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Webinar: Pooled Fund Grant 2018 - Tackling **Transportation Together**

Eva-Maria Muecke Portland State University, emuecke@pdx.edu

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HAITC WEBINAR

Pooled Fund Info Session: How to write a successful Problem Statement

Eva-Maria Muecke, TREC, Portland State University Hau Hagedorn, TREC, Portland State University February 28, 2018

NATIONAL INSTITUTE FOR TRANSPORTATION & COMMUNITIES













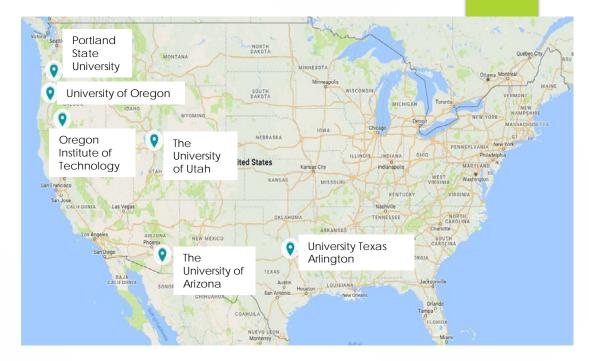
Outline

- Introduction to NITC
- Why pooled funded projects in transportation?
- NITC's Pooled Fund Competition: The process and application elements
- Vetting a Problem & Finding Partners
- Constructing a successful application



Overview

- Established under SAFETEA-LU (formerly OTREC)
- Became a National UTC under MAP-21



- Theme: improving mobility of people and goods to build strong communities.
 - Increasing access to opportunities
 - Improving multi-modal planning and shared use of infrastructure
 - Advancing innovation and smart cities
 - Developing data, models, and tools



Why Pooled Fund Projects? Key Benefits

- Pooled Funded projects attempt to solve problems that are pressing and impacts many
- For agencies:
 - Minimal resources investment (time, manpower, money).
 - Agencies provide guidance throughout the project (Technical Advisory Committee)
 - Problem solved; new tool in toolbox.
- For everyone:
 - Prevents duplication of effort
 - Ensures collaboration and coordination
 - Implementation of a project that is timely, relevant, and matters and that produces an outcome that is practice ready.

NITC's Pooled Fund Grant Process: 2-Steps

Step 1: Identify Problem Statement

- Call for Problem Statements
- Review & Selection (Executive Committee)
- Secure Match from agency partners

Partners



Step 2: Identify research proposal(s) & research team(s)

- Release of Request for Proposals (RFP) to Consortium members
- Review & Selection (by TAC)

Project(s) starts

- Research team implements project(s)
- TAC is kept abreast and is involved throughout project.













NITC Pooled Fund Problem Statement: Elements

- Problem Title
- Research Problem
- Research Objective
- Anticipated Product, Impact,
 and Implementation Potential
- Cost Estimate and Research Period
- Person(s) developing the statement
- Partners

- Captures essences of problem statement in as few words as possible
- Provide context
- Pressing & broad relevance
- How to solve problem
- Expected outcome solution to problem
- Projected total costs & total partner contribution
- Estimated project duration
- The champion(s) of the problem statement
- List of partners with cash commitment for each__

Problem Statement: Contextual Guidance at Intersections for Protected Bicycle Lanes

Research Problem:

Context: Implementation of protected or separated bicycle lanes is increasing rapidly in the US. Various design options are available for bike lanes at intersections.

<u>BUT:</u> Lack of guidance and context in which different intersection treatments for these lanes should be used.

<u>The Problem:</u> Lots of variation in implemented designs; significant cost and operational differences.

Research Objective:

- 1. Identify context when available treatments are most effectively employed.
- 2. Ensure uniformity and standardization by identifying critical elements & dimension of each treatment

Problem Statement: Contextual Guidance at Intersections for Protected Bicycle Lanes

Anticipated product and impact (<u>The Solution</u>):

Report that provides concrete design guidance at Intersections for Protected Bicycle Lanes

Guidance will ultimately be incorporated into the NACTO Urban Bikeway Design Guide

- Partners: 6 Cities, 1 MPO, 1 Transit agency
- Financial commitment: Total project budget: \$120,000

Partner contribution: \$60,000 (\$5,000-\$10,000/partner)

Project duration: 15 months

Additional Fundraising:

Added three more partners (1 City, 1 County, 1 Private) Increased partner contribution to \$124,800;

Total final budget: \$ 245,600



Problem Statement: Contextual Guidance at Intersections for Protected Bicycle Lanes

- What was compelling about the problem statement?
 - National relevance and timeliness of problem
 - Clearly articulated statement, including expected product
 - Willingness of practitioners to implement guidance
 - Partners!

http://nitc.trec.pdx.edu/research/project/987



Vetting your Problem Relevance & Interest

- Use online searches:
 - Research Needs Statement (RNS) database from TRB https://rns.trb.org/
 - ► TRID https://trid.trb.org/
 - More resources at end of presentation
- Activate your network!
 - Colleagues at other agencies
 - Contacts met at meetings
 - Ask colleagues to reach out to their network
- Contact NITC

Eva-Maria Muecke, emuecke@pdx.edu



Vetting your Problem: Is it a fit? NITC Theme (Mobility)

Increasing access to opportunities. (Equity)

Well-connected regions and communities can improve social equity by providing access to jobs, services, recreation, and social opportunities. Research should examine barriers to access, including the connections between transportation, land use, and housing. It should look at how to overcome these barriers and improve accessibility, affordability, and equity in our communities.

