

National Cooperative Highway Research Program

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## NCHRP Implementation Facilitation Plan 2015-2020

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Prepared for

AASHTO Standing Committee on Research

By

SCOR Implementation Planning Task Force

Approved December 2015

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## Background

As SCOR reviews and updates its Strategic Plan for 2015-2020, one of its new emphasis areas is the effective implementation of NCHRP research results. The NCHRP is an applied research program intended to address the day to day issues faced by practitioners in state DOTs through products that can be readily implemented. It is well understood that applied research has little value until it is implemented.

In March 2014, SCOR Chair John Halikowski called for the formation of a Process Improvement Task Force to review a number of issues, one of which was to identify opportunities to accelerate the NCHRP process. During this review, the Task Force concluded that the biggest gains would be achieved by focusing on ways to speed up the implementation of completed research.

Concurrently, an NCHRP study by CTC and Associates was nearing completion whose objective was to review implementation of previous NCHRP research and identify “best practices” - approaches or activities that have proven to be particularly effective. The Task Force recommended reviewing the results of this project and discussing appropriate follow-up actions. Principal Investigator Pat Casey presented the findings at the December 2014 meeting of SCOR. After the presentation and discussion, Chair Halikowski called for the formation of a body to develop an implementation plan for the NCHRP. A new NCHRP project and panel was created for that purpose: NCHRP Project 20-44 - *Accelerating the Application of NCHRP Research Results* (see appendix B for a list of members).

This report is the result of that effort. It is largely based on the experiences and advice of the NCHRP 20-44 panel members and three recent publications:

1. *Evaluating Implementation of NCHRP Products: Building on Successful Practices*, by Pat Casey and Associates, 2014.
2. NCHRP Synthesis 461, *Accelerating Implementation of Transportation Research Results*, 2014.
3. NCHRP Report 768, *Guide to Accelerating New Technology Adoption through Directed Technology Transfer*, 2014.

### How do we define implementation?

Implementation can be best conceptualized as a continuum or progression involving a number of stages: PROBLEM → IDEA → RESEARCH → COMMUNICATION → DISSEMINATION → DEVELOPMENT → PILOT DEPLOYMENT → ACCEPTANCE → WIDESPREAD DEPLOYMENT → COMMON PRACTICE.

The phrase **technology transfer** has come to mean activities supporting the transition of knowledge into practice, including simple **dissemination** of research results. **Communication** can refer to the application of sound communication principles to the format and content of the products we disseminate. **Development** typically describes activities that are undertaken to package or refine research products in a way that will facilitate their **acceptance**. **Implementation** and **deployment** are often used interchangeably, although deployment could be considered as one step in the implementation process, and may not lead to acceptance. These terms are all used in this report and refer to various elements or stages in the implementation process.

## NCHRP's Role and Mandate

The governing board of the NCHRP is the AASHTO Standing Committee on Research. Along with its Research Advisory Committee, these two groups represent the primary stakeholders in NCHRP research results.

To ensure the objectivity and fairness of the research procedures and results, the NCHRP was founded as a unit of the Transportation Research Board of the National Academy of Sciences. As such, the NCHRP does not own roads, set policies, or make regulations – in other words, it cannot directly implement any of its research findings. The primary focus of NCHRP's Implementation Plan must be to inform, assist, and facilitate implementation for its primary stakeholders. It must produce products in the right format for the appropriate target audiences, and effectively disseminate its project results and products. It must identify follow-up activities that will help the DOTs evaluate, develop, and implement NCHRP products.

By all accounts, NCHRP research results are widely used across the country. More than 70 current AASHTO publications were developed or updated through NCHRP projects. The *Impacts on Practice* series has highlighted many examples of how state DOTs have saved millions of dollars by implementing NCHRP Products. However, we do not collect this information systematically, and do not track every project once the research is completed. SCOR has assigned a greater emphasis on implementation, and there are always ways to improve the process.

