

# Evaluating and Communicating the Value of Research Brochure and Task Checklists



## Why Evaluate and Communicate the Value of Research?

Research benefit evaluation and communication help MnDOT and LRRB understand the outcomes of their investment in research and innovation, promote further exploration and implementation of new knowledge and technology in transportation, and prioritize future research and implementation projects.

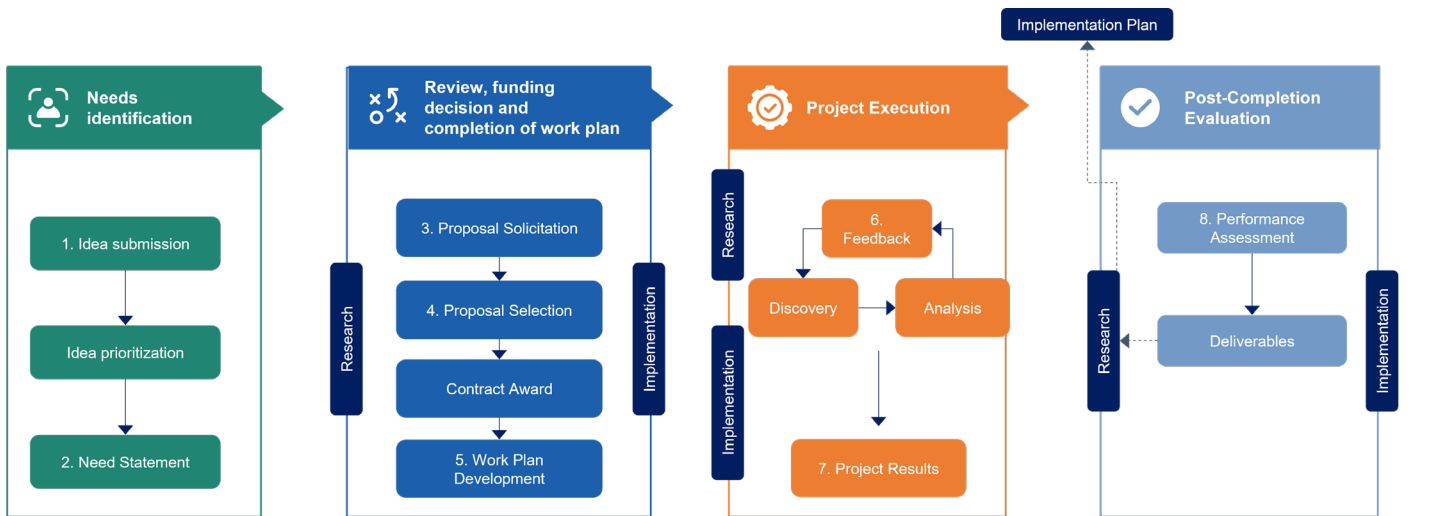


## Why Soft-Launch a New Framework for Research Benefits Evaluation and Communication?

The new framework will improve the efficiency and effectiveness of MnDOT's and LRRB's benefit monitoring process and ensure that identified research benefits are incorporated into existing communication and marketing activities

# Benefit Monitoring Processes in the Research Cycle of MnDOT and LRRB

The existing research cycle of MnDOT and the LRRB already involves multiple benefit evaluation activities and tasks. The newly adopted framework is built upon these tools and ensures a more streamlined evaluation and communication process.



## 1. Idea Submission

**Benefit monitoring activities:** Ideascale questions asking idea submitters to state why the submitted ideas are important and their benefits to MnDOT and local agencies.

**Responsible person/group:** Idea submitters

## 2. Need Statement

**Benefit monitoring activities:** Identify potential benefits of selected ideas in the need statements.

**Responsible person/group:** project champions and ORI staff

## 3. Proposal Solicitation

**Benefit monitoring activities:** Highlight quantifiable benefits and demonstrate benefit evaluation methodology.

**Responsible person/group:** proposers

## 4. Proposal Selection

**Benefit monitoring activities:** MnDOT/LRRB provides guidelines for proposers to present benefits, calculation methodologies, and research implementation steps.

**Responsible person/group:** proposers

## 5. Work Plan Development

**Benefit monitoring activities:** Refine identified benefits, proposed benefit monitoring methodologies, and implementation procedures.

**Responsible person/group:** principal investigators, project advisors, TAPS, project champions, and technical liaisons.

