

BUREAU OF TRANSPORTATION STATISTICS STRATEGIC PLAN

28 February 2022

THE MISSION

The Bureau of Transportation Statistics (BTS) of the U.S. Department of Transportation (DOT) provides timely, accurate, credible information on the U.S. transportation system, the movement of people and goods, and the consequences of transportation for the economy, society and the environment.

VISION

BTS is the preeminent source of statistics on multimodal freight and passenger movement, transportation economics, and commercial aviation, and is a portal to understanding the transportation system and the system's consequences. BTS assures the credibility of its products and services through rigorous analysis, transparent data quality, and independence from political influence. BTS promotes innovative methods of data collection, analysis, visualization, and dissemination to improve operational efficiency, to examine emerging topics, and to create relevant and timely information products that foster understanding of transportation and its transformational role in society. The Bureau's National Transportation Library (NTL) is the permanent, publicly accessible home for research publications from throughout the transportation community; the gateway to all DOT data; and the help line for the Congress, researchers, and the public for information about transportation.

WHY BTS MATTERS

Transportation is important for how it serves and affects individuals, businesses, the economy, the environment, and the nation. Statistics, maps, and their interpretation inform public and private decisions about transportation. BTS supports these decisions as a credible source of information that is free of perceived political bias.

SCOPE AND EMPHASES

BTS is guided by the Secretary's strategic objectives, the Bureau's authorizing legislation in Chapter 63 of Title 49, United States Code, and the Foundations for Evidence-Based Policymaking Act (Public Law No: 115-435, Jan. 14, 2019), also known as the Evidence Act. The ability of BTS to serve these objectives is supported by the Statistical Policy Directives of the Office of Management and Budget. As modified by Section 25004 of the Infrastructure Investment and Jobs Act (Public Law No: 117-58, Nov 15, 2021), BTS is required by 49 USC 6302(b)(3)(B)(Vi) to collect, compile, analyze, and publish a comprehensive set of transportation statistics on the performance and impacts of the national transportation system, including statistics on:

- transportation safety across all modes and intermodally;

- the state of good repair of United States transportation infrastructure;
- the extent, connectivity, and condition of the transportation system, building on the national transportation atlas database developed under section 6309;
- economic efficiency across the entire transportation sector;
- employment in the transportation sector;
- the effects of the transportation system, including advanced technologies and automation, on global and domestic economic competitiveness;
- demographic, economic, and other variables influencing travel behavior, including choice of transportation mode and goods movement;
- transportation-related variables that influence the domestic economy and global competitiveness;
- economic costs and impacts for passenger travel and freight movement;
- intermodal and multimodal passenger movement;
- intermodal and multimodal freight movement; and
- consequences of transportation for the human and natural environment.

In response to the Secretary's strategic objectives, BTS develops statistics on these topics with emphases on equity, climate change, and resilience of the transportation system. In response to time-sensitive questions from DOT leadership about the effects of the COVID-19 on these topics, BTS continues to add weekly and monthly statistics to its traditional portfolio that emphasized annual statistical products.

Beyond meeting the needs of DOT, the Bureau's authorizing legislation requires BTS to serve the entire transportation community. The community explicitly includes state and local governments, private industry, and the public, creating a diverse range of customers with differing needs. Some are power users who want access to source data to build their own statistics and create their own maps. Some are experts in aspects of transportation who need guides to information on other facets of the subject that they are now confronting. Some have only personal experience in transportation and are looking for a story to increase their understanding of the topic. Many are looking for pre-made tables and maps to use in reports and analyses. All are looking for credible data that have adequate quality for their planned use of the data. Section 25003 of the Infrastructure Investment and Jobs Act directs BTS to put special emphasis in the years ahead on meeting the data needs of state and local governments.

BTS requirements are not limited to the mandates of transportation authorizations. The Evidence Act requires BTS to work with DOT's Chief Evaluation Officer and Chief Data Officer to support evaluation research for accountability and organizational learning. BTS advises on statistical aspects of evaluation research and on open data access. The Evidence Act also provides BTS with special powers for protecting confidential data from public release and for sharing confidential data with other principal federal statistical agencies for statistical purposes.

