“How To” Guide on the AASHTO Committee Research Process

A white paper developed for AASHTO committees to provide guidance on research-related activities.

This document provides AASHTO committees a complete overview of the entire research process, starting with creating a research subgroup, all the way to the final steps of sharing the results, implementation, and determining the value of the research. This overview will help committees understand how the process works and where in the process committees can engage.

1. Create a Research Subgroup

Each committee should create a “Research” subgroup, designate a research point of contact, or assign activities related to research to an existing group, such as the Steering Committee. The goal of this group is to be the champion for research. This group would take on much of the responsibilities identified in this document. The benefits of having this group are the creation of better research topics, more committee engagement in research, improved implementation, etc.

2. Connection to TRB

It’s important for AASHTO committees to a) be aware of and b) partner with their corresponding Transportation Research Board (TRB) committees. While these two committees may have overlapping membership, they do have separate goals; however there are areas of overlap, and thus partnership, with research. TRB committees should be viewed as vital research cooperators in helping AASHTO committees identify research needs, develop and draft potential research problem statements, facilitate technology transfer, etc. View AASHTO–TRB Committee Connections.

3. Develop a Strategic Research Plan

In developing a research strategic plan, you will identify the ongoing and completed research. From this, you can identify the research gaps and the research that needs to follow.

4. Collection of Research Ideas

It is important to create a central point for research ideas identified through the research strategic planning process. This central point allows all committee members the ability to pursue research opportunities. It your committee starts a running collection of ideas, it is critical to periodically update your collection as various research progresses.

5. Review/Vet Ideas

In order to ensure transparency and prioritize the aforementioned collection of ideas, there should be a review process to determine which ideas move to the next step. The Strategic Plan can play a role in this process.

6. Write Problem Statement (or leverage TRB Committees)

The next step is to turn the idea into a problem statement. The proposer of each idea generally takes on this task, however, committees are encouraged to engage your corresponding TRB committees for assistance; see AASHTO–TRB committee connections. Also, please consult the “How To” guide on writing problem statements to assist with drafting of problem statements.

7. Selection of Problem Statements

Once there are a number of problem statements, there should be a process to review, rank, and determine which problem statements are submitted to the various research programs. Your research strategic plan can inform this process. This process does not need to be formal, but it should be rigorous enough to help explain which problem statements were submitted and why.

8. Know and Understand the Various Research Programs

There are a number of research programs where problem statements and ideas can be submitted. Each program may have a different goal.

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9. Research Tracking/Monitoring
This item applies to problem statements which are selected for funding. The aim of this task is to keep the committee informed of the research which they initiated.

- Committee members should be nominated to serve on the project panel. This panel members are tasked with:
  - At the beginning of the project, your panel representative can help to ensure the project is scoped to give your committee what it needs.
  - In the scoping process, your committee should identify the products that will be needed for implementation. As appropriate, include these products in the scope.
  - As the project progresses, your panel representative can ensure that the project remains on scope.
  - Given this, at the end of the project, there should be no surprises, your committee should get exactly what it needs out of the research; this facilitates implementation of the research results.
  - The panel representative should share research progress with your committee.

- Committee members should assign a project monitor (which may be a project panel member). This role is tasked with keeping the connection between the committee and the research project. This generally entails some type of quarterly report or update to the committee on the research project.

10. Project Completion/Sharing the Research Results
At the completion of a project, the sharing of the results is paramount in the implementation process. It is vital that the results get in the hands of those who can actively implement the research results. If additional products are needed for implementation, create them or initiate a follow-on project to develop these implementation products.

11. Research Implementation
Implementation of research results, as appropriate, is critical. Otherwise, why do we bother? Implementation ultimately has to occur at the agency-level. However, if a committee is interested in championing the implementation of NCHRP funded research, there is an NCHRP Project (20-44) which provides funding for activities that assist in the adoption of research findings.

12. Research Value
When possible, there should be an effort to determine the value of the research. This activity helps identify the benefits of research, which helps ensure continued funding for research. For more detailed information on how to capture the value of research, please read the “How To” guide.

13. Committee Engagement: Get Involved
Committee members are encouraged to participate in the research process. The main avenues of participation are: participate on the research subgroup, participate in writing a research strategic plan, write a problem statement, serve as panel member to monitor a project, and help to share research results and determine the value of research. All these require a different level of engagement and as well as a different time commitment.

The complete set of “How To” documents include the following:

• Committee Approach to Research
• Writing a Strategic Plan
• Writing a Problem Statement
• Funding Resources
• Experimental Features
• Sharing Results
• Implementing Results
• Determining the Value of Research
• Monitoring Results