StreetLight for Des Moines Area MPO/City of Des Moines

Better Data for Better Transportation Decisions

Juliet Hirni & Erin O'Higgins

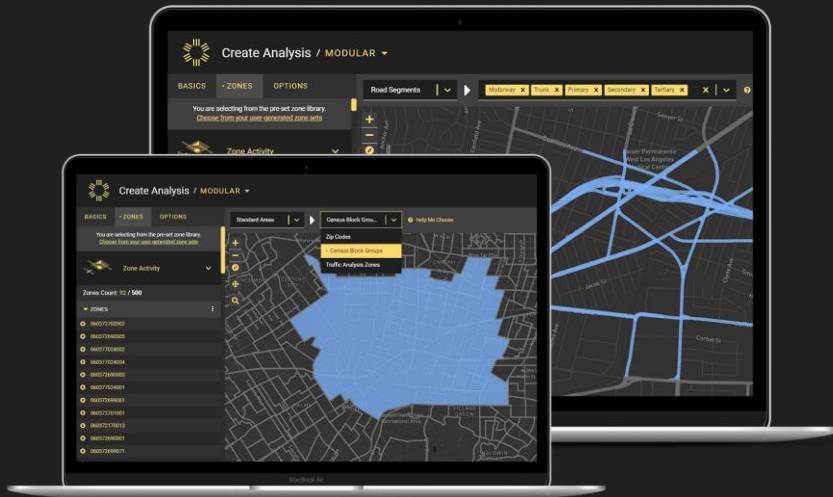juliet.hirni@streetlightdata.com
Erin.ohiggins@streetlightdata.com

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StreetLight: Understanding trip and travel patterns on-demand via a web-based platform

StreetLight InSight®   +   StreetLight User's transportation question   =   Answers
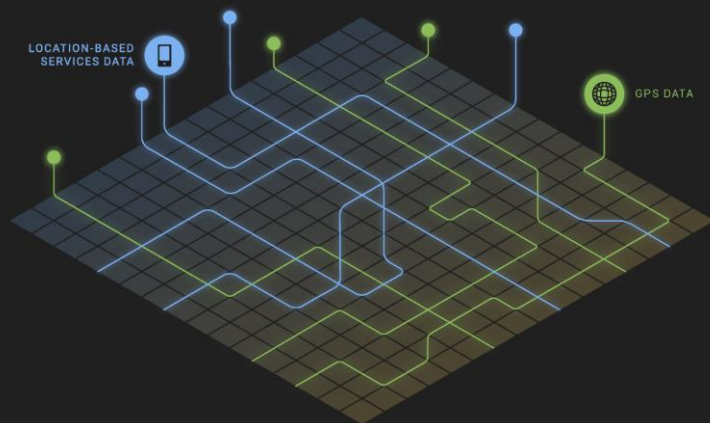
How it works: multiple data sources power StreetLight

Input: LBS, CVD, GPS and Contextual Data

Processing: Machine Learning + Algorithmic Processing

Output: StreetLight InSight® Metrics

DATA SOURCES:

Location-based services data

GPS data, Connected Vehicle Data

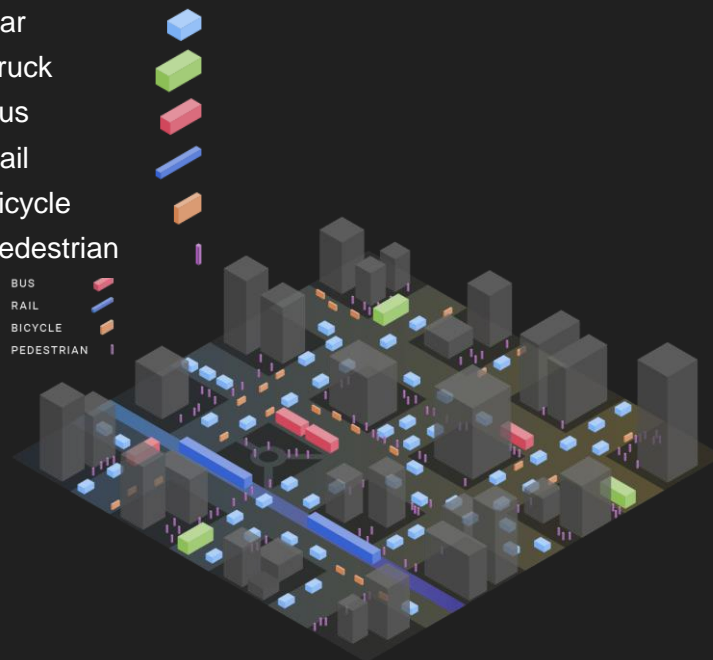Contextual data (road, census, etc.)

