

# RESEARCH SPOTLIGHT

## Project Information

**REPORT NAME:** Evaluating New Technologies for Roads Program Initiatives in Safety and Efficiency (ENTERPRISE) PHASE II

**START DATE:** November 2018

**REPORT DATE:** February 2022

**RESEARCH REPORT NUMBER:** SPR-1705

**PROJECT COST:** \$922,100

**COST SHARING:** 100% FHWA through the SPR, Part II, Program

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## POOLED FUND MEMBERS:

Illinois DOT, Iowa DOT, Kansas DOT, Michigan DOT, Minnesota DOT, Ontario Ministry of Transportation, Texas DOT, and Wisconsin DOT.

## Transportation agencies pool ideas and resources for technology-enabled solutions

Founded in 1991 to study emergent transportation solutions, the Evaluating New Technologies for Road Program Initiatives in Safety and Efficiency (ENTERPRISE) pooled fund has operated in a series of multiyear phases through the commitment of participating state departments of transportation (DOTs) and Canadian transportation agencies. Members of the pooled fund, which is led by the Michigan Department of Transportation (MDOT) and recently entered Phase III, prioritize technology-oriented research topics based on current transportation needs. From these priorities, the group conducts research, discusses learnings and shares best practices.

### ENTERPRISE – PHASE II

During Phase II, the pooled fund studied a wide range of intelligent transportation system (ITS) solutions and related topics. Its 20 projects included detection and communication tools to increase safety for drivers and pedestrians, and administrative process improvements to facilitate acquisition and implementation of new technologies.

Phase II research results offer ENTERPRISE members and other transportation agencies actionable data and guidance to support decision-making and implementation. Examples from two member DOTs illustrate the benefits of this research.

### FEATURED PROJECTS

**Partnering with Emerging Technology Providers.** As DOTs deploy more transformational technology, companies are augmenting their efforts to develop



A technical site visit to Kansas City SCOUT traffic management facilities allowed for a Q&A with local practitioners and decision-makers.

new products and solutions. However, the potential benefits of these innovations can be delayed by lengthy procurement processes. In response, transportation agencies have reworked their processes for evaluating and procuring new products and

*"In our exchanges, we identify topics that are of interest to multiple states, and we pool resources and testing environments when conducting research. The research-based solutions and approaches can be incorporated into the strategic plans of members and shared with other transportation agencies."*

**Marlon Spinks**  
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have sought support and collaboration from federal agencies and private industry.

To address process hurdles and other complexities in pursuing innovative solutions, one ENTERPRISE research initiative examined various aspects of procuring emerging technology, offering guidance on relevant information sources and also providing case studies to demonstrate successful procurement partnerships and the implementation of new approaches. The [report](#) for this initiative serves as a reference for DOT professionals, including project managers, program managers, and contracting or procurement staff.

One case study describes a procurement strategy developed by Minnesota DOT (MnDOT) that adds a preliminary step of information gathering to educate the agency on the options available in the market before it finalizes requirements for a formal request for proposals. A second case study describes a consortium of 12 agencies, including MDOT, which focused on testing automated buses. The member agencies successfully consolidated their purchasing power and learnings in exploring feasibility, while leveraging MDOT's experience with bus manufacturers.

"I value working with other transportation practitioners who continually assess and implement new technologies," says Charles Tapp, ENTERPRISE member representing Texas DOT. "With the range of expertise in the group, people bring different perspectives to these solutions. When we see how member DOTs are using internal capabilities in new ways, it opens up opportunities for others to follow their lead."

**Putting Updated Road Information in Drivers' Hands.** For drivers who turn to their apps and onboard navigation systems to get from point A to point B, the accuracy of this information is paramount, informing them of closures, detours or newly constructed roads. Even with the potential inconvenience and safety concerns, no consistent process exists to ensure that the information provided to drivers by commercially available navigation systems reflects the most current data from state DOTs. Where processes do exist for registering updates and changes to map information, they are not standard across different mapping companies.

To address this gap in information transfer, the ENTERPRISE group initiated a study of how DOTs communicate road information to mapping companies with the intent of improving the accuracy of information provided to map users. The methodology included a survey of DOTs to document their processes for providing map updates while also documenting the map companies' different processes for updating information. The analysis targeted nine familiar providers, including TomTom, Waze, MapQuest, and Apple.

With the information-gathering efforts completed, the research team drafted a process for DOTs to submit updates to mapping companies. The study participants then convened in a webinar along with ENTERPRISE members to offer additional input on the process. The resulting [report](#) provides a step-by-step guide for updating maps, specifying the differences among the nine mapping companies included in

the study. All state DOTs and transportation agencies can access this reference for sending updates to any of the nine mapping companies.

"Although the process for updating DOT map information remains different for each mapping company," says Sinclair Stolle, Iowa DOT's ENTERPRISE member, "this study approach can support future efforts to standardize the process across the country."

## IMPLEMENTATION

The 20 studies included in ENTERPRISE – Phase II address a wide range of technology-enabled ideas and implementations intended to support the strategic decisions of transportation professionals. The Phase II [final report](#) is a valuable tool for all transportation agencies looking to put ITS to work to improve their operations.

## Research Administration

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**The final report is available online at**

[MDOTjboss.state.mi.us/TSSD/tssdResearchAdminDetails.htm?keyword=spr-1705](https://MDOTjboss.state.mi.us/TSSD/tssdResearchAdminDetails.htm?keyword=spr-1705)

Research Spotlight produced by  
CTC & Associates LLC, June 2024.