POPULUS

Mobility Data Sharing

from the Private to the Public Sector: Current Practice and Policy issues

An Introduction to Data Sharing for Curb and Mobility Management

- ➔ Immediate need in the micromobility revolution: **Planning and Compliance**
- ➔ Expanded uses cases of methods: **Manage Public Space**
- ➔ Increasing challenges at the curb: **Tackle New Operator Types**
- ➔ Emergence of Digital Smart Zones

Micromobility Revolution Two Ways

In early 2018 bikes and shortly thereafter e-scooters were deployed in mass in cities around the world.

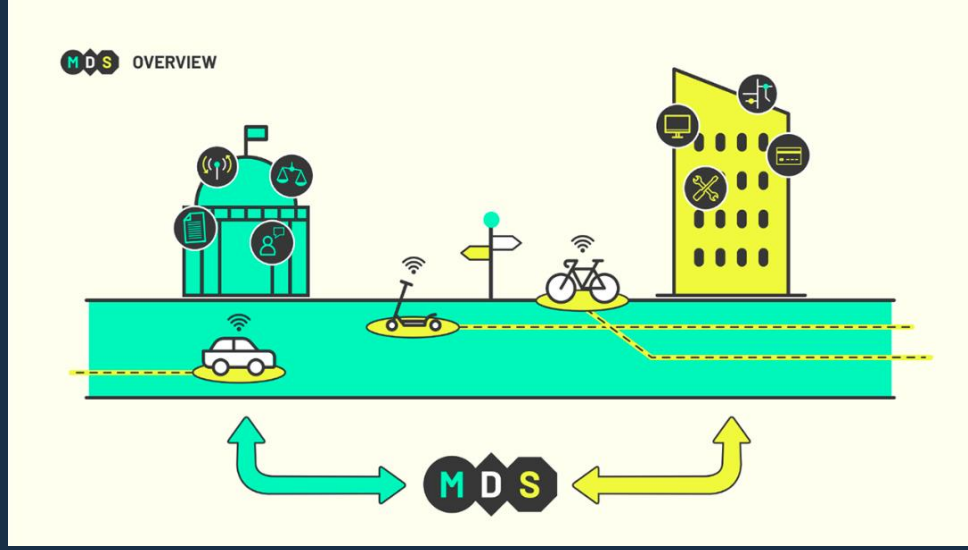
Cities needed to get a hold on things and quickly data sharing paradigms were established. Paving the way for a revolution in how our streets and public spaces can be managed.

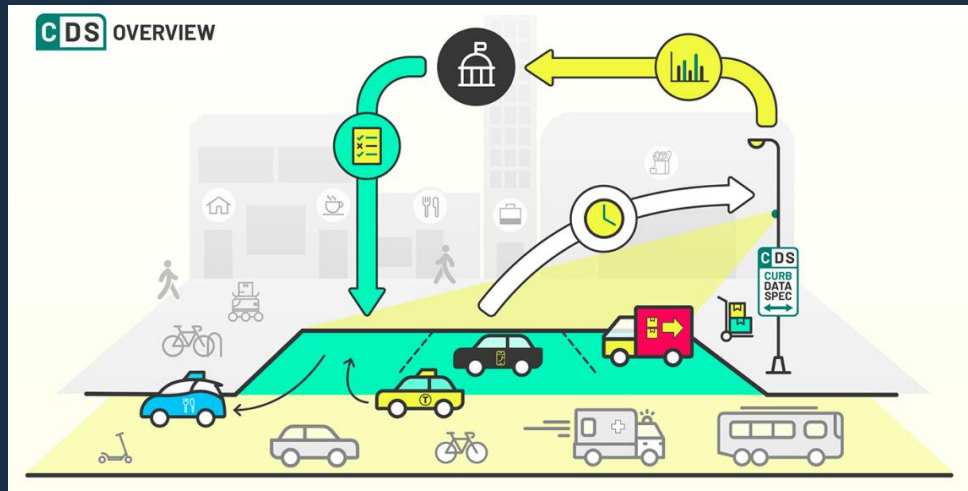
Data Standards

Standard forms of communication between providers of these mobility services was essential to the viability of these new services. Data standards such as:

- General Bike Feed Spec (GBFS)
- Mobility Data Spec (MDS)

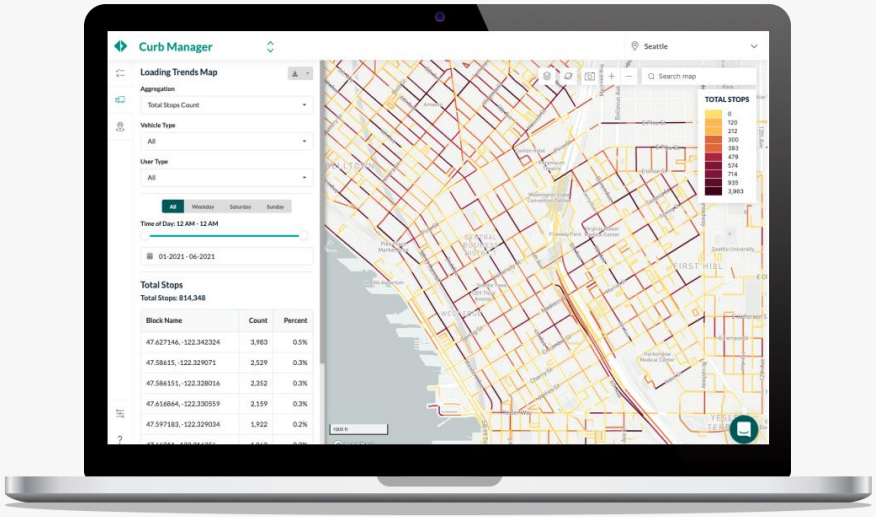
The success of data sharing to better manage these services led to continued evolution and the Curb Data Specification (CDS)





Populus Overview

- Founded in 2017 by transportation industry veterans
- Industry-leader in Mobility Management, delivering operator data insights in over **100 cities** around the world, from San Diego to Tel Aviv
- Only platform that delivers a comprehensive solution for curb and mobility management

