

Writing Effective Research Needs Statements

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Goal:

Ensure that competitive research programs address the most pressing transportation needs of the sponsors.

Competitive Research Programs:

- TRB Cooperative Research Programs
- TRB Scanning programs, synthesis, quick response ...
- FHWA and other federal programs
- State programs
- University programs

“Funding Sources for Transportation Research”

<http://www.trb.org/ResearchFunding/ResearchFunding.aspx>

Transportation Research Board



**Funding Sources
for Transportation
Research:
Competitive Programs**

www.TRB.org/ResearchFunding



*Do you have a research topic in
search of funding?*

*There's a new tool to help you find
a program to fund that research!*

TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES



Funding Programs: Know

- Who can submit research needs?
- Are there research focus areas?
- Are champions required? If so, who can be a champion?
- Who prioritizes the research needs?
- Who makes the funding decisions?
- What is the process for funding research ideas?

How can I get my research needs statement selected?

They must be ...

- Understandable
- Original
- Achievable
- Affordable
- Implementable
- Beneficial
- Scope is appropriate for funding body
- High priority
- Widely supported

Has research idea been identified by others?

- Research Needs Statement Database (RNS DB) (<http://rns.trb.org/>)

The screenshot shows the TRB website homepage. At the top, the TRB logo is displayed alongside the text "TRANSPORTATION RESEARCH BOARD OF THE NATIONAL ACADEMIES". Navigation links include Home, Contact Us, Directory, E-Newsletter, Follow Us, and RSS. A secondary navigation bar lists: About TRB, Annual Meeting, Calendar, Committees & Panels, Programs, Projects, Publications, and Resources & Databases. The main content area features a section titled "Promoting Innovation and Progress in Transportation" with a yellow diamond-shaped road sign icon and text explaining the board's mission. Below this is a "Browse Information By Mode" section with icons for Aviation, Highway, Marine Transportation, Motor Carriers, Pedestrians and Bicyclists, Pipelines, Public Transportation, and Rail. A "Browse Information By Topic" section lists Design & Construction, Operations & Preservation, Policy & Organization, and Safety, System Components, and Users. On the right side, there is a "Resources & Databases" dropdown menu listing items like Webinars, Research in Progress, and TRID. Below the menu are several news items, including "Scour at Bridge Found Rock" and "Performance-Based High Maintenance and Operations Management".

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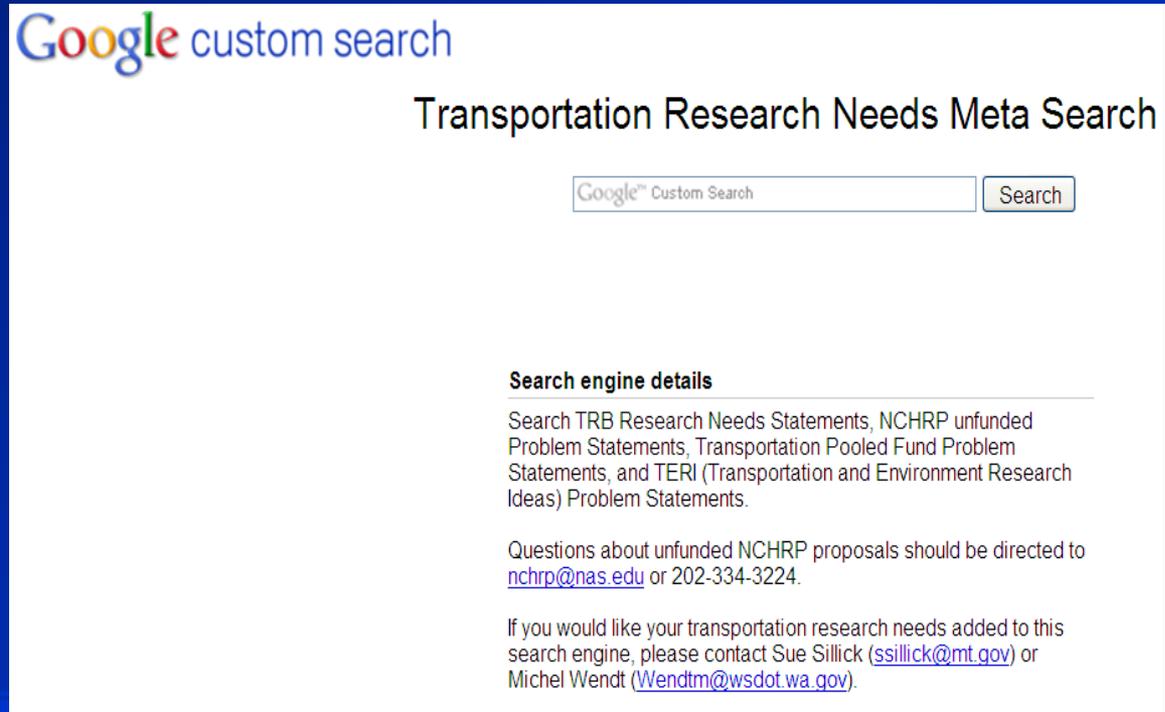


