



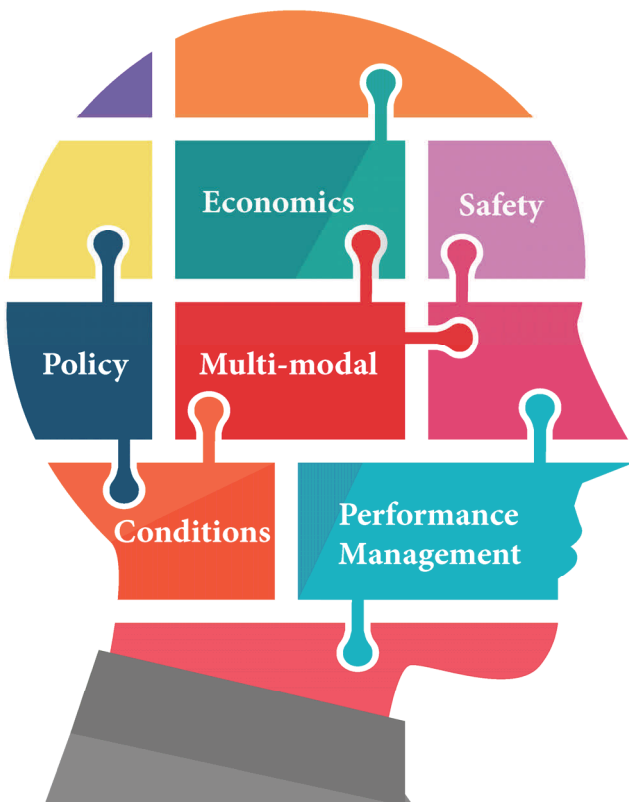
# ***2015 US DOT Datapalooza*** ***Preliminary Agenda***

## **Conference Date and Time**

June 16, 2015 from 9:00 a.m. to 5:00 p.m. and  
June 17, 2015 from 8:30 a.m. to 5:00 p.m.

## **Conference Location**

West Atrium  
Conference Center, West Building  
U.S. Department of Transportation  
1200 New Jersey Avenue, S.E.  
Washington, DC 20590



## **Registration**

[www.fhwa.dot.gov/2015datapalooza/](http://www.fhwa.dot.gov/2015datapalooza/)

## **Organized by**

2015 US DOT Datapalooza Planning  
Committee

## Theme

### ***Celebrating Data Application Innovations in Delivering a Safe and Efficient Multimodal Transportation System for Strong Economic Development***

The U.S. Department of Transportation, catalyzing on two previous successes in organizing a data-focused event, will host the **2015 Transportation Datapalooza**. This year's Datapalooza will focus on sharing a broad spectrum of data collection, applications, and analytical techniques spanning all transportation modes and highlighting innovations in harnessing the power of big data in developing a safe and efficient multimodal transportation system. Attendees will gain the latest information on various U.S. DOT data initiatives, U.S. DOT data coverage and primary data usages, industry and private business advancement in data collection and analysis, challenges associated with big data, research and development needs, and both private and public partnership in data collection and processing opportunities.

## Registration

- Come and join with transportation and data professionals from all sectors and disciplines.
- Learn how agencies are becoming data-driven.
- Hear from DOT leadership, data producers and users on key data elements.
- Gain insight into the data challenges and opportunities ahead.

[www.fhwa.dot.gov/2015datapalooza](http://www.fhwa.dot.gov/2015datapalooza)

## Registration Fee

**Free** to Attend and Exhibit

## **Vendors and Exhibitors: Innovation Showcase**

Contact Steven Jessberger at [Steven.Jessberger@DOT.GOV](mailto:Steven.Jessberger@DOT.GOV) for Additional Information.

### **(Open to all U.S. DOT personnel and event attendees)**

June 16, 2015 from 9:30 a.m. to 4:30 p.m. and  
June 17, 2015 from 9:00 a.m. to 4:00 p.m.