Road, rail and bus networks

MODES:

Car

Truck

Bus

Rail

Bicycle

Pedestrian

Every month, StreetLight processes over ~40 billion anonymized location records.

Our proprietary data processing engine Route Science® transforms them into contextualized, normalized, aggregated, multimodal travel patterns.

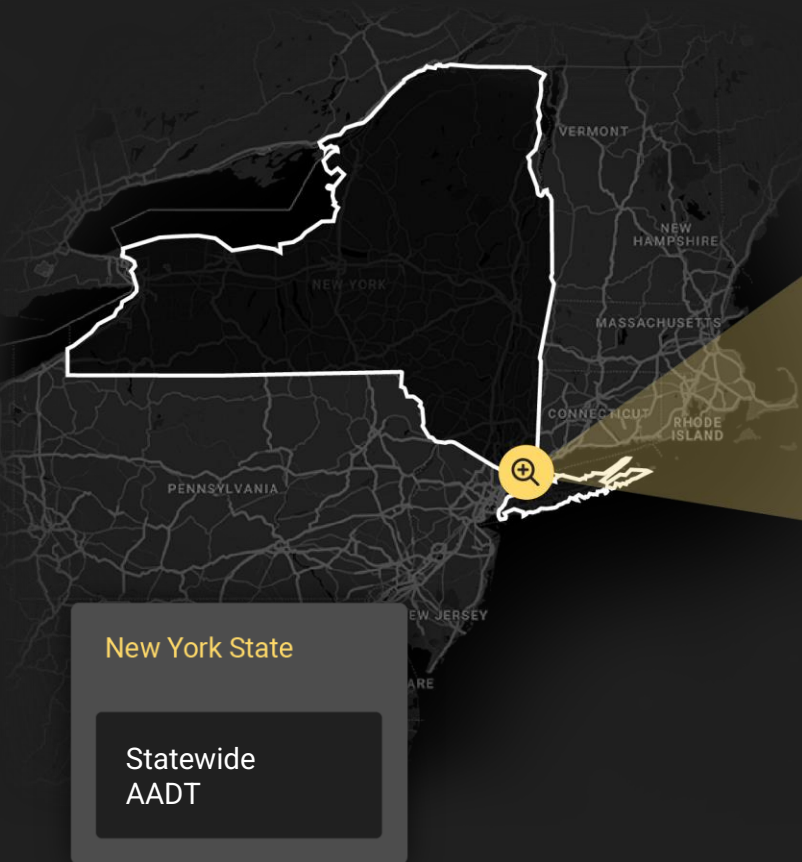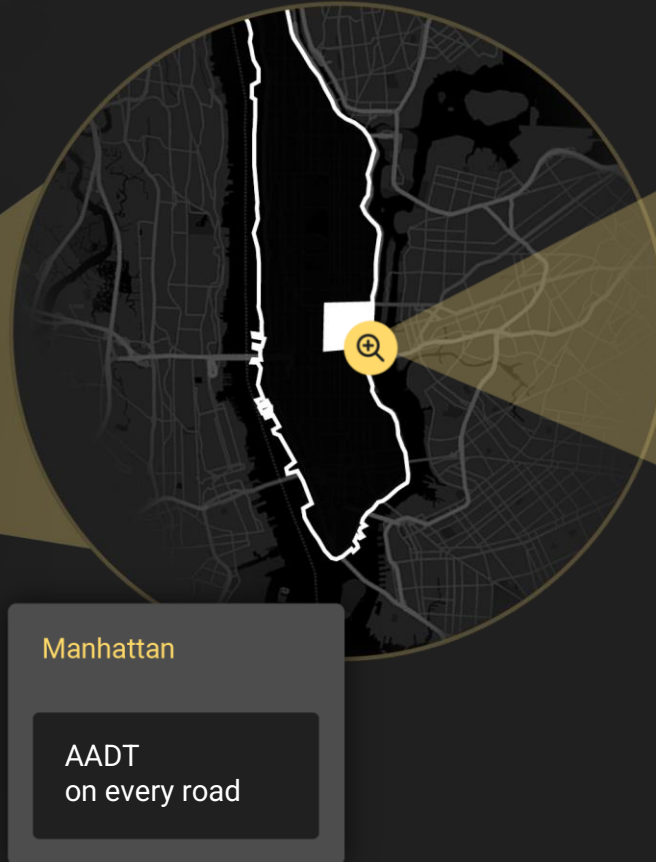**StreetLight InSight® lets you analyze how vehicles, bicycles, pedestrians, trucks, and bus and rail passengers move across virtually every road and Census Block.**

