Smarter signals and data for active modes in NZ

Smart Cities webinar

Megan Gregory| September 2025

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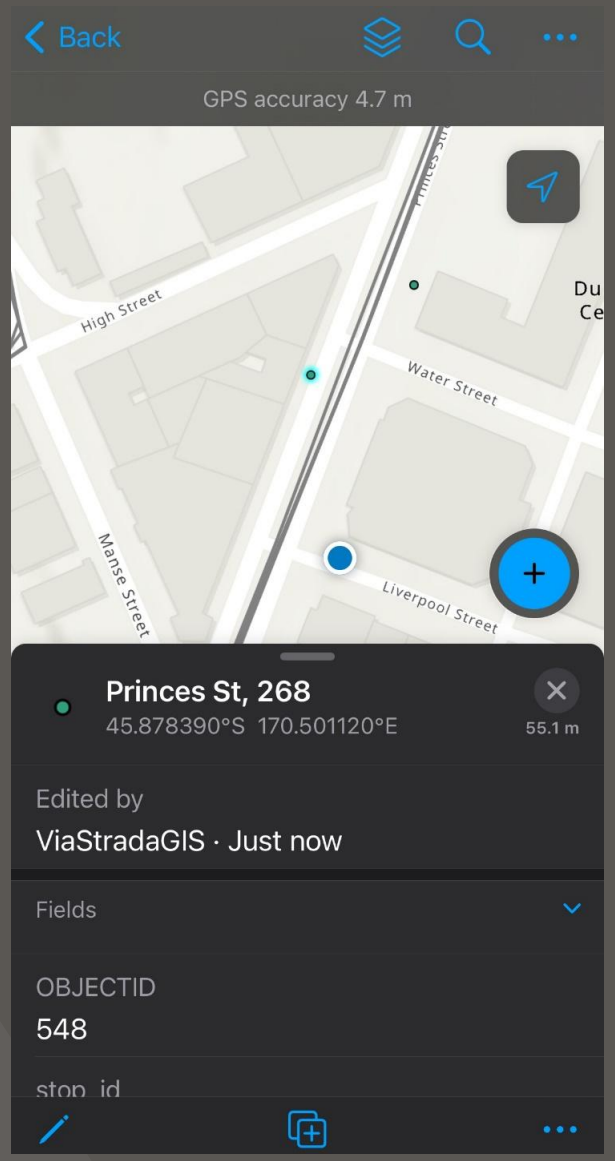
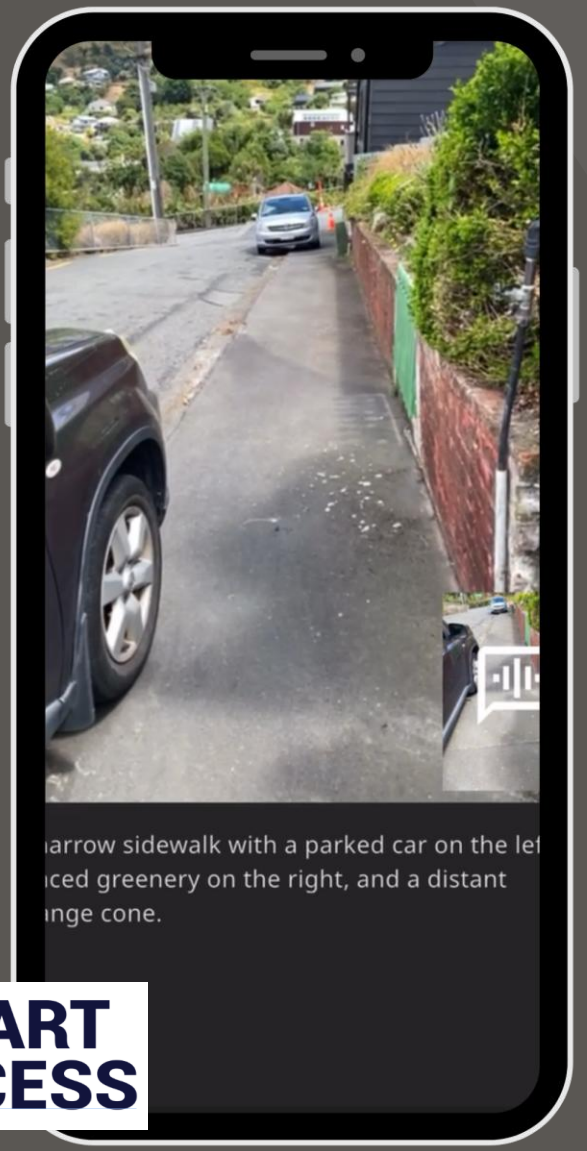
TRANSPORT PLANNING AND DESIGN

