

The **National Transportation Data & Analytics Solution** is a powerful platform that provides a unique, robust, and high-quality transportation dataset combined with advanced analytics tools, enabling valuable insights to empower academic research and instruction.



With expansive coverage of over 400,000 road segments of the U.S. National Highway System, and the full Traffic Message Channel (TMC) network, this advanced platform provides field-observed travel time and speed data for both trucks and passenger vehicles collected from across the country. Providing several billions of detailed observations directly to the fingertips of researchers, this deep dive analytics platform enables users to quickly and easily retrieve, analyze, visualize, and better understand critical transportation data, leading to profound insights and advancements across the transportation and mobility industry spectrum.

### Key Features and Benefits

- Unique and comprehensive dataset specifically designed for researchers, faculty, and students working in fields related to transportation, civil engineering, urban planning, traffic analysis and more
- Offers speed and travel time temporal resolution as low as five minutes providing greater granularity and precision for enhanced insights
- Includes data back to 2017, allowing for time series analysis, which enables researchers to identify patterns, variations, and trends over time
- Delivered via an advanced analytics platform with deep-dive tools that provide powerful features and visualizations, enabling custom mapping and analysis
- Enables multidisciplinary use cases across several fields related to transportation studies and engineering, civil engineering, environmental engineering and planning, urban and economic planning, and many others
- Trusted data source of the U.S. Federal Highway Administration (FHWA) relied upon to make investment and policy decisions that contribute to national performance goals
- Includes 50 multi-disciplinary use cases from leading IEEE experts in mobility, transportation, and related fields detailing how the platform can be used to facilitate and enhance research projects

### About NPMRDS

The National Performance Management Research Data Set (NPMRDS) is a vehicle probe-based travel time dataset relied upon by the FHWA performance measurement programs.

- **Geographical Coverage:** Across 400,000 road segments of the U.S. National Highway System including select Canadian and Mexican border crossings and the full U.S. TMC network
- **Data Source:** Vehicle probes
- **Metrics:** Speed, travel time
- **Modal Coverage:** Truck and passenger car
- **Coverage years:** Present day back to 2017
- **Lowest Temporal Resolution:** 5 minutes
- **Data Latency:** Updated monthly



# Take the Road to Advanced Insights

The **National Transportation Data & Analytics Solution** is an advanced analytics platform with deep-dive tools that provide powerful features and visualizations such as:

\$789.7K	\$379.8K	\$479.1K		\$15.7K	\$3.1M
\$322.7K	\$404.7K	\$417K		\$22.0K	\$2.2M
\$189.9K	\$194.2K	\$152.2K		\$19.9K	\$2.1M
\$135.2K	\$109.4K	\$109.5K		\$12.4K	\$1.4M
\$180.9K	\$231.7K	\$222.5K		\$5.4K	\$2.1M
\$258.7K	\$259.4K	\$411.5K		\$12.5K	\$3M
\$227.4K	\$334.8K	\$431.6K		\$11.9K	\$2.8M
\$203.5K	\$274.2K	\$394.2K		\$12.6K	\$3.4M

Thursday, February 17, 2022 5:00 PM

**Delay cost:**  
 Total: \$475.1K  
 Per SPK: \$9.34

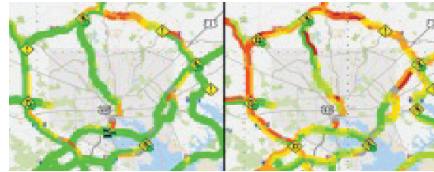
**Hours of delay:**  
 Person-hours: 19.3K hrs  
 Vehicle-hours: 15.7K hrs

**Vehicle miles traveled (VMT):**  
 Total: 1,293.5K miles  
 Commercial: 120.2K miles  
 Passenger: 1,081.4K miles

**Delay per VMT:** 0.8 mins / mile  
**Data validity:** 91.14%

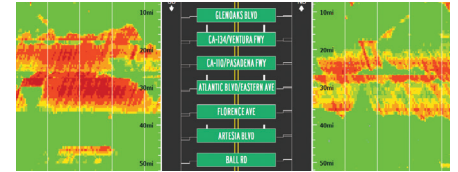
## User Delay Cost Analysis

Determine monetary impact of a delay on the roadway to its users.



## Trend Maps

Create animated maps of performance metrics over the course of time.



## Congestion Scan

Analyze conditions on one or more stretches of road.

A snapshot of the tools available on the **National Transportation & Analytics Solution** platform:



### Dashboard

Create your own personal dashboards to monitor corridor performance in regions of interest.



### Performance Summaries

Report on Buffer Time Index, Planning Time Index, and other performance metrics.



### Congestion Scan

Analyze the rise and fall of congested conditions on a stretch of road.



### NPMRDS Coverage Map

Explore the coverage completeness of the NPMRDS on a month-by-month basis.



### Massive Data Downloader

Download raw probe data from our archive for offline analysis.



### User Delay Cost Analysis

Put a dollar amount on how much a road's performance impacts its users.



### Corridor Speed Bins

Visualize congestion measures by time spent at each speed on a stretch of road.



### Tutorials

Learn how to use each of the tools in the suite.



### Corridor Time Comparison

View congestion metrics as a function of location on a road.



### Map-21

Create a widget to monitor states', MPOs', and Urbanized Areas' performances against the new MAP-21 ruling.



### Trend Map

Create animated maps of roadway conditions.



### Performance Charts

Chart performance metrics over time.



### Report Templates

Learn how to transform data in our suite into professional reports, documents, and pamphlets.



### User Guide and Use Cases

Chart performance metrics over time.

The **National Transportation Data & Analytics Solution** platform is equipped with state-of-the-art analytics tools allowing users to:

- Conduct advanced analysis, research, and performance generation using probe data.
- Analyze traffic conditions across one or more stretches of road.
- Evaluate the congestion health across roadways.
- Gain insight into several statistics like speed, buffer time index, planning time index, and travel time index.
- Visualize data on maps or other interactive graphics.
- Download raw data for offline analysis and create reports.

For a free demo or custom quote, please contact IEEE sales at: [ntdas-sales@ieee.org](mailto:ntdas-sales@ieee.org)

For more information, please visit: [ntdas.ieee.org](http://ntdas.ieee.org)

