



Mainstreaming TSMO with a TSMO Business Case

Why Is a Business Case Important for TSMO?

Transportation systems management and operations (TSMO) has been proven to help agencies deliver cost effective strategies that mitigate transportation issues, such as congestion, travel time, reliability, lost productivity, and safety, among others. Since State transportation agencies have historically prioritized projects that expand roadway capacity and emphasized roadway design, construction, and maintenance, an agency interested in instituting a culture that embraces and prioritizes TSMO often must first make the case for such a shift. This case, or rationale, will be unique to each agency, depending on its particular set of challenges and functions, but will focus on the value and contributions TSMO can make to the overall mix of strategies adopted to improve transportation system performance.

The function of the business case for TSMO is to encourage a greater overarching commitment to improving system performance and services through more widespread application of TSMO strategies. In the broader TSMO program planning process, the business case is a key element of the program's strategic direction, which then informs programmatic and tactical decisions.¹ An effective business case for TSMO leads to mainstreaming TSMO throughout an agency's functions by incorporating TSMO into agency culture, policies, and processes.

“ We recognized the importance of building a business case for TSMO to obtain buy-in from leadership and our stakeholders. It helped us build our TSMO program and mainstream TSMO at a statewide level. ”

Rodney Schilling
Chief Traffic Operations Engineer
Nevada DOT

What Is TSMO?

TSMO /'tiz-mō/

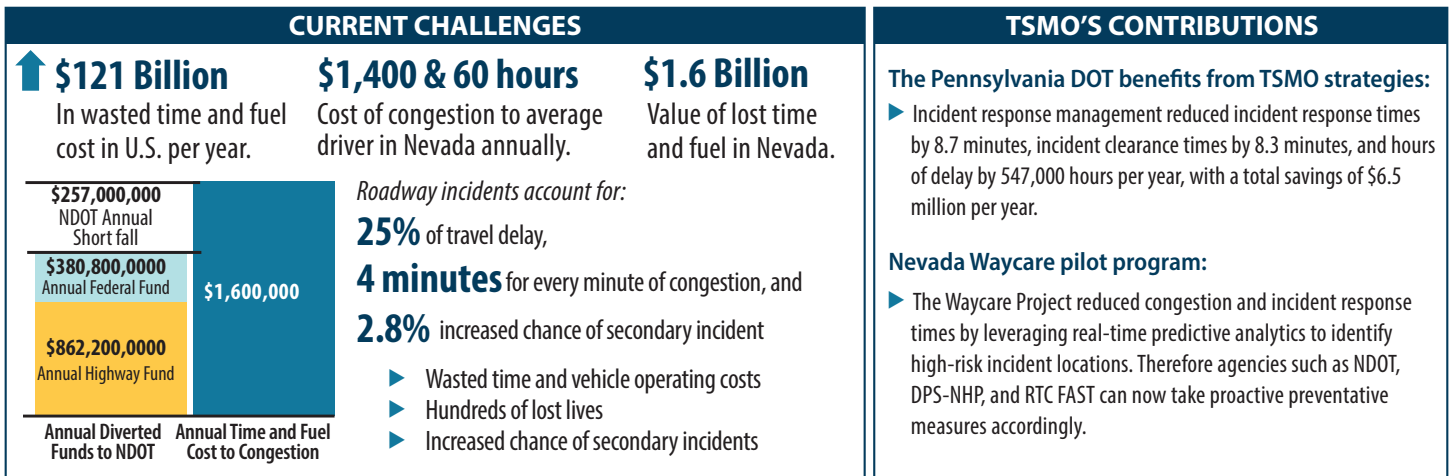
TSMO is an integrated set of strategies that focuses on operational improvements that can maximize the performance of the existing transportation system before extra capacity is needed. TSMO strategies are coordinated with others across multiple jurisdictions, agencies, and modes.

Federal Highway Administration (FHWA)

¹ To learn more about TSMO program planning, see FHWA's Developing and Sustaining a Transportation Systems Management & Operations Mission for Your Organization: A Primer for Program Planning, FHWA-HOP-17-017 (Washington, DC: USDOT, 2017), <https://ops.fhwa.dot.gov/publications/fhwahop17017/index.htm>.



CONGESTION AND ASSOCIATED COSTS



NDOT = Nevada DOT, DPS-NHP = Department of Public Safety Nevada Highway Patrol, RTC-FAST = Regional Transportation Commission Freeway and Arterial System of Transportation
 Source: Nevada DOT, webinar presentation, May 2022.

