Bureau of Transportation Statistics Significant Accomplishments

Fiscal Year

2009

U.S. Department of Transportation

Research and Innovative Technology Administration

CONTENTS

BUREAU OF TRANSPORTATION STATISTICS
Significant Accomplishments
Fiscal Year 2009

The Bureau of Transportation Statistics (BTS) is a component of the Research and Innovative Technology Administration (RITA). RITA coordinates the U.S. Department of Transportation's ever-increasing range of pioneering transportation and transportation-related activities, statistical programs, research efforts, and advanced technologies. RITA has several statutory missions, including comprehensive transportation research, analysis, and statistics reporting.

In response to the Intermodal Surface Transportation Efficiency Act (ISTEA) of 1991, the U.S. Department of Transportation (USDOT) established BTS in 1992. BTS creates, manages, and shares transportation statistical knowledge with public and private transportation communities and the Nation. This mission is served by developing quality transportation data, promoting transportation knowledge through statistical products, and advancing effective use of this knowledge by public and private transportation decision-makers, researchers, and the American people. In sum, BTS is a high-performance, results-oriented organization committed to creating, managing, and sharing transportation statistical knowledge.

A director, appointed by the Secretary of Transportation, leads BTS and reports to the RITA Administrator. BTS staff focus their expertise in transportation, statistics, economics, information technology, library sciences, and geographic information systems on a wide-range of transportation matters—with proven results. BTS is committed to all transportation and transportation-related subject matters.

The Bureau's customers and stakeholders include:

- Members of Congress;
- The White House;
- The Secretary of Transportation;
- Federal agencies;
- State and local governments, including their departments of transportation;
- Transit agencies;
- Metropolitan planning organizations;
- Universities;
- Private industry;
- Researchers; and
- The general public.

BTS is a Knowledge-Based Organization Supporting the Department of Transportation

As a Federal Statistical Agency, BTS maintains a special degree of objectivity and independence in its statistical work. BTS does not advocate policies or programs, and special protections are in place to maintain confidentiality in data collection and dissemination. BTS focuses on obtaining—and helping to objectively analyze and interpret—data that will be used to increase the Nation's understanding of transportation topics and to better inform decision- and policy-makers. To achieve this goal, BTS engages in three central activities:

1. Creating,

2. Managing, and

3. Sharing transportation statistical knowledge.

USDOT Key Priorities and Initiatives

BTS supports the Department as it works with Congress, public and private sector partners, and stakeholder groups to create a safe transportation system that contributes to livable communities, is in a state of good repair, promotes the Nation's economic competitiveness, and fosters long-term environmental sustainability.

► Improving Safety

BTS collects data and produces studies on the safety and security of travelers, vehicles, and transportation systems. The Omnibus Household Survey collects data on demand to provide information on the public's use and satisfaction with the transportation system, including personal safety and security while traveling.

BTS is a key partner in the Confidential Close Calls Reporting System (C3RS) Demonstration Project, a major safety initiative, sponsored by the Federal Railroad Administration (FRA), that involves working closely with railroad management and labor as well as the FRA and the Volpe National Transportation Systems Center. Using its unique authority to protect the confidentiality of information collected for statistical purposes and its expertise in data collection and analysis, BTS developed and operates the C3RS. Railroad employees voluntarily submit reports to BTS on close calls that pose safety risks to railroad operations.

BTS staff consult and collaborate with USDOT agencies and outside organizations on data collection, survey design, and other statistical issues related to safety matters. Recent examples include advising the Office of the Secretary of Transportation regarding differences in modal calculations of weights and staff participation on the Hazardous Materials Cooperative Research Program (HMCRP) project panels.

The Federal Aviation Administration uses the BTS Office of Airline Information's financial, traffic, and operational data to monitor airline safety, allocate safety inspection resources, and assess the adequacy of aviation safety regulations, standards, policies, and procedures.

► Enhancing Livability and Long-Term Environmental Sustainability

BTS staff participate in the DOT and interagency livability and sustainability initiatives. As part of the Department's livability subgroup on metrics, BTS representatives helped identify and define key measures related to livable communities. Staff continues to build on these efforts as members of the performance measures subgroup, one of three teams assembled as part of the U.S. Department of Transportation, Environmental Protection Agency, and Housing and Urban Development Interagency Partnership for Sustainable Communities.

BTS represented the United States at the Energy and Environment Working Group of the North American Transportation Statistics (NATS) Interchange held in Washington, DC in June 2009. At the Interchange, the Working Group finalized agreement to release a new trilateral environmental indicator as part of the NATS Online Database update and release scheduled for November.

BTS also serves as an active member of the technical oversight panel for the Transportation Research Board's (TRB's) Hazardous Materials Cooperative Research Program. With TRB, BTS staff facilitated a workshop in March 2009 on Data for Goods Movement Impacts on Air Quality.

► Maintaining Transportation Infrastructure in a State of Good Repair

BTS collects data on the extent, condition, use, age and performance of our transportation system and its supporting infrastructure. In addition to the extent and condition of runways, roads, bridges, and bus and

rail maintenance facilities, BTS collects data on the age of automobiles and trucks, urban transit vehicles and Class 1 (large) operating railroads, locomotive fleets, as well as the age and availability of Amtrak locomotive and car fleets.

► Maintaining Economic Competitiveness

Using a wide variety of data sources, BTS provides a detailed picture of the flow of people and goods to and from the United States. BTS compiles, validates, analyzes, and disseminates data on topics that include trade trends; movement of goods by land, sea, and air; and personal travel. In FY 2009, BTS released special reports on U.S trade with East Africa and North American trade growth. BTS also released a report on America's container ports.

Creating Transportation Statistical Knowledge

BTS designs and manages surveys, collects and interprets data from private organizations and governmental agencies, and reports results of statistical and economic analyses. The following activities exemplify BTS's work in creating knowledge.

