Preparing, Conducting, and Summarizing the Results - Assessing Traffic Management Systems (TMS)

TRB Annual Meeting 2024 | Workshop #1004

January 7, 2024 | 9:00am – Noon ET | Room: Ballroom C

This workshop will identify and compile information and practices to assist agencies with finding opportunities to improve TMS capabilities and performance. The expected outcomes from the small group breakout sessions to occur during this workshop is to identify opportunities for TMSs to meet the objectives, performance expectations, desired functions and services, and capabilities needed to meet the needs and expectations of their agency, other agencies, systems, service providers, or customers. This workshop will share information in support of preparing for and conducting a TMS assessment, assessing TMSs capabilities and performance, and identifying improvement opportunities.

📅 Preparing for and Conducting a TMS Assessment

Prior to planning or pursuing improvement projects, agencies may benefit from assessing a TMSs capabilities and performance. There are limited resources available to assist agencies with preparing for or assessing their TMS. Preparing for and conducting an assessment may include obtaining necessary approvals, resources, who to include, process, issues information to consider, basis for assessing each TMS dimension or subdimension, and summarizing the results.

📝 Assessing TMSs Capabilities and Performance

TMS assessments may provide insight on current capabilities, performance, resource needs, and potential areas for enhancements. Assessments will consider and offer insights into how well a TMS may be meeting agency or TSMO program goals, improving travel conditions, mitigating impacts of incidents, and planned events. An assessment may also consider the needs of the TMSs program and available resources, integrating these needs into the agencies TSMO program and plans, policies, and procedures.

Assessing TMSs Involves:
- Preparing for and conducing the assessment
- Evaluating TMS capabilities and performance
- Summarizing results

OUTCOMES — *IDENTIFY:*
- Process, issues to consider, and information to compile
- Basis for assessing TMS dimensions/subdimensions
- Improvement opportunities

🔍 Identifying Opportunities for Improving TMSs

The results of a TMS assessment will provide information to support agencies considering immediate changes, actions, or opportunities for improvements. Information obtained from the assessment may also support the processes occurring in the lifecycle (e.g., monitoring and reporting on performance, maintenance and repairs, managing assets, planning and implementing improvements, setting a strategic direction, managing resources) to improve the TMSs performance, management, and operation.

Sponsors: ITS Committee (ACP15) lead sponsor and the following co-sponsors: TRB Freeway Operations Committee (ACP20); TRB Traffic Signal Systems Committee (ACP25); TRB Joint Subcommittee on Active Traffic Management (ACP 20-5); TRB Artificial Intelligence and Advanced Computing Applications Committee (AED50); TRB Regional Transportation Systems Operation (RTSMO) Committee ACP 10); Traffic Management Center Pooled Fund Study; American Association of Highway and Transportation Officials (AASHTO) Committee on Transportation System Operations ITS Work Group; International Bridge, Tunnel and Turnpike Association (IBTTA); European Association of Operators of Toll Road Infrastructures (ASECAP); and ERTICO Innovation Platform Traffic Management 2.0 Work Group.

Workshop Agenda:

9:00 – 9:05 am | Welcome
Moderator: Jon Obenberger *(FHWA)* – Workshop Purpose, and Desired Outcomes

9:05 – 9:55 am | Session 1 *(Podium)*:
Framing the Discussion
Moderator: Jianming Ma, Texas DOT, AASHTO CTSO Research Work Group Co-chair
Recorder*:* Fanis Papadimitriou (*Attica Tollway Operations Authority*)
• Assessing Traffic Management Systems, Pete Marshall, D2 Traffic Technologies [10 min]
• Preparing for and Conducting a TMS Assessment, Dan Lukasik, Parsons [10 min]
• Assessing TMSs Capabilities and Performance, John MacAdam, MacAdam Consulting [10 min]
• Identifying Opportunities and Approaches for Improving TMSs, Matt Junak, HNTB [10 min]
• Audience Q&A: Moderator facilitates Q&A regarding issues and challenges [10 min]

9:55 – 10:55 am | Session 2 (*Breakout)*:
Identifying Issues to Consider, Successful Practices, and Resources
Moderator: Susanna Zammataro, IRF Geneva, Switzerland
• Introduction & Instructions—attendees will be asked to join breakout discussion groups.
Each group will review and add to the lists provided for issues to consider, successful practices (e.g.,
agency name and report), and resources (available or needed) [10 min]
• Breakout Discussion—Small groups deliberate their topic choice

10:55 – 11:00 am | Transition & Break

11:00 – 11:40 am | Session 3 (*Podium*): Breakout-Session Results
Moderator: Les Jacobson, LNJ Transportation Consulting
Recorders: Phil Masters, Parsons; Heng Wei, University of Cincinnati
The session moderator will ask each table to highlight the top three issues to consider, successful
practices, and existing or needed resources their breakout group identified. After all tables report, the
moderator will ask for questions, feedback on each process, or additional issues to consider.

11:40 – 11:50 am | Session 4 (*Podium*):
Action Planning
Moderator: Raj Ponnaluri, Florida DOT, AASHTO CTSO ITS Work Group Co-chair
Recorder: Mark Muriello, International Bridge, Tunnel and Turnpike Association (IBTTA)

11:50 am – Noon | Session 5 (*Podium*):
Next Steps and Sponsors' Perspectives
Moderator: Jon Obenberger, FHWA, TRB ITS Committee Chair
Speakers: Representatives from co-sponsors of workshop:
Beverly Kuhn (TRB Freeway Operations Committee); Edward Smaglik (TRB Traffic Signal Systems
Committee); Yinhai Wang (TRB Artificial Intelligence and Advanced Computing Applications
Committee); Lisa Burgess / Dan Lukasik (TRB Joint Subcommittee on Active Traffic Management);
Nicole Ivanov (TRB Regional Transportation Systems Management and Operations Committee); Raj
Ponnaluri (AASHTO Committee on TSO, ITS Work Group); Alex Wassman (Traffic Management Center
Pooled Fund Study); Malika Seddi (ASECAP); Mark Muriello (International Bridge, Tunnel and Turnpike
Association - IBTTA); Martin Russ / Johanna Tzanidaki (ERTICO Innovation Platform TM 2.0)