

# Virtual Peer Exchange Design

Performance Management & Predictive Operations

## Basic Information

### Date & Time

Monday, June 5<sup>th</sup>, 1-4pm ET

### Platform

GoToWebinar – personalized links to be provided via email

### Brief description

The Tennessee Department of Transportation (TDOT) seeks to achieve zero deaths from vehicle crashes. Proactive transportation systems management and operations (TSMO) practices are a key to success in achieving zero fatalities on Tennessee highways. The TDOT SmartWay Traffic Management Centers (TMCs) are the focal point of real time operations and the HELP Highway Incident Response Units are an extension providing emergency response to stranded motorists. This emergency service is a key tactic for the reduction of secondary crashes when extended road closures or restrictions occur. However, nationwide experience has shown that simply being proactive and providing the timeliest response possible in real-time isn't fully achieving a zero fatality goal. The need exists to use data, advanced geospatial techniques and continued emphasis on logistics management to achieve a predictive posture.

Tennessee has experience with predictive operations through efforts by the Tennessee Highway Patrol (THP). By using the TITAN system, THP reported that it has been able to predict heavy vehicle crashes and driving under the influence (DUI) crashes to an accuracy level of 70 percent. TDOT believes that adapting and integrating the THP methodology with the SmartWay TMCs and the HELP units could help achieve predictive operations that will help contribute to TDOT's zero fatality goal.

This virtual peer exchange will bring together agencies from across the United States, to share some of their best practices, challenges, and lessons learned, as they have refined their own use of mobility data for performance management and predictive analytics applications.

### Target Audience

The results of this peer exchange are intended for State and regional transportation agency personnel who are involved in traffic management, process development, and other operations functions as they pertain to the use of high-resolution mobility tools, such as crowd-sourced probe vehicle data. While TDOT and Gannett-Fleming will derive immediate use from the information shared during this event, the peer exchange will also benefit other practitioners, researchers and professionals who are interested in this topic.

## Learning Objectives

Before moving ahead with integration of the TITAN methodology, TDOT needs to learn as much as possible about what other jurisdictions are doing in this area. Anecdotally, TDOT believes that efforts to achieve predictive operations is happening in two main areas of TSMO practice: performance management and the development of operations decision support systems. TDOT anticipates the implementation of new central operations software in the near future for all SmartWay TMCs. It will be beneficial to understand how predictive operations can be included in this software upgrade.

In cooperating with the National Operations Center of Excellence (NOCoe), TDOT hopes to engage in a dialog that is efficient for its own purposes and helpful for other jurisdictions that have put thought into this topic. The list of TDOT objectives for the Peer Exchange is below:

- Objective 1: Determine to what extent performance management is being used by jurisdictions to guide operational decisions.
- Objective 2: Identify the extent to which jurisdictions with mature capabilities in performance management are using or considering decision support tools to assist with operation needs.

## Participants

### Moderator

- **Matthew Schiemer**, Gannett-Fleming
- **Steven Lavrenz**, National Operations Center of Excellence

### Presenters

- **Iowa DOT**, using vehicle probe data to make decisions for the Highway Helper program, for both vehicle positioning and system expansion.
- **Minnesota DOT**, using the iPeMS performance management data.
- **San Diego Association of Governments (SANDAG)**, using corridor management data to help predict traffic diversions and make traffic management decisions.
- **Maryland DOT**, using their CHART (Coordinated Highways Action Response Team) system.
- **Indiana DOT**, using vehicle probe data for identifying crash locations and queue lengths.

## Detailed Schedule

Time	Topic	Presenters
01:00 - 01:05PM	Welcome and introduction of participants	NOCoe
01:05 - 01:10PM	Overview of project and expected outcomes of peer exchange	Gannett-Fleming, TDOT
01:10 - 01:25PM	Using vehicle probe data to make decisions for the Highway Helper program, for both vehicle positioning and system expansion	Iowa DOT/Iowa State University
01:25 - 01:40PM	Open discussion	
01:40 - 01:55PM	Using the iPeMS performance management data.	Minnesota DOT
01:55 - 02:10PM	Open discussion	
02:10 - 02:25PM	Using corridor management data to help predict traffic diversions and make traffic management decisions.	SANDAG
02:25 - 02:40PM	Open discussion	
02:40 - 02:50PM	Break	
02:50 - 03:05PM	Using CHART (Coordinated Highways Action Response Team) system	Maryland SHA
03:05 - 03:20PM	Open discussion	
03:20 - 03:35PM	Using vehicle probe data for identifying crash locations and queue lengths	Indiana DOT
03:35 - 03:50PM	Open discussion	
03:50 - 04:00PM	Wrap up	NOCoe, Gannett-Fleming, TDOT