► Airline Program

BTS's Office of Airline Information (OAI) collects a wide range of airline-related data used by customers within USDOT, including the Office of Aviation Analysis, the Federal Aviation Administration (FAA), and the Office of the General Counsel. Stakeholders outside of USDOT (including Congress, the President, the Department of Homeland Security, state and local governments, the air transportation industry, researchers, academia, and the public) also rely on BTS airline data products and reports.
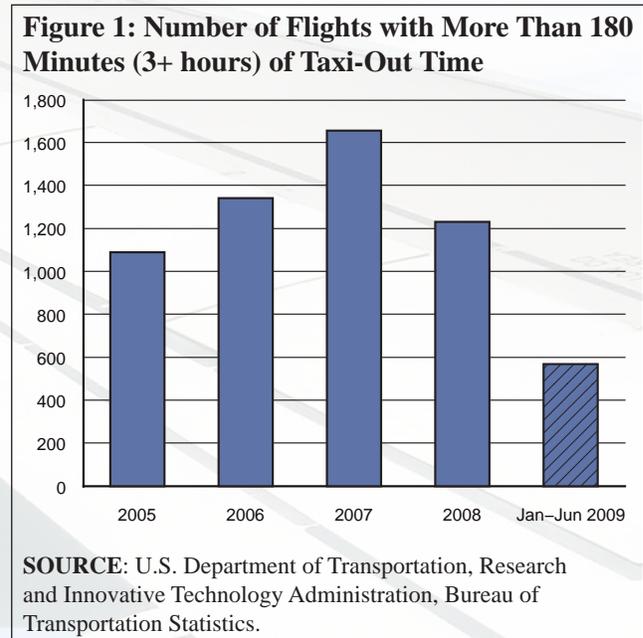
Data Quality

One of the most visible OAI programs is the Airline Service Quality Program, which collects data from 18 leading air carriers and one voluntary reporting carrier. The airlines electronically file their reports, which include on-time and delay data, cancellations, and reasons for delays. On May 15, 2008, BTS issued a final rule to collect additional data elements when flights are

> ### *Program Data Products & Publications*
>
> - *Airline On-Time Performance*
> - *Air Carrier Financial Statistics*
> - *Air Carrier Traffic Statistics*
> - *Average Air Fares*

cancelled, diverted, or returned to the gate.

Reporting of the additional data elements began with October 2008 data. The reports provide consumers with a more accurate portrayal of arrival and tarmac delays. Figure 1 shows the number of flights with more than 3 hours of taxi-out time in 2005 through 2009. These new elements require uniform reporting of instances in which a flight returns to the gate one or more times prior to take-off. The final rule also collects data on the length of time a flight is away from the gate prior to being cancelled. For flights that are diverted to an alternate airport, the final rule collects the airport code for each diverted airport and information on the arrival, tarmac, and departure times at the diverted airport. For diverted flights, information is also collected to determine whether a diverted flight reaches its original destination airport.

Figure 1: Number of Flights with More Than 180 Minutes (3+ hours) of Taxi-Out Time

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

Ancillary Fees

Standardized reporting of ancillary fees has improved the quality of airline financial data. With the rapid rise in fuel costs in 2008, airlines began charging fees for services formerly included in the ticketed fare, spurring interest in the revenue that airlines collected from these charges. These ancillary fees include baggage fees, seating assignment fees, rebooking fees, cancellation fees, on-board sale of food, drink, pillows, blankets, entertainment, and transport of pets.

Baggage fees accounted for over $1.2 billion dollars from January through June of 2009, surpassing the total for 2008 (figure 2). To ensure that airlines reported

the fee revenue correctly, BTS issued Technical Directive Number 289 (www.bts.gov/programs/airline_information/accounting_and_reporting_directives/) on Feb. 25, 2009, "to assist carriers with reporting their ancillary revenues in a like manner."

Figure 2: Baggage Fees Collected by All Airlines (millions of dollars)
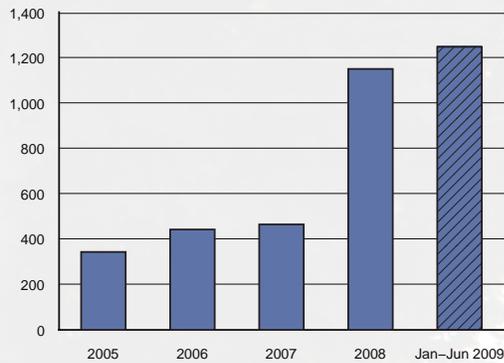
SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

Airline Data and Applications

Easy-to-use web tables were introduced to the BTS website in FY 2009. Eight of the most commonly used historic airline data tables are now available in the Airline Industry—Quick Facts section of the BTS homepage (www.bts.gov/programs/airline_information/)—each with a single click of the mouse. For information on airlines serving the United States, users can choose from monthly and yearly totals for all international and/or U.S. airlines or individual airlines—including data on passengers, flights, revenue passenger miles, available seat miles, and passenger load factors, for as far back as 2000. In addition, for U.S. airlines only, users can now easily access industry totals on operating profit/loss, operating revenue, and freight ton-miles. Figure 3 shows 2009 U.S. air traffic hubs.

BTS made available, for the first time in 2009, an application that allows the user to search for full- and part-time airline employment data for any month since January 1990.

Figure 3: Air Traffic Hubs 2009

NOTE: An Air Traffic Hub is a community of geographic area whose airport(s) serve at least .05% of all enplaned (boarded) passengers in the United States. All locations displayed here had a total enplanement of 30,000 or more for 2008. They are categorized based on their share of total enplaned passengers: Large, 1% or more; Medium, 0.25%-0.99%; and Small, 0.05%-0.24%. Source: BTS data as of August 2009

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

Airline statistics produced by BTS are regularly reported in the Nation's leading media outlets. Data are available in monthly and quarterly press releases and on the BTS website. The Office of the Secretary of Transportation uses BTS airline data to generate the monthly *Air Travel Consumer Report* (airconsumer.ost.dot.gov/reports/).

In addition to airline financial data, BTS collects airline traffic data from all U.S. carriers (except on-demand air taxis). These data include the number of passengers and the weight of cargo (mail and freight) by nonstop flight segment and on-flight market. Reported traffic data include available passenger and cargo capacity information. BTS also collects survey data on the origin and destination of flights, including the ticketed trip itinerary, of passengers as well as the total dollar amount of the airfare.

► *Railroad Safety: Confidential Close Calls Reporting Systems*

BTS is a key partner in the Confidential Close Calls Reporting System (C3RS) Demonstration Project, a major safety initiative sponsored by the Federal Railroad Administration (FRA). To prevent accidents, C3RS promotes the use of information gleaned from railroad-related close calls or near misses. Now in its third year, the C3RS has expanded to several pilot sites.

Information from railroad close call reports can help identify new and existing safety hazards and risks. Using this information, the carrier can develop countermeasures to prevent accidents or minimize their consequences.

This proactive, unique approach to enhance rail safety combines the Volpe Center's expertise in areas of human factors, human-systems integration, and program evaluation with BTS's expertise in data collection and analysis *and* BTS's statutory authority to protect the confidentiality of data collected for statistical purposes—a critical component.