With the smallest budget of the principal federal statistical agencies, BTS must carefully manage resources to serve the Secretary's strategic objectives, fulfill the Bureau's legislated mandates, and meet a growing demand for transportation statistics with useful,

timely, and credible products for a diverse range of customers. To achieve this balance, BTS will concentrate development of new or enhanced products in its core areas of expertise (freight, commercial aviation, and transportation economics); maintain the broad range of existing products and services that are either specifically required by law or meet customer expectations; and continue to investigate new methods of data collection, processing, analysis, quality assurance, dissemination, and preservation to enhance future products and services.

STAFF AND WORKPLACE

BTS currently includes positions for the Director, Deputy Director, 7 office directors, a public affairs director, a technical director, and approximately 50 statisticians, economists, geographers, and specialists in data science, information technology, library science, and transportation.

BTS staff and management have demonstrated the ability to operate effectively from remote locations on a long-term basis, releasing an unprecedented number of statistical products during the extended public health emergency that started in 2020. The period of maximum telework has served as an effective pilot program, demonstrating that staff productivity remains as high in remote locations as in the office. BTS recognizes that remote operations can reduce rent and other space-related costs, reduce expenditures for transit benefits, and enhance employee recruitment and retention. BTS also recognizes that remote operations create challenges for maintaining team cohesion, mentoring, and personal development

BTS recognizes that recent adaptations to Covid-19 will affect the workplace of the future with greater dependence on remote operations. The ability to work from distant locations should improve recruitment of new talent, but reduced face-to-face contact will require new approaches to staff development and team cohesion.

In order to enhance staff expertise and the working environment, BTS will:

- Recruit recent graduates for staff openings and through the BTS fellows program to expose BTS staff to new techniques and ideas for new products.
- Provide training, temporary assignments, and other professional development opportunities to BTS staff to cultivate skills and capabilities needed by the Bureau.
- Experiment with innovative ways to enhance communications among new and veteran staff and maintain comradery during fully remote and hybrid operations.

FINANCIAL RESOURCES

BTS has 3 sources of funding to support its activities:

- Contract authority: BTS activities specified in Chapter 63 of Title 49, U.S. Code, are funded as an allocation from the Highway Trust Fund. Unlike budget authority that must be appropriated each year, funds under contract authority are authorized to be obligated and do not disappear at the end of the year. Current funding is \$26 million per year, and will increase \$250,000 per year from FY 2023 through Fyn 2026.

- Budget authority (annual appropriations): the Infrastructure Investment and Jobs Act authorizes Congress to appropriate \$10 million per year in addition to the Bureau’s allocation from the Highway Trust Fund for use by BTS “for data collection and analysis activities.”
- Interagency agreements with external customers: the airline statistics program is funded through an agreement with the Federal Aviation Administration; the Confidential Close Calls Reporting Program is funded through agreements with the Washington Metropolitan Area Transit Authority and the Bureau of Safety and Environmental Enforcement of the U.S. Department of the Interior. BTS also receives funds from other agencies to support specific freight data products. Current reimbursable agreements total approximately \$10 million per year.

The Bureau’s contract authority must be renewed with reauthorization at the end of FY 2026. Annual appropriations are requested through the President’s budget. The reimbursable agreement with the Federal Aviation Administration is renewed annually. Agreements with other customers are extended at the discretion of the customers.

BTS is authorized to sell products, and has exercised this authority only for restricted aviation data. Product sales raised approximately \$17,000 per year, indicating that the commercial market for BTS products is small. Charging for unrestricted data products is not consistent with title 2 of the Evidence Act or with the Bureau’s longstanding philosophy of democratizing data by removing cost and other barriers to data availability.

