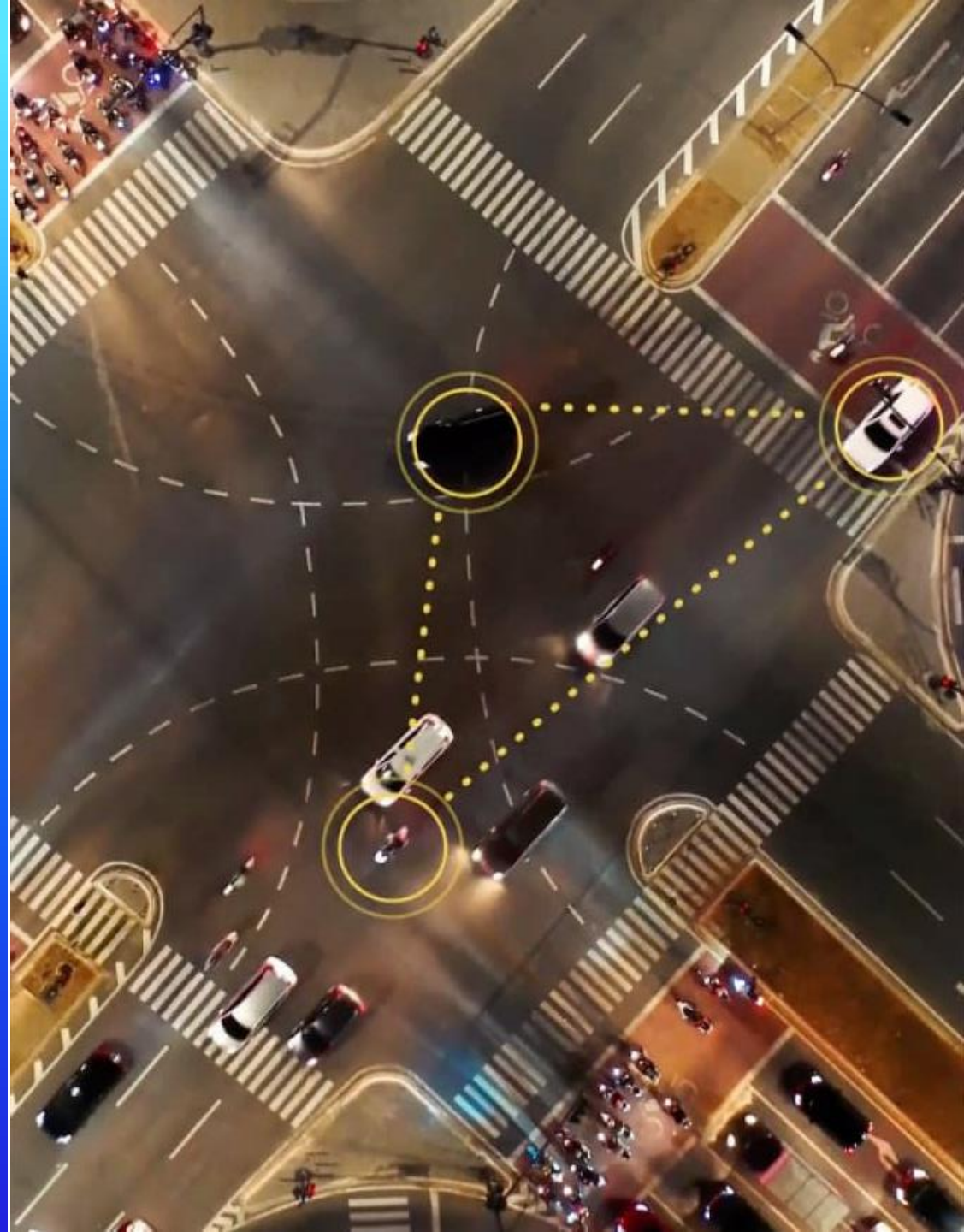
STREETLIGHT

Kentucky Transportation Cabinet and StreetLight Data: STP Meeting

TEAM KENTUCKY TRANSPORTATION CABINET

January 21, 2026

Monika Shepard – Principal Customer Success Manager



STREETLIGHT
A Jacobs Company

Agenda

- Overview: StreetLight & Big Data
- KYTC's StreetLight Planning Subscription + Local Use Cases
- Other Customer Examples of Using StreetLight Metrics
- Resources

Overview: StreetLight & Big Data

Trusted across North America

Most widely adopted transportation data platform

100s of public agencies

100,000+ of projects and counting

Validated exhaustively against permanent counters and transportation survey

steer · AECOM · CDM Smith · Kimley»Horn · Fehr & Peers · Stantec · HDR · Parsons · FHWA

Ford Mobility · Uber · Siemens · Spin · BCG · Bloomberg New Energy Finance · Alaska Airlines · Macquarie · CBRE · ooo

[streetlightdata.com/case-studies →](streetlightdata.com/case-studies)

More than data: StreetLight tackles a wide array of transportation challenges with the most complete portfolio in the industry

PLANNING

- Traffic & Intersections
- Transportation Modeling
- Transportation Planning
- Truck Traffic
- Truck Modeling
- Freight Planning
- Historic Active Transportation
- Forthcoming Active Transportation

SAFETY

- Crash Data Viewer
- Network Screening
- Safety Improvement Index
- Countermeasure Treatments
- Measuring Effectiveness
- Speed Scanner

OPERATIONS

- Traffic Monitor
- Real-Time Traffic Monitor
- Operational Performance Analytics

CLIMATE

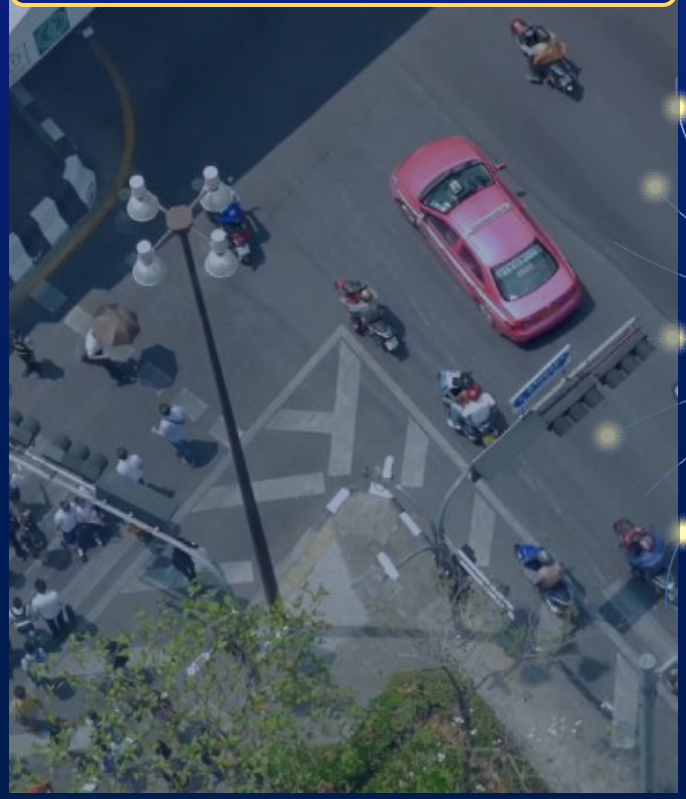
- VMT Analytics
- GHG Analytics
- Vehicle Electrification Analytics
- Evacuation Analytics

MOBILITY DATA

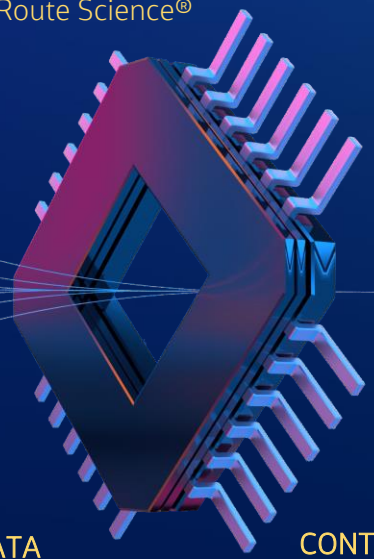
- Connected Vehicle Journeys
- Hard Braking Events