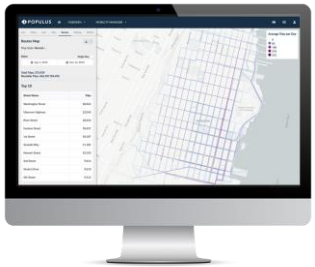


POPULUS

Populus empowers cities to manage their public right of way

Digital infrastructure:

- Geospatial Policy
- Mobility Hubs
- Curbside regulations
- Pricing



POPULUS

Dynamic + real-time data:

- Connected Vehicles
  - MicroMobility
  - Commercial vehicles
  - Shared Vehicles
- Fleet Operational Information
- Payments

Data Sharing Journey

Mobility Program Management

Mobility Manager

VEHICLE FILTERS

Operators

- [x] Bird
- [x] Lime
- [x] Link
- [x] VeoRide

Vehicle Locations

Vehicles outside citywide boundary

Vehicle Types

- [x] Show Bicycle
- [x] Show Scooter

Vehicle State

Deployed And Unknown

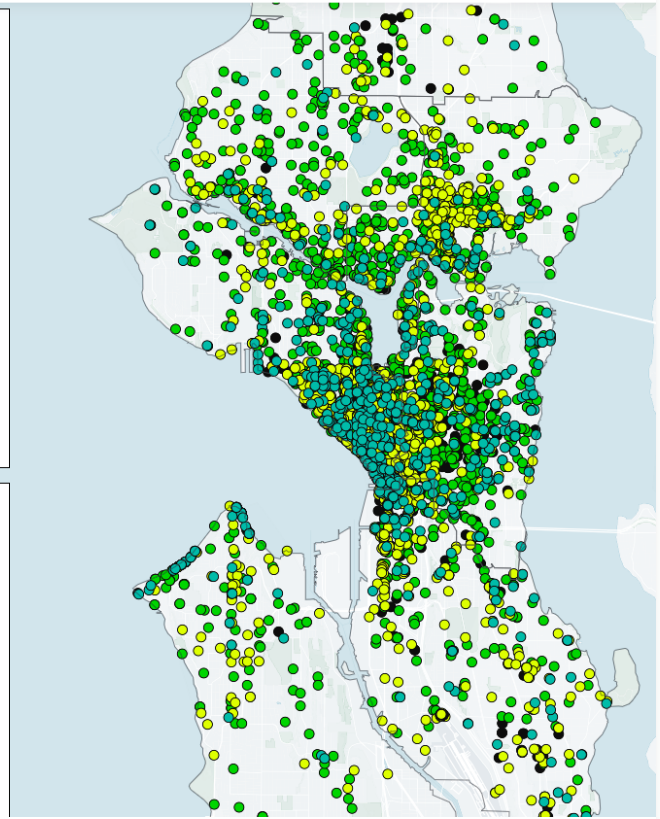
Parked Duration

Include all vehicles

VEHICLE COUNTS

Count By Operator

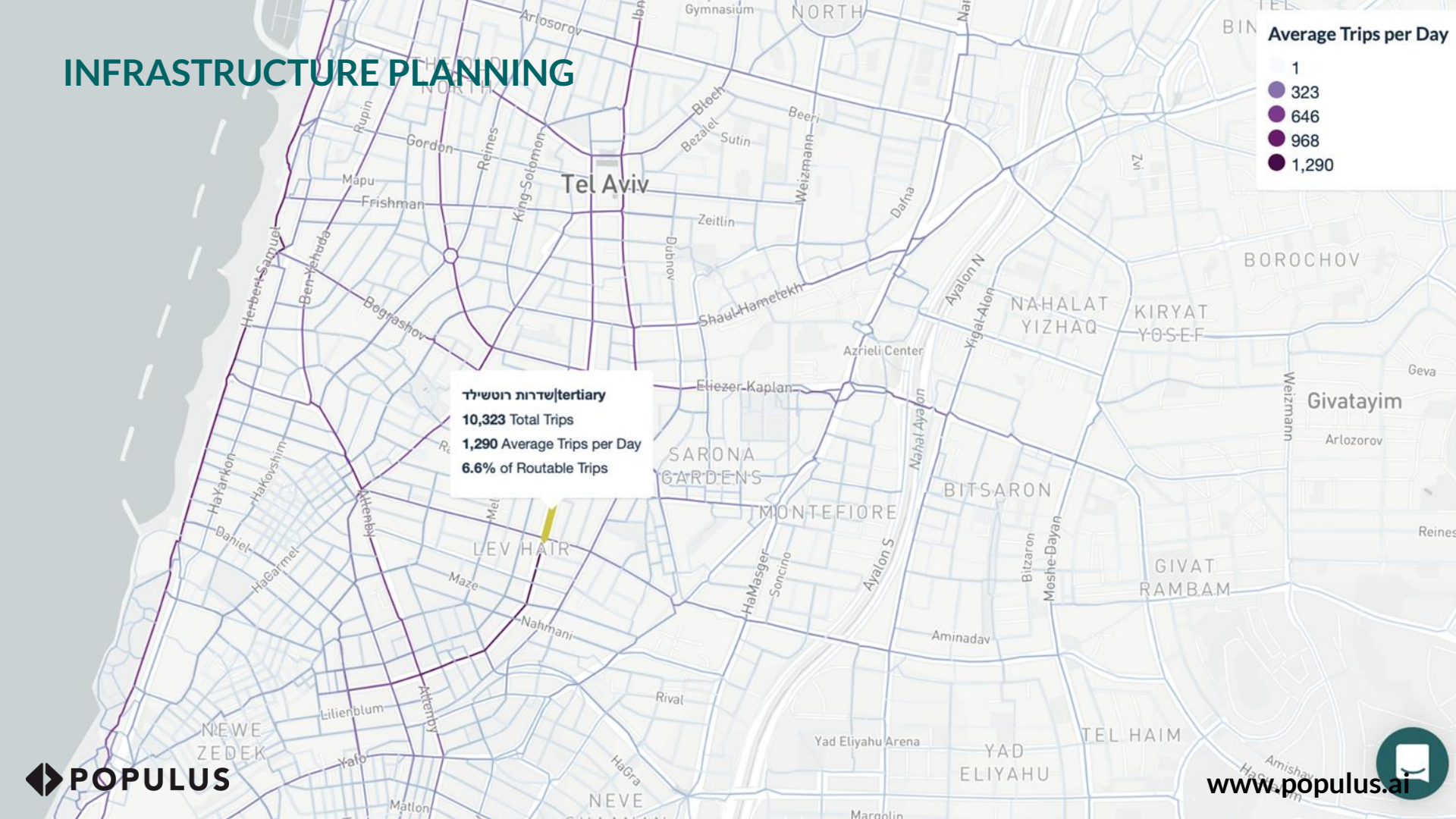
Type	Count
bird	1388
lime	2381
link	1810
veoride	747
Total	**6326**