Smarter planning – field data collection

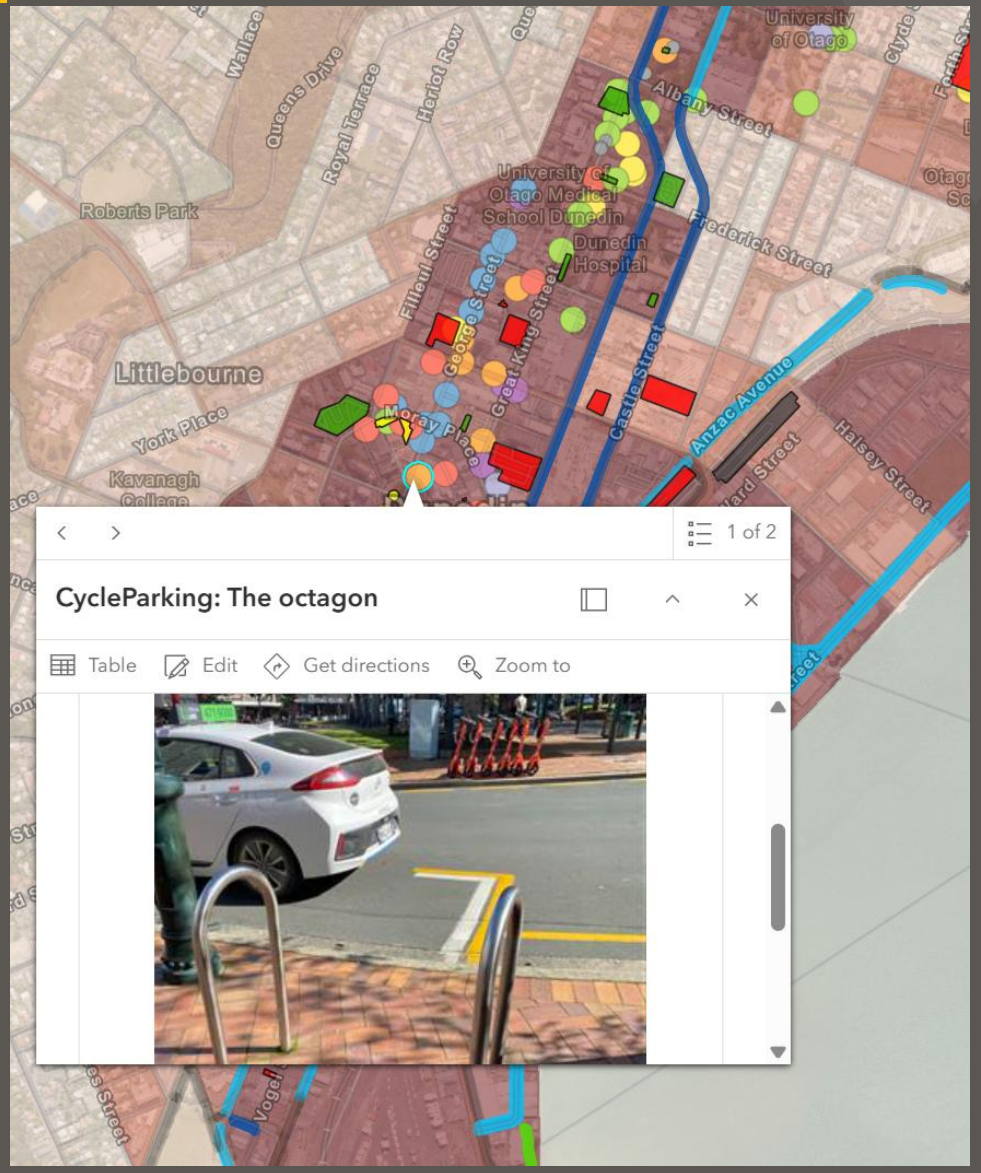




SMART ACCESS

Smarter planning – GIS applications

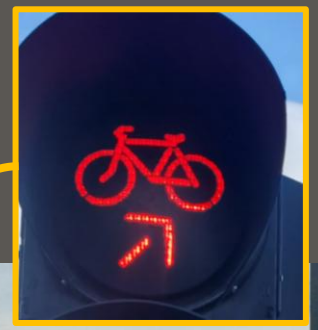
- Field data collection
- Collate data from multiple sources
- Geographic optimisation (catchment areas)
- Network planning & prioritisation
- Trend analysis



