



abley

Cycling Deserts

Where are they?

Ben Jassin

March 19, 2021

cycling desert

: an area that has limited access to cycling infrastructure.

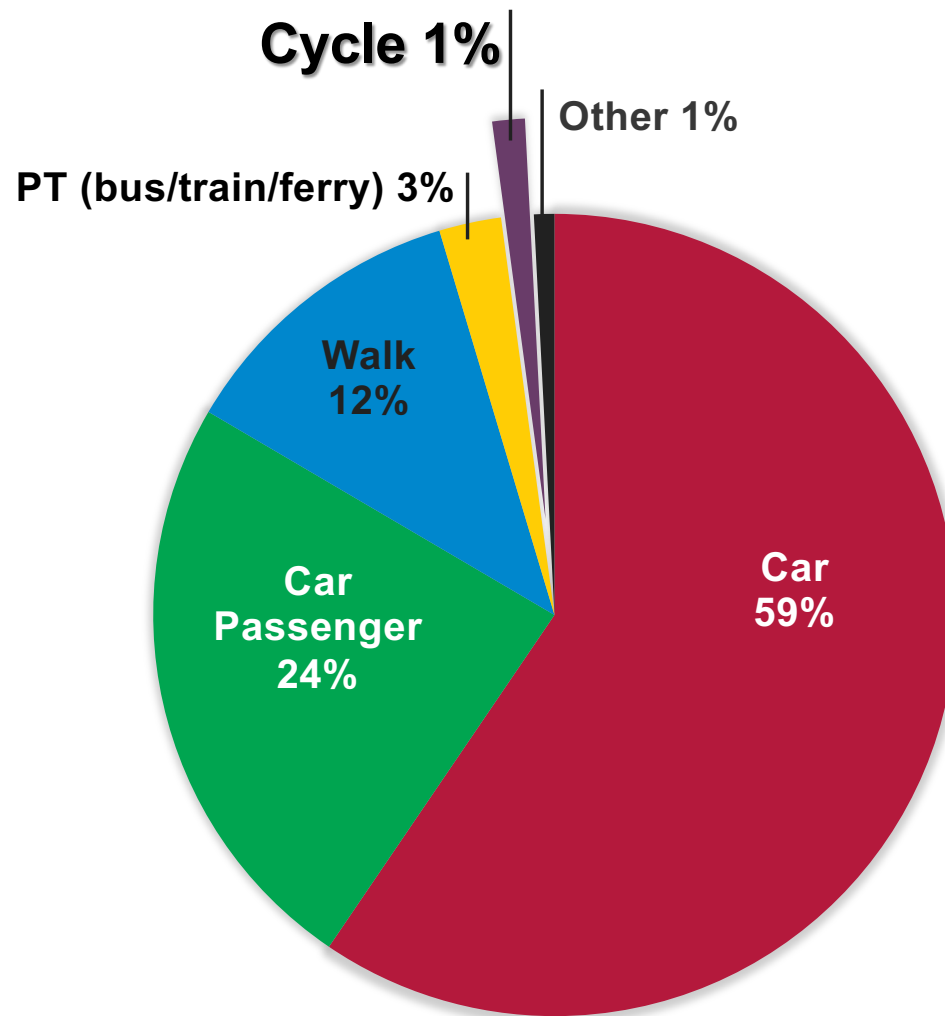
food desert

: an area that has limited access to affordable and nutritious food.

Why study this?

- Find areas that have no cycling infrastructure
- Evaluate the equity of the existing cycling network
- Better target for new cycling infrastructure = more people cycling, less carbon & obesity