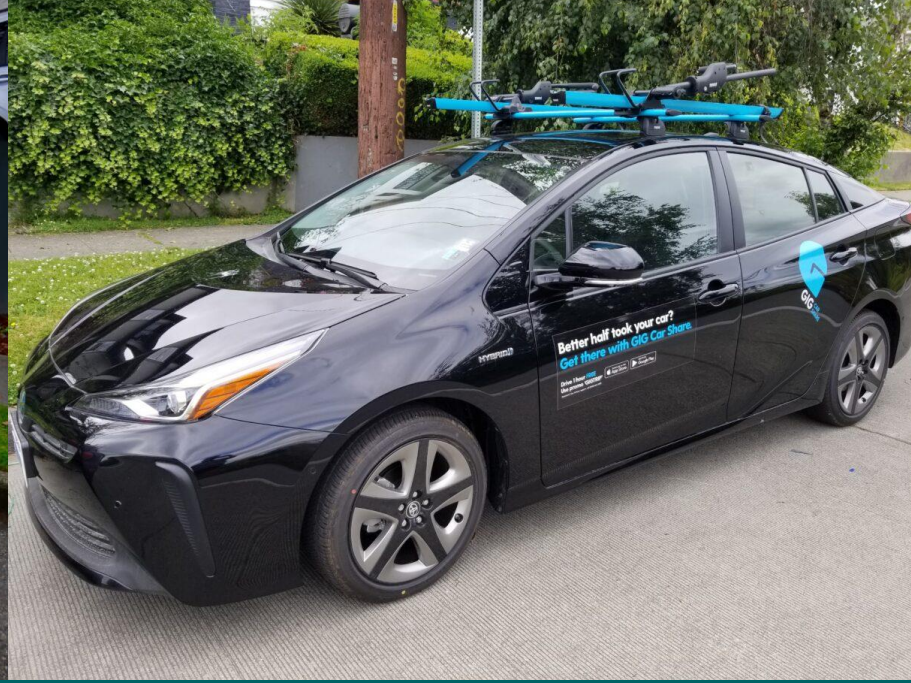


Name	Type	[redacted]	[redacted]
10 Day Limit	Parking Time Limit	13 Parking Events	4 Parking Events
[redacted] E-Scooter Vehicle Cap	Vehicle Cap	✓	—
Equity Distribution Policy (Bikes)	Distribution	—	✓
Equity Distribution Policy (Scooter)	Distribution	✓	✓
Fremont Bridge No Deployment	Operator Drop-offs	—	✓
Fremont Bridge No Parking	Parking Time Limit	10 Parking Events	14 Parking Events
Fremont Bridge Parking	No Parking	4 Parking Events	6 Parking Events
[redacted] E-Bike Vehicle Cap	Vehicle Cap	—	✓
[redacted] E-Scooter Vehicle Cap	Vehicle Cap	—	✓
[redacted] E-Scooter Vehicle Cap	Vehicle Cap	—	—
No Ride Areas	No Ride	369 Trips	3270 Trips

POPULUS

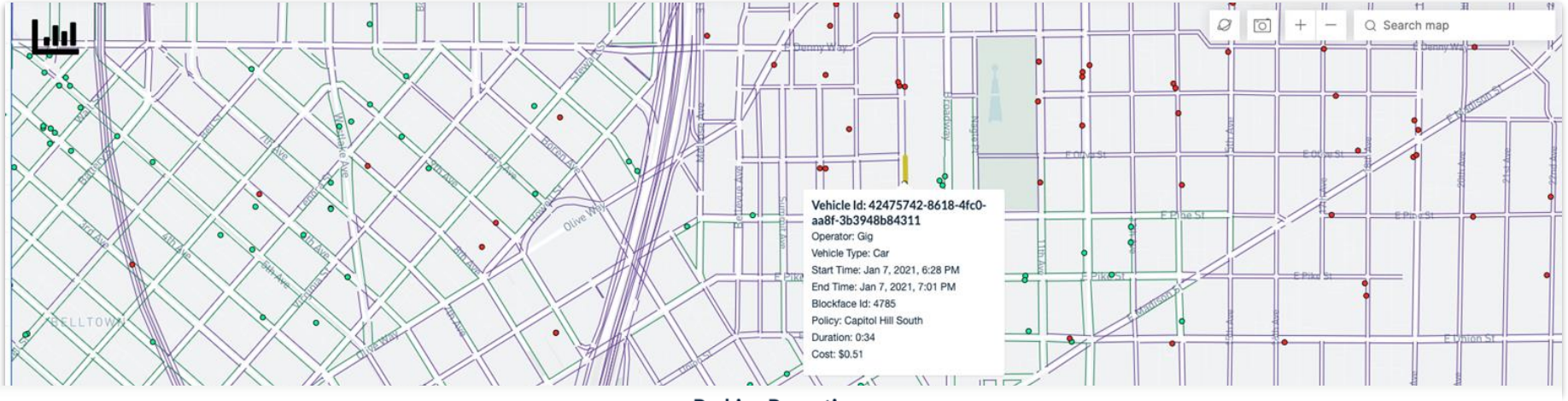
INFRASTRUCTURE PLANNING





Similar to dockless micromobility, many carsharing services operate under a city permit