Any road or geographic area. From network scans to local planning, measure transportation at any level of spatial granularity.
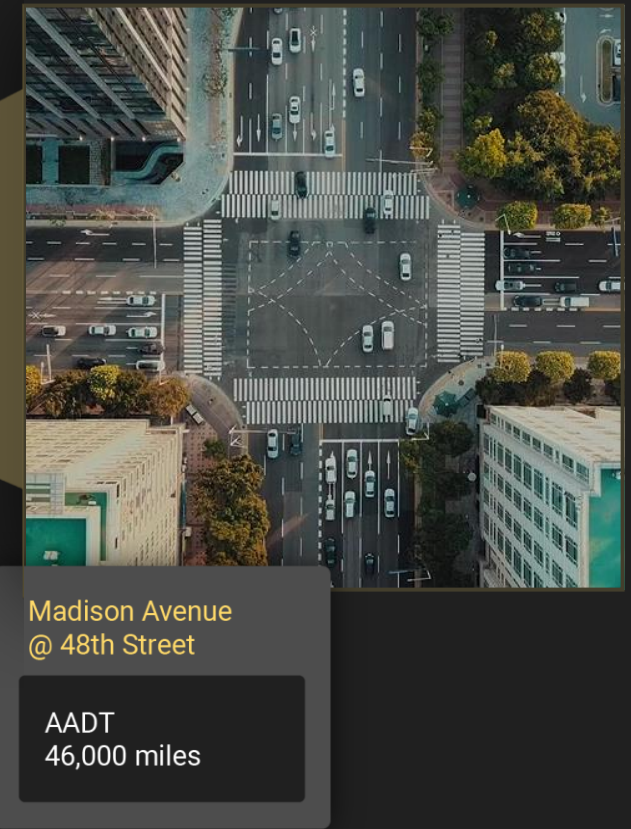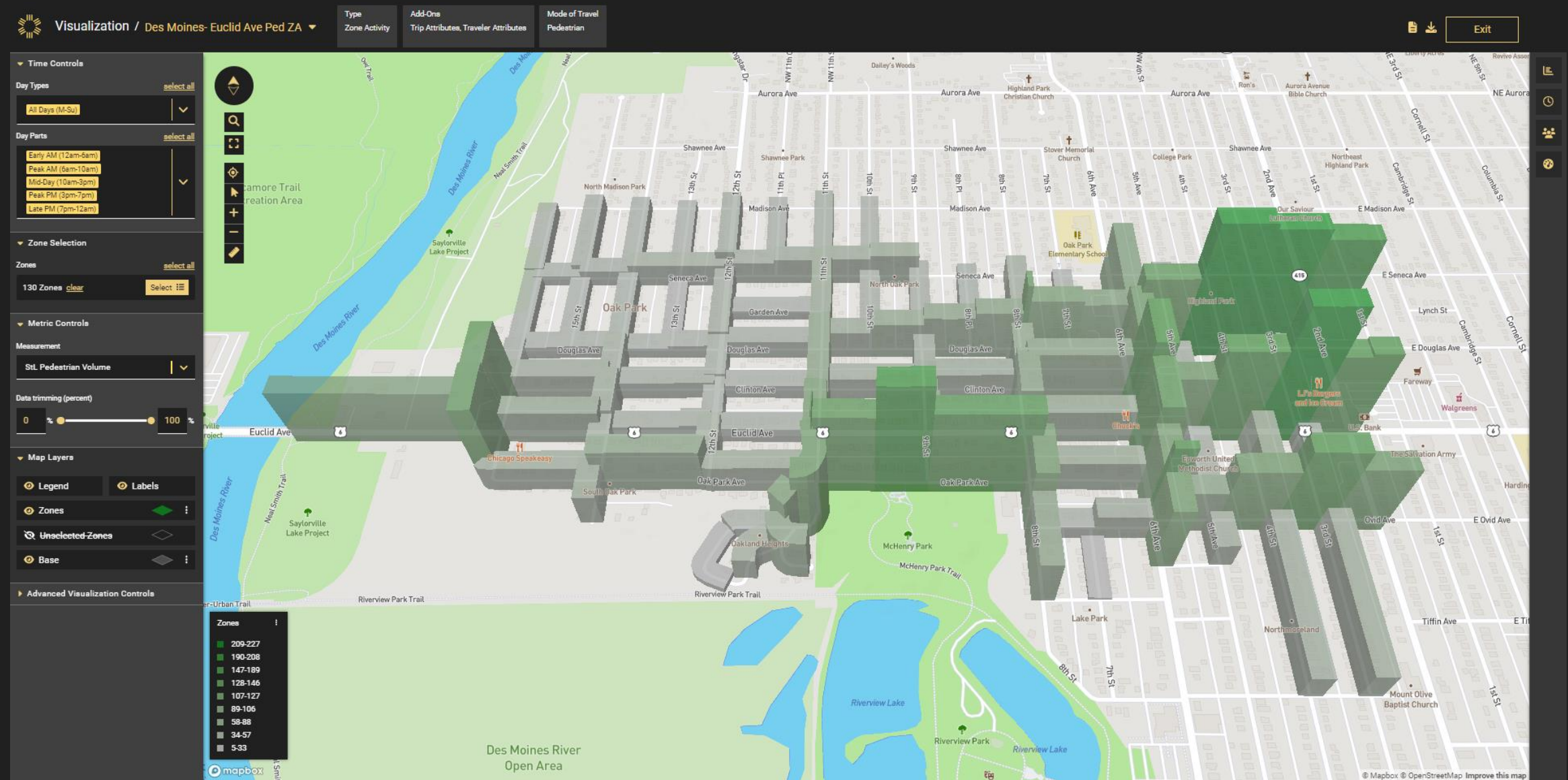
National or regional Level

