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
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?

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

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