TCAT The Taskar Center for Accessible Technology

Using OS-CONNECT to improve local reach and grant applications

Presented to the N. King County Mobility Coalition

Anat Caspi, Kunal Mehta, Ryan Liu

Taskar Center for Accessible Technology
Paul G. Allen School for Computer Science & Engineering
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Sidewalks inventory and accessibility mapping

2 Completeness over Quantity

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4 Usability over Raw Volume

5 Who Benefits, Who is Harmed

6 What Expertise is Replaced vs. Supported

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8 Call to Action

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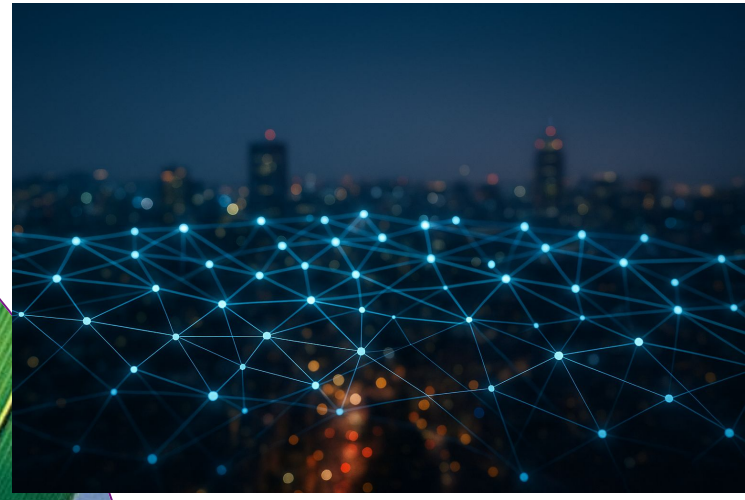
2023-20270- WA LegislatoiveProviso

Proviso Language

The appropriation in this section is subject to the following conditions and limitations: tate appropriation is provided solely for the University of Washington's sidewalk inventory and accessibility mapping project to develop a public dataset under an open license and develop the tools needed to publish that data according to an open data specification. The project must include, but is not limited to, utilization of existing data sources, imagery, detailed surveys, and manually collected, detailed data for city streets, county rural and urban local access roads and collectors/arterials, state roads of all types, and roads owned by other entities. The project may draw on partially developed sidewalk data for all state facilities. To the extent practicable, the final product must be suitable for use by the department of transportation, local and regional agencies, tribal governments, and the general public. For the 2023-2025 fiscal biennium, the project will produce a base active transportation data layer for all counties, with priority given to counties with high proportions of overburdened communities. A project status report is due to the transportation committees of the legislature on December 1st of each year until the work is completed.

OS-CONNECT

Image source: Felipe Tapia, adapted biker and OSW contributor in Santiago de Chile

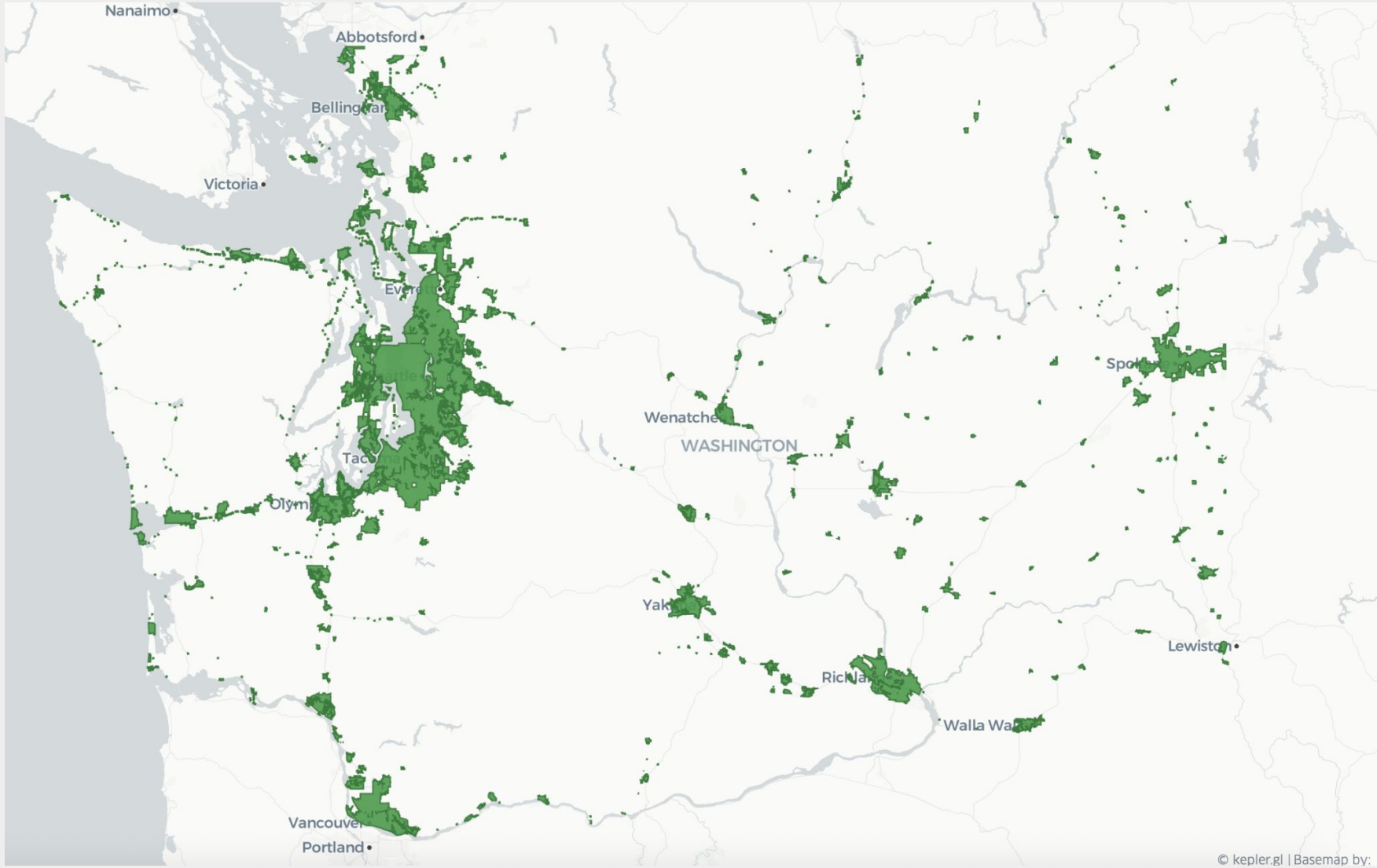


A transportation system is not just about infrastructure—it's about people, access, and connection to opportunity.