Big data intelligence means accurate insights without months of data collection

CONNECTED DEVICE DATA → MACHINE LEARNING & ALGORITHMIC PROCESSING → INSIGHTS AT YOUR FINGERTIPS



Route Science®



MOBILITY DATA

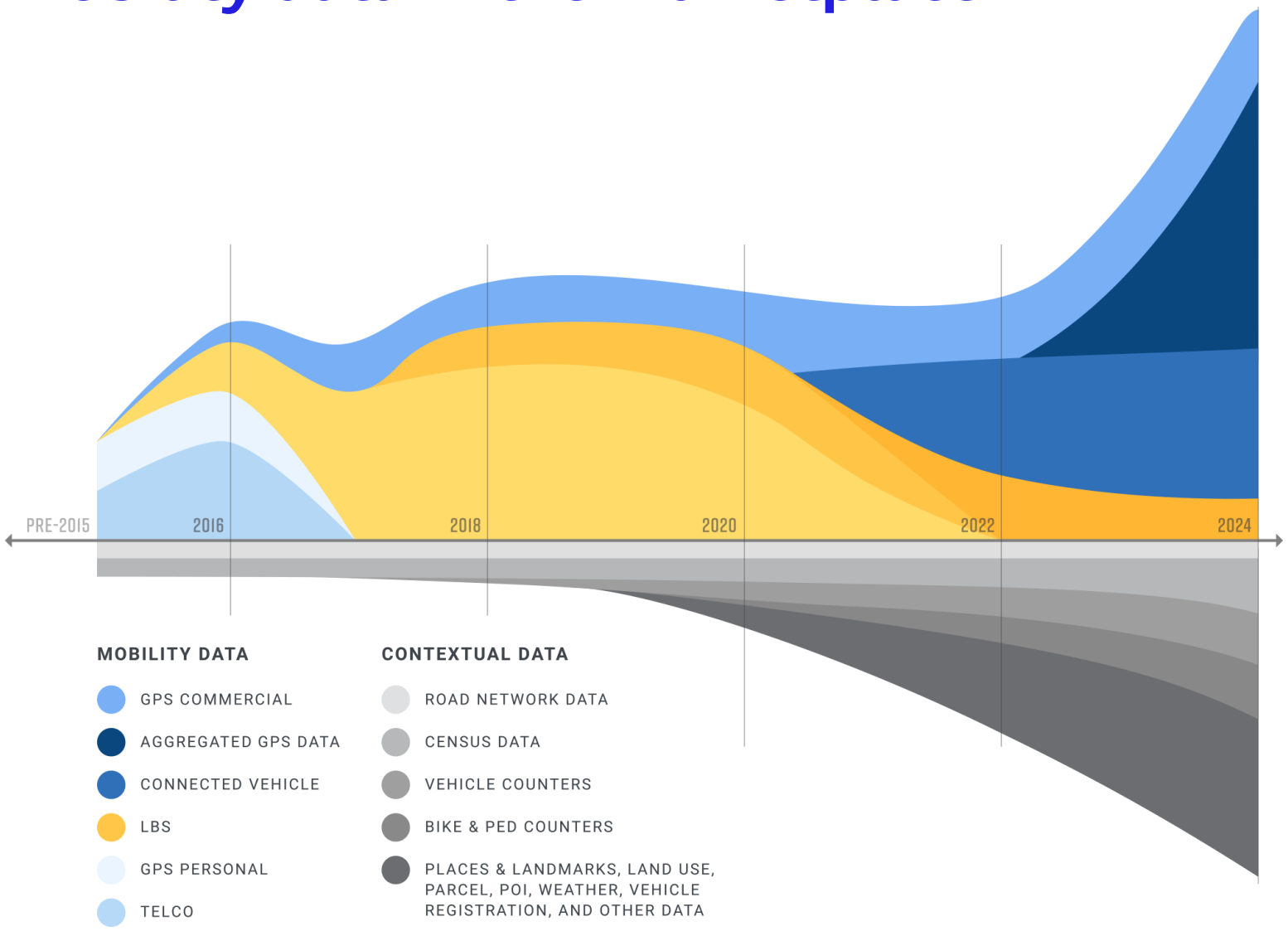
Aggregated GPS Data
Connected Vehicles
GPS Commercial
LBS
•••

CONTEXTUAL DATA

Road network data
Counters
Census
POI, Land use & other data
•••

Car
Truck
Bus
Rail
Bicycle
Pedestrian

Deepest and growing repository of mobility data in the marketplace



Unmatched insights into how North America moves

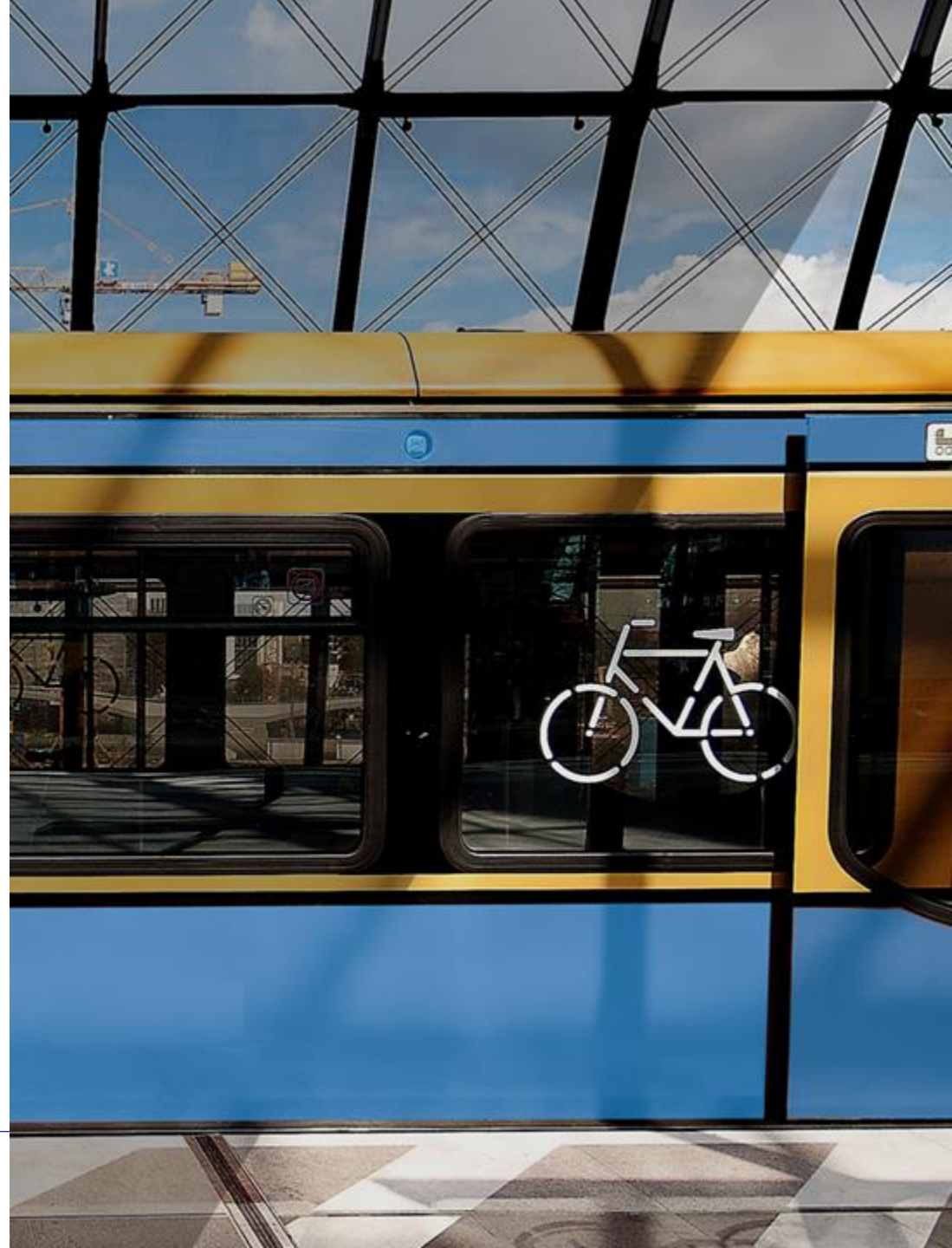
Empirical data, tested vs. permanent counters and transportation surveys

100s of historical data sources feeding our Route Science® engine

Frequently adding new sources and new modes to capture changes in travel patterns

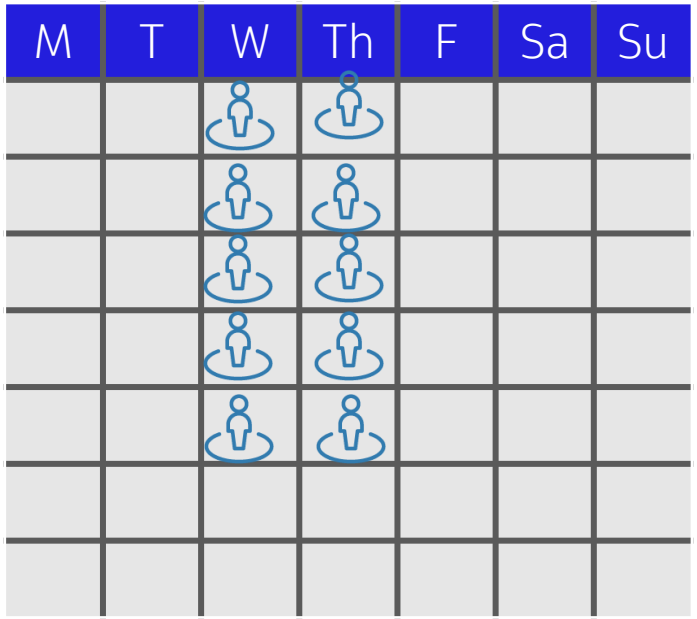
Traditional Data Collection

- Traditionally collected from census, field counts, household travel surveys, and intercept onboard rider surveys
- Used to forecast demand, inform investments, and drive policy decisions
- Limitations of traditional methods:
  - Cost
  - Time
  - Scale
  - Representativeness
  - COVID-19: Limited contact and new travel patterns



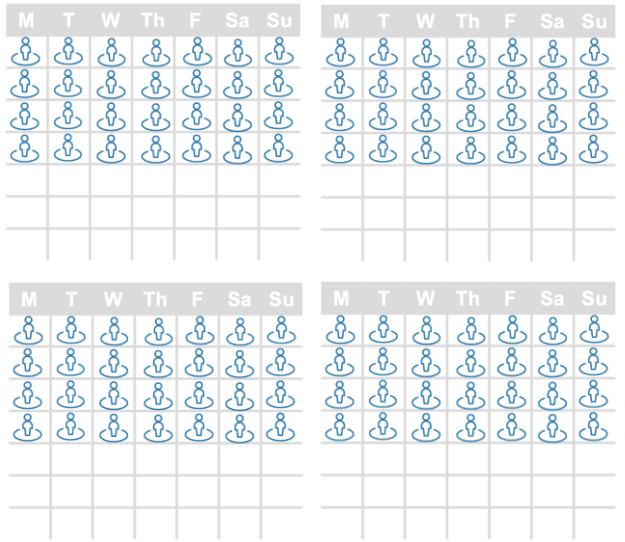
Sample Size: Big Data vs. Traditional Survey

Traditional Survey
Some people for a "snapshot" in time



VS.

