Project Management for Micromobility Transportation

A Case-Study for E-Scooters in Calgary

Khaled Ali, Macx Davies, Caedon Hunter, Basem Nassar, Gaelan Patterson, Wilson Tang
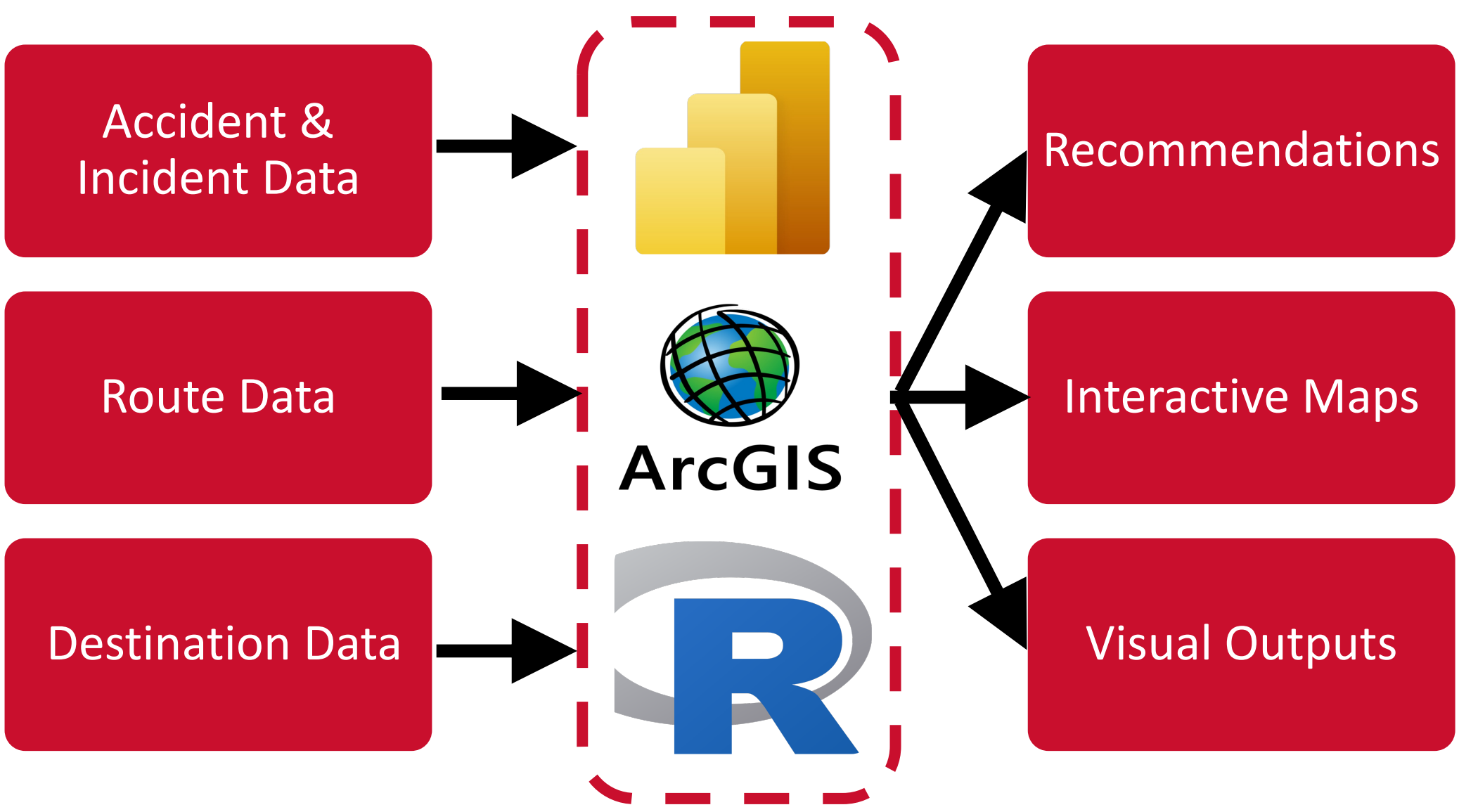
The Need

Provide data-oriented engineering decisions for allocating capital resources to improve micromobility systems.

