MWCOG Bicycle and Pedestrian Subcommittee Meeting

September 17, 2024

Agenda

1. Introduction
2. ADA Historical Context
3. Industry Data Collection Methods and Best Practices
4. Citian's Approach

Who are We?

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Our vision is to build
a **safer**,
more **equitable**,
and more **accessible**
transportation future.

Transforming cities, states, and infrastructure with automated, data-driven intelligence.

Historical Context

- The US Access Board is created in 1973 in order to propose solutions for standards under the Architectural Barriers Act (1968).
- Americans with Disabilities Act (ADA) of 1990 prohibits discrimination against people with disabilities
- The US Access Board issues final standards with ADA Accessibility Guidelines (ADAAG) for Buildings and Facilities in 1991
- The US Access Board issues final standards with Accessibility Guidelines for Pedestrian Facilities in the Public Right of Way (PROWAG) in 2023

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What is PROWAG?

- **P**ublic **R**ight-**o**f-**W**ay **A**ccessibility **G**uidelines
- PROWAG covers minimum guidelines for the accessibility of pedestrian facilities in the public right-of-way including sidewalks, signals, transit stations, curb ramps, protruding objects, multi-use paths, on-street parking, etc.
  - All new and altered assets have attributes that infrastructure providers must ensure are fully compliant

Transportation for Individuals With Disabilities; Adoption of Accessibility Standards for Pedestrian Facilities in the Public Right-of-Way

A Proposed Rule by the Transportation Department on 08/22/2024

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Why Focus on the Non-Motorized Network?

Reluctant Towns, Cities and States Are Being Dragged Into Court to Fix Sidewalks for People With Disabilities

TIME, October 12, 2021

Disability Rights Advocates Sue Baltimore For Accessible Sidewalks, Streets

WYPR, August 9, 2021

Philly must repair or install 10,000 curb ramps over 15 years as part of a class action settlement

A group of disabled residents and advocacy groups sued the city over a lack of accessible sidewalks in 2019

Philly Voice, May 8, 2023

Officials approve $9.1M plan to fix sidewalks that fail disability law standards

Frederick News-Post, Sep 26, 2014

Numerous lawsuits have been filed on this topic of sidewalks not being accessible; these are civil rights cases because not designing infrastructure with those with disabilities in mind is a discriminatory practice. These cases include but are not limited to:

- Betancourt-Colon v City of San Juan (2022)
- Hamer v City of Trinidad (2020)
- Liberty Resources v City of Philadelphia (2019)
- Dougherty v Allegheny County (2019)
- Reynoldson v City of Seattle (2015)
- Willits v City of Los Angeles (2013)
- Frame v City of Arlington (2010)
- Tinker v Town of Tilton (2005)
- Barden v City of Sacramento (2002)

Streetsblog, March 4, 2024

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Why Focus on the Non-Motorized Network?

- 12.2% of US adults have a mobility disability (CDC) and 8.3% of households don't have a vehicle (US Census Bureau)
- Reduce paratransit costs
- Support statewide greenhouse gas emission reduction goals
- Universal Design – benefits all residents

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Notice of Proposed Rulemaking (NPRM)

- The NPRM public comment period concludes next Monday, September 23
  - These guidelines will be minimum thresholds once they are adopted for enforcement by the Department of Justice and the Department of Transportation under Title II of the ADA
- Significant changes are outlined in the latest PROWAG edition

- On-Street Parking
- Passenger Loading Zones
- Pedestrian Street Crossings
- Alterations
- Transit Stops

- Crosswalk Treatments at Roundabouts
- Slopes Stated in Ratios and Percentages
- Alterations that Trigger Installation of Accessible Pedestrian Signals
- Identification of Places with No Pedestrian Crossing

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The ADA Transition Plan

The Transition Plan must:

1. Identify obstacles that limit accessibility

2. Describe methods to make facilities accessible

3. Provide schedule to make needed modifications

4. Identify officials responsible for implementing Plan

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ROW Data Collection Methods and Best Practices

	Accuracy	Labor Ease	Time Savings	Cost Savings	Evironmental Impact
Manual data collection	★★★★	★	★	★	★★★
Vehicle LiDAR data collection	★★★★★	★★★★	★★★★★	★★★★	★★★
Mobile LiDAR data collection	★★★★★	★★★★	★★★★	★★★★	★★
Aerial imagery data collection with manual supplement	★★★	★★★	★★★	★★★	★
Aerial imagery data collection without manual supplement	★★	★★★★	★★★★★	★★★★	★★
Migration and refinement of existing data only	★	★★★★★	★★★★	★★★★★	★★★★★