CarShare On-Street Parking Validation



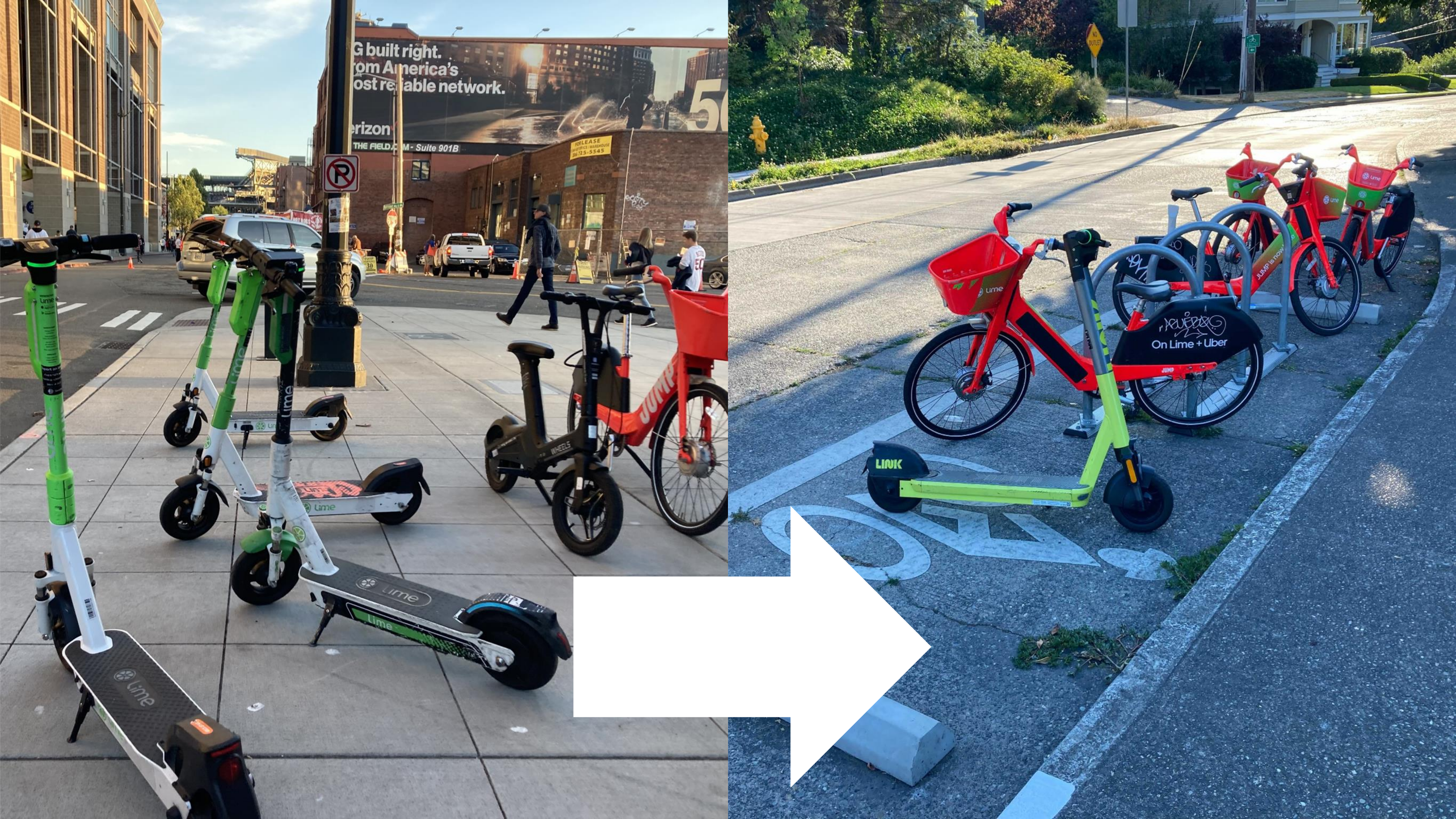
Parking Reporting

Single Day

Jan 6, 2021 — Dec 31, 2021

Count: 219376, Total: $94,879.43

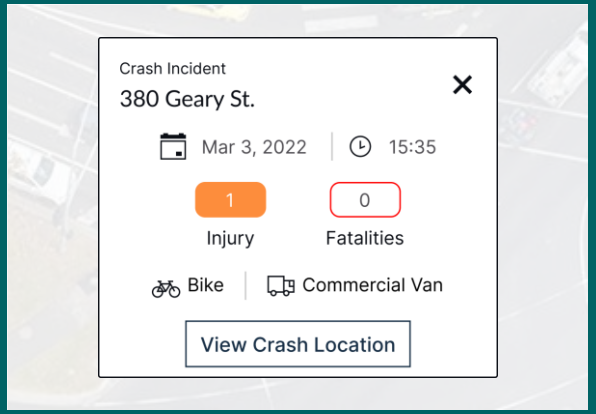
Vehicle Id	Operator	Vehicle Type	Latitude	Longitude	Start Time	End Time	Duration (hh:mm)	Blockface Id	Policy Name	Cost
42475742-8618-4fc0-aa8f-3b3948b84842		Car	47.616795	-122.34452	Jan 6, 2021, 7:02 AM	Jan 9, 2021, 1:24 PM	78:23	5118	Belltown North	$20.71
42475742-8618-4fc0-aa8f-3b3948b84951		Car	47.61494	-122.35314	Jan 6, 2021, 7:02 AM	Jan 6, 2021, 9:42 AM	2:41	Not matched	Not priced	$0.00
42475742-8618-4fc0-aa8f-3b3948b84719		Car	47.659363	-122.34564	Jan 6, 2021, 7:07 AM	Jan 7, 2021, 12:09 PM	29:02	Not matched	Not priced	$0.00
42475742-8618-4fc0-aa8f-3b3948b84538		Car	47.660168	-122.31307	Jan 6, 2021, 7:09 AM	Jan 6, 2021, 2:28 PM	7:19	4979	University District Core	$3.23
42475742-8618-4fc0-aa8f-3b3948b84234		Car	47.627403	-122.32425	Jan 6, 2021, 7:13 AM	Jan 8, 2021, 12:19 PM	53:06	Not matched	Not priced	$0.00
42475742-8618-4fc0-aa8f-3b3948b84263		Car	47.558353	-122.2836	Jan 6, 2021, 7:15 AM	Jan 6, 2021, 11:25 AM	4:11	Not matched	Not priced	$0.00
42475742-8618-4fc0-aa8f-3b3948b84955		Car	47.66101	-122.33861	Jan 6, 2021, 7:20 AM	Jan 6, 2021, 4:08 PM	8:48	Not matched	Not priced	$0.00


