
RESEARCH AND INNOVATIVE TECHNOLOGY ADMINISTRATION
BUREAU OF TRANSPORTATION STATISTICS

BRIEFING - NOVEMBER 9, 2007
RITA ADMINISTRATOR PAUL R. BRUBAKER

# BTS
# 180-DAY, 10-POINT PLAN
# FOR
# DELIVERING RESULTS

## OVERVIEW & EXECUTIVE SUMMARY

This briefing by BTS for the RITA Administrator provides a preliminary overview and materials for discussing a 180-Day, Ten-Point Plan for delivering results in FY 2008. The briefing materials outline approaches and plans for discussion with the Administrator regarding delivery of results.

The ***BTS 180-Day, Ten-Point Plan*** includes the following elements (sub-plans):

1. **BTS Five-Year Strategic Plan.**
2. **BTS Project Management Plans.**
3. **BTS Data Quality Improvement Plan.**
4. **BTS Publication Process Plan.**
5. **BTS Data Enhancement and Expansion for Decision Support Plan.**
6. **BTS Competitiveness Plan for Data and Statistical Services.**
7. **BTS Customer Service and Feedback Plan.**
8. **BTS Plan to Develop Forecasting Capacities.**
9. **BTS Plan to Compile Safety-Related Data.**
10. **BTS Plan to Leverage External Data.**

**Appendix A.** ***BTS Significant Accomplishments FY 2007***

The combined elements of the final ***BTS 180-Day, Ten-Point Plan for Delivering Results*** will be used by BTS in planning and managing its human capital, resources and business operations. This plan, in conjunction with the long-range ***BTS Strategic Plan FY 2008-2012,*** will cascade within the organization to the level of personal performance plans. BTS will regularly monitor the progress of the plan's implementation, and report regularly on BTS progress to the RITA Administrator.

# Bureau of Transportation Statistics
# Strategic Plan FY 2008-2012

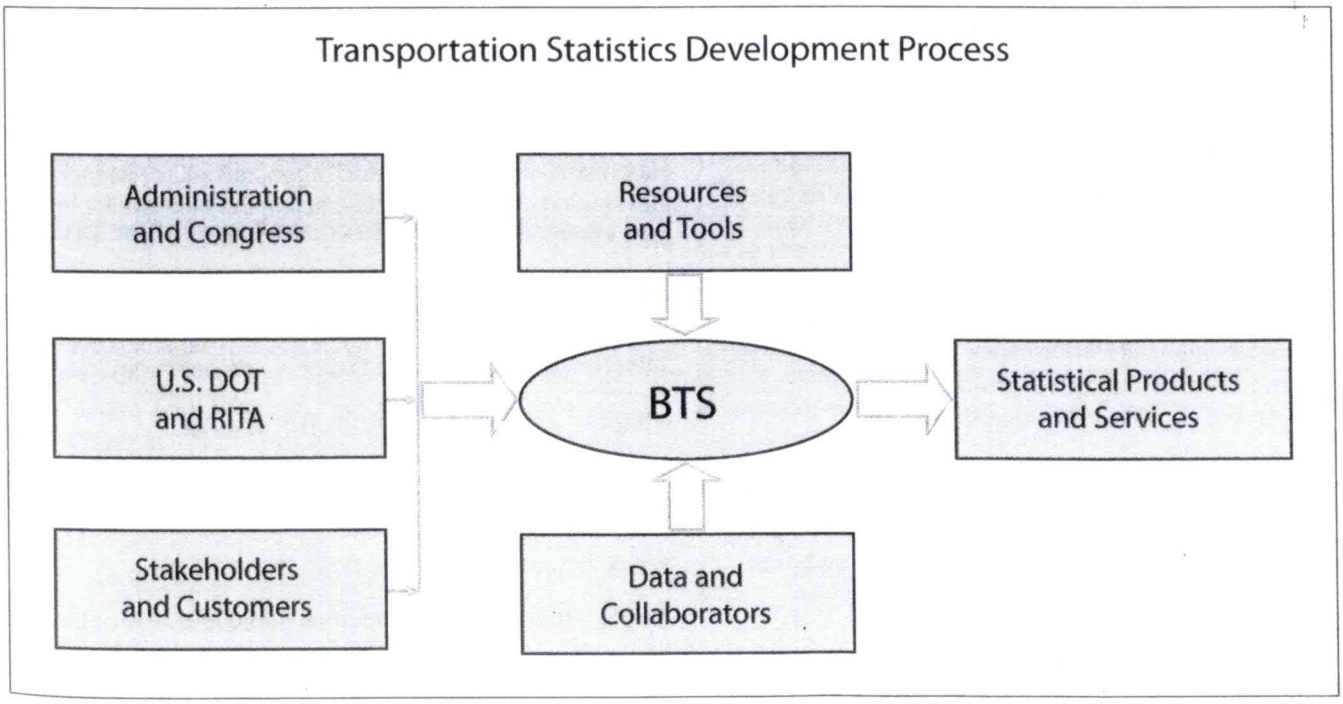
*"The BTS mission is to create, manage, and share transportation statistical knowledge with public and private transportation communities and the Nation."*

## TRANSPORTATION STATISTICS DEVELOPMENT

The FY 2008-12 Strategic Plan for the Bureau of Transportation Statistics (BTS) outlines the organization's ongoing transformation into a high-performance component of the U.S. Department of Transportation (DOT), Research and Innovative Technology Administration (RITA). In addition to BTS, RITA includes the Intelligent Transportation Systems Joint Program Office; Office of Research, Development & Technology; Transportation Safety Institute; and Volpe National Transportation Systems Center.

This plan reflects the knowledge and ideas generated by BTS based on agency experiences and department priorities. The plan provides the BTS vision and mission, and outlines a path for achieving results. The alignment of goals and objectives, as well as strategies and tasks, reflects the directives of the President and Congress. Goals that flow from the DOT Strategic Plan are incorporated. BTS goals are linked to specific objectives and measures. The plan provides a roadmap for the future success of BTS in fulfilling its vital role in America's transportation system. In sum, the goals of the Administration and Congress, DOT, RITA, and BTS cascade into both organizational and individual performance plans and measures.

In planning and executing the development of transportation statistics, BTS considers: congressional legislation and Administration priorities; goals of the U.S. Department of Transportation (DOT) and the Research and Innovative Technology Administration (RITA); and the needs of transportation stakeholders and customers. In accordance with these authorities, priorities and needs, BTS uses its resources and tools in collaboration with others to produce statistical products and render statistical services.