Has research idea been identified by others? (cont.)

- Transportation Research Needs Meta Search
(<http://www.google.com/cse/home?cx=006511338351663161139%3Avblegi9v2au&hl=en>)
 - TRB RNS
 - TERI
 - Unfunded NCHRP (2010-2013)
 - Unfunded Pooled-Fund Studies
 - Mn/DOT

Has research idea been identified by others? (cont.)

- Transportation Research Needs Meta Search



Google custom search

Transportation Research Needs Meta Search

Google™ Custom Search

Search engine details

Search TRB Research Needs Statements, NCHRP unfunded Problem Statements, Transportation Pooled Fund Problem Statements, and TERI (Transportation and Environment Research Ideas) Problem Statements.

Questions about unfunded NCHRP proposals should be directed to nchrp@nas.edu or 202-334-3224.

If you would like your transportation research needs added to this search engine, please contact Sue Sillick (ssillick@mt.gov) or Michel Wendt (Wendtm@wsdot.wa.gov).

Has research idea been identified by others? (cont.)

- Research Needs, Agendas, Roadmaps
(www.transportationresearch.gov)

RITA U.S. Department of Transportation
Research and Innovative Technology Administration

Setting the Research Agenda > Strategic Research Documents

Transportation Research Research Clusters NTL RPPM Connected Vehicle Federal Highways Sites Manage Account Rules of Behavior Register

Research Program and Project Management Home (RPPM)

Setting the Research Agenda

Carrying Out Research

Delivering Results/Communicating Value

Collaborating in Research Activities

Team Collaboration

DOT Research Clusters

All Site Content

- Research Cycles and Timelines - Who needs what by when.
- Research Planning Best Practices - How research organizations identify their research needs, scan existing international and national research, and define their annual research program.
- Strategic Research Documents - Tools to develop a strategic research program. What research needs organizations and groups have identified as a priority; collectively, these priority research areas might be viewed as a research agenda.

Type	Name	Title
Folder	Climate Change - Energy Conservation - Environmental Research Needs	Climate Change - Energy Conservation - Environmental Research Needs
Folder	Freight Research Needs	Freight Research Needs
Folder	Infrastructure Research Needs	Infrastructure Research Needs
Folder	Intelligent Transportation Systems (ITS)	Intelligent Transportation Systems (ITS)
Folder	Livability Research Needs	Livability Research Needs
Folder	Planning Research Needs	Planning Research Needs
Folder	Radio Frequency Identification (RFID) Research Needs	Radio Frequency Identification (RFID) Research Needs
Folder	Safety Research Needs	Safety Research Needs
Folder	Security	Security
Folder	State DOT Research Needs	State DOT Research Needs
Folder	System Performance	System Performance
Folder	Winter Maintenance Research Needs	Winter Maintenance Research Needs
Document	2010-2014_SCOH_SP	2010-2014 AASHTO Standing Committee on Highways Strategic Plan
Document	FHWA-RD-03-077-CMP-1-13-11	Corporate Master Plan for Research and Deployment of Technology & Innovation, FHWA-RD-03-077
Document	Multimodal_Transportation_Research_Framework_Development-Implementation-1-11-11	TRB Policy Study: Potential Application in the United States of International Experience in Multimodal Transportation Research Framework Development and Research Implementation - 1/11/11
Document	NCHRP_20-80(2)_FR-10-17-2008	NCHRP 20-80(2) - Long Range Strategic Issues Facing the Transportation Industry: Final Research Plan Framework - 10/17/2008
Document	Related_TRB_Docs-STRA-SRD	Related TRB Documents - Setting the Research Agenda - Strategic Research Documents
Document	RITA_RDT_SP-11-2006	RITA - Transportation Research, Development and Technology Strategic Plan 2006-2010 - Nov. 2006