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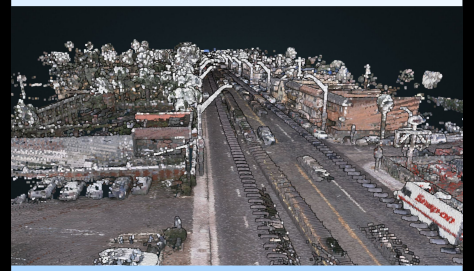
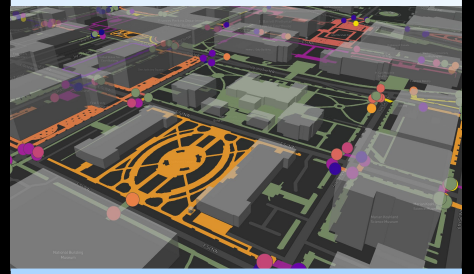
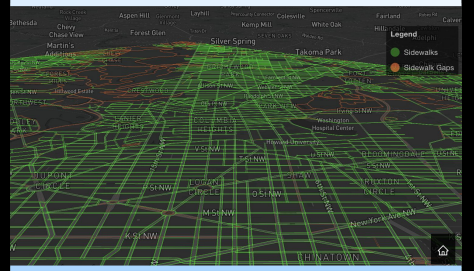
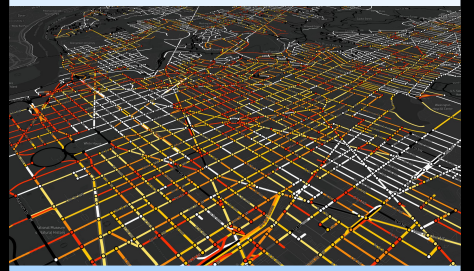
Citian's Approach

A case study featuring our accessibility integration

Use case: A civil engineer collecting ADA compliance data and prioritizing a sidewalk program.
The engineer using ADAPT can complete the sidewalk compliance analysis **20 times faster.**

Survey sidewalk attributes	**Extract compliance assessment**	**Create sidewalk map**	**Prioritization, Costs & Accessibility analysis**	**Generate Reporting & Programming**
From years of manual data collection…	From months of manual review and extraction…	From days of GIS work…	From hours of reviewing compliance thresholds and budget spreadsheets	From hours of reporting…
				
…to **LiDAR scans completed in weeks**	…to automatically extracted **data summaries of compliance metrics** in minutes	… to **automatically generated maps** and accessibility isochrones	… to ADAPT automatically generating **compliance assessments with costs summarized**	…to **automated** and **dynamic data dashboards** and **construction project priorities**

Data Collection

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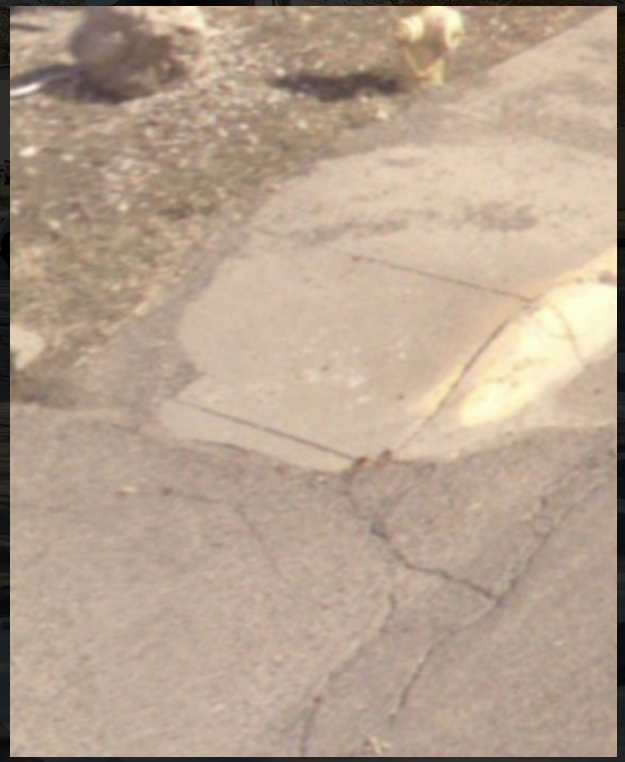
Data Extraction



Curb Ramp #10455-
Directional

NOT ADA COMPLIANT

Recommended Actions

Replace Curb Ramp (Perpendicular)

Resize Ramp Bottom Landing

Cost Estimate	Priority
$4,252.60*	1

This asset's **Cross Slope, Gutter Slope, Running Slope,** and more are non-compliant.