## 6. Discovery - Analysis -

**Feedback Benefit monitoring activities:** continuous discussion and modification of benefits; a communication plan to identify areas of implementation and communication.

**Responsible person/group:** project investigators, TAPs, technical liaisons, ORI staff

## 7. Project Results

**Benefit monitoring activities:** final documentation on estimated benefits, methodologies (quantitative and qualitative), and research implementation steps; records (e.g., benefits identified during the projects) entered into the ARTS database with the intent of assessing benefits monitoring at the research program level.

**Responsible person/group:** project investigators, project advisors, project coordinators

## 8. Performance

**Assessment Benefit monitoring activities:** Discussions on benefits and strategic outcomes during final TAP meetings; research/implementation teams and MnDOT evaluate each other's performance.

**Responsible person/group:** project investigators, technical liaisons, and TAPS

## Multi-Stage Benefit Evaluation and Communication Process

The benefit evaluation and communication framework follows a multi-stage process, aligning with the various stages in the MnDOT/LRRB research cycle. This approach ensures that the assessment and communication of project benefits are integrated seamlessly into the entire lifespan of research and implementation endeavors and requires active collaboration among the research/implementation team members.



### Project Development

This stage includes activities leading up to contractor selection and project funding announcement, such as proposal review and presentations during the Winter Meetings.



### Project Inception

This stage starts after contractor and research team selection. During this phase, research teams work with MnDOT/LRRB to establish Work Plans and Communication Plans.



### Project Execution

This stage comes after the completion of Work Plans and Communication Plans. This is the stage where researchers conduct technical works and generate results in response to research questions and needs.



### Project Completion

This stage begins after research teams finalize Final Reports. Responsible personnel should complete the Benefit Evaluation and Communication Form and the benefit evaluation component in Final Reports, preparing for hand-off after project completion.



### Post-Completion / Post-Implementation

This stage contains any activities that occur after the submission of Final Reports. If long-term benefits or implementation opportunities are identified in the Form, research teams of subsequent project phases or ORI staff should periodically update the Form or as often as necessary.

## Phased Benefits Evaluation & Communication Workflow Overview

The benefit evaluation and communication process will be a collaborative process involving existing research team members:

1

**Project Champions / Technical Liaisons** are the lead of benefit monitoring efforts. They track the flow of research on a specific topic, oversee completing the Form, and coordinate with other team members to gather benefit evaluation and communication information. They also serve as advocates for research teams during the project type categorization and adjustment discussions with the RSC and LRRB boards.

2





**Principal Investigators** provide technical expertise on benefit evaluation and communication throughout project lifecycles.

3

**Project Advisors** (also includes project coordinators) are responsible for the administration tasks in the benefit monitoring and communication process. They oversee the schedule of the process and organize check-in meetings with TAPs. They coordinate with research teams and the boards during project adjustment discussions.

4

**Technical Advisory Panel Members** provide guidance and feedback to research teams on the benefit evaluation and communication work throughout project lifecycles.

 Activity	 Project Stage	 Responsible Person(s)	 Facilitator(s)
<b>Project Type Assessment</b>			
Initial type assessment	Project development	RSC & LRRB board members	Champion
Revisiting type assessment	Project execution	Champion and Technical Liaison & Project Advisor	Principal Investigator, Technical Advisory Panel
<b>Completion of the Benefit Evaluation &amp; Communication Form</b>			
Form establishment	Project inception	Champion and Technical Liaison	Principal Investigator, Project Advisor, Technical Advisory Panel
Identify & document benefit categories, data, & methods	Project inception	Champion and Technical Liaison	Principal Investigator, Technical Advisory Panel
Review & update benefit categories, data, & methods	Project execution, project completion	Champion and Technical Liaison & Principal Investigator	Technical Advisory Panel
Identify & document anticipated post-completion benefit categories, data, & methods	Project inception	Champion and Technical Liaison & Principal Investigator	Technical Advisory Panel
Review & update anticipated post-completion benefit categories, data, & methods	Project execution, completion, post-completion	Champion and Technical Liaison & Principal Investigator	Technical Advisory Panel
Identify project audiences & communication tools & platforms	Project inception	R&I Communication & Principal Investigator	Champion and Technical Liaison, Technical Advisory Panel
Review & update the communication information	Project execution, completion, post-completion	Champion and Technical Liaison & Principal Investigator	Technical Advisory Panel, R&I Communication

The table on the right summarizes the evaluation and communication activities by role and project stage.

