

ODOT Transportation Systems Management & Operations Plan Early Action Implementation Plan

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Introduction

Historically, state departments of transportation (DOT), including Ohio DOT (ODOT), have focused efforts and resources primarily on construction and maintenance activities. Limited focus and resources have been placed on daily operational needs. The Federal Highway Administration (FHWA) has highlighted, through their Office of Operations, the Fixing America's Surface Transportation (FAST) Act, and Moving Ahead for Progress in the 21st Century (MAP-21) legislation, the need for state DOTs to strategize, implement, and evaluate the integration of systems management and operations into the agency. This requires an ongoing, iterative process that evaluates strengths, weaknesses, opportunities, and threats (SWOT) within the context of other agency plans and initiatives while taking into consideration relationships and interactions with stakeholders. As technology and demands on infrastructure change and funding and resources become more strained, ODOT must be positioned to meet these challenges and increase efficiency in the existing system through operational improvements.

To this end, ODOT developed a Transportation Systems Management and Operations (TSMO) Plan. ODOT's TSMO Plan will serve as a road map to guide the Department as it continues to integrate operations, asset management, and preservation into the organization. The TSMO Plan is the basis for statewide policy and process changes aimed at increasing the focus and execution of traffic operations to better meet future system needs.

ODOT's Early Action Implementation Plan for TSMO draws on content from several of the TSMO Plan's guiding documents to provide structure and direction during the initial roll-out of the Plan. It outlines early activities, actions and tools critical in creating ODOT's TSMO Program. Further details can be found in these guiding documents of ODOT's TSMO Plan: Policy Action Brief, Resource Alignment Brief, and Performance Measures Brief.

TSMO Program Development

Several mechanisms will guide the continued growth and development of the TSMO Program at ODOT:

1. **TSMO Council** – The TSMO Council is responsible for setting program priorities and tracking implementation. The Council will hold monthly meetings initially, moving to less frequent meetings as needed. The role of the Council is expected to evolve over time as the TSMO Program is refined and integrated throughout the Department. While the Council will provide support to the TSMO Program, the Council will not dictate the structure, functions, or workload of the Division of Operations. The Early Action Implementation Plan will be used as a basis for the TSMO Council to start its oversight activities.
2. **Regular TSMO Plan Updates** – The TSMO Plan should receive a comprehensive update at least every four years to maintain relevancy with the latest technologies and strategies. TSMO budgeting activities should occur every year over a four-year horizon and directly reflect the goals and objectives of the TSMO Program Plan.
3. **Capability Maturity Model (CMM)** – An annual self-assessment of TSMO functions should be conducted to measure ODOT's progress. The CMM exercise can be performed in conjunction with annual reporting. FHWA guidance and tools on the CMM can be found here: <https://ops.fhwa.dot.gov/tsmoframeworktool/index.htm>
4. **Performance Measures** – The proposed program level performance measures will be a tool for the TSMO Council to periodically evaluate the progress and effectiveness of the TSMO Program.

Key Early Policy Actions

The Policy Action Brief contains recommendations related to activities ODOT should consider to move the TSMO Program forward. Recommendations are organized in relation to the CMM model that ODOT uses to measure its TSMO-related development. As ODOT completes the recommended actions it will elevate the organization's score on the CMM scale.