Big Data
Many people across a longer time horizon



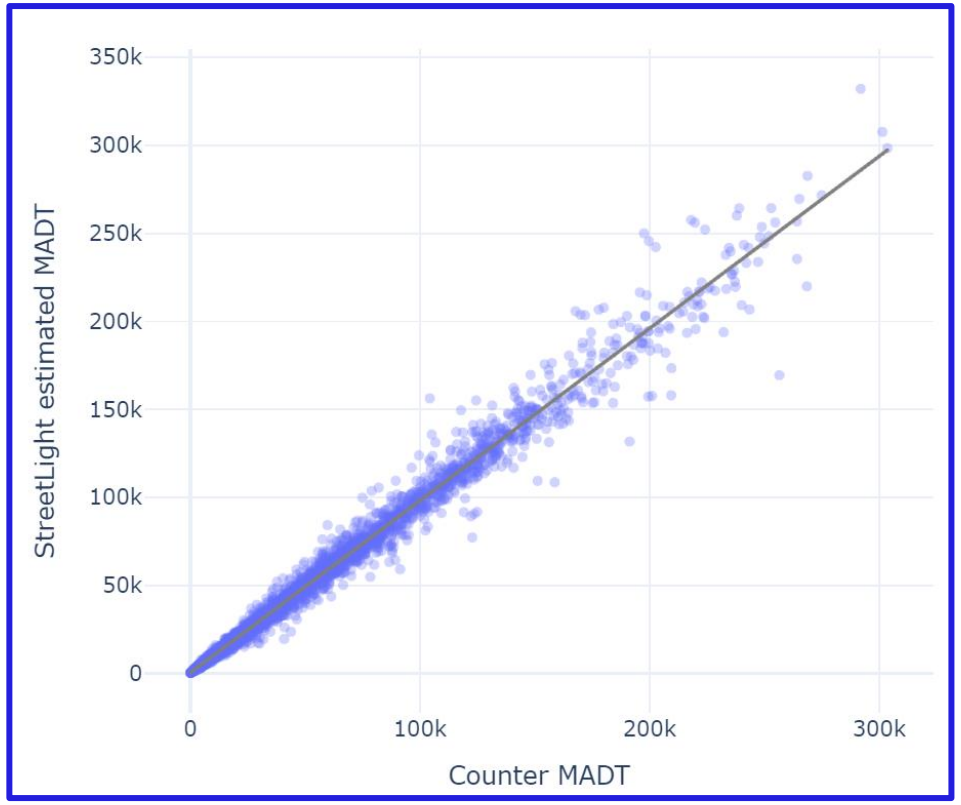
Visit the Help Center to access updated white papers

streetlightdata.com/whitepapers

Metrics Methodology & Validation *(click on Articles tab)*

3rd Party validations (via TETC)

StreetLight AADT 2024 metrics meet the industry-standard benchmark for all roads



StreetLight AADT estimates strongly correlate with ground-truth AADT. The best-fit line's r-squared is 0.987

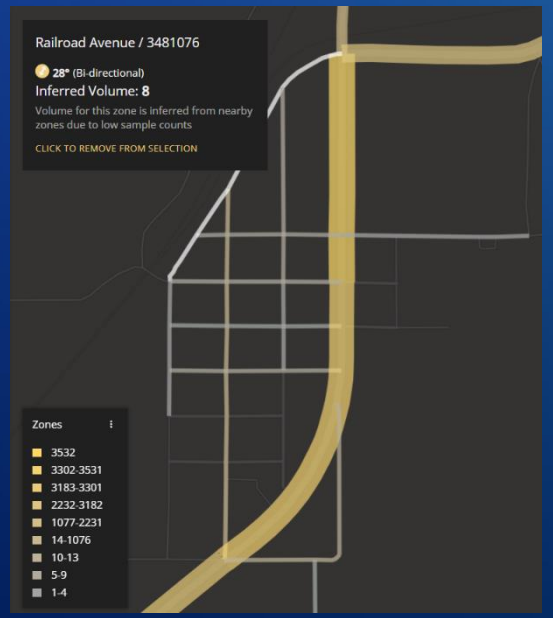
AADT Volume Category	Sample Size	Bias (%)	Target Bias (%)	MAPE (%)	Target MAPE (%)	Number of Sites with Errors Beyond Target (outliers)	Max Number of Sites Beyond Target Error Range
500-4,999	341	-1.46	± 2.33	11.09	13.86	4 sites >43.4% error	11 sites >43.4% error
5,000-54,999	1,254	-3.09	± 2.01	8.14	10.47	6 sites >33.6% error	50 sites >33.6% error
55,000+	830	-2.20	± 2.71	6.18	8.14	23 sites >22% error	40 sites >22.0% error

Cross-validation results for StreetLight AADT 2024 by road size, shaded to compare with short-term count expansion errors (new FHWA target benchmarks), indicate that StreetLight's AADT model performed nearly two percentage points better than the target MAPE across all three volume categories.

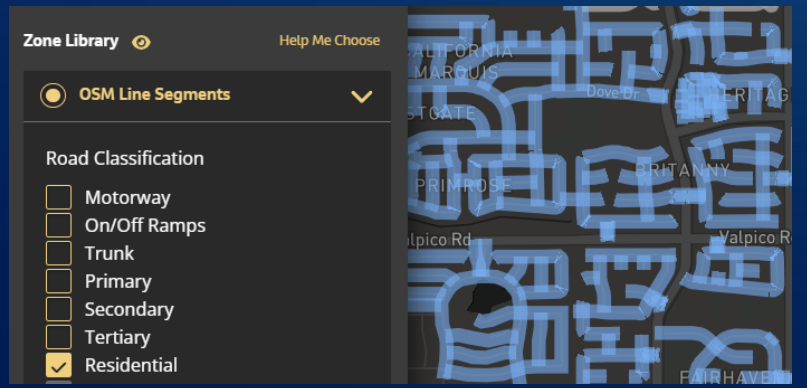
VIEW WHITE PAPER

Enhanced AGPS Volume model expands coverage and integrates nationwide counter data for high-quality vehicle insights with unmatched reliability

- Get defensible and granular volumes for **all road types in your region in minutes**
- Refined all vehicles volume estimates and **expanded coverage for residential and low-volume road types** across all years, including inferred volumes in low-sample areas
- Reduced bias through integration of permanent counter data from all lower 48 states for recent and historical analytics, to compare traffic trends across 2019 - 2025



New feature: inferred volumes in low-sample areas



Expanded coverage for all residential and low-volume roads

Note: this update applies to the following AGPS analyses for the U.S.: Network Performance, Network Origin-Destination, Turning Movement Counts, Corridor Study, AADT, Congestion Management

KYTC's StreetLight Planning Subscription + Use Cases

Key POCs for KYTC at StreetLight

- Monika Shepard, Principal Customer Success Manager (Program Management + Services)
- Emma Hoarty, Customer Success Associate (Engagement Coordination)
- Erin O'Higgins – Solutions Engineer (Services)

Adding new users?

Prospective users can reach out to Daniel Hulker for approval.

