

HDR



TSMO Education in the Heartland

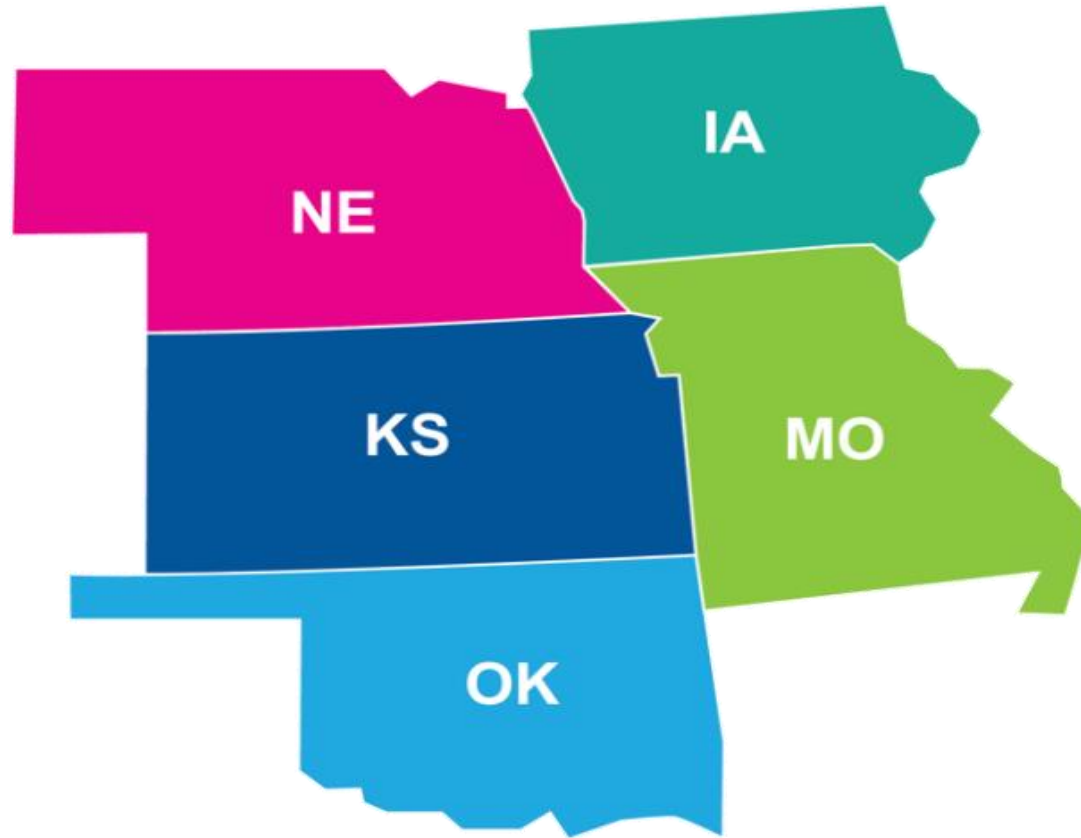
Matthew Volz, PE
HDR

ITS Washington
December 2018
Seattle, WA



ITS Heartland Chapter of ITS America

- Since 1999
- 300 members
- Strong Annual Meeting



BACK TO CLASS

Welcome to TSMO University



Why
Now

Training
Resources

Why TSMO Training and Why Now?

- SHRP2 Grant – New TSMO training
- ROFs/ROLFs
- Expand agency knowledge/support
 - Get deeper



TRAINING RESOURCES

The screenshot displays a webinar interface. At the top, a video feed shows two presenters. Below it is a presentation slide titled "Regional Operations Forum Training Program" and "ITS Heartland TSMO Webinar: Delivering TSMO". The slide content includes "Closing Comments, Upcoming TSMO Training Schedule" and the date "Thursday, September 28, 2017, 10:00 AM to 2:00 PM". Logos for ITS Heartland Chapter, IOWADOT, Kansas, MoDOT, NEBRASKA, DOT, and HDR are visible at the bottom of the slide. To the right of the slide is a Q&A panel with a question: "Could you ask a question of MoDOT and Iowa DOT about what holes they stepped into introducing the subject of TSMO internally?". The webinar is titled "HDR Presents TSMO Seminar" and "Delivering TSMO" with ID "134-149-547". The GoToWebinar logo is at the bottom right of the interface.