# Project Type Assessment

Project type categorization determines the level of effort and resources invested in the benefit evaluation and communication process. Projects will be classified into three types based on four criteria – 1) implementation likelihood and timeline, 2) impact magnitude, 3) level of interest, and 4) assumptions and unknowns for benefit quantification. The three project types guide the amount of resources (level of effort and budget) dedicated to benefit evaluation and communication and will be determined by LRRB and RSC boards during their annual winter meetings. The project type is flexible and could be adjusted during projects based on their intermediate and final findings.

	Implementation likelihood and timeline	Impact Magnitude	Level of interest	Assumptions and unknowns for benefits quantification
Type 1	Research products/results are very likely to <b>progress directly to implementation</b> .	Project outcomes are very likely to result in a <b>high magnitude of impacts</b> in areas like transportation system changes, benefits, and/or cost savings. Benefits tend to have positive impacts <b>throughout the state of Minnesota</b> .	Projects are very likely to attract a <b>high level of interest</b> from many stakeholders (e.g., elected officials, the public, transportation system users, etc.) across the state or the nation.	Key benefits of projects can be <b>easily quantified</b> without many assumptions.
Type 2	Research products/results are very likely to <b>lead to implementation within the next five years</b> .	Project generate impacts on transportation planning and engineering in <b>most areas of Minnesota</b> .	Projects are expected to be of <b>higher interest to MnDOT</b> and may attract interest from partnering agencies and other agencies.	Projects have <b>relatively few unknowns and assumptions</b> for benefit quantification.
Type 3	Projects are <b>emerging research anticipating a five year or greater pathway to implementation</b> (e.g, knowledge building priority projects, disruptive ideas, policy changes initiatives).	Projects are about <b>specialized research topics</b> that interest a relatively <b>small audience</b> .	Projects are of <b>interest to a single office or discipline</b> (e.g, changes in specifications or operational methods/procedures, product/material investigations.)	Projects have <b>many assumptions and unknowns</b> relative to benefits quantification.

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Criteria	Criteria Weight	Score			Total Score
		High (5)	Medium (3)	Low (1)	
Implementation Likelihood	2				
Impact Magnitude	2				
Level of Interest	1				
Assumptions and Unknown Benefit Quantification	1				
<b>Total Score</b>					

### Project type based on total score:

If total score >= 22 the project is Type 1

If total score >= 14 but <=20 the project is Type 2

If total score <= 12 the project is Type 3

# Benefit Evaluation and Communication Activity Checklist

## Project Champion / Technical Liaison Task List


Stage	Applicable Project Type			Task	Leads & Facilitators								Relevant Document/Materials	
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE		R&I
Project Development	•	•	•	Evaluate submitted proposals for Fast Track eligibility		Lead				Lead				Submitted proposals; Fast Track criteria
	•	•	•	Assist RSC and LRRB boards in determining project type		Lead				Lead	Lead			Submitted proposals; Project Type Classification Criteria; Project Type Scoring Matrix
Project Inception	•	•	•	Create a new Form and enter general project information and relevant prior projects to the Cover Page sheet		Lead	Lead							The Benefit Evaluation and Communication Form; Research/Implementation Project Proposals; MnDOT R&I Project Library; MnDOT Library
	•	•	•	Identify the anticipated benefit categories, types, metrics, and methodologies	Lead	Lead								Needs Statements; Research/Implementation Project Proposals; Work Plans
	•	•	•	Document the benefits and other relevant information in Tables 1 and 2 in the Project Inception tab	Lead	Lead	Lead							The Benefit Evaluation and Communication Form
	•	•	•	Ensure that benefit evaluation tasks (e.g., data collection and evaluation) are included in Work Plans	Lead	Lead								The Benefit Evaluation and Communication Form; Work Plans
	•	•	•	Identify suitable communication methods, tools, and target audiences	Lead	Lead			Lead				Lead	The Benefit Evaluation and Communication Form; Communication Plans
	•	•	•	Fill out Table 3 in the Project Inception tab	Lead	Lead	Lead							The Benefit Evaluation and Communication Form; Communication Plans
	•	•	•		Lead	Lead	Lead							