G built right.
rom America's
ost reliable network.
erizon
THE FIELD.COM - Suite 901B
lime
JUMP
On Lime + Uber
LINK


amazon
TRANSIT 250
19938Y2
RISE
prime

Last Mile Deliveries are Creating New Challenges

Increasing Congestion



Increasing Safety Issues

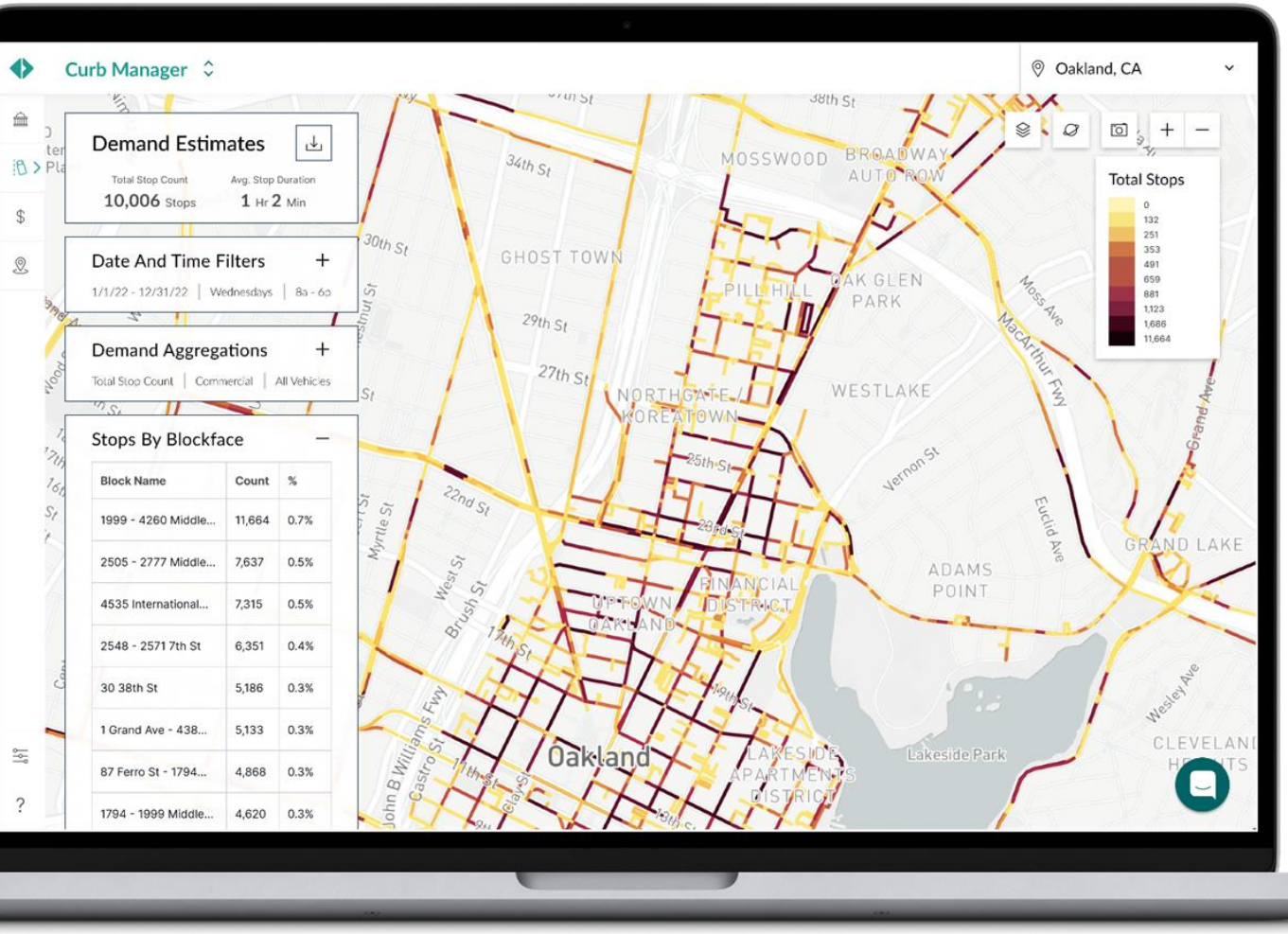
Increasing Emissions

Populus Curb Management Approach

Visualizations and Dashboards

