

Are Canadian municipalities ready for the Smart City revolution?

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Esri Canada



What would I use as a bookmark?



100%



100%



100%



100%



100%



100%



100%



100%



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100%



Road Alignment
Straight / Curved

What would I like to do now?



100%



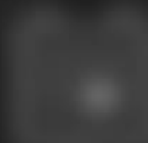
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Road Alignment
Straight / Curved



100%



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What would I like to see?



Road Alignment
Straight / Curved



Daily Traffic
AADT

What would I like to see in ArcMap?



ROAD
ALIGNMENT



ROAD
ALIGNMENT



ROAD
ALIGNMENT



ROAD
ALIGNMENT



ROAD
ALIGNMENT



ROAD
ALIGNMENT



ROAD
ALIGNMENT



Road Alignment
Straight / Curved



Road Alignment
Straight / Curved



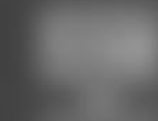
Road Alignment
Straight / Curved



Road Alignment
Straight / Curved



Daily Traffic
AADT



Daily Traffic
AADT

What would Cause an Accident?



Road Alignment
Straight / Curved



Daily Traffic
AADT

What would Cause an Accident?



Road Alignment
Straight / Curved



Speed Limit
120 km/h



Daily Traffic
AADT

What would Cause an Accident?



Road Alignment
Straight / Curved



Speed Limit
120 km/h



Daily Traffic
AADT

What would Cause an Accident?



Road Alignment
Straight / Curved



Road Width
20-30 M



Proximity to
Intersections

120 km/h



Proximity to
Billboards

AADT

What would Cause an Accident?



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Daily Traffic
AADT



**Proximity to
Billboards**

What would Cause an Accident?



Road Width
20-30 M



Road Alignment
Straight / Curved



Proximity to
Intersections



Sun Direction
East, West



Sun Direction
East, West



Daily Traffic
AADT



Proximity to
Billboards

What would Cause an Accident?



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Sun Direction
East, West



Daily Traffic
AADT



**Proximity to
Billboards**

What would Cause an Accident?



Road Width
20-30 M

Road
Structure



Day of the Week
Sun, Mon, Fri..



Time of the Day
12:45, 23:00



Month
Feb, Dec..



Proximity to
Billboards

What would Cause an Accident?



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Sun Direction
East, West



Daily Traffic
AADT



**Proximity to
Billboards**



Day of the Week
Sun, Mon, Fri..



Time of the Day
12:45, 23:00



Month
Feb, Dec..

What would Cause an Accident?

Ten
Sun,



Temperature
Sun, Mon, Fri..



Wind Speed
Fast, Slow..



Visibility
High/Low



Snow Depth
High/Low



Road

20-30 M

Straight / Curved

Intersections

120 km/h

East, West

AADT

Billboards

What would Cause an Accident?



Temperature
Sun, Mon, Fri..



Wind Speed
Fast, Slow..



Visibility
High/Low



Snow Depth
High/Low



Day of the Week
Sun, Mon, Fri..



Time of the Day
12:45, 23:00



Month
Feb, Dec..



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Sun Direction
East, West



Daily Traffic
AADT



**Proximity to
Billboards**

...

What would Cause an Accident?



Temperature
Sun, Mon, Fri..



Wind Speed
Fast, Slow..



Visibility
High/Low



Snow Depth
High/Low



Day of the Week
Sun, Mon, Fri..



Time of the Day
12:45, 23:00



Month
Feb, Dec..



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Sun Direction
East, West



Daily Traffic
AADT



**Proximity to
Billboards**

...

Much of the data needed to make our cities smarter we have available.

What would Cause an Accident?



Temperature
Sun, Mon, Fri..



Wind Speed
Fast, Slow..



Visibility
High/Low



Snow Depth
High/Low



Day of the Week
Sun, Mon, Fri..



Time of the Day
12:45, 23:00



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Feb, Dec..



Road Width
20-30 M



Road Alignment
Straight / Curved



**Proximity to
Intersections**



Speed Limit
120 km/h



Sun Direction
East, West



Daily Traffic
AADT



**Proximity to
Billboards**

...

**Much of the data needed to make our cities smarter we have available.
How to integrate very different data to make decisions can be a challenge.**

What would Cause an Accident?



Temperature
Sun, Mon, Fri..



Wind Speed
Fast, Slow..



Visibility
High/Low



Snow Depth
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Day of the Week
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Time of the Day
12:45, 23:00



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Proximity to
Intersections



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AADT



Proximity to
Billboards

...

