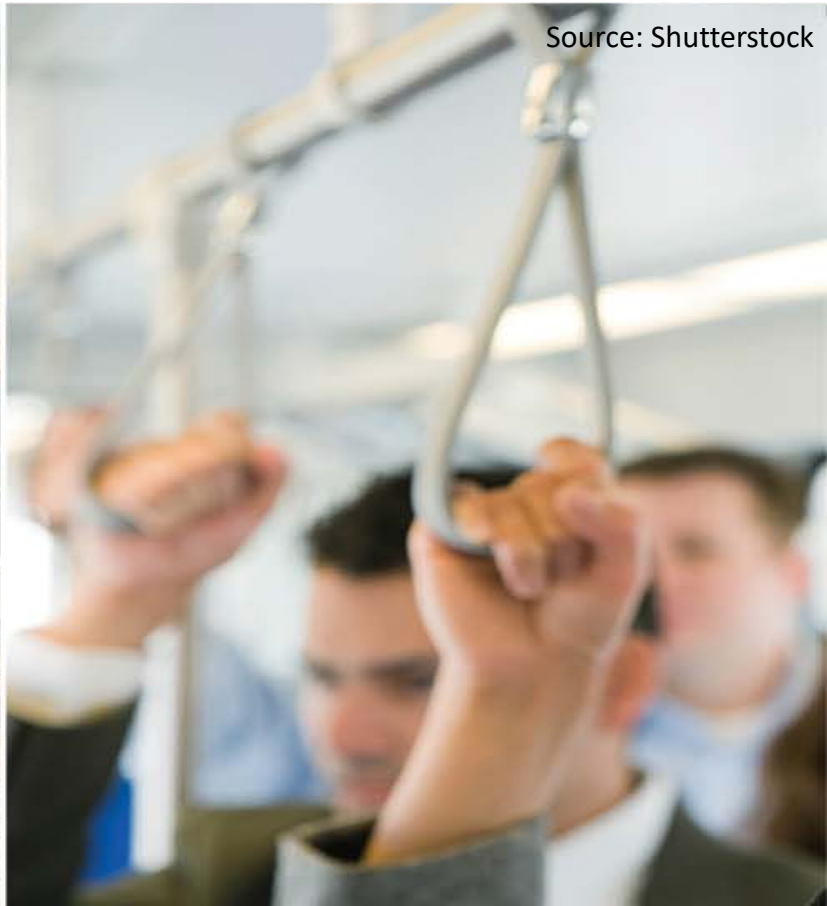
Source: Shutterstock

Source: Shutterstock


Source: Shutterstock

Linking Transportation Systems Management and Operations and Mobility of Demand

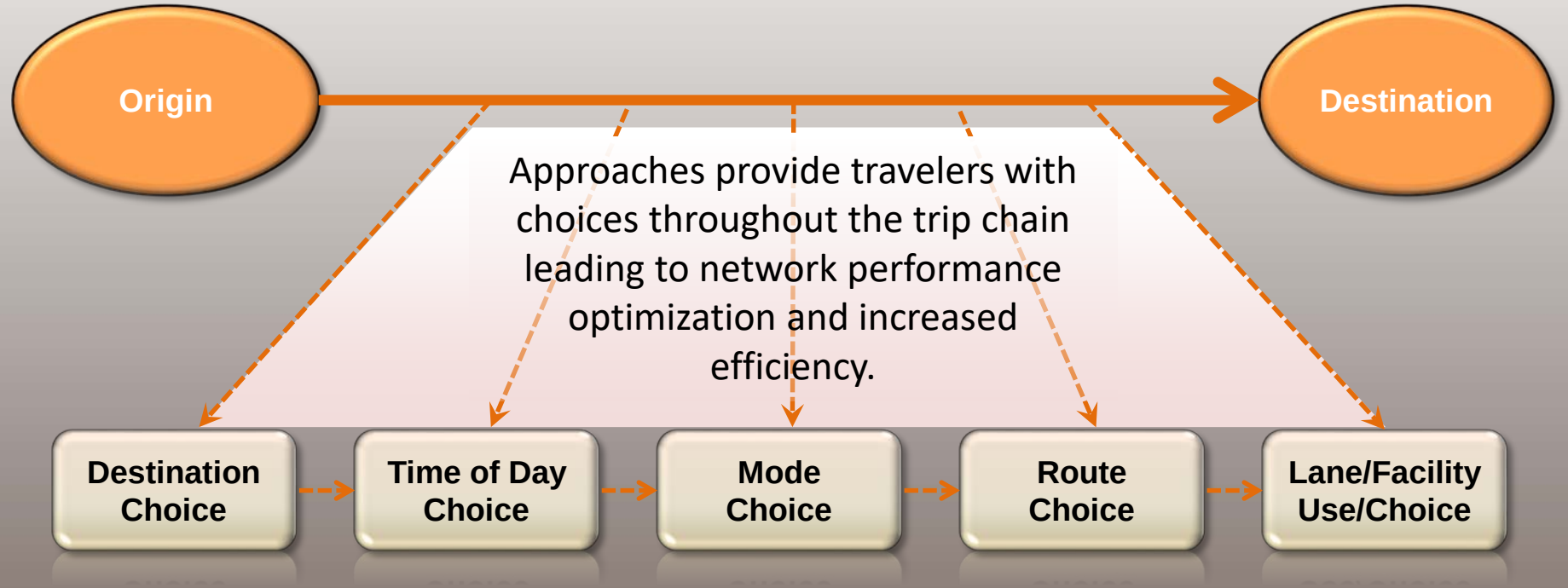
A Framework for Integrating Demand Management and Traffic Management Services as Part of TSMO

