Transportation Systems Management and Operations (commonly known as simply “Operations” or “TSMO”) is a collection of solutions to help state departments of transportation get the most out of existing infrastructure, recognizing the fact that we can no longer build our way out of congestion.

Utilizing TSMO strategies does not just help with congestion. These operations solutions make our transportation infrastructure safer, save money, improve the travel experience of users, enhance business productivity, and allow state DOTs to better connect all modes of transportation along a system.

The role of a state DOT has evolved over the past 75 years in response to the changing needs of customers. From an initial mandate that focused on building and preserving the transportation infrastructure, the transportation environment has changed so much. The DOTs’ responsibilities have expanded to also include actively managing and operating the network as effectively as possible to meet customers’ demands for safety, mobility, and reliability in the most cost effective manner.

TSMO helps transportation agencies do more with less. In fact, lower-cost TSMO options can often be deployed faster than other solutions and with immediate results. Relatively small changes can make big differences on the transportation system.

A focus on operations by state DOTs and other agencies has been on the rise in recent years due to several factors, including limited funding (meaning agencies must get more creative and have a greater impact with the funds they do have); advances in technology (allowing state DOTs to develop more dynamic and flexible solutions to address congestion and giving customers what they expect in terms of fast, reliable, and “smart” transportation); greater expectations from customers (who don’t just want a way to get from point A to point B, but to do so in a faster, more reliable way); and a better understanding of the causes of congestion (allowing DOTs to be proactive, pinpoint challenges faster, and target solutions to those challenges).

Operational strategies are especially helpful when conceptually deployed in the project planning process and an agency’s overall strategic planning. Thinking of TSMO as early as possible allows for greater impact and success.

Operations cannot succeed in a vacuum. It must be understood by state DOT leaders and communicated all the way through the agency as a core function.

Several Operations strategies are being implemented by state DOTs across the country right now. Many of these are applicable to both urban and rural environments. Examples of TSMO strategies being used by state DOTs across the country include:

- Work zone management
- Traffic incident management
- Traveler information
- Special event coordination
- Road weather management
- Traffic signal improvements
- Ramp metering
- Managed lanes
- Freight management
- Transit coordination
- Part-time shoulder use
- Integrated corridor management
- Connected and automated transportation readiness
- Personal mobility options

Without a focus on TSMO, state DOTs could soon see the inability to meet customer needs and expectations. As all transportation agencies know, building infrastructure only takes a state DOT so far—it’s how that infrastructure is managed, works with all other systems, and performs for customers that separates an adequate system from a safe, efficient, and reliable one.

Where Can I Learn More?
Want to learn more about TSMO/Operations and how to better integrate these strategies at your state DOT? Contact Tracy Scriba, FHWA Office of Operations, at Tracy.Scriba@dot.gov or AASHTO Associate Program Manager Pat Zelinski at PZelinski@aashto.org.