‘23-25 Biennium Recap: Target Mapping Area

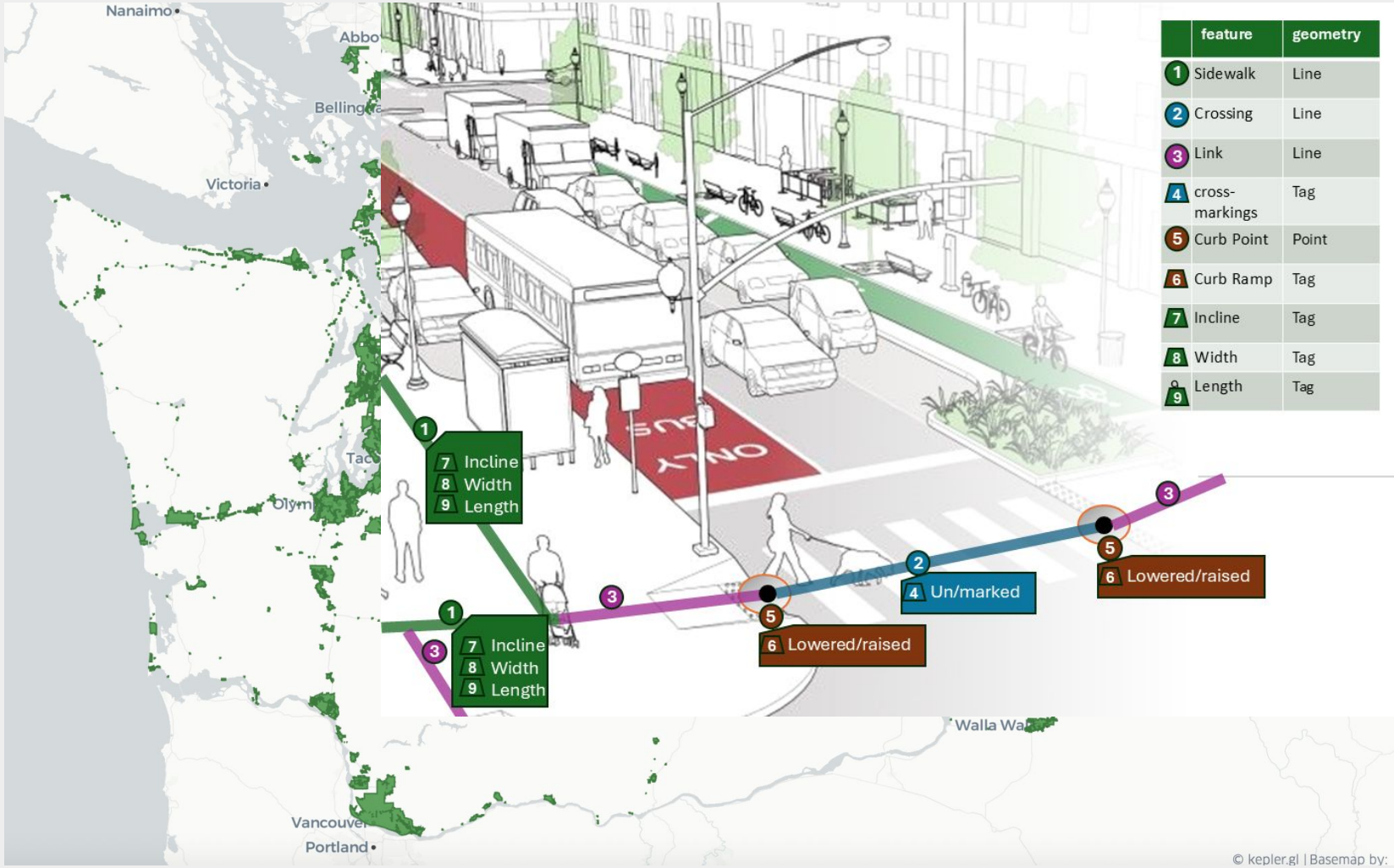
Target

- Densest census tracts accounting for 80% population
- Densest population centers in unrepresented counties
- Buffered areas around transit stops



‘23-25 Biennium Recap: Target Mapping Elements & Attributes

- Sidewalks (id)
  - Incline
  - Width
  - Surface
- Crosswalks (id)
  - Marked
  - Unmarked
  - Surface
- Curbs
  - Lowered
  - Raised
  - Tactile Paving