KYTC Subscription Summary

Subscription:

- StreetLight InSight® Planning
- 78/100 user seats

Modes:

- All Vehicles
- Commercial truck (HD & MD)
- Bike & Ped (historic)
- Bus & Rail (historic)

Packages:

- Transportation Planning
- Truck Traffic / Truck Modeling +
- Historic Active Transportation

Features:

- *API Access*
- *Services*

Region: Kentucky state boundary + 0.5 mile buffer

2025 StreetLight InSight® Planning lookback

Key metrics, analyses, and features that launched in StreetLight InSight® this year

Street Scanner

AADT 2024

Recent Home and Work Locations Metrics

Help Me Choose analysis selection capability

Network Origin-Destination, and Network Performance with Truck Mode for Canada

New data months, and faster run-time for QuickViews

Freight Planning with truck volumes and commercial vehicle attributes

ADDITIONAL PRODUCTS & FEATURES

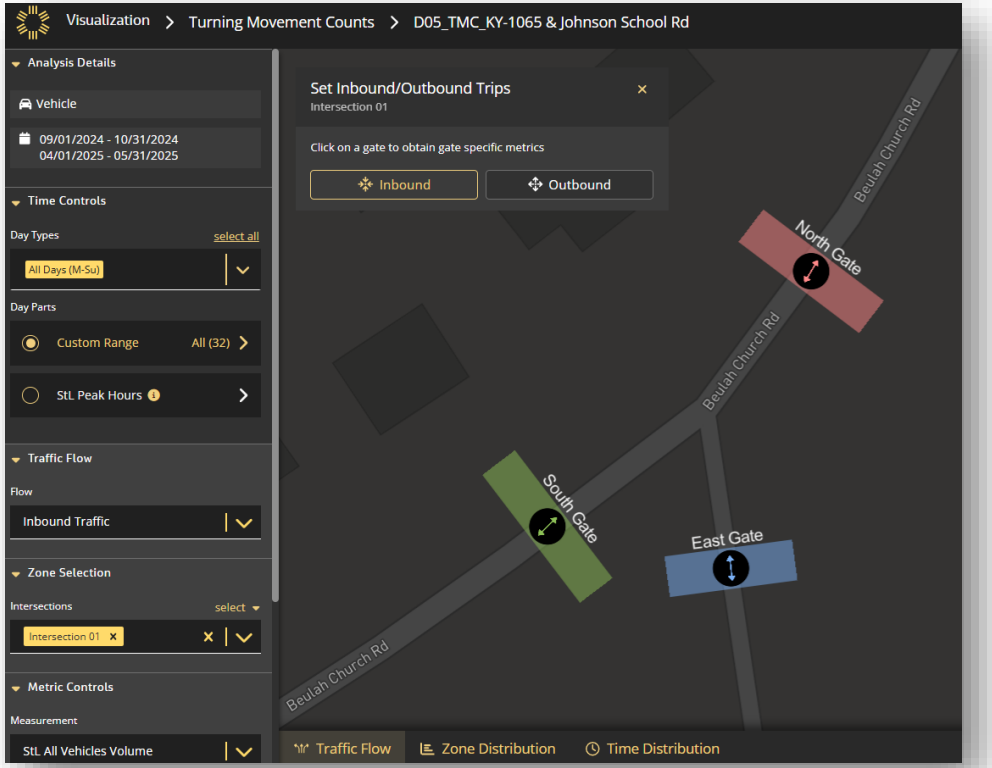
Route Monitoring, Real-time Incidents Feed, and Queuing added to Traffic Monitor

Hard Braking & Acceleration Events

Use Case: Turning Movement Counts

Devin Wyckoff with KYTC District 5 Traffic Operations uses StreetLight data to help make decisions to install traffic signals, all-way stop, or other control measures.

1. Receive complaint or have an intersection in mind
2. Pull **StreetLight Turning Movement Counts** data to **understand current area conditions**
3. Based on results, proceed with formal engineering study
4. Review StreetLight and engineering study data in conjunction to formulate decision



Johnson School Road and KY-1065

Use Case: Rebuild Downtown Mayfield

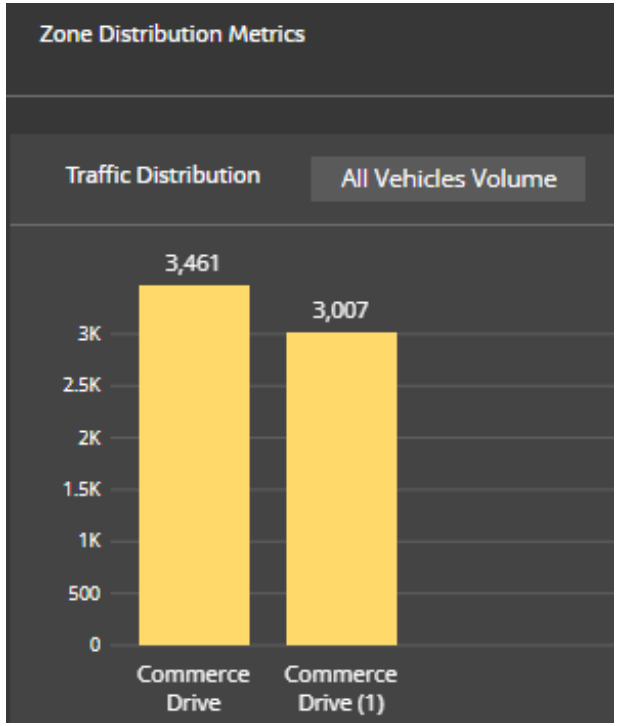
Rebuild Mayfield aims to transform downtown into a safer, more accessible space for walking and biking following destruction from the devastating 2021 tornado.

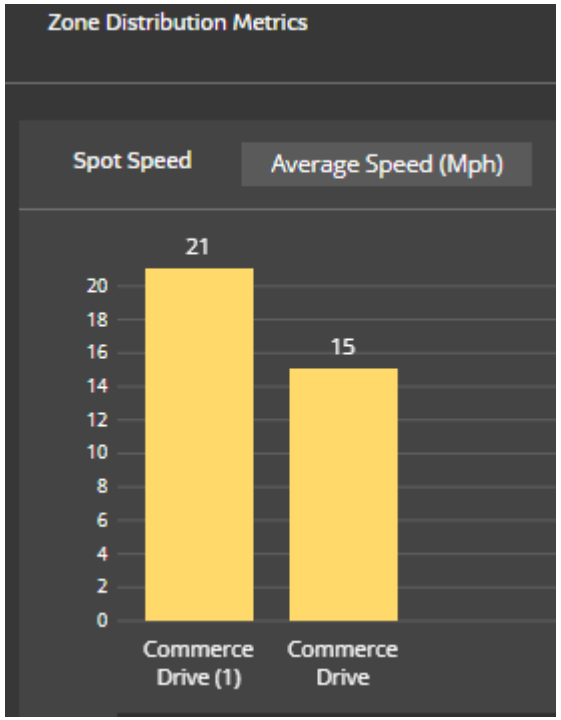
- Chad Bourke and the team at Strand could not obtain turning movement counts or volume because of destruction caused by the tornado.
- Used **StreetLight to obtain historic counts** that were used in forecasting.
- Have since gone back to proof StreetLight counts and were happy the numbers.

Use Case: Elizabethtown Roundabouts

Kevin Young with KYTC District 4 uses StreetLight data to support the replacement of 10 signalized intersections with roundabouts to improve safety and traffic flow in Elizabethtown, KY.

Used StreetLight in the preliminary stages of the planning process to obtain intersection approach speeds, turning movements, and AADT.





Other Customer Use Cases

CASE STUDY: PLANNING

Tennessee DOT uses advanced data analytics to minimize lane closure disruptions and optimize work windows

CHALLENGE

Nashville's Briley Parkway required daytime lane closures for street sweeping, which could cause congestion and long vehicle queues. Previously, Tennessee Department of Transportation (TDOT) relied on anecdotal observations and a limited number of traffic sensors to guess the best time to close lanes. They needed a better way to analyze traffic volume and identify targeted lane closure windows.

DATA-BASED SOLUTION

They obtained granular traffic volume data from StreetLight, analyzed by month, hour, and day. The analysis revealed specific hours for safer, cost-effective daytime lane closures. They discovered that completing work by 2 pm each day would reduce traffic impact the most, and allow them to avoid overnight street sweeping, which can be dangerous and costly.

AGENCY AND PUBLIC BENEFIT

"We have used StreetLight on 30 - 50 projects for queue analysis and to plan for work zone hours […] The data granularity helped save money by being able to do the work during the day more efficiently and get it done faster"

JASON QUICKSALL, STATE WORK ZONE ENGINEER

TN TDOT Department of Transportation

The data helped TDOT reconsider long-held assumptions that midday weekday volumes are generally higher than weekend volumes, and now the agency believes construction projects could potentially be completed in one or more work weeks, rather than being spread across many weekends. They plan to use StreetLight to regularly monitor the impact of road work zone closures, along with informing bridge repair closure times and other projects.

CASE STUDY: PLANNING

Analytics Secured Federal INFRA Funding for Columbus

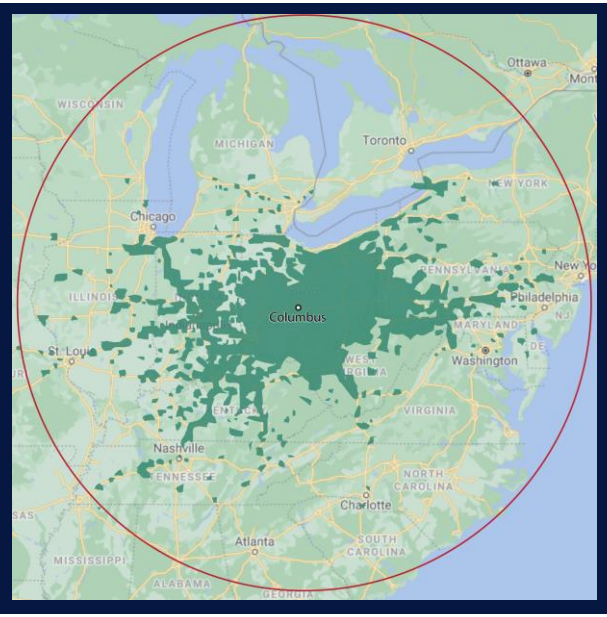


FIGURE 1.

