



## Evaluating and Communicating the Benefits of Transportation Research

Assessing the return on investment in transportation research is crucial to ensuring program goals are met, knowledge and technology are shared broadly, and future investigations are prioritized. A recent effort leveraged existing MnDOT and LRRB tools and processes to evaluate and communicate the value of innovation and research. A new benefit monitoring and communication framework, which can be tailored to individual projects, allows agencies to reassess a project and its benefits throughout the research life cycle.

### What Was the Need?

Investments in developing new technologies, knowledge, methods and tools support the enhancement of transportation networks and services. Understanding and communicating the value and impact of transportation research allow agencies to demonstrate outcomes of investments and progress in achieving program-level goals, share new knowledge among research partners and other states, and generate support from policymakers and the public.

Evaluating research benefits is a priority for MnDOT, the Local Road Research Board (LRRB) and transportation agencies around the country. While MnDOT and LRRB have long employed activities and tools to evaluate and

communicate research benefits, they were interested in a comprehensive framework that would tailor the efforts and activities of a project throughout the research life cycle and guide strategic research investments into the future.

### What Did We Do?

The project's Technical Advisory Panel (TAP) first identified the current tools and practices MnDOT and local agencies use to evaluate and communicate the benefits of research. After reviewing the literature and other state DOT materials to identify best practices, researchers consulted with transportation research professionals in Minnesota and other states through one-on-one con-

*“This multifaceted effort has enhanced our research benefits evaluation and communication activities. The results will provide invaluable insight into project outcomes—immediate and long term—guiding us to invest strategically in the future.”*

—KATIE WALKER, DIRECTOR, MnDOT OFFICE OF RESEARCH AND INNOVATION

sultations and surveys to understand common challenges and related solutions to articulating the value of research to internal and external stakeholders.

Guided by stakeholder input, researchers proposed a framework for identifying and communicating benefits. The framework allows users to focus on understanding and monitoring how project impacts evolve throughout the research cycle, share knowledge across agencies and external research communities, and articulate the value of research to policymakers.

After presenting the proposed framework to the TAP and other stakeholders at a workshop, investigators incorporated feedback and refined the methodology. Agency team members selected six existing research projects for a proof-of-concept pilot to test the tool’s flexibility to accommodate different types of projects at different stages of development and identify resources required to implement the methods. Investigators revised the framework further to include refinements gained from this phase and presented the refined framework and recommended implementation steps in a second workshop.

## What Did We Learn?

Building on the strengths of the existing processes and tools that the agencies used to evaluate and

communicate the benefits of research activities, the new two-part framework tailors agency and researcher efforts to a project’s type throughout its life cycle. The first process of the framework explores the potential for implementation, magnitude of impact and level of interest to identify where to invest the project team’s effort and other resources in assessing benefits.

The second process of the framework identifies project benefits, including construction, maintenance and other life cycle cost savings; user and environmental benefits; safety enhancements; and risk management. Project team members can also specify goals, key messages and resources to support communication activities. A multitable spreadsheet allows the information to be recorded at different stages throughout the project life cycle.

The framework focuses on three primary guiding principles:

- **Flexibility.** Applies to different types of projects and allows benefit categories, metrics, inputs and methodologies to change as the project progresses and is implemented.
- **Trackability.** Allows for reevaluation over multiple project stages to illustrate short- and long-term benefits.
- **Integration.** Leverages existing evaluation and communication

tools and processes to streamline the process throughout the research life cycle.

Detailed task lists for all project team members, prompted by workshop feedback, define clear roles and responsibilities. Finally, while MnDOT and LRRB have established communication tools and processes, researchers offered new ideas and suggested streamlined tracking of communication activities into the framework.

## What’s Next?

MnDOT and LRRB plan to pilot the benefits identification and monitoring framework to guide work planning for all research projects in the coming year. The project type assessment is already informing the framework for existing proposals advancing to work plan development. The framework can be refined as agencies gain experience with it and as it is tailored for use in other state departments of transportation.

## About This Project

### REPORT 2023-39

“Evaluating and Communicating the Value of Research.”  
Find it at [mdl.mndot.gov](https://mdl.mndot.gov).

### CONTACT

[research.dot@state.mn.us](mailto:research.dot@state.mn.us)

### TECHNICAL LIAISON

Katie Walker, MnDOT,  
[Katie.Walker@state.mn.us](mailto:Katie.Walker@state.mn.us)

### INVESTIGATOR

Rahil Saeedi, CPCS Transcom, Inc.,  
[RSaeedi@cpcstrans.com](mailto:RSaeedi@cpcstrans.com)

### LRRB PROJECT COST

\$46,969

### TOTAL PROJECT COST

\$99,937

[www.mndot.gov/research](https://www.mndot.gov/research)