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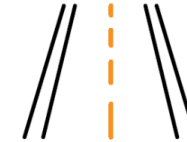


U.S. Department of Transportation Geospatial Ecosystem

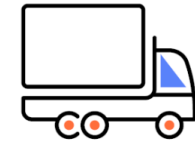
USDOT



FEDERAL AVIATION
ADMINISTRATION (FAA)



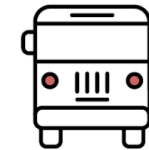
FEDERAL HIGHWAY
ADMINISTRATION (FHWA)



FEDERAL MOTOR CARRIER SAFETY
ADMINISTRATION (FMCSA)



FEDERAL RAILROAD
ADMINISTRATION (FRA)



FEDERAL TRANSIT
ADMINISTRATION (FTA)



MARITIME ADMINISTRATION
(MARAD)



NATIONAL HIGHWAY
TRAFFIC SAFETY
ADMINISTRATION (NHTSA)



PIPELINE AND HAZARDOUS
MATERIALS SAFETY
ADMINISTRATION (PHMSA)



GREAT LAKES ST. LAWRENCE
SEAWAY DEVELOPMENT
CORPORATION (GLS)



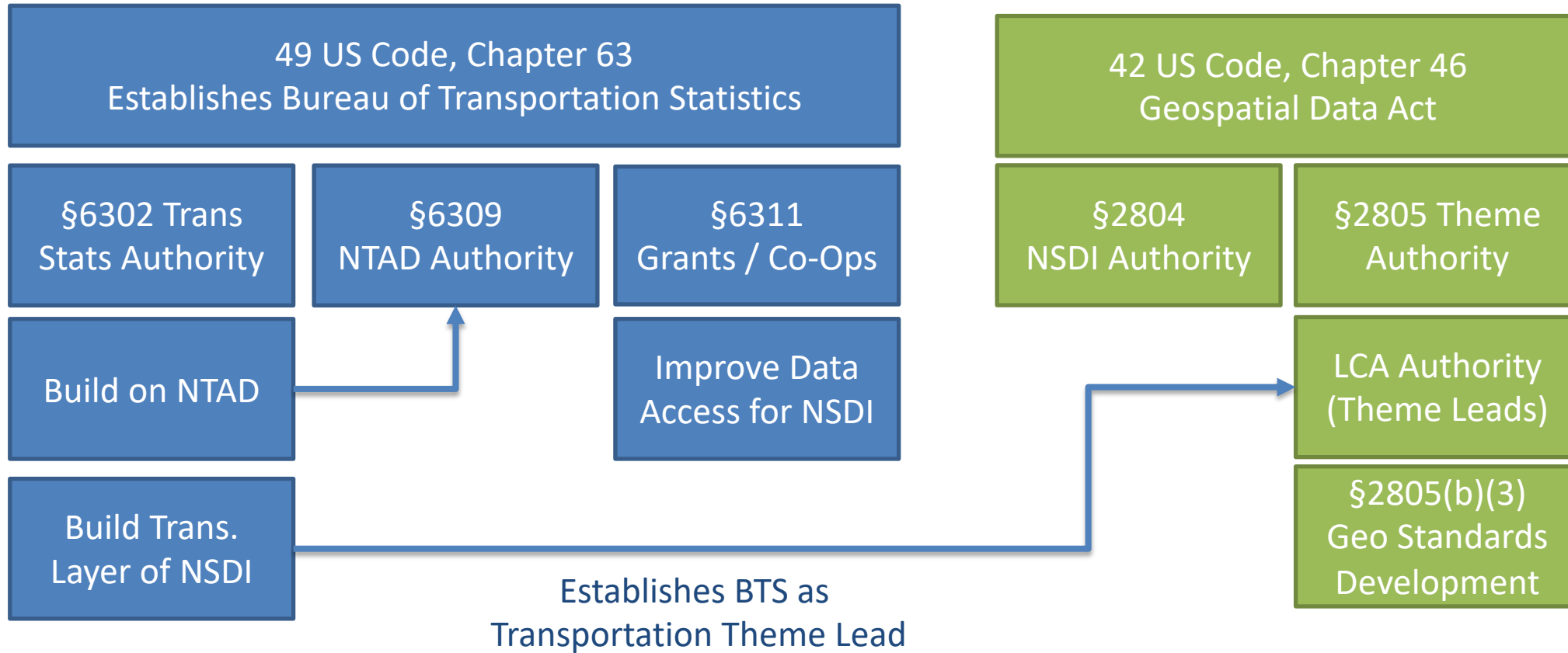
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Geospatial at BTS