NZ Overall Trip Mode Share



Source: 2014-2018 NZ Household Travel Survey, Ministry of Transport

OpenStreetMap

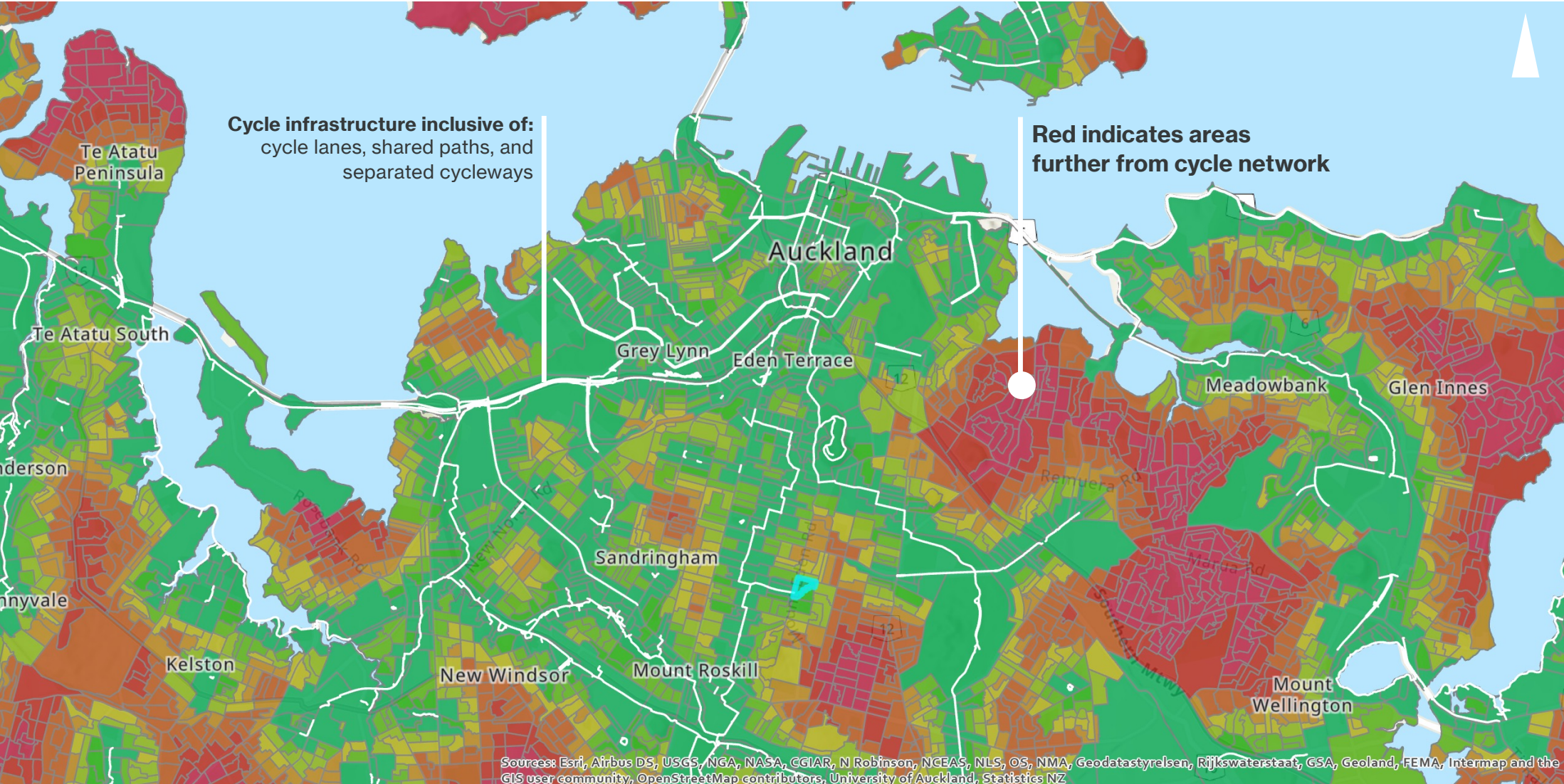
Cycle Lanes

Shared Paths

Separated Cycleways

Cycle infrastructure inclusive of:
cycle lanes, shared paths, and separated cycleways