Practical Issues

1. Direct investments in micromobility infrastructure
2. Device distribution during events
3. Minimize incidents

Design Solutions

- Use of different software types to manipulate data
- Transform data into understandable forms
- Tools provide practical solutions to issues
- Customized tool needed to exemplify unique data
- Feasibility shown using Calgary case study

Industrial Practices

- Large data simplified
- Principles from transportation engineering
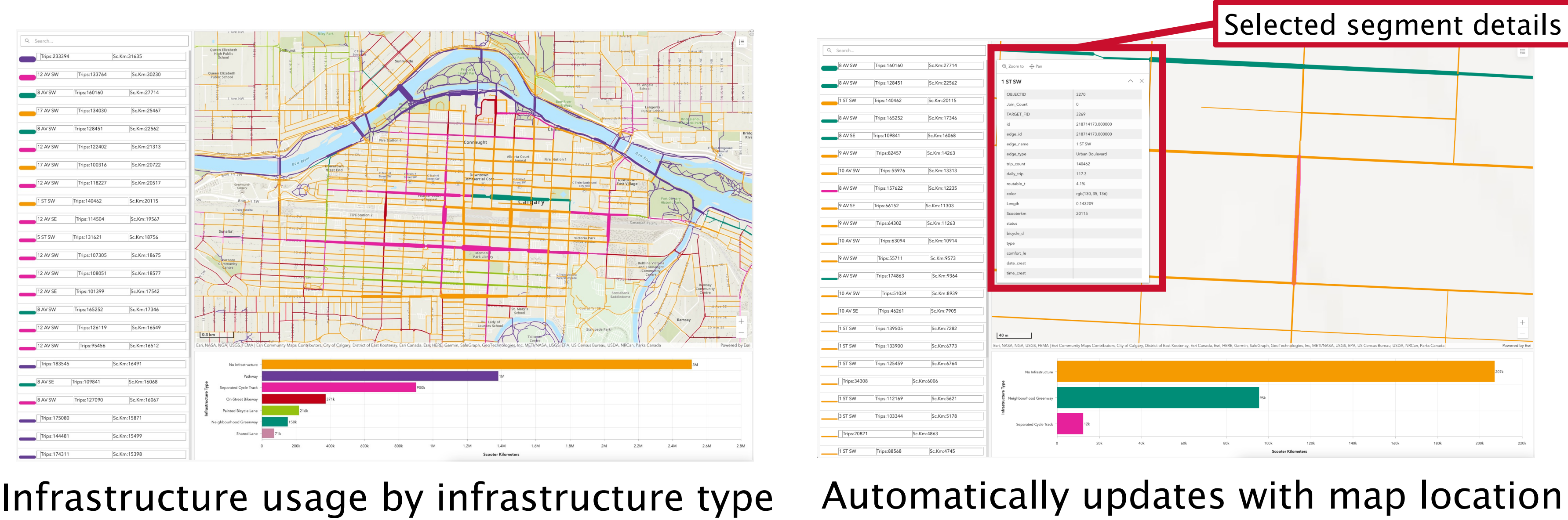- Engineering decision making