StreetLight's O-D metrics show the starting and ending Census blocks of truck movements through the I-70/I-71 overlap.

2019

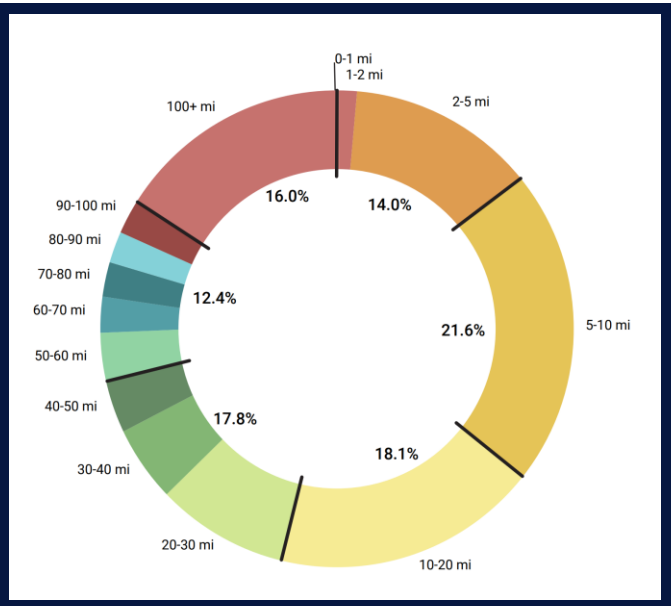


FIGURE 2.

Analysis of commercial vehicle trips revealed an even distribution of trip lengths through the I-70/I-71 overlap, including trips of 100+ miles.

2019

CHALLENGE

Ohio Department of Transportation **needed funding to complete a critical, long-term highway restructuring project** on I-70/I-71.

The **freeway was ranked second worst in travel time performance** in Ohio and was one of the most hazardous locations. Planners needed to show positive impact on freight movements.

DATA-BASED SOLUTION

StreetLight's Origin-Destination metrics isolated truck traffic from personal vehicles and identified start and end points for those truck trips going through the highway overlap.

Planners analyzed trips that extended up to 500 miles from the project area.

AGENCY AND PUBLIC BENEFIT

ODOT secured $25 million in Infrastructure for Rebuilding America (INFRA) funding using StreetLight visualizations that created a "light-bulb moment" and showed how those dollars would translate to long-term benefits for safety, the local economy, and our national transportation infrastructure.

CASE STUDY: PLANNING

Rebuilding a Collapsed Bridge with Safety and Equity in Pittsburgh, PA

FIGURE 1. 2019 traffic PM peak volumes (Baseline)

FIGURE 2. Analysis of alternatives to reroute traffic after closing slip ramp

CHALLENGE

After a bridge collapse, the City of Pittsburgh wanted to **rebuild a safer, more efficient traffic corridor** that accommodated pedestrians, bicyclists as well as motorists.

The city had to redesign the bridge and surrounding roadways while rebuilding the bridge on an extremely short timeline.

DATA-BASED SOLUTION

The city used StreetLight's **historical traffic data to better understand traffic issues** that existed before the bridge collapse, and to model the impacts of proposed operational changes once the bridge reopened.

The team **performed complex analyses** and identified where traffic on surrounding corridors was causing backups and was responsible for crashes.

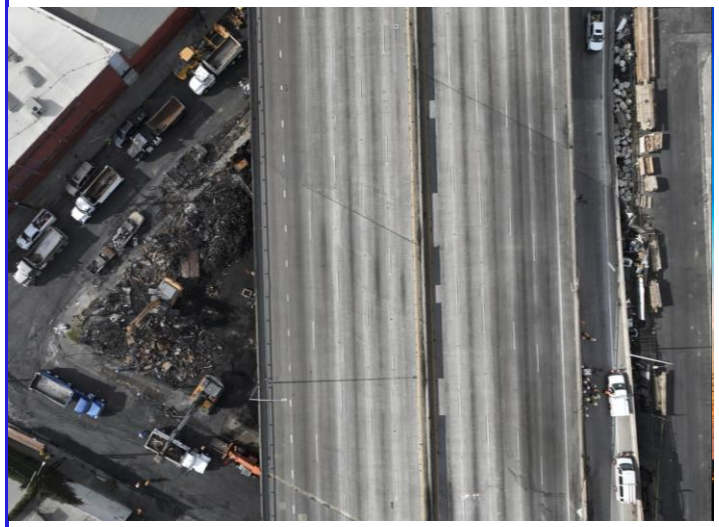
AGENCY AND PUBLIC BENEFIT

Less than a year after Fern Hollow collapsed and PennDOT opened the new bridge, the city was able to design an improved roadway system with protected bike lanes, simplified intersections, and additional traffic calming measures.

CASE STUDY: PLANNING

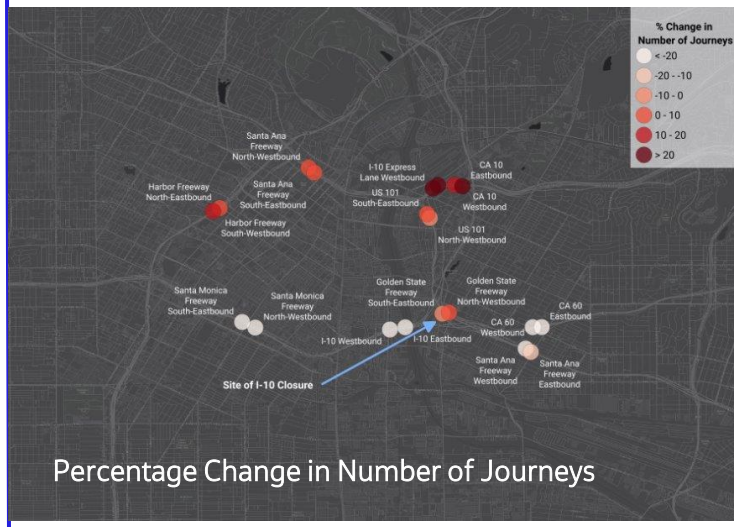
Trucking Analysis for the Port of Los Angeles

CHALLENGE



In November 2023, a fire closed a portion of the I-10 in Los Angeles. Southern California Association of Governments (SCAG) needed to **understand the congestion and economic impacts of rerouting traffic to adjacent highways**; specifically, commercial trucks traveling to and from the Port of Los Angeles.

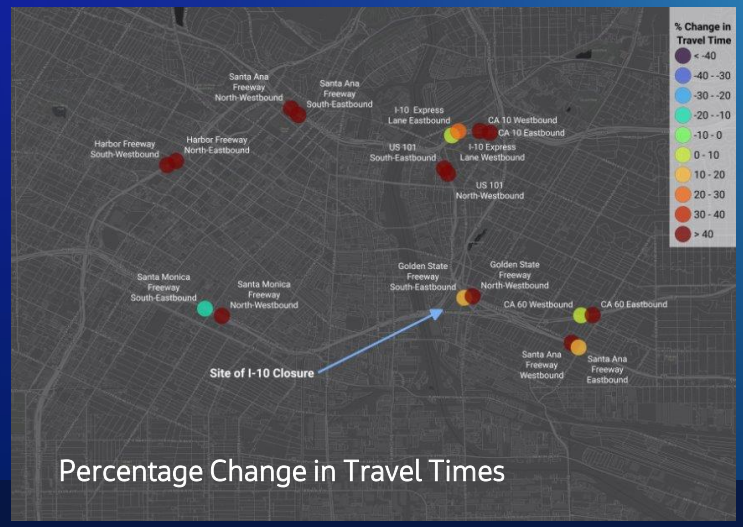
DATA-BASED SOLUTION



Percentage Change in Number of Journeys

SCAG turned to StreetLight to understand the impact on commercial truck activity. StreetLight created an origin-destination analysis for redirected I-10 traffic and for critical locations near the Port. The analysis compared travel times and number of journeys for the weeks preceding and following the fire.

AGENCY AND PUBLIC BENEFIT



Percentage Change in Travel Times

SCAG was able to pinpoint the locations where truck volumes and travel times changed the most because of the closure.

StreetLight's freight insights filled a critical information gap in a very short time period.

