

January 2000

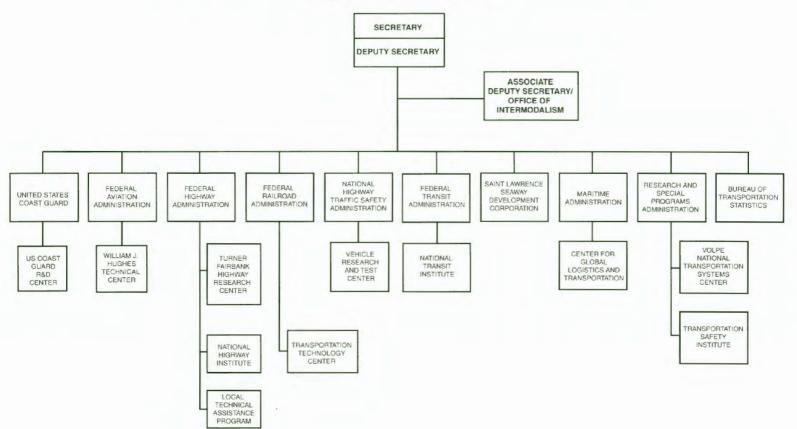
A Guide to Technology and Innovation

http://scitech.dot.gov http://t2.dot.gov

J.S. Department of Transportation

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U.S. DEPARTMENT OF TRANSPORTATION Organizational Chart



A Guide to Technology and Innovation

This guidebook was produced by members of the U.S. Department of Transportation (DOT) Technology Innovation Committee and is intended as an overview of innovation and technology transfer activities in the Department. This product is a quick reference book to points of contact to begin to understand innovation, research and technology activities at the DOT and help you pursue development of more formal technology and innovation sharing partnerships. The members of the Committee (listed on the inside back cover) are initial contacts who will assist you in finding technical assistance and materials of interest.

Online Users can find additional information on our headquarters agencies, DOT laboratories, partnership opportunities, SBIR, as well as updated information about DOT Technology Transfer at our web site at:

http://t2.dot.gov

The Transportation Science and Technology home page is a one-stop resource for additional information on federal, national and international transportation planning, technology, and R&D activities:

http://scitech.dot.gov

Additional information about the Department of Transportation is provided on the Department's web site:

http://www.dot.gov

For additional copies or information about this guidebook, you may contact the Office of Innovation, Research and Education at (202) 366-4208.

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To derive maximum return on our country's technological investments, the U.S. Department of Transportation (DOT) encourages innovation and transfer of federally funded technology to the private sector to promote safety and enhance the national transportation system.

What is Technology Transfer?

Technology Transfer includes a range of formal and informal cooperative actions between agencies, federal laboratories, and the public and private sectors. Product improvement, service efficiencies, improved manufacturing processes, joint development to address government and private sector needs, and the development of major new products for the international marketplace are the results of successful technology transfer efforts.

DOT is forging partnering ventures in the areas of strategic planning, enabling research, and education. Examples are the initiatives of the National Transportation Science and Technology Strategy; partnerships on transportation information infrastructure, next-generation vehicles, and transportation physical infrastructure; and the Garrett A. Morgan Technology and Transportation Futures Program.

Why is Technology Transfer Important to DOT?

The efficiency, flexibility, and low cost of transportation in the United States makes our transportation system the envy of the world. But our system faces unprecedented demands for improvement and renewal. A fast-paced, information-intensive economy is changing the places people want and need to travel to, and new production and management methods are radically reshaping the shipping needs of business. At the same time, the nation's transportation system is expected to meet unprecedented standards for reliability, cost, timeliness, safety, and environmental impact.





What Activities are Included in Innovation and Technology Transfer Efforts?

Innovation and Technology Transfer happens in many ways:

- · partnerships and memorandums of understanding;
- · coalitions and advisory committees;
- sharing of information through papers, workshops, briefings, publications, reports, conferences, and personal visits;
- · information searches;
- · providing technical assistance and expertise;
- · access to federal laboratory facilities and services;
- pooling resources through cooperative agreements;
- · license and patent agreements;
- · international exchange programs;
- · personnel exchange;
- · technical training

How to Use This Guide

In the following pages, facilities and services available from each DOT agency are briefly described and information is provided. This information includes telephone, fax numbers as well as postal mail, email, and web site addresses. Written inquiries to DOT elements within Washington, D.C. should use the address format below. Be sure to insert the appropriate office name.

