



TSMO BENEFITS AT A GLANCE

State departments of transportation (DOTs) are using Transportation Systems Management and Operations (TSMO) strategies to get the most out of their existing transportation systems, whether it's to improve safety, reduce delays caused by congestion, save taxpayer dollars, or reduce emissions and their impact on the environment. Here are a few of the many benefits State DOTs have reported from incorporating TSMO strategies and focusing on the broader operational picture.

ARIZONA

Innovative Striping and Signage

66% Reduction in Crashes
1,969:1 Benefit–Cost Ratio

The two-mile segment where westbound US-60 merges with I-10 in the Phoenix metro area had the highest number of serious and fatal crashes on the Arizona DOT (ADOT) system. The ADOT TSMO Division identified, engineered, and implemented a sign redesign that added clarity for drivers and lane restriping project to improve system performance and safety. In the 12 months after completion of the project, there were 385 fewer crashes of all severities than in the previous 12 months. Using data for all crash severities for the full two-mile segment, the project showed a benefit-cost ratio of 1,969:1 just 12 months after project completion.



FLORIDA

Integrated Corridor Management

Up to 40% Reduction in Delays

Up to 22% Emissions Reduction

Florida DOT (FDOT) was grappling with how to keep up with infrastructure needs in Orlando, the second-fastest growing city in the United States. FDOT implemented Integrated Corridor Management (ICM) to improve travel time and reliability for residents and visitors while more efficiently tackling incident management on the system by meshing freeway operations with arterial operations. Through the ICM and its use of transit signal priority and adaptive signal control, FDOT was able to reduce delays by up to 40 percent and improve bus times. Additionally, traffic signal and variable speed displays have substantially reduced emissions.



NEVADA

Traffic Incident Management

12-Minute Reduction in Incident Response Times

Reduction in Secondary Crashes

Nevada DOT worked with several other State agencies to develop a collective platform on which all agencies can share real-time incident data. The platform leverages in-vehicle data and artificial intelligence to help manage traffic and prevent crashes. The program allows for seamless, real-time sharing of incident information across all involved agencies, multi-discipline first responders, and the public, crucial for effective traffic incident management. This solution has significantly improved incident response times and reduced secondary crashes in Southern Nevada by pushing out real-time traffic information to drivers when an incident occurs.



MARYLAND

Traffic and Event Management

\$1.5 Billion Annually in Savings

Event Managed Every 16 Minutes

Described by Maryland DOT as its “entry into the Intelligent Transportation Systems arena,” the Coordinated Highways Action Response Team (CHART) is a Statewide comprehensive and advanced traffic management system that covers everything from traffic management to incident management to traveler information (and everything in between). CHART now assists a motorist every 16 minutes on average and manages traffic at a crash/incident every 22 minutes, preventing an estimated 225–250 secondary crashes a year. CHART also saves drivers an estimated \$1.5 billion in fuel and delay costs each year.



MICHIGAN

Active Traffic Management

Improved System Reliability by Up to 56%

Improved Corridor Speeds by Up to 19 mph

After exhausting all short-term solutions for congestion, operations, and incident management on US-23 through Washtenaw and Livingston Counties, the Michigan DOT (MDOT) turned to Active Transportation Management (ATM) strategies to dynamically manage these issues. With the ATM, MDOT uses strategies such as dynamic lane control and shoulder use, variable speed advisories, and queue warning, among others. Commuters now enjoy greater safety while experiencing more reliable travel times and less time sitting in congestion.