This asset is non-compliant because it is **damaged** .

Filters

Asset Overview

Asset Properties

Curb Ramp Type	Directional
Main Width	54.5 inches
Main Length	43.5 inches

Additional Asset Extraction Opportunities

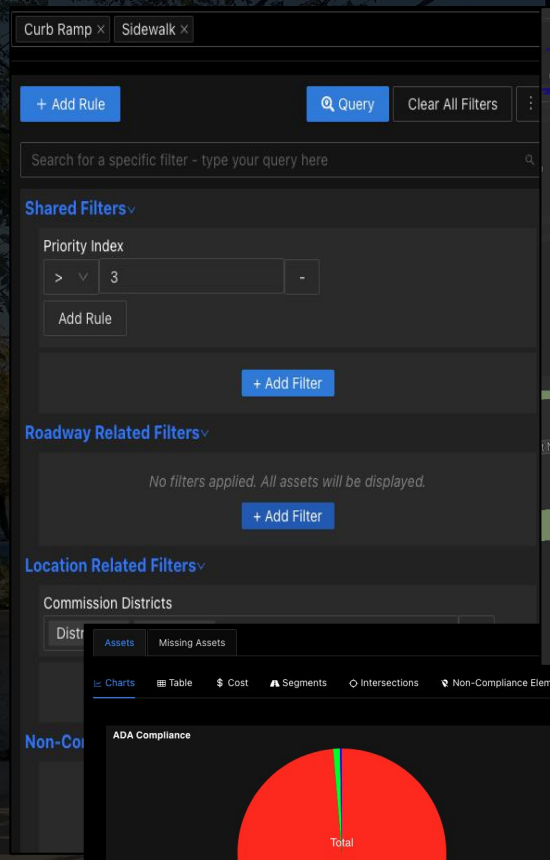
TIME, October 12, 2021

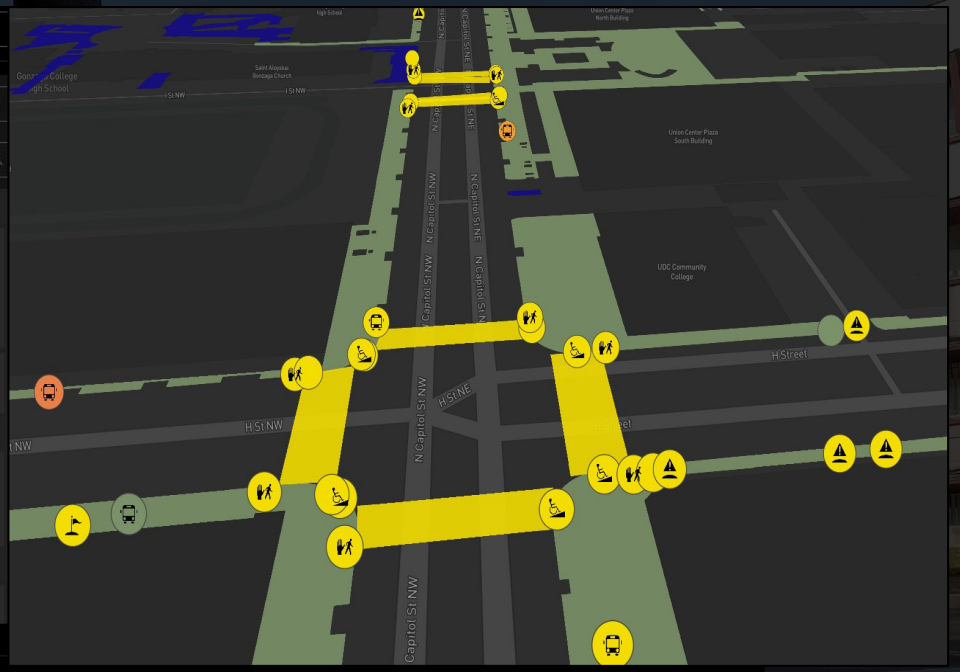
- **Pedestrian Network Assets**
  - Bus Stop
  - Crosswalk
  - Curb Ramp
  - Pedestrian Crossing Signal
  - Sidewalk
  - Stairway
- **Bicycle Network Assets**
  - Bicycle Dock
  - Bicycle Lane
  - Bicycle Other
  - Bicycle Rack
  - Bicycle Ramp