Legislative Mandates



Intersections: Transportation Data + Equity Hub

- Curated **data catalogs** on ArcGIS Online and Socrata
- Listing of **equity-related tools and apps** built by USDOT
- **Variable Explorer** to search for specific fields
- **Data Updates** to learn about new and improved datasets and tools
- **How To** section that shows users how to use free ArcGIS Online mapping and visualization tools



A screenshot of the 'Equitable Transportation Community Explorer' interface. The top part shows a map of Sacramento, California, with various neighborhoods highlighted in purple and blue. Below the map, there is a text box that reads: 'Explore the burden communities experience as a result of underinvestment in transportation.' Below this text is a blue button with the word 'Explore' in white.

Transportation Vulnerability and Resilience Data Program

- Develops an all-hazard approach (e.g., natural disasters, cyber attacks) in collaboration with local decision-makers and collects data necessary to compute resilience metrics.

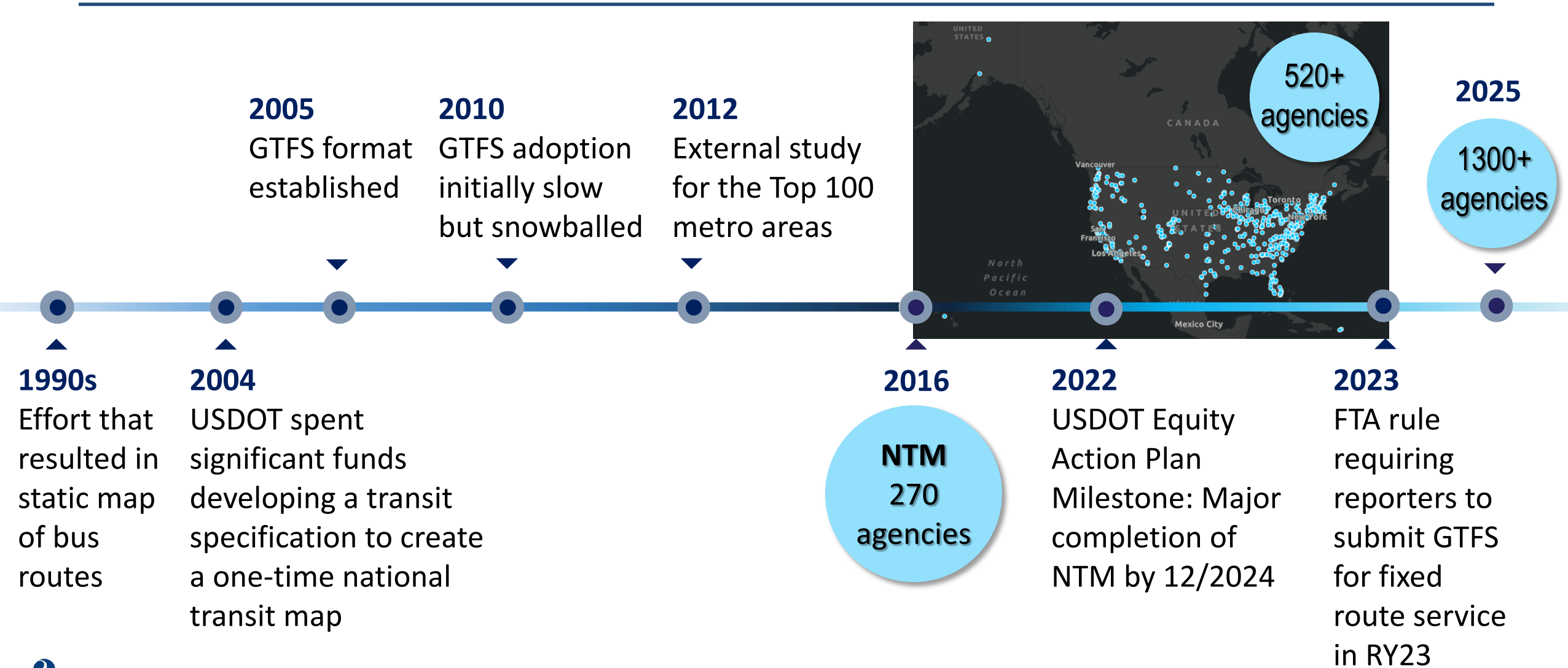


When completed, it will provide access to data and tools, such as:

- National-level data to develop and implement programs and projects that improve infrastructure readiness, resilience, and performance across all modes
- Evidence-based data to understand transportation system vulnerabilities
- Data and tools to measure the vulnerability of the transportation system to disruptions caused by natural, cyber, and manufactured threats
