

Project No. NCHRP 20-126 (02)

State Transportation Agency Multifaceted Decision-Making  
for Future System Performance

**TECHNICAL MEMORANDUM**  
**Implementation Plan**

TASK 8 Contract Item 11

Prepared for  
National Cooperative Highway Research Program  
Transportation Research Board  
of  
The National Academies of Sciences, Engineering, and Medicine

TRANSPORTATION RESEARCH BOARD OF  
THE NATIONAL ACADEMIES OF SCIENCES,  
ENGINEERING AND MEDICINE  
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## TECHNICAL MEMORANDUM

TO: Waseem DeKelbab, NCHRP Program Officer, and NCHRP 20-126 (02) Panel

FROM: Tony Furst

DATE: July 27, 2022

SUBJECT: NCHRP 20-126(02) Implementation Plan

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### **Recommendations on how to best put the research findings/products into practice.**

The objective of the NCHRP Project 20-126 series is to build understanding among state transportation agencies and others of a wide range of issues critical to the future of the nation's transportation system and its capability to support the nation's continued prosperity. This project, NCHRP 20-126(02), is designed to assist state transportation agencies and others integrate the issues raised in the reports into their system management decision-making through the development of an analytic framework. The playbook created in 20-126(02) provides options and examples in the form of "plays" that describe how and where the analytic framework that was developed brings value to decision-making and how employing the analytic framework can improve the ability of state transportation agencies to integrate these issues into their decisions about system performance.

During the workshop for this project with the panel, implementation options for this project were discussed. One of those options was the creation of videos to accompany each of the plays in the playbook. The videos would be, in effect, a self-directed implementation plan of informational/instructional videos of approximately five (5) minutes in length for each of the plays in the playbook. The videos would be embedded in the web version of the playbook and would augment the written text from each play. After an individual reads the play, he/she/they can view the video that will further describe the content in the written text. Some individuals learn best from reading material and others from a more visual experience. This self-directed implementation plan adds an option for individuals accessing and using the playbook and expands its reach to new media native generations.

A second option is a facilitated pilot for each of the plays in the playbook with sponsor state transportation agencies followed by a peer review of the pilots. This option could be stand-alone or could build off the self-directed option noted above. The facilitated pilots could be approached a la carte selecting all or some of the plays. Each pilot would work with a state that was in the process of conducting one of the functions in the playbook (e.g., scenario planning, enterprise risk management, multi-jurisdictional decision-making). The state would host a pilot application of the analytic framework to demonstrate how the analytic framework, the playbook, and the visualization tool could inform and augment the process in the play. These pilots would be geared toward senior officials and those who would be preparing information that would be used by senior officials. If conducted in concert with the self-directed implementation plan, the videos would be created before the pilots and used in the pilots. Feedback from a pilot could be used to enhance or augment the related video. If the facilitated implementation plan is chosen, the videos would be shot and edited in a modular form so that specific modules could be edited and then spliced to incorporate feedback or input from the pilots. The facilitated implementation plan

would conclude with a peer review event to capture feedback to further inform the videos.

If neither the self-directed nor facilitation implementation plans are pursued, then routine posting and advertisement of the research product through TRB channels would be pursued.

**Possible institutions that might take leadership in applying the research findings/products.**

As noted above, the facilitated in-person implementation plan would need individual State Departments of Transportation to host the pilots.

The American Association of State Highway and Transportation Officials (AASHTO) could host a website for the visualization tool along with its availability as a downloadable package from the TRB Dropbox site.

**Issues affecting the potential implementation of the findings/products and recommended possible actions to address these issues.**

Just the standard issue of transportation agencies being overwhelmed with information and work and being challenged to manage their workload with diminished staff. These challenges were acknowledged at the outset of the research endeavor and are the primary reason this work product was designed to be used in conjunction with existing managerial functions. Reinforcing that this work product is a strategic (program) versus tactical (project) level tool that works in concert with the planning process could potentially facilitate its implementation and usage. This reinforcement would be part of the self-directed and facilitated implementation options outlined earlier.

**Recommended methods of identifying and measuring the impacts associated with implementation of the findings/products.**

For the self-directed implementation plan, software that can track access to material could be used to determine the frequency of access to the playbook and the final report. If allowed, follow-up surveys to those who accessed the playbook or the final report could be sent out or a response survey function could be built into the access that would survey those who downloaded or viewed the playbook to gain their feedback on the analytic framework's functionality. If the self-directed implementation option is pursued, comparable tracking and feedback mechanisms could be deployed.

If the facilitated pilots are pursued, follow-on surveys would be used to ascertain the frequency of use in subsequent managerial functions.