City or neighborhood Level

Any road, intersection or corridor

New York State

Statewide
AADT

Manhattan

AADT
on every road

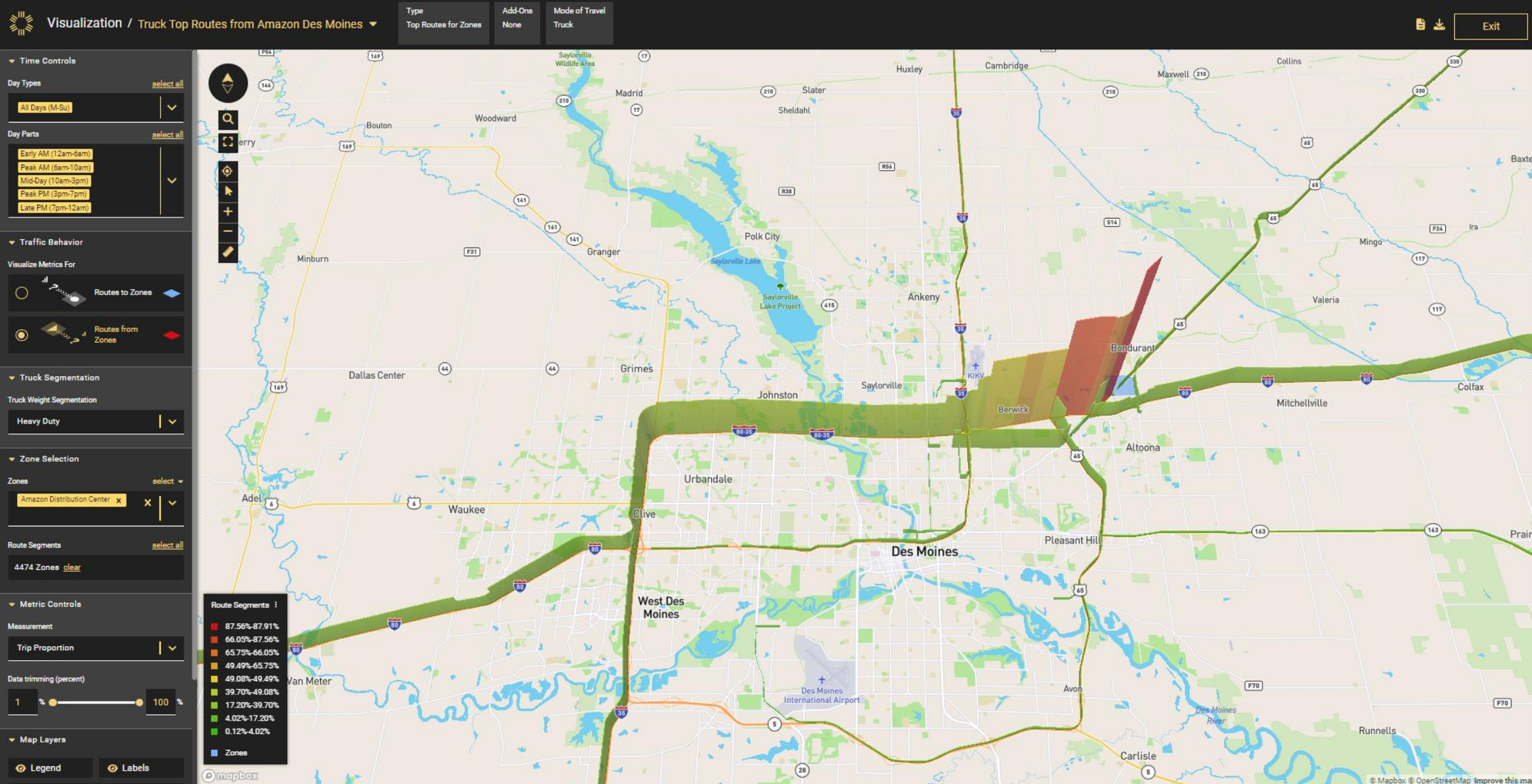Madison Avenue
@ 48th Street

AADT
46,000 miles

Streetlight Insight In-App Example: Pedestrian Volume Distribution along Euclide Avenue, Des Moines