US Department of Transportation (Insert Office Name and Mail Code) 400 Seventh Street SW Washington, DC 20590

Complete addresses are provided for those DOT elements located outside of Washington, D.C.











National Science and Technology Council http://www.whitehouse.gov/WH/EOP/OSTP/NSTC/ html/NSTC_Home.html

President Clinton established the National Science and Technology Council (NSTC) by Executive Order on November 23, 1993. This Cabinet-level Council is the principal means for the President to coordinate science, space, and technology and to coordinate the diverse parts of the Federal research and development enterprise. An important objective of the NSTC is the establishment of clear national goals for Federal science and technology investments in areas ranging from information technologies and health research, to improving transportation systems and strengthening fundamental research. The Council prepares research and development strategies that are coordinated across Federal agencies to form an investment package aimed at accomplishing multiple national goals. Transportation coordination with the NSTC is reflected in the strategic planning and assessment, public-private partnerships, enabling research, education, publications, and activities on the Transportation Science and Technology web site at http://scitech.dot.gov.

U.S. Department of Transportation Office of the Secretary

http://www.dot.gov/ost

The Office of Intermodalism provides coordination in developing an intermodal transportation system to move people and goods in an energy-efficient, economic manner that obtains the optimum yield from the nation's transportation resources. The Office coordinates federal research on intermodal transportation and advances intermodal initiatives supported by state and local governments and private sector through regionally based staff assignments.

Office of Intermodalism (S-3) Voice: (202) 366-5781

FAX: (202) 366-0263

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The DOT has centralized processing and information regarding DOT-owned patents and licensing of DOT-developed technology with the Office of the General Counsel.

DOT Patent Counsel (C-15) Contact: Otto Wildensteiner Voice: (202) 366-9161

Voice: (202) 366-9161 FAX: (202) 366-9170

Email: Otto. Wildensteiner@ost.dot.gov

DOT Small Business Innovation Research (SBIR) http://www.volpe.dot.gov/sbir

C(SBIR) Program to stimulate technology innovation, utilize small business to meet federal research and development needs, encourage participation by minority and disadvantaged businesses in technological innovation, and increase private sector commercialization of innovations derived from federal R&D. In DOT, this program is managed through the Volpe Center As of 1999, the SBIR solicitation became available in electronic form only on the internet. In 2000, the SBIR program will accept proposals in paper form and electronically.

Garrett A. Morgan Technology and Transportation Futures Program http://www.dot.gov/edu

The Garrett A. Morgan Technology and Transportation Futures Program has three goals: I) To build a bridge between America's youth and the transportation community; 2) To support the development of improved educational technology that provides better ways for people to acquire new skills; and 3) To ensure that America's transportation work force for the 21st century is technologically literate and internationally competitive. The Program will serve as a catalyst to enhance transportation education at all levels by leveraging the Department's

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current technology, education, and research programs and by forging public/private partnerships. The program has four components of k-12, community college partnerships, undergraduate and graduate opportunities and life-long learning.

Garrett A. Morgan Technology and Transportation Futures Program

ATTN: DRP-2

U.S. Department of Transportation Washington, DC 20590-000 Email: garrett.morgan@rspa.dot.gov



United States Coast Guard

http://www.uscg.mil

Coast Guard Research and Development Center http://www.rdc.uscg.mil

The Coast Guard R&D Center, in Groton, CT, is its sole R&D laboratory. The Center conducts research around six core technologies: marine navigation, marine fire and safety, marine environmental protection, search and rescue, naval engineering and maritime law enforcement. Facilities exist to carry out shipboard tests, such as seakeeping, speed/power, machinery and hull vibration. The Center also has a unique fire and safety test facility in Mobile, Alabama that conducts full-scale tests.