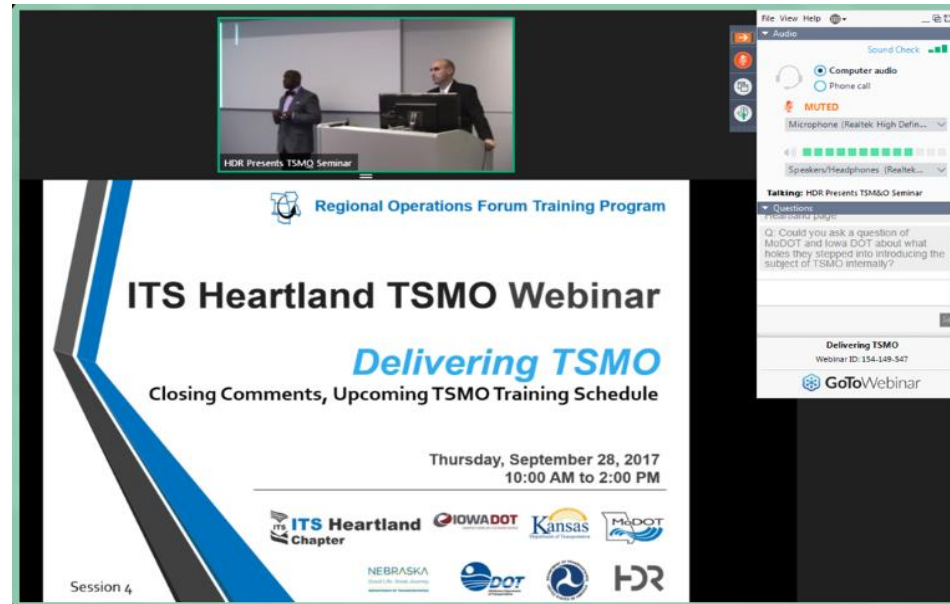
Webinars

Targeted Training



TSMO Education in the Heartland

- Monthly Webinars (9 total)
 - Started June 2017
- In-Person Sessions (3 total)
 - September 2017 (Omaha)
 - Spring 2018 (ITSH Annual Meeting, Lincoln)
 - Fall 2018 (Train-the-Trainer, Kansas City)





WWW.ITSHEARTLAND.ORG

A NEW ROADMAP TO TSMO AWARENESS



REGIONAL OPERATIONS FORUMS
Transportation Systems Management & Operations (TSMO) is a cross-cutting approach meant to optimize existing infrastructure through better integration, coordination, and systematic implementation of key operational strategies. The USDOT has provided training on TSMO principles through a series of Regional Operations Forums around the country but was seeking additional delivery methods to impact more transportation professionals through the SHRP2 program. The Kansas DOT, as the lead state, applied for a SHRP2 grant on behalf of the ITS Heartland Chapter of ITS America and was awarded a grant in 2016 to provide TSMO training across the ITS Heartland 5-state region (Iowa, Kansas, Missouri, Nebraska and Oklahoma).

ITS Heartland Chapter

Current TSMO Activities:

- Nebraska TSMO**
 - Engaging in TSMO education and training
 - Planning to develop a Statewide TSMO Plan
- Kansas TSMO**
 - Evaluating how TSMO can help accomplish the KDOT mission
 - Making organizational changes to incorporate TSMO into project planning
- Oklahoma TSMO**
 - Considering the development of a Statewide TSMO Plan
 - Engaging in TSMO education and training
- Iowa TSMO**
 - Developed a Statewide TSMO Plan in 2016
 - Embarking on a new agency education plan for Traffic Operations
- Missouri TSMO**
 - Developed a Statewide TSMO Plan in 2017
 - Have a robust Operations Performance Measurement and Management Program

PHASE 1
TSMO PROGRAM MANAGEMENT SERVICES
ITS Heartland created a TSMO Steering Committee comprised of an ITS Heartland Board Member from each of the five state DOTs. ITS Heartland also selected a consultant to facilitate the TSMO training program through a series of webinars and in-person training sessions to be conducted over a two-year period. A consulting firm, HDR, was selected and their training professionals worked with the TSMO Steering Committee to develop the curriculum, set training schedules, develop performance measures and invite subject matter experts to provide training. Performance measures to determine the effectiveness of the training will allow the USDOT to evaluate the impact on targeted audiences. These will include number of attendees, actions taken by agencies within ITS Heartland to advance TSMO and feedback obtained through evaluations by participants. Finally, the training sessions will be achieved for self-paced training and future use by transportation operations personnel. The goal of the training program is to share this valuable information in a more convenient format, with a wider audience of transportation and operations personnel (including transportation decision makers).