## Implementing Transportation Legislation

BTS' authorizing legislation – Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 – defines the agency's statutory responsibilities. Among them are:

- Collecting, compiling, analyzing, and publishing transportation statistics
- Providing data, statistics, and analysis to transportation decisionmakers
- Making statistics accessible to the public
- Protecting confidential data

Other authorized BTS activities include:

- Coordinating transportation geospatial data standards and supporting a geospatial information services and statistics program
- Maintaining a National Transportation Library
- Managing the Office of Airline Information, and developing and disseminating national aviation statistics

## Delivering Results

The Government Performance and Results Act of 1993 (GPRA), Pub. L. No. 103-62 provides a statutory basis for ongoing results-oriented improvements in the federal government. GPRA goals include:

- Improving citizen confidence through accountability
- Initiating program performance reforms
- Improving effectiveness and accountability by focusing on results
- Helping managers deliver with results information
- Improving decision making with objective information
- Improving internal management of programs

## Supporting President's Management Agenda

In addition to complying with GPRA, the BTS strategic plan seeks to implement the President's Management Agenda, with its focus on government-wide goals, as well as those of DOT.

- Strategic Management of Human Capital
- Competitive Sourcing
- Improved Financial Performance
- Expanded Electronic Government
- Budget and Performance Integration

## Reinforcing DOT Strategic Objectives

BTS collects, analyzes, and disseminates data and products specifically relevant to DOT strategic objectives.

**Safety**. *Reduce transportation related injuries.*

**Congestion**. *Advance movement of people and goods.*

**Global Connectivity**. *Facilitate efficient transportation systems.*

**Environmental Stewardship**. *Protect the environment.*

**Security**. *Ensure preparedness and secure transportation.*

**Organizational Excellence**. *Manage and deliver results.*

## Building on the RITA Vision

BTS is a vital component of RITA that promotes the RITA vision with high quality statistical products and services.

***RITA's Vision—"Ensure the effectiveness of the Department of Transportation's investment in research and technology with a focus on safety, system performance, and 21st century solutions."***

## Meeting Statistical and Customer Needs

BTS communicates with stakeholders and customers in providing statistical products and services that meet priority needs. BTS solicits, considers, and responds to numerous decisionmakers and customers. Statistical products and services enhance knowledge regarding domestic and international transportation topics.

## Applying Resources and Tools Effectively

As a principle federal statistical agency, BTS collects, analyses, and disseminates transportation-related statistical information and analyses through modern and efficient business tools and practices. Exceptional talent and adequate resources are required to fulfill BTS' mission.

## Building Data and Collaborative Connections

Transportation statistics require quality data of various types in performing analysis. While BTS sponsors data collection, most data is derived from other sources. Collaboration with agencies and organizations is essential to developing quality products utilizing the best available data and information.

## STRATEGIC PLAN ELEMENTS

**Mission** – who we are and what we do as an organization

**Vision** – where the organization is headed

**Values** – principles and beliefs guiding the organization and employees

**Work Practices** – how we perform our work.

**Goals** – the long-term outcomes pursued by the organization

## Understanding the BTS Mission

*"To create, manage, and share transportation statistical knowledge with public and private transportation communities and the Nation."*

BTS focuses on several major areas of responsibility, each mandated by legislation: 1) compiling, analyzing, and publishing a comprehensive set of transportation statistics; 2) making statistics readily accessible; and 3) implementing a long term data collection program. BTS' ongoing challenge is to ensure data and analyses are ***relevant***, ***high quality***, ***timely***, ***comparable***, ***complete***, and ***accessible***. BTS recognizes that innovation and continuous improvements are critical to its success.

## Embracing a BTS Vision

*"To be the premier provider of transportation statistical knowledge."*

## Fostering BTS Values

**Integrity.** *We will adhere to the highest ethical and professional standards.*

**Fairness.** *We will be impartial and honest in.*

**Respect.** *We will treat others with dignity.*

**Excellence.** *We will continuously enhance the effectiveness and efficiency of our service.*

**Accountability.** *We will continuously measure and improve our performance and results.*

These five core values embody the principles and beliefs that guide BTS employees in performing their duties. The values serve as beacons to others that the Bureau's role in America's transportation system is fulfilled in a principled, fair, effective, and results-oriented manner. These values will guide BTS in its cooperative and collaborative efforts.

## Winning with Best Practives

Management leadership and effective work practices are necessary to achieving and sustaining high performance. Among the management practices reinforced in BTS are: aligning organizational goals, people, and processes; ensuring integrity first; sustaining professional competency; strengthening commitments; and placing duty before self.

## Meeting BTS Goals and Objectives

BTS has developed several organizational goals – with objectives and measures for each.

1. Create and develop transportation statistical knowledge
2. Manage and disseminate transportation statistical knowledge
3. Achieve and maintain organizational excellence

The BTS strategic plan is designed to accomplish the Bureau's goals by linking goals, objectives, and measures (quantitative and qualitative) for assessing performance and documenting results, thereby reinforcing accountability.

