TMC Pooled Fund Study
Quarterly Meeting
Wednesday March 3, 2021
1:00 – 3:00 PM ET

Attendees

PFS Members Present		FHWA Liaison
1. Jose Camacho (Caltrans)	16. Mike Juliano (NJDOT)	Jon Obenberger
2. Matt Glasser (GDOT)	17. Jagdish Rana (NJDOT)	
3. Elyse Morgan (I-Pass, IL)	18. Dominic Ciaramitaro (NCDOT)	
4. Bonnie Castillo (IOWADOT)	19. Dominic DelCol (ODOT)	
5. Shari Hillard (KDOT)	20. David Gaffney (PennDOT)	**Guests**
6. Jason Dicembre (MDOT SHA)	21. Ryan McNary (PennDOT)	Chris Hilyer (ALDOT)
7. Rashad Rice (MDOT SHA)	22. Theresa Gaisser (RTC Nevada)	Venkat Nallamothu
8. Joey Sagal (MDOT SHA)	23. Ray Hallavant (TDOT)	(AASHTO)
9. Allison Balogh (MDOT)	24. Adam Moncivaez (TDOT)	
10. Jason Bodell (MDOT)	25. David McDonald (TXDOT)	
11. Brian Kary (MnDOT)	26. John Leonard (UDOT)	**Noblis Support**
12. Garrett Schreiner (MnDOT)	27. Ali Farhangi (VDOT)	Cheryl Lowrance
13. Alex Wassman (MoDOT)	28. Vinh Dang (WSDOT)	Kathy Thompson
14. LaShonn Ford (NDOT)	29. Stacey Pierce (WisDOT)	
15. Rod Schilling (NDOT)		

*PFS Member States not represented: Arizona, Delaware, Florida, Illinois DOT, Indiana, New York

Update on Current TMC-PFS Projects (Alex Wassman)

1. **Analysis of TMC Staffing and Contracts**
   o Completed annotated outline for report; draft expected later this month.
2. **Applying Predictive Analytics Into Real-time TMS Operation**
   o Draft literature review and outline for technical report submitted February 2021- under review.
3. **TMS Asset Management Planning and Life Cycle Cost Analysis**
   o Final letter report synthesizing practice submitted in January 2021.
   o Initial outline submitted in January 2021 and review comments submitted in February 2021.
   o Updated outline for technical report submitted later in March.
4. **Inventory, Document & Configure TMS Assets (FHWA Joint Funded)**
   o Draft letter report synthesizing practice submitted in January and comments submitted in February.
   o Final letter report expected later in March.
   o Initial outline submitted in February and comments submitted in March.

Alex solicited champions / review team members for the new projects.

- **Sharing Information and Practices on TMS Emerging Topics** – Jason Bodell volunteered to be co-champion with Ali Farhangi. Vinh Dang, Shari Hillard and Adam Moncivaez volunteered to be on the review team.
- **Integrating and Using New Data Sources in TMS Data and Software**- no volunteers in real-time. <mark>ACTION:</mark> Jon / Noblis to send email request for additional project backers.
- **Options for TMSs to Receive and Share Data from Multiple Sources**- no volunteers in real-time. <mark>ACTION:</mark> Jon / Noblis to send email request for additional project backers.

Update on Current TMC-PFS Activities (Jon Obenberger)

TMC PFS Funding

- **Tier 1:** Projects to initiate now using funding already available to the TMC PFS ($650K)
  - 3 projects selected (listed above)
- **Tier 2:** Projects to initiate when the FY21 funding is made available to TMC PFS ($650K)
  - 2 projects selected
- **Tier 3:** Projects needing to obtain support from other sources (e.g., NCHRP, FHWA) to advance further ($1,025,000)
  - 5 projects selected

Next Steps/Schedule: Noblis and FHWA will develop statements of work for Tier 1 and 2 projects, with hopes of having the three Tier 1 projects started by October 2021 and the two Tier 2 projects started by December 2021. Noblis/FHWA will also develop research problem statements for the Tier 3 projects, with hopes of later partnering with AASHTO, CTSO, TRB committees, etc. to advance them for consideration for NCHEP Research Programs or with FHWA. Noblis will also update the two-page proposals for the projects not being advanced and will have them ready for next year.