U.S. Coast Guard R&D Center 1082 Shennecosset Road Groton, CT 06340-6096 Contact: Jan McNutt

Voice: (860) 441-2670 FAX: (860) 441-2792

Email: jmcnutt@rdc.uscg.mil



Federal Aviation Administration http://www.faa.gov

William J. Hughes Technical Center http://www.tc.faa.gov

The William J. Hughes Technical Center, in Atlantic City, NJ is the focal point for technology transfer activities in the FAA. The Center's mission is to provide research, engineering and test expertise in an integrated laboratory environment for the development and support of a safe, secure, and efficient global aviation system. The facilities and specialized equipment available include: National Airspace Systems laboratory with computer operations and library facilities for enroute, oceanic and terminal systems support, scan radar lab, ATC voice communications complex and the technical computer data center; Air Traffic Flow Management Laboratory; Research, Development and Human Factors Laboratory; Aviation Security Laboratory; full scale aviation fire test building aircraft components fire test facility, airport and helicopter test beds, simulation capabilities in traffic alert and collision, airport capacity, weather and GPS; the National Airport Pavement Test Facility, engine nacelle fire simulator, airflow induction test facility; full-scale curved panel test system, fuels laboratory, and a dynamic vertical drop test facility. Other FAA facilities include the FAA Toxicology and Accident Research Laboratory and the Civil Aeromedical Institute which addresses the bioengineering, biomedicine, and biochemistry issues associated with performance and safety, both located at the FAA Mike Monroney Aeronautical Center complex in Oklahoma City, OK. The facilities at this location include aircraft cabin evacuation simulators, a dynamic impact sled test facility, a water survival tank, a research altitude chamber and a forensic toxicology laboratory.

> FAA Technical Center Atlantic City International Airport, NJ 08405





Contact: jenelle Derrickson Voice: (609) 485-5096 Fax: (609) 485-5711

Email: jenelle.derrickson@tc.faa.gov



Federal Highway Administration http://fhwa.dot.gov

Turner Fairbank Highway Research Center http://www.tfhrc.gov

The Turner-Fairbank Highway Research Center (TFHRC) is the home of the Federal Highway Administration's (FHWA's) Research, Development, and Technology Service Business Unit. The Center advances the state-of-the-technology and works cooperatively with FHWA's Core & Service Business Units, and the fifty-five field offices to ensure that the technology is put into practice.

The FHWA Research and Technology (R&T) Program directly supports the goals of the U. S. Department of Transportation to invest strategically in transportation infrastructure, promoting safe and secure transportation, enhancing our environment, and creating new alliances between the Nation's transportation and technology industries.

TFHRC provides FHWA and the world highway community with the most advanced research and development related to new highway technologies. The research focuses on providing solutions to complex technical problems through the development of more economical, environmentally sensitive designs; more efficient, quality controlled construction practices; and more durable materials. The end result is a safer, more reliable highway transportation system.

The Center has more than 40 laboratories conducting research in the following areas: safety, infrastructure, and

operations. Special facilities used for in-house or contractor-operated activities include human factors, highway driving simulator, FHWA/NHTSA National Crash Analysis Center located at the George Washington University's Virginia Campus, highway electronics, structures, hydraulics, pavement performance, aerodynamics, concrete technology, chemistry, soil mechanics, bituminous mixtures, bridge foundation test facility, federal outdoor impact laboratory, photometric and visibility laboratory and pavement testing facility. There are also general support facilities such as a mechanical design and fabrication shop, a technical reference center, and an offsite Report Center.

Turner-Fairbank Highway Research Center 6300 Georgetown Pike McLean, VA 22101 Contact: John McCracken Voice: (703) 493-3422 Email: (703) 493-3475

National Highway Institute http://www.nhi.fhwa.dot.gov

The National Highway Institute offers training programs addressed to transportation employees at all levels of the federal, state and local government; industry; universities; and international transportation community. The objectives of the NHI training are: (1) to increase the knowledge, skills, productivity, efficiency, and value of the transportation workforce; (2) to foster the implementation of state-of-the-art technologies emanating from research and development; and (3) to stimulate economic vitality while improving the U.S. competitive position in world markets by showcasing U.S. technology to the international transportation community.

In addition, the NHI participates in other learning activities including: administering the Dwight David Eisenhower Transportation Fellowship Program, providing resource

materials for universities, and involvement with industry and international entities including the Pan American Institute of Highways.

