



U.S. Department of Transportation
Federal Highway Administration

Policies and Processes that Support Mainstreaming TSMO

Webinar
November 3, 2021

U.S. Department of Transportation
Federal Highway Administration (FHWA)
Office of Operations



Source: istock

Webinar Purpose

Describe FHWA project on mainstreaming TSMO

Explain why policies and processes are important for mainstreaming TSMO

Highlight six common areas of policies and processes that transportation agencies can use to increasingly mainstream TSMO

Illustrate mainstreaming TSMO policies and processes in action at State Departments of Transportation (DOTs)

Discuss questions from participants on mainstreaming TSMO



Webinar Agenda

- Overview of Policies and Processes for Mainstreaming TSMO
 - Tracy Scriba, FHWA Office of Operations
 - Project Team
- Mainstreaming TSMO within State DOTs – Highlights of Policies and Processes
 - Brent Cain, Arizona DOT
 - Tim Simodynes, Iowa DOT
 - Subrat Mahapatra and Mohammed Raqib, Maryland DOT State Highway Administration
 - Doug Tomlinson, Pennsylvania DOT
- Panel Discussion and Audience Q&A



What is TSMO?

TSMO is an integrated set of strategies to optimize the performance of infrastructure through the implementation of multimodal and multi-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system while minimizing the environmental impact.

Source: See 23 USC 101 (a) (30) and FHWA website: <https://ops.fhwa.dot.gov/tsmo/#q1>



What Do We Mean by Mainstreaming TSMO?

TSMO and its strategies are readily understood, valued, and available to agency leadership and key staff regardless of where they sit in the organization.



Source: istock



Benefits of Mainstreaming TSMO

Agencies have a broader range of strategies to address transportation needs.

Operations staff and staff across disciplines (e.g., planning, design) can work together to more efficiently and effectively deliver transportation strategies.

Transportation system users experience a safer, more reliable trip with a cost-effective use of taxpayer dollars.



FHWA's Mainstreaming TSMO Project

Objective

Examine and support the mainstreaming of TSMO within transportation agencies, with a focus on State DOTs

Activities

In coordination with a National TSMO expert panel, held interviews with TSMO champions, conducted a virtual workshop, and reviewed literature

Products

White papers, case studies, webinars, videos, brochures, and a peer exchange

Timeline

Fall 2017 – Winter 2022



Mainstreaming Project Products

- This project will produce:
 - White Papers
 - Brochures
 - Videos
 - Infographics
 - Webinar
- The products will be available on the FHWA Office of Operations website.
 - <https://ops.fhwa.dot.gov/plan4ops/>





Mainstreaming TSMO

Examples of Integrating TSMO Across a Transportation Agency

Transportation Agency

EXECUTIVE LEADERSHIP

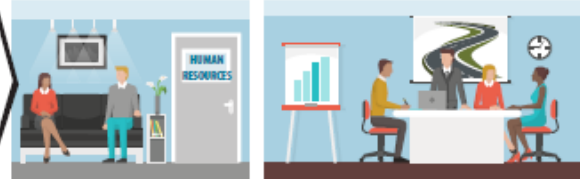
- Endorse TSMO with strategic plans and communications
- Consider TSMO directives in agency activities
- Include TSMO measures in agency dashboards
- Budget for TSMO activities

HUMAN RESOURCES

- Provide TSMO training
- Develop job categories for new workforce requirements for TSMO
- Establish a career path for those involved in TSMO

PROJECT DEVELOPMENT AND DESIGN

- Evaluate TSMO options to support performance-based practical design
- Include TSMO strategies in capacity projects to maximize investments
- Incorporate TSMO assets in infrastructure design
- Incorporate TSMO elements in design manuals



PLANNING AND PROGRAMMING

- Consider TSMO solutions as alternatives to capacity expansion projects
- Incorporate travel time reliability, efficiency, and equity in performance goals and objectives
- Identify and prioritize operations needs and investments
- Evaluate TSMO strategies for programming
- Integrate TSMO into transportation plans

TRANSPORTATION MANAGEMENT

- Monitor travel conditions 24/7
- Coordinate with partners for traffic incident management
- Share operations data with planners



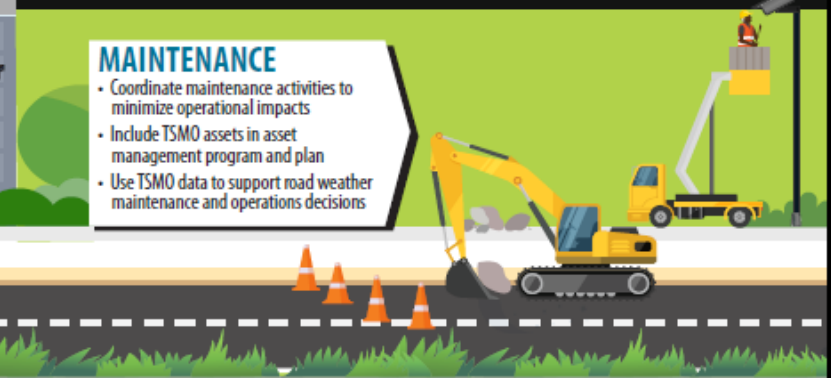
CONSTRUCTION

- Apply TSMO strategies to improve work zone safety and mobility
- Coordinate work zone scheduling
- Provide traveler information on construction projects
- Accelerate construction methods



MAINTENANCE

- Coordinate maintenance activities to minimize operational impacts
- Include TSMO assets in asset management program and plan
- Use TSMO data to support road weather maintenance and operations decisions