Specifically, using its authority as a Federal Statistical Agency to protect the confidentiality of data collected from participating railroad employees, BTS developed and operates the C3RS. Railroad employees voluntarily submit reports to BTS on close calls that pose safety risks to railroad operations. BTS collects additional data, as needed, to prepare a close call incident analysis and shares the results, with all identifying information removed, to a Peer Review Team (PRT) at the pilot sites. The PRT reviews the incident report, determines the underlying causes of the reported close call, and develops recommended corrective actions to prevent further occurrences. In addition, this year BTS assisted the Volpe Center's lessons learned team with the project's formative and summative evaluation by conducting safety culture surveys at the Union Pacific and Canadian Pacific pilot sites.

The first pilot site for this initiative is located at the Nation's largest rail yard in North Platte, Nebraska, where approximately 2,000 Union Pacific employees began reporting "close calls" in February 2007. The second pilot, with approximately 350 employees located at Canadian Pacific's operations in Wisconsin, began reporting in April 2008. New Jersey Transit, with approximately 1,600 employees, has completed C3RS training and planned to commence reporting close calls to BTS by December 2009.

More than 1,300 close calls had been reported to BTS by the end of FY 2009. Several key corrective actions have been implemented, significantly contributing to safety improvements. C3RS is helping FRA to meet its goal of improving operational safety and was identified as an important element in the National Rail Safety Action Plan.

► *Intermodal Passenger Connectivity Database*

The BTS Intermodal Passenger Connectivity Database is the first nationwide measurement of the degree of connectivity within the Nation's passenger transportation system. The database contains information on all of the modes serving terminals in the passenger transportation system. During FY 2009, data collection began for over 1,100 commuter rail stations and the estimated 2,500 intercity bus stations. Data collection for the commuter rail mode is expected to be completed during the first half of fiscal year 2010,

and that data will be added to the nearly 1,500 intercity rail terminals, airline airports, and ferry terminals already available in the database. Responding to interest in the passenger connectivity data, BTS also increased the visibility of the database with a direct link on the BTS website (www.bts.gov/programs/connectivity/index.html).

► Commodity Flow Survey

The Commodity Flow Survey (CFS) is the primary source of national data on the flow of goods and includes data on origin and destination, distance, and mode of transportation. Conducted every 5 years in partnership with the U.S. Census Bureau, the CFS obtains data on commodities shipped; their value, weight, and mode of transportation; and the origin and destination of shipments by manufacturing, wholesale, mining, and selected retail industries. The CFS provides key information for understanding the use and performance of our Nation's freight transportation system. Figure 4 shows 2009 U.S. freight shipments by transportation mode.

Figure 4: U.S. Freight Shipments by Mode of Transportation by Value and Tonnage: 2007 (Preliminary data from 2007 CFS)
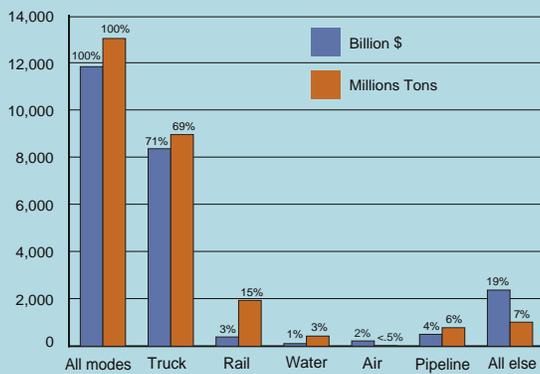
SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

During FY 2009, the BTS CFS team continued intensive efforts related to processing and finalizing the survey data in preparation for publishing final CFS data

products. 2007 CFS data products are scheduled for release in late 2009 and will include the complete series of data tables on the web (www.bts.gov/publications/commodity_flow_survey/), as well as select print reports for national level such as hazardous materials and export shipments. Many of the 2007 CFS tables have been expanded or enhanced, allowing for the release of more data. CFS data for the first time will be available by industry sector. The 2007 CFS will be published by 49 North American Industry Classification System (NAICS) codes. These data will be distributed via the Census Bureau's American Fact Finder system, http://factfinder.census.gov/, and BTS's Freight Data web page.

BTS staff worked in Joint Investigative Teams, in partnership with the U.S. Census Bureau, to address specific issues and research areas related to the 2007 CFS, such as weighting and estimation, mileage calculations, and publications. The teams calculated the miles for three-million freight shipments collected by the survey and developed the estimates for the 2007 CFS publications.

Transportation professionals rely on CFS data and publications to analyze trends in goods movement, conduct hazardous materials risk assessments, forecast future demand for goods movement and associated infrastructure and equipment needs, and analyze commodity and vehicle flow patterns.

The CFS is used by:

- Federal agencies, State and local government, including their departments of transportation, metropolitan planning organizations, trade associations, and transportation entities to guide transportation policy and investment;

- public-policy analysts and transportation planners to assess the demand for transportation facilities and services, energy use, and safety risk and environmental concerns; and

- the private sector for freight forecasts and modeling.

► TransBorder Freight Data

BTS reports TransBorder freight flow data by commodity type, mode of transportation (rail, truck, pipeline, air, and water), and port of entry/exit for U.S. exports to and imports from Canada and Mexico. Customers use these data for a variety of purposes, including trade corridor studies and transportation infrastructure planning. Additionally, BTS makes available incoming border crossing data for vehicles, containers, passengers, and pedestrians for land ports on the U.S. borders with Canada and Mexico. BTS prepared custom tables of the TransBorder and border crossing data for the Federal Highway Administration (FHWA) to calculate the FY 2009 apportionment of funds to states under the Coordinated Border Infrastructure Program.

The TransBorder Freight Data allows users to analyze movements of merchandise by all land modes, waterborne vessels, and air carriers between the United States and Canada and the United States and Mexico.

During FY 2009, new interactive tools were added to the TransBorder Freight Data interface to ensure that high quality international data and analyses are accessible to all levels of government, the private sector, and individuals studying trade and transportation. Also, during FY 2009, BTS continued releases of monthly statistics on North America freight movements on a scheduled basis.

TransBorder Freight data are used by:

- metropolitan planning organizations; State and local governments for transportation infrastructure and logistics planning, including border congestion analyses and freight corridor planning;

- FHWA to implement the coordinated border infrastructure program and apportion funds to border states and as one of the data sources included in the Freight Analysis Framework (FAF);

- transportation planners to perform trade corridor studies, transportation pattern analyses, system capacity studies, and other research; and

- other public and private users, including industry associations and manufacturing groups, academic researchers, transportation service providers, consultants, marketing firms and the private sector.

Managing Transportation Statistical Knowledge

To provide transportation professionals with current and relevant information, BTS extracts and compiles data from a wide variety of sources. As a result, BTS is recognized internationally as a reliable source of data, statistics, reports, and related materials on numerous facets of transportation.