Red indicates areas further from cycle network

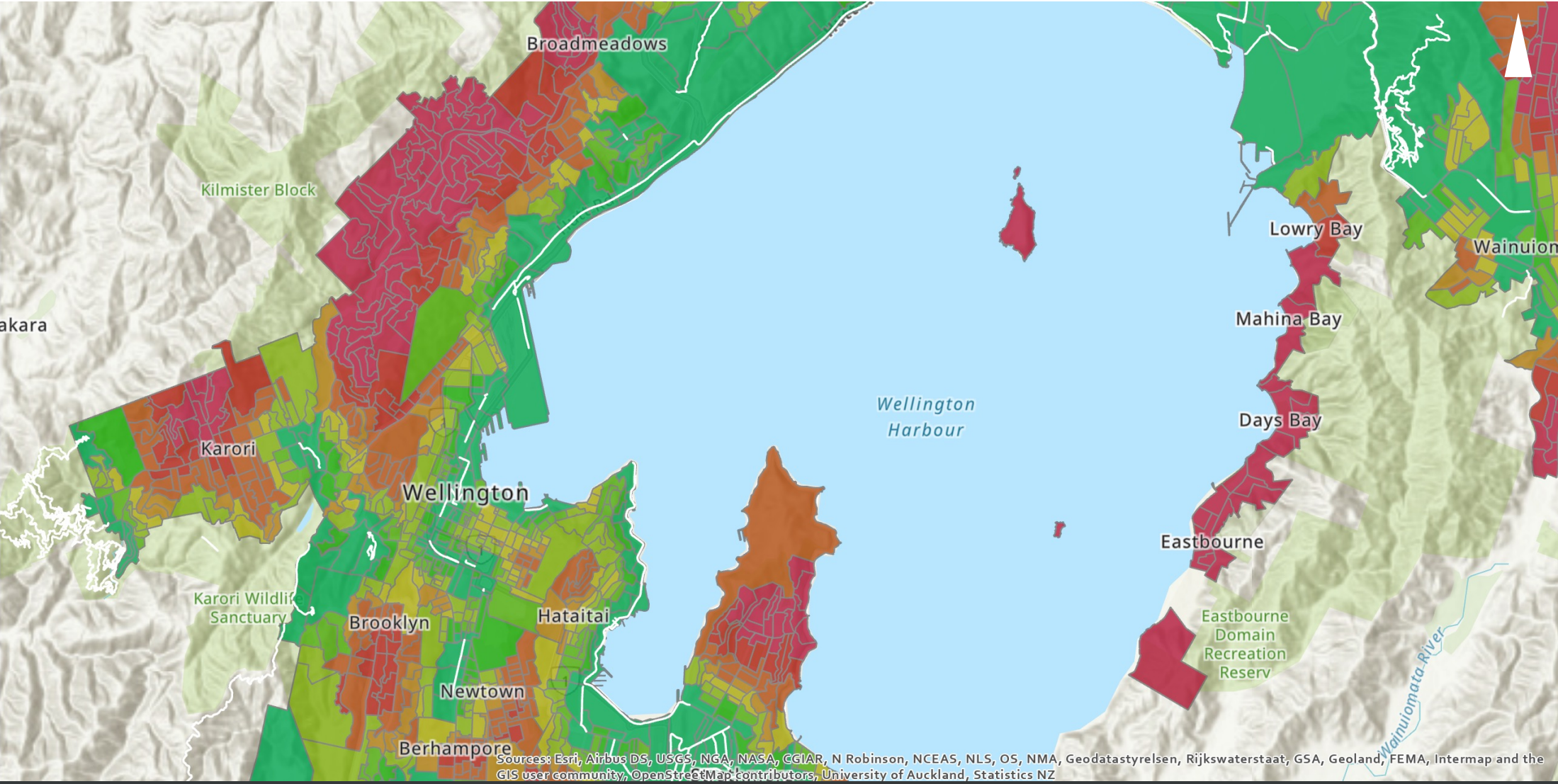


Sources: Esri, Airbus DS, USGS, NGA, NASA, CGIAR, N Robinson, NCEAS, NLS, OS, NMA, Geodatastyrelsen, Rijkswaterstaat, GSA, Geoland, FEMA, Intermap and the GIS user community, OpenStreetMap contributors, University of Auckland, Statistics NZ