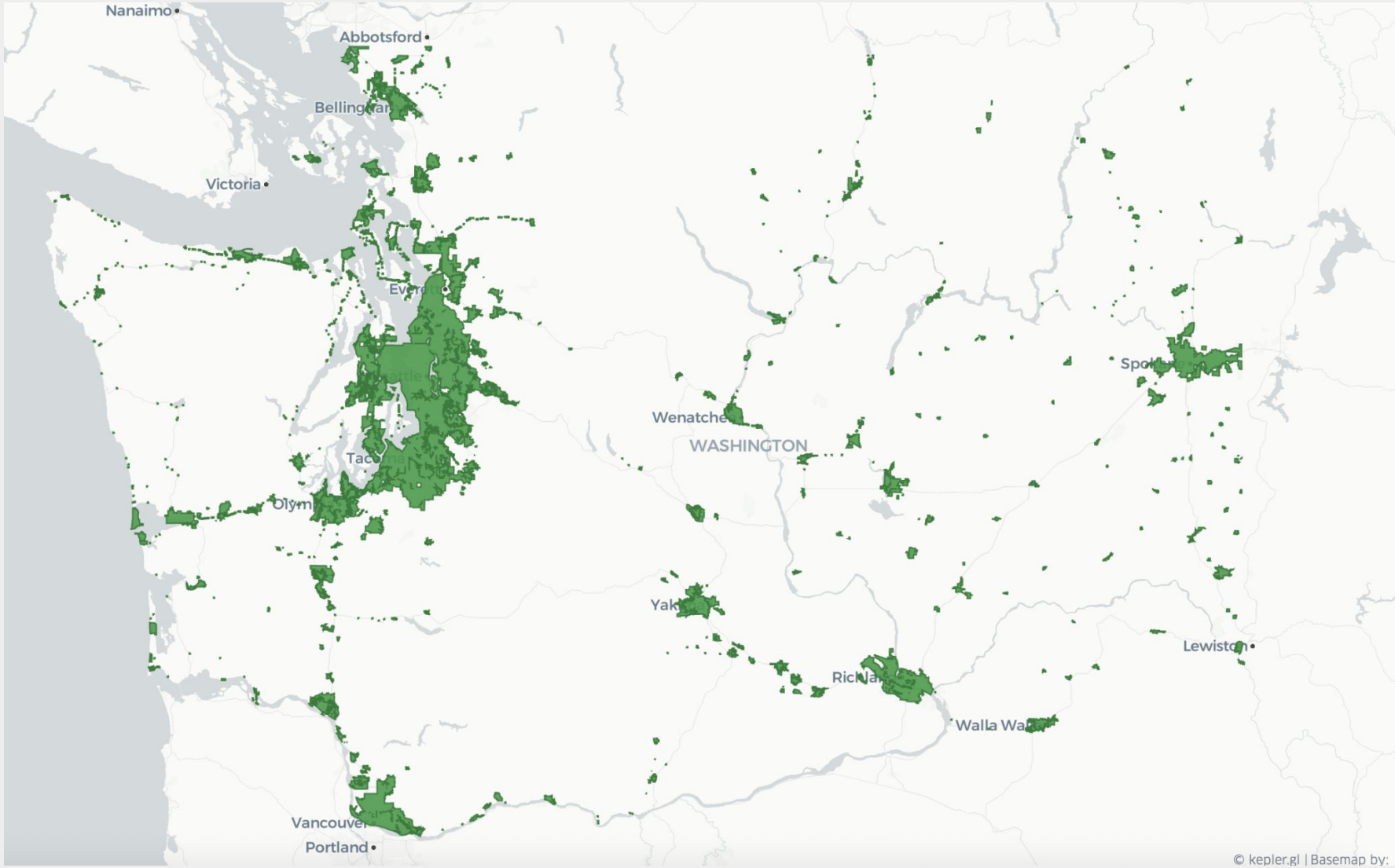
‘23-25 Biennium Recap: OS-CONNECT Statistics