- Data and tools to estimate the consequences of damages to assets and its lost functionality at national, regional, and local scale (macro, meso, micro levels)



National Transit Map

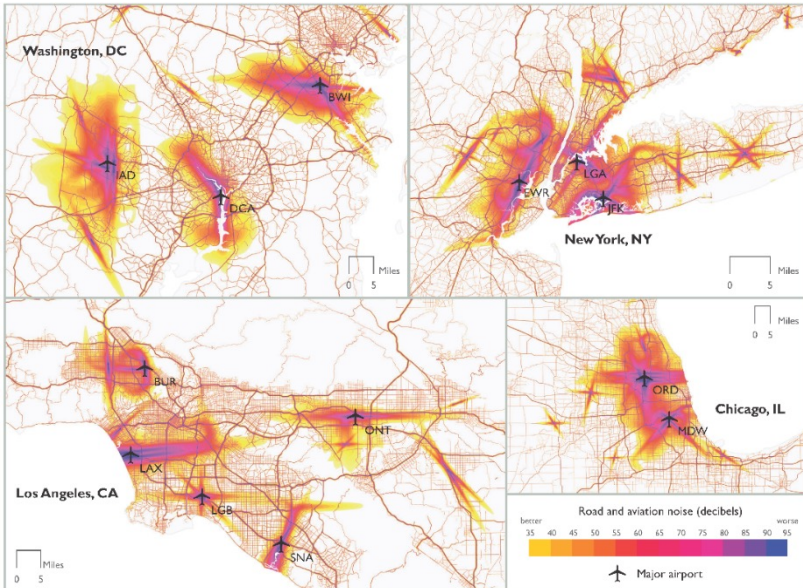


Intercity Bus Atlas



- Locates & describes the intercity bus network
- Coproduced with carriers who share their GTFS data with BTS
- Providers use the atlas to plan stop locations and routes.
 - Adjacent to urban areas for 5311f funding
 - Strategically integrate ICB network with other modal networks

National Transportation Noise Map



Tracks trends in *potential* exposure to transportation-related noise

- Mode-specific (road, rail, aviation) or All-mode
- Uses simplified, national-scale noise modeling
- Based on well-established datasets and USDOT noise models

Hosted on BTS website, with [web map](#), [FAQs](#), [documentation](#)

Produced biannually:

- 2014 = unreleased, experimental version with road, aviation noise
- 2016 = first version publicly released
- 2018 = added passenger rail; added interactive web map
- 2020 = added freight rail

Usage guidance:


- **Appropriate:** Tracking noise trends over time; Scoping research
- **Inappropriate:** *Evaluating noise at local/small scales and/or specific times or dates; regulations*

Intermodal Transportation Facilities


- **Freight**

- Current Layers

-  Marine Roll-on/Roll-off = 84 terminals

-  Pipeline = 1,402 terminals

-  Rail TOFC/COFC = 241 terminals

-  Air to Truck = 404 terminals

- New Freight Intermodal Layer

- Intermodal Liquid Bulk Layer (to be completed late summer 2023)