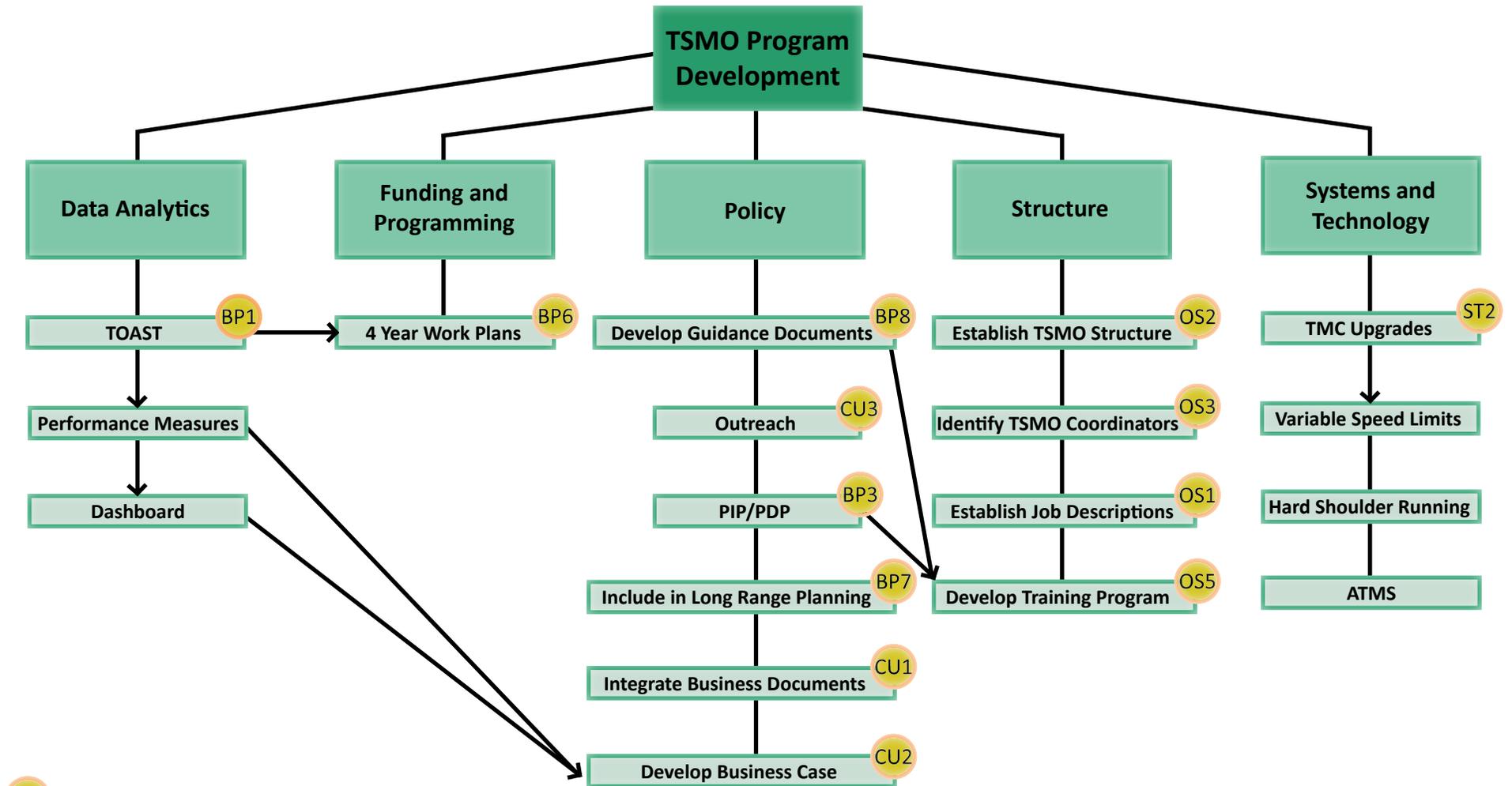
Table 1 highlights 14 key early policy actions critical to establishing the TSMO Program at ODOT. The table lists the Policy Actions, current development status, and reference to the Policy Action Brief. Actions are listed in order of importance to the program. Some actions should and can be undertaken simultaneously; others must be completed in sequential order. **Figure 1** illustrates these connections. Some actions will be led at the ODOT office level (i.e. TOAST) while others may require a technical subcommittee

to be formed by either the Division of Operations or TSMO Council for oversight.

For more detail on each recommended action, duration, needed resources, critical steps, and benefits please refer to the half page fact sheets in this document and the one-page summaries in the Policy Action Brief.

