A TSMO Transformation at the Idaho Transportation Department (ITD)

By the Idaho Transportation Department

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Benefits Statement

The Idaho Transportation Department's new, statewide TSMO Program transforms operations from reactive to proactive, using data-driven strategies to improve safety, reduce delays, and maximize infrastructure efficiency. With executive backing, dedicated funding, and strategic planning, ITD is advancing projects like incident response, signal optimization, and traveler information systems. These efforts enhance roadway safety, shorten travel and emergency response times, and prioritize smart, cost-effective investments. By integrating operations into planning and coordinating across agencies, ITD is saving lives, saving time, and ensuring smarter use of transportation dollars.

In this case study you will learn:

1. How ITD brought together a set of some existing and some new strategies to coordinate an enhanced statewide TSMO program.
2. How the ITD developed a strategic TSMO Plan by outlining clear priorities, investment strategies, and operational goals aligned with statewide mobility, safety, and economic objectives.
3. How strong executive support and collaboration among engineers, planners, and other stakeholders created a foundation for sustainable TSMO integration across Idaho's transportation system.

2025 TSMO Award Winner for Agency Improvement

NOCoE

Project #204

Version Number: 1

NOCoE

BACKGROUND

Prior to 2023, while individual pockets of TSMO activities existed within ITD, there was an opportunity for a unified, coordinated, and strategic approach. Due to the unprecedented recent growth of the state of Idaho and recognizing the need to optimize its existing infrastructure and enhance the safety, reliability, and efficiency of Idaho's transportation network, ITD embarked on a transformative journey. This submission highlights ITD's proactive and rapid advancement in TSMO capabilities, marked by a foundational Capability Maturity Model (CMM) assessment in April 2023 and culminating in the creation of a dedicated TSMO position in the HQ Traffic Operations section, developing ITD's first TSMO Plan, with the goal of incorporating a list of projects into the Idaho Transportation Investment Program (ITIP) in 2026. This represents a significant transformation in mainstreaming TSMO within ITD, moving from reactive operational practices to a proactive, data-driven, and strategically aligned approach.

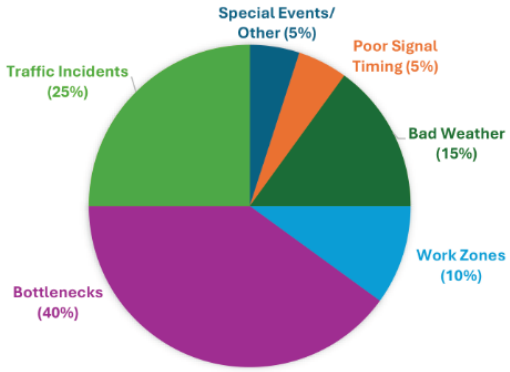


Figure 1: Causes of Congestion (adapted from FHWA[13])

Facilitated by FHWA, ITD completed its first CMM assessment on April 6, 2023. To elevate all dimensions to at least a "Managing" level of maturity, the assessment identified three key dimensions for development: systems and technology, business processes, and organization and staffing. Following the CMM assessment, ITD acted immediately by securing funding to create a dedicated TSMO position in the HQ Traffic Operations section and develop ITD's first TSMO plan (complete in May 2025).

Beginning with the 2023 CMM, this process represents a significant transformation at ITD moving from ad hoc TSMO implementation to formation of a formalized TSMO Program and TSMO integration in transportation projects across Idaho.

TSMO PLANNING, STRATEGIES AND DEPLOYMENT

TSMO Planning, Strategies and Deployment: Upon selecting a consultant team, we initiated the development of:

-The first statewide TSMO Strategic and Programmatic Plan

-An updated statewide Tactical ITS Plan

A statewide TSMO Steering Committee with participation of Districts Operations, HQ Traffic Ops, key ITD stakeholders, and FHWA was created. We also met with and interviewed staff from all ITD functional areas (including broadband, TIM,

freight, maintenance, traveler information, asset management, and we conducted interviews with several other State DOT's (Utah, Washington, Oregon, Montana, South Dakota, North Dakota, Colorado) and Idaho MPO's.

Throughout the whole TSMO Plan process we profited from strong Executive support and collaboration, and we are looking forward to having the continued support from ITD Leadership moving forward.