Jon mentioned the newly developed TMS PFS factsheet that provides a nice overview of the PFS and can be used as a tool when soliciting more funds. <mark>ACTION:</mark> TMC PFS member to review the factsheet (attached with the invite) and provide feedback by 3/12.

Jon introduced notable new attendees for today's meeting:

- Chris Hilyar from Alabama DOT is joining today for the first time.
- Theresa Gaisser is new Point of Contact for RTC Southern Nevada
- Mike Juliano (replacing Mike Pilsbury for NJDOT)
- Jose Camacho (replacing Sang Le for Caltrans)
- Venkat Nallamothu (AASHTO) is here to coordinate between the TMC PFS and CTSO research activities.

Member Updates

California DOT (Jose Camacho)

Caltrans is currently developing requirements to replace 12 siloed ITS systems for the 12 districts with just one system (CATMS) to improve incident and congestion management, traveler information, interoperability, standardized training and federal mandate compliance.

In January 2020, Caltrans chartered a working group to focus on developing best practices for UAS operations (for emergency response, data collection, training, etc.).

Georgia DOT (Matt Glasser)

Recently worked to use cell phone location data to locate and dispatch stranded motorists in rural Georgia, where there is no CCTV or other ITS coverage. Using Carbyne's c-Lite product, when a motorist contacts 511, Operators can send out a text to the motorist, and with one touch, they can confirm/send their exact location back. The product has been able to reduce the time to locate stranded motorists from sometimes 20 minutes to just 30 seconds. Currently averaging about 13 uses a week. Now trying to get licensing in place to roll this technology out statewide.

Illinois Tollway Authority (Elyse Morgan)

Had to close main Traffic Operations Center due to COVID- losing access to incident data, cameras, etc. Doing a pilot of a WebApp system where they can operate cameras remotely and provide data on DMS status, AVL, RWIS, snowplow data, etc. Now looking to expand this.

Also doing a wrong-way driver pilot program to detect vehicles entering the exit ramp at the interchange. Also added wrong-way signage at eye level with flashers. Next step will be to add cameras to pick up on some of these wrong way drivers. Reported that they were initially getting a lot of false positives from sensors – but are hoping the addition of video detection cameras can help improve this. **ACTION:** Bonnie Castillo to put Elyse in contact with Willy Sorenson who has been doing research on wrong way driving for 10 years. Jon also has contacts for this at TTI and UCF.

Iowa DOT (Bonnie Castillo)

Created a TMC Dashboard that does all emergency incident notifications (EIN) automatically based off severity and GIS data. The system automatically sends a monthly report out on the last day of the month. Next working on integrating a feed from crash reports – have already created a wrong way driver reporting process.

Combining ATMS/ATIS solution – Did not receive good proposals for a 2-in-1 system so they had to re-do the RFP and pick each system separately, with a requirement that they would be able to communicate. Have completed Phase 1 and successfully deployed this 2-part system, which reduces the number of steps required for operators to manage an incident. Noted that a wrong way driver project is planned for Phase 2.

Maryland DOT (Jason Dicembre)

MDOT SHA did a major office reorganization last year to bring Signal Operations under the Statewide TMC. Office of Coordinated Highways Action Response Team (CHART) was changed to Office of Transportation Mobility & Operations (OTMO).

Began construction on the Statewide Operations Center Reconfiguration. Have a temporary center set up while they wait for construction on the other center to be complete (estimated June 2021).

Maryland also joined the Waze Connected Citizens Program (CCP) and began incorporating use within TMC.

Michigan DOT (Jason Bodell)

During pandemic, 2 of the 4 state TOCs went fully remote. Had to move a lot of equipment to staff's homes, but otherwise were able to perform virtual operations as usual. Made some adjustments to freeway service patrol operations due to traffic volume changes (not due to staffing challenges).

MDOT is piloting a TOC GIS Operator Dashboard that brings in data from Waze, Google, and other internal data into one central location for an operator to better detect incidents in real-time.