Much of the data needed to make our cities smarter we have available. How to integrate very different data to make decisions can be a challenge. The common foundation necessary to bring it all together may be **WHERE**

My Smart South Island

- [South Island Demo Link](#)

My Smart South Island

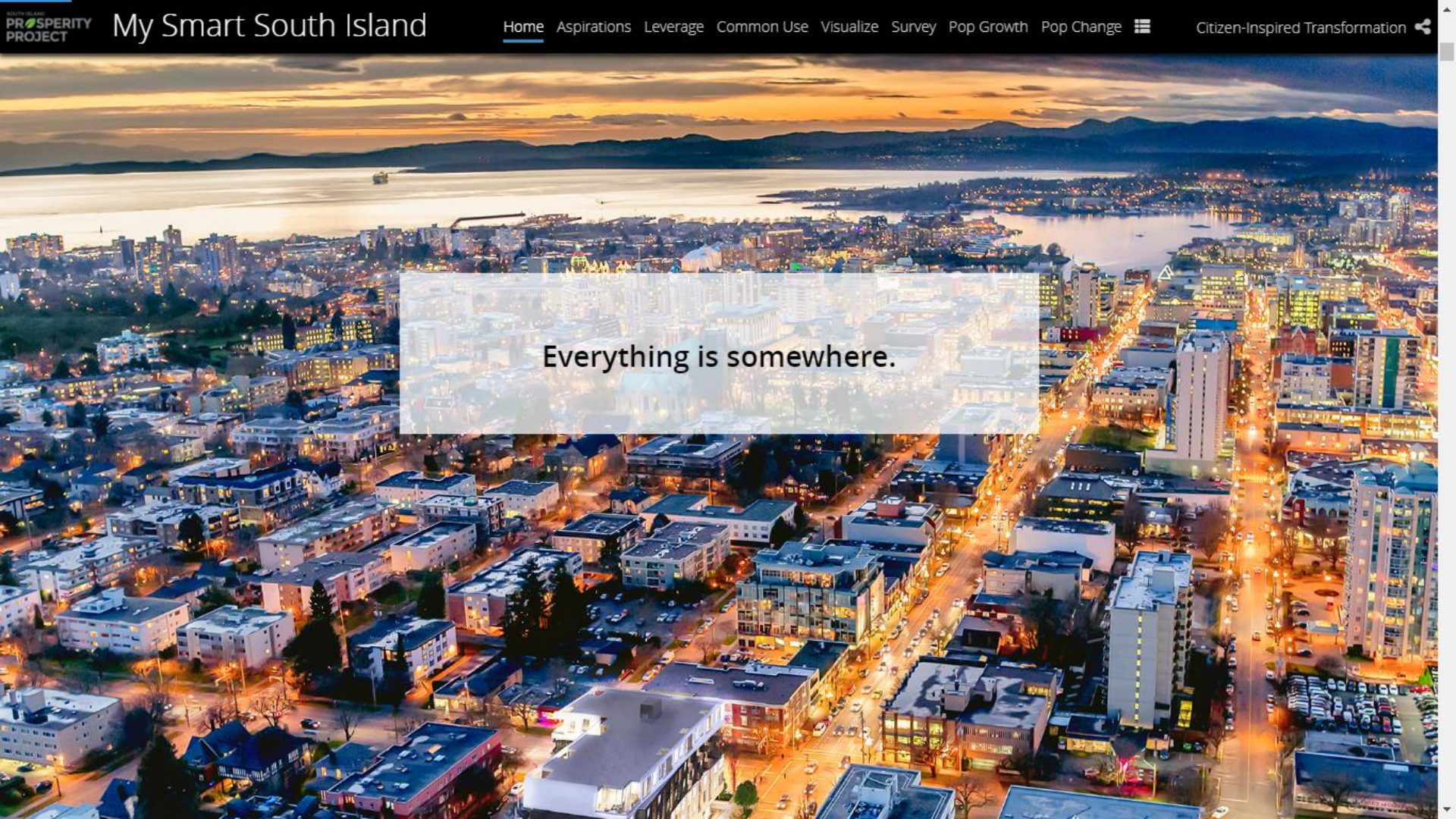
Citizen-Inspired Transformation



SMART
SOUTH ISLAND
Citizen-Inspired Transformation