- Update to the Air to Truck

- 700+ airports that handle freight as of 2022
 - 200+ may have a facility
 - Will create polygons

- What's next

- Dry bulk layer

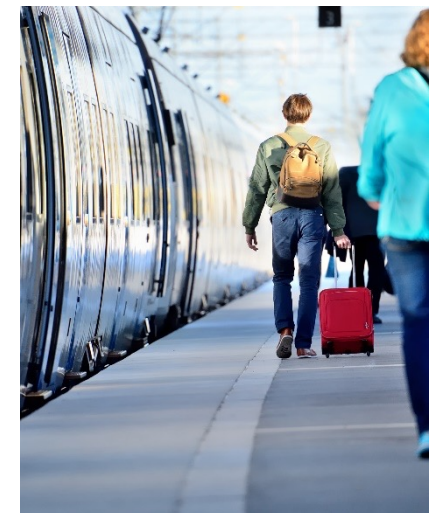
- **Passenger**

- Initial point layer for:

- Airports
 - Intercity bus and rail stations
 - Local transit stops
 - Bikeshare facilities

- Polygons derived from point layer for:

- Large facilities, such as airports, and intercity transit terminals
 - Polygon features will be accompanied by access point information for entrances/exits



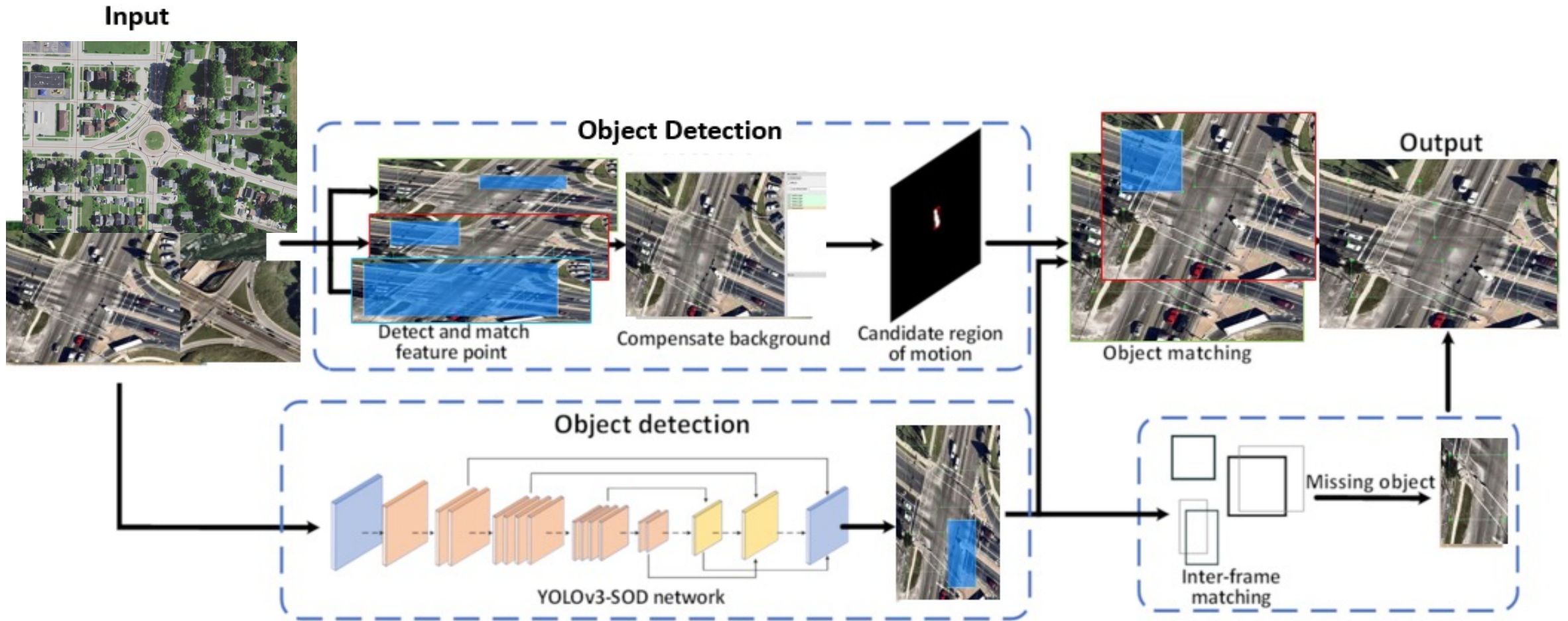
National Bike, Ped, Accessibility Infrastructure Data