Program Data Products & Publications

- *Major Transportation Facilities of the United States 2009 Map*

- *National Transportation Atlas Database, 2009*

► Geospatial Information Program

BTS actively contributes to the Nation's geospatial knowledge by developing applications and collaborating on data with Federal agencies and stakeholders to improve transportation analysis. BTS is the USDOT's lead agency overseeing the Department's OMB Circular A-16 and geospatial Exhibit 300 efforts. The Geospatial Information Officer for the USDOT, who resides within BTS, continues to assist and coordinate Geographic Information Systems (GIS) activities within the Department. The Office of Geospatial Information Systems was actively involved in key activities that promote the use of GIS within RITA and the USDOT including:

- creating a new geospatial database of railroad bridges with FRA, promoting safety and enhancing FRA's emergency planning efforts;

- assisting the development of an interactive software tool that combined existing USDOT geospatial data for roads, rail, and waterways with imagery and aerial photographs to aid in locating the rail bridges;

- assisting the Office of the Secretary in developing a database structure and web mapping application. Thirteen thousand users per day tracked the spending on transportation projects funded by USDOT under the American Recovery and Reinvestment Act (ARRA) (www.dot.gov/recovery/);

- outreach with geospatial transportation professionals from State and Federal agencies and the National States Geographic Information Council

Figure 5: Recovery Act Project Count

Recovery Act Project Count
Projects with Obligated Funds
as reported November 27, 2009
Total Projects: 10,799

State	Count
WA	247
MT	85
ND	141
MN	214
ME	83
OR	287
ID	76
SD	30
WI	264
MI	525
VT	46
NH	40
NY	466
MA	75
WY	71
IA	230
PA	328
RI	61
NV	43
UT	117
CO	108
NE	71
IL	700
IN	892
OH	295
CT	56
NJ	96
MD	162
DE	34
CA	878
KS	142
MO	277
WV	132
VA	102
DC	19
KY	106
AZ	195
NM	77
OK	205
AR	103
TN	289
NC	357
MS	153
AL	229
GA	311
SC	167
TX	432
LA	87
FL	571
AK	38
HI	28
PR	39

Number of Projects with Obligated Funds
- 0 - 50
- 51 - 150
- 151 - 250
- 251 - 350
- Over 350

Notes: The other U.S. Territories have received 19 grants.

Compiled by: USDOT
Source: Grants Information System November 27, 2009

USDOT TIGER

November 2009 USDOT/RITA/BTS

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

(NSGIC) to develop requirements for a national transportation dataset to promote data sharing and standardization; and

- providing essential mapping services to the Congress, USDOT Crisis Management Center/Continuity of Operations, Coalition of Northeastern Governors, and partnering Federal agencies.

BTS participates in the Steering Committee and Coordination Group meetings of the Federal Geographic Data Committee (FGDC)—the policy-level interagency group responsible for overseeing Office of Management and Budget Circular A-16 related to activities and implementation of the National Spatial Data Infrastructure. The Steering Committee coordinates all Federal geospatial activities between, among, and within agencies by establishing policy

and providing guidance and direction to the member agencies. The Coordination Group advises on the day-to-day business of the FGDC, and is comprised of chairpersons of the 9 thematic subcommittees and 4 cross-cutting working groups, representatives from Federal agencies, and stakeholder groups.

BTS works with agencies within the USDOT and throughout the government to support efforts to improve the Nation's security, preparedness, and response. During FY 2009, BTS staff continued to provide extensive geospatial mapping and analysis support to the USDOT Crisis Management Center (CMC). Geospatial Information Program staff provided support for the CMC's preparedness exercises and their response to incidents and natural disasters.

► *National Transportation Library*

TIGER Team - USDOT Reference Service

National Transportation Library (NTL) staff served as the Department's primary public liaison for questions and comments on American Recovery and Reinvestment Act (ARRA) activities. Between February and September, the Library responded to nearly 3,000 emails and phone calls, serving members of Congress and the President, state and local governments, metropolitan planning organizations (MPOs) and regional transportation authorities, private industry and contractors, and the public. NTL maintained and utilized working relationships with points of contact from every agency in the Department, facilitating answers to highly technical, complex, and time-sensitive questions.

Figure 6: NTL Reference Service Interactions by Month - November 2008 to September 2009
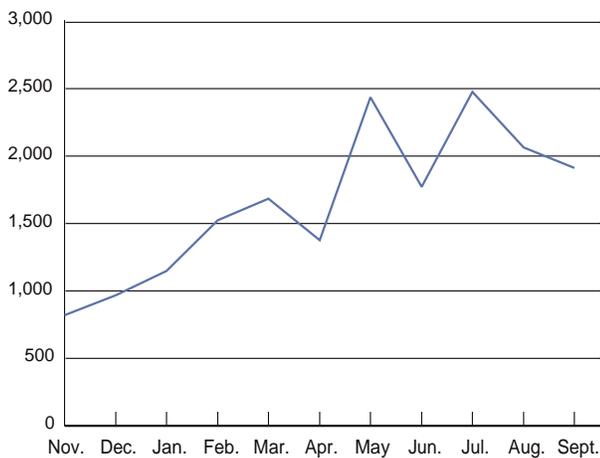
SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

Library staff created frequently asked questions (FAQs) to aid and simplify public research on U.S. Department of Transportation's ARRA policies and procedures as well as to streamline NTL response time. NTL composed daily and weekly reports for USDOT ARRA Responsible Officers, defining public inquiries by quantity, content, customer type, and relevant USDOT operating administration. Two members of NTL's staff are serving as ARRA High Volume Coordinators (HVC), working directly with Office of Budget and Management as well as state Recovery Act Coordinators to facilitate the states' ARRA reporting

requirements. There are less than 50 HVCs in the entire Federal Government, and the 2 from USDOT are both NTL staff.

Department of Transportation Secretary, Ray LaHood, addresses audience at the November 2009 Distracted Driver Summit.

Distracted Driving Summit

The National Transportation Library suported the USDOT Distracted Driving Summit in responding to calls and emails from interested stakeholders (members of Congress and the President, state Governor's offices and legislators, university researchers, non-profits, and family of those killed or injured due to distracted driving) on Summit attendance and content, and kept our leadership up-to-date on stakeholder questions and concerns. Librarians created a bibliography on the current state of distracted driving research and technology that was distributed to all Summit attendees. NTL monitored current events nationally, keeping organizers aware of state proclamations and recommendations of legislation related to distracted driving.