Streetlight Insight In-App Example: Segment Speed Distribution along Euclide Avenue, Des Moines
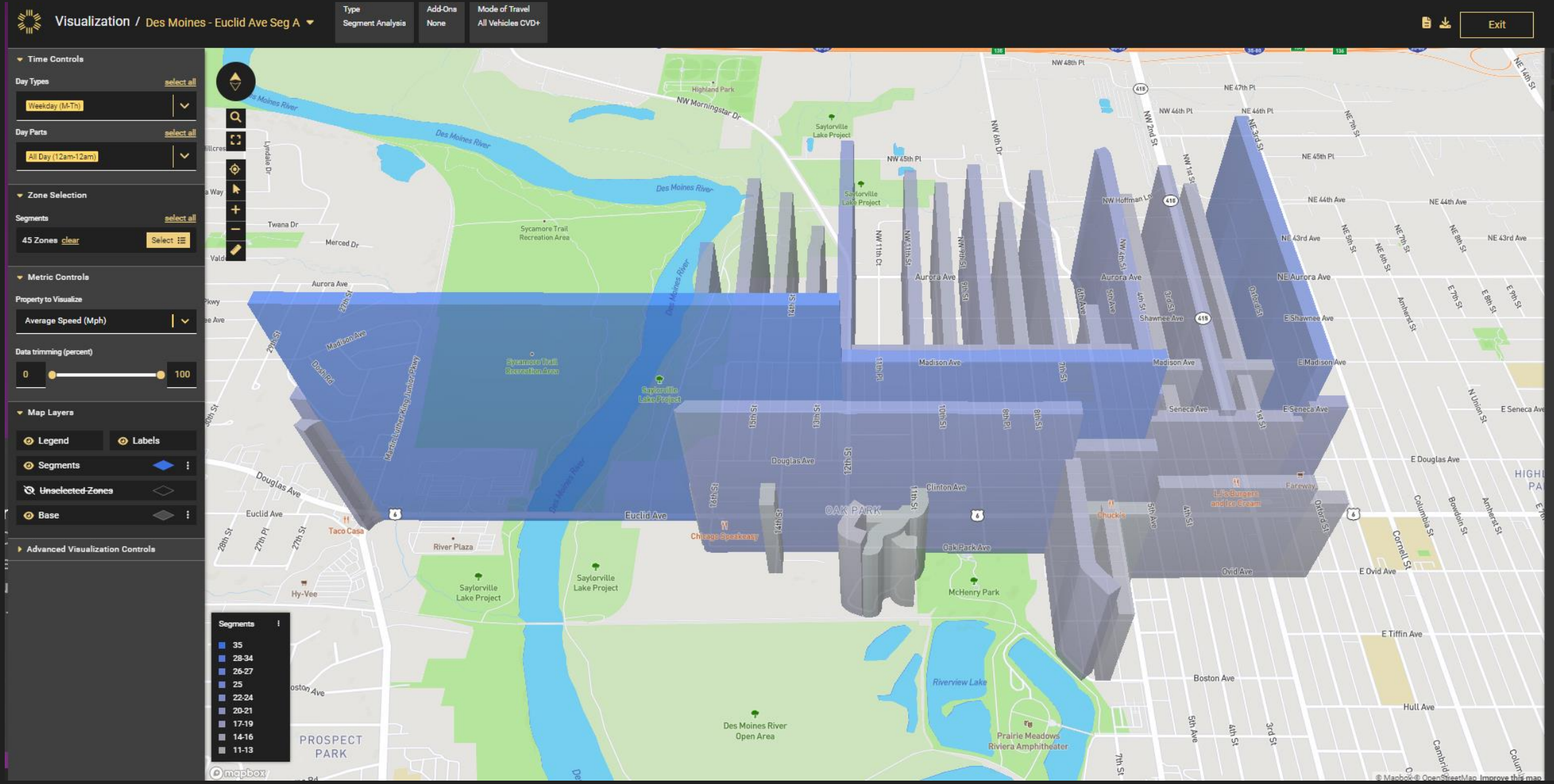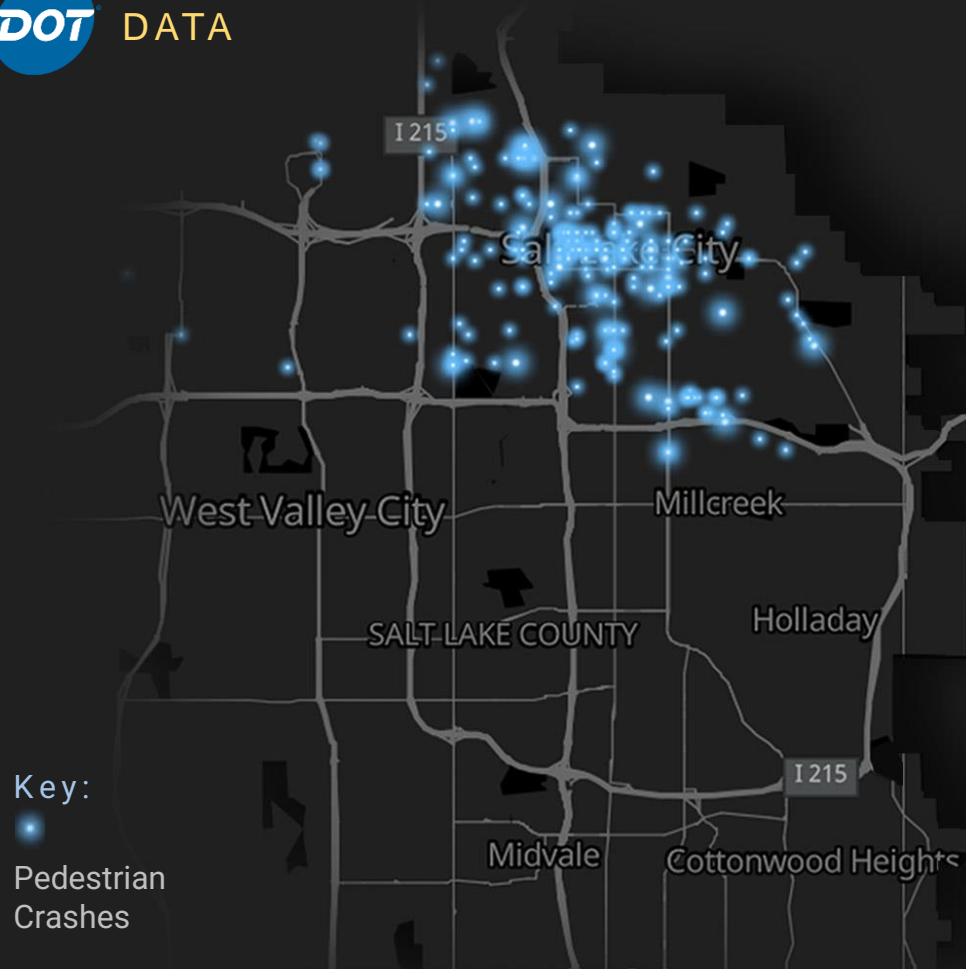
Streetlight Insight In-App Example: Truck Top Routes from Amazon Distribution Center, Des Moines