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 Lead

 Facilitator



Stage	Applicable Project Type			Task	Leads & Facilitators									Relevant Document/Materials	
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE	R&I		
Project Execution	•			Review benefit categories, types, metrics, and methodologies	Lead	Facilitator		Facilitator							The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1)
	•			Update benefit categories, types, metrics, and methodologies, if needed, in Tables 1 and 2 in the Project Execution tab.	Facilitator	Facilitator	Lead								The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1)
	•			Review project type and bring suggestions to PAs and TAPs for further discussion	Facilitator	Facilitator		Facilitator	Lead						The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); Final Reports; other relevant intermediate research findings
	•			Update Table 3 in the Project Execution tab, if needed	Facilitator	Facilitator	Lead								The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); Communication Plans
	•	•	•	Develop communication materials	Lead	Facilitator								Lead	Intermediate research findings; Communications Plans
	•	•	•	Lead and coordinate the discussion of potential follow-up studies or implementation opportunities, if applicable	Facilitator	Facilitator		Facilitator	Facilitator						The Benefit Evaluation and Communication Form; Final Reports; other relevant intermediate and final research/implementation results
	•	•	•	Plan for follow-up studies or implementations and submit needs statements, if applicable	Facilitator	Facilitator		Facilitator	Lead				Facilitator		The Benefit Evaluation and Communication Form; Need Statement Template; IdeaScale; Implementation Form

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	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE	R&I			
Project Completion	•	•	•	Complete the Contracts Agreements Audit Tracking System Performance Evaluation Details	Lead	Facilitator			Facilitator						Contracts Agreements Audit Tracking System	
	•			Complete Table 3 in the Project Completion tab	Facilitator	Facilitator	Lead							Facilitator	The Benefit Evaluation and Communication Form	
	•	•	•	Develop communication materials	Lead	Facilitator								Lead	Final Reports; other relevant intermediate and final research/ implementation results	
	•	•	•	Lead and coordinate the discussion of potential follow-up studies or implementation opportunities, if applicable	Facilitator	Facilitator			Facilitator	Facilitator						The Benefit Evaluation and Communication Form; Final Reports; other relevant intermediate and final research/ implementation results
	•	•	•	Plan for follow-up studies or implementations and submit needs statements, if applicable	Facilitator	Facilitator			Facilitator	Lead				Facilitator		The Benefit Evaluation and Communication Form; Need Statement Template; IdeaScale; Implementation Form
Post-Completion / Post-Implementation	•	•		Update Post-Completion/Post-Implementation benefits and relevant information as needed	Facilitator	Facilitator			Facilitator	Facilitator					Final Reports; other relevant intermediate and final research/ implementation results	
	•	•		Document post-completion/ implementation benefits according to the set timeline in Table 3 in the Post-Completion / Post-Implementation tab	Facilitator	Facilitator			Facilitator	Facilitator					The Benefit Evaluation and Communication Form; Final Reports; other relevant intermediate and final research/ implementation results	
	•	•		Update the relevant project links on the Cover Page	Facilitator	Facilitator			Facilitator	Facilitator					The Benefit Evaluation and Communication Form; MnDOT R&I Project Library; MnDOT Library	
	•			Develop communication materials per request		Facilitator								Lead	Final Reports; other relevant intermediate and final research/ implementation results	

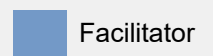
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Facilitator



# Principal Investigator Task List

Stage	Applicable Project Type			Task	Leads & Facilitators									Relevant Document/Materials
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE	R&I	
Project Inception	•	•	•	Provide technical expertise when updating identified benefit categories, types, metrics, and methodologies	Lead	Facilitator	Lead	Facilitator	Facilitator					Needs Statements; Research/Implementation Project Proposals; Work Plans
	•	•	•	Draft and finalize Work Plans and benefit evaluation activities are incorporated into the plans.	Lead	Facilitator			Facilitator					Needs Statements; Research/Implementation Project Proposals; Work Plans; The Benefit Evaluation and Communication Form
	•	•	•	Identify suitable communication methods, tools, and target audiences	Lead	Facilitator							Lead	The Benefit Evaluation and Communication Form; Communication Plans
	•	•	•	Provide the R&I communication team with content for project announcements and Communication Plans.	Facilitator								Lead	The Benefit Evaluation and Communication Form; Work Plans
Project Execution	•			Draft and finalize the Initial Memorandum on Expected Research Benefits and Potential Implementation Steps from Task 1 (Memo 1)	Lead	Facilitator		Facilitator	Facilitator					Initial Memorandum on Expected Research Benefits and Potential Implementation Steps from Task 1
	•			Provide technical expertise when updating identified and anticipated benefit categories, types, metrics, and methodologies	Lead	Lead		Facilitator	Facilitator					The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); other relevant intermediate research findings
	•	•	•	Draft and finalize the Final Report and other deliverables outlined in the Work Plans	Lead	Facilitator		Facilitator	Facilitator					The Benefit Evaluation and Communication Form; Final Reports

