



NDOT TSMO PROGRAM PLAN EXECUTIVE SUMMARY



What is TSMO?

The Moving Ahead for Progress in the 21st Century Act (MAP-21) defines Transportation Systems Management and Operations (TSMO) as: "Integrated strategies to optimize the performance of existing infrastructure through the implementation of multi-modal and intermodal, cross-jurisdictional systems, services, and projects designed to preserve capacity and improve security, safety, and reliability of the transportation system" (MAP-21, 2012).

Why TSMO?

Strategies offered by TSMO are used to proactively address transportation challenges (such as recurring and/or non-recurring congestion, safety, mobility, and reliability). This performance-driven program focuses on the surface transportation system and the policies, business processes, technologies, infrastructure, and systems that are applied to manage and operate this system more efficiently.

NDOT's History with TSMO

Both MAP-21 and Fixing America's Surface Transportation (FAST) Act bills strongly support TSMO and encourage state departments of transportation (DOTs) and agencies such as Metropolitan Planning Organizations and Regional Transportation Commissions to consider initiatives and projects that improve the efficiency, safety, and mobility of transportation systems. NDOT's first step on its TSMO journey was the 2014 TSMO capability maturity self-assessment workshop. The assessment used the Capability Maturity Model (CMM) as a tool and estimated the extent and maturity of TSMO activities under six key dimensions. The results from CMM self-assessment were used as the basis for development of NDOT's TSMO Program.

What will TSMO do for NDOT?

As demonstrated in the Business Case, TSMO solutions can significantly contribute to addressing transportation challenges. Therefore, internal stakeholders (such as NDOT Divisions) and external stakeholders (such as Regional Transportation Commissions and other local agencies) will effectively implement TSMO as a core function and will utilize TSMO elements such as a TSMO Evaluation Tool to identify opportunities for integrating TSMO solutions and addressing operational challenges. This tool will enable NDOT to maximize the exposure to and integration of TSMO in the scoping phase of every project, ensuring TSMO and its recommended strategies are formally considered and evaluated.

The implementation of NDOT's TSMO Program, as described in the NDOT Statewide TSMO Program Plan, will result in a safer, more reliable, and more efficient transportation system through collaborative, performance-based, and targeted investments. The program is currently managed within the Traffic Operations Division with the goal to be mainstreamed at a statewide level in the future.

The NDOT TSMO Program Plan presents a five-year action plan to implement the TSMO Program as part of a cross-jurisdictional approach to achieve Nevada's transportation vision and objectives. The Program Plan includes three main components:

- Strategic Elements: Provide a high-level strategic direction toward achieving the statewide transportation vision through TSMO.
- Programmatic Elements: Complement the Strategic Elements by providing a more-detailed approach to identify the required structure for the implementation of a successful TSMO Program.
- Tactical Elements: Define detailed and specific strategies and actions required to achieve TSMO goals and objectives



Strategic Elements

NDOT's Transportation Challenges

The Business Case for TSMO

TSMO Vision, Mission, Strategic Goals and Objectives



Programmatic Elements

Program Objectives

Organizational Structure

Business Processes

Resource Management

Communication and Collaboration

Investment Prioritization Tool

Evaluation Tool

TSMO Champion Team



Tactical Elements

Opportunities and Challenges

Description of TSMO Strategies and Recommendations

5-year Plan Projects and Cost Estimates

These components and elements are developed in alignment with the FHWA TSMO Primer as well as the One Nevada Transportation Plan to ensure transportation efforts are aligned at both national and agency levels. This plan includes recommendations on the update cycle of the specific elements to ensure all TSMO efforts are up to date