National Webinar

November 20 2019

U.S. Department of Transportation
Federal Highway Administration

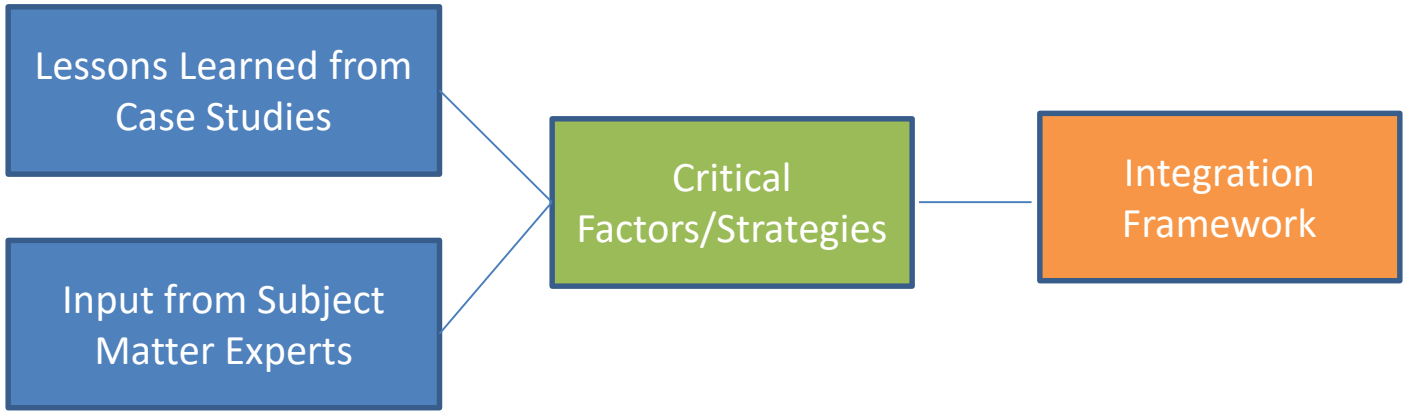
Managing Demand through the Trip-Chain



Key Takeaway: Active management occurs before, during, and at the end of the trip chain

Framework: Integrating Demand Management and Traffic Management Services

- Provide a starting point to regions to identify gaps and opportunities
- Provide a pathway to develop an action plan and roles



Capability Areas

- Supportive Policies and Flexibility in Existing Programs
- Inter- and Intra- Agency Communication and Collaboration Capabilities
- Regional Data Sharing
- Focus on Traveler Choices
- Dynamic Management of Facilities/Corridors
- Integration with Regional Goals, Plans and Operational Functions
- Marketing of Travel Services
- Consideration of Multimodal Options
- Considerations of Access and Equity

Capability Levels

Levels	Description
Level 1 (Ad-hoc)	TSMO and MOD largely considered separate functions with limited interaction between the two groups. Groups work together primarily for regionally significant events but ability to develop robust active demand management strategies is still minimal.
Level 2 (Managed)	TSMO and MOD professionals are starting to leverage each other's capabilities through regional information coordination and exchanges. Successes in large events have promoted a culture of collaboration but capability to support active demand management strategies is ad-hoc.
Level 3 (Integrated)	TSMO and MOD professionals are fully integrated into regional transportation operations and can leverage each other's capabilities and systems to effectively implement a wide variety of travel management, marketing strategies and TSMO strategies that support travelers in making choices at different points through the entire trip chain.

Actions for Improvement

- Over sixty actions identified in the framework
- Handout in the webinar provides a list of actions under each capability area

Travel Contexts

Weather Events and Natural Disasters	Transit disruptions	Major road reconstruction project	Using HOT and priority treatments for transit service	Special Event management	Influencing Parking	Managing system efficiency

- May provide **targeted opportunities** for MOD services and TSMO professionals to get together
- May create opportunities to **enhance travel choices**
- Travelers may be more prone to making short-term travel decisions
- **Need for system management** can be greater

Emerging Mobility Activities Influencing Choices

Weather Events and Natural Disasters	Transit disruptions	Major road reconstruction project	Using HOT and priority treatments for transit service	Special Event management	Influencing Parking	Managing system efficiency

- Temporary **priority treatments** for buses and HOVs
- Integration of shared mobility services for **first- and last- mile services**
- Park-and-ride lot monitoring and information sharing
- **Advance notification** of impending weather to travelers and employers
- Promotion of transit use or telecommuting during weather events
- Local employer outreach about incident conditions
- Combination of transit access with event tickets
- Parking information and reservations
- Shuttle service coordination