CASE STUDY: PLANNING

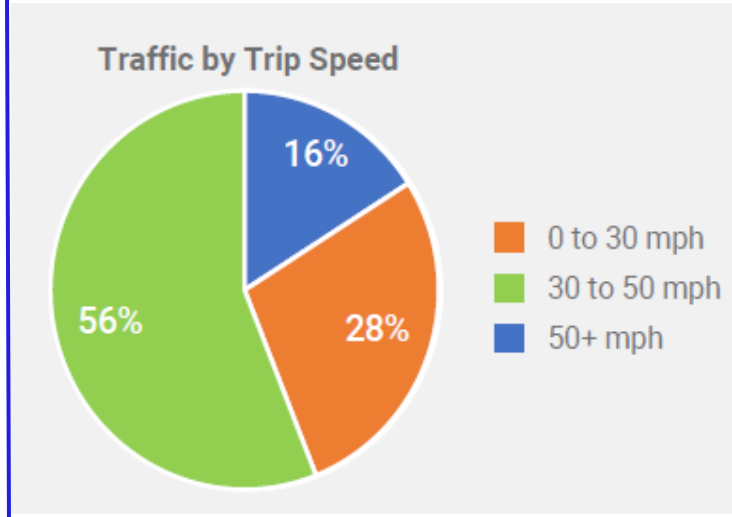
Streamlining a 40-Mile Corridor Study With On-Demand Analysis

CHALLENGE

Route 28 is a critical corridor for Pittsburgh-bound commuters, freight operators, local residents, and visitors to nearby trails and parks.

After **25 years without a comprehensive study**, Southwestern Pennsylvania Commission (SPC) partnered with other agencies to get the full picture of existing conditions on Route 28.

DATA-BASED SOLUTION



With StreetLight, planners were able to **quickly run multiple analyses to measure current travel behaviors**, including traffic by trip duration and trip speed.

They identified where people were traveling to and from when they pass through the middle of the corridor, adding insight into trip purpose and travel demand.

VALUE FOR THE AGENCY

"Now that we have StreetLight, we can broaden the corridor, look at alternative roadways, intersecting roadways, more details on where transit id, and we can look at the context of the whole corridor, not just little pieces one at a time."

CHUCK IMBROGNO

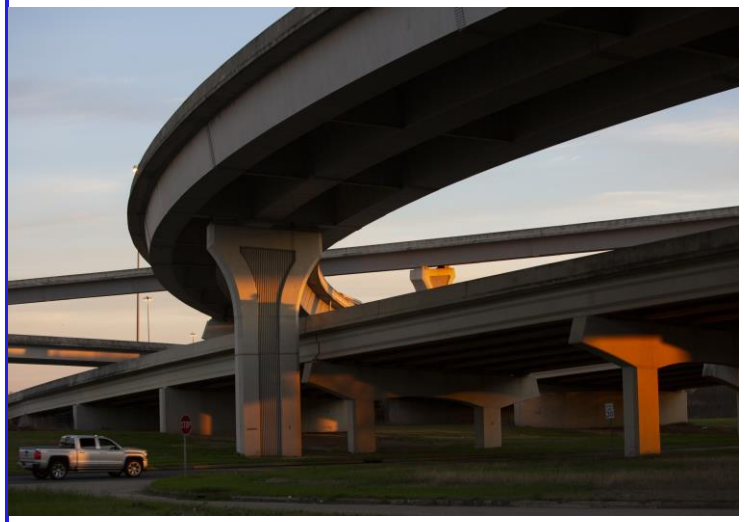
SOUTHWESTERN PENNSYLVANIA COMMISSION SPC

By leveraging StreetLight's on-demand metrics for the entire corridor, the agency avoided the need for costly and time-consuming traffic counter installs, allowing them to stretch their budget and shorten their timeline.

CASE STUDY: PLANNING

Analytics Informed Congestion Management Strategies

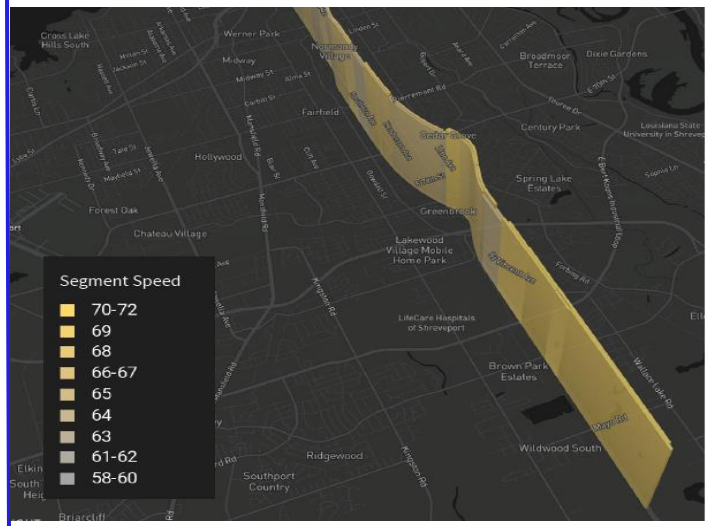
CHALLENGE



The Northern Louisiana Coalition of Governments (NLCOG) wanted to **reduce congestion, improve traffic flow, and upgrade road safety** for their multi-modal transportation network.

To design effective mitigation measures, planners required insights to determine where and why traffic flow was slowing down.

DATA-BASED SOLUTION



StreetLight provided traffic flow metrics and helped NLCOG planners integrate data for use in a GIS environment.

Using this data, NLCOG calculated a Speed Reduction Factor (SRF), to **determine vehicle delay for different road segments**.

AGENCY AND PUBLIC BENEFIT

"Without StreetLight's data, calculating the Speed Reduction Factor would have been monumental in terms of MPO staff time and resources. StreetLight also helped compile, attribute, and format traffic flow data in a GIS environment."

CHRIS PETRO

NLCOG

Planners prioritized trouble spots for improvements, focusing on any congestion that impacted transit services.

This new and faster way to obtain this type of metric required far fewer internal NLCOG resources than past efforts.

CASE STUDY: PLANNING

Getting a Full Picture of Visitors to an Entire State's Park System

FIGURE 1. Analyses show disrupted park visitation patterns after COVID lockdowns, validating StreetLight counts against known visitor variation.

CHALLENGE

Minnesota Department of Natural Resources, Metropolitan Council, & Greater Minnesota Regional Parks and Trails Commission collaborated on a study of parks visitation.

They wanted a clearer picture of state and regional park visitors to **guide improvements to natural resource management, visitor experiences, and park maintenance**.

DATA-BASED SOLUTION

Using StreetLight, they **retrieved three years of park visitation data** for 210 state and regional Minnesota parks.

Researchers gained access to **in-depth park visitation numbers**, broken down weekly across parks statewide, rather than the traditional comparisons of peak summer vs. off-season data or monthly analysis.

AGENCY AND PUBLIC BENEFIT

This decreased the time spent by individual parks in research - a huge leap forward from costly manual counting and survey methods, reducing costs.

With the implemented ideas, the agency can make informed decisions further improving visitor experiences.

Service Offerings

Integration Services

LRS MAP MATCHING: Get foundational transportation metrics – from AADT to congestion and more – aligned to your Linear Referencing System (LRS) / base road network

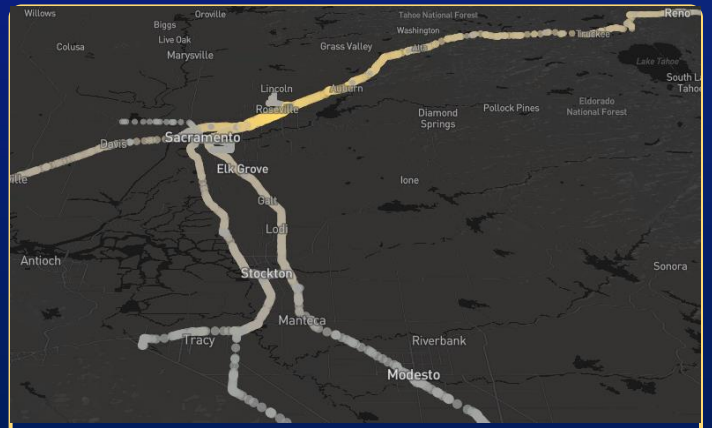
CUSTOMIZED REPORTS & VISUALIZATIONS/DASHBOARDS: Get the insights you need – from automated daily emails, professional presentations, dashboards, and customized visualizations

CUSTOMER DATA INTEGRATIONS: Blending best in class big data with customer data sets

*Note: **Integration Services** are ONLY sold with other Data Products*

STREETLIGHT Planning Solutions | Multi-trip Analytics

VEHICLE TOURS

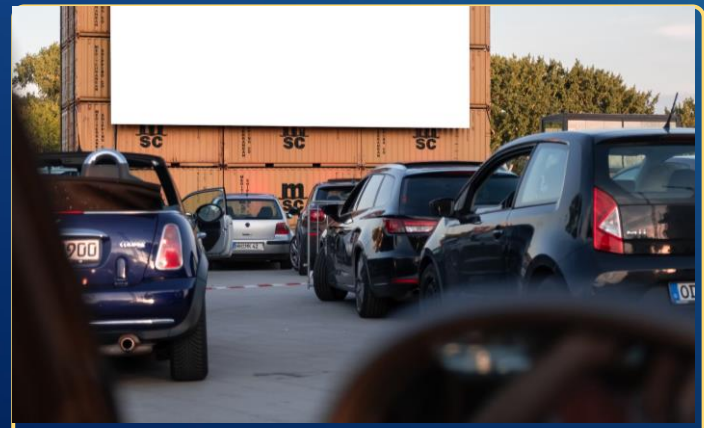


- Analyze long-distance vehicle travel patterns
- Customize trip breaking rules
- Use real-world route choices to understand travel behavior

