

LOUISIANA TSMO

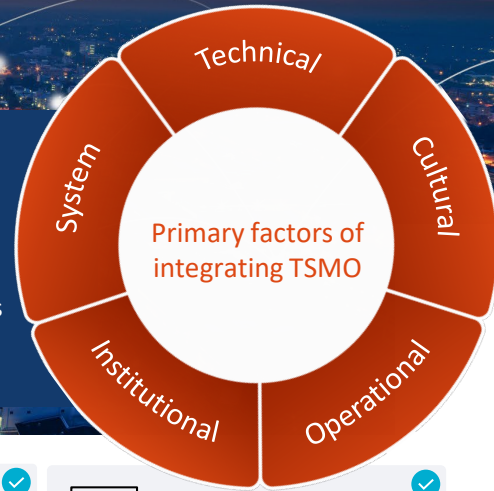
Transportation Systems Management & Operations

Definition of TSMO



TSMO is a data-driven approach that uses integrated strategies to enhance the real-time performance of transportation systems. **TSMO** helps ensure safer, more predictable, and more reliable trips for everyone.

TSMO monitors, assesses, and responds to technologies **and partnerships to boost system** performance. Integrating TSMO with the five core elements of a strong program will optimize Louisiana's transportation network.



High return on investments



Increased safety for workers and users



More consistent travel times



Benefits of TSMO



Improved collaboration and resource sharing.



Better agency effectiveness



Safe, quick clearance of crashes, disabled vehicles, and debris



Improved user experience



Resilience to withstand and recover from storms



Smoother traffic flow and driving experience



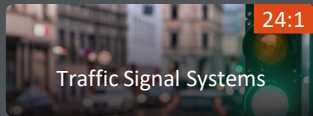
Realized capacity gain



Economic growth and freight efficiency



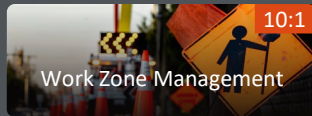
Examples of TSMO



24:1

Traffic Signal Systems

Optimize traffic signals to improve flow, reduce congestion, and enhance performance.



10:1

Work Zone Management

Manages traffic during construction projects to minimize congestion and reduce crashes.



6:1

Traveler Information Systems

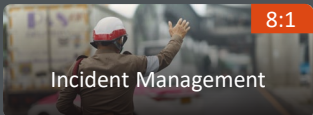
Provide real-time traffic, construction, and crash updates to help travelers make informed decisions both before and during trips.



15:1

Innovative Road Design

Implements efficient, small-scale design elements to improve traffic flow and boost capacity.



8:1

Incident Management

Efficiently manages and clears incidents to reduce crash-related congestion.



8:1

Emergency Event Management

Mitigates effects of emergencies and major weather events like hurricanes on the transportation system.



15:1

Travel Demand Management

Increases capacity and regulates traffic flow using hard shoulder running, ramp metering, or active lane management.



5:1

Emerging Technologies

Enhance safety and lower environmental impacts.

When?

TSMO should be considered **as early as possible**. TSMO should be integrated at every project stage—planning, development, construction, and maintenance. Even when capacity expansion is the preferred option, utilizing TSMO solutions enhances efficiency, extends performance lifespan, and mitigates construction-related issues. Additionally, TSMO should be included in DOTD's strategic planning and project selection processes.

Who?

Support from DOTD's upper management, stakeholders, and partner agencies is vital for integrating TSMO into Louisiana's transportation culture statewide.

Where?

TSMO benefits areas prone to crashes, seasonal travel, special events, inclement weather, and road construction. It is particularly effective in urban areas facing congestion from high commuter traffic and in suburban and rural regions experiencing frustrating, irregular congestion due to limited routes and modes.

What's the Goal?

The goal is to embed TSMO strategies into the daily operations of DOTD and its stakeholders, ensuring our roadway network runs smoothly at all times.

How?

DOTD is already implementing TSMO strategies, but the greatest benefits will come from their integration and collaboration across all jurisdictions. There is no one-size-fits-all approach to mainstreaming TSMO in Louisiana. Here are some questions you can ask to learn how to get involved with TSMO:

Who should be involved? Are we considering and coordinating with the right stakeholders?

Is TSMO a part of project selection? Are TSMO elements considered in every project?

How can I explain TSMO to my supervisor and leadership?

Does our staff have the right skill sets to advance TSMO?

How can we best utilize the data and metrics we have to improve safety and mobility?

How are we monitoring and responding to the performance of our transportation system?

What technology needs should we address to advance TSMO? Is our technology interoperable with other related systems and jurisdictions?

Do we have established goals and objectives for TSMO? Are they reflected in our existing plans and processes, or will new ones be developed?

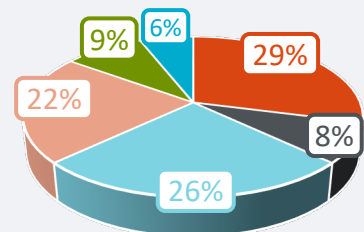
Why?

Traffic delays cost Louisiana road users

\$1.4 billion in 2023



Causes of Congestion in Louisiana (2023)



As population and employment rise, traffic on Louisiana's roads is increasing. With urbanization and limited infrastructure funding, widening roadways is no longer a viable solution to congestion. Instead of relying solely on large projects, TSMO optimizes existing infrastructure, offering high returns on investment, quick implementation, and strong public support. Given modern technology and current transportation challenges, TSMO is more crucial for Louisiana than ever.

■ Bottlenecks
 ■ Signals
 ■ Incident
■ Work Zone
 ■ Weather
 ■ Holiday