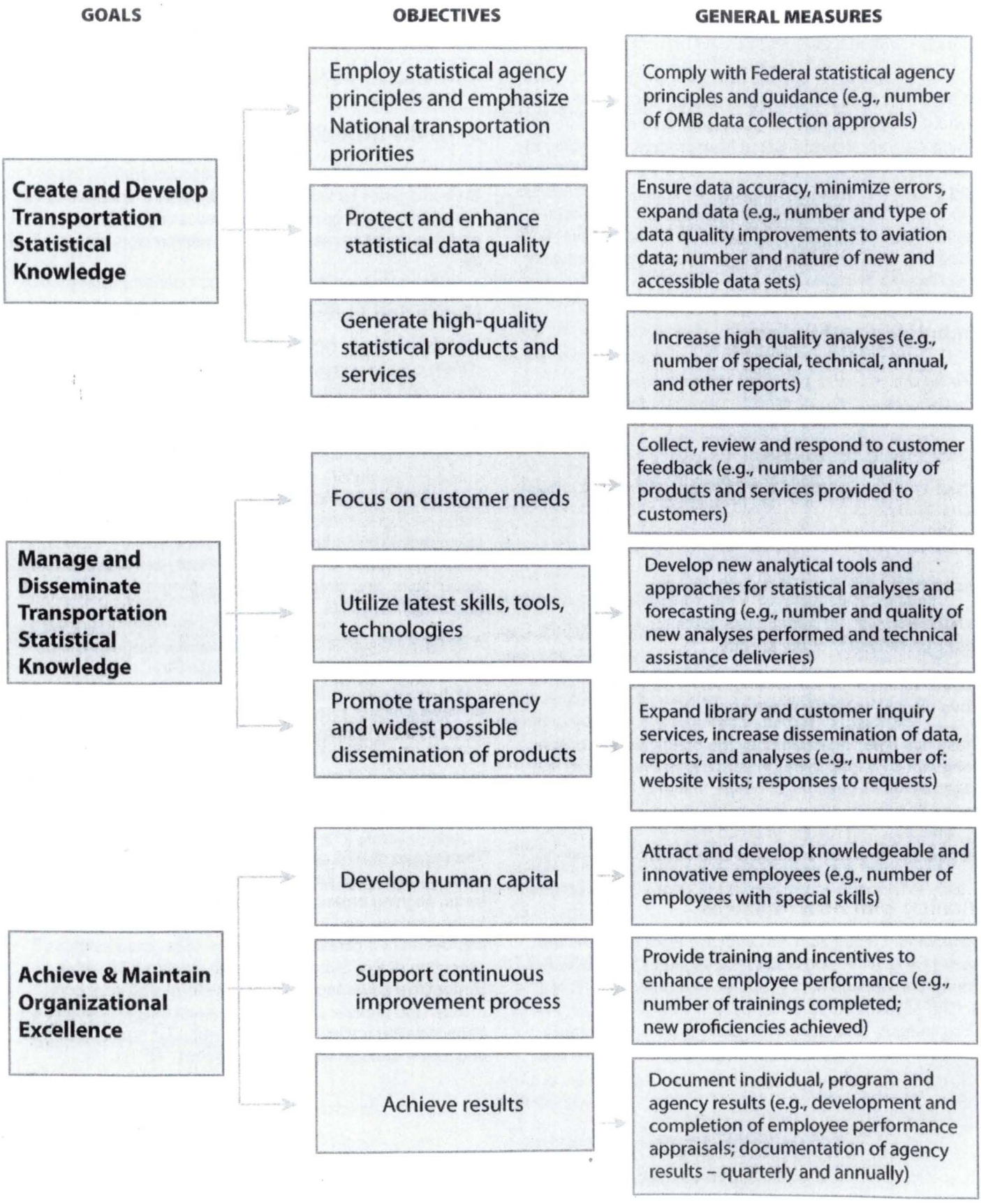
## Measuring Performance and Results

The White House Office of Management and Budget (OMB) uses a systematic approach to assessing programs and measuring their results. The Program Assessment Rating Tool ("PART") was developed to assess and improve program performance so that agencies and programs can achieve better results. PART reviews are employed to identify program strengths and weaknesses to inform funding and management decisions and to make programs more effective. PART reviews examine many factors that impact program performance, including: program purpose and design; performance measurement, evaluations, and strategic planning; program management; and program results.

A PART review of BTS in 2006 found the program to be "moderately effective." This Strategic Plan, covering Fiscal Years 2008 – 2012, provides an opportunity for BTS to achieve a higher level of performance and more significant results. At the conclusion of FY 2007, BTS published its first Significant Accomplishments Report for that year. This plan calls for BTS to publish a significant accomplishments report annually. BTS plans to collect data quarterly for purposes of benchmarking and monitoring its progress.

The linkage of BTS goals, objectives and measures provides a framework for translating strategy to operational tasks, aligning organizational and personal performance to the strategy, and making strategy and performance improvement a continuous process. The successful execution of this Strategic Plan will provide BTS with a competitive advantage within the federal statistical community, and provide customers and stakeholders with vital transportation statistics and knowledge for meeting current and future transportation system needs.

## LINKING BTS GOALS, OBJECTIVES, AND MEASURES



## 2. BTS Project Management Plans

In an effort to enhance the management and tracking of BTS projects, a project development and tracking form has been developed. The proposed attached form may be completed for new major projects within BTS to provide information and tracking of major BTS initiatives. This documentation provides a uniform process for identifying the scope and development plan of major projects to be developed within BTS. Systematic management, planning and tracking of project development ensures that proposed projects effectively contribute to the accomplishment of agency strategic goals and objectives.

The attached proposed BTS Project Development/Management Plan form includes four sections to provide essential information regarding proposed projects. The first consists of background information on the project including parties involved, mandates supported, and timeline. The second section requires a more detailed description about the project such as a detailed overview, purpose, outcomes, and customers. Third is a summary of required resources to obtain information on the estimated cost and time requirements for projects. Fourth is a table to track the progress of projects including major milestones and use of resources.

PROPOSED TEMPLATE

# BTS Project Development/Management Plan

## *Background Information*

**Project Name:**

**Lead Office:**

**Project Manager:**

**Partners**
**Internal:**

**External:**

**Program / Mandate Supported:**

**Timeline**
**Begin Date:**

**Completion Date:**

## *Project Description*

**Overview:**

**Purpose:**

**Intended Outcomes:**

**Customers:**

**Approach:**

## PROPOSED TEMPLATE

*Resource Summary*

**Primary Staffing (name, role / function / responsibilities):**

| Name | Role / Function / Responsibilities | Work Hours |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | Total | |

**Outsourced Activities (please itemize):**

| Vendor / Agency | Contract / TO / IA | Role / Function / Responsibilities | Cost Estimate |
|---|---|---|---|
| | | | |
| | | | |
| | | | |
| | | | |
| | | Total | |

(TO = Task Order; IA = Interagency Agreement)

**Other Resources; hardware / software, travel, printing, etc. (please itemize):**

| Item Name | Purpose | Cost Estimate |
|---|---|---|
| | | |
| | | |
| | | |
| | | |
| | Total | |

PROPOSED TEMPLATE

## BTS Project Development / Management Plan Tracking

| Milestones / Objectives | Activities | Tracking | | | Resources | | | |
|---|---|---|---|---|---|---|---|---|
| | | Target End Date | % Complete | Actual End Date | Work Hours FTE | Work Hours Contract | Direct Costs Contract | Direct Costs Other |
| Milestone / Objective 1 | | | | | | | | |
| Milestone / Objective 2 | | | | | | | | |
| Milestone / Objective 3 | | | | | | | | |
| Milestone / Objective 4 | | | | | | | | |
| Milestone / Objective 5 | | | | | | | | |
| Milestone / Objective 6 | | | | | | | | |
| Milestone / Objective 7 | | | | | | | | |
| Milestone / Objective 8 | | | | | | | | |
| Milestone / Objective 9 | | | | | | | | |
| Milestone / Objective 10 | | | | | | | | |

# 3. BTS Data Quality Improvement Plan

The Bureau of Transportation Statistics continues to disseminate a substantial amount of data through the RITA Website. Customers are able to find information in static tables, reports, and numerous interactive searchable datasets on a wide range of topics. BTS maintains adherence to the Department of Transportation's Information Dissemination Quality Guidelines, which are consistent with the Office of Management and Budget's (OMB) Guidelines for Ensuring and Maximizing the Quality, Objectivity, Validity, and Integrity of Information Disseminated by Federal Agencies. BTS is focusing on two areas of on-line data quality improvement: 1) Airline on-time performance and financial data, and 2) Geospatial data.