Real-World Examples

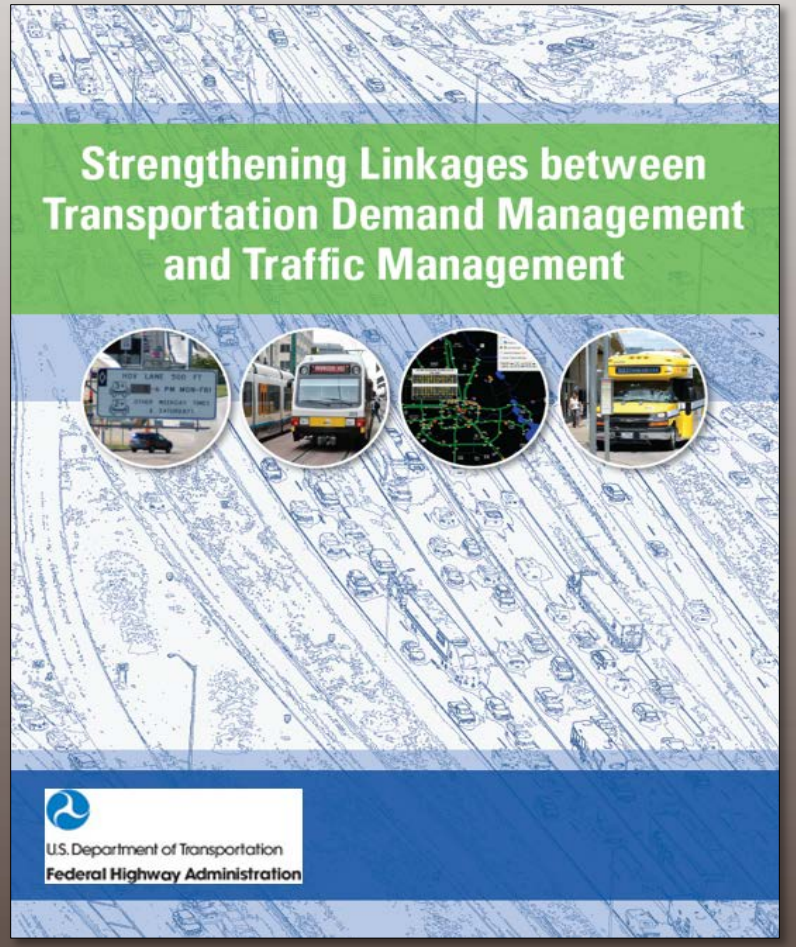
Context	Case Studies
Managing Demand and Traffic during Weather Events/Natural Disasters	Case 1. Hurricane Harvey Mobility Response – Houston Transtar Case 2. Utah DOT's Traffic Operations Center proactive weather messaging
Linking TM and TDM as part of Transit Disruption	Case 3. SafeTrack – Washington, D.C. Case 4. Amtrak New York Pennsylvania Station Emergency Repair Work
TDM as part of a major road reconstruction project	Case 5. New Jersey Pulaski Skyway Reconstruction Case 6. Texas I-35 Freight Trip Optimization with Construction Information Case 7. Atlanta's I-85 Bridge Collapse
Managing system efficiency using ADM and ATM	Case 8. NYSDOT Active Transportation and Demand Management Program Case 9. Houston's ConnectSmart Program

Real-World Examples

Context	Case Studies
Using HOT and priority treatments for transit service enhancements	Case 10. MoPac Express Lanes Improvement Project in Austin, Texas Case 11. I-110/I-10 Express Lanes HOV Incentives (Los Angeles County) Case 12. I-55 Bus on Shoulder (Chicago Region)
Special event management using parking, ADM, and traffic management	Case 13. UCI Road World Championships (Richmond, VA) Case 14. Mass Transit Super Bowl (New Jersey and New York) Case 15. Wyoming DOT and the 2017 Solar Eclipse
Smart Parking management	Case 16. SFpark: Managing Parking Demand via Pricing (San Francisco)

Resource

https://ops.fhwa.dot.gov/publications/fhwahop18072/index.htm



U.S. Department of Transportation
Federal Highway Administration

MOD Related Resources & Publications

- MOD Business Models Synthesis Report*
- MOD Planning and Implementation: Current Practices, Innovations, and Emerging Mobility Futures*
- MOD Marketplace Concept of Operations*
- MOD Sandbox Independent Evaluation Reports*
- Multimodal and Accessible Travel Standards Assessment: Forward-Looking Assessment White Paper *
- MOD Sandbox Independent Evaluation Plans (2018)
- MOD Operational Concept Report (2017)

* = Report will be released in 2020

TSMO, TDM and Active Demand Management Resources

Questions & Answers

SAVE THE DATE

December 11, 2019: Introduction to MOD
January 22, 2020: Planning & Implementation of MOD
February 12, 2020: MOD Business Models
March 18 & April 15, 2020: MOD Marketplace, Supporting Standards, and Case Studies

Note: All webinars are on Wednesdays at 1:00-2:30 PM ET