Cycle Network



Proximity to Cycle Network



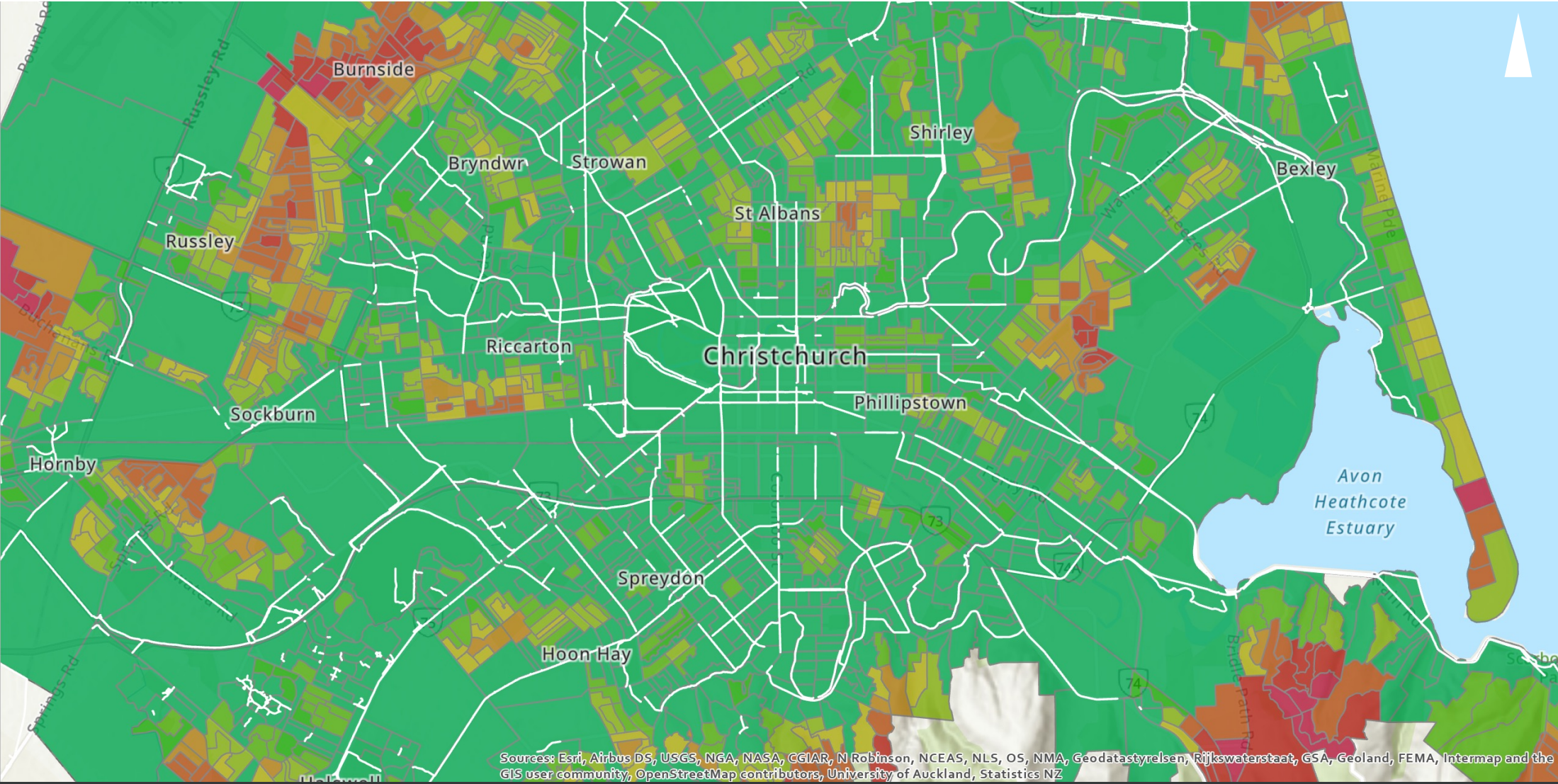
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Cycle Network