Capabilities & Constraints

- Data availability and type
- Interpretation of outputs
- New type of tool: use transportation principles from transit applied to micromobility
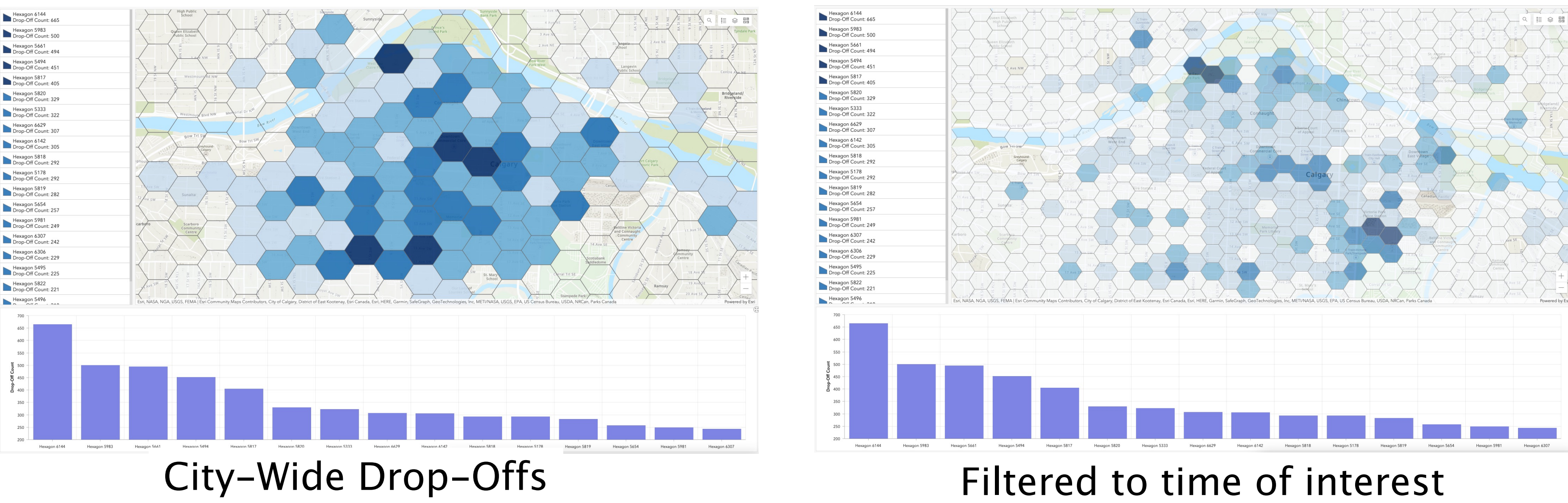
Evidence of Feasibility

Infrastructure Tool

Selected segment details

Infrastructure usage by infrastructure type

Automatically updates with map location

- **Features:**
  - Pan & Zoom
  - Select Segments
  - Filter Types
  - Rank Ridership
  - Compare Types

City Events Tool

City-Wide Drop-Offs

Filtered to time of interest

- **Features:**
  - Pan & Zoom
  - Select Hexagons
  - Highlight Areas
  - Filter Hourly

Incident Tool

City-Wide Incidents

Filtered to incident type
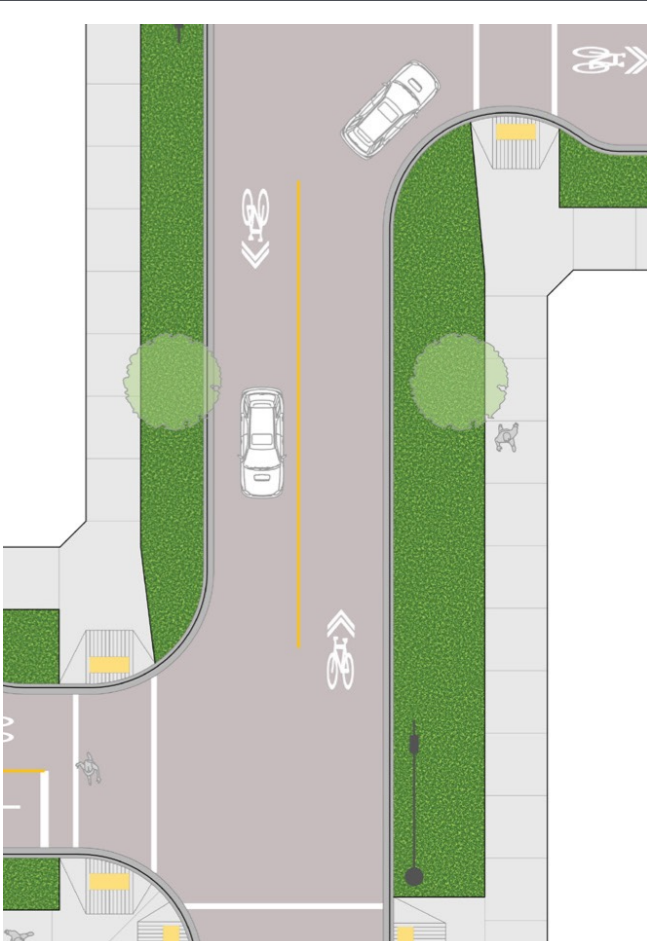
- **Features:**
  - Pan & Zoom
  - Select Type
  - Filter Types
  - Weather Data
  - View Trends
  - Nearest Infrastructure