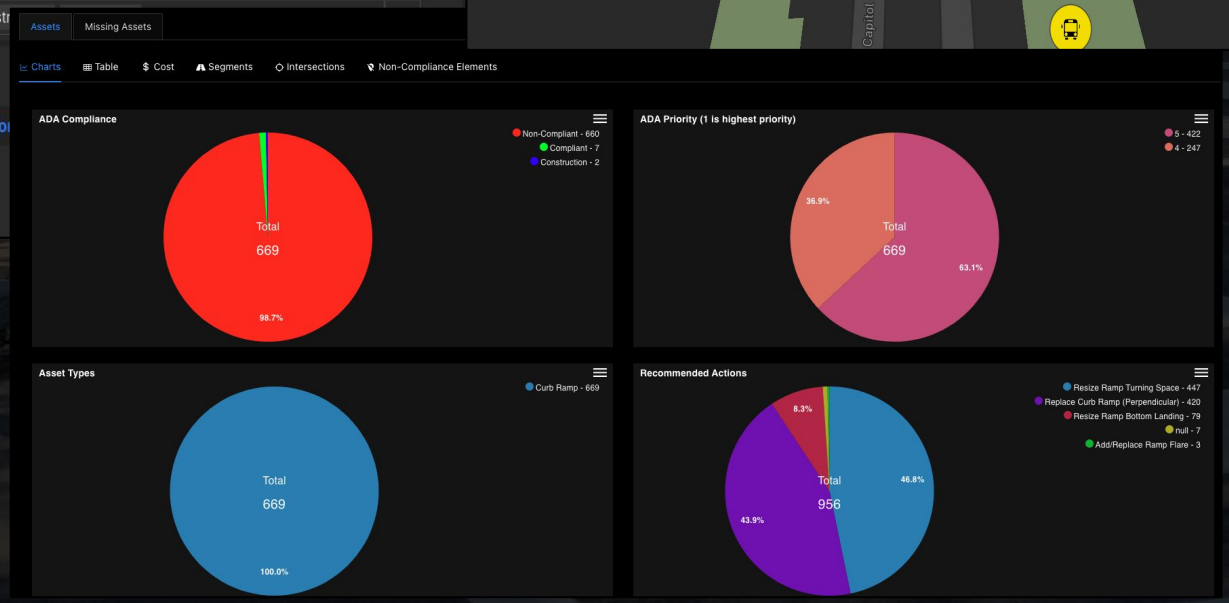
- Non-Compliance Elements
- Missing Assets
- Block Faces

- **Roadway Network Assets**
  - Bus Lane
  - Curb Extension
  - Curb & Gutter
  - Geometric Component
  - Pavement Marking
  - Street
  - Signpost
  - Sign Structure
  - Vertical Speed Control Element

Prioritizing Pedestrian Improvements







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Programming Pedestrian Improvements

Personal Dashboards | Organization Dashboards | Public Facing Dashboards

Pedestrian Network Capital Program

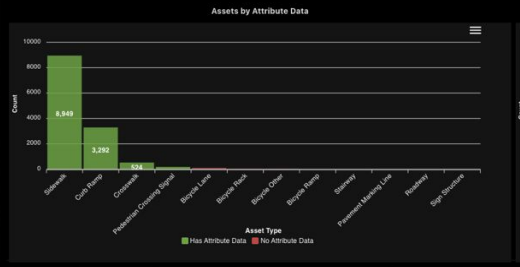
This dashboard generates a program for addressing missing and non-compliant pedestrian assets given a number of years and an annual budget.

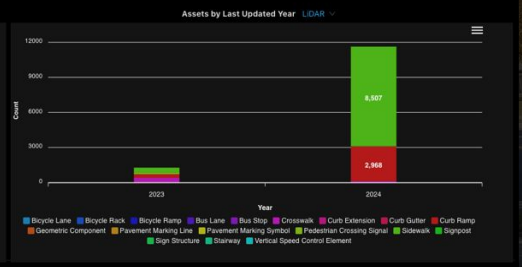
Number of Years: 2 | Annual Budget: $ 2,000,000 | New Construction Budget Allocation: 60 % | Generate Program

Asset Overview Dashboard

This dashboard provides a high-level overview of all assets in your jurisdiction's network.