Figure 1. Infographic. A segment of Nevada DOT's business case for TSMO.

What Does a Business Case for TSMO Look Like?

A business case may be a separate or stand-alone document, or it may be integrated across various agencywide or program-specific strategic documents. At a high level, an effective business case will define the current and anticipated challenges that departments of transportation (DOTs) face (i.e., internal or external motivations) and explain how TSMO can address these issues (i.e., the value of TSMO to the agency and its customers). For example, the Nevada DOT's business case looks at the State's transportation challenges and the benefits of using TSMO to address them (see figure 1). By selecting effective strategies for managing and operating the system, the agency can mitigate challenges within the realms of safety, reliability, and congestion. The business case will discuss the value of TSMO to the agency in terms of cost savings, the ability to deliver on agency goals, or other metrics. The business case will also recognize issues that are important to system users and other transportation stakeholders, such as metropolitan planning organizations, transit providers, State and local agencies, law enforcement,

and elected officials. It will address issues such as improved safety, decreased congestion, enhanced system reliability, economic vitality, and other metrics of importance to those groups. The business case may include an assessment of risks associated with not using TSMO to address current and anticipated challenges. Risks could include the lack of system resiliency or inefficient use of existing assets.

When developing a business case, it is important to know the audience (e.g., executive leadership, DOT business units, legislators, general public, or other stakeholder groups) and to communicate real-life examples and data to appeal to that audience's interests and priorities. Some agencies have found that personalizing a business case in this manner makes it more effective because it speaks to a specific group's concerns. For example, a business case designed to engage decisionmakers is brief (two to four pages) and links to the overall agency mission, goals, and objectives. It includes examples of best practices and cost-benefit justification tailored to the agency.



Source: Michigan DOT.

Figure 2. Graphic. Michigan DOT brief business cases for TSMO.

The Michigan DOT developed a unique TSMO business case for individual stakeholder groups: legislators, transportation partners, Michigan DOT decisionmakers, Michigan DOT technical staff, and the public. Figure 2 shows Michigan DOT's five business cases for TSMO, which address the concerns of each of these groups.

Internal Audiences

An effective TSMO business case presents a compelling story by describing current challenges or shortcomings, painting a picture of how things could or should be, and highlighting the ways TSMO can be applied to achieve that vision. A business case targeted toward agency audiences does the following:

- Educates leadership, management, and staff about what TSMO includes
- Explains how TSMO can support agency goals
- Outlines how TSMO interfaces with different DOT functions
- Explains why staff in other DOT functional areas should support TSMO
- Presents a case that TSMO helps position the agency for success

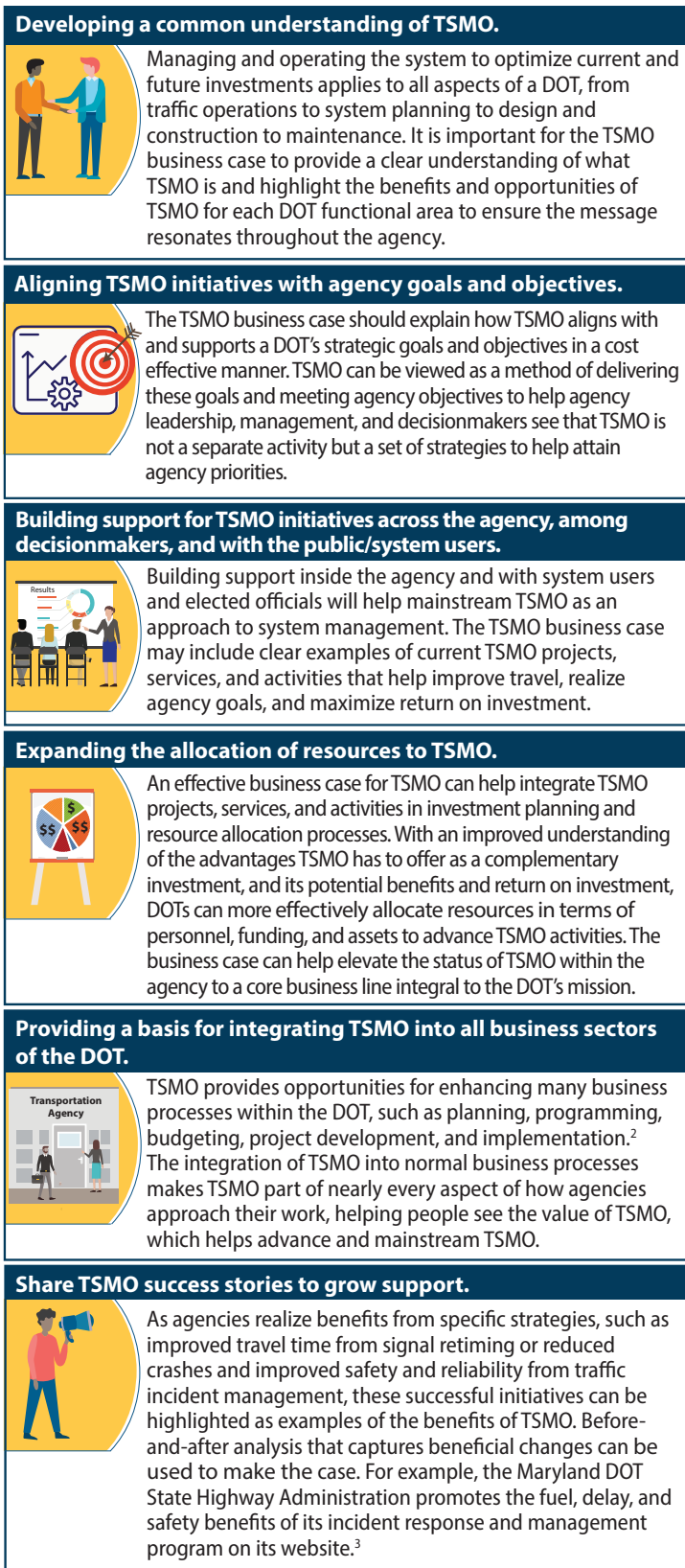
The business case can be shared through presentations across the agency, within regular team or business unit meetings, or through ongoing conversations with colleagues. To achieve the goal of mainstreaming TSMO, the case can be made both formally and informally on an ongoing basis to help develop an understanding of and commitment to TSMO.