## Session Information

# Tuesday, June 16

**8:15 a.m.**

### Registration

Registration material pick up will start at 8:15 a.m. inside the main entrance lobby area off New Jersey Avenue. Due to security, non US DOT employee event attendees are advised to arrive at least 20 minutes before 9:00 a.m.

DOT employees should pick their name tags and material from the registration table located inside the West Atrium and next to the East Elevator

**9:00 a.m. to 10:00 a.m.**

### Opening Session

Welcome and Objectives

Tianjia Tang, 2015 DOT Datapalooza Planning Committee Chair, FHWA, US DOT

Opening Keynote Address: Data and Beyond Traffic: US DOT's 30 Year Framework for the Future

Peter M. Rogoff, Under Secretary of Transportation for Policy, US DOT

Under Secretary Rogoff will deliver an opening keynote speech on how data shapes up the Beyond Traffic – US DOT's 30 Year Framework for the Future conversation.

U.S. DOT Leadership Panel Discussion on Data

Terry Shelton, Associate Administrator for the National Center for Statistics and Analysis, NHTSA, US DOT

**10:00 a.m. to 10:15 Break**

**10:15 a.m. to 12:15 p.m.**

### Safety

Beth Alicandri, FHWA, US DOT, *presiding*

The Department of Transportation (DOT) highly prioritizes transportation safety. This session will provide an overview of safety data in various DOT operating modes, highlight specific safety data currently collected and explore new and innovative data collection methods and initiatives. Each presentation will address the following questions:

What safety data is currently collected?

How is safety data used?

What is needed to improve the utility of our safety data?

What are some examples of innovative solutions for improving safety data?

Discussion will follow modal presentations to explore how various data collection methods and initiatives can foster multi-modal collaboration and aid decision making.

Speakers will include:

1: NHTSA's Crash Databases Overview

Chip Chidester, Director of the Office of Data Acquisition, NHTSA

Mr. Chidester will provide an overview of NHTSA's crash databases. Mr. Chidester will present some of the new and innovative ways NHTSA collects safety data. One new initiative electronically retrieves state-wide crash data and automatically populate variables on a federal database.

## 2: Using Data for Safety Program Policy and Effectiveness

Joe DeLorenzo, Director of the Office of Enforcement and Compliance, FMCSA

Mr. DeLorenzo will discuss the use of data, including commercial motor vehicle inspections and crash data, to determine policy direction for safety programs, and for evaluating the effectiveness of these programs.

## 3: Innovative Solutions for Improving Safety

Robert Siegfried, Systems Analyst, Federal Railroad Administration (FRA)

Mr. Siegfried will speak to some of the innovative solutions for improving safety within the rail industry including the implementation of Positive Train Control, application of Retro-reflective tape, and the introduction of an electronic submission process for Grade Crossing Inventory. Each of these is covered and enforced by the FRA, which in turn becomes part of FRA's overall database of information.

## 4: Using Data to Improve Efficiency of Sharing Information

Dave Winkler, USCG Contractor, Coast Guard

Mr. Winkler is a Data Architect and self-described "Data Quality Evangelist" who works for DMI, supporting the U.S. Coast Guard with data management and analysis tasks which include Maritime Domain Awareness (MDA). Mr. Winkler uses data sources to improve the efficiency of those activities which rely upon accurate MDA information to accomplish their mission and to facilitate information sharing between those agencies and activities.

## 5: Highlights of the Roadway Safety Data Program

Robert Pollack, Data and Analysis Tools Team, Office of Safety, FHWA

Mr. Pollack's presentation will highlight FHWA's Roadway Safety Data Program, and the guidance, resources and technical assistance they provide to help State and local agencies improve their safety data systems and expand their analysis and evaluation capabilities. Additionally, this presentation will focus on data and analysis within the context of the Towards Zero Deaths vision.