Roadway Cross-Sections

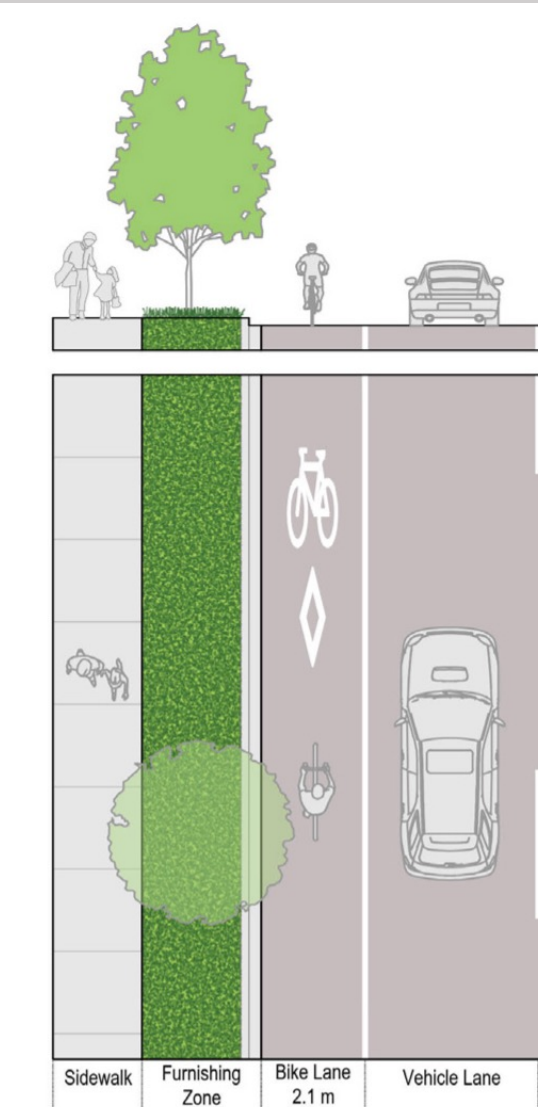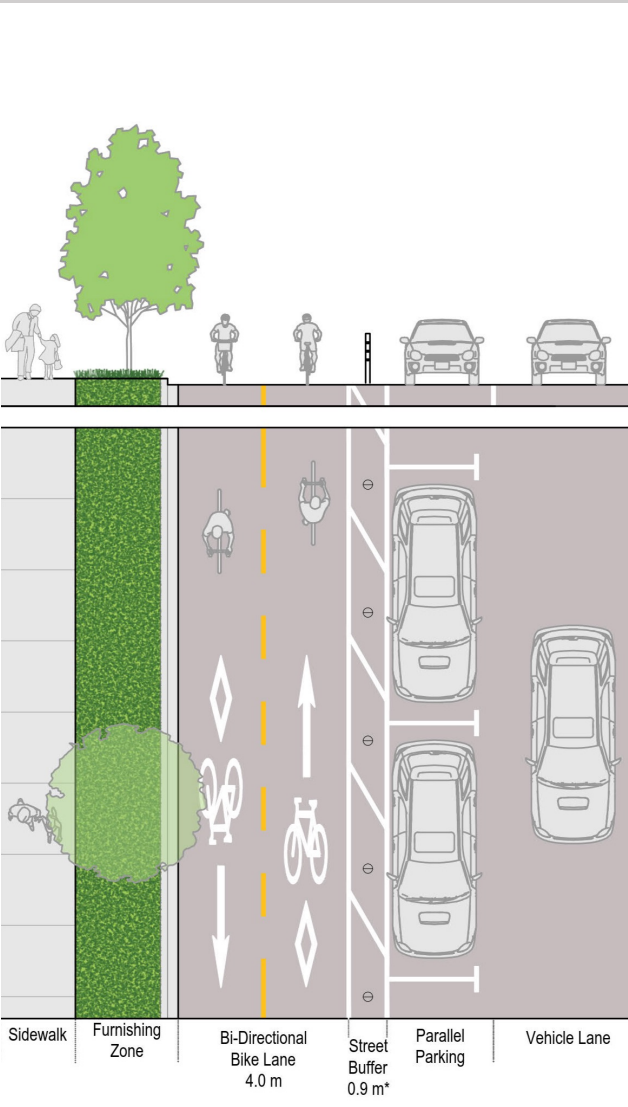**Infrastructure types in the City of Calgary**

Shared Lane

Bike Lane

Cycle Track

Pathway