## Implementation Success Factors

In the report *Evaluating Implementation of NCHRP Products: Building on Successful Practices*, the authors identify five key elements that have been factors in successful implementation of NCHRP results:

### **Implementation Leadership**

No one position or organization is responsible for implementing NCHRP research results. Implementation champions—individuals or groups who consider it their role to initiate and oversee the implementation and follow through with this commitment—are needed. As the owners and users of NCHRP research, state department of transportation (DOT) managers and practitioners take on especially strong roles in implementing research results—as participants on NCHRP project panels and AASHTO committees, and as leaders within their state organizations. Their efforts are supported, guided, and coordinated by individuals within TRB, AASHTO, and FHWA who are committed to seeing the research implemented.

### **Buy-In for Implementation**

The interviewees for this project repeatedly mentioned the importance of getting support for implementation from the beginning of the project. Support needs to come from those who will lead the implementation efforts, those who will be affected by the research, and those who will provide the channels for presenting the findings. This means communicating the project goals and interim results to stakeholders in an understandable way, gaining and leveraging the support of AASHTO and FHWA for upcoming changes, and addressing stakeholder concerns before the project is complete. Even after the research has concluded, the application of findings must be promoted in a way that acknowledges potential reservations or challenges among the users. Implementation champions build confidence in the research products through webinars, pilot projects, workshops, and other information and demonstration initiatives.

### **Structural Support and Resources**

Beyond having the necessary people to support implementation, the interviewees discussed a range of mechanisms and resources that have been used to share the research results with those who will apply them. The TRB, FHWA, and AASHTO committees, task forces, and working groups provide critical channels for disseminating the results to end users and offering technical support and guidance for effective application. State DOT technical teams and oversight committees also play key roles in facilitating implementation, initiating changes to policy and practice documents, and partnering with industry and universities to train staff on new approaches and techniques.

### **Research Products That Address a Real Need and are Ready to Use**

Research results are not always “field-ready,” or easily understood and applied without additional assistance. Implementable deliverables go beyond final reports to include demonstration software, websites, policy guidance, and training manuals. The project investigator provides some of these products, but the TRB, FHWA, and AASHTO project panel members and implementation leaders also provide additional support and guidance to make these products possible.

### **Targeted Dissemination**

The dissemination of NCHRP project results is a fundamental step toward successfully implementing research findings. However, communication efforts are most effective when they are targeted to those who can act on the new information. Dissemination activities should focus on getting the right information to the right people in the right format at the right time.

While these key factors have contributed to successful implementation of NCHRP results, there is no “one size fits all” solution. Each research product is different and requires different treatment. Some projects may not even result in implementable results. The key is to have a standard approach to evaluating the most appropriate implementation strategy for each NCHRP project, and range of products and strategies from which to choose.

## Current Implementation Strategies

The range of products that has been used in the NCHRP to disseminate research results and promote their implementation is broad and ranges from simple and inexpensive to complex and costly.

All of the state DOT sponsors receive copies of reports, either in print or electronic format at their preference. Reports are distributed to others who subscribe to the TRB publication subscriber categories.

Blurbs on all new NCHRP products are included in the TRB E-Newsletter which now has almost 60,000 subscribers.

*NCHRP Alerts* on each new publication are sent by email to the RAC and SCOR listservs as well as to several other national and international associations.

For the most part, NCHRP products are aimed at practitioners – the intended users of the research results. Working directly with AASHTO committees can be very effective in promoting and implementing NCHRP results, particularly when the research results in a new AASHTO Guide or specification.

On a case by case basis, NCHRP research results are presented to AASHTO and TRB committee meetings, and to other conferences and workshops. Occasionally we have had principal investigators work directly with a state DOT to demonstrate a product. These face-to-face interactions are effective in building trust between researchers and implementers.

The following chart shows various implementation activities and products that have been employed on NCHRP projects, how they match up to three key target audiences, and relative costs.