## 6: Safety Data Collection Elements Essential for Modal Comparisons

Matthew Chambers, Senior Transportation Specialist, Bureau of Transportation Statistics (BTS)

Mr. Chambers serves as the project manager for the Transportation Statistics Annual Report. He also contributes to its companion publications—the National Transportation Statistics as well as other BTS publications. His work includes interpreting the differences in safety data collection and reporting by mode, essential for comparing safety measures and fatality/injury statistics with multimodal data.

## 7: Panel Discussion and Q/A

**12:15 p.m. – 1:15 p.m.**

### **Lunch Break**

**1:15 p.m. - 2:45 p.m.**

### **Economic Development and Transportation Investment**

Karen White, OST-R, US DOT, *presiding*

The Department of Transportation (DOT) has been active in putting America back to work through transportation investment. Job opportunities, economic development, and economic competitiveness in addition to safety and mobility are key issues being addressed through investing on the nation's transportation system. In this session, speakers will cover how data are supporting transportation program and projects delivery and quantitative analysis associated with the role of transportation infrastructure on economic growth.

Speakers:

1: National Data for Economic Development – TIGER

Tony Homan, US DOT – Office of the Secretary

Mr. Homan will cover the Transportation Investment Generating Economic Recovery, or TIGER Discretionary Grant program, where through a data driven rigorous process, projects are selected for implementation.

2: Measuring the Economic Contribution of Metropolitan Areas  
Jim Diffley, IHS, Inc.

Mr. Diffley will describe the methodology and forecasts developed by IHS in its estimates of the contributions to US economic growth of metro areas. The focus will be on the concept of Gross Metropolitan Product, with applications to transportation and trade in the US

3: Economic Development Impacts  
Stefan Natzke, Federal Highway Administration (FHWA)

Mr. Natzke will provide an overview on a large array of studies completed as related to economic development as a result of highway investment. He will address key issues on the usage of data in these studies and discuss future improvement areas.

4: Ladders of Opportunity – Connectivity Decisions Based on Transportation Data  
Dwayne Weeks and Nazrul Islam, Federal Transit Administration (FTA)

Mr. Weeks and Mr. Islam will cover how data can be used in the analysis and identification of gaps in the transportation system where disadvantaged people live and areas where employment, educational and social opportunities exist.

5: Panel Discussion and Q/A

The panel discussion is to provide the platform to interact with audiences on data gaps, analytical tools, and collaboration opportunities.

**3:00 p.m. – 5:00 p.m.**

### **Multi-modal Transportation Demand**

Derald Dudley, OST-R, US DOT, *presiding*

System demand drives the development and improvement of U.S. transportation system. This session will cover both freight and passenger transportation demands as related to our growing economy and population. This session will present data and data analysis methods and techniques as related to past, present and future transportation activities covering all modes. Finally, this session will conclude with panel discussions on data gaps, challenges within the industry and potential solutions

Speakers:

1: Freight Analysis Framework (FAF)  
Mike Sprung, BTS

The Freight Analysis Framework (FAF) is a data tool that provides a complete multimodal picture of goods movement to, from, and within the United States. FAF is created by harmonizing data from a variety of sources, the most significant being the BTS Commodity Flow Survey into a comprehensive freight flow data set. FAF presents information on the current and forecast value and tonnage of freight by origin, destination, mode, and commodity, to show the pressures that freight movement places on the transportation system. This information provides an understanding that decision-makers can use to guide investment in policies to handle expected growth in the demand for freight and to keep the economy moving.

2: FRA's Traffic Demand for Passenger Rail: Conceptual Network Connections Tool (CONNECT)  
Kyle Gradinger, FRA

The CONNECT tool estimates – at a coarse, sketch-plan level – the relative impacts of alternative passenger rail network configurations and service plans on future ridership, revenue, capital, operating, and maintenance costs, as well

as the overall financial performance of each option. Focusing on markets separated by at least 50 miles, CONNECT is a high-level network analysis tool suitable for sketch planning at the regional, multi-state level and is intended for use at the very outset of conceptual passenger rail planning, before decisions on alignments, service plans and station locations are made. The CONNECT tool can be used to reduce a wide range of options to a smaller subset of reasonable alternatives for more detailed study.

