

## ITE Reauthorization Principles

Supports applying a total systems management and operations approach to plan and implement the best combination of capital and operational improvements to improve safety, alleviate congestion, improve reliability, enhance economic vitality, and reduce energy consumption and greenhouse gas emissions.

Supports a total systems management and operations approach that breaks down the barriers between project types and modes, and between capital construction and operations/maintenance improvements.

Supports continued funding for ITS research, including connected vehicle technology, traffic management center operations, traffic incident management, traffic signal system management, public transit management, and advanced traveler information systems.



### ITE FAST ACT REAUTHORIZATION

#### WHITE PAPER: TSMO

Transportation Systems Management and Operations (TSM&O or TSMO) is a growing field focusing on the management of transportation assets with the mindset that we cannot build our way out of congestion. Per the FHWA, TSMO is a set of strategies that focus on operational improvements that can maintain and even restore the performance of the existing transportation system before extra capacity is needed. Examples include real-time signal retiming, congestion pricing, and incident management. FHWA and USDOT started recognizing the need for a different approach over 20 years ago with the implementation of the Intelligent Transportation Systems (ITS) program in TEA-21. Since then, recipients of Highway Trust Funds have been making institutional changes and technological investments to improve the operations and management of the National Highway System and other key transportation system elements.

In order to achieve these operational objectives, TSMO programs utilize technologies, such as wireless and fiber optic communications, cloud-based software, data collection devices and other traffic management systems. Technology allows states and local municipalities (i.e., agencies) to collaborate in real time to manage the transportation system, enhancing throughput, safety, and improving the overall efficiency of the roadway. The investments made to-date to develop and refine TSMO strategies have led to increased safety and improved mobility.

Without reauthorization of surface transportation programs, these systems and programs are at risk. Systems, like roadway infrastructure, require frequent monitoring and improvement. Day-to-day and programmatic activities are vital to their upkeep. By continuing to support, improve, and deploy these systems, ITE believes that appropriate reauthorization provisions, as outlined in its FAST Act Reauthorization Principles, will help keep these elements running. Systems will not be at risk of disrepair resulting in a negative public perception, if long-term funding can keep pace with implementation. Continual advancement of systems enables ITE members and other transportation professionals to set-up programs and projects based on system-level goals and objectives, implement and manage new technologies to improve these objectives, and strive to continuously improve the transportation system for all users.

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Supports a program that facilitates collaboration between state, regional, urban, and rural investments.

Supports federal leadership to help pursue new priorities needed to address change and innovation in the transportation landscape.

These new priorities should include transformational technologies, smart communities, emerging business models, equity, health, and climate change impacts.

## MANAGEMENT AND OPERATIONS ARE KEY TO SYSTEM PERFORMANCE

ITE strongly believes that a TSMO approach to transportation is paramount. By setting system goals and objectives across agencies and modes, the traveling public will be able to work safely and efficiently, have a home as well as engage in recreational activities. Those moving people and goods do not have to worry if they are on a state or local road irrespective of the location. The traveling public relies more and more on the smooth operations of the roadway for their lives to occur. Therefore, management and operations funding through reauthorization should be continued and strengthened as the system reaches its physical limits. ITE supports the use of federal funds for these management and operations activities.

ITE supports collaboration between transportation industry and partners in the first responder and emergency management community. These stakeholders are vital to the transportation system and should be supported; the SHRP2 “Train the Trainer” is a good example of this. Both industries play a key role when an incident occurs, and by leveraging resources and collaborating across jurisdictions, the traveling public can be assured they will receive assistance in the event of a crisis. Coordinated efforts are of prime importance in current and future scenarios given that VMT is increasing, roadway fatalities are increasing, and climate change is creating unanticipated disasters.

## MORE COMPLEX ECOSYSTEMS

ITE supports the funding of complex systems. Current transportation systems are vastly different from what we had just a decade ago. The advent of ubiquitous connectivity, improved processing power that is both faster and more miniature, and developments in energy storage have led to changes the industry could not have foretold. Connected and autonomous vehicles (CAVs), smart communities, micromobility, and mobility as a service (MaaS) are providing new opportunities and challenges.

ITE supports the safe testing and implementation of CAV technologies, as noted in its position on Connected and Automated Vehicles, adopted in 2018. ITE also supports interstate collaboration in developing operational policies for these new technologies. Car manufacturers sell vehicles that operate across jurisdictional boundaries. A patchwork of policies, laws, and operational concepts will only hurt our national advancement in this new technology.

ITE supports and advocates for Smart Communities, which is using new technology to improve a public good or service. Agencies that have embraced a Smart Community concept have provided avenues for innovation both within the transportation industry and across the traditional public works spectrum. This concept has allowed for

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Supports restoring funding for the Freight Cooperative Research Program.

Supports continued funding for the National Operations Center of Excellence.

Supports appropriating additional money to fund a permanent transportation operations discipline and program at USDOT.

communities to innovate and serve their constituents in manners never conceived before, especially around public health.

ITE supports the inclusion of new delivery models for transportation services. With the reduced cost of storage and processing power, more elements can be delivered as-a-Service. Two examples are mobility and software. Mobility-as-a-service (or Mobility-on-Demand) reduces the friction between different modes of travel and assists the traveling public has a choice to reach their destinations in the best possible way. Software-as-a-Service models give agencies and their private sector counterparts new ways of developing technology and systems without being constrained by old practices.

### **FREIGHT: AN EVER-GROWING FOCUS AREA FOR TRANSPORTATION**

ITE supports the mindset that transportation is about the movement of people and goods – both of which are vital to economic prosperity. Goods movement is an ever-changing industry. As e-commerce and rapid fulfillment expectations continue to rise, the impacts of deliveries on our rural and urban road network will be significant. Similarly, the long-haul market is changing – exploring technological solutions to overcome truck driver shortages and reduce crashes caused by human factors. All of these concepts make it ever more important to keep goods movement as part of the larger mobility conversation with people movement.

### **THE NATIONAL OPERATIONS CENTER OF EXCELLENCE IS VITAL TO TSMO'S SUCCESS**

ITE supports the National Operations Center of Excellence (“NOCoE”), which plays a key role in TSMO. NOCoE, or “the Center,” serves as the connector and advocate for TSMO practices along with ITE, AASHTO, ITS America, and USDOT. The Center’s approach cuts across these organizations to deliver valuable content and help grow the next group of TSMO professionals. These professionals will be the backbone of the industry as the operations discipline grows.

In addition, ITE supports the establishment of a permanent transportation operations discipline and program at the U.S. Department of Transportation. This program should assist state and local agencies in determining when to apply their scarce apportioned funds to investments that facilitate effective, efficient, and safe operations on the transportation system. Such a program should focus on supporting private and public sector integration of operations technologies, interstate operations management solutions, and a leadership forum and clearinghouse for operations best practices.