TRANSPORTATION SYSTEMS MANAGEMENT & OPERATIONS (TSM&O): A SHIFT IN CULTURE
Transportation Systems Management & Operations (TSM&O)

• The Basics...
  – What is it?
    ▪ The FHWA defines TSM&O as “an integrated program to optimize the performance of existing multimodal infrastructure through implementation of systems, services, and projects to preserve capacity and improve the security, safety, and reliability of our transportation system.”
  – Why do we care?
    ▪ Capacity improvements projects are difficult to fund and build, and we may not really need them anyway
    ▪ We need to find a way to measure performance so we can invest in strategies that are effective
    ▪ We need to treat the transportation system as connected network that includes multiple modes and choices
TSM&O Is Becoming a Popular ‘Buzzword’

• There are a lot of TSM&O activities occurring at the national, state, and local level
  – FHWA’s Creating an Effective Program to Advance Transportation System Management and Operations (TSM&O) – A Primer
  – SHRP 2 Research on Reliability and the TSM&O Capability Maturity Model
  – NCHRP Project Number 20-07/345 - Program Planning and Development for Transportation System Management and Operations (TSM&O) in State Departments of Transportation
Key Dimensions of Capability - Six critical dimensions are closely associated with the more effective TSM&O activities, including:

- Business processes – including formal scoping planning, programming, and budgeting;
- Systems and technology – including systems architecture, standards, interoperability, and standardization and documentation;
- Performance measurement – including measures definition, data acquisition, analysis, and utilization;
- Culture – including technical understanding, leadership, policy commitment, outreach, and program authority;
- Organization and workforce – including organizational structure, staff capacity, development, and retention; and
- Collaboration – including relationships with public safety agencies, local governments, MPOs, and the private sector.
Capability Maturity Model (CMM) Levels

- **Performed**
  - Activities and relationships ad hoc
  - Champion-driven

- **Managed**
  - Processes developing
  - Staff training
  - Limited accountability

- **Integrated**
  - Process documented
  - Performance measured
  - Organization/partners aligned
  - Program budgeted

- **Optimized**
  - Performance-based improvement
  - Formal program
  - Formal partnerships

Source: Creating an Effective Program to Advance Transportation System Management and Operations - Primer
Current Level of Agency Capability – Culture

• **Level One (Performed):**
  – Value of TSM&O not widely understood beyond champions

• **Level Two (Managed):**
  – Agency-wide appreciation of the value and role of TSM&O

• **Level Three (Integrated):**
  – TSM&O accepted as a formal core program

• **Level Four (Optimized):**
  – Explicit agency commitment to TSM&O as key strategy to achieve full range of mobility, safety, and livability/sustainability objectives

Source: Creating an Effective Program to Advance Transportation System Management and Operations - Primer
How Do You Make Progress?

• From Level One (Performed) to Level Two (Managed):
  – Develop business case for TSM&O and continuous improvement of operations performance

• From Level Two (Managed) to Level Three (Integrated):
  – Establish TSM&O with a formal core business program status equivalent to other major programs

• From Level Three (Integrated) to Level Four (Optimized):
  – Rationalize TSM&O program development with other programs on basis of service-related cost-effectiveness

Source: Creating an Effective Program to Advance Transportation System Management and Operations - Primer
With all of this focus on TSM&O...

Are we changing the way we do business or are we just re-branding what we are already doing?
A Shift in Culture in Needed to Implement Change

- To implement TSM&O in an effective manner, a transportation agency should place Operations on the same level as Design, Construction, or Maintenance.
- A review of a transportation agency organizational chart can yield clues as to areas of focus for that agency.
- Many States DOTs including New Hampshire, Minnesota, Iowa, and California have included a Division or Bureau for TSM&O.
A Look at the Ohio DOT Org Chart
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Noun: culture \ˈkəl-chər\’

• the beliefs, customs, arts, etc., of a particular society, group, place, or time
• a particular society that has its own beliefs, ways of life, art, etc.
• a way of thinking, behaving, or working that exists in a place or organization (such as a business)
Make the Move Towards a TSM&O Culture

- Develop a Business Case
- Secure support from Leadership
- Empower staff that will drive the process
- Develop a Plan that is realistic and implementable
- Track progress and validate investments
- Break down the silos – communicate, cooperate, & coordinate

“When you're finished changing, you're finished.”
- Ben Franklin
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