Table 1: Key Early Policy Actions, Sequential Order

Recommended Action	Current Status	Policy Action Brief Reference #
Create and maintain a TSMO Council.	Complete	CO2
Develop and implement an internal communications plan.	In Progress	CU3
Develop Traffic Operations Assessment System Tool (TOAST).	In Progress	BP1
Include TSMO in PIP and PDP.	In Progress	BP3
Include TSMO in Long Range Transportation Planning (MPOs, RTPOs, and ODOT).	In Progress	BP7
Establish TSMO organizational guidelines.	In Progress	OS2
Establish TSMO Coordinator for each District.	In Progress	OS3
Pursue interim TMC upgrades and improvements.	Initial Discussions	ST2
Develop four-year TSMO Program Plan with funding sources and identified budgets.	No Action	BP6
Develop TSMO policies, procedures, and guidance documents.	To Be Scheduled	BP8
Establish TSMO job descriptions, classifications, career paths, etc.	Initial Discussions	OS1
Develop sustainable TSMO training program for ODOT.	No Action	OS5
Integrate TSMO in the guiding documents of the Department (ODOT Business Plan, Strategic Plan).	In Progress	CU1
Develop and maintain a TSMO business case with Ohio data.	No Action	CU2



Key Early Policy Action Reference #

Must occur in sequential order

May occur simultaneously

Figure 1: Key Early Policy Action Flow Chart



CO2. Create and maintain a TSMO Council.

Importance to TSMO Plan: The mission of the TSMO Council is to recommend policies, procedures, and processes to the Director, Chief of Staff, and Assistant Directors (the ODOT Governance Board) that will improve the travel time reliability of the Highway System through operations in real-time. The goal of the Council will be to identify and track the implementation of strategies to address congestion and unreliable travel through operations and technology.

Critical Steps

1. Develop a charter similar to Technology Council.
2. Identify leadership and participants. Assign a staff person to support and assist in administering the leadership group.
3. Assemble group for kickoff and charter signature. Schedule and hold monthly meetings initially; move to less frequent meetings as need.
4. Develop summary materials and tracking for two years of TSMO activities to help guide the group.
5. Assign subcommittees or leaders to begin leading development/implementation of the ODOT TSMO Plan policy recommendations.

- » **Resources Needed:** Executive leadership time and staff support for council meetings.
- » **Expected Duration:** Ongoing.
- » **Supports:** Cross-department collaboration, executive leadership involvement, routine assessment on delivering ODOT TSMO Plan recommendations, and funding decisions.
- » **Potential Roadblocks to Success:** Availability of Council members to participate, long-term retention of Council members, providing consistent balance of Central Office and District perspectives, and balancing oversight with over-involvement.

CU3. Develop and implement an internal communications plan.

Importance to TSMO Plan: An internal communications plan will promote staff and administration buy-in, which is critical to the TSMO Program’s success.

Critical Steps:

1. Use TSMO External Communications Plan as a starting point for creating the internal communications plan.
2. Identify primary audiences.
3. Identify and recruit TSMO champions to conduct outreach at Central Office and in Districts. Newly designated District TSMO Coordinators could assume this responsibility.
4. Include TSMO updates in regular, internal news platforms, and special events.
5. Include strategies to maintain TSMO knowledge, introduce the latest TSMO strategies and technologies, and communicate TSMO Council updates.
6. Identify plan for coordinating with external partners.
7. The outreach plan should be updated in conjunction with the regular TSMO Plan update cycle to include the most recent techniques and communication platforms.

- » **Resources Needed:** Executive leadership time, communications staff support, and District champions.
- » **Expected Duration:** Ongoing.
- » **Supports:** Central Office, widespread understanding of TSMO’s benefits across the Department/departmental shift toward operations.
- » **Potential Roadblocks to Success:** Skepticism or lack of interest among staff and/or leadership.



BP1. Develop Traffic Operations Assessment System Tool (TOAST).