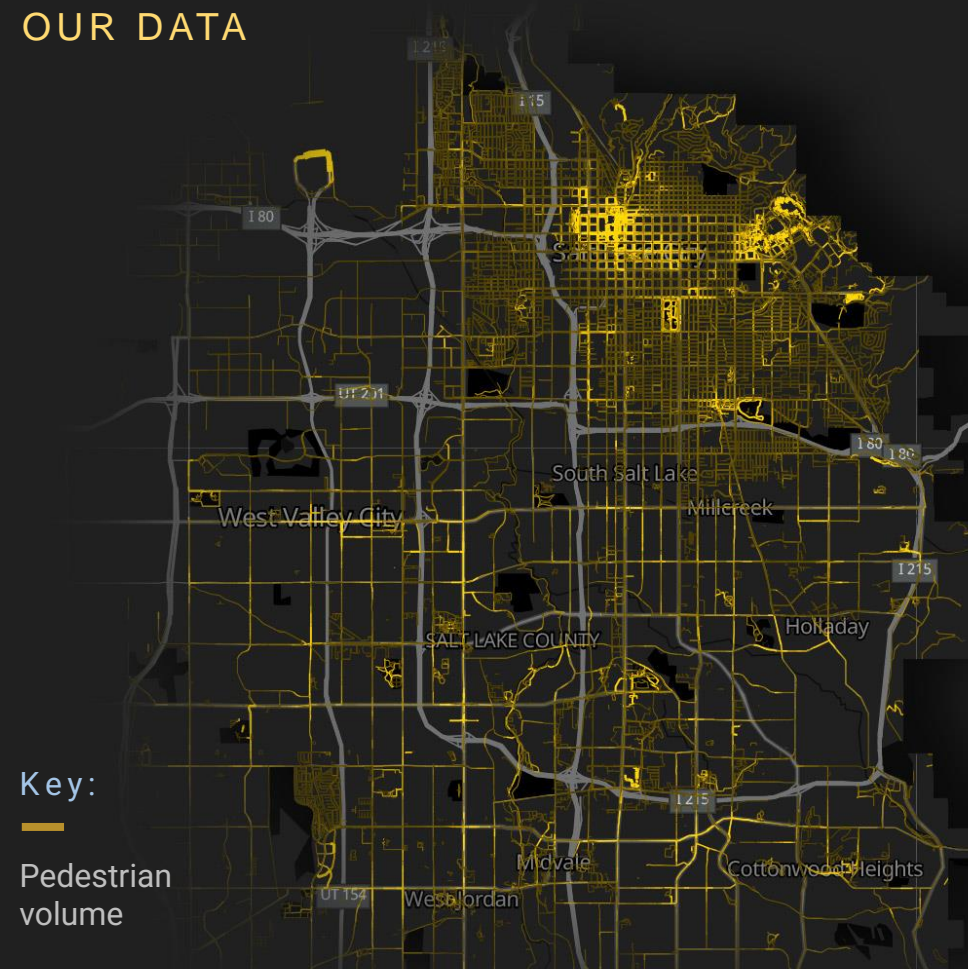# Marry datasets to diagnose crash propensity region-wide and prioritize infrastructure that improves safety.

