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# INTELLIGENT TRANSPORTATION SYSTEMS JOINT PROGRAM OFFICE (ITS JPO) WITHIN THE OFFICE OF THE ASSISTANT SECRETARY FOR RESEARCH AND TECHNOLOGY (OST-R)



## OST-R Mission

The mission of OST-R is to transform transportation by expanding the base of knowledge to make America’s transportation system safer, more competitive, and sustainable. To do this, OST-R:

- Advances innovation, technology development, and breakthrough knowledge
- Conducts research and facilitates multimodal research collaboration
- Fosters technology transfer through partnerships within the Department and with other partners
- Provides useful information and statistics to decision-makers as they debate policies
- Develops a highly skilled interdisciplinary transportation workforce for the nation.

OST-R is a dynamic, world-class transportation resource with broad technical and institutional expertise not replicated elsewhere.

## OST-R Offices

To achieve its mission, OST-R harnesses the collective resources and productivity of several offices:

- ITS JPO
- Office of Positioning, Navigating, and Timing and Spectrum Management
- Office of Research, Development, and Technology
- Transportation Safety Institute
- Volpe National Transportation Systems Center
- Bureau of Transportation Statistics.

## OST-R ITS JPO

The ITS JPO is the U.S. Department of Transportation’s primary advocate and national leader for ITS research, development, and future deployment of connected vehicle technologies, focusing on intelligent vehicles, intelligent infrastructure, and the creation of an intelligent transportation system. The ITS JPO leads the strategic advancement of ITS through investments in major research initiatives, exploratory studies, and a deployment support program including standards development, technology transfer, and training.

## Vision

### Transforming the future of transportation for the public good



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U.S. Department of Transportation

## Contribution

The ITS JPO contributes value by:

- Providing a Department-level perspective to modal ITS opportunities, issues, and policies
- Planning, coordinating, and funding a broad portfolio of cross-modal research in transformative research topics
- Conducting multi-modal coordination on cross-cutting ITS issues across all levels of the Operating Administrations
- Using the collective statutory authorities, capabilities, and deployment resources of our modal partners to achieve results they could not achieve on their own
- Working with modal partners to champion and resolve critical issues and remove technology and policy barriers to ITS.

## Activities

The ITS JPO leads, funds, and directs a multi-modal technology research program to improve transportation through the integration of advanced communications-based information and electronic technologies into the transportation system's networks, infrastructure, and vehicles. The ITS JPO maintains relationships with ITS transportation stakeholders in the United States and internationally.

## Strategy

The *ITS Strategic Plan, 2015-2019* program portfolio coordinates multiple modes and stakeholders on the most transformative issues impacting future transportation systems, capabilities, and operations. The portfolio identifies research, development, and future deployment activities across six broad, complex system transportation research and technology program areas. The portfolio addresses the ITS lifecycle of technology research and innovation through technology transfer and adoption. It includes six major areas:

- **Connected Vehicles:** The ITS JPO conducts research and coordination activities on connected vehicle policy, applications development, and prototyping demonstrations. Through planned risk-reduction activities, the ITS JPO supports implementation of regulations and guidelines to accelerate adoption and deployment of connected vehicle systems. The ITS JPO's research partners include the Federal Highway Administration, National Highway Traffic Safety Administration, Federal Transit Administration, and Federal Railroad Administration, as well as other governmental and industry partners, to advance vehicle-to-vehicle; vehicle-to-infrastructure, vehicle-to-pedestrian, and more activities.
- **Automation:** The ITS JPO's automation program plans, coordinates, and conducts the development of a technology and systems environment to enable smooth and safe introduction of automated features into the nation's vehicles and transportation systems. The program focuses on automated road-vehicle systems and related technologies research that transfer some amount of vehicle control from the driver to the vehicle.
- **Enterprise Data:** With increased connectivity among vehicles, organizations, systems, and people, unprecedented amounts of data are being generated. New methods to collect, transmit/transport, sort, store, share, aggregate, fuse, analyze, protect, and apply these data will be needed for management and operations of transportation systems. Mechanisms also must be developed to preserve personal privacy and protect against unauthorized access. This body of work supports transportation research in both Smart Cities and Internet of Things applications.
- **Interoperability:** Interoperability is essential to ensure effective connectivity among devices, systems, and modes. Interoperability focuses on enabling ITS elements in vehicles, devices, infrastructure, and applications to effectively communicate with other parts of the system as needed, regardless of where they are built and where or when they are used. Interoperability will be more critical than ever before with the implementation of connected vehicle systems and the introduction of automated transportation systems as system interdependencies increase, not only in number but also in complexity.
- **Accelerating Deployment:** As new ITS technologies and systems evolve into market-ready products, the ITS Program will address issues associated with adoption and deployment, such as standards, policies, training, investment decision-making, and implementation of successful practices. Adoption includes the phase after testing, when technologies are ready for initial implementation in the "real world" and deployment support is critical.
- **Emerging Capabilities:** The ITS emerging capabilities program focuses on exploring technologies essential to future generations of transportation systems. The ITS JPO will track technological, market, and demographic trends throughout the globe and across industries to seek and evaluate emerging capabilities that demonstrate the potential to transform transportation.

For more information, please contact:

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