Importance to TSMO Plan: The TOAST will allow ODOT to assess traffic operations performance from a statewide perspective. It will expand to include more data and assist other program areas with planning and prioritization of projects.

Critical Steps:

1. Work with the Division of Information Technology and Transportation Information Management Systems (TIMS) group, as appropriate, to develop Traffic Operations Assessment Systems Tool (TOAST).
2. Convene an inter-agency group to refine the framework, uses, default criteria weighting, and desired outcome of TOAST.
3. Conduct a data discovery phase to identify available data sets, their ability for interactions with TOAST, and gaps in existing data.
4. Run tool analysis for several pilot Districts; confirm accuracy of analysis with Districts.
5. Create hotspot maps to identify operationally sensitive segments.
6. Implement and expand TSMO field applications (ST5) in accordance with analysis outputs.
7. Update annually (at a minimum) in coordination with longer-term TSMO planning and programming activities.
8. Establish interfaces between TOAST and data sharing tools, such as ATMS data and HERE traffic analytics speed data.
9. Expand TOAST functionality to query and analyze archived/historical data.
10. Continue to look for ways to expand TOAST capabilities to assist other ODOT program areas with needs analysis.

» **Resources Needed:** Staff time for Technical Services, Information Technology, Traffic Operations, District Planning Engineers. Depending on prioritization of development, and external resources may be needed.

» **Expected Duration:** Development — 6 months for prototype; Operation — Ongoing.

» **Supports:** Needs identification/prioritization, work plans, performance measures, and dashboard development.

» **Potential Roadblocks to Success:** Available IT resources and available data.

BP3. Include TSMO in PIP and PDP.

Importance to TSMO Plan: This action will ensure that TSMO strategies are considered during the scoping and project planning stages, which allows TSMO to be considered at the earliest stages of project development.

Critical Steps:

1. Convene an inter-agency group from the appropriate supporting offices (see offices under Resources Needed below).
2. Develop a list of recommended PDP modifications that can be made to ensure TSMO is considered throughout the PIP and PDP.
3. Assign business process modification assignments to staff.
4. Implement and formalize PIP and PDP modifications and provide training as needed.

» **Resources Needed:** Staff time for Traffic Operations, Environmental Services, Statewide Planning and Research, Roadway Engineering, and District Planning Engineers.

» **Expected Duration:** 12 months.

» **Supports:** Expanding TSMO culture throughout the Department and integration of TSMO into the PDP.

» **Potential Roadblocks to Success:** Proposed business process changes may be stalled by administrative delays.



BP7. Include TSMO in Long Range Transportation Planning (MPOs, RTPOs and ODOT).

Importance to TSMO Plan: Incorporating TSMO into the long range transportation plan’s recommendations and strategies will further embed it in ODOT’s mission and culture.

Critical Steps:

1. During the next long range plan update (Access Ohio 2045), include members from the TSMO Council, Technical Advisory Committee, and Steering Committee in plan development, and on the long range plan steering committee.
2. Encourage collaboration during both ODOT and MPO/RTPO planning processes.
3. Align long range plan goals with TSMO mission, vision, and goals.

» **Resources Needed:** Staff time for Statewide Planning and Research, Traffic Operations, and District Planning.

» **Expected Duration:** 2 years.

» **Supports:** TSMO’s longevity across administrations/funding changes and establishing TSMO’s importance at MPO/RTPO level.

» **Potential Roadblocks to Success:** Resistance from external partners.

OS2. Establish TSMO organizational guidelines.

Importance to TSMO Plan: Currently, TSMO functions exist on an ad hoc basis. A more consistent approach will reduce miscommunication and inefficient use of staff time/resources. The resource realignment recommendations in the TSMO Plan provide guidance on staffing, collaboration, and responsibilities related to TSMO.

