• TSM&O aims to optimize the performance of existing infrastructure through the implementation of specific systems and services that preserve capacity and improve reliability and safety.

• Why do we care?
  – Capacity improvements projects are difficult to fund and build, and we may not really need them anyway
  – More than ½ delay and most reliability caused by unpredictable disruptions – not capacity shortfalls
  – There are specific TSMO strategies to deal with each disruption
  – While capacity is expensive, TSMO strategies are relatively low cost, effective, and quick
Origins of TSM&O

- Strategic Highway Safety Plans
- Congestion Management Plans
- ITS Deployment Plans
- Regional & Statewide ITS Architectures
- Regional Concepts of Transportation Ops
- Strategic TIM Programs
- AASHTO Guide to SOM
Why TSM&O?

- Define (or clarify) program mission, vision, goals, objectives, and performance measures
- Establish (or clarify) organizational roles, responsibilities, & strategic relationships (internal/external)
- Recommend and prioritize actions to improve program components and commit resources
- Inform and influence internal stakeholders, TSMO partners, policy-makers, and customers
- Facilitate change management in refining the DOT’s roles and responsibilities
The Six ‘Dimensions’ of TSM&O

- **Business Processes** describe the level to which TSM&O is integrated planning, programming, and budgeting.
- **Systems and Technology** describe the ability to use and standardize systems and technology that support TSM&O.
- **Performance Measurement** captures the ability to acquire and analyze system and operational performance data effectively.
- **Culture** examines the knowledge, leadership support, and authority an agency commits to TSM&O.
- **Organization/Workforce** captures the level to which an agency possesses the staff capabilities and organizational structure to support TSM&O.
- **Collaboration** with local and regional partners is a key factor in an agency’s success implementing TSM&O.
TSM&O Levels of Capability

- **Level 1: Performed** – Activities and relationships largely ad hoc, informal, and champion-driven
- **Level 2: Managed** – Basic strategy applications in place with key process and needed staff capacities under development
- **Level 3: Integrated** – Standardized strategy applications implemented in priority contexts and managed for performance; the TSM&O technical and processes developed, documented, and integrated into the regional transportation agencies, partnerships aligned.
- **Level 4: Optimized** – The TSM&O as full, sustainable, region-wide program, established on the basis of continuous improvement with all partners.
• ODOT conducted a TSM&O Self Assessment in August 2013. Scoring for each ‘Dimension’:
  - Business Processes – 2.0
  - Systems & Technology – 1.5
  - Culture – 2.0
  - Organization/Workforce – 1.0
  - Collaboration – 2.0
  - Average – 1.8
• ODOT Staff participated in a ‘scan’ tour
  - 9 States in total
Concept of Continuous Improvement

- Objective: Continuous Improvement
- Concept: Maximize TSMO Strategy Effectiveness
- Approach: Identify Key Capabilities Needed (People & Stuff)
- Methodology: Assess Current Capabilities and Develop a Program to Improve
### Common State DOT TSM&O ‘Goals’

<table>
<thead>
<tr>
<th>Organization</th>
<th>Optimizing Performance of Existing Infrastructure</th>
<th>Increase Safety</th>
<th>Increase Reliability</th>
<th>Increase Mobility</th>
<th>Anticipate and Manage Congestion</th>
<th>Minimize Unpredictable Costs of Delay</th>
<th>Increase Security</th>
<th>Improve Customer Convenience</th>
<th>Improve Coordination</th>
<th>Improve TSMO Integration</th>
</tr>
</thead>
<tbody>
<tr>
<td>Caltrans</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Florida DOT Statewide</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Florida DOT District 5</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Georgia DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Iowa DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Michigan DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>New Hampshire DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>New Jersey DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Oregon DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>South Dakota DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
<tr>
<td>Tennessee DOT</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
<td>□</td>
</tr>
</tbody>
</table>
Ohio DOT TSM&O Plan ‘Current Status’

- Established a Technical Advisory Committee
- Interviewed over 20 ODOT Business Lines
- Drafted Potential Plan Goals & Objectives
- Performed a SWOT Analysis of TSMO related functions
- Developing preliminary policy framework
- Updated SHRP2 Scan Tour Information / Best Practices
Ohio DOT TSM&O Plan ‘Next Steps’

• Establish Current Environment
• Summarize Key Findings & Impacts
• Develop Strategies and Implementation Plan
  – Identify Champions
  – Clearly Define Priorities
• Final Draft of TSMO Plan – May 2017
Contact Information:

Keith R. Mullins, P.E.
Vice President
Gannett Fleming
kmullins@gfnet.com
610-574-1190 (mobile)