**E-filing of airline data to improve airline data quality**

BTS is pursuing the next-generation of an automated airline data collection and retrieval system. This electronic filing system will enable carriers to submit traffic, financial, on-time performance, and Airline Origin and Destination Survey data via web filing. Work will be carried out in collaboration with representatives from OST-X and the Volpe Center.

Carriers will be able to submit data through either electronic forms or formatted data files. This system will generate cost savings for data submission and data processing as well as improving aviation data quality through a change of business processes – from "file-based" to "database-oriented" processes. The advantages of the new E-filing system include:

- Implementation of upfront data validation to eliminate data errors within submissions
- Checks submissions against the data requirements to detect delayed or missing submissions, enabling OAI and OST to perform enforcement and reduce missing data in the data collection
- Builds the foundation for switching data processing from the current "file-based" method to "database-oriented" processing. Utilizing database tools ensures data quality checks and edits across current and historical data and different data tables (such as segment and market data as well as traffic and financial data)
- Eliminates or reduces the risks of manual intervention that may introduce errors to the submitted data. The database tools can supply a detailed error report for any rejected submission, which in turn helps the carriers to improve the data quality before they submit the data next time

**Geospatial on-line data quality**

BTS recognizes the growing role that geospatial activities play with regards to the transportation and economic infrastructure of the United States. BTS actively contributes to the Nation's geospatial knowledge having developed software to improve the estimation of travel routes, and by collaborating with federal agencies and stakeholders to advance geographic data efforts. The BTS geospatial staff are developing methods to present geospatial information on the web. For example, information from the TransBorder Freight Data can be encapsulated into a map displayed in a web browser that would present the user with information pertaining to the freight shipments across U.S. borders. The user will be able to use this tool to easily drill down and obtain detailed information. Tabular data on freight shipments to and from U.S. port (similar that found in the 2004 BTS report, *America's Freight Transportation Gateways*) could also be presented in a similar manner. Through the use of geospatial tools and a web browser interface, complex data can be presented to the end user in a manner that allows the information to be presented in a much more comprehensible manner.

## 4. BTS 180-Day Publication Release Plan

The Bureau of Transportation Statistics is a recognized source for high quality recurring and non-recurring publications. Public and private stakeholders and customers at the Federal, state, and local level rely on a wide variety of reports produced and published by BTS to make informed decisions regarding transportation policy, investment, and to conduct research and analysis. Statistical reports produced include; interpretive analytical reports, data compilations, online databases, special and technical reports, press releases, and in some cases special tabulations. In recent years the release of publications has shifted from the traditional printed products to the use of electronic media, primarily internet, to reduce costs and increase the timeliness of information to the public.

**Recurring Annual Publications:**

*BTS Significant Accomplishments - Fiscal Year 2007*
Target Release: November 2007
Audience: Congress, OST, DOT modal administrations, and other organizations interested in the activities and accomplishments of BTS in the past fiscal year.

*North American Transportation Statistics - Online Database*
Target Release: November 2007
Audience: Federal, state and local governments of the U.S., Canada, and Mexico; international transportation and statistics organizations; universities; researchers and consultants.

*Pocket Guide to Transportation - 2007*
Target Release: January 2008
Audience: Congress, DOT modal administrations, state departments of transportation, other state and local government entities, libraries, universities, consultants and researchers.

*2007 Transportation Statistics Annual Report*
Target Release: January 2008
Audience: This is an annual report to Congress. Other audiences include the DOT modal administrations, state departments of transportation, other state and local government entities, libraries, universities, consultants and researchers.

*Maritime Trade and Transportation Report - 2008*
Target Release: April/May 2008
Audience: Congress, DOT modal administrations, state departments of transportation, other state and local government entities, libraries, universities, consultants and researchers.

*State Transportation Statistics - 2008*
Target Release: June/July 2008
Audience: Congress, DOT modal administrations, state departments of transportation, other state and local government entities, libraries, universities, consultants and researchers.

**Recurring Quarterly Publications:**
*National Transportation Statistics - Quarterly Update*
Target Release: December 2007
Audience: Congress, DOT modal administrations, state departments of transportation, other state and local government entities, libraries, universities, consultants and researchers.

*Airline Financial Data*
Target Release: December 2007 (schedule available online)

**Recurring Monthly Publications:**
*TransBorder Freight Data*
Target Release: November 2007 (schedule available online)
Audience: Federal, state and local governments of the U.S., Canada, and Mexico; international transportation and statistics organizations; universities; border and trade development researchers and consultants.

*Transportation Services Index (TSI)*
Target Release: November 2007 (schedule available online)

*Airline Traffic Data*
Target Release: November 2007 (schedule available online)

*Passenger Airline Employment*
Target Release: November 2007 (schedule available online)

*Airline On-Time Performance*
Target Release: December 2007

**Non-Recurring Publications:**
*Transportation Services Index – Technical Report*
Target Release: November 2007

*Deseasonalization of Airline Data - Technical Report*
Target Release: December 2007

*Aircraft Taxi-Out Times – Special Report*
Target Release: December 2007

*Census of Ferry Operators – Technical Report & Highlights Report*
Target Release: January 2008

*U.S. – China Trade Impacts on the Transportation System – Special Report*
Target Release: February 2008

*Third-Party Logistics – Special Report*
Target Release: March 2008

## 5. BTS Data Enhancement and Expansion for Decision Support Plan

BTS is working to identify and leverage relevant transportation data sources from throughout the federal system to expand its capacity to provide timely data for critical decision making support. As part of this effort, the National Transportation Library (NTL) has been aggressively pursuing opportunities for collaboration with other data centers and resources. BTS is also developing an on-line data directory to make a wide range of transportation data sources available to the public. BTS will emphasize DOT goals and priority topics in all data collection activities to bolster relevancy to decision making. For example, BTS has provided data and been directly involved in the Secretary's initiatives in responding to airline delay. The BTS proposed rule-making was agreed to by OMB on November 7th, 2007, and will be published in the Federal Register.

**Collaborative workspace for regional library networks (working with GSA)**
**http://colab.cim3.net/cgi-bin/wiki.pl?EasternTransportationKnowledgeNetwork**
NTL is the lead in coordinating the development of a new regional library network, the Eastern Transportation Knowledge Network (ETKN). ETKN membership includes U.S. DOT, university, state DOTs, and metropolitan planning organization libraries.

