

Transportation Systems Management and Operations (TSMO): Getting More from Our Existing System

Expanding Travel Choices to Move More People

49% of shared electric scooter
and bicycle trips replaced
single-occupant vehicles.¹



80% of people using express
lanes in peak hours were
riding on buses or carpooling.²

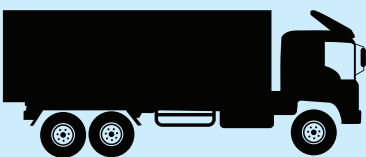
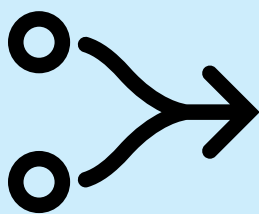


Making Travel Times More Reliable



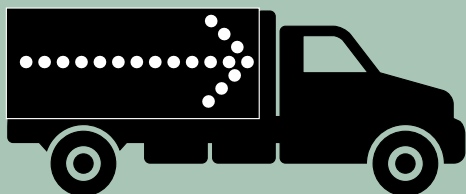
Increased travel time
reliability accounted
for 68% of the
benefits of using
congestion-priced lanes.⁶

Dynamic late lane
merging in work zones
reduced delays by 67%.⁷



Truck parking and management
systems reduced parking search time
with a benefit-cost ratio of 4:1.⁸

Keeping Lanes Open Increases the Value of Investments



Freeway Courtesy Patrol³

15:1



Smart
Work Zones⁴

10:1



Traffic Incident
Management Systems⁵

8:1

Improving Travel Time without Increasing Capacity



Regional signal retiming
reduced delays by 23%.⁹



Adaptive signal control
reduced travel time by 9.4%.¹⁰



Active Transportation
Management Systems may
reduce peak period travel
times by up to 21%.¹¹



U.S. Department of Transportation
Federal Highway Administration

Example benefits are presented above. For more information on TSMO strategies and benefits, visit
ops.fhwa.dot.gov/plan4ops/focus_areas/integrating_operations_strategies.htm.
FHWA-HOP-22-067

¹ <https://www.itskrs.its.dot.gov/node/209350>

² <https://www.dot.state.mn.us/ezpassmn/useandperformance.html>

³ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/1c189f2ff31a91cf85257c8c0074c08d>

⁴ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/f26342fda0558e528525847100639606>

⁵ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/3c3e8dd9b5716a4e852580090063c0e2>

⁶ <https://ops.fhwa.dot.gov/publications/fhwahop19062/fhwahop19062.pdf>

⁷ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/a0426eb8eb872485257c19005d827e>

⁸ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/c69b25afd84ebf018525837c005f476b>

⁹ <https://www.spcregion.org/wp-content/uploads/2021/05/SPC-Cycle-3-New-Final-Summary.pdf>

¹⁰ <https://www.itskrs.its.dot.gov/node/209558>

¹¹ <https://www.itskrs.its.dot.gov/its/benecost.nsf/ID/57b6173dca9f2499852583cb006682f4>