 Improving multi-modal planning and shared use of infrastructure. (Multi-Model)

Improved mobility requires a range of options for moving people and goods. As concepts of mobility evolve, research is needed to understand how people and firms make mode choices so that we can design better multi-modal systems. Research should examine how different modes can share our infrastructure safely. It should look at how cities and regions can better plan for and prioritize multi-modal transportation, integrated with land use.

Advancing innovation and smart cities. (Smart Cities)

The growth of urban areas of all sizes requires the innovative use of technology and new mobility options. Smart cities research should examine the feasibility of integrating connected and automated technologies in our cities and overcoming the social, political and economic barriers to implementation. This includes ensuring that smart cities improve access for all people and modes.

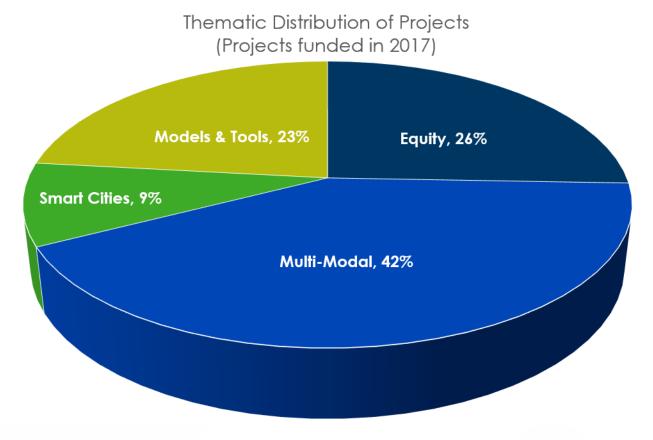
Developing data, models, and tools. (Models & Tools)

Our complex transportation system demands better data and tools for decision-making. Research is needed to develop tools to collect and analyze multi-modal data from a variety of sources, aimed at optimizing the use of the system. These new models and tools should examine the implications of changes to the system on a range of outcomes including mobility, economic equity, the environment, and health.



Vetting your Problem: Is it a fit? NITC Theme (Mobility)

Problem has to be linked to one or more of the thematic elements.





Constructing a Successful Application **Include all Elements**

Problem Title

Captures essences of problem statement in as few words as possible

Research Problem

- Provide context
- Pressing & broad relevance

Research Objective

- How to solve problem
- Anticipated Product, Impact, > Expected outcome and Implementation Potential
- - Contact us: emuecke@pdx.edu
- Cost Estimate and Research Period
- partner contribution Estimated project duration
- Person(s) developing the statement
- The champion(s) of the problem statement

Partners

List of partners with cash commitment for each

Constructing a Successful Application: The Hallmarks

Problem statements must be:

- Understandable
- Original
- Achievable
- Affordable
- Implementable
- Beneficial
- Scope has to be reasonable
- High priority
- Widely supported

√ Have a colleague review the statement



Additional Resources

- ▶ **USDOT Research Hub** searches USDOT ongoing and completed research. Records are transferred to TRID periodically.
- Pooled-Fund studies These should be in RiP and TRID.
- NTL Integrated Search which searches the USDOT Headquarters Catalog, Digital Repository of full text research reports, and records that point to external transportation website content. Website content is diverse and includes data sets, publications, and institutional information. There is some duplication with TRID.
- Transportation Research Needs Meta Search (RRPM, Google Custom Search)
- ► Transportation Libraries and Information Centers Directory where you can search resources individually. There is some duplication with TRID.
- NTIS searches government reports and information. Again, there is some duplication with TRID
- ▶ **WC** is the largest database of library records in the World and TLCat (Transportation Libraries catalog) is a subset of WC and searches a number of transportation libraries. There is some duplication with TRID.
- ▶ TRIP is the Transport Research & Innovation Portal (formerly known as the Transport Research Knowledge Centre or TRKC); it contains information on research programs, research in progress, and completed research from 30 European countries. It also contains thematic and policy summaries of ongoing and completed research.



Acknowledgment

Some content used in the presentation was drawn from these sources:

- TRB Webinar: How to Write an Effective Research Statement (http://www.trb.org/Research/Blurbs/161771.aspx)
- http://www.trb.org/ResearchFunding/appendix.asp



Questions?

Eva-Maria Muecke Research Program Administrator emuecke@pdx.edu

Hau Hagedorn Interim Director hagedorn@pdx.edu