Federal Highway Administration National Highway Institute 4600 N. Fairfax Dr., Suite 800 Arlington, VA 22203 Contact: Gary Hamby Voice: (703) 235-0500

Fax: (703) 235-0593

Email: GaryHamby@fhwa.dot.gov

Local Technical Assistance Program http://www.ltapt2.org

The Local Technical Assistance Program (LTAP) is the most direct, hands-on method FHWA and its partners have for moving innovative transportation technologies out of the lab, off the shelf, and into the hands of people who maintain our local, rural, and tribal streets and roads.

The LTAP does this by funding technology transfer (T2) and technical assistance projects that link local highway agencies, tribal governments, universities, the States, and the Federal Government. A network of LTAP centers provide T2 services, technical assistance, training, products, advice, and educational resources to meet the varied needs of the local transportation work forces. There are 57 LTAP T2 centers, one in each State and Puerto Rico, and 6 regional centers serving Native American tribal governments.

Generally located at universities or State highway agencies, centers serve more than 38,000 rural and local agencies and tribal governments. The program is administered by FHWA's Office of Professional Development. Support for the centers come from the Federal LTAP funds, matched by a combination

of funds from State Departments of Transportation, the Bureau of Indian Affairs, universities, local agencies, and finances designated by State legislation.

Federal Highway Administration
Office of Professional Development
4600 N. Fairfax Dr., Suite 800
Arlington, VA 22203
Contact: Joe Conway
Tel: (703) 235-0552
Fax: (703) 235-0593

Email: joe.conway@fhwa.gov



Federal Railroad Administration http://www.fra.dot.gov/index4.htm

A railroad research and development program is administered by the Federal Railroad Administration (FRA) to advance all aspects of railroad safety and intercity ground transportation. R&D is carried out in the following program areas: equipment, human factors, hazardous materials, track safety, next generation high-speed trains, safety of high-speed ground transportation, and highway railroad grade crossings.

The Transportation Technology Center, managed and staffed by the Association of American Railroads for FRA, is a 50-square-mile facility located near Pueblo, CO. It has laboratories, test tracks, and instrumentation for testing and evaluation of freight and passenger rolling stock, rolling stock components, track components, and advanced systems.

The Research and Locomotive Evaluator/Simulator (RALES), managed and staffed by the IIT Research Institute (IITRI) for FRA, is a fully functional, high fidelity locomotive and train handling simulator located in Chicago, Illinois. Operation, maintenance and upgrades of the RALES facility are performed under contract with IITRI. The purpose

of this facility is to conduct human factors research, such as engineman stress and fatigue, and research involving train-handling train locomotive engineers. The cost of all uses of RALES is covered by user fees.

Office of Research and Development, RDV-30

Contact: Steve Ditmeyer Voice: (202) 493-6347 FAX: (202) 493-6333

Email: Steve.Ditmeyer@fra.dot.gov



National Highway Traffic Safety Administration

http://www.nhtsa.dot.gov

The National Highway Traffic Safety Administration (NHTSA) is an authoritative national and international source of highway and motor vehicle safety information and services and provides technical and programmatic assistance to industry; federal, state and local governments; educational and research institutions; and motorists. Examples are the Auto Safety Hotline (1-888-327-4236) which provides information on product defects; and the Buying a Safer Car program (http://www.nhtsa.dot.gov/cars/testing/ncap) which provides ratings of vehicle safety performance by crash testing new vehicles.

The NHTSA also offers much outreach information at (http://www.nhtsa.dot.gov/people/outreach) including NHTSA Facts for information on consumer products and issues, and Traffic Safety Digest highlighting innovative traffic safety projects.

Office of Research and Development, NRD-01

Contact: Gary Bell

Voice: (202) 366-5932 FAX: (202) 366-5930

Email: Gary.Bell@nhtsa.dot.gov

The Vehicle Research and Test Center (VRTC) http://www-nrd.nhtsa.dot.gov/vrtc/vrtcstar.htm

The VRTC, located in East Liberty, OH, is the principal in-house testing laboratory for NHTSA. The physical facilities include a 7.5 mile test track, vehicle dynamics area with various test surfaces, skid pad, brake slope, truck/bus durability and off-road courses. VRTC conducts research and vehicle testing in the areas of crash avoidance, crashworthiness, and biomechanics. These research and development activities produce safer vehicles through improved vehicle performance, improved occupant protection systems, improved structural integrity of vehicles, increased understanding of driver behavior, and the use of intelligent systems to enhance drivers' ability to avoid crashes and travel safely. VRTC also conducts investigations into potential safety-related defects in motor vehicles in support of the Office of Defects Investigation.