Critical Steps:

1. Establish an agency-wide TSMO organizational structure.
2. Establish TSMO job descriptions and classifications (OS1).
3. Use resource realignment recommendations and work with Human Resources and TSMO Council to assign roles and responsibilities to TSMO positions at Central Office and in Districts.
4. For TSMO-related recruitment efforts, reconsider areas of expertise from which candidates are drawn (e.g., computer science, electrical and computer engineering, etc.)
5. Establish a communications and training program to convey the responsibilities of the TSMO-related roles. Training will help standardize TSMO functions across ODOT (OS5).

» **Resources Needed:** Staff time for Traffic Operations, Human Resources, and Executive Management.

» **Expected Duration:** 12 months.

» **Supports:** Improved communication between Central Office and Districts.

» **Potential Roadblocks to Success:** State regulations related to position descriptions, resistance from current staff, and staff who currently perform functions that may be separated in the future organizational structure.





OS3. Establish TSMO Coordinator for each District.

Importance to TSMO Plan: District TSMO Coordinators will play a critical role during the implementation and ongoing management of TSMO at ODOT.

Critical Steps:

1. Clarify and define the role and responsibilities of a District TSMO Coordinator.
2. Encourage and support the identification of District TSMO Coordinators.
3. Encourage and support the training of District TSMO Coordinators.
4. Educate ODOT staff on the Coordinators' roles and responsibilities.
5. Encourage the integration of Coordinators into District operations.
6. Establish and maintain a TSMO District Coordinators Peer Group to encourage collaboration, share best practices, and provide periodic updates to the TSMO Council.
7. Encourage routine communication between coordinators and Central Office.

» **Resources Needed:** Staff time for Human Resources and training program for Coordinators and ODOT staff. Traffic Operations will need to help facilitate coordination across the TSMO Coordinators.

» **Expected Duration:** Identify and integrate Coordinators — 6 months; Training — Ongoing.

» **Supports:** All TSMO activities, improved communication within and between Districts, and between the Districts and Central Office.

» **Potential Roadblocks to Success:** Need to establish the correct description of duties or classification to attract top talent to the TSMO Coordinator role, identifying champion-minded individuals with strong management and communication skills, maintaining consistency in TSMO Coordinator duties amongst districts, and overextending current workforce by assigning TSMO Coordinator responsibilities to existing staff.

ST2. Pursue interim TMC upgrades and improvements.

Importance to TSMO Plan: Before a new stand-alone TMC facility is constructed in the future, there are interim steps that are needed to improve the functionality of the existing facility and meet the needs of new initiatives like variable speed limits and hard shoulder running.

Critical Steps:

1. If space permits, it is suggested to install or add the following resources during the upgrades to the existing TMC:
 - Ergonomic and climate control workstations for all operators.
 - Two to four additional workstations.
 - One conference/situation room with view of control room floor.
 - Two to three supervisor offices with view of control room.
 - Third shift supervisor.
 2. Hire a dedicated IT technologist to provide life cycle support and become a software subject matter expert. Develop control software that integrates the traffic signal system and ITS devices into one network to monitor device performance and for data collection.
 3. Acquire control software that allows for near-term deployments of variable speed limits, hard shoulder running lane control, and truck parking information systems.
 4. Develop decision matrices for VSL and HSR.
 5. As ODOT makes the shift from traffic monitoring to traffic management (i.e. VSL and HSR), designate a staff member to maintain and update procedural manuals so that TMC staff can be provided with the most current and accurate Standard Operating Procedures.
 6. Create an Information Sharing Working Group to establish a list of offices within ODOT and partner agencies that need to exchange data and develop procedures for how the information is exchanged and how frequently.
 7. Formalize and structure a training program to train both new and existing staff on TMC operation components in detail from design and deployment to operations and maintenance.
 8. Actively participate in the Asset Management Working Group to develop a checklist of ITS field hardware and develop procedures for how to evaluate the working condition and how to initiate the work order process when necessary.
 9. Develop performance metrics to measure the success of traffic operations, create performance reports, and disseminate the information to the public and internal and external stakeholders.
 10. Explore read/write access with external agencies through the IT group to determine how much information ODOT can share externally while respecting IT/security policies. Focus on signal timing/coordination. Developing standard maintenance/operations agreements/blanket legislation would be useful as well to address these types of issues.
- » **Resources Needed:** Additional operators, dedicated IT support, consultant support, and funding for software development.
- » **Expected Duration:** 12 months. VSL initiative anticipated to be active in November 2017. HSR pilot anticipated to be active in 2018.
- » **Supports:** Improved ability to manage traffic, improved inter-agency relations, greater consistency in operations management, tracking operational goals, and enhancements to TMC functional uptime, future software and hardware procurements, and TMC staff training.
- » **Potential Roadblocks to Success:** Availability of IT resources, inability to properly operate VSL and HSR when programs launch, and software development tends to take longer than initially projected.