NTL and Web 2.0

NTL developed a strategy document that served as the formal framework for all Web 2.0 initiatives throughout the year. Under that framework, NTL released Really Simple Syndication (RSS) feeds to alert its users of frequently updated web content. The NTL posted resources on distracted driving on Delicious, www.delicious.com in the lead-up to the Distracted Driving Summit. They established an external Wiki using a SharePoint site for collaborative creation and editing of research in the areas of hazardous materials, human factors, traffic management, transport logistics, vehicle

systems, transportation planning, safety analysis, and positioning navigation and timing.

NTL Digital Submissions

NTL simplified and upgraded the process for submission of documents to our digital repository, greatly reducing the lag time between publication and centralized online public availability of the latest transportation research. Primary external customers most benefited include State DOTs and University Transportation Centers and the Transportation Research Board. Primary internal customers include the Intelligent Transportation System Joint Program Office and National Highway Traffic Safety Administration's Research and Program Development office.

Figure 7: NTL Reference Service Interactions by Customer Type - FY 2009

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.
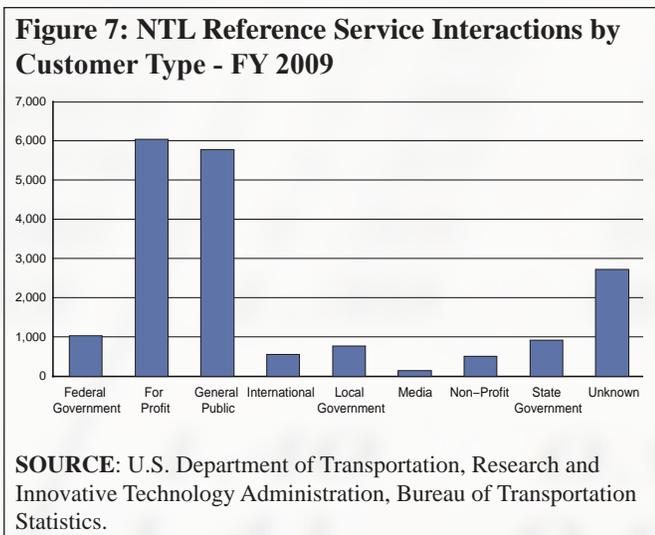
NTL Reference Service

One of NTL's primary missions is to answer USDOT and transportation-related research questions from the public. NTL has continued to excel at achieving that goal, responding to 19,470 questions during FY 2009. In addition, the NTL diverted more than 6,000 questions to its frequently asked questions (FAQ) knowledgebase, freeing time for library to staff to respond to the large number of questions requiring individual attention.

Charged with improving the availability of transportation-related information needed by Federal, State, and local decision makers, the NTL provides timely access to information that supports transportation policy, research, operations, and technology transfer activities. The NTL serves as an online repository of transportation materials from

public, academic, and private organizations. The NTL also:

• publishes TRIS Online (Transportation Research Information Service), a product of the Transportation Research Board and the premier bibliographic database for the industry;

• provides an integrated search tool that serves as a single point of entry to NTL's digital collection, TRIS Online, and the Transportation Research Thesaurus;

• networks with other transportation libraries, agencies, and organizations; facilitates the development of transportation library consortia; and leads the community in adopting new technologies to manage and provide access to information; and

• helps customers find statistics, reports, and transportation experts by offering professional reference, referral, and training services.

The NTL's Transportation Librarians Roundtable brings information professionals throughout the community together for a monthly web conference. In FY 2009, topics covered special projects, innovative technologies, library marketing, and skill development—such as how to use the Transportation Research Thesaurus.

The NTL actively supports the activities of three regional knowledge networks: Eastern, Midwest, and Western. The NTL provides leadership and coordination of projects in each of the regions. For example, the Eastern Transportation Knowledge Network Digital Collaboratory is a project to increase the availability and accessibility of high-value, high-use resources from each member library in the eastern network. The NTL coordinated the first cooperative project among all three networks, a milestone in the establishment of a national transportation knowledge network. The resource-sharing project is increasing cooperation and information exchanges between libraries, resulting in improved access to information for transportation professionals.

► *International Freight Data System*

BTS leads the USDOT effort to develop an international freight data warehouse and interface with the U.S.

Department of Homeland Security's Customs and Border Protection (CBP) Automated Commercial Environment/International Trade Data System (ACE/ITDS). BTS represents the USDOT in the Program Support Group, Board of Directors, Product Code, Trade Support Network, and Standard Data Set Review Committee workshops and meetings. BTS leads the International Freight Data System (IFDS) Implementation Team, providing modal administrations status updates the overall program. BTS works closely with CBP to ensure that needed trade and transportation data are available in ACE and to address issues regarding system integration and data harmonization. In FY 2009, after years of negotiations, CBP approved the USDOT Concept of Operations for the ACE/ITDS. In addition, CBP renewed the "Letter of Exchange" in FY 2009 to allow USDOT staff with appropriate security clearances to continue accessing data via the ACE web portal. Also, BTS staff reviewed and commented upon the annual *Report to Congress on the ITDS*.

► Statistical Quality

Through the RITA Administrator, the BTS Office of Statistical Quality (OSQ) assisted the Office of the Secretary of Transportation with ensuring the quality of USDOT American Recovery and Reinvestment Act (ARRA) data. OSQ met with representatives of the Federal Aviation Administration, Federal Railroad Administration, Federal Highway Administration, and the Maritime Administration. After collecting the necessary information about the data collection Forms 1512 and 1201, OSQ provided each of these modes with the required protocols they will need to develop quality assessments of ARRA data. These OIG-approved protocols will be used to ensure data quality on an on-going basis.

OSQ reviewed USDOT Government Performance and Results Act (GPRA) Performance Indicators published in the FY 2009 Performance and Accountability Report (PAR). OSQ staff consulted with the modal administrations regarding performance indicators and reviewed projection methodologies where data are incomplete or unavailable. OSQ staff also assisted the Pipeline and Hazardous Materials Safety Administration on their projection methodologies and metrics.

OSQ staff projected the FHWA Highway Congestion Measure, and consulted with the Federal Motor Carrier Safety Administration regarding projection of the Large Truck and Bus Fatality Rate.