Area: 7400 km^2

Sidewalks:
 * 39000 km
 * 535000 edges

Crosswalks:
 * 6700 km
 * 532000 edges

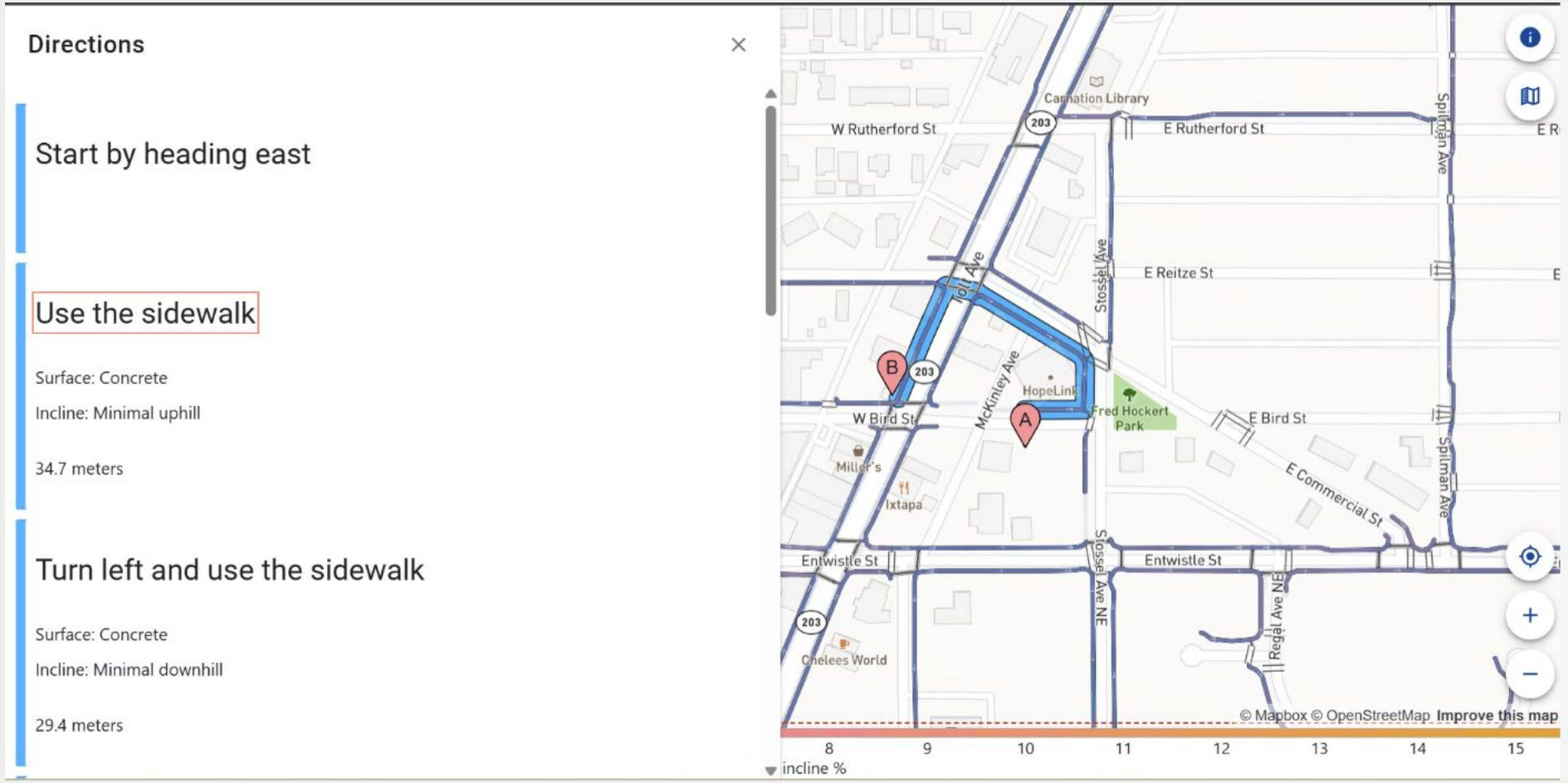
Curbs: 747000



‘23-25 Biennium Recap: ACCESSMAP.APP

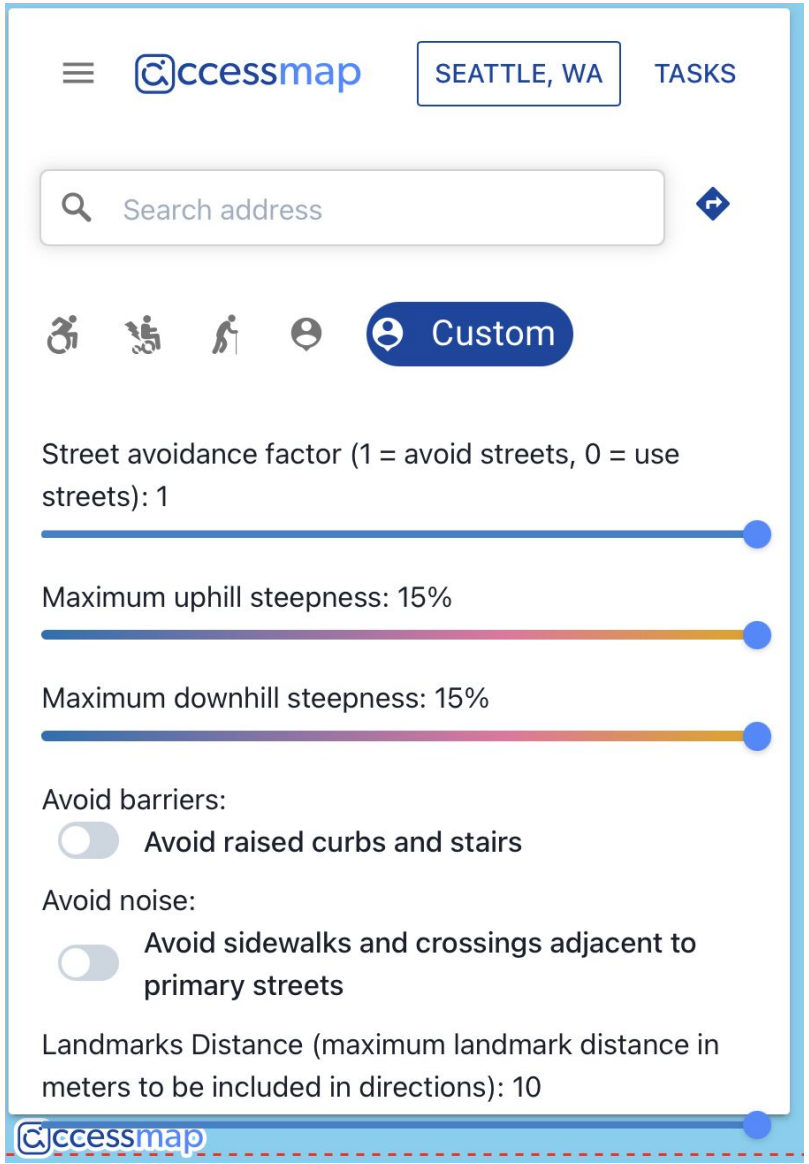
133 jurisdictions

Directions
Personalization
Step by Step



AccessMap.app

- Personalized trip planner
- Preferences: slope, surface, curb ramps
- Non-visual support
- Research lens: where infra supports/fails



AI & Civic Tech in local Communities: What to Look For

- Civic Tech is already used in ex-urban regions
- Opportunity to strengthen local economies and access
- HOWEVER, access is dependent on
  - **How is the technology built**
  - **How is the technology adopted**

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Completeness over Quantity

- Big data focuses on “HOW MUCH”
- In local settings, we focus on completeness, “HOW WELL”
- ex-urban settings need complete coverage of primary infrastructure
- Missing sidewalk = missing connection, no matter how many miles elsewhere

	Shoreline	Lake Forest Park	Kenmore	Woodinville	Bothell
Total area (sq km)	30	9.3	16.1	14.7	35.2
Total Sidewalk Segments	2117	353	1118	1138	6979
Total Crossings	3640	979	1406	1139	3548
Total Curb Points	4918	1311	1906	1665	5289

Feature completion table

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Connectivity over Density

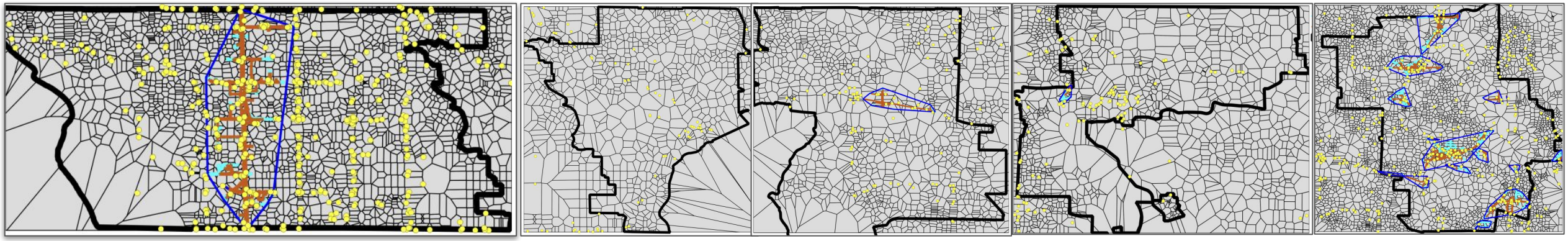
- Density metrics fit smaller jurisdictions differently
- Key issue: are pathways actually *connected*?
- A single broken link can cut off a school, clinic, or workplace

In OS-CONNECT, our metrics for how well we collected data includes assessing connectivity by looking at “accessibility islands”

“accessibility islands” are connected subgraphs of the pedestrian network. The more disconnected islands there are in an area, the greater the discontinuity experienced by travelers in those locations. Well connected areas have few accessibility islands.