Location Data Based Policy Communication, Enforcement, and Payments/Pricing

Planning and Partnerships



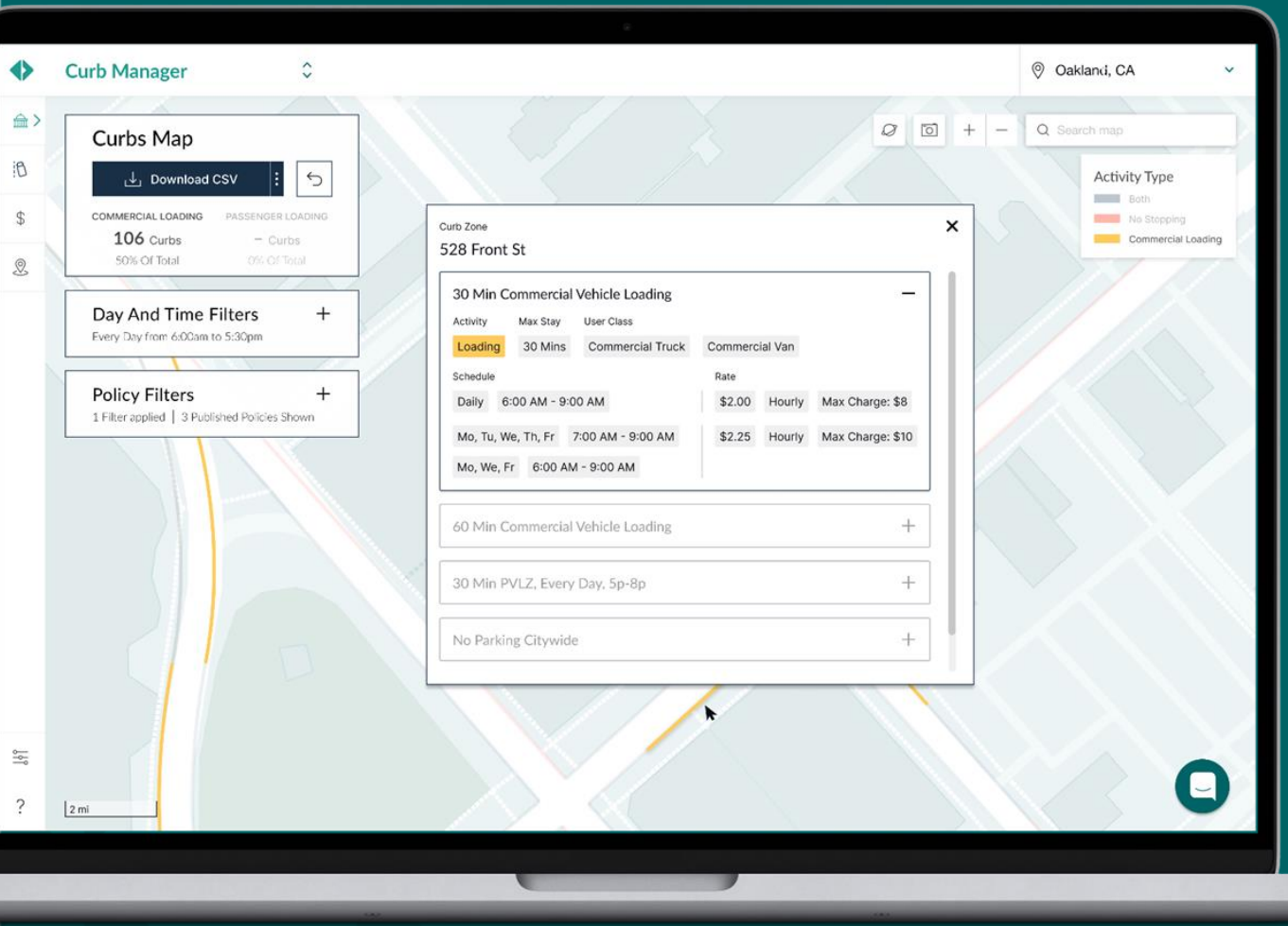
Demand Analyzer

Allows cities to understand and visualize historical commercial vehicle demand

→ Filter by vehicle type

→ Analyze trends

→ Identify issues



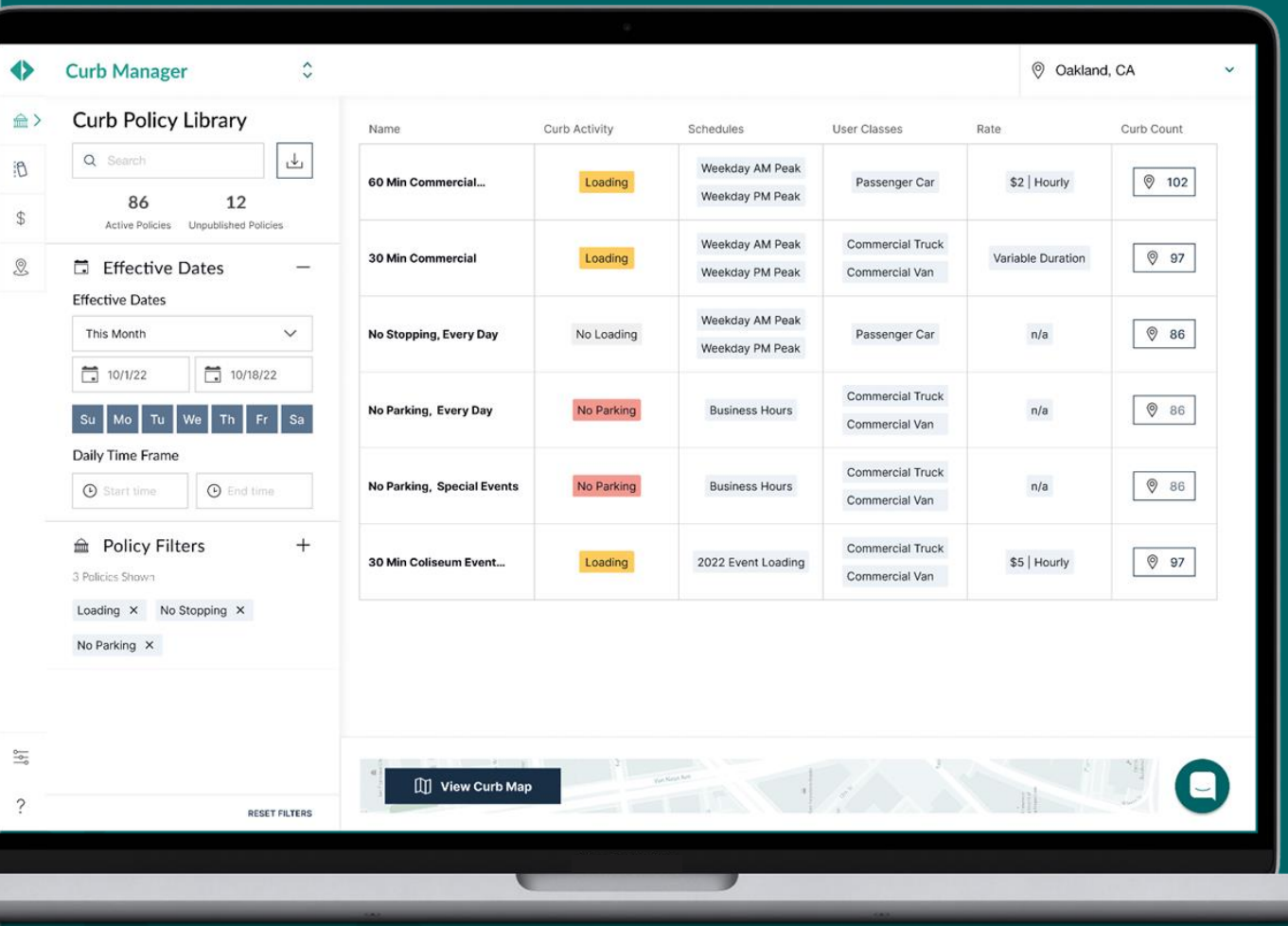
Smart Loading Zones

Frictionless software to share loading zone policies and reconcile payments.