DOT DATA

Key:

Pedestrian Crashes

Pedestrian Traffic Deaths & Serious Injury Crashes
SLC.gov

OUR DATA

Key:

Pedestrian volume

Pedestrian Volume
StreetLight

Marry datasets to diagnose crash propensity region-wide and prioritize infrastructure that improves safety.
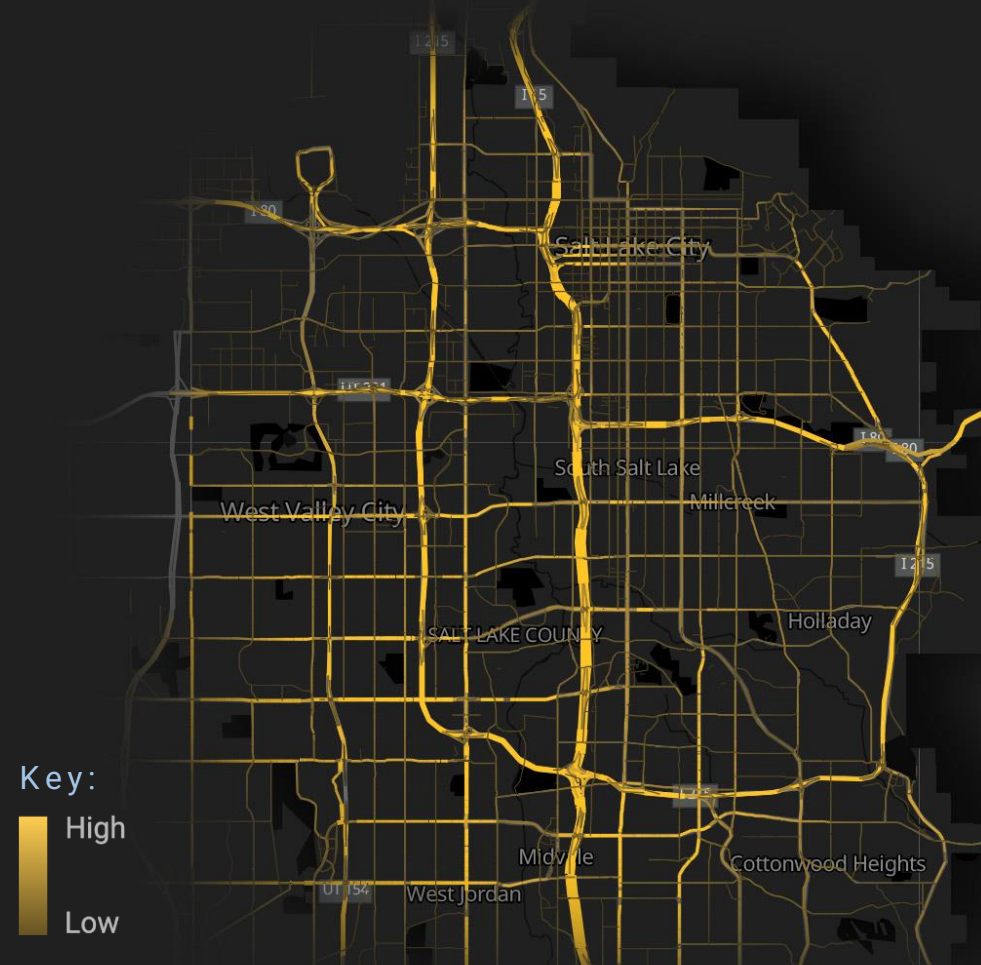