Connectivity over Density

Accessibility Islands



Shoreline

Number of Accessibility Islands 2
Number of Points of Interest 409
Number of Disconnected POIs 333

Lake Forest

 # Acc. Islands 0
 # POIs 86
 # Disc. POIs 86

Kenmore

 # Acc. Islands 1
 # POIs 99
 # Disc. POIs 90

Woodinville

 # Acc. Islands 1
 # POIs 117
 # Disc. POIs 90

Bothell

 # Acc. Islands 24
 # POIs 412
 # Disc. POIs 286

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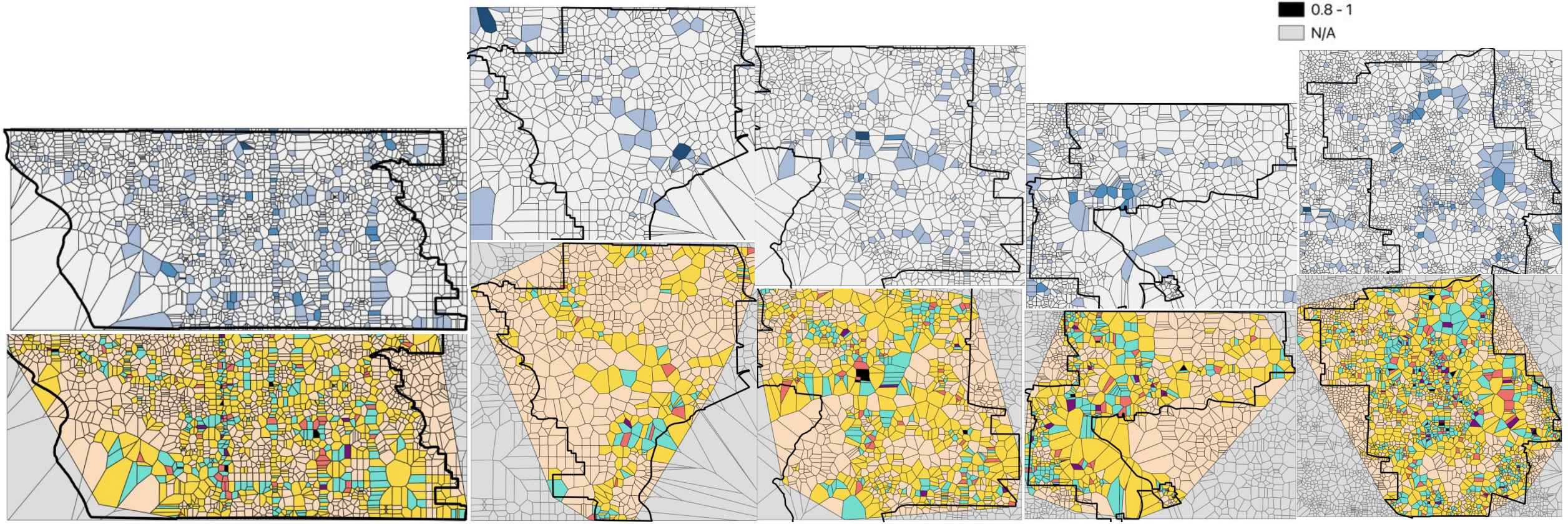
Usability over Raw Volume

Access to Points of Interest



Shoreline

Lake Forest Park

Kenmore

Woodinville

Bothell

Total Unreachable Points of Interest:

333/409

86/86

90/99

Usability by Reach

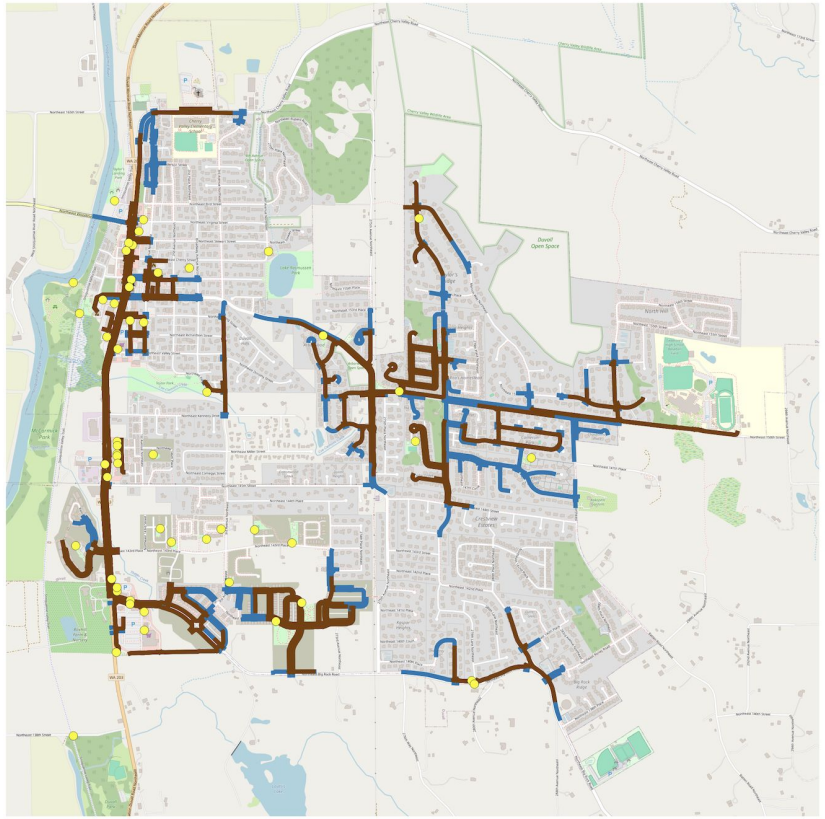
Access to amenities, by amenity type

	DUVALL	CARNATION	NORTH BEND
TOTAL REACHABLE AMENITIES	21	8	24
TOTAL REACHABLE BUS STOPS	10	6	12
TOTAL REACHABLE SUPERMARKETS	2	1	1
TOTAL REACHABLE SCHOOLS	2	0	2
TOTAL REACHABLE HEALTHCARE FACILITIES	7	1	8
TOTAL REACHABLE STATIONS	0	0	1