BP6. Develop four-year TSMO Program Plan with funding sources and identified budgets.

Importance to TSMO Plan: Historically, budgeting for TSMO activities has been performed on an ad hoc, annual basis at ODOT. Establishing a longer-term program plan, similar to other programs at ODOT, will further legitimize the proposed investment in TSMO and yield measurable benefits.

Critical Steps:

1. Define Program Activities, Policies, Procedures, and Projects to be completed over the next four years (part of TSMO Plan development).
2. Incorporate into annual work plan.
3. Map out TSMO funding stream from Pro Forma to program plan to District work plans. TSMO Council needs to understand scope of existing expenditures before prioritizing future expenditures.
4. Identify existing and potential future funding sources including P3 and collaboration with MPOs/RTPOs and Locals.
5. Present draft four-year Plan to TSMO Council.
6. Present TSMO funding proposal to the Funding Council for consideration on Pro Forma.

» **Resources Needed:** TOAST development to identify operational hotspots, staff time for Traffic Operations, Program Management, Information Technology, and District Planners.

» **Expected Duration:** 6 months.

» **Supports:** ODOT network preservation priorities, deliberate planning for multi-year, phased projects, such as Next Generation ATMS, and ability to establish dedicated funding for TSMO.

» **Potential Roadblocks to Success:** TOAST development, and funding may need to be reallocated from long-established Departmental programs.

BP8. Develop TSMO policies, procedures, and guidance Documents.

Importance to TSMO Plan: There are a number of policy, procedure, and guidance documents needed to start institutionalizing TSMO throughout ODOT, such as: self-assessment of the program using the Capability Maturity Model, considering TSMO applications during the PDP, and District-level guidance on TSMO implementation.

Critical Steps:

1. Convene a group of ODOT staff to audit existing ODOT policies, procedures and guidance documents and assess specific areas of opportunity.
2. Develop prioritized list of policies, procedures, and guidance documents that will benefit from enhanced TSMO integration.
3. Assign teams of 2-3 people to develop draft documents.
4. Allow the TSMO Council to review draft documents.
5. Establish expedited review and approval process.
6. Develop and deliver TSMO training materials.

» **Resources Needed:** Staff time for Traffic Operations, Roadway Engineering, District HMAs, and District TSMO Coordinators.

» **Expected Duration:** 12 months.

» **Supports:** Expanding TSMO culture throughout the Department and integration of TSMO into PDP.

» **Potential Roadblocks to Success:** Established administrative processes may slow down progress.



OS1. Establish TSMO job descriptions and classifications, including new TSMO-oriented career paths, retention, and succession plans.

Importance to TSMO Plan: To successfully implement the TSMO Plan, a greater emphasis on hiring electrical/communications engineers, computer/data analysts, and GIS professionals will be necessary. Establishing career paths, improving retention practices, and proactive succession planning are all connected with updating ODOT's approach to attract a highly skilled TSMO workforce.