→ Collect parking data

→ Reconcile payments and invoice operators

→ Share new loading zone policies



Digitize and Manage Curb Inventory

Translate existing data or gather new data to inventory curb regulations using city-led Curb Data Specification (CDS).

→ Input existing data

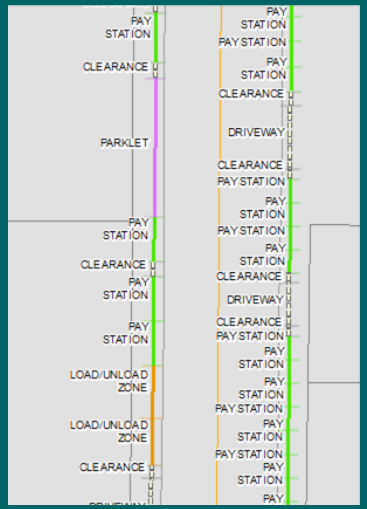
→ Gather new curb regulation data

→ Create machine-readable curb policies

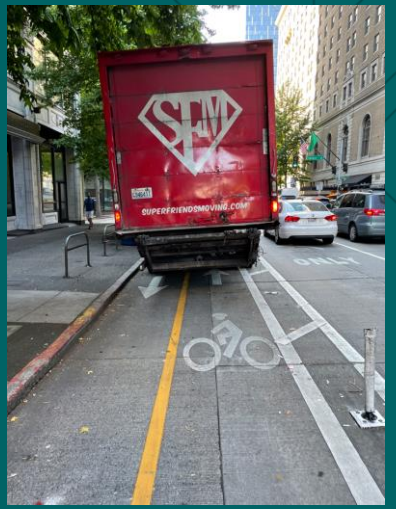
Case Study: Transforming Curb Data City of Seattle

Data Driven Curbside Management

Seattle Department of Transportation



?