TSMO TRAINING PROGRAM
The ITS Heartland TSMO Training Program is comprised of webinars as well as live training. Each month a new topic is introduced and a subject matter expert provides training and expertise to our audience. Recent training topics include:

- TSMO Overview
- TSMO to Improve Safety
- TSMO to Improve Reliability
- Delivering TSMO
- Communicating TSMO
- TSMO Performance Measurement

Each webinar is broadcast live but ITS Heartland also archives the webinars on their website at www.itsheartland.org.



PHASE 2
TSMO TRAINING PROGRAM FUTURE
ITS Heartland is entering Phase 2 of its TSMO Training Program. This phase will include more targeted training for specific groups and more focused TSMO education with all levels: Agency Executives to Design and Operations Staff to Field Level personnel. TSMO Expert Teams will be tasked with meeting and presenting to various groups, agencies, organizations and individuals to educate them on TSMO benefits, encourage action and spur projects forward.

FOCUSSED TRAINING: DESIGNERS AND OPERATIONS PERSONNEL
Target Audience Description: Design Engineers, Operations Personnel, TMC Staff, Planning Personnel, MPO Staff, Traffic Engineers, Public Works Engineers, City Planners, Consultants, District Engineers, Bureau Chiefs, etc.
Learning Objectives:

- Be able to define TSMO and identify TSMO strategies;
- Be aware of how construction and maintenance activities affect traffic operations and vice-versa;
- Recognize certain TSMO strategies that can be applied to issues they are facing now;
- Identify traveler information related TSMO strategies that can benefit their projects;
- Recognize TSMO strategies that are not applicable to their needs;
- Recognize the benefits of TSMO strategies to their projects and their agency;
- Recognize the costs of various TSMO strategies;
- Recognize how including TSMO early in the project planning process can benefit the agency, designers and operations personnel;
- Be aware of impacts that various TSMO strategies will have on their agency and be viewed by the public or political leadership.

FOCUSSED TRAINING: FIELD PERSONNEL AND CONTRACTORS
Target Audience Description: Maintenance Supervisors, Maintenance Operators, Construction Engineers, Construction Technicians, Inspectors, Traffic Signal Technicians, Contractor Foreman, Contractor Field Engineer, Traffic Control Subcontractors, Law Enforcement, Fire, Towing Companies, etc.
Learning Objectives:

- Be able to define TSMO and identify TSMO strategies;
- Identify how construction and maintenance activities affect traffic operations and vice-versa;
- Identify how contractor activities and changes affect traffic operations and traffic phasing;
- Identify TSMO strategies that can improve safety, improve work zone operations, improve traffic incident management and reduce the impact of projects on the traveling public;
- Recognize how planning for unplanned events can reduce impacts;
- Recognize that they are empowered to request changes that will have a positive impact on traffic operations;
- Be aware of TSMO strategies that are not applicable to their needs;
- Be aware of the benefits of TSMO strategies to their projects;
- Be aware of the general costs of various TSMO strategies;
- Recognize how including TSMO early in the project planning process can benefit the agency and contractors;
- Be aware of impacts that various TSMO strategies will have on their agency/company and be viewed by the public or political leadership.

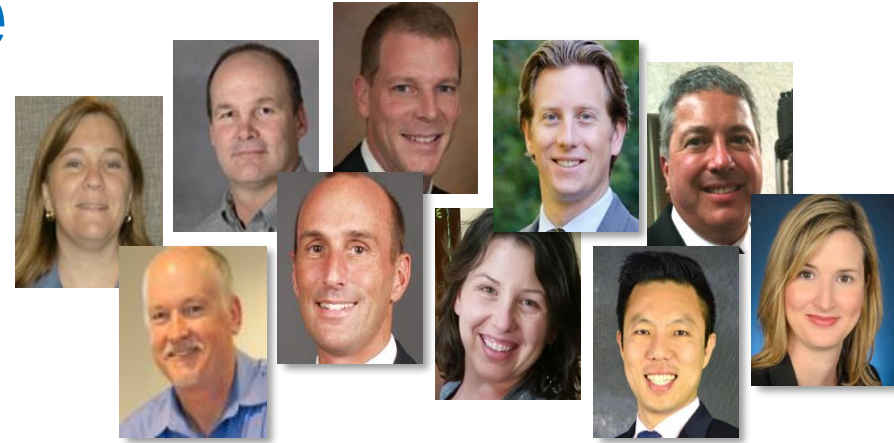
TSMO DEFINITION
TSMO encompasses a broad set of strategies that aim to optimize the safe, efficient and reliable use of existing and planned transportation infrastructure for all modes. TSMO is undertaken from a systems perspective, which means that these strategies are coordinated with related strategies and across multiple jurisdictions, agencies, and modes.