PARTNERS AND STAKEHOLDERS

BTS is part of four communities, each with its own set of partners and stakeholders:

- The transportation community: BTS serves DOT as a source of statistical expertise and of objective information on transportation (especially from the perspective of system users rather than from suppliers of modal components); and BTS serves both DOT and the broader transportation community as a repository of research, data, and institutional knowledge through the NTL and the Bureau’s activities through partners like the Transportation Research Board.
- Federal statistical agencies: BTS represents the transportation community on the Interagency Council on Statistical Policy, chaired by the Office of Management and Budget, and collaborates with individual federal statistical agencies such as the Census Bureau to meet the information needs of the transportation community.
- Federal geographic data and mapping community: BTS is the principal integrator of geographic data related to transportation and works with a variety of organizations that develop and compile geo-spatial data to establish a high-quality, comprehensive, detailed electronic map of transportation that can be used throughout government and industry.
- The knowledge management community: BTS works through the NTL with the Library of Congress, the National Library of Medicine, the National Agricultural Library, state DOT libraries, universities, and others to assure that transportation data, results of research relevant to transportation, and institutional memory are maintained and shared in forms that are readily accessible to the transportation community.

THE QUALITY CHALLENGE

BTS provides varied statistics used throughout the transportation community as a foundation for planning, performance measurement, analysis, and research. A growing emphasis in the transportation community on performance management and evidence-based decisions places special demands on timely, detailed, accurate statistics. At the same time, open data initiatives and expanded numbers of users increase opportunities to reveal problems with the quality of data behind the statistics published by BTS and its partners. Quality is rarely an absolute, single value, and the requisite degree of data quality depends on how the data are used. (See Federal Committee on Statistical Methodology, A Framework for Data Quality, FCSM-20-04, September 2020, https://nces.ed.gov/fcsm/pdf/FCSM.20.04_A_Framework_for_Data_Quality.pdf.) To remain credible and useful, BTS must be transparent about the quality of its products and their fitness of use for various applications.

While the demands for data and statistics continue to grow, methods of collection are undergoing major change. Surveys remain a major source of data, but their cost-effectiveness is declining. The widespread replacement of paper with electronic transactions in businesses, the growth of on-line shopping, the exploding use of electronic sensors for controlling everything from vehicle engines to traffic signals, extensive coverage of cell phones, and the complete coverage of publicly available aerial imagery provide new sources of data on transportation and its consequences. These new data sources often involve unexplored privacy concerns, data sharing complications, poorly documented data quality problems, and data integration challenges. BTS programs and staff expertise must evolve to overcome the problems and take advantage of the new data sources.