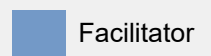
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Facilitator


Stage	Applicable Project Type			Task	Leads & Facilitators								Relevant Document/Materials	
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE		R&I
Project Completion	•	•	•	Discuss the potential for follow-up studies or implementation opportunities.	Facilitator	Facilitator		Facilitator	Facilitator					The Benefit Evaluation and Communication Form; Final Reports; other relevant intermediate and final research/implementation results
	•	•	•	Provide input and availability on the potential of a fast-tracked follow-up study.	Facilitator	Facilitator		Facilitator	Facilitator					
	•	•	•	Complete the Contracts Agreements Audit Tracking System Performance Evaluation Details	Lead	Facilitator			Facilitator					Contracts Agreements Audit Tracking System
	•	•	•	Provide communication materials to ORI Communication staff upon request.	Facilitator								Lead	The Benefit Evaluation and Communication Form; Final Reports; other relevant research findings/documents

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 Facilitator

# Project Advisor Task List


Stage	Applicable Project Type			Task	Leads & Facilitators								Relevant Document/Materials	
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE		R&I
Project Inception	•	•	•	Establish a timeline and check-in dates for benefit evaluation and communication.	Facilitator	Facilitator		Facilitator	Lead					The Benefit Evaluation and Communication Form; Work Plans
	•	•	•	Supervise and ensure submitted work plans reflect benefit evaluation tasks identified in the Form;	Lead	Facilitator			Facilitator					Needs Statements; Research/Implementation Project Proposals; Work Plans; The Benefit Evaluation and Communication Form
	•	•	•	Ensure the Form is saved in the correct contract folder.		Lead			Facilitator					The Benefit Evaluation and Communication Form
Project Execution	•			Review project type and coordinate with R&I/the Boards and research teams.	Facilitator	Facilitator		Facilitator	Lead					The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); Final Reports; other relevant intermediate research findings
	•			Assist research teams with project type adjustment (i.e., file an amendment or plan for a follow-up study)	Facilitator	Facilitator		Facilitator	Facilitator					The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); Final Reports; other relevant intermediate research findings
	•	•	•	Assemble TAP meetings to update TAP members on benefit evaluation progress.	Facilitator	Facilitator		Facilitator	Lead					Work Plans
Project Completion	•	•	•	Ensure all tabs in the Form are completed and saved in the correct contract folders.		Lead			Lead					The Benefit Evaluation and Communication Form

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# TAP Member Task List


Stage	Applicable Project Type			Task	Leads & Facilitators								Relevant Document/Materials	
	1	2	3		PI	PCh/TL	PC	TAP	PA	PET	RSC & LR RB	IE		R&I
Project Inception	•	•	•	Review Work Plans in conjunction with the completed Project Inception tab in the Form.				Lead						The Benefit Evaluation and Communication Form; Work Plans
Project Execution	•			Review Initial Memos and provide feedback.				Lead						Initial Memo on Research Benefits (Task 1)
	•			Review the completed Project Execution tab in the Form and provide feedback.				Lead						The Benefit Evaluation and Communication Form; Initial Memo on Research Benefits (Task 1); Final Reports; other relevant intermediate research findings.
	•	•	•	Review the Final Reports and provide feedback.				Lead						Final Reports; other relevant intermediate research findings.
	•	•	•	Revisit and discuss project type adjustments with project teams when applicable.	Facilitator	Facilitator		Facilitator	Lead					-
Project Completion	•	•	•	Review the completed Project Completion tab in the Form and provide feedback.				Lead						The Benefit Evaluation and Communication Form
	•	•	•	If applicable, provide comments and guidance on the follow-up phases of the research project.	Facilitator	Facilitator		Facilitator						-

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