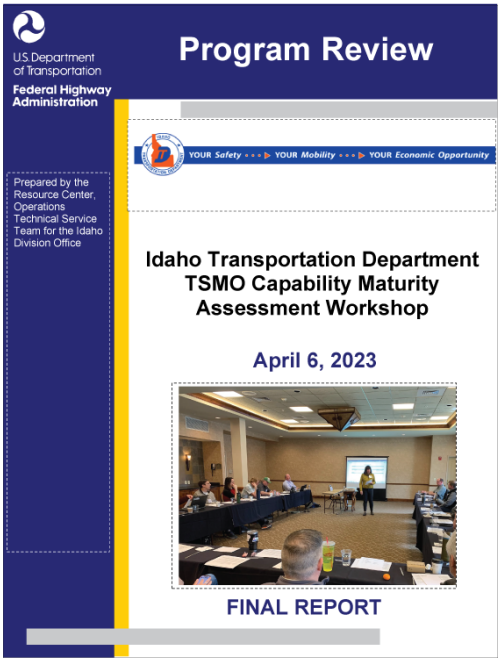
After the TSMO Plans have been completed, the TSMO Steering Committee will determine ongoing TSMO funding, prioritization of TSMO projects, and broaden the reach of TSMO within the organization.

Other steps will include a renewed emphasis on TIM (a separate TIM Plan including mapping statewide detour routes, landing zones, truck parking areas is advancing to the RFP stage currently) and planning for a TMC (ITD currently partners to have some TMC capabilities statewide and regionally). Also, we plan on highlighting the TSMO aspects within ITD's work zones and signal systems within ITD's reach.

Another very exciting aspect is the continued discussion of the creation of a dedicated TSMO Program within ITD likely very soon (July 2026/FY27).

COMMUNICATIONS PLANNING AND EXECUTION

A TSMO Steering Committee was created to provide detailed feedback on the plan. Participants were from a range of areas, including Districts Operations, HQ Traffic Ops, key ITD stakeholders, and FHWA. To ensure the plan was well-rounded, we met with staff from all ITD functional areas to identify existing TSMO activities and current and upcoming needs. The Steering Committee provided us with contacts and filled in any information gaps. ITD met with many other states and Idaho MPOs, to identify their best practices and develop connections for possible future collaboration opportunities. ITD Executives were gathered for their input on the plan as well. Their support is key for project implementation and statewide TSMO messaging. This participation from various stakeholders gave us a wide range of perspectives, allowing us to develop robust and thorough planning documents.



Moving forward, ITD is continuing the TSMO Steering Committee, with the goal to accomplish what was developed in the TSMO Plan. The Steering Committee's responsibilities will include:

- Coordinate TSMO priorities statewide
- Share lessons learned
- Plan and prioritize funding
- Serve as a steering committee for selection and application of statewide systems
- Coordinate with other groups with ITD such as Broadband, Work Zone Management, Traffic Incident Management
- Coordinate with Regional TSMO Operating Committees
- Identify and plan training opportunities
- Identify and implement business process improvements
- Maintain and update the Capability Maturity Model (CMM) assessments and statewide ITS Architecture
- Perform an internal CMM yearly or bi-yearly
- Serve as the ITD TSMO subject matter experts and TSMO Advisory Group to the ITD Executives

The connections made through the Steering Committee have improved collaboration across the state. This will allow for easier implementation of statewide initiatives, such as the Transportation Management Center, Traffic Incident Management, Work Zone Safety and Management, broadband expansion, and improved signal systems.

TIMELINE

2024	2025	2026	2027
• Established ITD TSMO Steering Committee • Hired a consultant to review Idaho information and draft ITD TSMO Statewide Strategic and Tactical Plans	• Gather District feedback on draft TSMO Statewide Strategic and Tactical Plans and complete by Fall 2025 • Develop TSMO projects list with each District • Prioritize and estimate costs	• Present final TSMO plan and projects list to the May 2026 Board meeting • Incorporate projects into the FY27-FY33 draft ITIP • Update Board annually	• Continue to review TSMO projects into the program on an annual basis • Pursue federal grants or state funding for ITS/TSMO activities • Update the ITD TSMO Statewide Strategic Plan every five years (2030)

OUTCOME, BENEFITS AND LEARNINGS

ITD Traffic Safety and Maintenance Operations (TSMO) is the ITD guidance on transportation systems management and operations for Idaho highways to maintain or restore the existing system performance through added efficiencies before extra capacity is needed.

Outcomes include:

- Ongoing operations committee
- Range of stakeholders across functional areas
- Coordination with other divisions such as broadband and TIM
- TMC
- Dedicated funding
- TIM, Work Zones, Signal Systems

As a direct result of our TSMO Planning efforts, ITD has already started implementing an ITS life-cycle plan. Most excitingly, ITD is in the process of implementing a dedicated and funded TSMO Program which should be fully operational in July 2026. Moving forward, a portion of the operational funding will run through the TSMO Program. ITD Executives plan on using the TSMO Plan to request operations-related funding in the 2026 legislative budget session.

An obvious outcome of the effort is the 2023 CMM, the Tactical ITS Plan, and the Strategic and Programmatic TSMO Plan, which provide a clear work plan and priority investments. However, the critical intangible outcome from the effort is the commitment of Executive Leadership to the investment of TSMO.