DWELL TIME & IDLING

- Understand parking behaviors, visitation, and length of stay
- Measure how long vehicles are idling at the curb

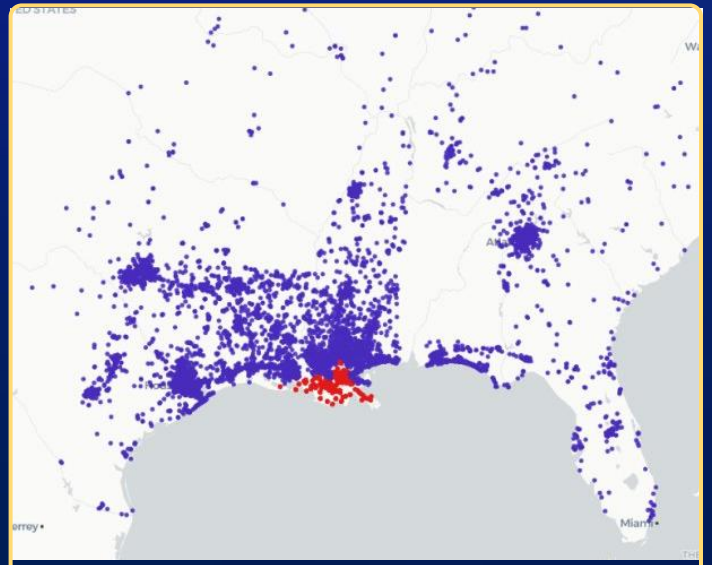
HABITUAL TRIP FREQUENCIES



- Identify locations and corridors with a high share of repeat vehicle trips
- Evaluate site potential by comparing frequent and one-time visits

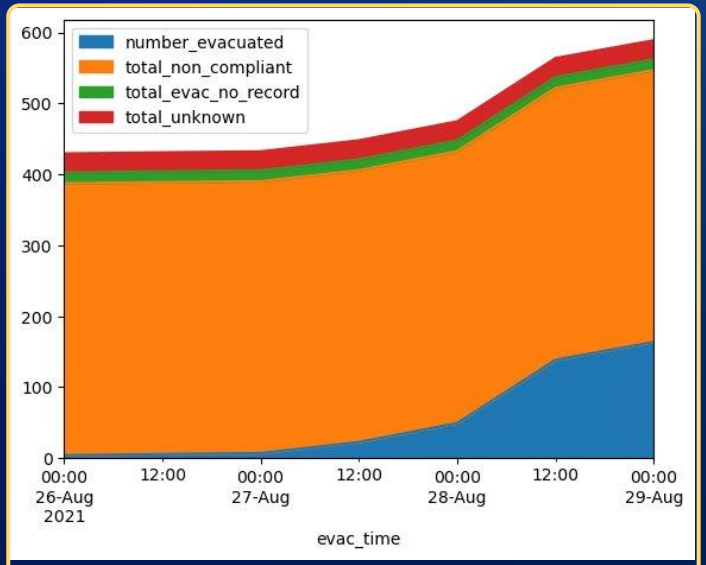
STREETLIGHT Climate Solutions | Evacuation Analytics

FULL EVACUATION TOURS



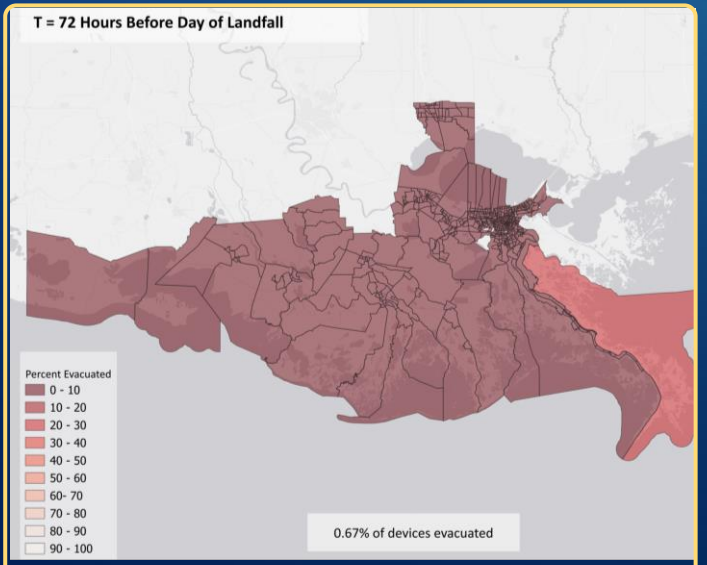
- Characterize the long-distance travel behaviors during evacuations to map out where the evacuees ultimately go.

EVACUATION ORDER COMPLIANCE



- Analyze device movement to measure evacuation compliance and departure times

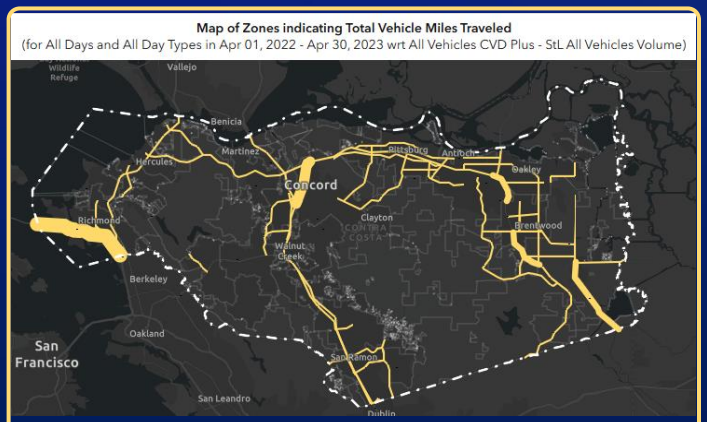
DETAILED MAPPING



- Visualize trends across time and space to learn how travel routes were utilized or evacuation zones were cleared

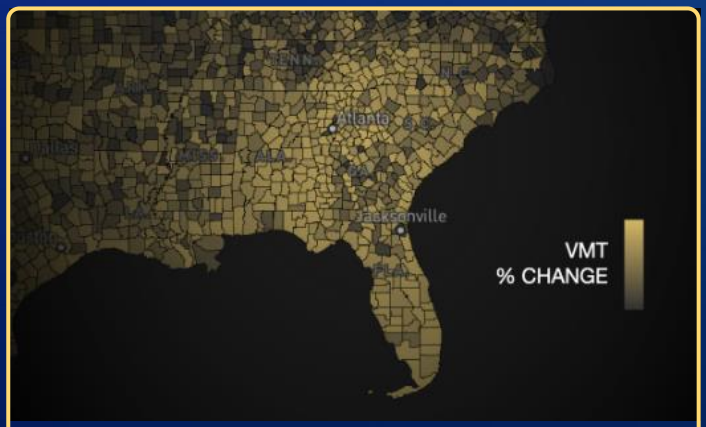
STREETLIGHT Climate Solutions | VMT Analytics

AREA OR SEGMENT VMT



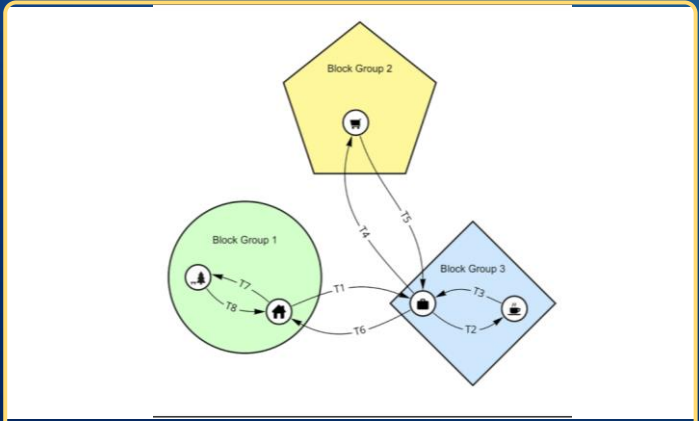
- Get comprehensive VMT for states, counties, cities, or roadways
- Monitor trends in transportation and measure the effectiveness of infrastructure investments, policies, and programs

VMT IMPACT ANALYSIS



- Analyze patterns in passenger and commercial vehicle VMT
- Determine transportation impacts for capacity-increasing transportation projects

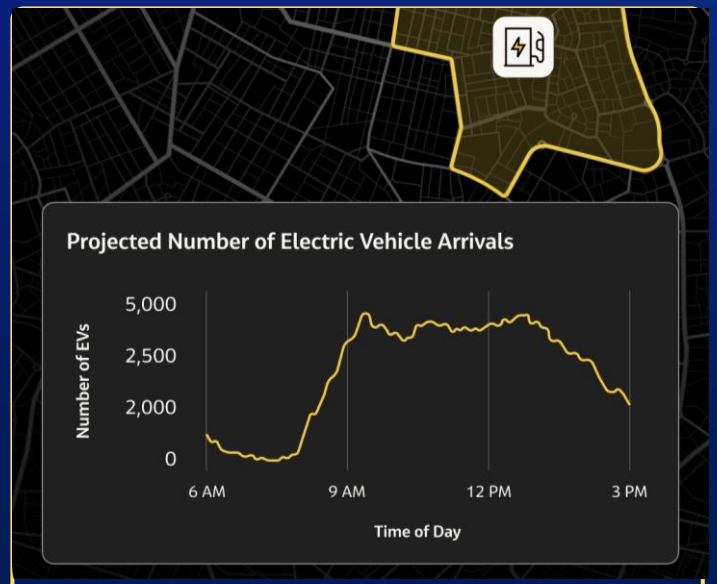
CALIFORNIA SB 743



- Quantify VMT in accordance with OPR guidelines
- Assess trips within defined geographic areas to understand where VMT is occurring
- Leverage granular VMT metrics segmented by resident, employee, and visitor