OSQ provided the Federal Transit Administration with a statistical quality consultation on valid sample design from the universe data to identify demographic characteristics. This will help in determining whether rural counties are better served by public transportation. Further, this effort will help determine any statistically significant differences between the demographics within the groups of counties.
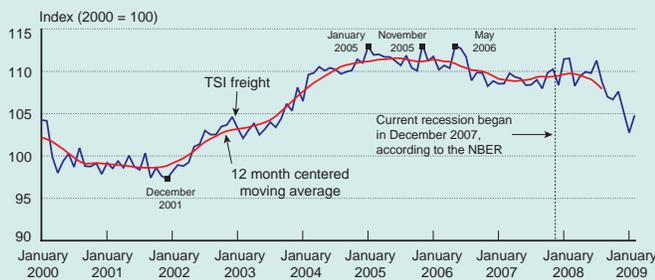
► Transportation Services Index

The FY 2009 focus on the Nation's economy drew particular attention to BTS's Transportation Services Index (TSI), a broad monthly measure of U.S. domestic freight and passenger for-hire transportation services. This measure stands out for its application of BTS's combined statistical and economic strengths to the transportation sector. The value of freight TSI in relation to the economy was recognized in September 2009 when Transportation Secretary Ray LaHood cited the freight index as an important indicator relating to national economic recovery.

BTS's own study of the freight TSI, released in September 2009, showed a decline a full year and a half prior to the start of the current recession (see figure 8). This TSI decline strengthens the suggestion that the TSI may be an indicator of economic downturns. Leading economic indicators identify and anticipate emerging turns in the current business cycle by historically turning downward before a recession or a slowdown in the economy and upward before an expansion or acceleration.

The TSI covers the activities of for-hire freight carriers, for-hire passenger carriers, and a combination of the two. The freight transportation index consists of for-hire trucking, freight railroad services, inland waterway traffic, pipeline movements, and airfreight. The passenger transportation index consists of local

mass transit, intercity passenger rail, and passenger air transportation. These components were selected to give the best coverage possible of the for-hire transportation industry.

Figure 8: Freight TSI, Actual and Smoothed, January 2000 to February 2009

Index (2000 = 100)

KEY: NBER = National Bureau of Economic Research; TSI = Transportation Services Index

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics, http://www.bts.gov/xml/tsi/src/index.xml and special tabulations as of May 2009.

The TSI tracks monthly fluctuations in the output of transportation services. Together with other economic indicators, the index contributes to a better understanding of the current and future course of the economy.

Sharing Transportation Statistical Knowledge

BTS shares knowledge with stakeholders and constituents of America's transportation systems by continuously disseminating information through its publications and popular website.

► *Collaborating with Data Users and Producers Through the Transportation Research Board*

BTS provides expert support for the National Academies' Transportation Research Board (TRB) and its committees. BTS presentations at the TRB FY 2009 annual and mid-year meetings addressed a variety of transportation-related topics. BTS staff provided peer reviews for numerous TRB papers and serve as members of TRB committees, including the Economic, Travel Survey Methods, Hazardous Materials Transportation, Freight Transportation Data, Statistical Methodology, Statewide Data Planning, and Statistical Computer Software committees. BTS staff participated in project panels for several of TRB's Cooperative

Research Programs, such as the National Cooperative Freight Research Program and the Hazardous Materials Cooperative Research Program.

Matthew Chambers

► *Maritime Program*

The BTS Maritime Program is engaged in a wide-range of USDOT and interagency activities. It serves as maritime expertise and helps disseminate maritime data products. In FY 2009, the BTS Maritime Program established its own website, which contains links to maritime-related databases, publications, maps, and special/technical reports produced by BTS.

In FY 2009, the BTS Maritime Program continued to sponsor and lead the Maritime Data Working Group (Group). The program compiled and distributed the Group's *Maritime Trade and Transportation, 2007* report. BTS hosts and maintains the Group's website, www.bts.gov/programs/maritime_data_working_group, which contains Marine Transportation System (MTS)-related data and statistics, the Group's mission statement, and several joint publications as well as links to the Group members' websites.

Program Data Products & Publications

- *National Census of Ferry Operators 2008*

- *America's Container Ports: Freight Hubs that Connect Our Nation to Global Markets*

- *Maritime Trade and Transportation 2007*

BTS is actively involved in the Committee on the Marine Transportation System (CMTS). Working with the CMTS/Communication Team, BTS helped developed a *MTS Fact Sheet*. The USDOT leads the CMTS, which consists of representatives of other Federal agencies with responsibility for some aspect of the U.S. Marine Transportation System.

► International Data Exchanges

BTS continued to provide monthly incoming border crossing/entry data for vehicles, containers, passengers, and pedestrians at the port level on the U.S.-Canadian and U.S.-Mexican borders. BTS staff participates in the Transportation Border Working Group (TBWG) by presenting and providing data to the group. The TBWG covers the U.S. - Canada border issues and data. To enhance its technical support and data quality efforts, BTS returned to active participation in the Transportation Working Group, which is the counterpart organization to the TBWG for the U.S.-Mexican border.

North American Transportation Statistics Interchange

Established in 1991, the North American Transportation Statistics (NATS) Interchange is a forum for the exchange of information and the initiation of collaborative activities among the transportation and statistical federal agencies of Canada, Mexico, and the United States.   Its mission is to raise the general awareness and improve the quality, relevance, and comparability of transportation data and information in North America. The overarching goal of the Interchange is to promote and develop high quality, relevant, comparable data, and analysis that provide information necessary for an efficient and fully integrated transportation system for North America.

Since its inception, the Interchange has resulted in several outstanding data products such as the *North American Trade and Travel Trends*, the *North American Transportation Atlas Database* and the annually updated *North American Transportation Statistics Online Database* (NATS OD) www.nats.sct.gob.mx. Mexico hosts the website and maintains the NATS OD.

Cosponsored by the U.S. Census Bureau, BTS, and the Transportation Research Board (TRB), the XXIII NATS Interchange was held in Washington, DC on June 22-24, 2009. The theme for this Interchange

was *Improving the Transportation Knowledge Base*. Transportation and statistics experts of the United States, Canada, and Mexico came together and gave country updates on activities and research over the past year, discussed the NATS Interchange Strategic Plan and corresponding plans of the NATS Working Groups, and evaluated opportunities to collaborate. The 2009 NATS Interchange focused on the areas of performance measurement, system performance, program evaluation, and data quality.

The Census Bureau and BTS co-chaired the Interchange meeting. Harvey Monk, Associate Director for Economic Programs, Census Bureau; David Matsuda, the then Deputy Assistant Secretary for Policy, USDOT; and Robert Skinner, Jr., Executive Director of TRB opened the Interchange and welcomed the participants. Katherine Wallman, Chief Statistician of the Office of Management and Budget gave the keynote address. As a result of this Interchange, the member agencies agreed to develop additional trilateral indicators in the areas of energy and the environment, and in maritime transport. The agencies also agreed to another annual update of the NATS Online Database.