External Audiences

A business case targeted toward public audiences, elected officials, and other external stakeholders will focus on educating these groups on the work of the agency and TSMO's role in delivering key transportation services. It may be useful to frame TSMO improvements as a cost effective way to complement more traditional transportation agency activities (e.g., roadway expansion, pavement condition maintenance). It may also be helpful to highlight that adding TSMO elements to other transportation improvement projects can enhance the benefits and cost effectiveness of both. Engaging agency public relations staff when developing and marketing a business case for external audiences can enable broad exposure to the message and improve the effectiveness of the campaign. These staff can also contribute to development of effective infographics, simple charts, and images that can engage non-technical audiences on relevant topics. Links to agency Web pages or a TSMO plan with more information is also useful for those who pick up the business case and would like to know more.

How Can an Organization Use a Business Case to Mainstream TSMO?

A TSMO business case is a foundational tool that can be instrumental in giving DOT personnel across the agency an understanding of TSMO's full potential and benefits, as well as how those benefits support the agency's mission. Figure 3 outlines how a business case for TSMO can help mainstream TSMO throughout a transportation agency.



Source: FHWA.

Figure 3. Graphic. How a business case for TSMO helps to mainstream TSMO.

Questions to Consider

The following questions can help agencies frame the benefits of TSMO when developing a business case (FHWA 2017):⁴

- What issues and trends are affecting the performance of our transportation system?
- What are the agency's unique transportation needs and challenges?
- What opportunities does TSMO offer in addressing the challenges?
- Who are the users of our transportation system?
- What is most important to the system users? What is most important to our decisionmakers?
- What constraints must we work with to manage and operate the system effectively?

For more information

See FHWA's Organizing and Planning for Operations web page at <https://ops.fhwa.dot.gov/plan4ops/index.htm>.

Contact Tracy Scriba, Organizing and Planning for Operations Team Lead, FHWA Office of Operations, tracy.scriba@dot.gov.

- ² For more information on integrating TSMO into agency business processes, see FHWA's *Organizing for TSMO Case Study 1: Business Processes – Optimizing Existing Planning and Implementation Processes with TSMO*, FHWA-HOP-19-063 (Washington, DC: USDOT, 2019), <https://ops.fhwa.dot.gov/publications/fhwahop19063>.
- ³ Maryland DOT State Highway Administration, "CHART Services" website, available at <https://roads.maryland.gov/mdotsha/pages/otmo.aspx?pageid=900>.
- ⁴ FHWA, *Developing and Sustaining a Transportation Systems Management & Operations Mission for Your Organization: A Primer for Program Planning*, FHWA-HOP-17-017 (Washington, DC: USDOT, 2017), <https://ops.fhwa.dot.gov/publications/fhwahop17017/index.htm>.