**Collaboration on Maritime Transportation Statistics**
BTS has been in discussions with representatives from the Commission on Maritime Transportation Statistics (CMTS) to host their inventory of maritime datasets, which would include safety related information, through the NTL. Since the data are already gathered, NTL can easily incorporate it into the Integrated Search software. Through our "Collection View" capability, users can search only the CMTS inventory and the search interface can be customized/branded to match the CMTS website appearance and logos.

**NTL Data Expansion to Include NHTSA Reports**
NTL has developed a collection view for NHTSA Office of Research reports. BTS is also working with the Virginia Transportation Research Council to archive and make accessible all of their reports, from the mid-1900's to present. Through a Memorandum of Understanding (MOU) with the Transportation Research Board to provide the TRIS Online database, NTL has made 19,000 Environmental Impact Statements (housed at Northwestern University Transportation Library) freely available to the public.

**BTS Database Directory of Transportation Sources**
The original Directory was last published in book form in 1996 as a comprehensive inventory of transportation data sources. The current effort repurposes the book into on online database that will allow users to browse transportation topical areas, i.e., by mode—Aviation, Maritime, Highway, Transit, Rail, Pipeline, HazMat, Bike/Pedestrian or by subject—Safety, Freight Transport, Passenger Travel, Infrastructure, Economic/ Financial, Social/Demographic, Energy, Environment, National Security, and Geospatial. Currently, BTS is working with a pilot collection of nearly 100 records reflecting an updating of the past information from the 1996 Directory and supplemented by information drawn from TranStats. The current work can be viewed at http://preview:8082/tris/ntlc/btsdd/index.shtm.

## 6. BTS Competitiveness Plan for Data and Statistical Services

**Data/Statistical Services Subject to Competitiveness Review/ Cost-Benefit Analyses:**

**TransBorder Freight Data**. BTS contracts with Census for purchase of the TransBorder data. The data purchase cost is approximately $150K per year. BTS processes and disseminates this data monthly at a cost of approximately $380K per year. Plans call for the International Freight Data System (IFDS) to replace (in estimated five years) the Transborder data, thereby reducing processing costs, if the system provides data in the format needed. BTS plans to spend $100K of HTF funds money this year (supplemented with $900K returned to RD&T from CBP) to begin developing the system.

**Official Airline Guide (OAG) Data**. BTS purchases air reference data (Official Airline Guide) to use in validating the data submitted by carriers and other purposes. It costs about $65K per year. The rest of the contract costs for OAI and OSC come to a little over $2M for collecting, processing and disseminating the airline data.

**Commodity Flow Survey (CFS) Data and Services**. BTS reimburses the Census Bureau for 80% of the cost of the CFS data collection; this is a cost share, not a purchase. The payment to Census is $19.6M over 5 years. That does not include other costs such as for mileage calculation and analysis, funding for these comes out of BTS' contracts budget and totals approximately $2M.

**Mandated Ferry Database**. BTS conducts a survey of Ferry Operators basically with in-house resources every other year, but BTS pays for some contract support with processing and enhancing the data. BTS cost is approximately $220K this FY.

**National Transportation Atlas Database (NTAD).** BTS produces the National Transportation Atlas Database every year using geospatial data compiled from other governmental sources. BTS does not pay for the data, but must compile, process, and publish it. The BTS costs are about $85K per year.

**Omnibus Household Survey**. BTS conducts the Omnibus Household Survey annually provided that BTS has a client to pay for it. Currently that client is Transportation Security Administration (TSA), which pays about $100K per year for the survey.

**Confidential Close Call Reporting System ($C^3RS$)**. FRA funds the $C^3RS$ at a cost between $1M and $1.5M per year. BTS collects close call reports, conducts analysis, and provides results to the pilot sites to determine causes and countermeasures. Costs for this program may increase as more pilot sites are added to the project.

**Mandated Annual Statistical Reports**. Production of compilations such as NTS, TSAR, Pocket Guide, State Transportation Statistics, TSI, etc. costs BTS approximately $700K per year.

**BTS Website**. BTS spends a little over $1M on technical support for both BTS Web and NTL Web; about $360K for GIS; and $300K for other NTL and reference services.

# 7. BTS Customer Service Feedback Plan

**Fiscal Year 2008**

**Background:**

Although BTS historically has sought and valued customer feedback, a formal recommendation has been made for BTS to establish a more comprehensive process or system for obtaining customer feedback for the purposes of evaluating and improving agency services and products. In August 2006, GAO issued a report ***Opportunities for Improving the Oversight of DOT's Research Programs and User Satisfaction with Transportation Statistics***. While addressing other DOT research issues, the report included findings and recommendations relating to BTS customer feedback practices. The report found that, "BTS does not have a systematic process for identifying its primary users, soliciting ongoing feedback from those users, and determining whether or how that feedback should be incorporated." GAO recommended that BTS "Develop and implement a systematic process for BTS to identify its primary users, solicit and incorporate feedback from those users, and measure the satisfaction of its users. This process should contain the following elements: (1) that primary users of BTS data products and services are identified and documented in a comprehensive manner; (2) that feedback on user satisfaction is solicited on a periodic basis from those users; (3) that user feedback is documented and evaluated at BTS agency-wide level and against established criteria, to ensure consistency in decisions about what improvements should be made to data products; and (4) that performance indicators that measure data users' satisfaction are developed and applied.

**Past Practices:**

BTS routinely collects information about its customers, their data needs, their satisfaction with current products, and their suggestions on improvements. In part, this has occurred through Transportation Research Board (TRB) hosted data user meetings, comment cards in our publications, a previous customer satisfaction survey, direct interaction with customers, and a variety of other means. Still, as GAO notes, BTS had not implemented a formal process across the entire organization. This effort will involve documenting existing practices, collecting some new information, and establishing a management review and approval process.

**Plan:**

**a. Develop an inventory of key data/product users**
**(Target completion date: February 29, 2008)**

Section 111(c) of Title 49 U.S.C. assigns responsibility to BTS for "providing data, statistics, and analysis…to support transportation decision-making by the Federal Government, State and local governments, metropolitan planning organizations, transportation-related associations, the private sector (including the freight community), and the public." This provides a broad base of potential users of BTS data and products.

Many customers of BTS data and products are in the public sector and include policymakers, planners, and administrators. These officials invest public funds and provide for the management and development of the public transportation infrastructure. The inventory of key customers in federal, state, local and tribal governments will be by organization and key

individuals, including official contact information that is publicly available. No private Personally Identifiable Information (PII) will be collected.