3: Multimodal - National Long Distance Passenger (Origin/Destination data for base year 2008 and future 2040)  
Danny Jenkins, FHWA and Colin Smith, Resource Systems Group

This presentation will highlight the objective of the project and identify the top 10-20 origin-destination pairs by mode and the number of trips between them. These data cover long distance passenger trips greater than 100 miles for all modes of transportation – air, rail, and highway (both private automobiles and buses). The data covers travel for both base year 2008 and future year 2040. The goal and objective of this effort is to assess how highway travel through both private automobiles and buses are linking the nation and their magnitudes. These preliminary or “beta-version” data are deemed to be the starting point for any organization to use for their analysis. FHWA requests that data users proceed with caution when using the data, and would request that users share your enhancement techniques and results with FHWA. FHWA plans to improve and enhance these data in the future, and users feedback will greatly assist FHWA with that effort.

4: FAA's Modernized Terminal Area Forecast (TAF-M)  
Dr. Dipasis Bhadra, Federal Aviation Administration (FAA)

The Terminal Area Forecast tool is designed to integrate views of local, national and international flow of activities and capture effects of socioeconomic and technological factors on aviation. The tool is used to understand airports, passenger routing, and aircraft network impact of NEXTGEN development. It also provides projections for future air transport activity through time using future passengers by origin and destination (O&D) market routes and networks (i.e., segment flows); aircraft operations by markets and network routes; and integrates operations and passenger flows through the National Airspace System (NAS) network. The forecasting tool is used to help understand the policies, procedures, and environmental regulations.

5: Panel Discussion – challenges and opportunities to collaborate

## Session Information

# Wednesday, June 17

8:30 a.m. – 10:15 a.m.

### **Performance Management Session**

Pete Stephanos, FHWA, US DOT, *presiding*

Performance Management and Transparency - Better use of data, information, analysis, and reporting helps ensure transportation agencies manage internal organizational effectiveness, improve system performance, and make transportation investment decisions based on their ability to meet established goals for the transportation system. Making choices based on information and showing what that decision means and how transportation dollars are spent will lead to greater transparency, leaving agencies and officials with transportation agencies and assets that better serve the public's need. In this session a variety of government agencies will explore performance management policy, the critical role of data analytics, and the role of transparency in different performance management applications.

#### Speakers:

1: FHWA Transportation Performance Management Program  
Francine Shaw Whitson, Team Leader, FHWA

Ms. Whitson will present the Federal Program for Transportation Performance Management. The FHWA published proposed rules on the National Performance Management Measures for Safety in March 2014 and for Bridges and Pavements in January 2015 for public comments. The FHWA establishment of the National Performance Management Measures is statutory requirement under the MAP-21. This presentation will include an overview of the two published proposed rules on the National Performance Management Measures focusing on proposed requirements for performance measures, performance targets, and performance data. The latest schedule of the performance measure rule-makings and related rulemaking efforts under way will also be presented.

2: Data Driven Decision-Making at SHA

Felicia Alexander, Deputy Director of Planning and Preliminary Engineering Maryland State Highway Administration.

Ms. Alexander will provide of an overview of Maryland's approach to managing a safe, well-maintained and reliable highway system through SHA's Decision-making Framework. Highlights will include SHA's safety, mobility, system preservation, and environmental strategies

3: Evaluation, Performance Management, and Data Analytics at the United States Department of Labor

Dr. Demetra Smith Nightingale, Chief Evaluation Officer, United States Department of Labor.

Chief Evaluation Officer Demetra Nightingale will present briefly on evaluation at the Department of Labor, the role of data in performance management, and on building a new data analytics team in the DOL Chief Evaluation Office.