Product	Cost	Audience		
		Practitioners	Middle Managers	Senior Managers, Legislators, Congress
Final reports	\$	X		
Guidebook focused on how to implement the research findings	\$	X	X	
Models, decision tools, and other software products	\$\$	X		
Manual and Specifications (AASHTO, FHWA, and others)	\$\$	X		
4-page Executive Summaries	\$	X	?	
1 or 2 page flyers (hard copy or electronic) summarizing the results and how to effectively implement them	\$\$	X	X	
1 or 2 page flyers summarizing the benefits that could accrue through implementation	\$\$	X	X	X
1 or 2 page flyers on the impacts of past research	\$\$		X	X
PPT presentations (tailored to audience)	\$	X	X	X
Short (1 paragraph) blurbs	\$	X	X	X
Short videos	\$\$\$\$	X	X	X
Webinars	\$\$	X		
Workshop, pilot, or Peer Exchange in a host DOT	\$\$\$	X	X	
Presentations by staff or PIs at conferences and committee meetings	\$	X	X	
Articles in TR News	\$	X	X	X
Demonstration project involving assistance for construction or installation of technology or infrastructure. (e.g. new pavement, bridge construction method, scour abatement product, stormwater treatment method).	\$\$\$\$\$	X	X	X
“Research Showcase” – Highlighting selected NCHRP products at state, regional, and national meetings and conferences. This could be done through a presentation or a “booth” arrangement similar to the SHRP 2 exhibit at the TRB annual meeting, or through presentations by Ambassadors.	\$\$\$	X	X	X
Conference sessions	\$	X	?	

## Challenges and Opportunities

*The fact that resources are needed to accomplish T<sup>2</sup> is common knowledge among research managers, T<sup>2</sup> Implementation practitioners and many technical staff members of user organizations. Yet, having the appropriate resources at hand for T<sup>2</sup> tasks is a significant accomplishment, and one that contributes to success.*

- Dissemination of research results and facilitation of implementation do not occur spontaneously or at no cost.
- For NCHRP staff, the “attention span” of a project typically starts with the submission of a problem statement and ends with publication of the final report and completion of the research contract. If we want to promote and accelerate implementation, we need a culture change that will extend our attention to projects into the future, possibly several years. This would put an additional burden on NCHRP staff and their ability to manage a large portfolio of projects.
- The key to effective dissemination is getting the right information to the right people at the right time. Current approaches typically involve broad distribution of NCHRP research results to a wide range of sponsors and stakeholders. NCHRP staff do their best to attend TRB, AASHTO, and other conferences and committee meetings and report on NCHRP research in their areas of interest. We also rely on RAC members to disseminate information to the right target audiences within their DOTs.
- Frequently, we have principal investigators present results or work directly with a state DOT to demonstrate a product. They are not systematic or spontaneous – they rely on the initiative of staff, the research team, or the individual committee officers. Face-to-face interactions cost money, but can be very effective in disseminating results of our research to the target audience.
- Researchers may not be the best people to speak to DOT practitioners about their research results. DOT staff are more willing to implement innovations when they are presented by their peers.
- Our members are constantly telling us that they are bombarded with too much information. It is too easy to hit the “forward” button on an email and distribute material to a very broad audience. Emails that are relevant often get lost in the volume of irrelevant and SPAM messages. Ideally, people would like to receive only information that is directly related to their job and career responsibilities.



- For the most part, NCHRP products are aimed at practitioners – the intended users of the research results. We do not put as much effort in marketing our products to senior management who need to approve and fund the implementation of new technologies.
- We now ask for a preliminary implementation plan in the RFP and a revised plan as one of the final deliverables from our research contractors. However, the panel typically does not engage the implementation plan until the project is nearing completion. In most successful state DOT programs, implementation is considered from the beginning and an implementation plan is continuously revised and updated throughout the life of the project.
- When problem statements are submitted, the relationship between the estimated budget and the expected work is tenuous at best. If budgets are adequate, a range of implementation products for different target audiences can be built into the scope of work. If not, panels are hard pressed to find enough in the budget for activities such as workshops, presentations, etc. In the past, there has been only a small amount of money available on request for “post-research” implementation activities.
- We generally ask and expect our panel members to be champions for implementation, but after a contract is completed, we disband the panel and lose contact with them and their efforts.
- The final reports of our continuing projects, especially the AASHTO committee support projects, may not be submitted to national and international indexing services such as RiP and TRID. They fall into the category of “grey literature” and are difficult to find.
- We do not fully exploit the opportunities to work with AASHTO committees to facilitate implementation of research results. There is communication between NCHRP and AASHTO staff, but it is largely informal and unstructured. Some AASHTO committees are far better organized than others in proposing research ideas and implementing their findings. There can also be a disconnect between the panel managing the research effort and the AASHTO group that will be balloting or implementing the results.
- There are a host of additional associations and organizations that could help with the dissemination and promotion of NCHRP products. These include organizations like ITE, ASCE, AMPO, APWA, NACE, and many others. Relationships between NCHRP and these are groups is informal and unfocused.
- State DOTs do not put as much emphasis on implementing NCHRP results as they do their own research. This is certainly understandable, but we could do more to make states understand that the NCHRP is *their research program*.