Total Assets	Total Assets With Attribute Data
13,118	12,874





Bus Stop | Crosswalk | Curb Ramp | Pedestrian Crossing Signal | Sidewalk | Stairway

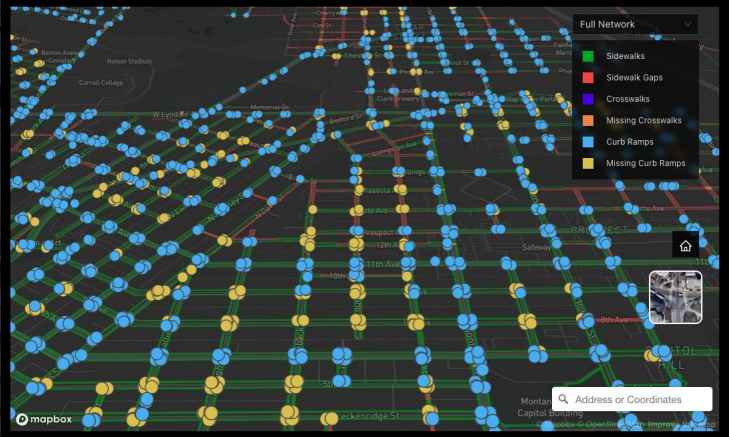
Total Assets With Data	Compliant Assets	Percent Compliant	Cost To Compliance
8,929	3,645	40.8%	$12,405,849.41

Action Stats | Charts | Non-Compliant Elements

Action Name	# Assets w/ Action	Avg Priority of Assets w/ Action	Avg Cost of Assets w/ Action	Total Cost of Assets w/ Action
Concrete Resurfacing	8	1.00	$125.00	$1,000.00
Concrete Sidewalk Grinding	20	1.00	$250.00	$5,000.00
Flatten Sidewalk Cross Slope	3,950	3.48	$2,394.70	$9,459,078.93
Flatten Sidewalk Longitudinal Slope	80	4.00	$2,047.04	$163,763.01
Flatten Sidewalk Slopes	84	2.89	$2,141.05	$179,848.31
Install Sidewalk	2,992	3.34	$8,948.38	$26,773,549.07

Pedestrian Network Gaps Dashboard

This dashboard provides a comprehensive high-level overview of the pedestrian network gaps and missing assets within your jurisdiction. Featuring concise summary charts and informative widgets, the dashboard encapsulates the critical insights needed to address deficiencies. Additionally, it provides a summarized cost analysis for remediating the entire network to achieve full coverage.

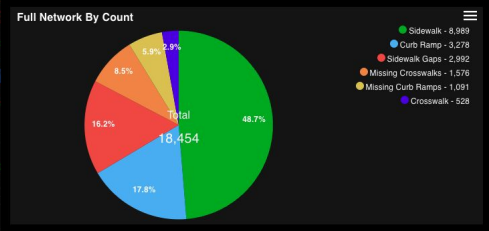


Total Network Completion Cost: $30,135,169.50

Sidewalk Gaps: $26,773,549.07

Missing Crosswalks: $88,620.43

Missing Curb Ramps: $3,273,000.00



	Asset Type	Priority Index	Compliance Status	Cost To Repair
	Crosswalk	1	Non-Compliant	$252.60
	Pedestrian Crossing Signal	1	Non-Compliant	$200.00
	Pedestrian Crossing Signal	1	Non-Compliant	$5,478.24
	Curb Ramp	1	Non-Compliant	$178.24
1382	Curb Ramp	1	Non-Compliant	$5,180.84