Vehicle Research and Test Center PO Box 37 East Liberty, Ohio 43319-0337 Contact: Mike Monk Voice: (937) 666-4511

FAX: (937) 666-3590

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Email: Mike.Monk@nhtsa.dot.gov



Federal Transit Administration http://www.fta.dot.gov

The Federal Transit Administration (FTA) supports its interest in federal research and development and its continuing commitment to facilitate the dissemination and implementation of transit research and planning activities to state and local agencies and private sector through its full-service **Transit**Research Information Center. The Center annually publishes Transit Planning and Research Reports: Annotated

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Bibliography, and Transit Planning and Research Program Project Directory to help its stakeholders stay abreast of the nature and scope of transit research projects.

Contact: Marina Drancsak, TRI-30

Voice: (202) 366-0201 FAX: (202) 366-3765

Email: Marina.Drancsak@fta.dot.gov

The Center also supports the **Urban Mass**Transportation Research Information Service
(UMTRIS) which is operated and maintained by the Transportation Research Board. UMTRIS is a computerized online bibliographic database on all phases of conventional, new, automated and emerging transit systems worldwide.

Transportation Research Board 2101 Constitution Avenue NW Washington, DC 20418 Contact: Jerry Maddock Voice: (202) 334-2995 Email: jmaddock@trb.edu

National Transit Institute http://policy.rutgers.edu/nti

The National Transit Institute (NTI) at Rutgers University was established to carry out training and education activities for the transit industry. NTI provides education and training to help FTA grantees comply with federal regulations, guidance, and policy; to facilitate multimodal planning by those engaged in transportation planning and programming; to facilitate the efficient introduction of advanced technologies that improve public transit services; to improve the skills and knowledge of public transit managers; to promote the development of comprehensive training programs by transit agencies for their work force; and to improve the exchange of information within the public transportation industry about education and training.

National Transit Institute 120 Albany Street, Suite 705 New Brunswick, NJ 08901-2163

Contact: Stephan Parker Voice: (732) 932-1700 FAX: (732) 932-1707

Email: stparker@rci.rutgers.edu



Maritime Administration http://marad.dot.gov

The Maritime Administration (MARAD) conducts research and development activities to assess and deploy innovative technology and management practices in the U.S. maritime industries. The purpose is to improve the competitiveness, efficiency, productivity, safety, environmental sensitivity and military utility of:

- · U.S. vessel operations in domestic and international trades
- U.S. intermodal transportation and port operations
- U.S. shipbuilding and repair yards in domestic and international trades

ARAD works closely with industry and academia. Several active research cooperatives having industry leadership have been formed in the areas of ship operations, cargo handling, maritime academies, and ship piloting.

Contact: Alexander C. Landsburg, R&D

Coordinator, MAR-130 Voice: (202) 366-1923 FAX: (202) 493-2288

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Email: alex.landsburg@marad.dot.gov

The Ship Operations Cooperative Program (SOCP) is a public/private sector partnership engaged in cost-shared joint-venture R&D to improve the safety and efficiency of vessels in a wide variety of maritime services. The purpose of the SOCP

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is to address and promote commercially beneficial innovations in ship operations through the identification, development, and application of new methods, procedures, and technologies. With the support of the Maritime Administration (MARAD), industry, labor, and government are working together to address common challenges and identify new solutions for improvements in ship operations.

Contact: John Dumbleton, MAR-500

Voice: (202) 366-1928

Email: John.Dumbleton@marad.dot.gov

Web: http://www.socp.org

Center for Global Logistics and Transportation US Merchant Marine Academy

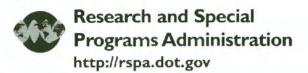
http://www.usmma.edu/ce/coned.htm

Late on the campus of the US Merchant Marine Academy, the Center for Global Logistics and Transportation (CGLAT) provides short courses, conferences, and seminars for transportation professionals seeking to learn about leading-edge developments in intermodal transportation and logistics management. The Center's programs are designed to meet the transportation training needs of corporate America as well as those of government and military organizations. Courses include topics designed for management trainees and seasoned professionals who wish to understand complex transportation and logistics systems in order to most efficiently manage or expand the transportation activities of their organization.