Critical Steps:

1. Assess staffing needs based on any proposed organizational changes. Begin with TMC as they are currently short staffed on third shift (by one person), which poses a safety issue.
2. If desired, consult federal guidelines on TMC position descriptions: https://tmcdfs.ops.fhwa.dot.gov/cfprojects/uploaded_files/tmc_opreq_pds.pdf or use best practices from other DOTs.
3. Work with Human Resources and DAS to modify existing and create new position descriptions.
4. Develop a range of retention strategies (e.g., small, one-time spot bonuses for exemplary work, supplemental training, endorsed participation in professional societies, challenge coin recognition, etc.).
5. Modify ODOT's recruitment plans to attract new workforce (i.e. data analysts, systems managers, etc.).
6. Formalize succession planning for known positions that will likely be vacated over the next 2-4 years.

» **Resources Needed:** Staff time for Traffic Operations, Human Resources, and Employee Development and Lean.

» **Expected Duration:** 12 months.

» **Supports:** Ability to attract and retain high quality work force, and TMC upgrades and operations.

» **Potential Roadblocks to Success:** Competition/poaching from external partners and/or the private sector, and state regulations related to position descriptions and pay scales.



OS5. Develop sustainable TSMO training program for ODOT.

Importance to TSMO Plan: To accelerate the implementation of TSMO, ODOT should develop internal training to educate all levels of ODOT on the shift to a TSMO focused organization.

Critical Steps:

1. Develop train the trainer training for TSMO Coordinators and TSMO subject matter experts within ODOT.
2. District TSMO Coordinators, in collaboration with Central Office staff and other TSMO-related personnel, will conduct training for ODOT staff. Training may include topics such as:
 - TSMO focused Workforce development (OS1).
 - A project management training module should be developed to help project managers integrate TSMO into their projects (BP3).
 - TSMO guidance (BP8).
 - Traffic Incident Management (CO4).
 - TSMO resources (BP1).
 - Planning and design of TSMO projects (BP4, BP7, ST4).
 - Performance measurement (PM1, PM2, PM3).

Future External Training options:

- District TSMO Coordinators work with Office of Local Programs to contact external partners interested in TSMO trainings.
- Trainings could rotate throughout the Districts and around the state.
- Tailor training curricula to match local circumstances (e.g., urban vs. rural). Focus on major metro areas because they rely on a large portion of ODOT’s critical assets.
- Work with Office of Consultant Services to include TSMO training as part of consultant prequalifications for TSMO-related contracts.
- External trainings could be run through LTAP.

- » **Resources Needed:** Staff time for Districts’ Business and Human Resources, District TSMO Coordinators, Local Programs, and Consultant Services to create training curricula and operate program.
- » **Expected Duration:** Initial development — 12 months; Delivery — Ongoing.
- » **Supports:** Expanding TSMO culture throughout the Department and to external partners.
- » **Potential Roadblocks to Success:** Lacking expertise to develop effective training that can be targeted to each group, resistance from staff.

CU1. Integrate TSMO in guiding documents of the Department (ODOT Business Plan, Strategic Plan).

Importance to TSMO Plan: One of the hallmarks of integrating TSMO into state DOTs includes strengthening language in guiding documents, such as the Access Ohio Long-Range Transportation Plan, ODOT Strategic Plan, the Statewide Transportation Improvement Program (STIP), and the Annual Report with 2-Year Business Plan.

Critical Steps:

1. Include TSMO as part of Access Ohio 2045 update.
2. More explicitly reflect TSMO in the Department's Strategic Plan, 2-Year Business Plan, and STIP/TIPs.
3. Coordinate with MPOs to include TSMO in ITS Architecture and/or MPO Plans.

- » **Resources Needed:** Staff time for Statewide Planning and Research, Communications, Districts, and District Planners.
- » **Expected Duration:** 12 months.
- » **Supports:** Expanding TSMO culture throughout the Department, case for dedicated TSMO funding.
- » **Potential Roadblocks to Success:** Resistance to integrating new concepts into the Department's foundational documents, and lack of data to establish a business case.