FOCUSSED TRAINING: AGENCY EXECUTIVES
Target Audience Description: Public agency leaders including DOT Directors, State Transportation Engineers, Division Heads, Public Works Directors, Highway Commissioners, Political Leaders, MPO Directors, etc.
Learning Objectives:

- Be able to define TSMO and identify TSMO strategies;
- Recognize TSMO needs and how improving operational efficiency impacts/benefits their agency;
- Identify the funding needs associated with various TSMO strategies;
- Recognize how including TSMO early in the project planning process can benefit the agency;
- Recognize the impacts that various TSMO strategies will have on their agency and be viewed by the public or political leadership.



TSMO Education in the Heartland – Phase 1



- Overview of TSMO – Laying a Foundation
- TSMO to Improve Safety – Laying a Foundation
- TSMO to Improve Reliability – Laying a Foundation
- Delivering TSMO
- Communicating TSMO to Shareholders
- TSMO Performance Measurement
- TSMO Workforce Education
- CV and AV Impacts on TSMO
- TSMO Funding
- TSMO Planning Primer
- Data Driven Safety Analysis
- All archived at: www.itsheartland.org, along with PDH certificates





Regional Operations Forum Training Program

TSMO focuses on actively managing the multimodal transportation network to deliver improved safety and mobility outcomes. It 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 the capacity and improve security, safety, and reliability for the transportation. *–Moving Ahead for Progress in the 21st Century (MAP-21)*

TSMO

- Maximizes current investments in roads, bridges, rails and transit systems
- Offers near-term, lower cost solutions
- Works as an alternative or complement to adding capacity

Archived TSMO Webinars

April 23, 2018 – TSMO Program Planning – Presented at the ITS Heartland Annual, facilitated by Tracy Scriba and Jim Hunt, USDOT

- [Introduction](#)
- [Panel Discussion](#)
- [Key Elements](#)
- [Small Group Activity/Closing](#)

PDH – Click [here](#) for a Certificate of Continuing Education for TSMO Program Planning Workshop

March 22, 2018 – Funding Solutions for TSMO Activities

PDH – Click [here](#) for a Certificate of Continuing Education for Funding Solutions for TSMO Activities

February 22, 2018 – CV and AV Impacts on TSMO

PDH – Click [here](#) for a Certificate of Continuing Education for CV and AV Impacts on TSMO

January 25, 2018 – TSMO Workforce Development

PDH – Click [here](#) for a Certificate of Continuing Education for TSMO Workforce Development



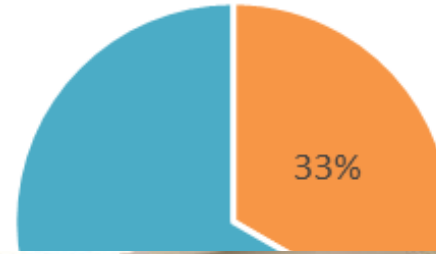
TSMO Education in the Heartland – Phase 2

- Train-the-Trainer
- SME trainees from 5 state DOTs, MPO, Consultants
- 2-day seminar
- Presentation Skills
- TSMO Materials
- Practice Presenting TSMO
- 3 Target Audiences



Results

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ic Sector



HDR

Recognition!

ITS Heartland's TSMO University
one of four NOCoE National
TSMO Award Winners!

The screenshot shows the NOCoE website header with the logo and tagline "Delivering resources to save time, lives". Below the header is a navigation menu with links for "Knowledge Center", "Why TSMO?", "Calendar", "News", and "About Us". The main content area features a "TOP STORIES" section with a large image of a highway interchange. The image shows a multi-lane highway with overhead signs. The signs include "LEFT HOV LANE", "95 NORTH", "EXIT ONLY", "HOV LANE", "15 NORTH", "ENDS 1/2 MILE", and a large electronic sign displaying "LAKE HEAD BLVD 14 CONSTRUCTION AHEAD", "CRAIG RD 18 SLOW DOWN", and "US-95 AHN RD 25". Below the image, the text reads "TSMO Awards" and "2018 NOCoE TSMO Awards winners are: Arizona DOT, ITS Heartland/HDR, North Carolina DOT, and Oregon DOT [Read More](#)".