► Trending and Forecast Team

Established in FY 2008, the BTS Trending and Forecast Team performs trending, prediction, seasonal adjustment, and forecasting of transportation data. This team consolidates some of the trending work that is being done at BTS, as well as provides new tools, research, and products.

In addition to several reports and analyses in FY 2009, the team served as the organizing committee for BTS's international Workshop for Transportation Forecasters, in September 2009. Topics for this 2-day workshop, sponsored jointly with the International Institute of Forecasters, include recognizing economic change in forecasts, incorporating environmental impacts, working with highly seasonal data, and measuring forecast accuracy. Held in the Conference Center at the USDOT headquarters, the 40 attendees enjoyed a keynote presentation from the Department's Chief Economist, John V. Wells, in addition to talks from speakers from ESRI, IHS Global Insight, RAND, Georgetown University, U.S. Census Bureau, and speakers from USDOT.

► *Publications*

BTS publishes a variety of reports and products to meet the needs of transportation system stakeholders. All BTS publications are available on the BTS website, and select publications may be obtained in hardcopy from the BTS bookstore at www.bts.gov.

*Annual Reports and New/Revised Data Products*
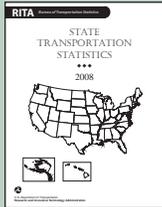
State Transportation Statistics presents a statistical profile of transportation in the 50 states and the District of Columbia, and is updated annually.

The National Transportation Atlas Database (NTAD) DVD comprises a set of 29 nationwide geographic databases of transportation facilities, transportation networks, and associated infrastructure and safety that is compiled and distributed annually via disc and online.
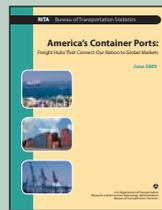
America's Container Ports: Freight Hubs that Connect Our Nation to Global Markets gives an overview of maritime freight movement and the impact of the recent U.S. and global economic crisis on U.S. container ports.

The **Transportation Statistics Annual Report** presents transportation facts and modal indicators, the current state of transportation statistics, the economic and social impacts of the U.S. transportation system, and several maps.
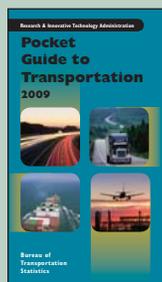
The **Pocket Guide to Transportation**, valued by a wide variety of audiences, is a quick reference to the changes in the U.S. transportation system over time and their impact on the Nation's economy, safety, energy use, and the environment. Published annually, the BTS *Pocket Guide* has been used as a model by USDOT's Maritime Administration for its U.S. Water Transportation Statistical Snapshot, and also by Eurostat.
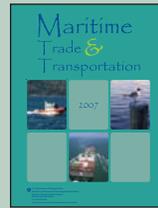
The third edition of the **Maritime Trade and Transportation Report** was prepared in support of the Committee on Marine Transportation System (CMTS), a major effort to better coordinate marine transportation system activities, resources, and regulations.

National Transportation Statistics, updated quarterly online, presents a comprehensive compilation of statistics on the U.S. transportation system, including more than 260 data tables.

Key Transportation Indicators

Key Transportation Indicators (KTI) focuses on monthly and quarterly data series that reflect the latest conditions in for-hire transportation industries, including usage, cost, price, and service performance, as well as general economic indicators.

KTI data are released on a bi-monthly basis. Research is ongoing for filling in data gaps, and new series are being developed and added. In addition, BTS is seeking to develop working relationships with data sources, such as the Federal Transit Administration and their National Transit Database. KTI are available at www.bts.gov/publications/key_transportation_indicators/.

Special Reports

Summarize available data sources on current transportation topics of interest.

- *Motorcycle Trends in the United States* – June 2009—This report focuses on the current and emerging trends involving street-legal (on-road and dual-purpose) motorcycles.

- *U.S. Freight on the Move: Highlights from the 2007 Commodity Flow Survey Preliminary Data* – October 2009

- *Maritime Vessels Carry More Than Half of Growing U.S.-East Africa Trade* – March 2009

- *Estimation and Analysis of Multifactor Productivity in Truck Transportation: 1987-2009* – April 2009

- *North American Trade Growth Continued in 2007* – February 2009

- *Making Connections: Intermodal Links Between Scheduled Passenger Ferries and Other Public Transportation Modes* – February 2009—Scheduled passenger ferry terminal data are the most recent to be added to the Intermodal Passenger Connectivity Database (IPCD). The database now includes connection information for airports, intercity rail stations, and ferry terminals.

Technical Reports

Provide in-depth background, discussion, and analysis of transportation data sources and issues.

- *The Background, Criteria, and Usage of the Intermodal Passenger Connectivity Database*—To provide a baseline connectivity measurement against which to measure future progress, BTS began, in 2006, to develop the Intermodal Passenger Connectivity Database (IPCD). This report describes in detail the background for the project, the considerations taken into account in the development of the project, the criteria used to determine where connectivity exists, and information to help users of the IPCD understand its contents.

Research Papers

Are detailed and complex analyses of specific transportation-related topics of interest.

- *An Analysis of Labor and Multifactor Productivity in Air Transportation: 1990–2001*—This paper examines labor productivity and multifactor productivity (MFP) in U.S. air transportation.

- *Impacts of Productivity Changes in Air Transportation on Profits, Prices, and Labor Compensation:*

1990–2001—The paper assesses the impacts of productivity changes in air transportation since 1990 with regard to industry profits, consumers, and industry employees and also compares the price level of the economy and several price indexes of the air transportation sub-sectors.

- *Estimating Multifactor Productivity in Truck Transportation, 1987-2004*—These data include the land input and its costs and the amount and cost of public capital, in the form of highways.

Estimation and Analysis of Multifactor Productivity in Truck Transportation: 1987-2003

ANTHONY D. APOSTOLIDES, Ph.D.
February 2009

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Research and Innovative Technology Administration
Bureau of Transportation Statistics
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- *The National Highway Construction Cost Index (NHCCI)*—In a 2-year effort, BTS designed and built the NHCCI, a quarterly highway construction chained-cost index in dollars, for the FHWA's Office of Transportation Policy, to provide a measure that is useful as a pure price index for raw materials used in constructing federally subsidized highways.