## Summary of Recommendations – How to Manage Change and Develop an Implementation Culture in the NCHRP

The key to NCHRP's new implementation plan is to implement a systematic, common approach that is flexible enough to suit every research project, audience, and situation. Implementation will be emphasized at all phases of the NCHRP process according to the following framework:

1. Problem Statement Solicitation, Review, and Selection
2. Role of Project Panel and Contractor Before, During, and After Conduct of Research
3. Overall Role of NCHRP 20-44 Panel and Selection of Enhanced Implementation Activities
4. Integration of Research Results Implementation with AASHTO, FHWA and other programs/activities
5. NCHRP Staff Support

Details and responsibilities are outlined below:

### **1. Problem Solicitation, Review and Selection**

#### **(a) Problem Statement Submitters**

- Submitters should emphasize two key factors: the potential value of the research results and the likelihood of implementation-ready products. Submitters should describe the expected benefits of the anticipated product and the urgency of the research, and outline activities necessary for its successful implementation. Any institutional or political barriers to implementation of the anticipated research products should also be identified.
- In order to maximize timely deployment of the research results, problem statement submitters should identify (a) the appropriate target audience for the research, (b) key decision-makers who can approve or influence implementation of the findings, and (c) individuals or organizations who could serve as champions for implementation of the results. It is expected that the problem statement submitter is committed to taking a lead role in implementation during and after the conduct of research.
- Submitters should request sufficient funding for the research and some initial implementation activities.

### (b) Problem Statement Reviewers

- Utilize a new rating model that emphasizes the potential value of the problem statement and the likelihood of implementable results. One possible approach is to assign a value of 1-5 for each criterion and multiply them together for a total score out of 25.

## **2. Role of Project Panel and Contractor Before, During, and After Conduct of Research**

### (a) Project Panels

- Identify implementation champions, starting with the panel members themselves. Assign responsibility to facilitate implementation to a subset of the panel – an Implementation Working Group – and an implementation leader (typically the AASHTO Monitor). Assign a panel member responsibility to serve as liaison with the appropriate AASHTO committee. Identify lead states willing to evaluate implementation of the project results in their own agencies.
- Develop or revise the implementation plan at the first panel meeting and throughout the life of the research after milestone deliverables.
- Develop funding Requests for implementation assistance from the NCHRP 20-44 funding. These requests would be accompanied by a commitment to follow through and track the results.
- Develop and submit problem statements for the next NCHRP cycle for more costly implementation activities (i.e. \$150,000 +).
- Meet near the end of the research contract to plan and initiate implementation activities. Each project's Implementation Working Group will remain active and be tasked to lead and facilitate implementation efforts, and track implementation successes.
- Work with NCHRP staff and the 20-44 panel to explore alternative funding programs for implementation (such as federal programs or pooled fund studies)

### (b) Principal Investigators

- Assist panels with development of the implementation plan. The plan is more likely to gain support if the implementation is led by the stakeholders through peer to peer communication.

### 3. Overall Role of NCHRP 20-44 Panel and Selection of Enhanced Implementation Activities

#### (a) Guidance and Oversight

- Review and approve NCHRP communication and dissemination products. As well as current products such as *Impacts on Practice*, *Research Makes a Difference*, and webinars, develop new products such as one-page technical briefs, targeted dissemination, CEO briefings, Implementation Success Stories, etc.
- Develop a guide or synthesis for DOTs on how to effectively analyze, evaluate, implement, and track the impacts of NCHRP research products.
- Develop training materials and guidelines to disseminate the new program requirements and responsibilities. Clearly articulate and communicate the responsibilities of all relevant stakeholders in the NCHRP process.
- Supplement and expand our face to face communication activities which are currently carried out as an NCHRP staff function. Consider the formation of an NCHRP Ambassadors Program in which volunteers would have travel costs paid to help disseminate information about NCHRP research to local, state, regional, and national events and organizations.
- Track and promote the value of NCHRP to state and national transportation leaders.