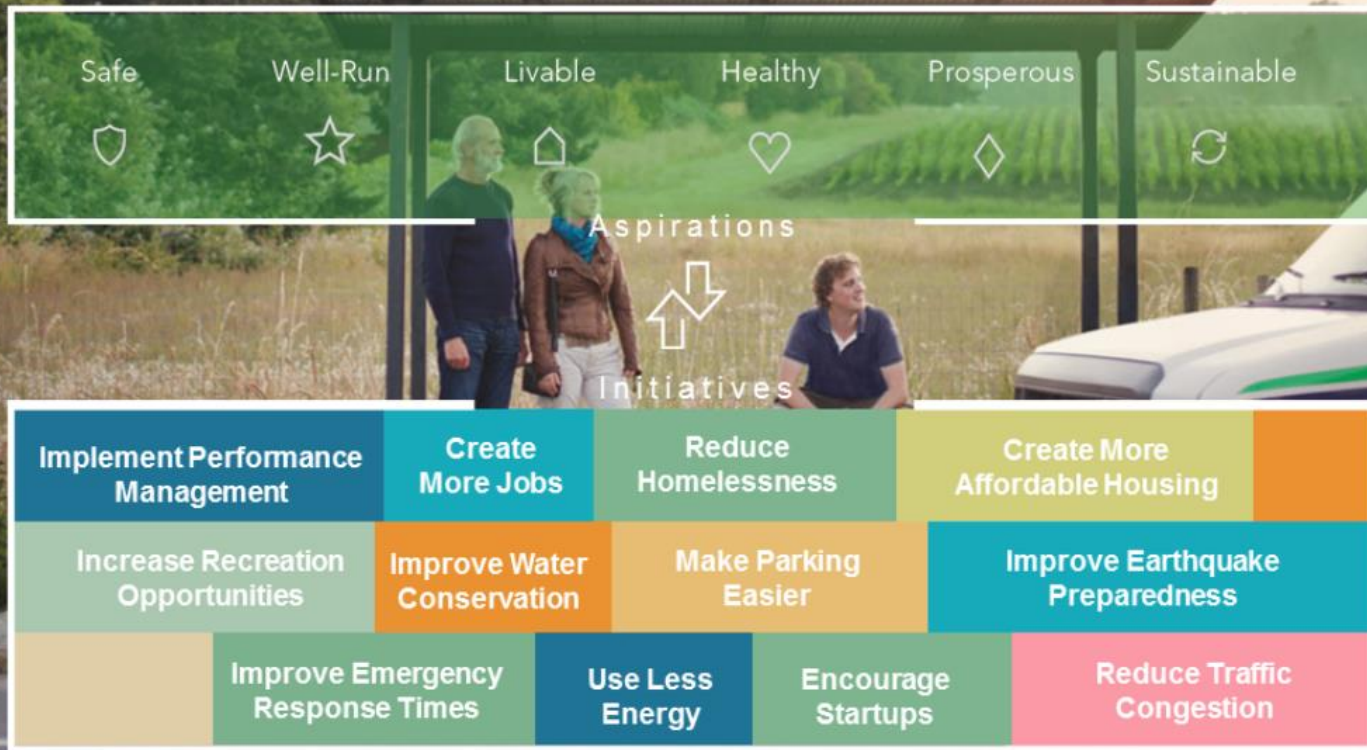
ROSS
SOUTH ISLAND
PROSPERITY
PROJECT
Tria Islands





Everything is somewhere.

Aspirations get translated into actionable, real-world initiatives



Leverage the broader community



What area does the current transit system serve?

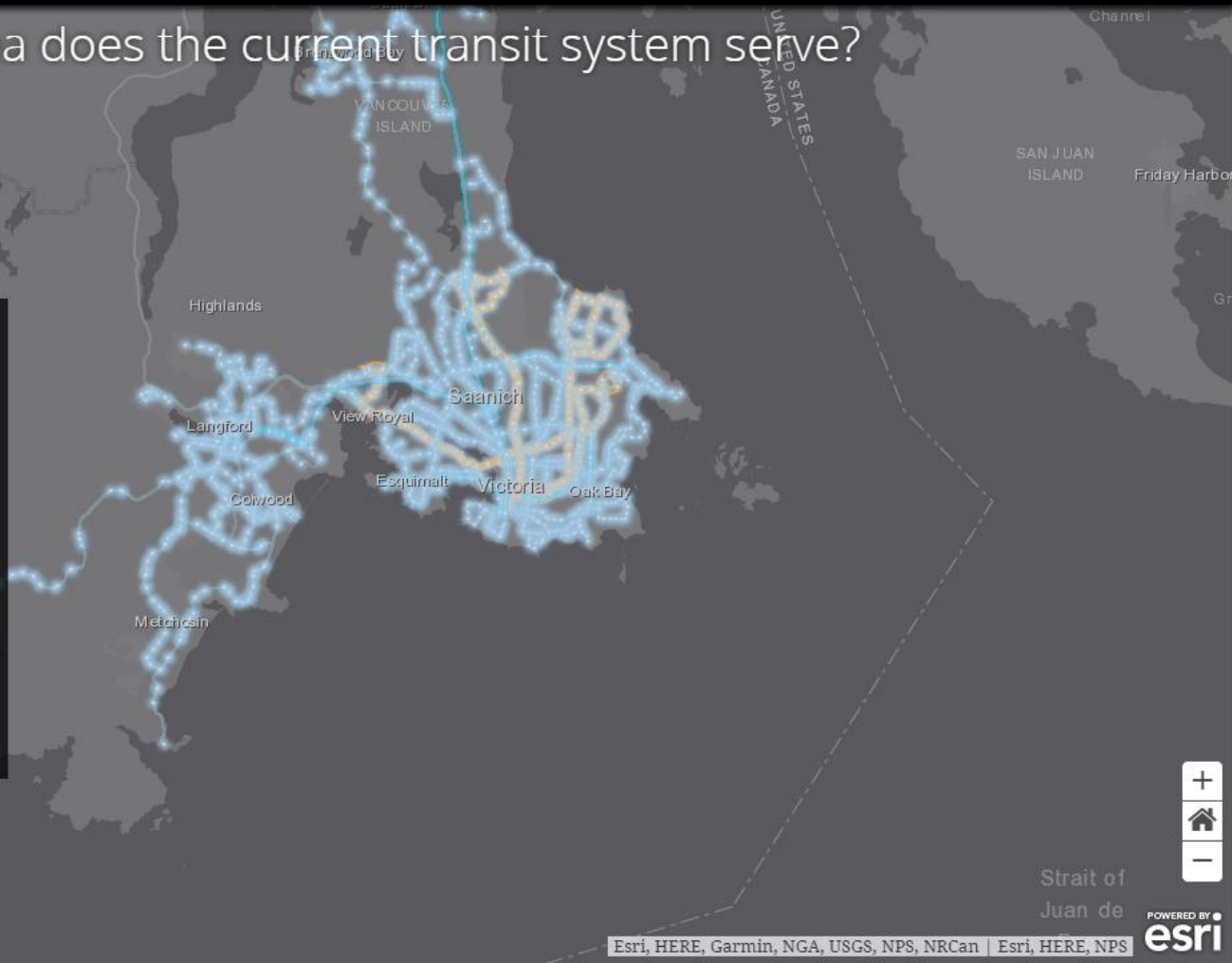
This regional transit map is produced from GTFS data provided by BC Transit.

