

Traveler Information Strategies

ICM Functional Area / Tactic	ICM Category	ICM High-Level Benefits									
		Safety / Response	Mobility / Accessibility	Demand Reduction / Shift	Travel choice / Decision Making	Return on / Use of Existing Investment	Efficiency / Productivity	Institutional Cooperation	Environmental Impact	Customer Experience / DOT Perception	
Traveler Information											
Comparative Travel Time Messaging	Active and Advanced		•	•	•	•	•	•	•	•	•
Predictive Traveler Information	Active and Advanced	•	•	•	•	•	•		•	•	
Dynamic Speed Advisories / Limits	Active and Advanced	•	•		•				•	•	
Queue Warning	Active and Advanced	•	•		•				•	•	

Comparative Travel Time Messaging

	Comparative Travel Time Messaging
Description	Comparative travel time messaging provides en-route motorists with dynamic travel times for two or more unique but comparable routes to a downstream destination. Based on the travel times displayed, motorists can easily gauge travel and traffic conditions for the signed routes and select in real-time the route with the least delay. In 2014 the Iowa began providing comparative travel time estimates on dynamic message signs located along I-235. This strategy would expand on this implementation and more specifically provide travel time estimates for arterials that parallel interstate highways. This will allow travelers to select among freeway and arterial routes based on displayed travel times.
ICM Category	<ul style="list-style-type: none"> • Active and advanced strategy
Anticipated Benefits	<ul style="list-style-type: none"> • Improved accessibility and mobility • Reduced or shifted demand • Enhanced traveler choice and decision making • Increased return on and use of existing investment • Improved transportation efficiency and productivity • Improved institutional cooperation • Reduced environmental impact • Improved customer experience and perception
Provided Functionality	<ul style="list-style-type: none"> • Passively shifts demand to networks with available capacity
Prerequisite Functionality Required	<ul style="list-style-type: none"> • Network surveillance • Traveler Information dissemination
Complementary and/or Supported Strategies	<ul style="list-style-type: none"> • Dynamic routing • Congestion pricing • Traveler information dissemination • Predictive traveler information
Examples	<ul style="list-style-type: none"> • Milwaukee, WI (I-94/I-894 Interchange reconstruction)

Predictive Traveler Information

	Predictive Traveler Information
Description	This strategy involves using a combination of real-time and historical transportation data to predict upcoming travel conditions and convey that information to travelers pre-trip and en-route (such as in advance of strategic route choice locations) in an effort to influence travel behavior. Predictive traveler information can be incorporated into a variety of traveler information mechanisms (e.g., multi-modal trip planning systems, 511 systems, dynamic message signs) to allow travelers to make better informed choices.
ICM Category	<ul style="list-style-type: none"> • Active and advanced strategy
Anticipated Benefits	<ul style="list-style-type: none"> • Improved safety and emergency response • Improved accessibility and mobility • Reduced or shifted demand • Enhanced traveler choice and decision making • Increased return on and use of existing investment • Improved transportation efficiency and productivity (e.g., integrates multiple, growing data streams) • Reduced environmental impact • Improved customer experience and perception
Provided Functionality	<ul style="list-style-type: none"> • Improves traveler information and decision making
Prerequisite Functionality Required	<ul style="list-style-type: none"> • Network surveillance • Traffic information dissemination • Machine learning
Complementary and/or Supported Strategies	<ul style="list-style-type: none"> • Traffic incident management • Weather responsive traffic management • Smart cities • Connected and automated vehicles • Queue warning • Dynamic speed advisories / limits • Dynamic rerouting
Examples	<ul style="list-style-type: none"> • Las Vegas, NV • Tampa, FL

Dynamic Speed Advisories/Limits

	Dynamic Speed Advisories/Limits
Description	The dynamic change in speed limits or advised speeds based on road, traffic, and weather conditions. Speeds can either be enforceable (regulatory) speed limits or recommended speed advisories and can be applied to an entire roadway segment or individual lanes. This smoothing process helps minimize the differences between the lowest and highest vehicle speeds. Other terms commonly associated with dynamic speed advisories/limits include variable speed limits and speed harmonization. Some potential benefits include reduced difference between posted speed and actual speed, reduced speed variability, reduced spatial extent of congestion, reduced temporal extent of congestion, reduced crash rates, and reduced crash severity.
ICM Category	<ul style="list-style-type: none"> • Active and advanced strategy
Anticipated Benefits	<ul style="list-style-type: none"> • Improved safety and emergency response • Improved accessibility and mobility • Enhanced traveler choice and decision making • Reduced environmental impact • Improved customer experience and perception
Provided Functionality	<ul style="list-style-type: none"> • Provides warning of a change in conditions • Smooths traffic flow heading into incidents or adverse conditions.
Prerequisite Functionality Required	<ul style="list-style-type: none"> • Network surveillance • Traffic information dissemination • Roadway environmental monitoring
Complementary and/or Supported Strategies	<ul style="list-style-type: none"> • Incident management • Dynamic shoulder lanes/part-time shoulder use • Queue warning • Connected and automated vehicles • Weather responsive traffic management • Work zone management
Examples	<ul style="list-style-type: none"> • I-95 and I-295 VSL (Maine DOT) • PA 76 Toll Road VSL (Pennsylvania Turnpike Commission) • I-80 VSL (WYDOT) • Loop 1604 (San Antonio, TX) • WSDOT Smarter Highways

Queue Warning

	Queue Warning
Description	The dynamic display of warning signs to alert drivers that congestion and queues are ahead. Warnings are typically displayed on dynamic message signs and possibly coupled with flashing lights. This strategy is typically applied in specific locations in advance of known congestion points. Some potential benefits of this strategy include reduced rear-end crashes where the warning is in effect, increased travel speeds, reduced speed differential.
ICM Category	<ul style="list-style-type: none"> • Active and advanced strategy
Anticipated Benefits	<ul style="list-style-type: none"> • Improved safety and emergency response • Improved accessibility and mobility • Enhanced traveler choice and decision making • Reduced environmental impact • Improved customer experience and perception
Provided Functionality	<ul style="list-style-type: none"> • Provides warning of queues • Smooths traffic flow
Prerequisite Functionality Required	<ul style="list-style-type: none"> • Network surveillance • Traffic information dissemination
Complementary and/or Supported Strategies	<ul style="list-style-type: none"> • Predictive traveler information • Dynamic speeds advisories/limits • Traffic incident management • Work zone management • Weather responsive traffic management
Examples	<ul style="list-style-type: none"> • I-35 work zone end-of-queue warning system (Waco, TX) • I-94 ATM system (Minneapolis, MN) • OR-217 ATM system (Oregon)