



MODULE 3: Benefits of TSMO



Benefits of TSMO

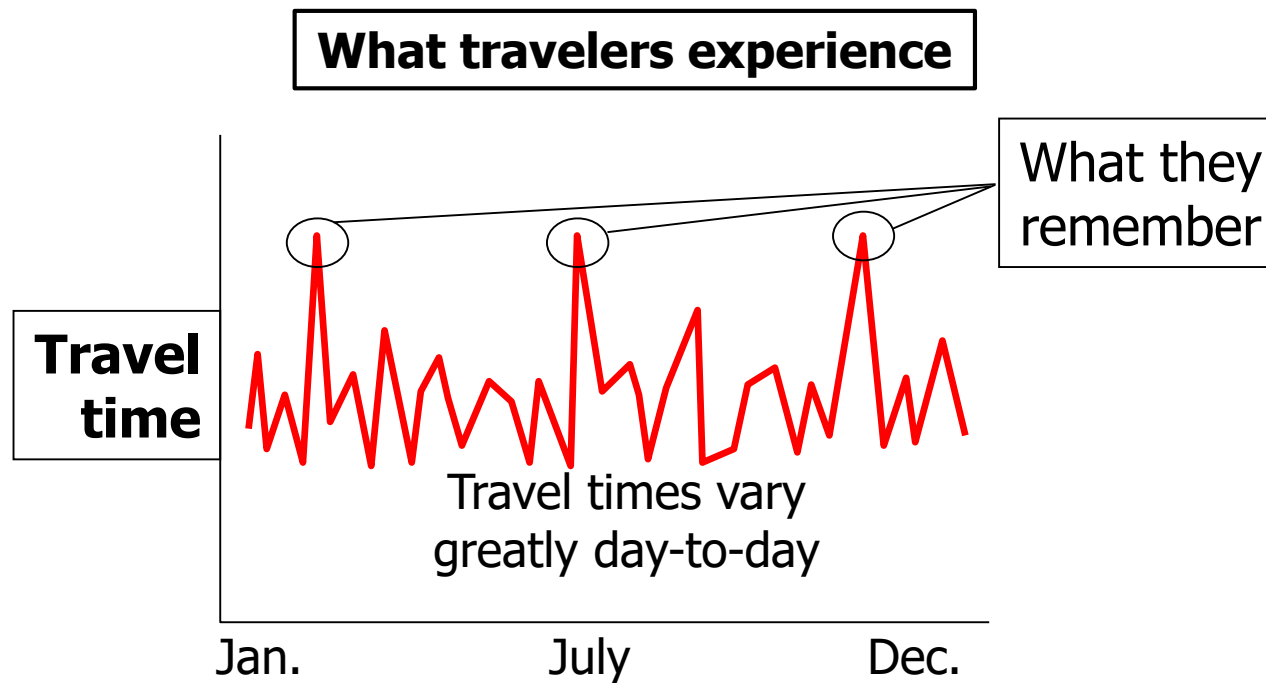
- Reliability
- Safety
- Environmental
- Performance Management
- Better informed public/driver – traveler information
- Cost Savings
- Alternatives to building
- Improved internal communications
- Coordination of multiple transportation modes
- Improved event management/incident management
- Improved road weather/maintenance management





Reliability

- **Reliability:** Consistency or dependability in travel times, as measured from day to day or across different times of day.





Safety

- Traffic fatalities and serious injuries at unacceptable levels and rising
 - 34,439 fatalities in 2016 vs. 29,757 fatalities in 2011
 - National Fatality Rate: 2014 – 1.08; 2016 – 1.18 (a 9% increase! Why?)
- Improvements in traffic flow create safer roads
- Safer work zones reduce maintenance/ construction personnel injury/fatalities



NATIONAL STATISTICS							
	2016	2015	2014	2013	2012	2011	2010
POLICE-REPORTED MOTOR VEHICLE TRAFFIC CRASHES							
Fatal	34,439	32,539	30,056	30,202	31,006	29,867	30,296
Injury	NA	1,715,000	1,648,000	1,591,000	1,634,000	1,530,000	1,542,000
Property-Damage-Only	NA	4,548,000	4,387,000	4,066,000	3,950,000	3,778,000	3,847,000
Total	NA	6,296,000	6,064,000	5,687,000	5,615,000	5,338,000	5,419,000





Environmental



- More free time
 - Traffic signal retiming decreases delay on roads by 13-94%
 - Transit signal priority reduces transit delay by 30-40%
- Less wasted fuel
 - Georgia's traffic incident management program reduced annual fuel consumption by 6.83 million gallons per year
- Cleaner air
 - Electronic toll collection reduced harmful emissions at Baltimore, Maryland toll plazas by 16-63%



Better Informed Public/Drivers



- Alerts – closures, incidents, lanes blocked
- Hazards, including weather and disasters
- Road conditions
- Special event traffic advisories
- AMBER Alerts
- Project information
- Announcements—public and project meetings, milestones, achievements
- Safety messages and alerts
- Public service announcements





Cost Savings

- Typical benefit-cost ratios:
 - For traffic signal retiming/optimization, 17:1 to 62:1
 - For work zone management systems, 2:1 to 42:1
 - For bus rapid transit, 2:1 to 10:1
- State of Georgia study found almost a 200-to-1 return on investment for each dollar invested in travel demand management

Has your agency measured the benefits of M&O solutions? If so, what did you find?



U.S. Department of Transportation
Federal Highway Administration



Improved Road Weather/ Maintenance Management Weather Responsive Traffic Management (WRTM)

- Impacts to:
 - Safety
 - Mobility
 - Productivity
 - Environment
- Strategies:
 - Advisories
 - Control traffic
 - Treatment
- Benefits of WRTM
 - Effective resource allocation for safer roads and reduced costs
 - Reduce lost productivity
 - Safer road conditions