90,000+

Digital parking sign records

40,000

Fully mapped curb zones

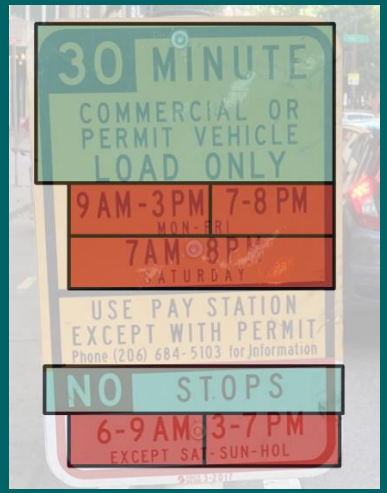
>40%

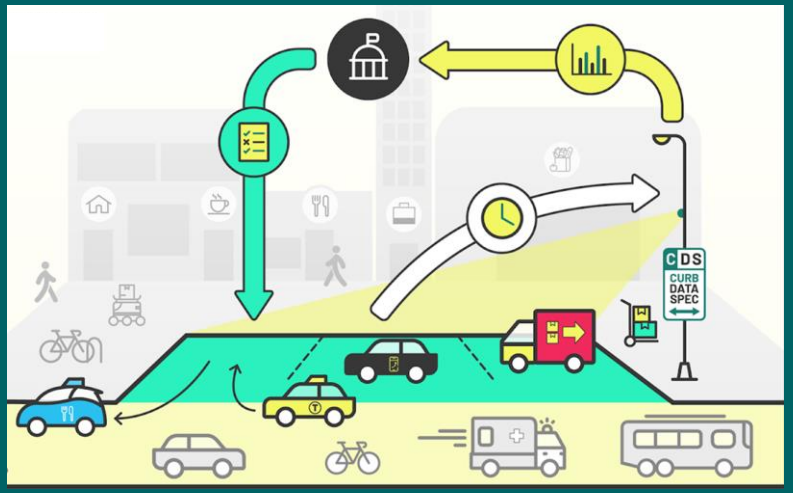
Commercial vehicles parked illegally

customers@populus.ai | populus.ai

Sign Record Translation to CDS

Seattle Department of Transportation





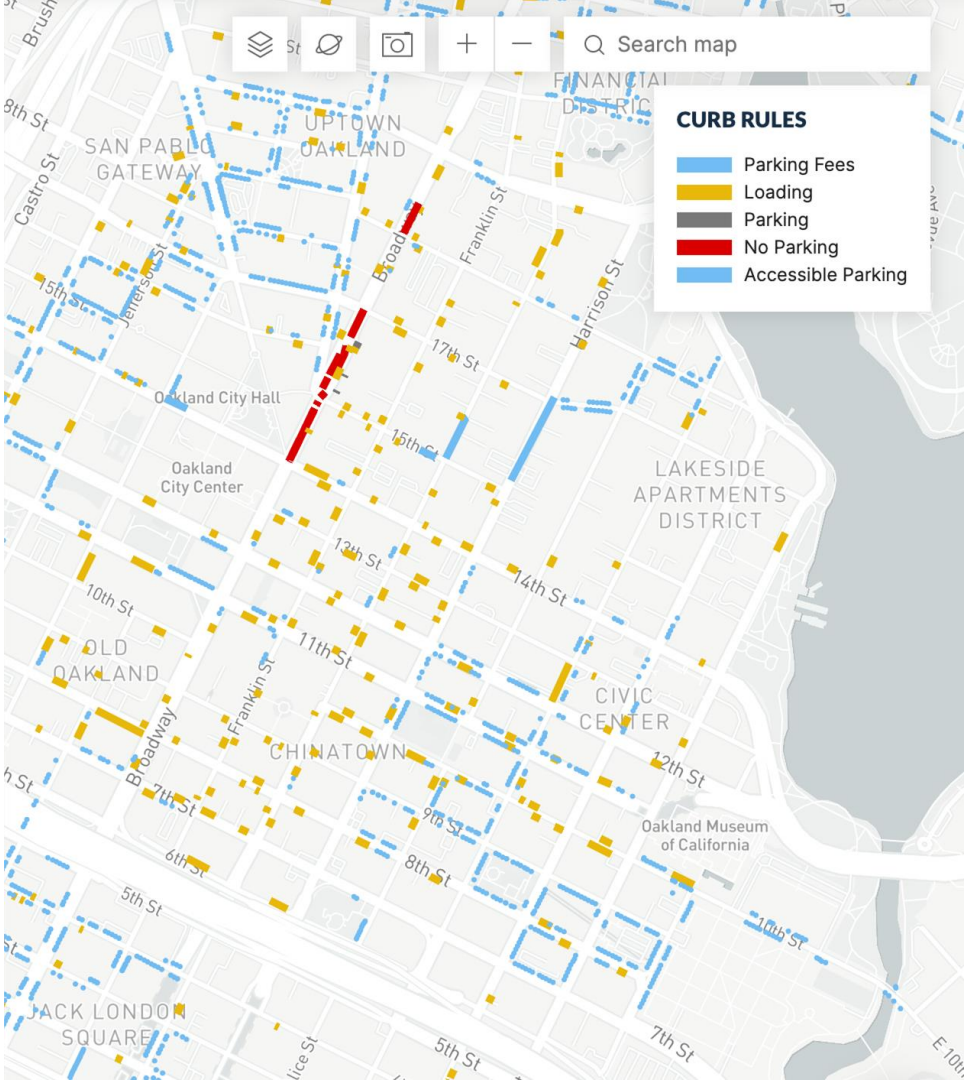
POPULUS

CDS CURB DATA SPECIFICATION

City of Oakland: Collecting Curb Usage Data, Evaluation of Curb Space Allocations + Payments

Oakland's Challenges

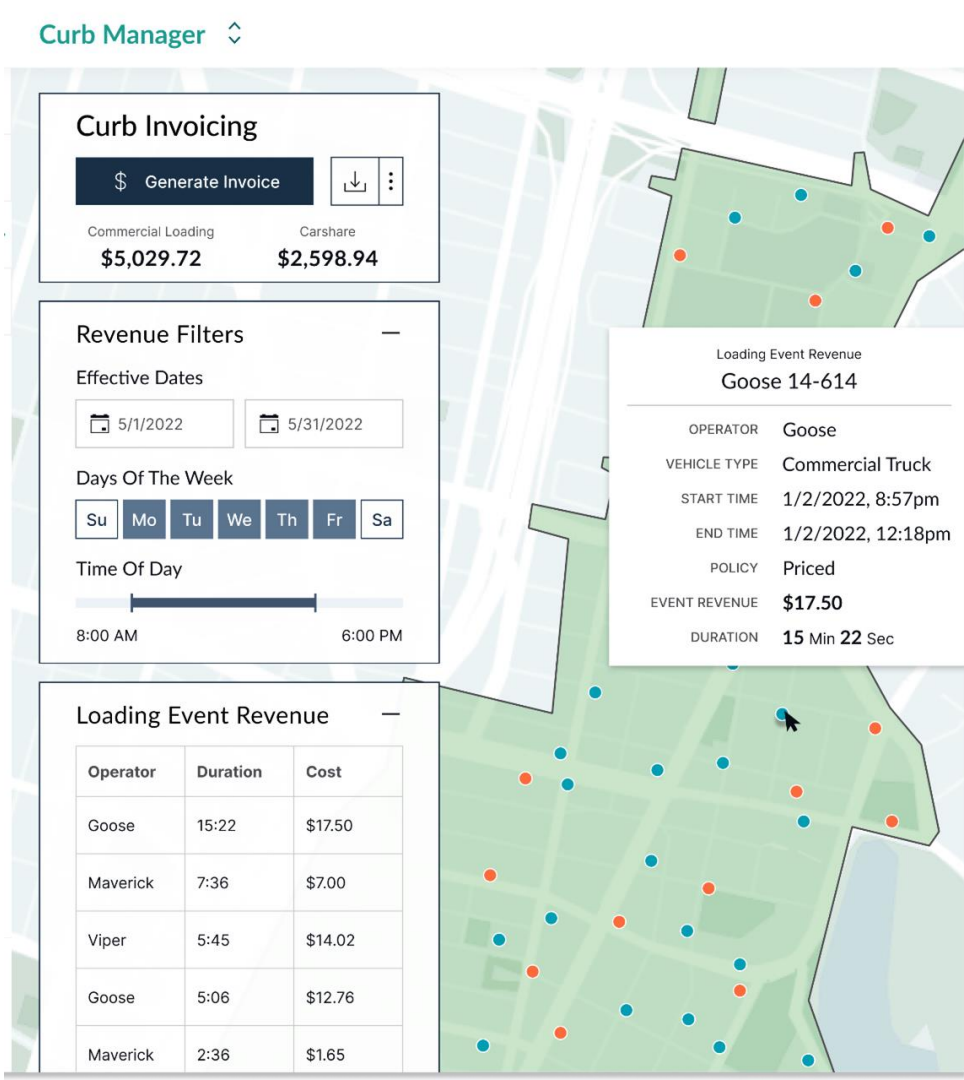
- Oversubscribed loading zones
- About 50% of time non-commercial vehicles occupied loading zones
- Increasing unsafe parking incidents



POPULUS

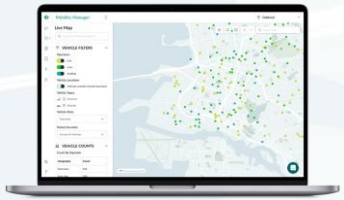
Oaklands Solution: CDS Enabled GPS Payments

- Enrolling Major Operators
- Collecting Curb Usage Information
- Invoicing for use of paid spaces
- Evaluating existing curb allocations and iterating



POPULUS

POPULUS



Commercial Vehicles

GPS Location and Vehicle Information

Digitized curb locations, access policies, cost/min

Curb policies, locations and access info.

Commercial Loading Zones

Aggregated analytics of curb use, number of priced events, total duration of paid events

$ for use of on street space

CITY OF OAKLAND

POPULUS

Thank You

Key contacts:

Eliot Mueting, Head of Implementations, eliot@populus.ai