Domestic Scan 18-02 - Leading Practices In Modifying Agency Organization And Management To Accommodate Changing Transportation System Technologies

From the perspective of state departments of transportation (DOTs) and other public sector organizations responsible for development and management of surface transportation systems, *transportation systems technologies* refers broadly to operating procedures, procurement methods, and information management, as well as a wide range of hardware, materials, and software. Many of these technologies have been evolving rapidly and some are motivating change in DOT organization and management practices. Some agencies have found, for example, that effective implementation of Transportation Systems Management and Operations (TSMO) strategies requires significantly enhanced communication and coordination among operations, maintenance, and engineering staff. Others are finding that increased availability and reliability of information about roadway and traffic conditions offer opportunities for improving safety and travel times but require changes in their traffic incident management and road-weather management practices. Many observers expect that introduction of connected and automated vehicles (CAV) will continue to motivate organizational and management change.

The scan will investigate how DOTs are changing their organizations, institutional arrangements, and management practices to improve transportation system performance through adoption of new technologies. A diverse scan team—drawn from maintenance, operations, and traffic engineering—will be tasked to review the experience of DOTs or other agencies that have been notably successful in their adoption of new technologies for integrated corridor management, traffic incident management, and road-weather management, to explore the institutional and management changes credited for the success and to extract lessons that can inform other agencies' development.

TSMO is a recent example of changing transportation technology that is influencing organizations. Several states that have created TSMO Divisions or Bureaus within their agencies may provide insights to the scan. These include Arizona, Colorado, Florida, Georgia, Iowa, Maryland, Ohio, Tennessee, Texas and Washington. Other public sector or toll authorities or agencies may provide valuable insights as well.

This scan is anticipated to be conducted as a Type 1- Traveling Scan. The scan report will provide guidance on leading practices for enhancing communications and coordination amongst maintenance, operations, and traffic engineering staff and others, sharing of operational information across the organization and case studies demonstrating these success from agencies that have been successful in establishing organizations that deal effectively with changing transportation technology. The scan results are likely to be of interest to several AASHTO committees including the AASHTO Committees on Traffic Engineering, Construction, Maintenance and Transportation System Operations.

Original Scan Proposal Title:
Institutionalizing Collaboration and Cooperation In Maintenance, Operations, And Traffic Engineering To Support The Transition To New And Emerging Transportation Technologies

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Execution Schedule

Milestone	**Anticipated Date**
Chairs and Team Members Identified	September 2018
Desk Scan Completed	November 2018
Prescan Meeting Held	November 2018
Scan Conducted	May 2019
Draft PowerPoint submitted by SME	June 2019
Draft Report Delivered to NCHRP and Panel	August 2019
Final Report Delivered to NCHRP	January 2020

Estimated Scan Cost: $300,000 (large team)
Anticipated Duration: 2 weeks (type 1 scan)

Last Reviewed/Revised Oct 10,2018