**Government / Public Sector Customers**:

- Congressional members and committee staff;
- Federal officials in the DOT;
  - Office of the Secretary (OST), Federal Aviation Administration (FAA), Federal Highway Administration (, FHWA), Federal Motor Carrier Safety Administration (FMCSA), Federal Railroad Administration (FRA), Federal Transit Administration (FTA), Maritime Administration (MARAD), National Highway Traffic Safety Administration (NHTSA), Pipelines and Hazardous Materials Safety Administration (PHMSA), and the Research and innovative Technology Administration (, RITA)
- Federal officials in other departments and agencies;
  -U.S. Army Corps of Engineers (USACE), Transportation Security Administration (TSA), Bureau of Economic Analysis (BEA), Council of Economic Advisors (CEA), U.S. Postal Service (USPS), and the Government Accountability Office (GAO)
- State and local officials;
  -State Departments of Transportation, and Metropolitan Planning Organizations (MPO),

BTS data and products also are also utilized by customers who rely on this information for business decisions, for incorporation in products or services offered in the marketplace, or use as reference statistics in conducting research and analysis. BTS will also maintain an inventory, to the extent possible, of these important users. However, due to privacy restrictions, the inventory of non-governmental users will be by organization only and personal contact information will not be collected.

**Non-Government Customers**:

- Trade associations and other non-governmental organizations;
  - E.g., American Association of State Highway Officials (AASHTO), American Public Transit Association (APTA), Air Transport Association (ATA), and American Association of Railroads (AAR);
- Transportation businesses and industries;
  - E.g., Airlines, freight shippers and carriers, financial institutions, and transportation equipment manufacturers;
- Researchers, academia, consultants;
- News media; and
- Foreign governments or organizations with data exchange arrangements with BTS

The inventory will include, to the extent known, the data or product needed and the purpose for which it will be used.

Information for the inventory will come from a variety of sources:

- Product Distribution Center records

- BTS Reference Services information request tracking
- Requests for information coordinated by RITA/GIP
- Website usage information from the BTS, TranStats, and NTL websites
- Transportation Research Board meetings and conferences
- BTS sponsored data user workshops, peer exchanges, conferences and interchanges
- BTS participation in other transportation related conferences and events
- Meetings of transportation data users groups within the Department.

The inventory will be reviewed and updated quarterly by Program Managers who will submit a synopsis of the review to BTS executive management.

**b. Develop and implement a consolidated system for tracking customer feedback (Target completion date: March 31, 2008)**

BTS captures feedback from its data and product users by a variety of means. However, any recommendations received have been primarily addressed at the program level and only those having resource, regulatory or significant business process change implications have been raised to BTS executive management level. Sources of customer feedback include:

- BTS sponsored data user workshops, peer exchanges, conferences and interchanges
- Transportation Research Board (TRB) meetings and conferences
- Direct customer interactions with program staff
- Meetings of transportation data users groups within the Department.
- BTS Reference Services
- Feedback on information requests coordinated by RITA/GIP
- Committee on National Statistics (CNSTAT), National Academies of Sciences
- BTS participation in other transportation related conferences, events and data exchanges.

The electronic tracking system will consolidate input from these sources, as well as the survey and comment cards described below, into a central repository for customer feedback. The repository will contain information on the user, the data/product(s), how the data/product(s) is used, the recommended improvement, and any other pertinent information.

The repository will be updated as information is received, and a summary report will be distributed to BTS executive management and program managers quarterly.

**c. Implement a web-based customer satisfaction survey (Target completion date: June 30, 2008)**

It has been estimated that 90 percent or more of access to BTS data and products is via the BTS website. The BTS website has more than 20,000 visitors per day. Therefore, the most logical way to solicit customer satisfaction is via a web-based customer survey. BTS has prepared a draft set of questions for visitors to the BTS website that are currently undergoing internal review. The questions solicit input on such things as category of customer, type of information sought, frequency of visits, and satisfaction with the results.

Once the survey content has been finalized, BTS will prepare a Federal Register notice and submit the required Paperwork Reduction Act package for OMB approval to conduct the survey. The clearance process can take from three to six months to complete.

Once established, results from the survey will be summarized monthly and reported to BTS executive management and all program managers.

**d. Reestablish a Comment Card process**
**(Target completion date: June 30, 2008)**
In the past BTS included comment cards in its print publications that solicited feedback on the content of the publication, as well as information about the person who obtained the product. This was discontinued because the cards asked for PII and BTS did not have approval for collecting and storing PII information.

New comment cards will not solicit, nor will BTS keep, personal contact data or any other PII. However, the cards will solicit feedback similar to that asked for in the web-based customer satisfaction survey.

Input from the comment cards will be summarized quarterly and reported to BTS executive management and all program managers.

**e. Develop performance indicators for measuring data user satisfaction (Target completion date: May 30, 2008)**
BTS tracks information in many ways about customer usage of its data and products. These usage statistics are reported on a regular basis, often monthly. This includes:

- Product Distribution Center orders
- BTS Reference Services information request tracking
- Requests for information coordinated by RITA/GIP
- Website usage information from the BTS, TranStats, and National Transportation Library websites.

These statistics, along with the information that will be tracked in the customer feedback system described above, will be used to develop a family of measures to assess customer satisfaction with BTS data and products.

The measures will be compiled and reported regularly to BTS executive management and the program managers.

**f. Promulgate a BTS User Feedback Process instruction**
**(Target completion date: June 30, 2008)**
The BTS User Feedback Process instruction will incorporate all of the previously addressed items into a systematic process for identifying its primary users, soliciting ongoing feedback from those users, and determining whether or how that feedback should be incorporated.

The instruction will establish criteria and procedures on how to address customer feedback at an agency-wide level to ensure consistency in decisions about what improvements should be made to data products.

**Summary:**

Beginning in Fiscal Year 2008 (October 1, 2007), BTS has begun implementation of a comprehensive plan (with target dates) to establish a customer service feedback system to evaluate and improve agency services and products. This plan builds upon past successful practices, and expands and improves BTS customer feedback processes. The action items to be implemented during FY 2008 include: (a) developing an inventory of key data / product users (government, associations, private sector); (b) developing a customer feedback tracking system; (c) implementing a web-based customer satisfaction survey; (d) re-establishing a customer comment card process; (e) developing performance indicators of customer data and production user satisfaction; and (f) promulgating a BTS feedback instruction. These process improvements and benchmarks are anticipated for completion by July 1, 2008. This plan, once successfully implemented, incorporates GAO and other recommendations designed to ensure that BTS systematically assesses and addresses key customer needs.