* amenities are a subset of Points of Interest, considered essential to daily living, noted on the previous slide

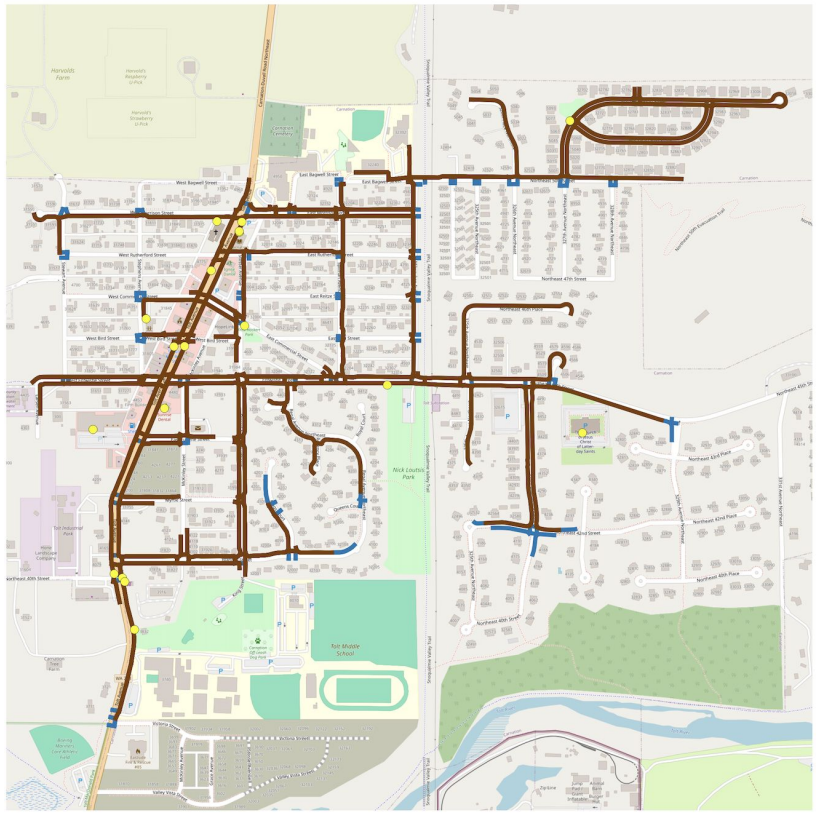
General Reach in Community

Points of Interest
Manual Wheelchair Walksheds
Unconstrained Pedestrian Walksheds



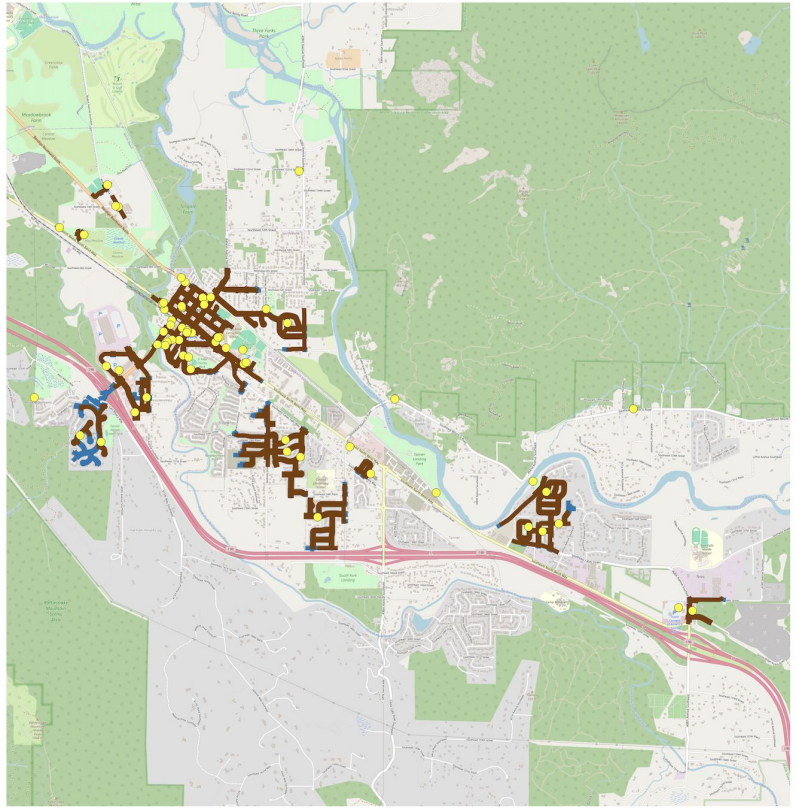
Duvall

Difference in walkshed length: 52683.92 m
Difference in sidewalk count: 827
Difference in crossing count: 904



Carnation

Difference in walkshed length: 14590.79 m
Difference in sidewalk count: 145
Difference in crossing count: 615