Proximity to Cycle Network



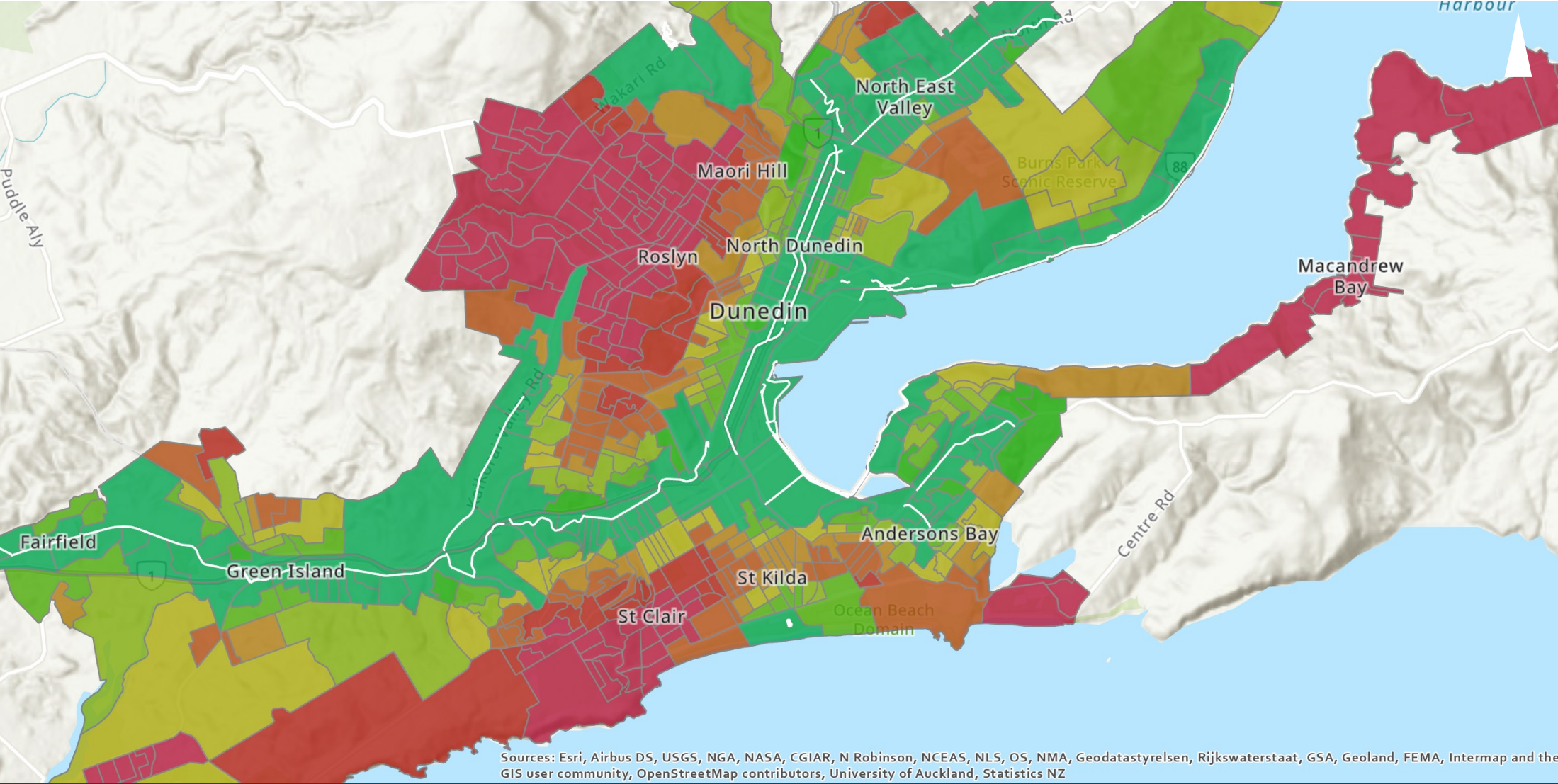