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Has research idea been identified by others? (cont.)

- Multidisciplinary topics

Make connections with stakeholders in other disciplines

Typical Research Needs Statement:

- Title
- Background
- Objective
- Benefits / Justification / Urgency
- Tasks
- Funding requirements
- Implementation
- “Submitter”

Title:

- BRIEFLY CONVEY the subject
- Include key elements only
- Clear, simple, and unambiguous
- “Branding”

Background:

- Set the context
- Describe the overall issues
- Quantify the problem
- Don't be parochial
- Relate to other disciplines

Relationship to existing knowledge:

- Your problem statement will sound familiar ...
- How does it differ?
- Do your homework
- TRID (<http://trid.trb.org/>)

Relationship to existing knowledge:

- **USDOT Research Hub**
(<http://ntlsearch.bts.gov/researchhub/index.do>)
- **National Transportation Library (NTL)
Integrated Search** (<http://ntl.bts.gov>)
- **Transport Research & Innovation Portal
(TRIP)** (<http://www.transport-research.info/>)

Relationship to existing knowledge:

- Transportation Libraries and information Centers
(<https://www.transportationresearch.gov/ntl/ntkn/librarydirectory2/forms/default.aspx>)
- National Technical Information Service (NTIS) (<http://www.ntis.gov>)

Relationship to existing knowledge:

- WorldCat (<http://www.worldcat.org/>)
- TLCat (<http://tlcat.worldcat.org/>)
- Pooled-Fund Studies
(<http://www.pooledfund.org/browse/>)

Objectives:

- Describe the PRODUCT
- Short, concise, accurate
- No need for details

Benefits/urgency:

- Why should YOUR project be selected?
- Why NOW?
- Be as specific as you can
- Quantify if possible
- Be positive; Be honest

Tasks:

- Provide detail only if necessary
- Be conscious of your biases
- Don't limit creativity of proposers

Funding requirements:

- Appropriate to program
- What tasks are anticipated?
- What facilities / equipment needed?
- Field testing, lab work, simulation?
- Understand charge-out rates
- Underestimate is as bad or worse than an overestimate

Implementation:

- Identify barriers and impediments
- Identify champions
- Increase comfort level of sponsors

“Submitted by ...”:

- Individual versus group
- What are sponsors looking for?
- Garner support
- Include co-sponsors or endorsements
- Consider the multidisciplinary nature of your RNS

Resources:

- CRC webpage
(<http://www.trb.org/abouttrb/crc.aspx>)
- CRC Council (<http://www.trb.org/abouttrb/crc.aspx>)
- TRB Staff
 - Committees
 - Funding Program
 - CRC/CRC Council
 - Michael DeCarmine (mdecarmine@nas.edu)
 - Fred Hejl (fhejl@nas.edu)

Resources:

- TRB Committees
 - Conduct of Research (COR)
(<https://sites.google.com/site/conductofresearchcommittee/>)
 - LIST (<http://trblist.org/>)
 - Technology Transfer (T²)
(<https://sites.google.com/site/trbt2committee/>)

Conclusions:

- If at first you don't succeed ...
- It can be an iterative process
- Don't be discouraged
- Study review comments
- Never forget target audience
- **NETWORK** - ask for advice, seek support

Thank You!

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