SHRP2 SOLUTIONS
TOOLS FOR THE ROAD AHEAD

Guide to Organizing Transportation Agencies to Advance Systems Operations and Management (L06)

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Challenge

In recent years, transportation agencies have moved toward addressing congestion by focusing on effectively operating highway systems as coordinated networks using transportation systems management and operations (TSM&O). Traditional construction and maintenance solutions to congestion require increasingly limited resources, including money, time, and physical space. TSM&O strategies help agencies utilize existing capacity that can lead to safer roads and more reliable travel times for drivers.

However, an agency's ability to apply TSM&O strategies is not primarily related to technology or understanding of best practice. Reaching full potential requires that supportive business processes and institutional arrangements be put in place, monitored, and managed—just as is typically done for the other core transportation programs, such as construction and maintenance.

Solution

The second Strategic Highway Research Program (SHRP2) has developed the Guide to Organizing Transportation Agencies to Advance Systems Operations and Management. The solution includes a **guide** that examines how transportation agencies should be organized to successfully execute operations programs and a related **research report** that provides additional background.

The guide describes a capability maturity model (CMM) framework that helps agencies assess current TSM&O capabilities and create an action plan to systematically improve. During a focused workshop, State and local transportation agencies and their partners can use the capability framework to assess of their existing operations. The framework identifies the elements needed to continually improve, one level at a time, along six dimensions of organizational capability: business processes, systems and technology, performance management, culture, organization and workforce, and collaboration.

Participants in these workshops evaluate of the strengths and weaknesses of the six dimensions, which enables the agency to assess the effectiveness of its TSM&O programs, as well as identify the features associated with effective programs. The workshops include an analysis of TSM&O activities from the standpoint of relationships and interactions among staff, required technical and business processes, and supportive institutional and organizational arrangements.

Following the self-assessment workshop, the agency develops an implementation plan, identifying specific actions, with the goal of elevating the agency's capabilities for TSM&O and ultimately improving travel-time reliability and the efficiency of their transportation system.

An online version of the CMM framework is also available, at **www.aashtosomguidance.org**.

To support agencies in conducting the assessment and applying the results, FHWA has created additional implementation aids. A **primer document** provides a brief overview of the process for applying the capability framework. A prep kit provides information and tips to help in preparing for an effective assessment, such as methods for selecting possible workshop participants. A tool kit provides examples of actions an agency could consider including in their implementation plan and resources, such as training, that can help them accomplish those actions. These additional materials will be available soon.

Save Lives

These solutions reduce secondary crashes through faster response times, protect responders by implementing standard procedures, and improve work zone management and operations, which together result in less congestion and safer roads.

Save Money

Better operations can reduce the number and duration of road closures. Early identification of potential problems and better planning for special events decreases costs and congestion for motorists as well as the freight industry.

Save Time

These products provide highway agencies and state DOTs with the tools to reduce traffic congestion and traveler delay. Preventive measures mitigate problems before serious delays and congestion occur.

Continued on next page.

RELIABILITY

Products from the Reliability SHRP2 focus area help transportation organizations improve travel reliability by reducing congestion through incident reduction, management, response, and mitigation.

Visit: www.fhwa.dot.gov/GoSHRP2
Learn more about products, case studies, and implementation assistance.

SHRP2 has also developed outreach materials tailored for DOT and MPO leadership (project L31) that can help gain support for TSM&O efforts. These materials include an adaptable **PowerPoint presentation** and an accompanying **presentation guide** focused on educating chief executive officers (CEOs) and senior managers of State DOTs about the value of mainstreaming TSM&O as a core mission, business practice, and investment priority. A similar **presentation** and accompanying **presentation guide** are tailored for CEOs and senior managers of MPOs and to the MPO's board members about the value of mainstreaming TSM&O as a core component and investment priority in the regional transportation planning process.

Benefits

Evaluating capabilities and making essential improvements to underlying supportive institutional structures and business processes moves an agency closer to organizational excellence. This will enable an agency or State DOT to successfully execute programs that effectively manage and reduce congestion and improve reliability.

Who is using this product?

Already, more than 35 transportation agencies—including State DOTs, MPOs, and regional/corridor coalitions—are using the CMM framework and related tools to help improve TSM&O and the reliability of their highway systems.

The Implementation Assistance Program

Implementation assistance is available to help State departments of transportation (DOTs), metropolitan planning organizations (MPOs), and other interested organizations deploy SHRP2 Solutions. A range of opportunities is available to raise awareness of SHRP2 Solutions and to encourage early adoption of these products. Application periods are offered approximately twice per year. Each product selected for implementation assistance has the potential to deliver more efficient, cost-effective programs to meet the complex challenges facing transportation today.

How can you learn more?

Visit: www.fhwa.dot.gov/GoSHRP2

- Additional product information
- Information about how this product is being used in the field
- Contact information for peers who are familiar with this product
- Links to research reports

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About SHRP2 Implementation

The second Strategic Highway Research Program (SHRP2) is a partnership of the Federal Highway Administration (FHWA), the American Association of State Highway and Transportation Officials (AASHTO), and the Transportation Research Board (TRB). TRB completed the research, and now FHWA and AASHTO are jointly implementing the resulting SHRP2 Solutions that will help the transportation community enhance productivity, boost efficiency, increase safety, and improve the reliability of the Nation's highway system.