# 8. BTS Plan to Develop Forecasting Capacities

**Developing BTS forecasting capacity**

In response to Department and Administration priorities, BTS is designing a forecasting capability to allow for the trending, prediction, seasonal adjustment, and forecasting of transportation data. This forecasting center would consolidate some of the trending work currently undertaken at BTS, as well as provide new tools, research, and products not yet pursued. This group will network with federal transportation forecasters outside of BTS (primarily in DOT, but could also include NASA, Energy Information Administration, and other transportation-related federal forecasters).

At present, the BTS trending and forecasting work is done on a special topic basis. The consolidation of BTS' forecasting and time-series work is anticipated to provide better products to more customers. Highly seasonal data can be trended and used as a better decision tool. Scenario analysis can be performed on existing data to foresee the impact of certain events on the Nation's transportation system. For example, in the past, BTS examined the impact of September 11, 2001 on transportation-related trends. BTS will share its expertise with other DOT agencies, and attempt to ensure that DOT on the whole provides consistent forecasts. Through its outreach efforts, this 'forecasting' initiative will establish enhanced relationships with the other statistical agencies, research organizations, and other federal entities that provide forecasts.

**Specific areas for trend analyses**

Recent BTS studies have examined the impact of household income trends on transportation behavior and the capacity of the Transportation Services Index (TSI) to forecast national economic trends. Other forecasting capacities can be established to address: 1) Seasonal adjustment and trending of data distributed by BTS, and 2) econometric forecasting. BTS envisions a *Transportation Forecasting Network* to leverage forecasting activities within DOT. BTS will explore the feasibility of sponsoring a DOT Forecast Network, bringing together the various forecasters in the Department to present results, discuss modeling techniques, and share assumptions.

**Actions underway**

BTS has established a team to begin and consolidate trending and forecasting activities (see following attachment with team description). A preliminary chart of key topics and forecasts is being developed (see following attachment).

**Trending and Forecast Team** (Members include;
Peg Young, David Chien, Gary Feuerberg, Jeffery Memmott and Pheny Weidman)

**Brief Description of Team:** a working group has been established in BTS to pursue trending, prediction, seasonal adjustment, and forecasting of transportation data. This group consolidates some of the trending work that is being done here at BTS, as well as provides new tools, research and products not yet pursued. This group plans to network with federal transportation forecasters outside of BTS (primarily in DOT, but may also reach out to NASA, EIA and other transportation-related federal forecasters).

Projects presently underway:

- *Seasonal Factors*: Estimate seasonality in congestion.
    - SPECIAL REPORT on congestion seasonality by Jeffery Memmott and Peg Young. The research provides monthly seasonal factors for Chicago, Los Angeles and Houston. The analyses are based upon ITS data from the past three years. Draft report expected to be completed by mid-November.
- *Seasonal adjustment and trending of data distributed by BTS*: Since transportation data are highly seasonal, these analyses would provide the reader with knowledge of what truly is the underlying behavior of the data.
    - Example: Gary Feuerberg is presently deaseasonalizing some of the data series that BTS maintains on the White House page: http://www.whitehouse.gov/fsbr/transportation.html
    - Deseasonalization is done monthly by Gary Feuerberg on modal data used in the Transportation Services Index. Pheny Weidman is working with Gary.
- *Forecasting Risk*: Create prediction models to rank transportation operators / companies on likelihood of future incidents.
    - Example: Peg is working with Rick Kowalewski, Senior Advisor in PHMSA, to develop statistical models to predict pipeline incidents; this model will be used to help determine a ranking of which pipeline operators should be inspected in the upcoming years. A presentation of the preliminary results on gas transmission data was made by Rick Kowalewski two weeks ago to PHMSA. A draft Special Report, co-authored with PHMSA, on the modeling procedure is underway, based upon this presentation. Such risk models may be appropriate for other modes as well.
- *Forecasting Travel Time:*
    - Example: Jeff and Peg are studying the congestion data provided by the Texas Transportation Institute. Peg is testing growth curves models to the travel time data to determine if an upper limit exists; Jeff is going to create a multivariate model to the data to again study the time series behavior of travel time over that past 15 years. A link to the TTI report, on which these analyses are based, is: http://mobility.tamu.edu/ums/
- Long-term forecasts:
    - Example: In 2000 BTS developed 25-year projections of key transportation variables (based solely on statistical projections), published in the 'Changing Faces' report. The 2000 forecasts were updates on DOT 25-year forecasts

provided in the Secretary's Trends & Choices report published in 1977. (A copy of 200 forecasts is provided in separate word document). Peg is taking a new look at the freight ton-mile forecasts, adding more current data to determine the forecast accuracy of the 200 forecasts, and also employing the new estimates of freight ton-miles (calculated by Scott Dennis) to develop new 25-year forecast (to the year 2030).

- *Econometric forecasting*: Key program would be TEAMS model.
  - Example in work being done by David Chien.
- *Estimate underlying trends in transportation data*:
  - Example: Peg is updating trending analyses on monthly transportation data (originally done for the BTS Transportation Indicators Report. Current analysis being done on airline delay data – old version of analyses can be seen at: http://www.bts.gov/publications/transportation_indicators/january_2002/Special/html/A_Time_Series_Analysis_of_Airline_Delay.html
- Lead / Lag relationship of modal data:
  - Example: Gary and Peg have been studying the time series relationships among the modal data used in the TSI. Early work using cointegration modeling was presented at the International Symposium on Forecasting in NYC (June 2007). Peg and Gary now plan to study the data with alternative procedures, to determine the lead / lag relationships among these data.
- *Projection of BTS data*: For data 'owned' by BTS, we could provide baseline projections of those data. Likely candidates: OAI or border crossing data. Not presently being worked on.
  - Example: Similar work was done with the old Transportation Indicators data (in which we forecasted out a few months and then compared the actual incoming data to the forecast data to determine if something 'unusual' was occurring in the data. We had created an 'early warning' system for key indicators with this forecasting approach.
- *Transportation Forecasting network:* Network forecasting activities within DOT.
  - In 2004, Jack Wells (current Chief Economist of DOT), Caesar Singh (now in RD&T) and Peg Young conducted a survey to determine what forecasting is being done within the Department. The results of that survey, along with a 25-year synopsis of transportation forecasting in general, was provided in an invited presentation at the International Symposium on Forecasting in San Antonio, Texas in June 2005.
  - We plan to sponsor a 'DOT forecast network,' bringing together the various forecasters in the Department to present results, discuss modeling techniques, and sharing assumptions.