Smarter TCDs (Traffic Control Devices)

Smarter TCDs – achievements

- Directional signals for cyclists
  - more flexibility in operation
  - similar standard of provision to motorists



Smarter TCDs – achievements

- Directional signals for cyclists
  - more flexibility in operation
  - similar standard of provision as for motorists
- Two-aspect signals for cyclists
  - for shared crossings
  - possibly integrated with pedestrian signals

Smarter TCDs – wish list

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- Flashing yellow arrows
  - especially for filter turning past cyclists

Dutton Park, QLD

Smarter TCDs – wish list

- Flashing yellow arrows
  - especially for filter turning past cyclists
- Small near-side signals for cyclists

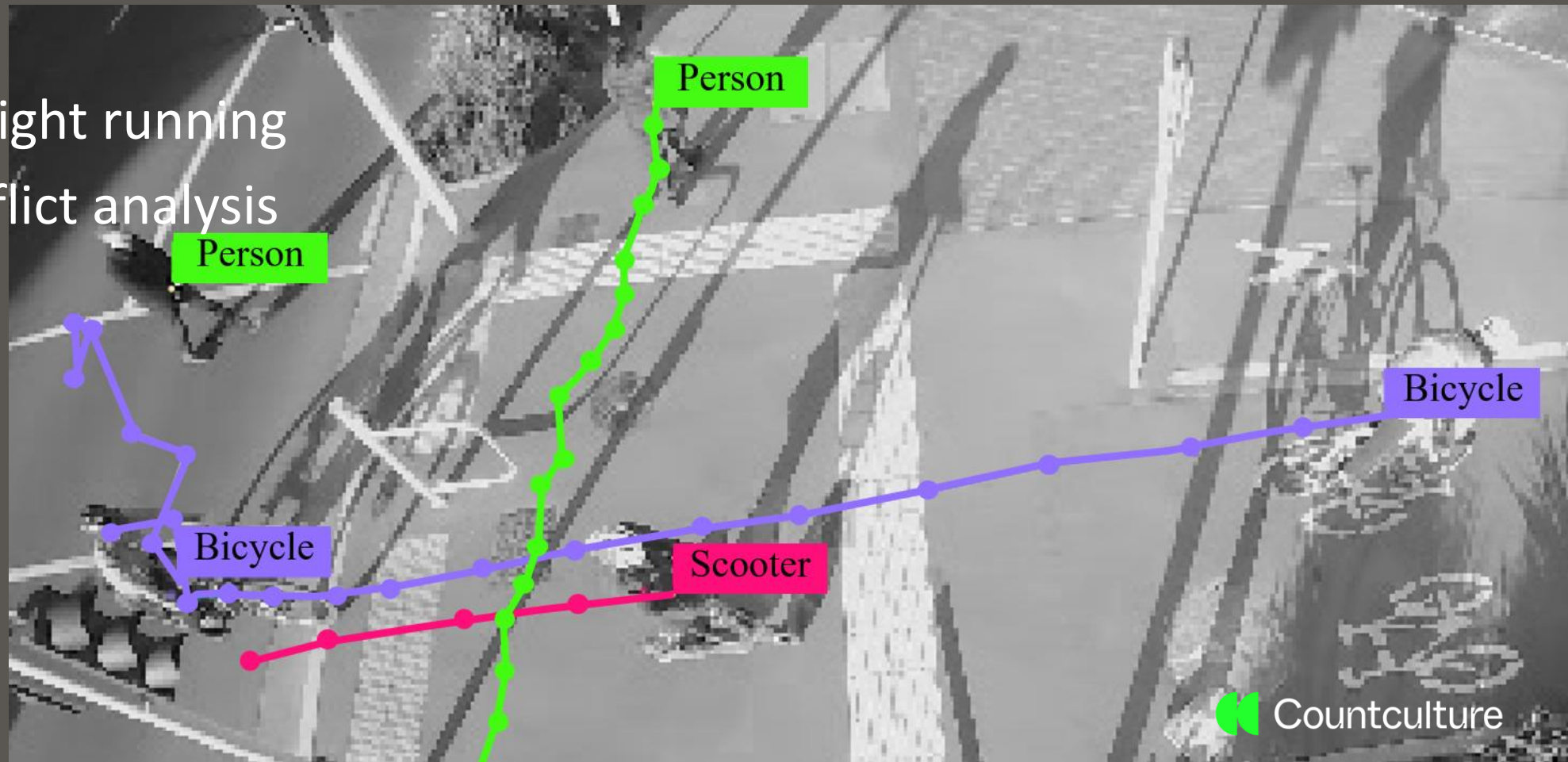
Dutton Park, QLD

Auckland, NZ

Behaviour data technology

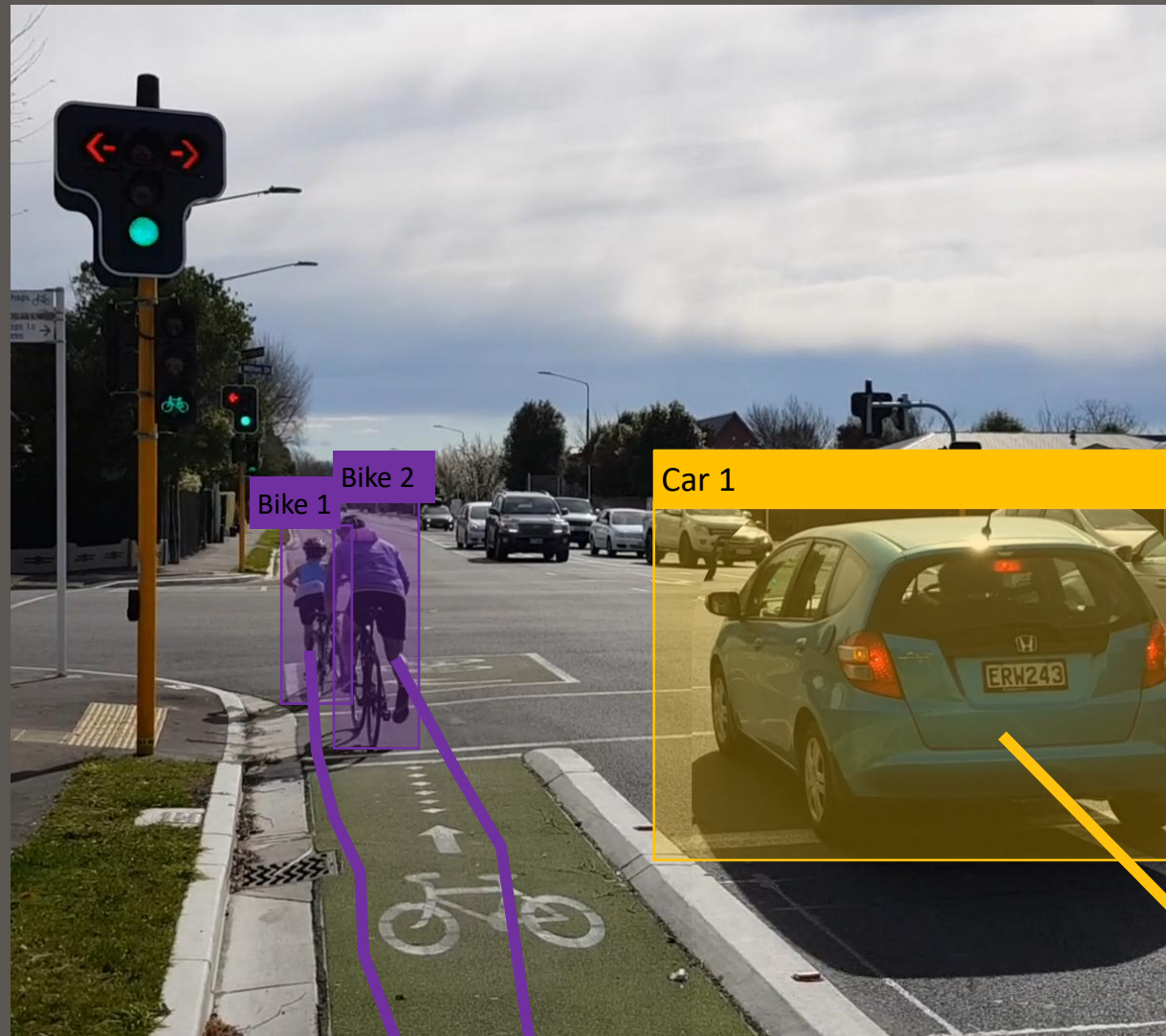
Behaviour data tech – current practice

- Distinguish and count different types of users
  - Mode
  - Trajectory
- Basic red light running
- Some conflict analysis