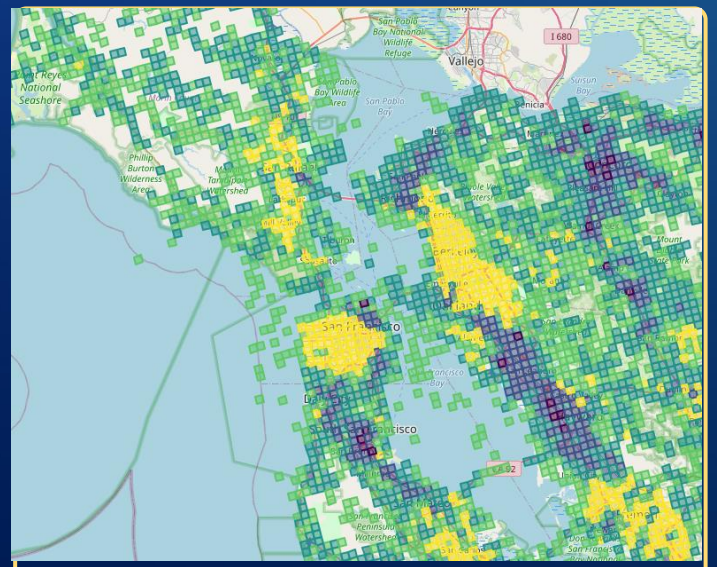
STREETLIGHT Climate Solutions | Vehicle Electrification Analytics

UTILITY READINESS



- Prioritize grid investments with analysis of travel demand and EV charger deployment plans

EV CHARGER DEPLOYMENT



- Harness recent region-wide transportation data to plan EV infrastructure that taps into fast-growing market demand

Resources

Events and Resources: Kentucky Only

- KYTC User Workshop
  - Late March 2026 – date TBA
  - Virtual!
  - Advanced use cases & User Presentations
  - Please reach out to Emma.Hoarty@StreetLightData.com if interested in presenting!

- KYTC Training Page
  - All previous sessions are available here: https://training.streetlightdata.com/kytc-regional-live

Additional User Learning Opportunities: Open Sessions

Instructor-Led Open Trainings

- **Dates/Times:** 2026 Schedule TBA
- Click here to register

Open Office Hours

- **Date/Time:** March 5th at 2pm ET / 1pm CT
- Look out for an invite in February!

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summit 2026

MAR. 12-13, 2026 | VIRTUAL EVENT

SUBMIT TO SPEAK BY JAN. 9 »

streetlightdata.com/summit

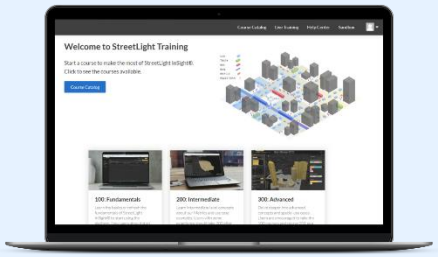
We are here to help!

StreetLight is the **gold standard** in training and customer care, and we have many self-serve resources to support you.

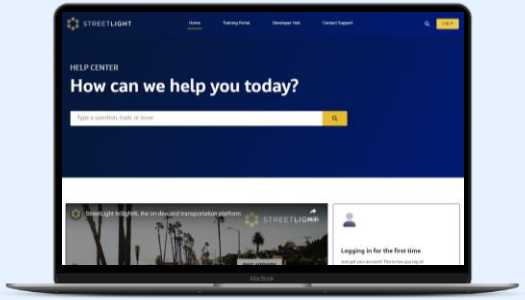
Training

training.streetlightdata.com

Our **StreetLight Training portal**, with handcrafted content developed by our experts, offers **self-paced on-demand eLearning courses, live training sessions, and onboarding** to help you get the most out of the StreetLight InSight® platform.



Help Center



help.streetlightdata.com

StreetLight maintains a **comprehensive online Help Center** with 250+ articles that feature FAQs, how-tos, best practices, tips and tricks, and more.

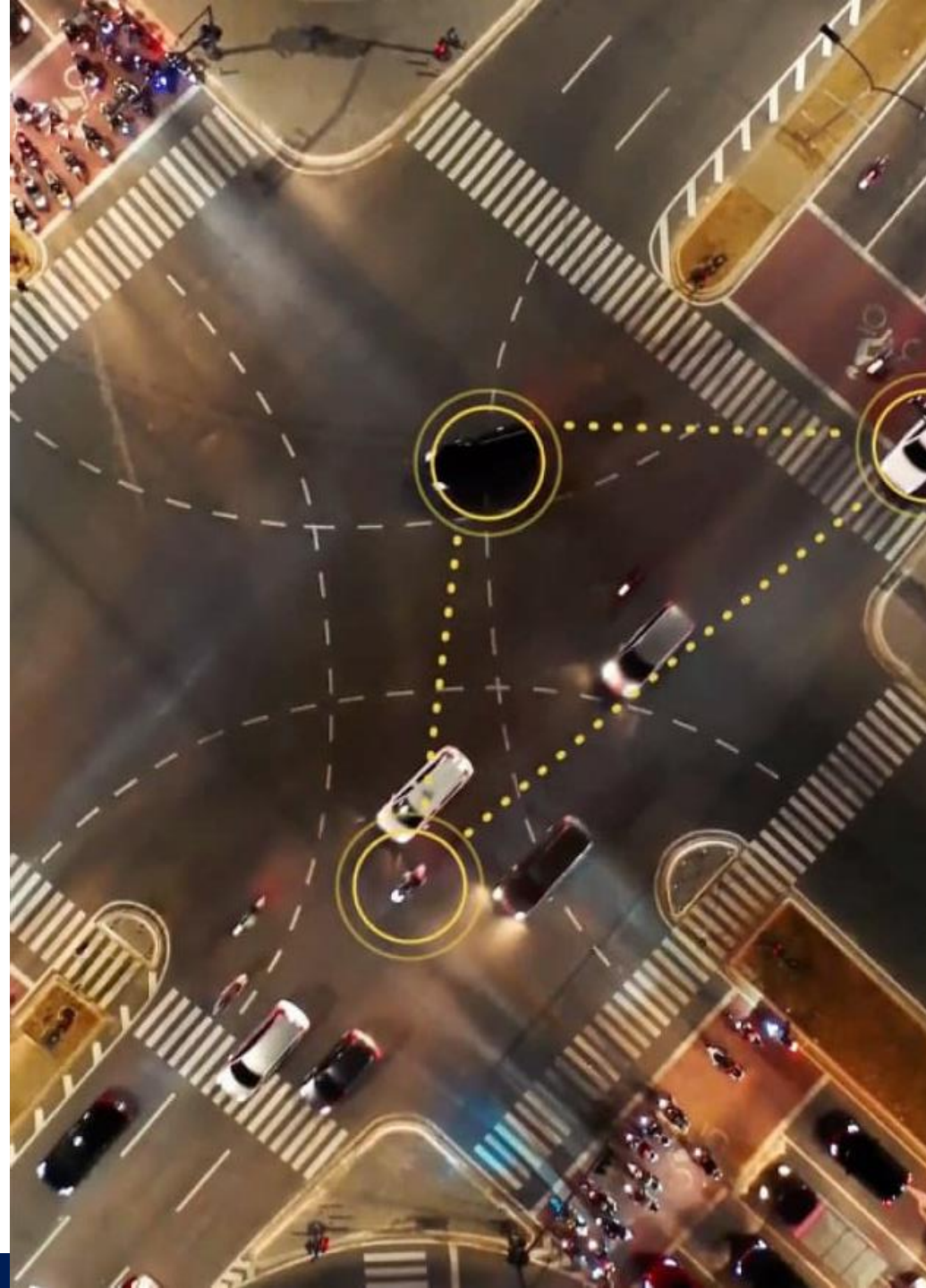
Support Team

Contact Support
or
support@streetlightdata.com

StreetLight's **Support Team is available to answer questions daily**, and team members are available across all time zones in continental North America to troubleshoot with users.

Help Center Resources

- AADT Methodology
- All Vehicles AGPS Volume Methodology and Validation
- How to Create a Network Performance Analysis
- How to Create AADT Analysis
- Working with Roadway Volumes
- Analyzing Roadway Volumes results
- Zone limits for analysis types
- Upload zones from a shapefile
- Comparing AADT overtime
- On-demand training
- Data availability



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Thank you, we appreciate your time!

TEAM KENTUCKY

TRANSPORTATION CABINET