The glowing **blue** dots represent bus stops along a route

The thicker **orange** line depicts frequent 15-30 minute service

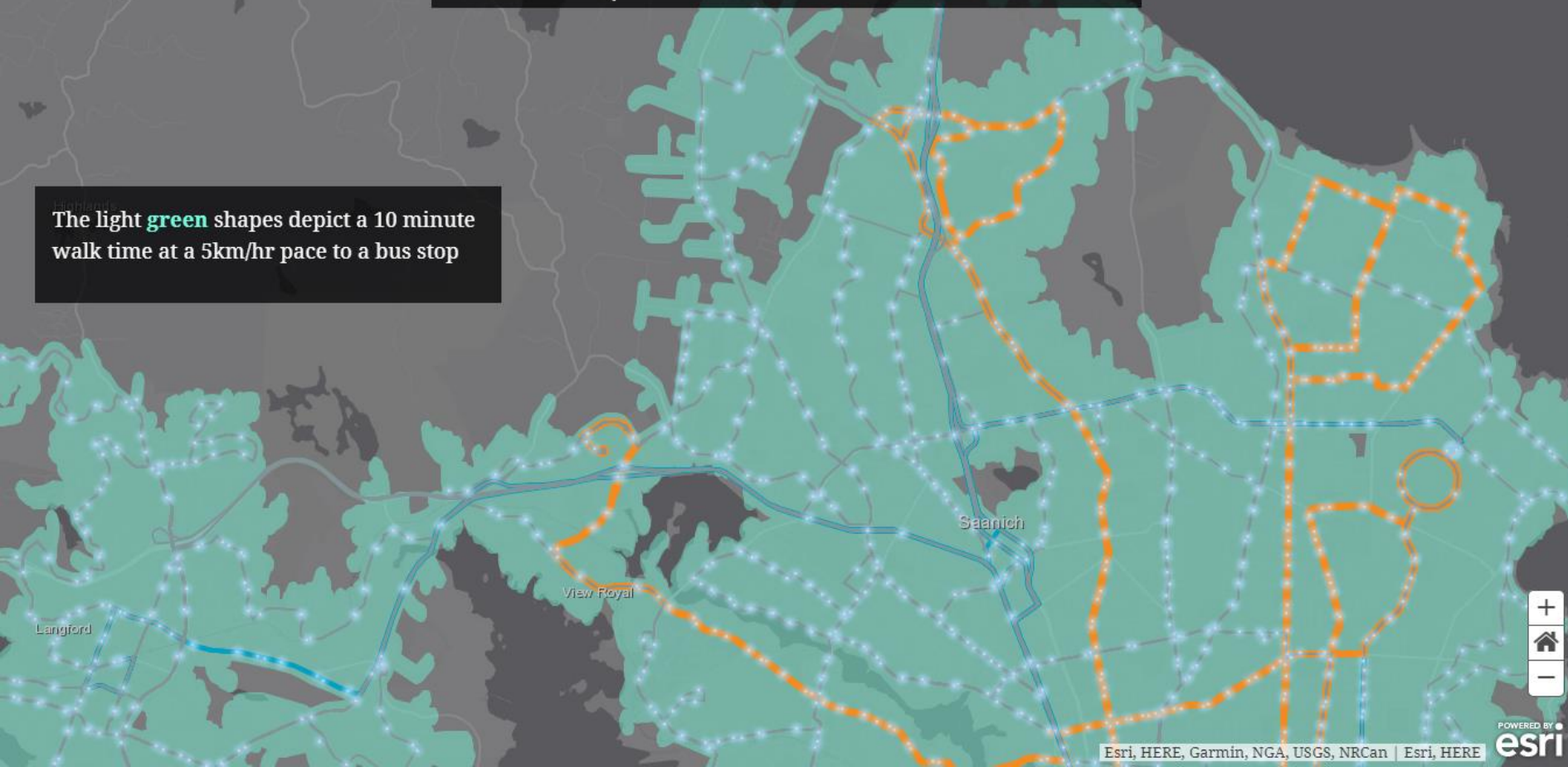
The medium **blue** line depicts regional 15-30 minute service

While the thin **grey** line depicts local 30-60 minute service



Bus Stops within a 10 minute walk

The light **green** shapes depict a 10 minute walk time at a 5km/hr pace to a bus stop



Average Ridership per day (Fall 2016)