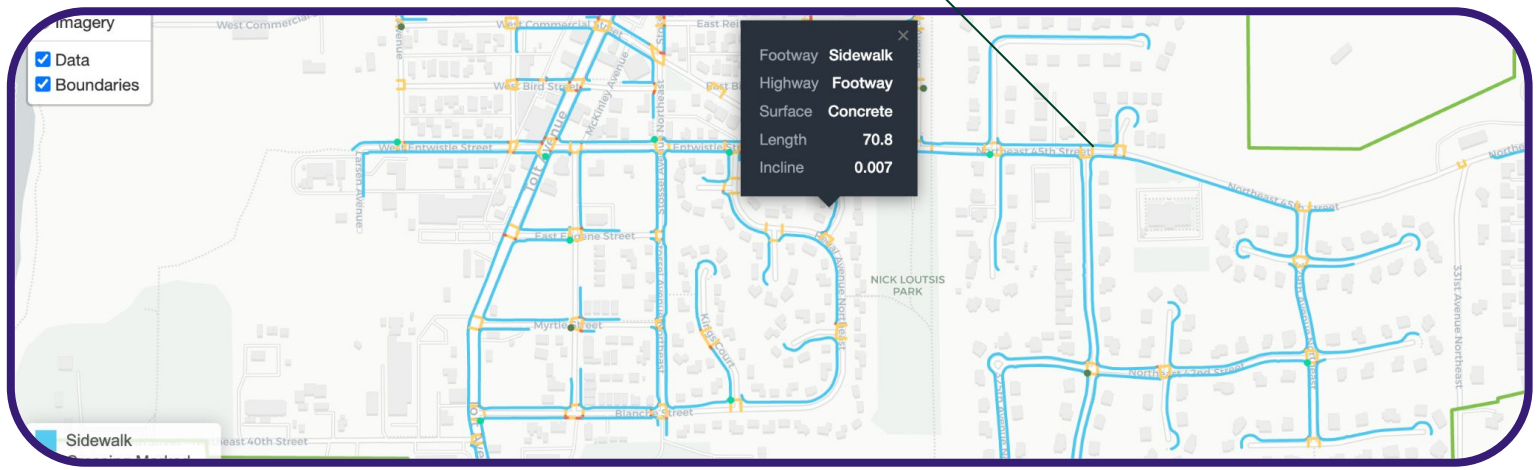
North Bend

Difference in walkshed length: 33832.27 m
Difference in sidewalk count: 305
Difference in crossing count: 851

Usability over Raw Volume

- Local leaders don't need terabytes of aerial data
- Needs are around *applied* data — for grants, audits, planning
- Usability = open formats + ready tools

OS-CONNECT viewer
https://osconnect-viewer.tdei.us/
View, download, suggest edits



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Who Benefits, Who is Harmed

- Walkability apps often reflect *only where people already walk*
- Risk: reinforces inequities & invisibility of underserved routes
- Ask: does the tech highlight gaps or only showcase privilege?

Who Benefits, Who is Harmed

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Advice from Reddit:

> Eat the cost and take the tour. From what it looks like it's appx 2-3 hours each way and that's with at least a 10 minute walk to the top of the falls.
>
> And that IF you successfully make all your connections. So, 4-6 hours on busses round trip.
>
> I'm frugal, but if it was my vacation, spending up to 6 hours on a bus to see one thing. Nope.

Who Benefits, Who is Harmed

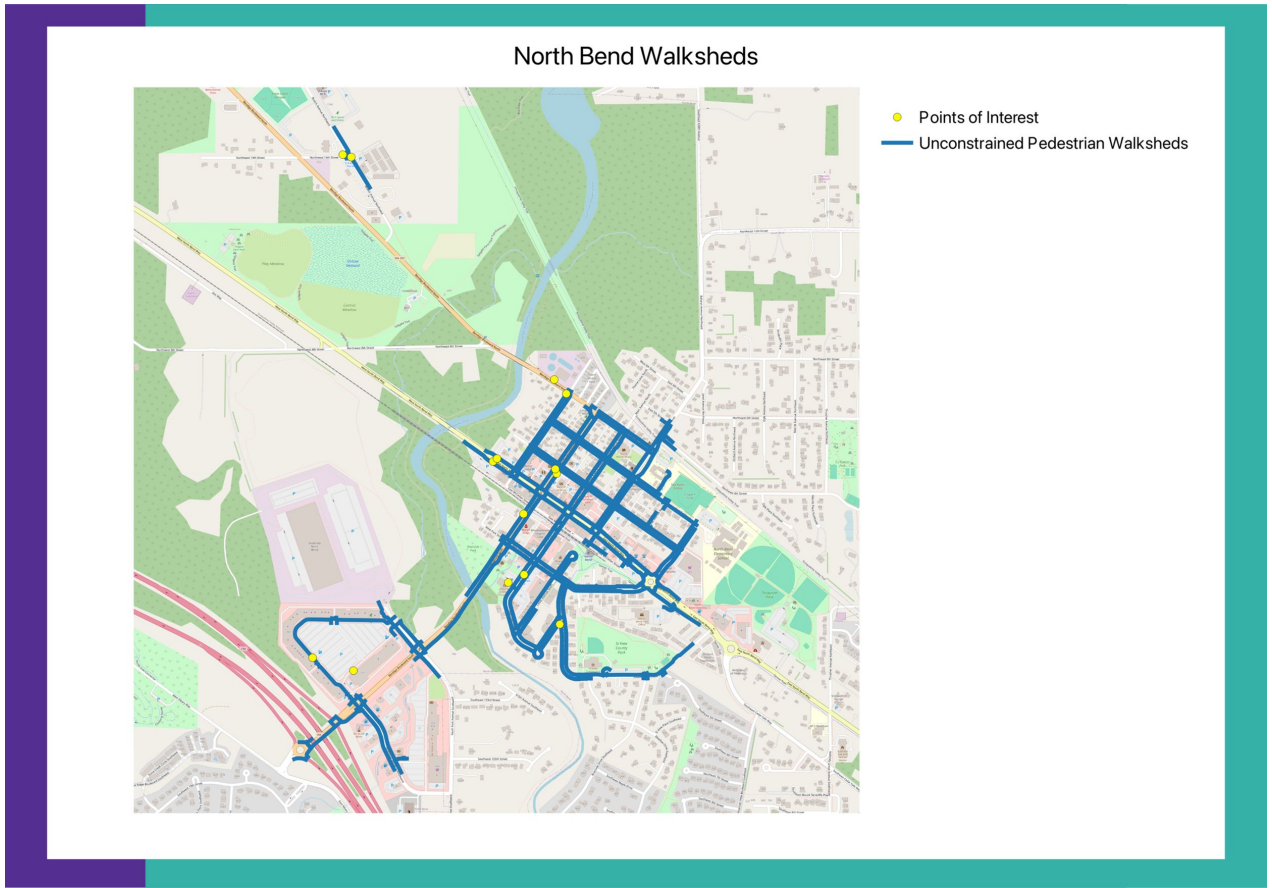
Amy, *North Bend, WA*

Amy usually drives, but after an injury she primarily used **public transportation** for several months.

