

Promoting the Transportation Systems Management and Operations Program in Kansas

Report Number: K-TRAN: KU-18-2 • Publication Date: January 2021

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Introduction

Transportation Systems Management and Operations (TSMO) consists of a set of strategies that aim to improve operational and safety features of existing transportation systems. The ultimate goal of these strategies is to assess and improve existing transportation infrastructure systems.



The Capability Maturity Model (CMM)

Project Description

The objective of this research was to recommend processes, tools, and resources required to implement a TSMO program in Kansas without disrupting the organizational structure of the Kansas Department of Transportation (KDOT). This effort promotes the mission of KDOT to serve major metropolitan areas while also executing that mission in challenging rural regions of the state.

This research investigated the current level of TSMO implementation and integration within the KDOT at the headquarters and all areas and districts in Kansas. This investigation is of particular importance to KDOT because it will initiate implementation of a statewide TSMO plan and align Kansas with its peer states. The research team conducted a thorough review of how TSMO is defined and implemented in several states throughout the United States, and the team consulted with federal guidelines and applied the Capability Maturity Model (CMM) to identify the current state of TSMO development and implementation in Kansas.

A detailed questionnaire was sent to 43 KDOT senior employees (directors, bureau chiefs, and section heads), and 35 area engineers and metro engineers throughout Kansas. The questionnaire included an initial evaluation to understand which TSMO strategies are currently implemented and the level of knowledge of these strategies from the surveyed state employees. The survey was also designed to perform CMM analysis on five dimensions (business process, systems and technology, performance measurement, collaboration, and organization and staffing), as these were selected by the project monitors.

Project Results

Based on the survey responses, the team concluded that most TSMO activities are performed ad-hoc and champion-driven, although efforts are made to better understand strategy applications. Many of the survey responses were “I don’t know,” indicating a low level of familiarity with current processes. After the CMM evaluation was completed, the research team prepared a complete list of recommendations in the form of actions and targets to advance each of the five dimensions to the next levels of capability. The findings of this report suggest specific steps that KDOT must take to advance TSMO regionwide within its operation.

Project Information

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