Avg Ridership Weekday Embus

K_On



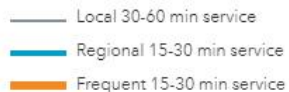
Avg Ridership Weekday Debus

Off



Bus Route

Frequency



Household demographics

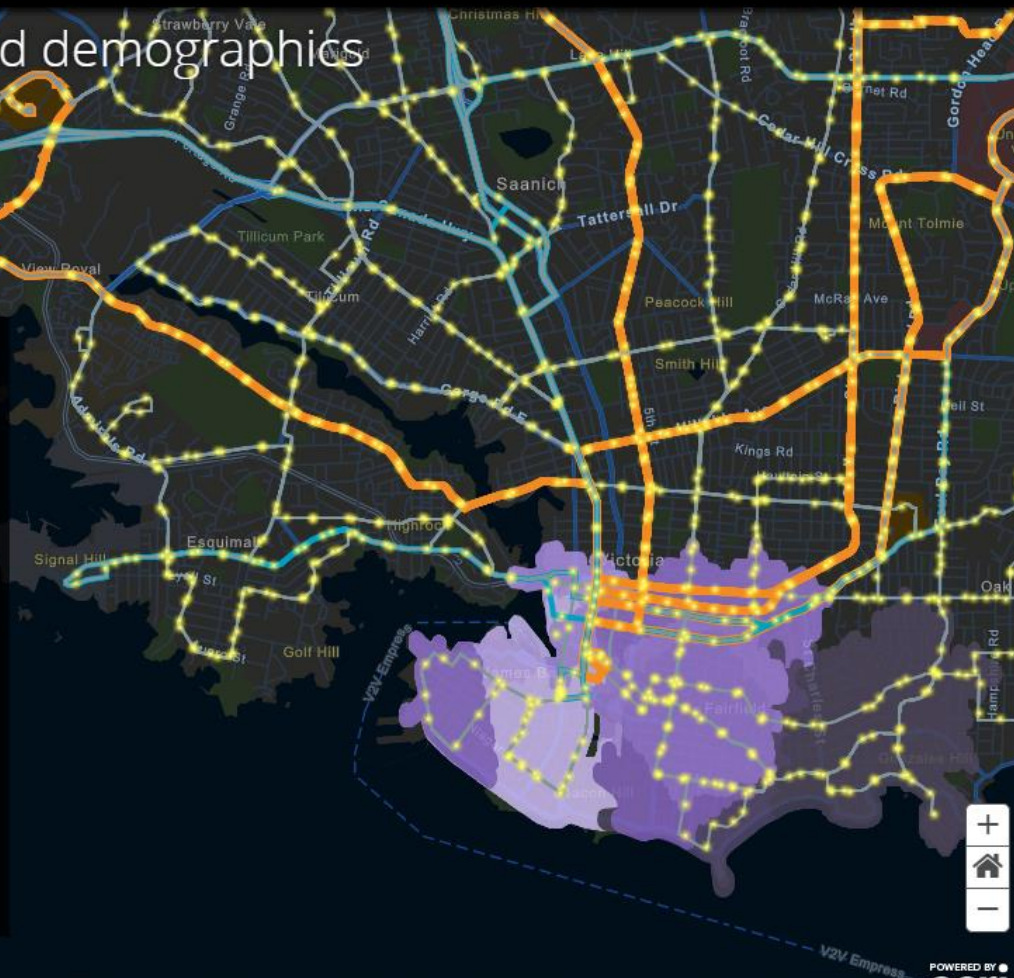
This map contains demographic information about the areas surrounding bus stops.

Clicking on area reveals information about household income, transportation costs, mode of travel to work, and living situations

The demographics data is projected to 2017 current year using Environics Analytics geoenrichment services

The average household in the Westshore spends approximately **12.9%** of its annual income on transportation. Explore the variances with the region by clicking on the light to dark green polygons.

The average household in James Bay spends approximately **9.5%** of its annual income on transportation (depicted in purple polygons)