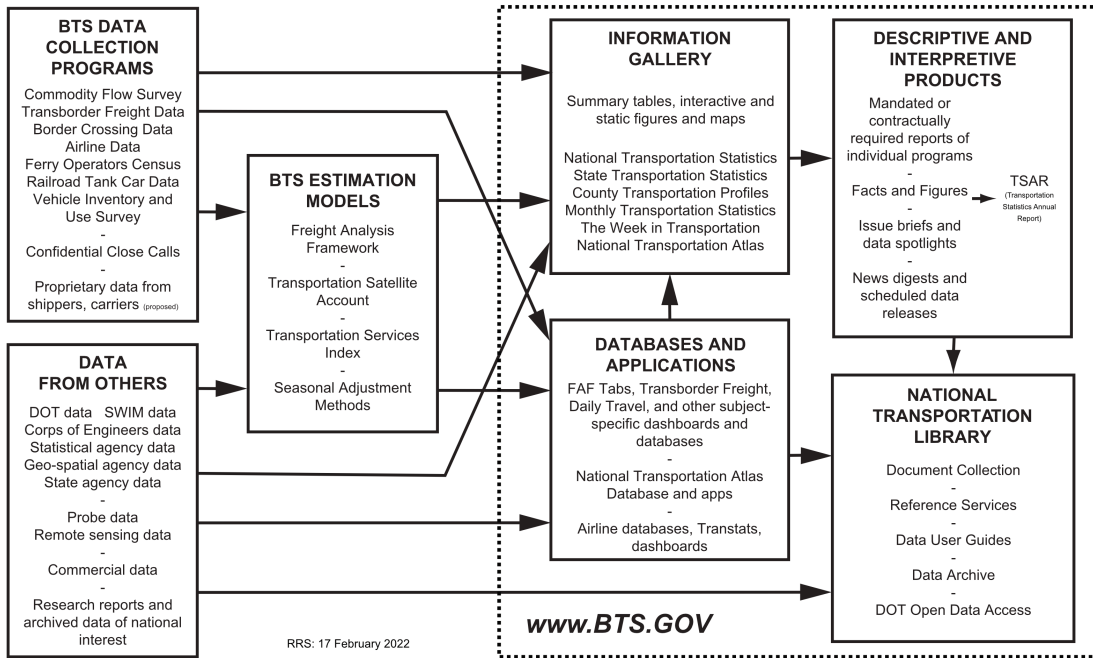
In addition to its own data collection activities, BTS compiles data and statistics from a wide range of sources. In many cases, data are collected by state and local agencies and processed by another federal agency before the results are assembled into BTS products. When BTS identifies a questionable statistic from another source, BTS must decide whether or not to publish the statistic. If BTS includes questionable numbers in its publications, the Bureau encourages the transportation community and others to use potentially erroneous information and gets the blame if someone else confirms an error. If BTS excludes questionable statistics in its publications, the Bureau can appear to be incomplete or irrelevant. The proper approach often requires BTS to work through a long supply chain of data collectors and providers to validate or correct any questionable statistics. BTS must find ways to shorten data supply chains and enhance quality without alienating its data suppliers.

SUCCESSFUL OUTCOMES

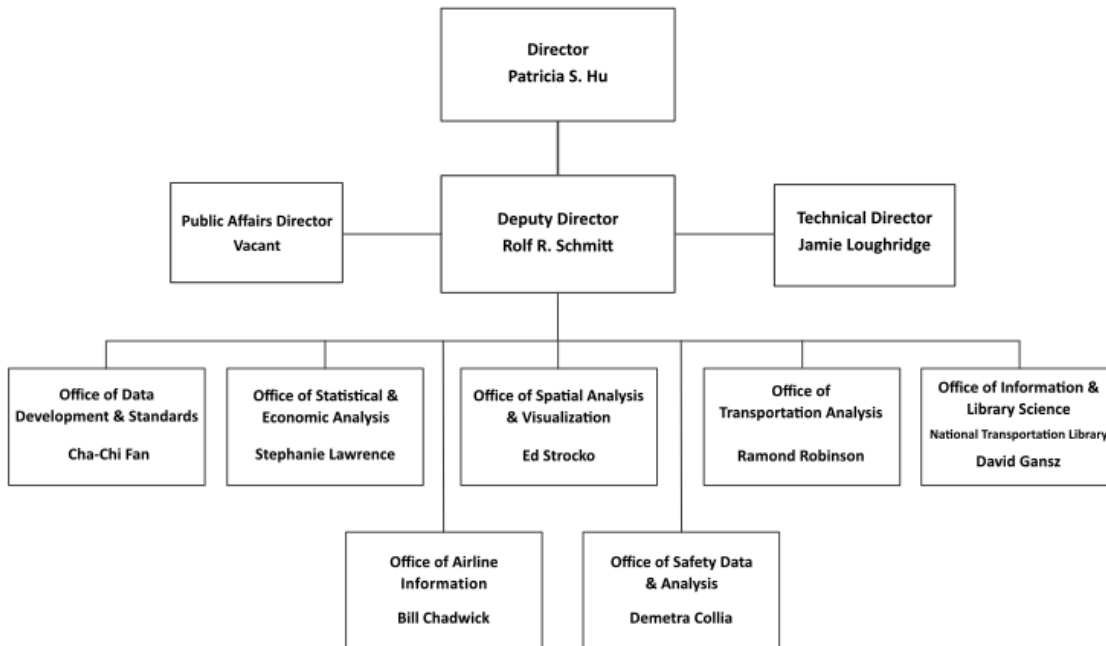
In the years ahead, BTS will be successful if it is recognized for delivering robust, credible, widely used products in each of the topic areas identified in legislative mandates and departmental goals. BTS products will be successful if they are recognized as incisive, definitive, and objective. BTS will be a great place to work if the intellectual challenges are great, responses to the problems are creative and effective, and the Bureau's products are useful and used throughout the nation.