#### (b) Additional Implementation Assistance

- Review and approve funding requests for implementation assistance.
- Recommend funding requests that are appropriate for federal programs (such as Every Day Counts, Accelerated Implementation Deployment, National Highway Institute courses, etc).

### 4. Integration of Research Results Implementation with AASHTO, FHWA and other programs/activities

#### (a) AASHTO Committees

- Have an assigned responsibility to serve as champions for implementation of NCHRP results.

- Assist with tracking implementation and impacts of NCHRP research over time.
- Include presentations on NCHRP work as a regular agenda item at their meetings, and identify DOTs that would be willing to help facilitate implementation or pilot research results.
- Working with NCHRP and AASHTO staff, provide information and encouragement to AASHTO committees that have not been typically strong participants in the NCHRP.

(b) [FHWA Programs and Technical Assistance](#)

- Work with the 20-44 panel to identify NCHRP projects that would be suitable for the various federal implementation funding programs (such as EDC, AID, NHI, and LTAP).

## 5. NCHRP Staff Support

- A full time Implementation Coordinator position will be created to serve as the focal point for all implementation activities.
- The implementation coordinator will have the daily responsibilities to work with NCHRP 20-44 panel to fulfill their responsibilities identified above.
- Develop revised instructions to problem statement submitters (see Appendix A).
- Develop a guide and template for NCHRP project implementation plans (see Appendix B)
- Develop a template for implementation assistance applications (\$1.5 million available in FY2016). The application should require a commitment to follow through and track the results. (See Appendix D)
- The Implementation Coordinator will work closely with SPOs to help determine the most appropriate implementation champions and activities for their projects.
- Staff will explore mechanisms to identify and target specific audiences depending on their management level and area of interest, and tailor products accordingly.
- SPOs will help their project panels identify appropriate implementation products that can be conducted as part of the research contract. They will remain engaged in post-contract work and serve as the liaison between the project panel and the information coordinator.

- SPOs will identify individuals in positions likely to have influence or decision authority for implementation when selecting panel members.

These recommendations are presented in a checklist format in Appendix C.

## Budget

On a case by case basis, the NCHRP has funded a wide variety of technology transfer and dissemination efforts under its existing administrative budget and individual project budgets. These include presentations at conferences and committee meetings of TRB, AASHTO, and other organizations, promotional flyers aimed at practitioners and senior leaders, product demonstrations in host state DOTs, and other ad hoc activities. NCHRP 20-44 funds additional activities such as workshops, promotional brochures, and travel for PIs to deliver presentations, as well as the annual publication (through CTC and Associates) of “Research Makes a Difference”, the “Impacts on Practice” series, the “Paths to Practice” series, and the NCHRP “Summary of Progress”. Total expenditures for 20-44 have ranged from \$100,000 - \$200,000 per year.

At their meeting in March 2015, SCOR provided \$2.0 million in FY2016 for implementation activities. This will allow an enhanced implementation program based around activities and products outlined in this report.

The following is a proposed annual budget for expanded implementation activities, based on staff activity and contractor support. **It does not include staffing costs.** In the first year it will be possible to get a better idea of how much implementation activity this can fund. In the longer term, greater results may be obtained by devoting funds to a dedicated implementation specialist, as more and more state DOTs are doing. This would likely take between .5 and 1 full time position, at an additional cost of \$300,000-500,000 per year.