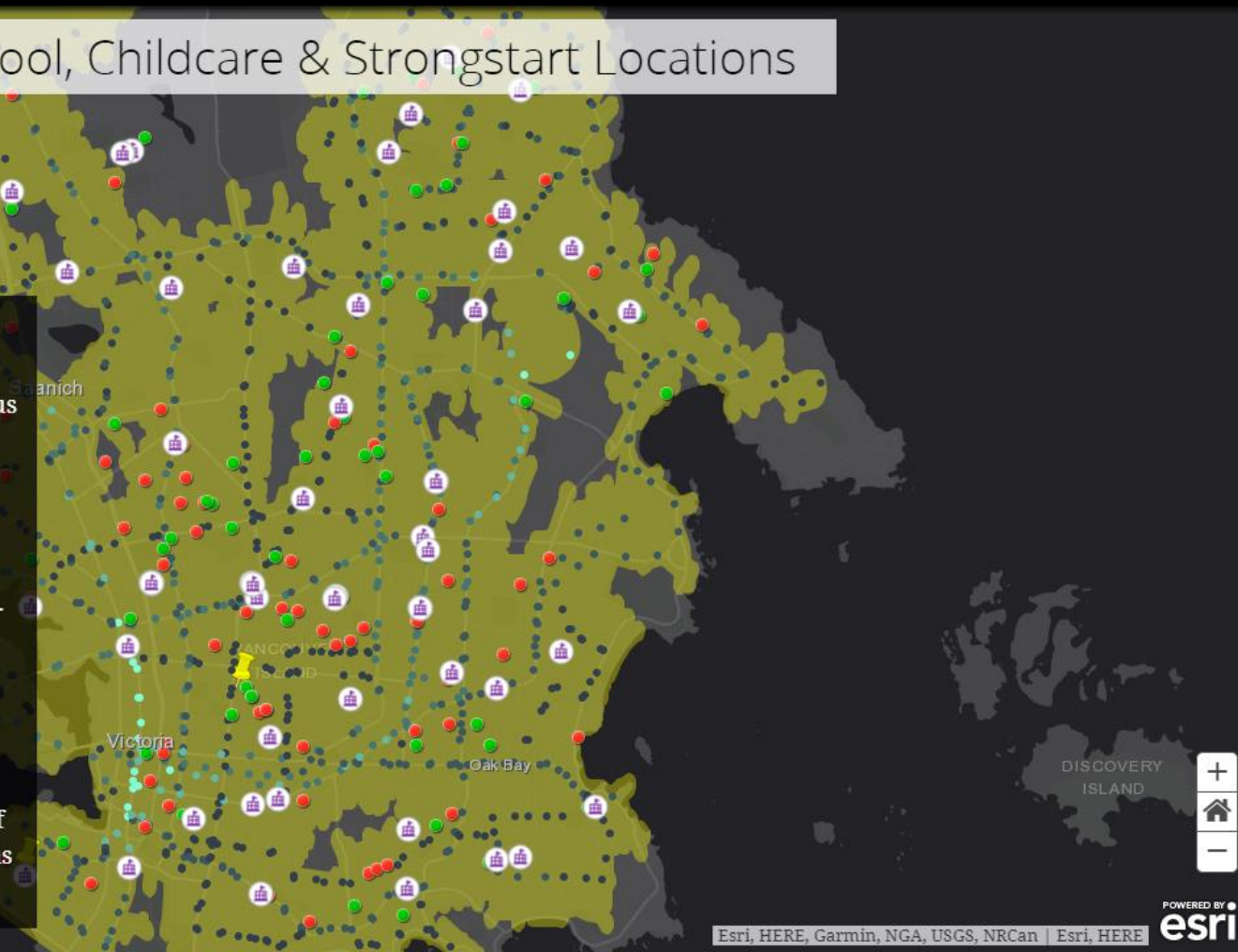
School, Childcare & Strongstart Locations

Finding childcare with vacancy is a growing concern in the region. Not only that, but also for families, proximity to bus routes is a large factor in childcare selection.

In this map we are looking at childcare locations with vacancy (green) vs no vacancy (red) on top of bus service areas.

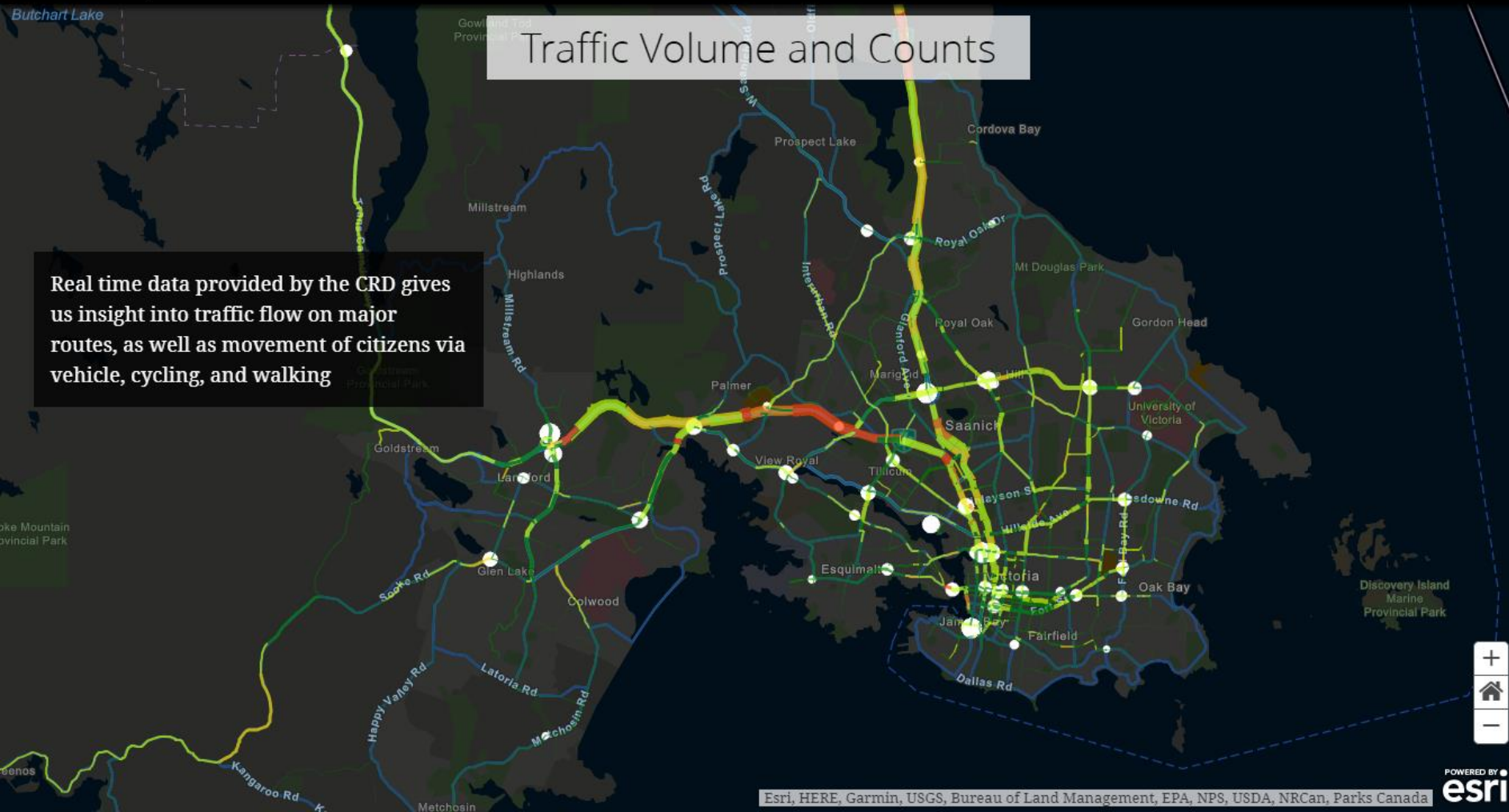
Schools are shown in purple symbology while Strong Start locations are using yellow pushpins.

