

# Research Life Cycle: Idea, Proposal, Project, Technical Transfer, Implementation

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# VTrans Research in Brief

- Here to work with the entire agency
- Moving from a lot of field and internal research projects when Research was part of the Materials Lab to some field work
- New Research Manager, Dr. Emily Parkany, P.E. started Feb. 1
- Hiring new Research Engineer

# VTrans Research Budget

- \$1.2M budget (25% of state SPR funds)
- 44% to TRB, NCHRP, AASHTO TSPs
- 56% to manage Research Projects (internal and external)
- NETC (\$100,000/year)
- UVM (\$300,000/year)+



# Why Do We Do Research?



# Why Do We Do Research?

- Better processes and procedures
- Better quality projects
- Test new products and ideas
- Promotes streamlining
- Increases public satisfaction
- ???



# Research Life Cycle

- Idea
- Proposal
- Project Execution
- Technical Transfer
- Implementation



# Research Ideas

- What is your idea?
- Why is this important to VTrans?
- Who are you?
- SIMPLE form in Survey Monkey
- VTrans Research web site:

<http://vtrans.vermont.gov/planning/research/>



1. What is your research idea? Are you trying to answer a specific question?

2. Why is this important to VTrans? What are the expected benefits of the research for the work that you do and for the Agency?

3. Contacts. Please provide your name and email. Please list (additional) VTrans staff or (additional) potential researchers that are interested in this topic.



# Do You Have Research Ideas?

- Fill out a 3 x 5 card!!
- Use form on research page, my signature
- Also, we'll share as a group during the upcoming discussion.

# All Ideas Should Have VTrans Champion(s)

- VTrans Champion
  - Excited about the idea
  - Wants a research project
  - Will lead Technical Activities Committee (TAC) and oversight of the project



# Literature Review

- Has this been studied elsewhere?
- Does existing literature point to best practices?
- Can we find results that we can use?
- Is more research needed to make the results implementable in Vermont?

# EXPANDED Idea

- Potential project title
- VTrans staff technical champions (at least two)
- Who will do the work
- Expected value to VTrans? Implementation potential?
- Estimate of project duration and budget
- Project objectives and goals
- Potential tasks/methodology
- Related to other work? How unique?
- Who is submitting?

<https://www.surveymonkey.com/r/TXBX6HY>

# Proposal

- EXPANDED Idea is close to a mini-proposal
- Need the proposal details from the researcher to decide whether to go further
- Researcher should work with VTrans staff
- Who decides?
  - Research Staff
  - Performance Innovation Excellence Operations group
  - ????

# Project Work Plan

- Objectives and Goals
- Methodology/Tasks
- Duration/schedule and budget
- Deliverables
- Deliverables-based invoices



# Project

- Need a TAC
- Can be short (6 months); often two years
- Interim reports
- Need to share what is learned
- Goal of all projects should be implementation

- VTrans staff and others
- Needs a champion
- If people are not enthusiastic about serving on the TAC, do we need the project?
- Meet with the researcher(s)
  - Kickoff and draft final report
  - Quarterly
  - As needed
- Review deliverables, provide feedback and inputs to make the research useful to VTrans
- Are the people needed to implement the project on the TAC?



# Technical Transfer

- Share the results of the project
- Report and other deliverables
- Symposium
- Posters and presentations
- Fact Sheets
- Web sites
- Webinars
- Videos
- Citations
- One size does not fit all



# Implementation

- Should be a main point of research, especially funded by a state DOT—we want something that we can apply
  - Improve a process
  - Do things more efficiently
  - Understand what works
- Is the research done if it's not ready to implement?
- Tech transfer is a step towards implementation

# Implementation

- Should be considered with EVERY project
- TAC members should be responsible for implementation
- May be a separate project, new phase

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# Contact Information

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