Nevada DOT (LaShonn Ford)

Implementing TSMO into the statewide program. Held virtual CMM workshops and administered surveys to evaluate NDOT's TSMO maturity. The improved TSMO culture, divisional business case development and development of investment prioritization tool for ITS projects has been very successful. NDOT was also selected as the runner-up project in the Project Selection and Prioritization category for the 2020 TSMO NOCoE Awards.

Neon Active Traffic Management (ATM) System with speed harmonization, lane control, queue warning, adaptive ramp metering, etc. went live in March of 2020 in Vegas.

Leveraging Waycare traffic management system to leverage real time incident information- reducing response times by an average of 12 minutes.

Added a work zone speed reduction counter measure matrix to NDOT's Work Zone Safety and Mobility Implementation Guide. Next update will be in April 2021.

New Jersey DOT (Michael Juliano)

To maintain TMC operations during COVID 19, NJDOT went to remote working where possible, and implemented additional measures for those still working in person (e.g. social distancing, temperature scans etc.)

NJDOT also piloted a mobile RWIS Program to address winter weather challenges. System was complete with RWIS temperature dew points and mobile cameras in fixed positions on trucks to provide live feeds of traffic information. The system has so far resulted in faster/more accurate information.

Texas DOT (David McDonald)

TXDOT had a ransomware attack on May 14, 2020. As a result, the network was compromised. This event highlighted the need for separate networks for the TxDOT Traffic Network and business network. TXDOT has since created a new separate network for critical ITS infrastructure with two-factor authentication, firewalls, and switches. Per David, separate networks are also needed to enable full functionality for ITS devices (so you do not have to worry about firewalls prohibiting the ITS).

Additional key lesson learned: IT is not the same as ITS. ITS and IT equipment cannot both be supported using IT methodologies. Just because the equipment is attached to a network does not make it the same.

Virginia DOT (Ali Farhangi)

VDOT started integrating incident management coordination with law enforcement agencies. Opened the Virginia Department of Transportation (VDOT) and Virginia State Police (VSP) Joint Operations Center in Richmond as the region's first and only joint, state agency traffic and public safety operations center. Read more here: https://kbsgc.com/project/vdot-vsp-joint-operations-center/. VDOT is also planning to develop a new Eastern Region joint VDOT-VSP Traffic Operations Center.

VDOT received an ATCMTD grant to advance a Regional Multimodal Mobility Program (ICM) in Northern VA. Also in January, VDOT received an FHWA grant to provide statewide WZDx data feeds. See the full list of recipients here: https://ops.fhwa.dot.gov/wz/wzdx/demonstration_grants.htm

ACTION: Ali to send Jon information he has on integrating data into VDOT's databases (as opposed to just an overlay) to be used for the *Integrating and Using New Data Sources in TMS Data and Software* project.

Other Announcements

- The member updates slides from these meetings are now accessible on the NOCoE TMS Portal: https://transportationops.org/traffic-management-systems-and-centers/tmc-pooled-fund-study-and-projects. **ACTION:** Group to let Cheryl / Jon know if they have any issues with these items being publicly available.
- Alex, John and Jon conducted a workshop during last January's TRB Annual Meeting on *Managing Traffic Management Systems (TMS) Assets and Resources* to help raise awareness of current projects and to get feedback on managing assets and resources for TMS systems.

Upcoming Meetings

1. **Next Quarterly Meeting**
   Date/Time: June 2, 2021; 1:00 – 3:30 PM ET
   Agenda:
   - Introductions and Review of Agenda
   - Update on Current TMC PFS Projects
   - Update on Current TMC PFS Activities
   - Update on New TMC PFS Projects
   - Discussion – How to Frame Asset Management for TMSs and Link to Agency Asset Management Efforts
   - Discussion – How to Frame Options to Plan for TMS Improvements and Link to TSMO and Agency Plans and Planning
   - Review Agendas for Upcoming TMC PFS Meetings
2. **Annual Meeting**
   Jon updated that there will not be an in-person annual meeting in May. The PFS will re-visit at the June meeting whether an in-person Annual Meeting can be held later this. Jon noted that if the meeting were to be in-person, any travel expenses would be covered by FHWA, so members would not have to budget for that.