Florida Department of Transportation Research

Financial Achievability Model: Operationalization Case Studies and Analysis

October 2023

Project Number
BDV30-977-36

Project Manager
Jason Tuck
FDOT Research Center

Principal Investigator
Patricia (Born) Shriefer
Florida State University

Current Situation

How do you measure the value produced by research projects? Sometimes, cost, time, and labor savings realized from the results of a research project are clear and straightforward. However, many times the benefits of research are not easily quantified. It can also be difficult to implement the same set of research performance measures across the dozens of research projects conducted each year by the Florida Department of Transportation (FDOT). To better identify the quantifiable benefits of research, FDOT and some of its partner universities created the Financial Achievability Model (FAM) to capture the net benefits of varied FDOT research projects and to standardize the collection and tracking of data needed to calculate value.

The FAM can be used in all stages of research, which helps research teams track return on investment throughout a project. However, applying the FAM requires significant coordination between project managers (PMs) and principal investigators (PIs). While a formal process for applying the FAM has been implemented, researchers have noted additional expertise is required for the FAM to meet its potential.

Research projects investigate new methods, materials, and tactics that can result in transportation infrastructure that is safer, more cost-effective, and last longer with less maintenance needs.

Research Objectives

The goal of this project was to explore the best way to continue to incorporate and refine the FAM as part of the current FDOT research process. Part of a prior project (BDV30-977-12) identified barriers to the implementation of the FAM, primarily a lack of data and a need for more expertise. This project addressed those barriers.

Project Activities

To gauge their experiences implementing the FAM, 75 current and former PMs from across all FDOT functional areas were surveyed. The survey questions were designed to solicit feedback that would reveal more about the PMs' familiarity and comfort level with basic economic concepts and the availability of FAM data in their functional area – for example, cost for concrete raw material and the projected reduced cost that results from a longer service life. The team then identified existing internal and external sources of data and a selection of research projects that would be concrete examples for how to apply the FAM. Using those projects, researchers held three workshops with PMs to develop project-specific FAM models and train them on how to update their models throughout the project. The team used input from the workshops to determine the extent to which the FAM may be reasonably implemented.

Project Conclusions and Benefits

The researchers found that, while knowledgeable and willing, PMs may be too overwhelmed with other project activities to take the lead on FAM implementation. Moreover, facing fewer distractions, PIs may be a better fit to produce FAM estimates as part of their funded research projects. Identifying this obstacle can possibly help FDOT develop and deliver specific training on FAM implementation for PIs as well as draft research project scopes of work that include FAM processes and data collection.

For more information, please see fdot.gov/research.