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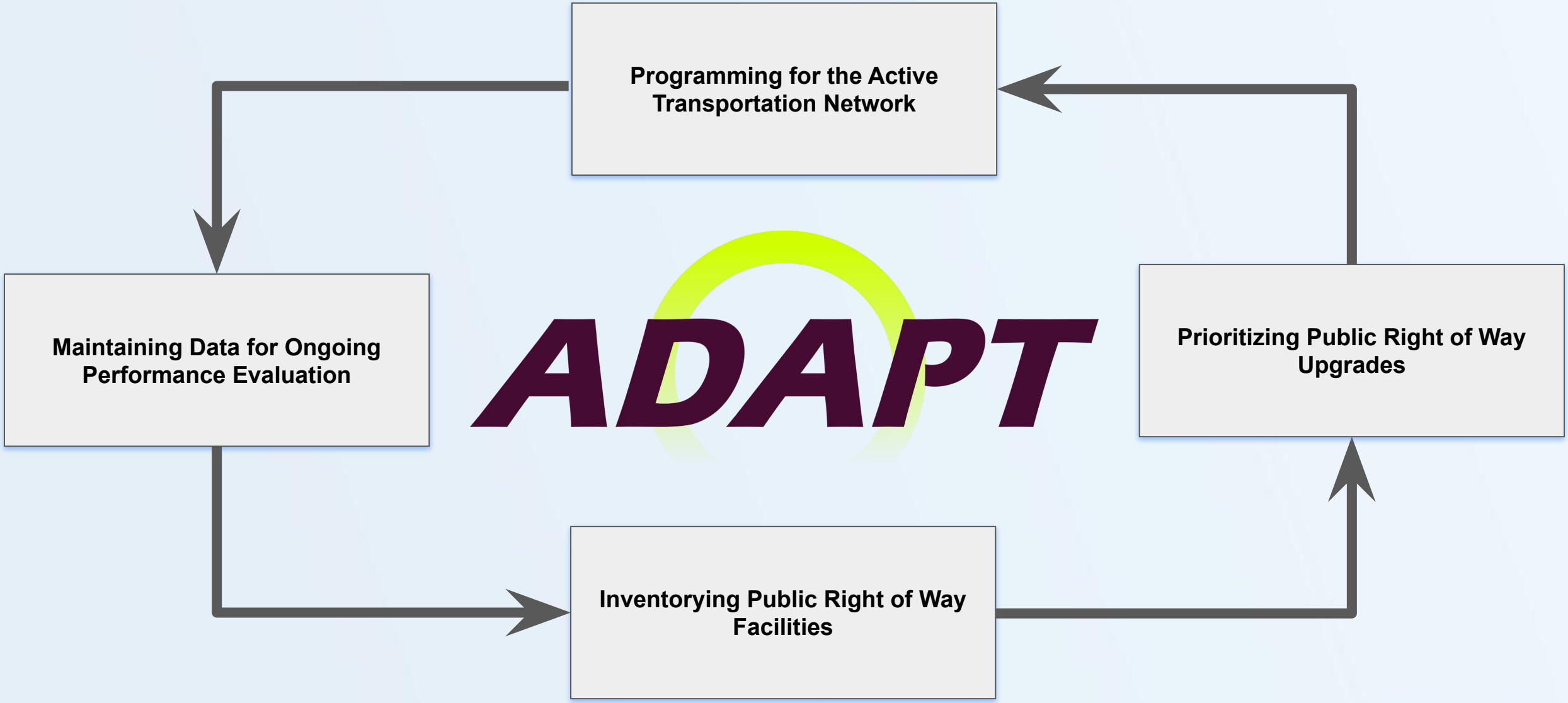
Overview of ADAPT's Capabilities



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Questions?

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Contact

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Data Extraction

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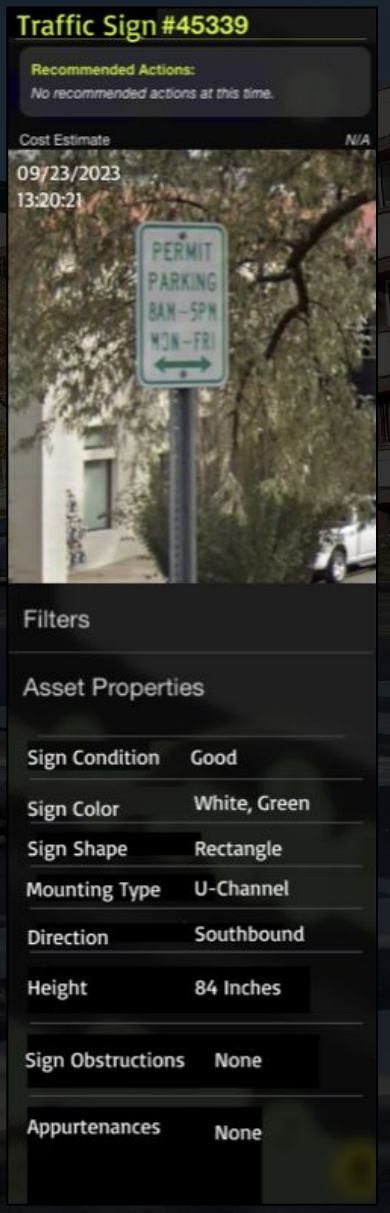

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