> I had to attend a **90-minute meeting** in Carnation, 20 minutes from where I live, and, using the local transportation, to be picked up at home, taken to the meeting, picked up after the meeting and brought back home **took seven and a half hours door to door**. I had to attend those meetings but doing so took up my entire day because the buses are so limited and infrequent.

Who Benefits, Who is Harmed

Infrequent transit impacts connectivity to daily needs and services.



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What Expertise is Replaced vs. Supported

- Local knowledge is an asset
- Tech should amplify, not erase, community expertise
- Best systems integrate lived experience directly into data

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What Values Must Constrain AI Use

- Efficiency ≠ safety
- Civic tech must encode exurban values: safety, dignity, accessibility
- Question for vendors: *what values are built into your system?*

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Call to Action

- ex-urban places are not afterthoughts — set your own standard, in coalition
- Ask five questions:
  - Completeness
  - Connectivity
  - Usability
  - Expertise
  - Values
- **Work with the OS-CONNECT dataset for improved access and engage community in placemaking!**

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2025-2027 biennium Key Work Streams

1 2 3 4

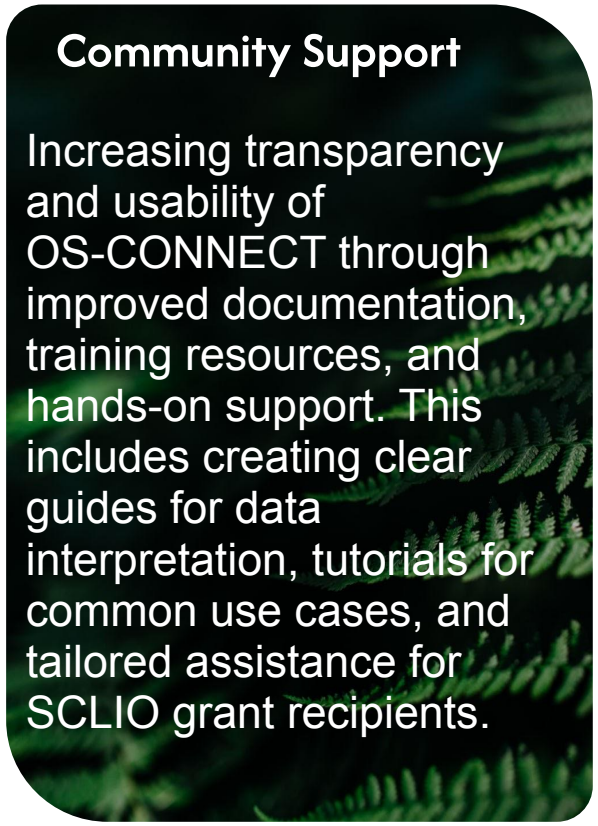
OSW Update Streams

OSW Update Streams to ensure OS-CONNECT remains a living, up-to-date statewide sidewalk and pedestrian dataset. This system enables continuous, community-informed updates, integration of new sources, and enrichment of the dataset with real-time changes—supporting more responsive planning, analysis, and accessibility-focused innovation across Washington State.

Enhance QA/QC

Enhance QA/QC processes to improve the accuracy, completeness, and usability of OS-CONNECT. Focus areas: refining topology validation, detecting and resolving data gaps, improving alignment with aerial imagery and local basemaps, and expanding checks for accessibility features. These will support trust in the dataset and ensure it meets the needs of planners, advocates, and community partners.

Community Support



Increasing transparency and usability of OS-CONNECT through improved documentation, training resources, and hands-on support. This includes creating clear guides for data interpretation, tutorials for common use cases, and tailored assistance for SCLIO grant recipients.

Enabling Workflows

developing workflows that help translate OS-CONNECT data into actionable project suggestions, supporting agencies and communities in identifying high-impact interventions. These tools will assist with prioritization based on equity, safety, and accessibility indicators—aligning local needs with funding opportunities and planning processes.

‘25 Biennium Recap: Capacity Building & SCLIOs

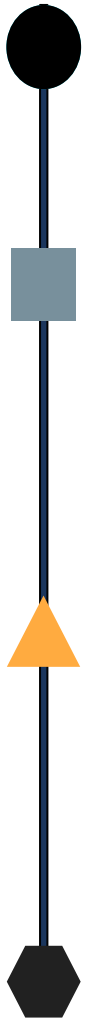
We partner with organizations across Washington State to improve pedestrian access and active transportation using OS-CONNECT.

Please apply here and reach out with any questions!

https://tcat.cs.washington.edu/participate/sclio-grants/

uwtcat@uw.edu

Typical SCLIO project timeline



SCLIO Application grants open twice a year

SCLIO funding cycles close on Feb 1 and on August 1 each year.

Tier 1 applications are expected to include a year long timeline and a budget justification. Contract agreement requires sole source contracting authorizations.

Tier 2 applications are typically 6-9 month timeline. Contract agreement requires being established as a UW Vendor.

Tier 2 grantees work with the TCAT team getting set up with OS-CONNECT in-house and working through milestones. Meetings typically monthly.

Tier 1 grantees meet with TCAT's team monthly to discuss progress and milestones.

Final Milestones assessed

SCLIO teams present their work in public, provide final report and exit survey

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How to start working with OS-CONNECT:

visit the map:
osconnect-viewer.tdei.us

Come to Office Hours
zoom contact: uwtcat@uw.edu

Apply for a grant:
https://tcat.cs.washington.edu/sclio

Come to OpenThePaths2026:
tcat.cs.washington.edu/OTP2026

SCLIO Grants currently OPEN!
Come to OFFICE HOURS tuesdays
8-10am
UWTCAT@uw.edu

tcat.cs.washington.edu/OTP2026

OpenThePaths 2026 Feb 26-27, 2026
Connecting People and Places
Keynotes
Community building
Stewardship Panels
SCLIO writing workshop

THANK YOU!

Happy to take any questions

uwtcat@uw.edu

https://osconnect-viewer.tdei.us/

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“I had to attend a **90-minute meeting** in Carnation, 20 minutes from where I live, and, using the local transportation, to be picked up at home, taken to the meeting, picked up after the meeting and brought back home **took seven and a half hours door to door**. I had to attend those meetings but doing so took up my entire day because the buses are so limited and infrequent.”

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Thank you