4: Using Data and Data Analytics Tools to Better Manage Government Service Delivery

Soumya S. Dey, Director of Research and Technology Transfer, District of Columbia Department of Transportation

Customer expectations for government services have changed significantly in the past decade, at the same time as technology, especially social media, has transformed how agencies interact with their customers and deliver services. This presentation discusses the successes and challenges experienced by the District Department of Transportation in adopting a data driven approach to effectively manage service delivery.

5: FTA National Transit Database (NTD)

Keith Gates, FTA Program Manager

Mr. Gates will present how NTD data is used to evaluate transit agency performance. He will give examples of how vehicle data is used to estimate long-term capital needs, how performance data is used in STIC formulas to reward transit agencies that provide more service, and how NTD data can be used to explore the impact of external factors On transit usage.

6: Q/A



**10:30 a.m. to 12:30 p.m.**

### **Conditions and Performance**

David Winter, FHWA, US DOT, *presiding*

FHWA and FTA provide the Conditions and Performance on U.S. Highways, Bridges, and Transit to Congress; and FAA provides Congress the National Plan for Integrated Airport System and publishes the Airline Service Quality Performance Matrix on a host of parameters such as departure and arrival. This session will present data uses, data needs, and analytical techniques for conditions and performance analysis and evaluation. Also, this session will discuss challenges associated with missing data, incomplete data, and other data issues. Lastly, this session will explore data analytic needs.

Speakers:

1: Data – the Enabler for the “Condition & Performance Report to Congress on the Nation’s Highways, Bridges, and Transit”

Ross Crichton, FHWA and Sergio Maia FTA

Mr. Crichton and Mr. Maia will provide a brief overview on the C&P report and summarize the breadth of data used in the report and the criticalness of having timely and quality data.

2: Data – the Oxygen for the National Bridge Investment Analysis System (NBIAS)

Bill Robert, Spy Pond Partners, LLC

Mr. Robert will provide an overview on the vital role of data to NBIAS analysis in C&P’s assessment of national bridge investment needs and the trade-off between funding and performance

3: Data – the Foundation for the Highway Economic Requirements System (HERS)

Mr. David Luskin, FHWA

Mr. Luskin will provide an in-depth examination on how data are driving the HERS model in analyzing Investments associated with highway resurfacing and reconstruction and in highway and bridge capacity expansion.

4: Data – the Driver for FTA’s Transit Economic Requirements Model (TERM)

Sergio Maia, FTA and Rick Laver, CH2MHILL/FTA

Mr. Maia and Mr. Laver will provide an overview on how data are used by TERM to forecast the level of annual capital expenditures required to attain specific physical condition and performance targets within a 20-year period.

6: Highway Performance Monitoring and the Integrated Transportation Data Analysis Platform

David Winter, FHWA

Mr. Winter will provide an overview on the Highway Performance Monitoring System and the newly debuted Integrated Transportation Data Analysis Platform on a broad range of data covering roadway inventory, performance, financing and others. Mr. Winter will also cover the experience gained in developing and implementing the systems and the outlook for future enhanced functionalities.

7: FAA’s National Plan of Integrated Airport Systems (NPIAS)

Sharon Glasgow, FAA

Ms. Glasgow will provide an overview on FAA’s National Plan of Integrated Airport Systems which are important to national air transportation and, thus, eligible for Federal grants.

8: Panel Discussion and Q/A



**12:30 p.m. – 1:30 p.m.**

Lunch Break

**1:30 p.m. – 3:45 p.m.**

**Policy Development in the Era of Big Data**

Daniel Morgan, OST-S, US DOT, *presiding*

Current approaches to data gathering, quality control, and publication are lengthy, time-consuming, and often insensitive to urgent policy needs. In the era of big data and machine data, how to move forward, open new ways to adopt new approaches to meet the timeliness needs of policy making will affect entire business operations. This session will explore examples of these new methods and approaches and offer a platform to discuss and explore how to expedite the adoption of new technology and new approaches.