CU2. Develop and maintain a TSMO business case report with Ohio data.

Importance to TSMO Plan: Ohio-specific data will make a compelling case as to why ODOT should be more TSMO-oriented. The business case should summarize performance of the program based on reported statistics, including TSMO activity and its impact on the overall transportation network.

Critical Steps:

1. Engage resources to develop business case framework and associated infographics that can be updated on a routine basis.
2. Identify performance measures to feed the business case.
3. Work with regional partners to ensure the availability of relevant data.
4. Develop and track performance measures.
5. Promote the TSMO business case with internal and external partners to continue building support.
6. Use FHWA's Tool for Operations Benefit Cost Analysis (TOPS-BC) to compute program benefits and costs to the motoring public:
<https://ops.fhwa.dot.gov/plan4ops/topsbctool/>
7. Include elements of business case in Long Range Transportation Plan.

- » **Resources Needed:** Staff time for Traffic Operations, Statewide Planning and Research, Communications, Technical Services, Asset Inventory and Systems Integration, Districts, and District Planners.
- » **Expected Duration:** 12 months.
- » **Supports:** Justifying investment in TSMO to the legislature and other constituents.
- » **Potential Roadblocks to Success:** Lack of resources to gather Ohio-specific data, unavailability of data, and complications with data integration due to incompatible formats.

Program Measures

Currently ODOT tracks 21 Critical Success Factors (CSFs). Two of the CSFs are directly related to TSMO and fall into the Operations category. These are Travel Time Reliability Index (TTRI) and Snow and Ice Control.

Just as ODOT measures the entire organization through the CSFs, the TSMO Program needs to measure itself through its own TSMO-specific performance measures. The Performance Measures Brief outlines the proposed TSMO Program objectives, measures, and targets. The brief includes ten program objectives with corresponding performance measures and targets for consideration.

The ten program level measures in **Table 2** represent the core program objectives, performance measures, and targets and should be given priority as the TSMO Program evolves. The proposed program level performance measures will

be a tool for the TSMO Council to periodically evaluate the progress and effectiveness of the TSMO Program.

To illustrate ODOT's progress, an online dashboard should be developed that can be viewed internally, by ODOT's external partners, and eventually by the public (for more information about the online dashboard, refer to the PM3 profile sheet in the Policy Action Brief). Many other DOTs have established publicly facing dashboards that can be used as a model for ODOT's future dashboard.

Conclusion

Pursuing the recommendations outlined in this Early Action Implementation Plan will position ODOT for a successful TSMO Program launch. There are many moving parts to the TSMO Plan; distilling the most important items here allows ODOT to focus on critical steps during implementation.

Table 2: TSMO Program Measures

Program Objectives	Performance Measures	Targets
Reduce secondary crashes caused by traffic incidents.	Percentage of secondary crashes to primary crashes on monitored freeways.	< 15% of all TMC-verified crashes.
Reduce work zone related crashes.	Frequency of work zone crashes.	Reduce by 1% over a 5 year moving average.
Reduce roadside "struck by" incidents.	Frequency.	Zero.
Maximize free flow travel time on Ohio's freeway system.	Percent of time motorists experience free flow travel time (TTRI).	> 88%
Increase resilience of the transportation system to winter weather events.	Percent of routes that recover speeds within 10 MPH of the expected speeds within 2 hours of a snow event ending.	> 96%
Reduce Incident clearance.	Duration.	To be determined.
Reduce Roadway clearance.	Duration.	To be determined.
Optimize signalized corridors.	Percentage of corridors retimed per year.	25% of Tier 1 and Tier 2 Corridors.
Reduce work zone traffic delays.	Number of hours the operating speed is less than 35 MPH per monitored work zone.	Increase no more than 25% over preconstruction.
Provide consistent incident response and management across the state.	Percentage of TIM trained emergency responders in state (DOT/Public Works, Fire, Police, Towing, EMS).	Increase by 5% per year over 5 years.