

Traffic Incident Management (TIM) Performance Measurement On the Road to Success



Law enforcement, fire and rescue, emergency medical services, and transportation agencies involved in traffic incident management (TIM) share a common goal—restoring the roadways as safely and quickly as possible. They know that every minute of incident delay multiplies traffic queues by a factor of four and increases the risk to responders’ and drivers’ lives.

TIM teams across the country are recognizing that improvements in individual agency TIM operations are helpful, but that to make a real impact responders must work together to assess, identify and act on opportunities for improvement. In short, TIM has become a team sport. TIM teams across the country are increasingly interested in jointly measuring performance as a team to win more resources for TIM.

The biggest barriers to jointly measuring performance of multiagency TIM operations include different definitions for common measures such as “incident clearance time,” institutional concerns over data sharing, and incompatible data systems. FHWA’s TIM Performance Measurement Focus State Initiative, however, has shown that all of these hurdles can be overcome.

FHWA’s Traffic Incident Management Program-Level Performance Measurement Focus State Initiative

FHWA launched a focus state initiative in 2005 to develop and test consensus-based, multi-agency, or “program-level” performance measures for TIM. TIM leaders from transportation and law enforcement organizations in 11 states reached consensus on three program-level TIM objectives and associated performance measures for their TIM teams:

TIM Program Objectives	Related Performance Measures
Reduce “Roadway” Clearance Time	Time between first recordable awareness of incident by a responsible agency and first confirmation that all lanes are available for traffic flow.
Reduce “Incident” Clearance Time	Time between first recordable awareness of incident by a responsible agency and time at which the last responder has left the scene.
Reduce the Number of Secondary Crashes	Number of unplanned crashes beginning with the time of detection of the primary incident where a collision occurs either a) within the incident scene or b) within the queue, including the opposite direction, resulting from the original incident.

Consensus-based, Program-level TIM Performance Measures Developed by Focus States

TIM teams across the country are beginning to explore measuring team or “program-level” TIM performance as the only means to improve multi-agency team response. TIM stakeholders share a common goal to safely restore the roadways as quickly as possible because this equates to lives saved:

- Every minute of incident delay multiplies traffic queues by a factor of four, and increases the risk for secondary crashes
- The likelihood of a secondary crash increases by 2.8% for each minute the primary incident continues to be a hazard
- Faster response time has a well-documented relationship to the increased likelihood of crash survival
- Responder lives remain at risk every minute they are on the incident scene



Focus State TIM Performance Measurement Accomplishments

- Achieved landmark agreement on common definitions for three core TIM performance measures.
- Demonstrated that multi-agency data collection and fusion to improve TIM can be accomplished.
- Demonstrated that by working together to measure TIM performance, transportation and law enforcement agencies were able to overcome institutional data sharing hurdles and improved their ability to quantify TIM benefits.
- Helped agencies more effectively build support for their TIM program and win additional funding for TIM technical and resource needs by showing quantified TIM benefits.

Getting Started with TIM Performance Measurement

Getting started measuring program-level TIM has never been easier. The experiences and resources of the 11 focus states and others in the TIM community are soon a mouse-click away with the TIM Performance Measurement Knowledge Management System, coming this spring:

- **Subscribe to the TIM Performance Measurement email list** to conveniently access the experiences and expertise of the focus states and your peers across the country for your questions. Send an email to ETO@dot.gov to subscribe.
- **Plan to bookmark and visit the TIM Performance Measurement Knowledgebase** to download helpful resources including sample MOUs, CAD-TMC integration strategies and requirements documents that have worked for others, as well as presentations, studies and reports that can help you build support in your region with TIM performance measurement. Search by keyword or browse by performance measure, conference/event (for presentations you've seen) or document type to find what you're looking for.

Steps to Success

- Recruit agency champions for program-level TIM Performance Measurement.
- Develop a plan, including a plan to exchange needed data between agencies.
- Test the performance measures with available data, manually at first if necessary.
- Identify and plan for any needed system modifications to support data sharing.
- Modify your plan as needed.
- Track your progress on the Road to Success!

TIM Performance Measures 11 Focus States:

- California
- Connecticut
- Florida
- Georgia
- Maryland
- New York
- North Carolina
- Texas
- Utah
- Washington
- Wisconsin

Want to Know More?

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