. Treatment at driveway intersections	Raised table, limited or few right turns into driveway		Clear surface markings across driveway, corner radii and ramp profile slows turning vehicles	No surface marking or raised table	No surface marking or raised table, frequent conflicts with turning traffic into driveway
		NA	NA	NA	NA
Direct	I. Geometric Directness	Route minimises geometric directness between intersections	Minor deviations from most direct route	Obvious deviation from most direct route	Major deviation from most direct route prompting frequent bypassing of route by cyclists
		NA	NA	NA	NA
J. Access to destinations	K. Presence of pedestrians on shared path (weekday peak-hour pedestrian flows)	Facility provides access to the most significant street-level destinations	Facility provides access to some street-level destinations	Access to most significant street-level destinations requires circle-back or walking	Facility provides limited access to street-level destinations
		NA	NA	NA	NA
L. Gradient	M. Social Safety	0-3% (uphill)	7-10% (uphill)	>10% (uphill)	>15% (uphill)
		0-10% (downhill)	10-15% (downhill)	>15% (downhill)	>15% (downhill)
		NA	NA	NA	NA

Mixed Traffic ● Cycle Lane ● Protected Cycle Path ● Shared path ●

\*QoS 1 and 2 scores represent a facility that is likely to attract the widest range of cyclists. QoS 3 and 4 scores represent a facility with a design feature(s) that is likely to detract some types of users.