Project Focus Areas

- **Policies and Processes**
 - Formalize TSMO in an agency, integrate it across divisions, and make TSMO meaningful to staff
- **Agency Culture**
 - Establishes TSMO as a valued tool to accomplish an agency's mission
- **Decision-Making and Information Management Systems**
 - Facilitate a more effective use of TSMO and support its use across agency functions
- **Business Case for TSMO**
 - Encourages agency commitment to TSMO as part of its way of doing business and supports adoption of TSMO strategies



How Policies and Processes Support Mainstreaming

- Formalize and guide the implementation of TSMO strategies
- Integrate TSMO across functional areas of a State DOT
- Support, including TSMO strategies as options and alternatives to address transportation needs
- Engage and educate disciplines in the opportunities provided by TSMO
- Promote consistent application of TSMO strategies



Common Areas of Policies and Processes Used for Mainstreaming TSMO

Integrate TSMO into business practices



Incorporate TSMO formally into planning and project development



Include TSMO in agency manuals and guidance documents



Develop TSMO committees



Develop organizational structure and staff positions that support TSMO

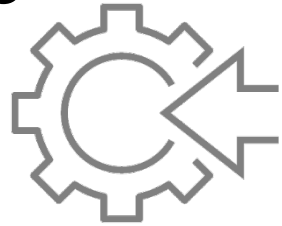


Integrate TSMO into agency-wide performance management



Business Practices

- Business practices can integrate TSMO into how work is done
- Business practices include:
 - Project identification and selection
 - Contracting and procurement
 - Data management
 - Partnerships
- Integrating TSMO into day-to-day activities can:
 - Raise awareness of TSMO and increase its use
 - Lead to change in organizational culture and employee mindset
- TSMO policies and plans can insert TSMO in business practices



Planning and Project Development

- Transportation planning and project development can include TSMO in identifying needs, determining how to meet those needs, and converting that to projects
- Incorporating TSMO into planning and project development decisions is key to funding and implementing TSMO strategies
- TSMO can offer cost-effective alternatives for addressing needs and enhance the effectiveness of other solutions



Planning and Project Development (continued)

Ways to incorporate TSMO into **planning** include:

- Efficient, reliable transportation system performance in plan goals and objectives
- Operations-oriented performance metrics to identify and prioritize needs and investment priorities
- Operations data sharing with planners to support all aspects of planning
- TSMO plan as key input to the long-range transportation plan and investment programming



Planning and Project Development (continued)

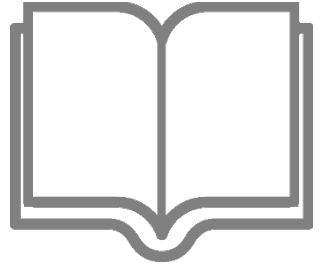
Ways to incorporate TSMO into **project development** include:

- Project review checklist with TSMO considerations used in project scoping
- Operations data shared to support project development and prioritization
- Leverage TSMO to support performance-based practical design or solutions
- ITS architecture used to include technology for TSMO strategies in projects



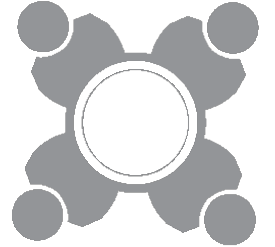
Manuals and Guidance

- Integration of TSMO-focused actions in agency manuals and guidance documents helps ensure TSMO is considered in processes throughout a State DOT.
- Changes to written documentation
 - Formalize processes and procedures of TSMO in other functional areas and demonstrate its importance
 - Standardize TSMO implementation across the agency and get everyone on the same page
- Staff training is key to rolling out on changes to existing practices



TSMO Committees

- TSMO committees show support and direction for TSMO
- Committees can:
 - Coordinate TSMO efforts across functions and divisions
 - Develop agency-wide TSMO policies and procedures
 - Prepare for and respond to rapidly changing transportation technology and data needs
- Committees may be permanent or temporary and include external partners such as local DOTs, transit agencies, and metropolitan planning organizations (MPOs).



Organizational Structure and Staffing

- Organizational structure and staff positions can support mainstreaming TSMO
- Organizational structure includes:
 - Reporting relationships
 - Grouping of individuals into departments
 - Systems for effective communication, coordination, and integration across departments
- Agencies are creating TSMO units, TSMO staff positions, TSMO coordinators, and TSMO liaisons to advance TSMO



Performance Management

- Integrating TSMO into agency-wide performance management practices can increase the:
 - Visibility of TSMO
 - Importance of improving TSMO measures
 - Resources for TSMO to “move the needle”
- Areas for TSMO integration in performance management include:
 - TSMO performance measures and targets in plans and dashboards
 - Evaluating and forecasting benefits of planned TSMO strategies
 - Tracking benefits and return on TSMO investments to build business cases



Steps to Consider for Mainstreaming TSMO in Policies and Processes

- Review current policies and processes to identify if they restrict, enhance, or are neutral in advancing TSMO
 - Revise to better support TSMO, such as in agency manuals and standards
- Include TSMO measures in dashboards and project analysis
- Create a TSMO plan
- Establish a TSMO steering committee for coordination
- Meet with managers in other divisions to discuss what TSMO can offer
- Create TSMO staff positions



Presentations from State DOTs

- Brent Cain, Arizona DOT
- Tim Simodynes, Iowa DOT
- Subrat Mahapatra and Mohammed Raqib, Maryland DOT State Highway Administration
- Doug Tomlinson, Pennsylvania DOT



Discussion and Question Session with the Panel



Thank you for participating!

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