



# Transportation Systems Management and Operations Program Planning

Transportation systems management and operations (TSMO) is a broad suite of transportation strategies and applications to optimize the performance of existing transportation infrastructure, including implementation of intelligent transportation systems (ITS) and other multimodal and intermodal systems, services and projects. TSMO also offers agencies the opportunity to meet demands for leveraging technology and real-time and historic data to manage transportation networks more effectively.

Traditionally, state departments of transportation and local transportation agencies have focused on delivering capital construction and maintenance programs. Elevating TSMO to a comparable agency priority, however, requires new thinking. Technical understanding is not sufficient or even the primary driver for success. Business processes, organizational characteristics, and partnerships matter just as much, because TSMO is often a 24/7 commitment, requires collaboration across institutional boundaries, and demands a renewed focus on the customer—all of which are often a significant cultural shift for transportation agencies. As a result, new forms of strategic and program planning for TSMO are emerging.

WSP USA has been at the forefront of these developments over the past decade, conducting foundational research and preparing guidance on how transportation agencies can be more effective at delivering TSMO solutions and structuring their organizations to do so. We draw upon a team of practitioners with expertise in multiple disciplines, from policy, planning, organizational development and asset management to systems, ITS and civil engineering. Today, we are helping clients assess and improve their TSMO capabilities by preparing TSMO strategic plans, program plans and implementation plans. We strive to help agencies identify gaps, build on strengths, and implement improvements to TSMO strategies and programs so they can deliver more cost-effective and better service to their customers.

## Our services

WSP's team of experts in TSMO, ITS, organizational development and business process improvement, including former senior officials and transportation agency executives with firsthand experience, can help transportation agencies:

- Clarify missions, goals and objectives related to TSMO outcomes
- Develop the business case for making investments in TSMO program enhancements
- Identify the strengths and weaknesses of their TSMO programs and delivery of strategies and projects
- Formulate and prioritize concrete actions to improve areas of weakness and mitigate threats to successful TSMO programs
- Facilitate strategic and tactical TSMO planning workshops, for both practitioners and leaders
- Relate national best practices to context-specific TSMO program goals and projects
- Prepare TSMO strategic plans, program plans and tactical implementation plans
- Guide the roll-out, communication and performance tracking of TSMO plans
- Plan, design, implement and operate a full range of TSMO solutions

## Our Experience

### FOUNDATIONAL TSMO RESEARCH, GUIDES AND WORKSHOPS

For over a decade, WSP has developed concepts and tools to educate public agency staff on how to implement successful TSMO strategies and programs. We originated application of the capability maturity model to a framework that assesses public agency effectiveness in conducting TSMO from business process and institutional perspectives. WSP built on that work to prepare the American Association of State Highway and Transportation Officials' (AASHTO) official guidance on improving TSMO capabilities. Most recently, we laid out a plan and roadmap for development of an AASHTO *Operational Standards for Highway Infrastructure* guide that would help professionals implement TSMO in the same way that the AASHTO *Policy on Geometric Design of Highways and Infrastructure* guide advises highway geometric design practices.

These TSMO improvement concepts have been applied in 50+ state and regional workshops, guiding agencies to critically evaluate their current programs and develop improvement plans across a set of critical business process and institutional dimensions. As a subconsultant, WSP facilitated many of these workshops on behalf of the Federal Highway Administration (FHWA). Our team also led development and continued delivery of the Regional Operations Forum—an FHWA-sponsored training opportunity that provides the strategies, technologies and practices needed to advance the paradigm shift toward advancing systems operations, management and reliability.

### SOUTH DAKOTA DEPARTMENT OF TRANSPORTATION TSMO PROGRAM PLAN

Even in a rural state like South Dakota, winter weather, traffic incidents and work zones require a proactive approach to TSMO planning and delivery. WSP developed a TSMO program plan for the South Dakota Department of Transportation (SDDOT) that offers specific actions to improve TSMO planning, project programming, organization, training and collaboration, among other activities. The plan includes an implementation strategy, schedule and assessment of resource implications, and has served as an educational resource for SDDOT and focal point for statewide TSMO awareness. TSMO is now part of SDDOT's strategic priorities, and new initiatives from the plan's implementation include a TSMO leadership group, targeted training, and a multi-agency statewide traffic incident management group.

### OREGON DEPARTMENT OF TRANSPORTATION OPERATIONS PROGRAM PLAN

The Oregon Department of Transportation (ODOT) knew that its operations program had a solid foundation and responded well to customer needs, but the department wanted to advance program effectiveness further, institutionalize good practices for the longer-term, and better share them across the state. WSP led a stakeholder engagement process involving a department-wide survey, conducted interviews with key functional groups, and collaborated with an operations leadership team to guide ODOT in creating an operations program plan. Along the way, we helped formulate an operations program mission statement, definition and set of goals. We facilitated compilation of gaps in the current program, proposed actions to close those gaps, and honed a set of prioritized, final actions ODOT is currently undertaking in implementing its plan.

### MINNESOTA DEPARTMENT OF TRANSPORTATION TSMO PROGRAM PLANNING SUPPORT

The Minnesota Department of Transportation (MnDOT) recognized that tightening fiscal constraints—combined with growing public expectations—required new and innovative approaches to address system mobility needs and deliver its mission. MnDOT engaged WSP to help plan for a fully mature TSMO program that cost-effectively improves safety, mobility, accessibility, efficiency and reliability of travel statewide. We are preparing a TSMO program plan consisting of a strategic plan, implementation plan and business plan. The strategic plan makes the case for TSMO in the state and sets strategic objectives. A detailed project-based implementation plan drew input from all MnDOT's districts, applying a tactical decision-making process. The business plan will help institutionalize and sustain the reenergized program and implementation process, focusing on building consistency across the state and among MnDOT business units, proactively identifying TSMO strategies when needed in the future, and favoring those that are most cost-effective.



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