# Engagement & Retention requires A compelling purpose



# Community Engagement



Orientation



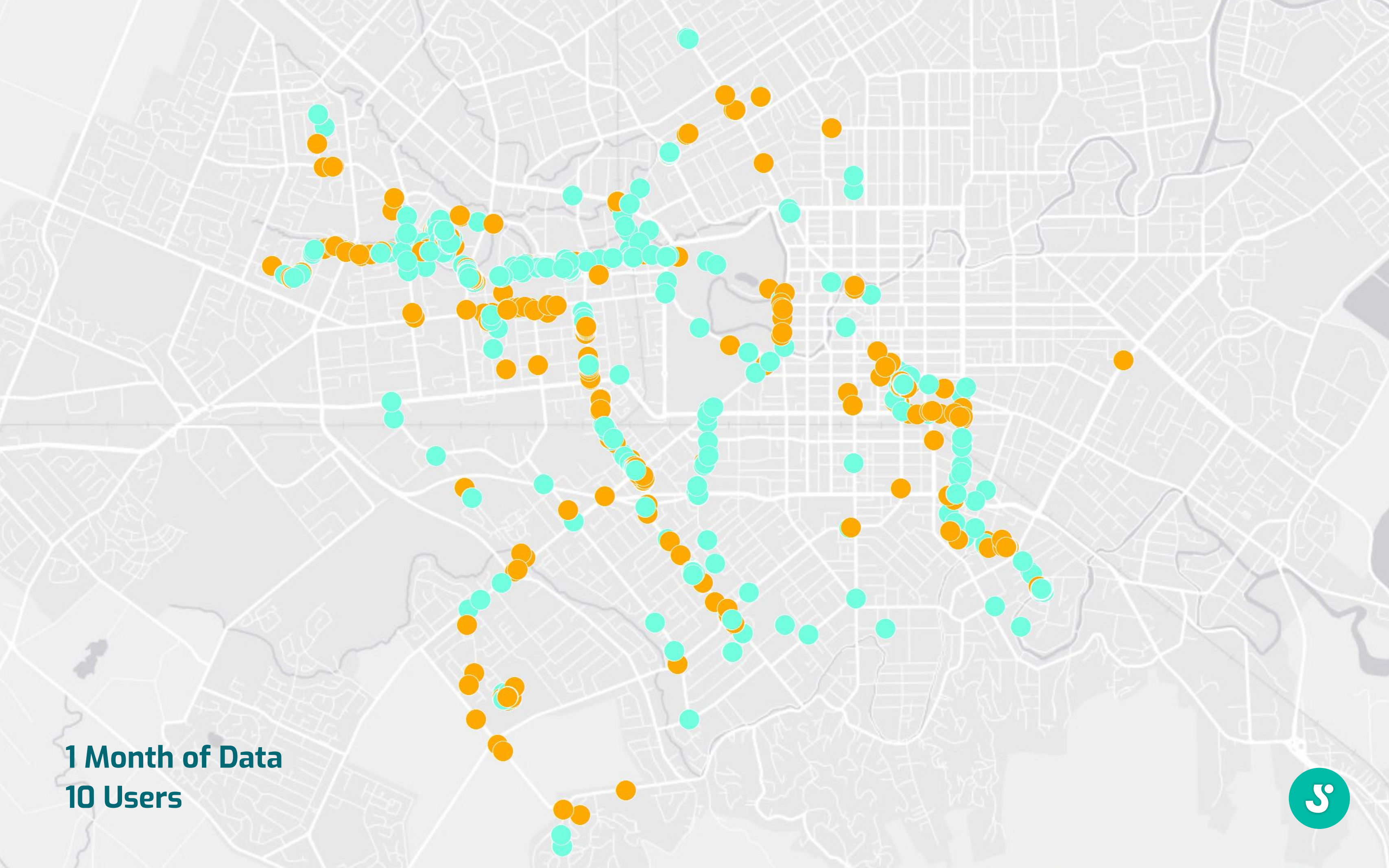
Activation

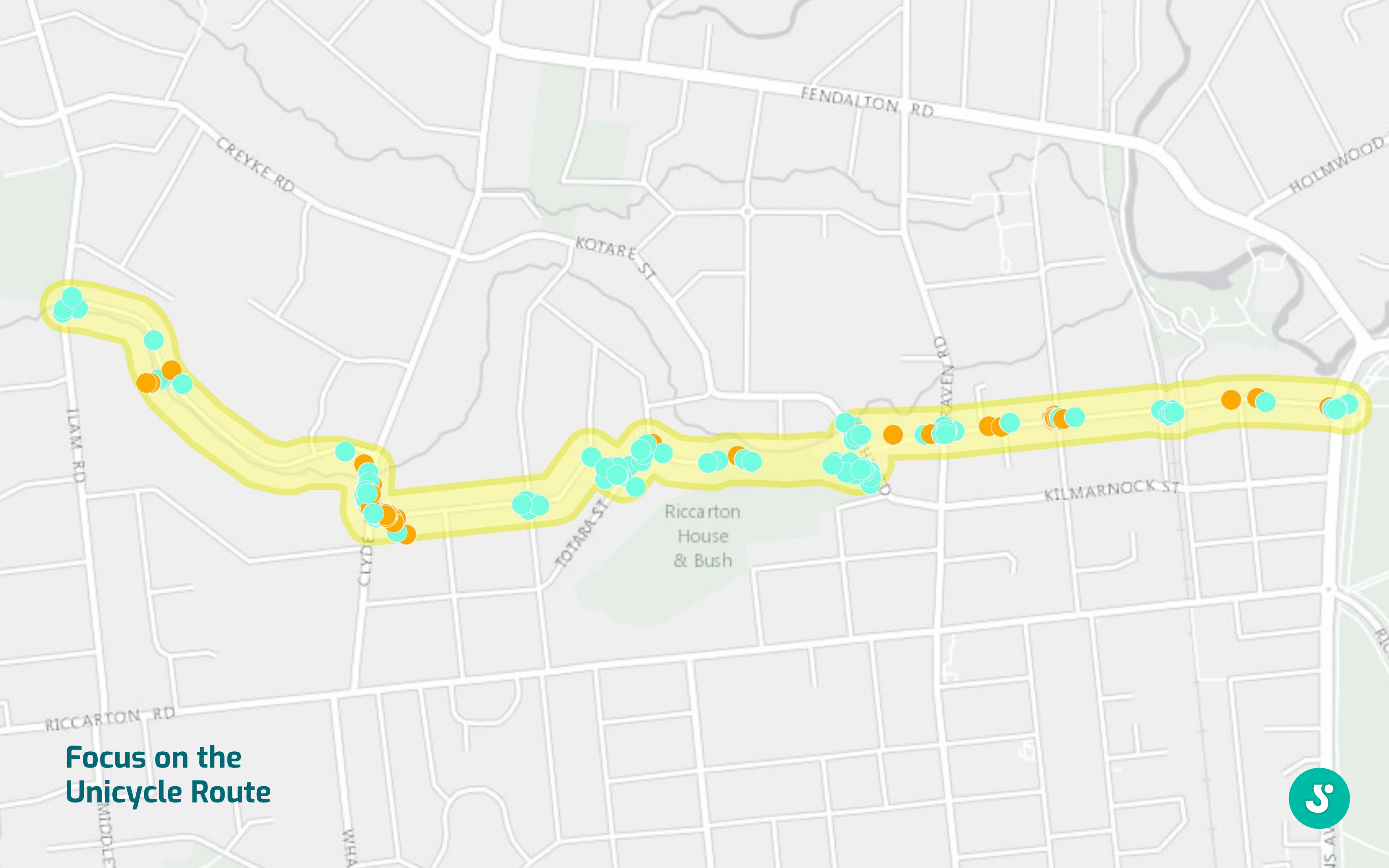


Agency



**1 Month of Data**  
**10 Users**





**Focus on the  
Unicycle Route**



“I feel safe in this section”

“Uni to city cycle way is really great”

“I am always worried about the other cyclist and pedestrians here”

“Congested cycle way with school pupils walking along cycleway”





Analyse clusters





“Safe crossing”

“Cycle triggered lights  
make getting around  
easy”

“Blind spot”

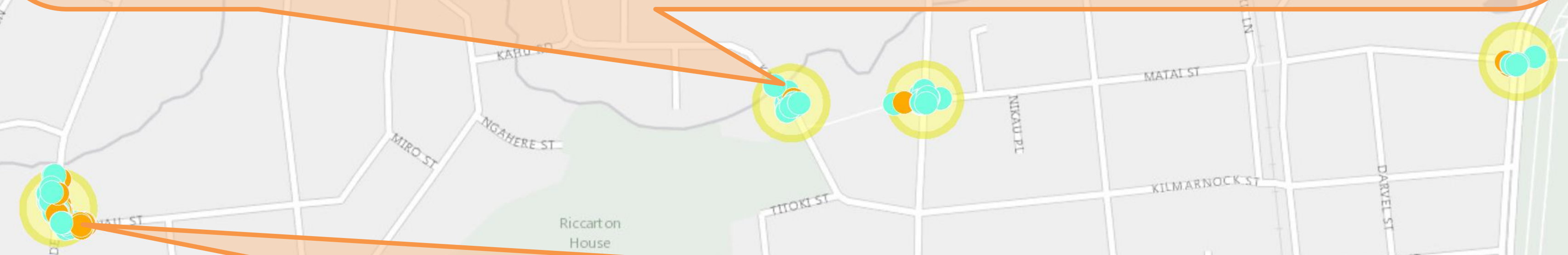
“Cant see through the  
fence”

“Blind corner”





“Blind corner”



“Blind spot”

“Cant see through the fence”



# Next Steps

MVP -> Proof of Concept -> **Projects**

More community activations

Creating positive feedback loops

**Sentiment + Urban Design + Engineering**



[www.sensibel.org](http://www.sensibel.org)



**Thanks!**