ITD now has champions at the Executive and District Leadership levels. With a dedicated TSMO Lead, the TSMO Program, and clear investment priorities, ITD leadership has the resources to champion TSMO projects and secure dedicated investment. This sets ITD up for significant advancement in TSMO over the coming years.

CAPABILITY LEVEL DEFINITIONS FOR SELF-EVALUATION OF CURRENT STATE OF PLAY IN IDAHO

DIMENSIONS	LEVEL 1 PERFORMED	LEVEL 2 MANAGED	LEVEL 3 INTEGRATED	LEVEL 4 OPTIMIZING
Systems Technology	Ad hoc approaches to system implementation without consideration of systems engineering and appropriate procurement processes	ConOps and architectures developed and documented with costs included appropriate procurement process employed	Systems & Technology standardized and integrated on a statewide/regional/district basis (including arterial focus) with other related processes and training as appropriate	Architectures and technology routinely upgraded to improve performance; systems integration/interoperability maintained on continuing bases
Performance Measurement	Some outputs measured and reported by some jurisdictions	Output data used directly for after-action debriefings and improvements; data easily available	Outcome measures identified (networks, modes, impacts) and routinely utilized for objective-based program improvements	Performance measures reported internally for utilization and externally for accountability and program justification
Business Processes (Planning and Programming)	Each jurisdiction doing its own thing according to individual priorities and capabilities	Consensus statewide/regional/district approach developed regarding TSMO goals, deficiencies, B/B, networks, strategies and common priorities	Statewide/regional/district program integrated into jurisdictions overall multimodal transportation plans with related staged program	TSMO integrated into jurisdictions' multi-sectoral plan and programs based on formal continuing planning processes
Organizing/Staffing	TSMO added on to units within existing structure and staffing - dependent on technical champions	TSMO-specific organization concept developed within/among jurisdictions with core capacity needs identified, collaboration takes place	TSMO Managers directly report to top management; Job specs, certification, and training for core positions	TSMO Senior Managers at equivalent level with other jurisdiction services and staff professionalized
Culture	Individual Staff champions promote TSMO	Senior Management understands TSMO business case and educates decision makers/public	State/regional/districts' mission identifies TSMO and benefits with formal program and achieves wide, public visibility/understanding	Customer mobility service commitment accountability accept as formal, top-level core program of all jurisdictions
Collaboration	Relationships ad hoc, and on personal basis (public-public, public-private)	Objectives, strategies, and performance measures aligned among organized key players (transportation and public safety agencies) with after-action debriefing	Rationalization/sharing/formalization of responsibilities among key players thru co-training formal agreements and incentives	High level of TSMO coordination among owner/operators (state, local, private)

The Tactical ITS Plan includes:

- A prioritized set of ITS projects with planning level costs
- A multi-year investment plan
- Plan for emerging technologies

The Statewide Strategic and Programmatic TSMO Plan includes:

- A business case for TSMO in Idaho
- The ITD statewide vision, goals, and objectives for managing and operating the transportation system based on ITD's Strategic Mission of: "Your Safety, Your Mobility, Your Economic Opportunity"
- A process for using the TSMO Plan on a regular basis
- Actively facilitates the communication between stakeholders such as engineers, planners, maintenance, operators, and other agencies.

The TSMO Steering Committee, alongside the ITD Executives, established prioritized functional areas and strategies within the TSMO Strategic and Programmatic Plan and the ITS Tactical Plan:

Tier 1 Priorities: Functional Area - TSMO Strategy

Freeway Management - Statewide and/or District Transportation Management Centers, Traffic Monitoring Cameras (CCTV)

Arterial Management - Traffic Signal Management and Operations Program

General & Winter Maintenance - Road Weather Information Systems (RWIS) Maintenance and Expansion

Traffic Incident Management - D1 Incident Response Team, Incident Response Procedures, Interagency TIM Coordination/Workshops

Broadband - Broadband Network Mapping, Communications Infrastructure Standards

Traveler Information - Dynamic Message Sign (DMS) Maintenance and Expansion, Work Zone Traveler Information Standards

Organization/ Workforce and Business Processes - TSMO Action Group, ITS Equipment Standards, Planning for Transportation Management Center

Work Zone Management - Interagency Work Zone Coordination, Work Zone Management Standards

Tier 2 Priorities: Functional Area - TSMO Strategy

Organization / Workforce and Business Processes - TSMO Champions, TSMO Training, TSMO Needs Integrated into Planning and Programming, TSMO Manual and Plan Integration

Traffic Incident Management (TIM) - TIM Training

Asset Management - Asset Management Strategy and Plan for Electrical Equipment

Traveler Information - DMS Operational Procedures, Video Monitoring Sharing System

Special Event Management - Special Event Management Procedures

Commercial Vehicle Operations - Truck Parking Information Management System (TPIMS), Port of Entry Master Plan

Data & Performance Management - Transportation Data Management System