- Geospatial data gap on non-motorist infrastructure – location & condition unknown
- Some data does exist, but is fragmented across geography and unstandardized in structure and content.
- BTS is a coordinator – building access to data across orgs that collect it; support orgs to collect and share new data; increasing interoperability.



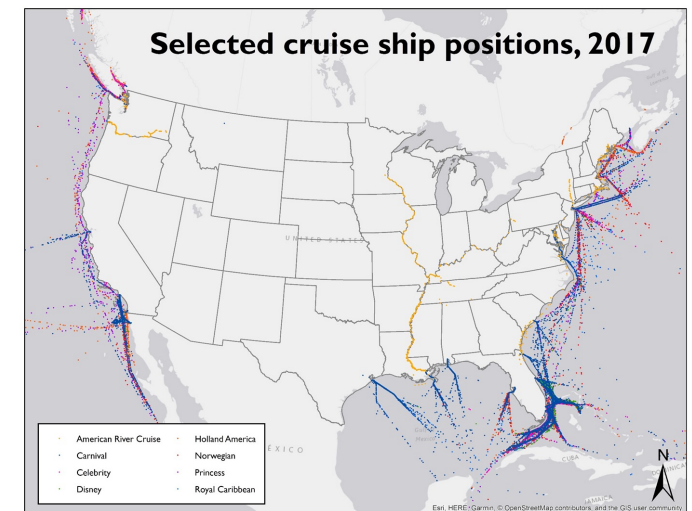
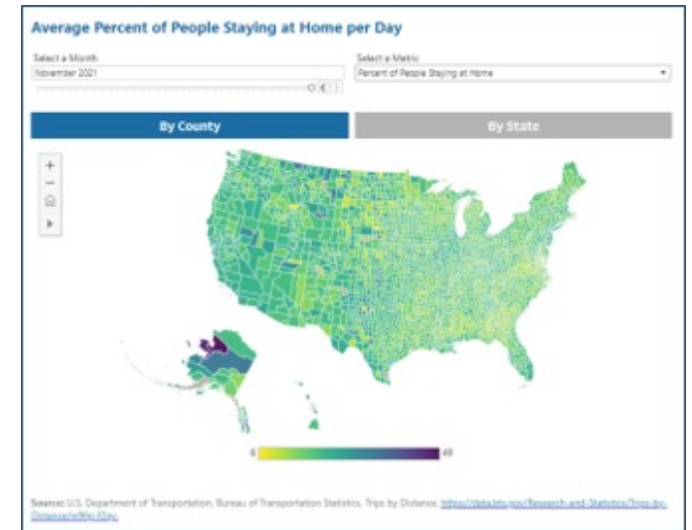
Photo by [James Lewis](#) on [Unsplash](#)

Experimental Work: Traffic Signals, Street Lights, and Roundabouts



Other Projects

- **Freight Mobility Initiative** - A series of projects using aggregated, anonymized, non-customer-specific truck probe GPS position data covering the entire United States.
- **FAF Multimodal Network** - Developing process to link all the modal networks together
- **Intercity Accessibility** - Evaluating the accessibility (to destinations) provided by intercity passenger transportation in the U.S.
- **Travel Movement Statistics** - Experimental products generated from an anonymized national panel of location-based services (LBS) data collected from mobile devices
- **Automatic Identification System** - using AIS to analyze spatiotemporal patterns in ship movements in and around the United States
- **Commercial Flight Database** - Using FAA Swim Data and other aviation datasets to support the BTS mandate to measure and report aviation system performance.



Contact Us



<https://www.bts.gov/>



Derald Dudley
derald.Dudley@dot.gov
+1 202.309.0940



NTAD@dot.gov