Key:
Low
High
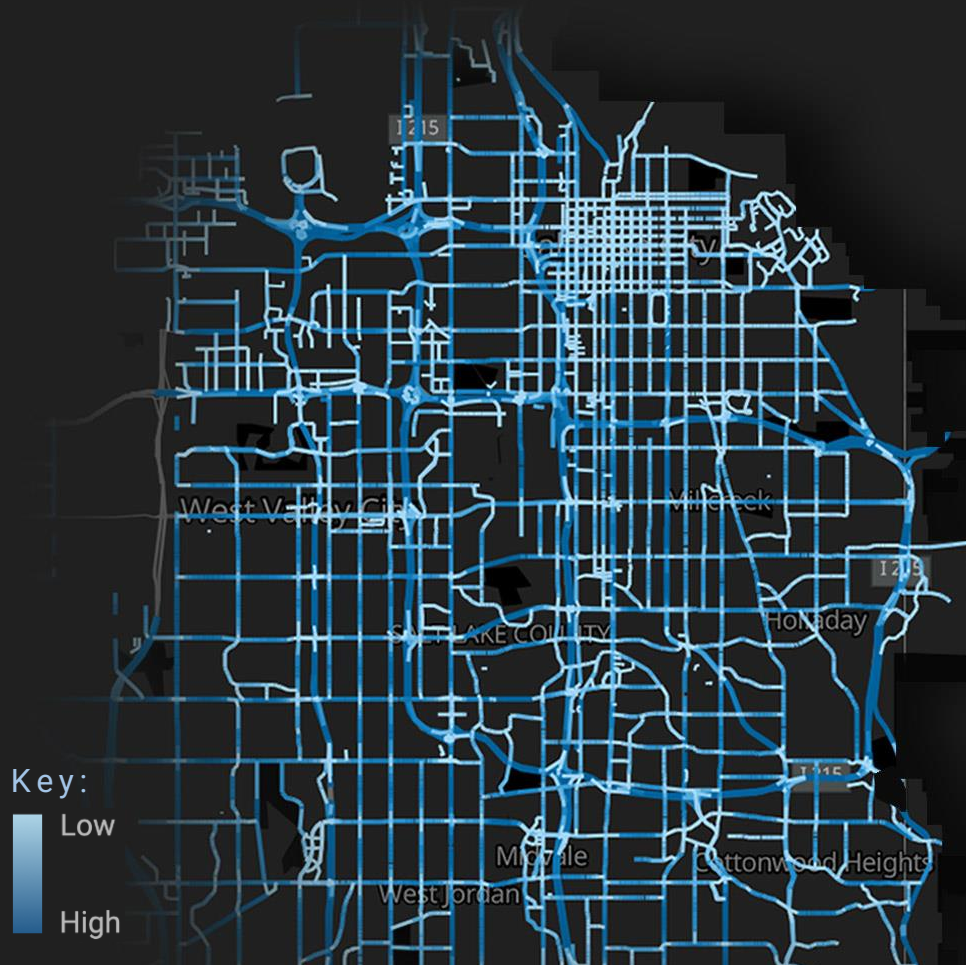
Vehicle speed | Peak-hour
StreetLight

Key:
High
Low

Vehicle Volume
StreetLight

Equitable Bike-Ped Safety in Pittsburgh for Vision Zero

Challenges: (limited Safety Improvement funds, where to prioritize)

Identify vulnerable corridors and neighborhoods for bike and ped.

Understand resident travel behavior, mode choice and trip assignments.

No bike-ped travel data to help pinpoint where traffic-related crashes were occurring.

StreetLight Solution: Bike-Ped O-D Metrics overlaid w/their crash data

Most severe crashes occurred in the areas with lower bike-ped traffic.

½ of Ped fatal crashes/51% of total crashes occurred in neighborhoods w/low ped activity.

½ of Bike fatal crashes/36% of total crashes occurred in neighborhoods with little or no bike infrastructure and low bike activity.

Pittsburgh divided into zones by relative bicycle activity, and overlaid with bicycle crash data.

Relative pedestrian activity combined with pedestrian crash data for Pittsburgh.

> "We no longer have to make assumptions in people's trip activity and travel behaviors. Now we have data to support our research and it separates fact from fiction."
> PANINI CHOWDHURY, AICP