Behaviour data tech – wish list

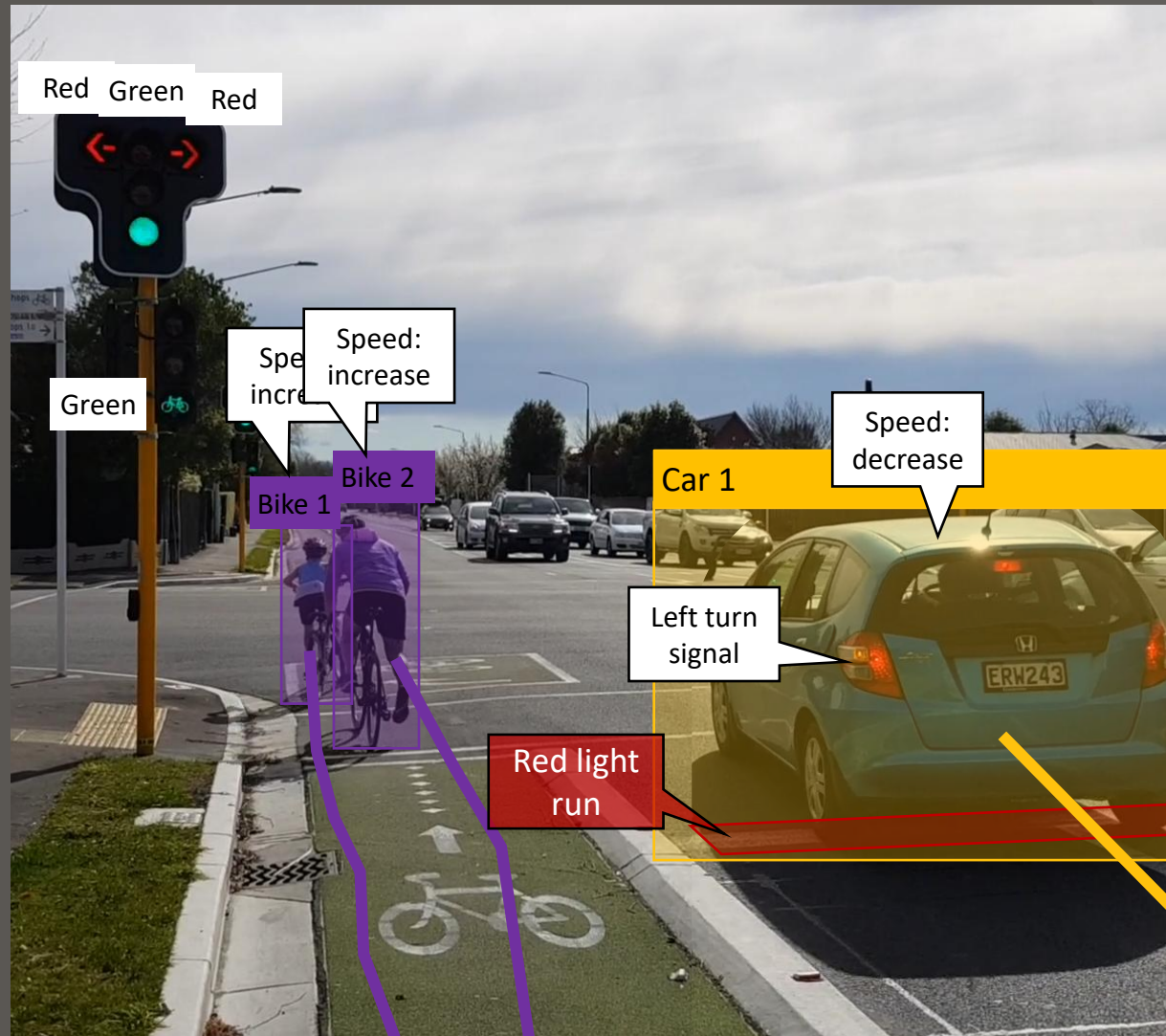
Analyse user behaviour in response to different environments / new devices



Behaviour data tech – wish list

Analyse user behaviour in response to different environments / new devices

- Types of infringement
  - E.g. for red light running: head start / false-start / late entry
- Interactions between users
  - warning factors
  - e.g. car vs cycle, cycle vs pedestrian
  - extent to which anyone changes speed / trajectory
- Level of risk when conflicts / infringements occur



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