Speakers:

**1: Safe and Secure Sharing of Travel Surveys and Studies**

Elaine Murakami, FHWA

Ms. Murakami will discuss the Transportation Secure Data Center (TSDC) capability, built and managed in partnership between FHWA and the National Renewable Energy Laboratory. She will review the need for this capability and the policy and planning considerations that the TSDC is designed to address.

**2: Intelligent Transportation Systems Data Capture, Management and Use**

Dale Thompson, FHWA/ITS JPO

Mr. Thompson will provide an overview of the ITS JPO data capture and management program, the Research Data Exchange, and current research surrounding data use policies for V2V/V2I data. He will review the research already underway to understand the value of connected vehicle data and highlight key data questions.

**3: Driving Value from Big Data Analytics**

Gary Baker, VOLPE

Mr. Baker will demonstrate how geographic information systems (GIS) and big data processing techniques are being used to model aviation fuel burn in support climate analyses.

**4: Adopting and Fusing Administrative Records with Traditional Survey Based Data to Increase Accuracy and Timeliness**

Ben Pierce, Battelle Memorial Institute

Mr. Pierce will present how administrative record data can be used in concert with the traditional survey data to expedite the delivery of data and information with increased accuracy.

**5: Combining Proprietary, Public, and Government Data to Inform Policy**

Dennis Sawyer MITRE

Mr. Sawyer will highlight the importance of building trust among parties, operating transparently, and providing bi-directional benefits, in order to achieve public policy goals.

**6: Seizing the Opportunity to Collaborate among Different Profession and organizations**

Rolf Schmitt, BTS

Dr. Schmitt will provide an overview on DOT data program areas, challenges, and strategies to move forward in areas of collaboration with other agencies and entities.

**7: Data Isn't Everything: The Promise and Challenges of Big Data**

Victoria Adams, Booz Allen Hamilton

Dr. Adams will provide a presentation on the promise of big data, advanced analytics, and advance computation

devices for transportation agencies and the importance of organizational, cultural, capacity and other factors in effectively using data

#### 8: Panel Discussion and Q/A

The panel discussion is to provide an interactive platform for engaging audiences. Some panel questions include:

A: How do we balance the appetite for data sources that are more detailed, granular and frequent with our own organizational capabilities to capture and manage that data?

B: What are the keys to building successful partnerships with the private sector to encourage responsible data sharing?

C: How do we take advantage of the nontraditional data and decipher the patterns or trends through such data?

D: What are the key issues for building the capacity of our transportation workforce and preparing them for big data/data science analysis?

## Transportation

### Directions to the U.S. Department of Transportation

The 2015 Datapalooza is held inside the U.S. DOT headquarters building. The U.S. DOT's street address is 1200 New Jersey Avenue, SE, Washington, D.C. 20590.

### By Metro

1. Take Metro's Green Line to the Navy Yard-Ballpark station.
2. Exit the station by following signs to the New Jersey Avenue Exit.
3. Cross M Street
4. The US DOT Building main entrance is facing west on the east side of New Jersey Avenue.
5. Pick up your name tag and material at the registration table inside the lobby and outside the security gate.

### 2015 Datapalooza Planning Committee Members

Tianjia Tang, Federal Highway Administration (Chair)  
Michael Sprung, Bureau of Transportation Statistics  
Akira Kondo, Federal Aviation Administration  
Steven Jessberger, Federal Highway Administration  
Jon Schans, Federal Highway Administration  
Ed Strocko, Federal Highway Administration  
Jenny Guarino, Federal Motor Carrier Safety Administration  
Raquel Hunt, Federal Railroad Administration  
Stephanie Lawrence, Federal Railroad Administration  
Sergio Maia, Federal Transit Administration  
Tina Morgan, National Highway Traffic Safety Administration  
Daniel Morgan, Office of the Secretary, U.S. DOT