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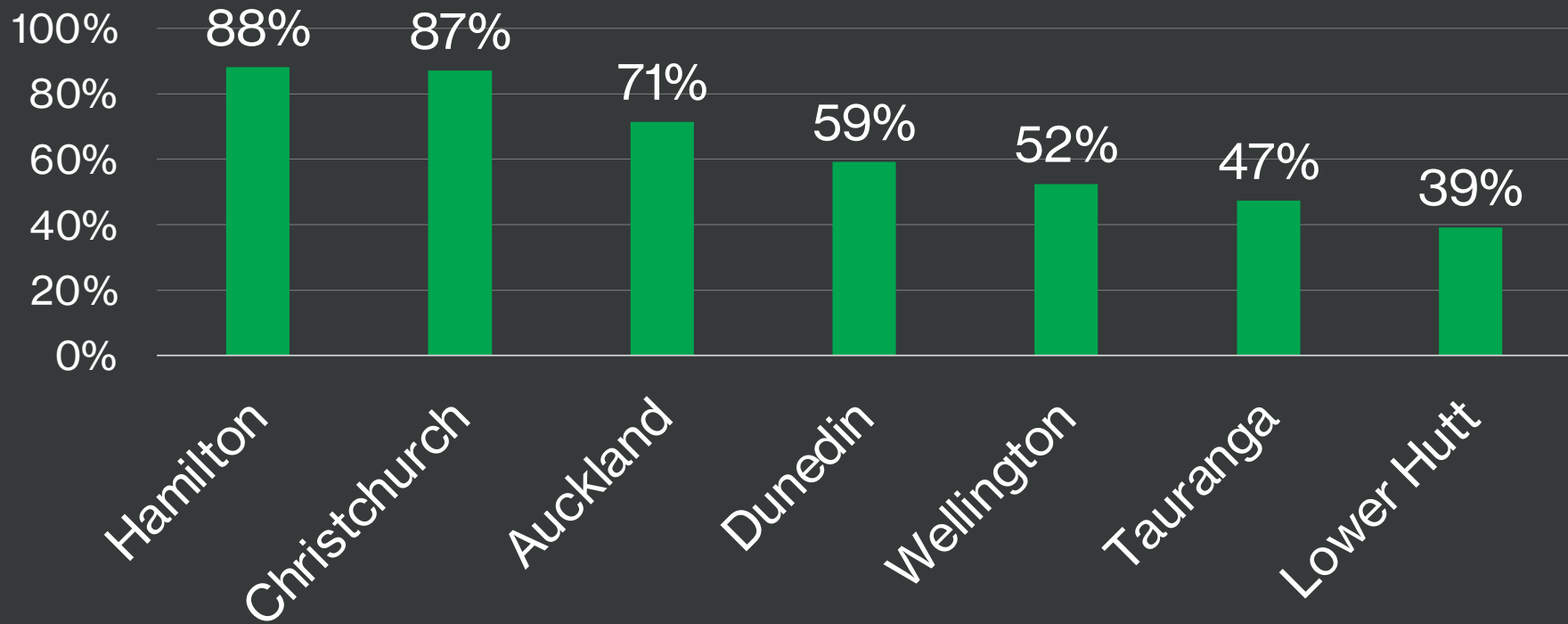