Transportation Trends in Focus

New for FY 2009 the Transportation Trends in Focus (TTiF) report series represents the start of a new data product from BTS. These short (two-page) fact sheets provide insight into trends on important transportation topics through analysis of monthly time-series data. The TTiF reports consist of simple time series statistics and graphics – thereby providing insight into trends on important and timely transportation data. TTiF reports are a quick way to release short, timely and focused data and information on key transportation-related issues. BTS has released the following TTiF reports:

- *The Freight Transportation Services Index as a Leading Economic Indicator* – September 2009

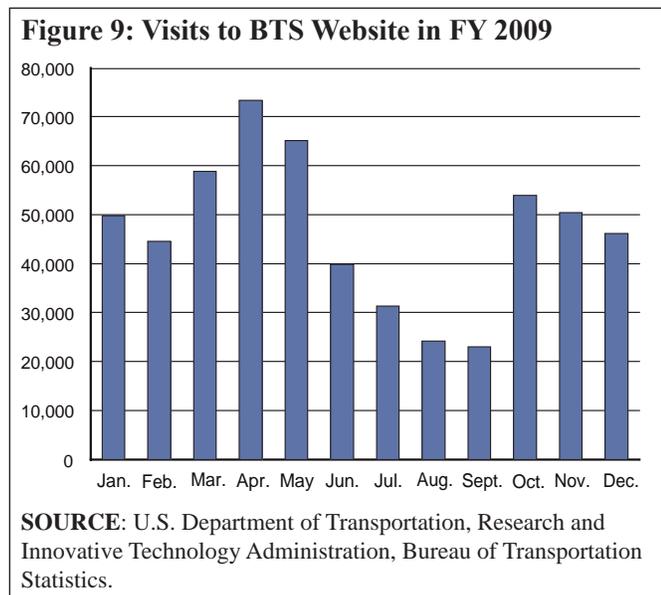- *Transportation Energy Use* – June 2009

National Transportation Statistics (NTS) – quarterly updates

NTS presents statistics on the U.S. transportation system, including its physical components, safety record, economic performance, energy use, environmental impacts and national security. This large on-line dataset is made up of more than 260 data tables plus data sources and accuracy statements.

► *Press Releases*

BTS issued 62 press releases during FY 2009. Besides the continuing series of recurring four monthly and two quarterly press releases, BTS issued press releases on the third annual update of the North American Transportation Statistics online database, preliminary numbers from the 2007 Commodity Flow Survey, 2008 North American surface trade, and 2008 passenger airline employment by job category, including airline maintenance outsourcing. In addition, BTS provided 10 sections of the USDOT Weekly Digest.

Beginning with the airline financials press release for the first quarter of 2009, BTS added a new table listing the top 10 airline recipients of baggage fees to respond to the increased public interest in ancillary fees charged by airlines.

Figure 9: Visits to BTS Website in FY 2009

SOURCE: U.S. Department of Transportation, Research and Innovative Technology Administration, Bureau of Transportation Statistics.

BTS public affairs joined the trend toward Web 2.0 social networking during FY 2009 by establishing a Twitter page, called TransportStats. TransportStats continued to have an increasing number of followers.

BTS Twitter is available at www.twitter.com/TransportStats. BTS public affairs also responded to hundreds of press inquiries during FY 2009.

► *Website*

The BTS website, www.bts.gov averaged over 325,000 visitors per month in FY 2009 (figure 9). The BTS home page enables quick and easy access to the latest BTS products, including recent statistical releases, facts about the airline and freight industries, economic trend data, and links to the National Transportation Library and other BTS data products. The interactive BTS TransStats website, www.transtats.bts.gov, allows users to select tables, analyze variables, create maps, or download data from a searchable index of over 90 transportation-related databases.

► *Customer Feedback Initiative*

In FY 2009, BTS began implementation of the American Customer Satisfaction Index (ACSI) for the BTS website to ensure continued improvement and responsiveness of information and products delivered through www.bts.gov. As a proactive approach to integrating customer feedback into decisions for BTS products, programs, services, and initiatives, BTS will regularly review and incorporate findings into its activities. ACSI is the only uniform, national, cross-industry measure of satisfaction with the quality of goods and services available in the United States. In 1999, the Federal Government selected ACSI to be a standard metric for measuring citizen satisfaction. Over 100 Federal Government agencies have used ACSI to measure citizen satisfaction of more than 200 services and programs.

BTS collects data and produces studies on the safety and security of travelers, vehicles, and transportation systems. The Omnibus Household Survey collects data to provide information on the public's use and satisfaction with the transportation system, including public opinion on personal safety and security while traveling.

Continuing Work and a View Toward the Future

As one of the designated Federal Statistical Agencies, BTS is a member of the Federal Interagency Council on Statistical Policy, chaired by the Chief Statistician, Office of Management and Budget (OMB). The Council

meets regularly to discuss best practices, national data needs, and developments throughout the statistical community. Detailed information on the Federal statistical agencies is available from the report *Statistical Programs of the United States Government, Fiscal Year 2010*. An electronic version can be accessed through the OMB website (www.whitehouse.gov/OMB).

BTS will continue to explore techniques for more efficient and less costly data collection, including online survey submission and data automation methods. The collection of airline data will be made more efficient through the use of the internet (e.g., e-filing of reports and data), which promises to expedite data processing and ease the reporting burden on the airlines.

BTS continues to look for new ways to assess and meet the varied needs of its customers. The Bureau is developing strategies for responding to recognized needs and identifying pressing issues within the transportation community.

In 2009, BTS senior leadership focused on human capital management and developed a workforce plan that includes outreach and recruitment. This planning effort also involved reviewing the critical knowledge and skills needed to maintain a productive and innovative statistical organization.

BTS Advisory Council in Transportation Statistics will reconvene in FY 2010 to exercise its duties and responsibilities to: 1) advise the BTS Director on the quality, reliability, consistency, objectivity, and relevance of transportation statistics and analyses collected, supported, or disseminated by BTS and the Department; 2) provide input to and review the congressional report required by 49 U.S.C. Section 111(d)(4); and 3) advise the Director on methods to encourage cooperation and interoperability of transportation data collected by BTS, the operating administrations of the Department, States, local governments, metropolitan planning organizations, and private sector entities.

BTS data is vital to improve transportation decision making, as well as evaluations of performance and "what works" in the nation's transportation systems. As BTS continues its course of producing relevant, accurate, and timely transportation data and analyses, it will pursue new opportunities for partnering, collaborating, and sharing information within the U.S. Department of Transportation and with external constituencies and stakeholders to meet the Nation's present and future transportation statistical needs.

The Bureau of Transportation Statistics is a component of the Research and Innovative Technology Administration (RITA). RITA also includes the Intelligent Transportation Systems Joint Program Office; Office of Research, Development & Technology; Office of Positioning, Navigation, and Timing; Transportation Safety Institute; and Volpe National Transportation Systems Center.

PERFORMANCE

CUSTOMERS

RESULTS

RELEVANCE