Center for Global Logistics and Transportation US Merchant Marine Academy Kings Point, NY 10024-1699 Contact: James Hanna Voice: (516) 773-5159

Voice: (516) 773-5159 FAX: (516) 773-5252

Email: hannaj@usmma.edu



The Research and Special Programs Administration (RSPA) operates the **Technology Sharing Program (TSP)**, a technical assistance and information exchange service primarily for state and local government officials. It has gained a reputation of producing high quality intermodal technical reports in a user-friendly format for the non-scientist or technical person to understand and act on problems of state or local governments.

TSP Order Desk Information: (202) 366-4999

Web: http://www.tsp.dot.gov FAX: (202) 366-3272

University Transportation Centers (UTC)

The mission of the UTCs is to advance U.S. technology and expertise in the many disciplines comprising transportation through the mechanisms of education, research and technology transfer at university-based centers of excellence. The Transportation Equity Act for the 21st Century (TEA-21), enacted on June 9, 1998, authorized up to \$194.8 million for grants to establish and operate up to 33 University Transportation Centers (UTC) throughout the U.S. in FY 1998 - 2003. Ten of these centers, which are designated as Regional Centers, were selected by competition in 1999. The other 23 UTCs are located at universities named in TEA-21. After a limited competition among the named universities in FY 2002, the program will comprise 26 centers. All UTCs are required to match federal funds dollar for dollar.

Email: utc@rspa.dot.gov Voice: (202) 366-4434 Volpe National Transportation Systems Center http://www.volpe.dot.gov

The Volpe National Transportation Systems Center (Volpe Center) in Cambridge, MA, is an element of RSPA. The Center, which fosters innovation and champions transportation from a system-wide perspective, performs work on a fee-for-service basis for all modes of DOT, other federal, state, and local agencies, and some international entities. The expertise of the Center falls into four major categories: Operations Research and Analysis; Information Systems Engineering; Communication, Navigation and Surveillance; and Vehicle, Guideway, and Terminal Systems. The Center is also responsible for coordinating and supporting the Department's Small Business Innovation Research (SBIR) Program.

Volpe National Transportation Systems Center Kendall Square Cambridge, MA 02142-1093 Contact: Lynn Murray

Voice: (617) 494-2224 FAX: (617) 494-2370

Email: murray L@volpe.dot.gov

Transportation Safety Institute http://tsi.dot.gov

With over 350,000 students trained, RSPA's Transportation Safety Institute (TSI) has made major contributions to improve transportation safety and security for the traveling public - both nationwide and internationally. TSI's training programs are designed and conducted to respond to the needs of the sponsoring (or client) organizations. They are the primary provider of multi-modal safety and security training in the federal government. The Institute offers a wide variety of training courses and seminars, most of which are available at field locations as

needed. Training is performance oriented; that is, designed to teach people how to better perform their jobs to ensure safety of personnel, systems, and functions.

> Transportation Safety Institute 6500 South MacArthur Blvd., P.O. Box 25082 Oklahoma City, OK 73125-5050 Contact: Frank Tupper, Director

Voice: (405) 954-3153 FAX: (405) 954-3521

Email: Frank.Tupper@mmacmail.jccbi.gov



Bureau of Transportation Statistics http://www.bts.gov

The Bureau of Transportation Statistics (BTS) compiles, analyzes, and makes accessible information on the nation's transportation systems; collects information on intermodal transportation; and works to enhance the quality and effectiveness of DOT statistical programs through the development of guidelines and promotion of improvements in data acquisition and use. BTS publishes statistical and other information in printed and electronic forms and compiles and disseminates inventories of all transportation data resources available to the public. Visit the National Transportation Library on the BTS website for thousands of publications and reports. With the exception of BTS Office of Airline Information products, all other BTS products are available at no charge while supplies last.

Information Technology Center

Contact: Robert Zarnetske, Actg Director

Voice: (202) 366-5081 FAX: (202) 366-3640

Email: robert.zarnetske@bts.gov

Statistical Information: (800) 853-1351

BTS Products: (202) 554-3564

Email: Info@www.bts.gov

Technology and Innovation Committee Contacts

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