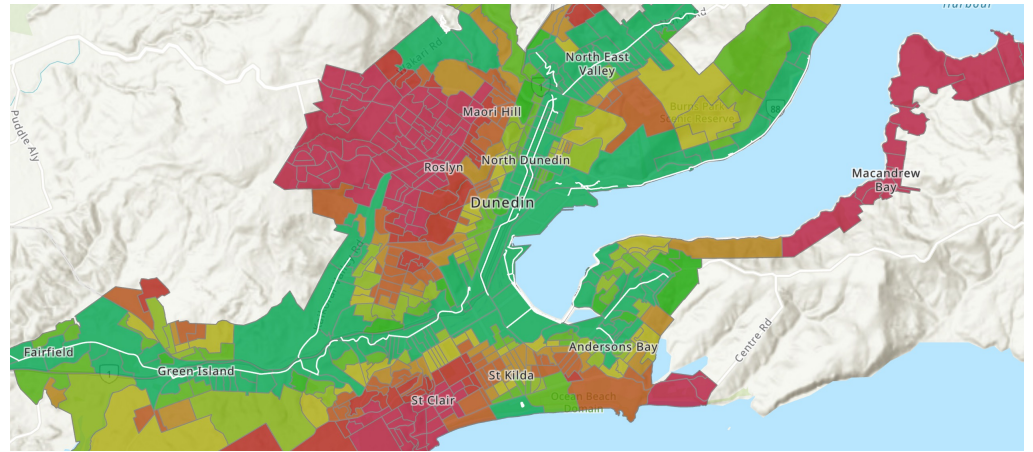
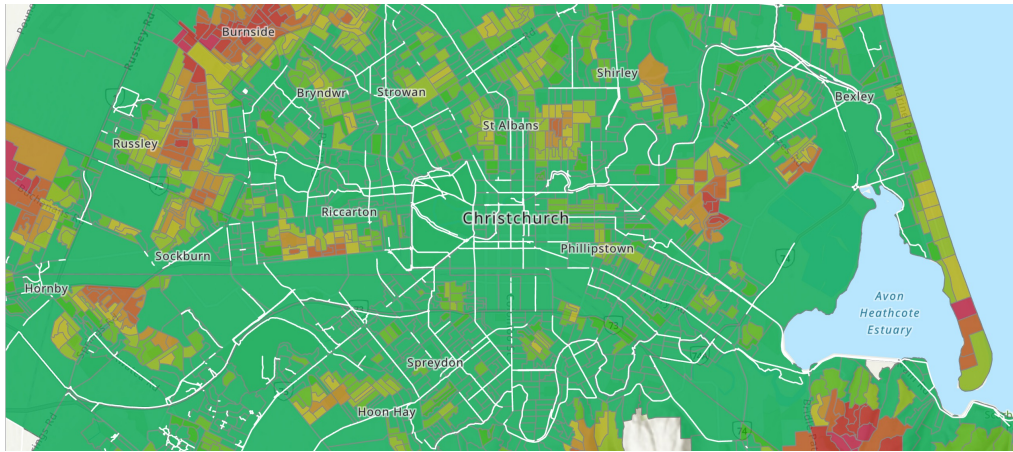
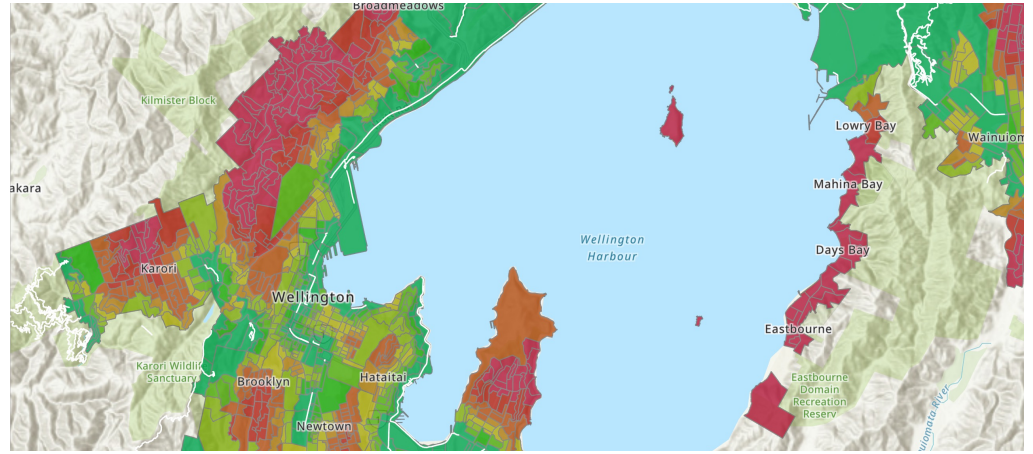
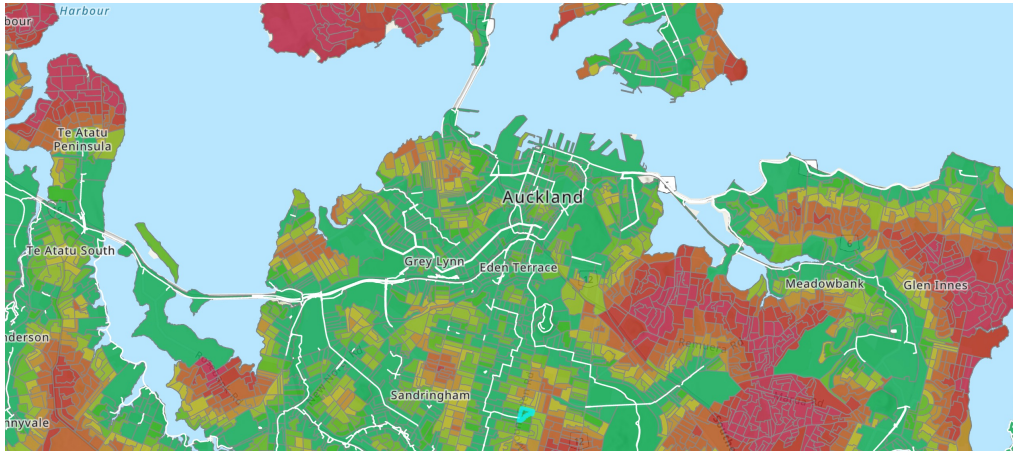
Cycle Network