Bus stop frequency and service area polygons help to visualize relative ease of access to an education location from a bus stop



Traffic Volume and Counts

Real time data provided by the CRD gives us insight into traffic flow on major routes, as well as movement of citizens via vehicle, cycling, and walking

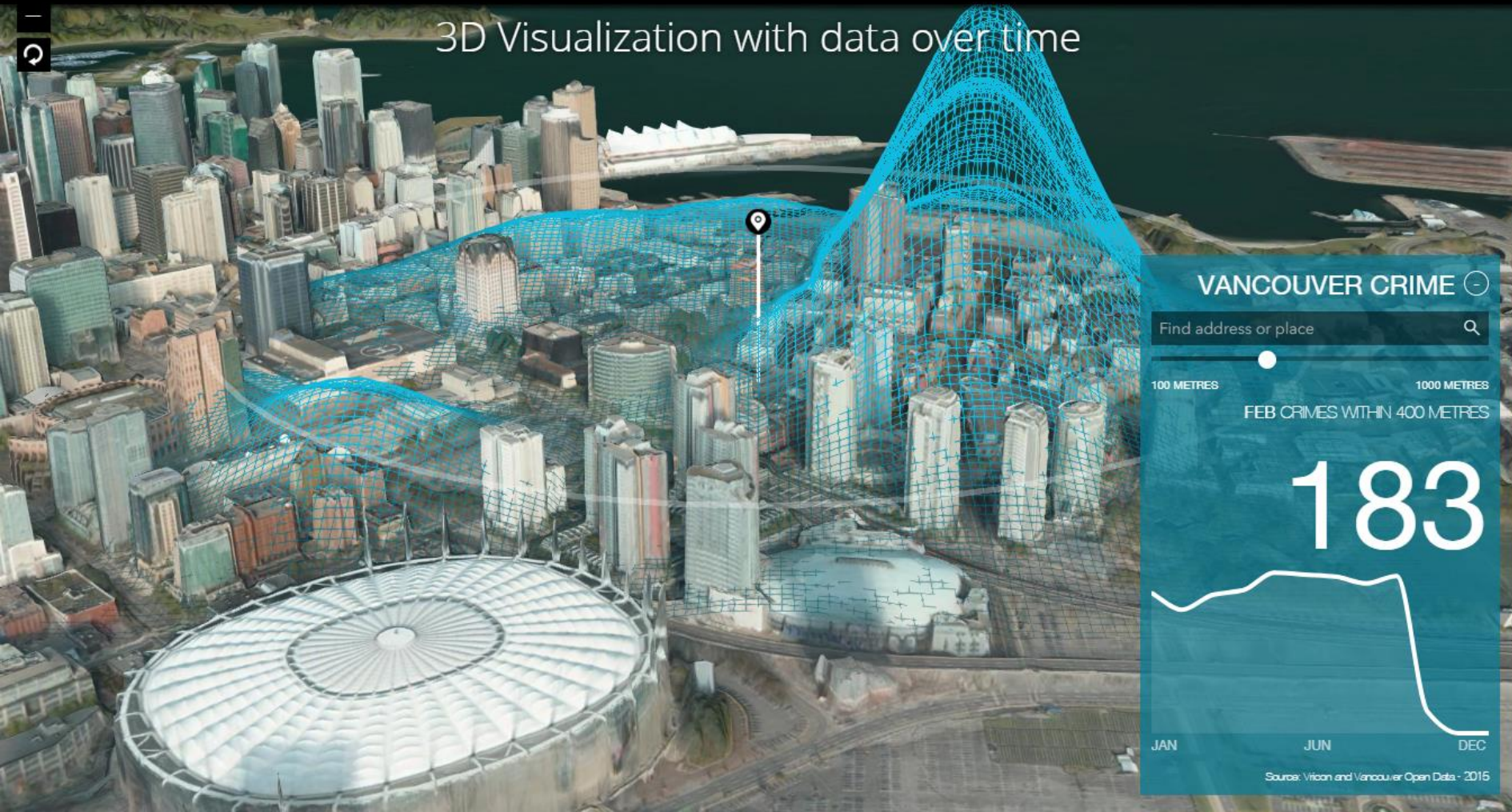


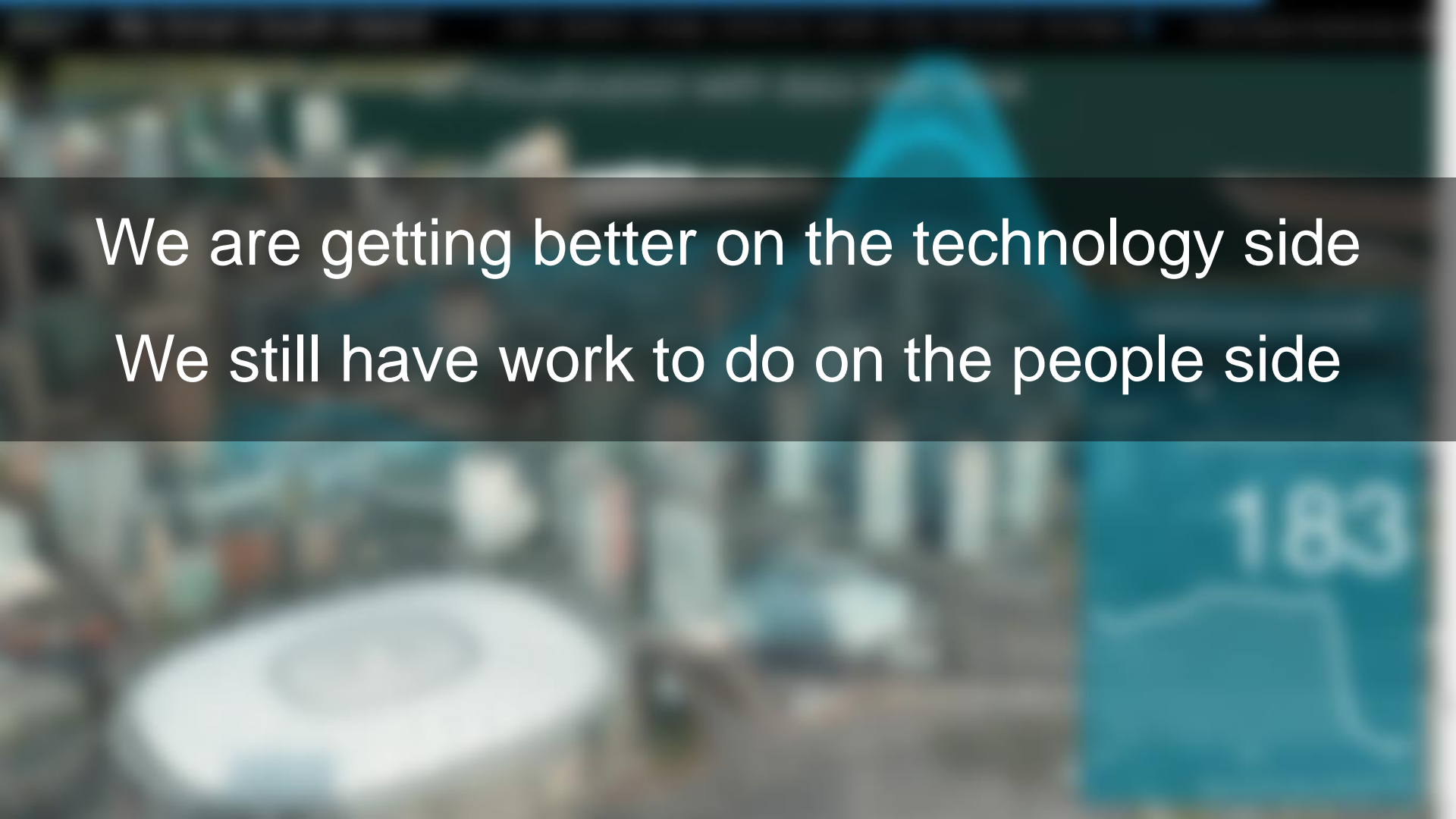
Regional Cycling Network

This map shows the regional cycling network including bike paths, shared roads and other cycling-specific infrastructure suited for the commuter.

If there is a specific section of the cycling network you feel needs improvement, please use [this feedback form](#)

3D Visualization with data over time



The background is a blurred photograph of a crowd of people. In the lower right corner, there is a blue rectangular sign with the white number '183' and a white line graph below it. The text is overlaid on a semi-transparent dark grey band.

We are getting better on the technology side
We still have work to do on the people side

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