APPENDIX

BTS INFORMATION FLOW



ORGANIZATION CHART



MANDATES

Congress designates the BTS Director as “the senior advisor to the Secretary [of Transportation] on data and statistics” and declares that “the Director shall not be required to obtain the approval of any other officer or employee of the Department [of Transportation] with respect to the collection or analysis of any information; or prior to publication, to obtain the approval of any other officer or employee of the United States Government with respect to the substance of any statistical technical reports or press releases lawfully prepared by the Director.” (49 USC § 6302)

Congress requires BTS to create:

- Comprehensive information on transportation performance and impacts in 12 subject areas (49 USC § 6302)
- The Intermodal Transportation Database, which includes “information on the volumes and patterns of movement of goods, including local, interregional, and international movement, by all modes of transportation and intermodal combinations, and by relevant classification; information on the volumes and patterns of movement of people, including local, interregional, and international movements, by all modes of transportation (including bicycle and pedestrian modes) and intermodal combinations, and by relevant classification; information on the location and connectivity of transportation facilities and services; and a national accounting of expenditures and capital stocks on each mode of transportation and intermodal combination.” (49 USC § 6303)
- The National Transportation Atlas Database (NTAD) “comprised of geospatial databases that depict transportation networks; flows of people, goods, vehicles, and craft over the networks; and social, economic, and environmental conditions that affect or are affected by the networks.” (49 USC § 6309 with data coordination in 49 USC § 6302)
- The National Ferry Database, which contains “current information regarding ferry systems, including information regarding routes, vessels, passengers and vehicles carried, funding sources, including any Federal, State, and local government funding sources, and such other information as the Secretary considers useful.” (23 USC § 129 note)
- Information on railroad tank cars that carry flammable material. (49 USC § 20155)
- An annual report on the capacity and throughput of the largest ports by tonnage, container traffic, and dry bulk. (49 USC § 6314)
- The Transportation Statistics Annual Report (49 USC § 6312)

Congress requires BTS to operate the National Transportation Library (NTL) to “acquire, preserve, and manage transportation information and information products and services for use by the Department, other Federal agencies, and the general public; provide reference and research assistance; serve as a central depository for research results and technical publications of the Department; provide a central clearinghouse for transportation data and information of the Federal Government; serve as coordinator and policy lead for transportation information access; provide transportation information and

information products... [and] coordinate efforts ... with the goal of developing a comprehensive transportation information and knowledge network...” (49 USC § 6304)

Congress requires BTS to:

- “establish on behalf of the Secretary a program to effectively integrate safety data across modes; and to address gaps in existing safety data programs of the Department.” (49 USC § 6302)
- “continually improve surveys and data collection methods of the Department to improve the accuracy and utility of transportation statistics; encourage the standardization of data, data collection methods, and data management and storage technologies... issue guidelines for the collection of information by the Department of Transportation ... and carry out modeling, economic assessment, and program assessment activities to ensure that such information is accurate, reliable, relevant, and in a form that permits systematic analysis.” (49 USC § 6302)
- “improve the coordination of information collection efforts with other Federal agencies.” (49 USC § 6302)

As a designated principal federal statistical agency, BTS is required by the Foundations for Evidence-Based Policymaking Act (Pub. L. 115-435, Jan. 14, 2019) to “produce and disseminate relevant and timely statistical information; conduct credible and accurate statistical activities; conduct objective statistical activities; and protect the trust of information providers by ensuring the confidentiality and exclusive statistical use of their responses.” (44 USC § 3563)