Proximity to Cycle Network

% of Population Residing Within 500m of Cycleway





Cycling Deserts / March 2021



The New Zealand Index of Multiple Deprivation (IMD)



The 7 Domains of Deprivation

- Employment
- Income
- Crime
- Housing
- Health
- Education
- Access to services

Auckland



What if we could see deprivation data side by side



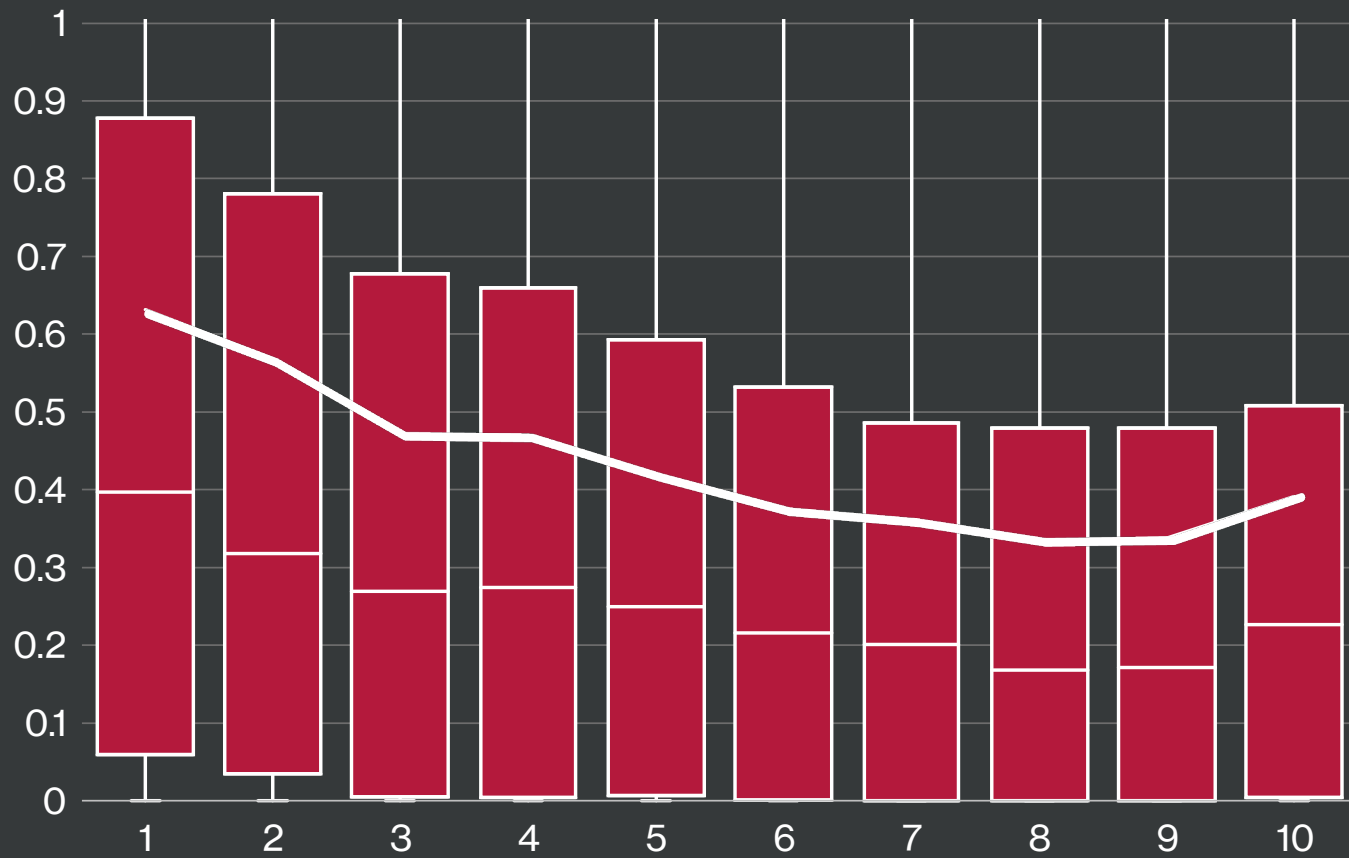
Proximity to Cycle Network



Deprivation

**Are cycling deserts
correlated with high
deprivation?**

Distance to Cycling Infrastructure (km)



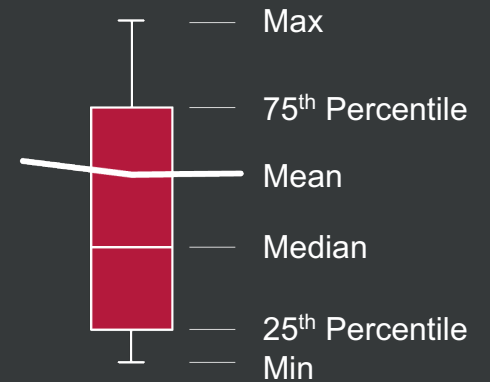
Area Deprivation

Low



High

Box Plot Legend



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	Cycling Deserts	Accessibility Modelling	Monetized Benefits/Costs	Level of Service
Route Design & Planning			✓	✓
Compare Infrastructure Types				✓
Quantify Cycling Infrastructure	✓	✓	✓	
Evaluate Equity	✓	✓		
Compare Cities	✓	✓		
Identify Gaps in Service Area	✓			

Future Opportunities

- Create a historical slider map comparing the impact of future cycle network expansion
- Combine and compare with journey to work and/or school data
- Expand cycling oases to include low speed environments

Thank you!

Questions?

Contact

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