| | 1990 actual | 2000 estimated | 2025 forecast |
|---|---|---|---|
| **Transportation Context** | | | |
| • Population (Millions) | 249 | 275 | 337 |
| • GNP (constant $1975, Billions) | 2,409 | 3,049 | 4,231 |
| **Passenger Transportation** | | | |
| • Passenger Miles (Billions) | 3,946 | 5,036 | 8,438 |
| • Passenger Miles per Capita | 15,819 | 18,294 | 24,980 |
| • Licensed Drivers (Millions) | 167 | 190 | 243 |
| • Vehicles (Millions) | 193 | 219 | 262 |
| • Automobiles (Millions) | 134 | 131 | 146 |
| • Light Trucks (Millions) | 48 | 77 | 102 |
| **Freight Transportation** | | | |
| • Total Ton-Miles | 3,196,000 | 3,920,500 | 4,986,500 |
| • Rail Ton-Miles | 1,033,969 | 1,416,000 | 1,573,000 |
| • Water Ton-Miles | 833,544 | 696,000 | 660,500 |
| • Truck Ton-Miles | 735,000 | 1,160,000 | 1,998,000 |
| • Air Ton-Miles | 9,064 | 15,500 | 34,000 |
| • Pipeline Ton-Miles | 584,000 | 633,000 | 721,000 |
| **Safety** | | | |
| • Transportation Fatalities | 47,247 | 42,600 | 40,300 |
| **Air Pollution** | | | |
| • CO (Millions of Tons) | 61.18 | 50.48 | 24.24 |
| • NOx (Millions of Tons) | 8.51 | 8.66 | 7.98 |
| • HC (Millions of Tons) | 7.31 | 5.49 | 2.16 |
| **Energy** | | | |
| • Trillions of BTUs | 24,070 | 25,200 | 36,600 |

## 9. Safety Trend Projects within BTS

**Confidential Close Calls Reporting System ($C^3RS$).** A 5-year research effort to develop a sustainable model for voluntary reporting of close calls and near misses in the rail environment. Data collected from $C^3RS$ will be used to improve rail safety in two ways: a) identify root causes of potentially catastrophic events before such an "event" actually happens, and b) prevent rail accidents by developing and implementing countermeasures which will target root causes of reported close calls. This project promotes a proactive, non-punitive approach to rail safety. The first pilot site began reporting to BTS in February 2007. Preliminary results of reported cases have already provided solid evidence to support the installation of a countermeasure that prevented a head-on collision between two locomotives in the rail yard two months ago. Three more pilot sites are scheduled to join $C^3RS$ within 2 years.

**Motor vehicle safety related issues.** Upon request by National Highway Traffic Safety Administration (NHTSA), BTS staff reviewed statistical methods used by NHTSA to identify motor vehicle safety related issues and justify mandatory investigation and/or recalls on original equipment manufacturers.

**Motor carrier safety.** Upon request by Federal Motor Carrier Safety Administration (FMCSA) BTS staff assisted in analyses related to motor carrier safety.

**Young motor vehicle occupant fatality risks: From 15 to 30.** BTS combined NHTSA data on motor vehicle occupant fatalities with National Household Travel Survey data on occupant hours of travel to estimate hourly, daily, and monthly trends in fatality risks for young occupants 15 to 30 years of age and interactions of age, gender, day of week, time of day, alcohol, speed, and fatigue.

**Association of Traffic Flow with Accident, Injury, and Fatality Risk.** A review of representative literature on the association of traffic flow with motor vehicle-related accidents, injuries, and fatalities and analysis of data on the association of occupant fatality rates with vehicle flow as measured by 2002 National Household Travel Survey.

**Generalized Linear Regression Analysis of Association of Universal Helmet Laws with Motorcyclist Fatality Rates.** An analysis of seasonal trends and association of universal helmet laws with U.S. motorcyclist fatality rates from 1993 through 2002 using climate measures as statistical controls for motorcycling activity via generalized linear regression analyses.

Proposed new analytic studies: *Systemic Factors Associated with Motorcyclist Fatalities*; *Role of Hypoxia in Instrument Approach Accidents in Civil Aviation.*

## 10. BTS Plan to Leverage External Data

**BTS is sole purchaser of only a couple of data sources**. In the past, BTS funded its TransBorder Freight Data. FHWA has agreed to pay the direct costs of collection next fiscal year. BTS funds the congressionally mandated collection of ferry data. BTS also funds special data procurements and technical services in performing its regulatory responsibilities associated with airline data, including the purchase of OAG data.

**BTS shares data costs with others**. BTS pays 80% of the costs associated with collecting Commodity Flow Survey (CFS) data; the U.S. Census Bureau funds 20% of the survey costs. BTS collects selected data and performs statistical services reimbursed by others (e.g., the Confidential Close Calls Reporting System (CCCRS) for Federal Railway Administration (FRA); Omnibus Household Survey (OHS) for Transportation Security Administration (TSA)).

**BTS collects and uses data from other sources**. BTS routinely collects and publishes data from other DOT components and from other Federal agencies and DOT stakeholders / customers. Examples of BTS products using external data include: The BTS *Pocket Guide to Transportation*; *Transportation Statistics Annual Report*; and the *National Transportation Atlas Database (CD-ROM)*.

**BTS is compiling a directory of transportation data sources to be placed on the BTS website**. BTS has begun the process of compiling an inventory of current public transportation databases. This directory was last compiled and published in 1996. The anticipated product will be a web-based listing of the transportation data sources with direct links when possible. This new resource will bring decision makers, transportation analysts and customers to the BTS website for locating data and for research purposes. BTS will explore opportunities to use the new data sources in performing analysis.

**Expanding and enhancing BTS geospatial data capacities**. BTS is exploring new opportunities to develop its capacity to provide decision makers and transportation customers with convenient web-based geospatial data. As geospatial data is becoming increasingly available and GIS technology is rapidly improving, BTS hopes to expand and enhance its role in this area. The Director of BTS now serves as the DOT representative to the interagency Federal Geospatial Data Committee (FGDC).

**Participating in the Development of a Data-sharing Capacity for all Federal Agencies**. The BTS Director meets with the heads of all federal statistical agencies and OMB Chief Statistician, who share the long-range goal of facilitating data sharing and continue to discuss future options.

**BTS is leading the Department in development of a new international freight data warehouse.** Leveraging the Customs and Border Protection Automated Commercial Environment / International Trade Data System (ACE/ITDS) modernization effort, BTS is coordinating the development of an international transportation data source for the Department. The International Freight Data System (IFDS) will include the requirements of all DOT modal administrations with a need for data on international freight movements. BTS has the support of all associated DOT modes in building and maintaining this data warehouse that will provide detail not currently available (or at significant cost) on all international trade transactions.