Product or activity	Quantity	\$ Amount
Development Assistance Program		1,600,000
Research makes a difference brochure	1	10,000
Impacts on Practice (2-pages)	5	15,000
Paths to Practice	5	20,000
NCHRP Summary of Progress	1	7,000
CEO briefings	2	20,000
NCHRP Research in Brief (for individual projects)	15	50,000
“Field Folios”, or Subject Compilations	10	65,000
Targeted Report distribution assistance	n/a	10,000
Tracking impacts and benefits of completed research	n/a	10,000
Webinar support (compiling topics, organizing speakers and sessions, submitting application forms)	n/a	35,000
NCHRP Ambassadors’ Program	n/a	50,000
Contingency	n/a	108,000
Total		2,000,000

## [Appendix A – Revised Instructions to NCHRP Problem Statement Submitters](#)

The AASHTO Standing Committee on Research (SCOR) is soliciting candidate research problems for the fiscal year 2018 National Cooperative Highway Research Program (NCHRP). Problem statements are to be submitted electronically via [this link](#). To be considered for the FY 2018 program, problem submittals must arrive by 4:00 p.m. on October 15, 2016—this is a firm deadline.

**Special note to FHWA staff:** you will be receiving a separate email from Jean Landolt with further instructions on problem statement submittal.

The NCHRP is an applied-research program and is intended to produce readily-implementable products such as the following examples.

- Specification.
- Manual, handbook, or guidelines.
- Business practice, procedure, test method, or process.
- Materials, product, or device.
- Decision support tool, simulation, model, or algorithm (software).
- Research framework, roadmap, or strategic plan.

NCHRP projects are intended to produce direct benefits to the transportation community. These may include increased safety, reductions in time or cost, or improvements to efficiency, mobility, quality of life, aesthetics, or the environment.

The AASHTO Standing Committee on Research – NCHRP’s governing body – will select projects based on two key factors: the potential value of the research and the likelihood of readily-implementable results. In order to maximize timely deployment of the research results, problem statement submitters should identify (a) the appropriate target audience for the research, (b) activities to facilitate implementation, (c) key decision-makers who can approve or influence implementation of the findings, and (d) individuals or organizations who could serve as champions for implementation of the results.

Submitters must do a literature search and summarize the results under "Literature Search Summary" on the NCHRP problem statement form. By performing a literature search, you will have accomplished one of two objectives; either you will have found a solution to your pressing problem or you will have confirmed the need for new research. Your summary should describe how your problem statement builds upon or complements the current state of knowledge. TRB’s Transportation Research International Documentation (TRID) Database is freely available online at <http://trid.trb.org/> to do literature searches.



More detailed guidance and helpful hints on writing effective problem statements can be found [here](#).

Please direct any questions you may have to Chris Hedges, NCHRP Manager, ([Chedges@nas.edu](mailto:Chedges@nas.edu); 202-334-1472) or me ([cjenks@nas.edu](mailto:cjenks@nas.edu); 202-334-3089).

## Appendix B – Implementation Plan Guide and Template

## Guide to NCHRP Implementation Plans

NCHRP projects are intended to develop practical, implementable solutions to address the needs of transportation practitioners. While it cannot implement research directly, the NCHRP is committed to facilitating the implementation of research by its primary sponsors and stakeholders. NCHRP Panel members are expected to serve as champions for implementation of the results. Each panel shall develop and maintain an implementation plan. A preliminary plan will be developed during the first panel meeting concurrent with the development of the Request for Proposals. Not all aspects of the implementation plan will be known at the beginning of the project. The implementation plan will be updated after major project milestones as the research results become more defined. As part of each research contract, the Principal Investigator will be asked to provide input to the plan for consideration by the panel.

Each panel will assign an Implementation Leader who will have overall responsibility for maintenance of the plan, coordination of implementation activities, completion of implementation funding assistance requests, and tracking of project implementation and impacts. The plan will include the identification of one or more lead states willing to evaluate implementation of the research results within their agency.

The implementation plan should include products and activities both during and after the completion of the research contract. To the extent possible, products or activities to facilitate implementation should be built into the research contract. Panels may request additional funding from NCHRP Panel 20-44, who may provide funding directly or coordinate with other national implementation funding programs. Possible implementation products and activities can include, but are not limited to, the following:

- Research products that are implementation-ready and targeted at appropriate audiences.
- Workshops or Peer Exchanges.
- Webinars
- Training
- Presentations, posters, or exhibits at relevant committee meetings or at state, regional, and national meetings and conferences.
- Software beta-testing.
- Focus groups.
- Revision of research products after AASHTO balloting.
- Development of promotional materials such as flyers, brochures, or videos for specific target audiences.
- Briefing materials for senior management.
- Follow-on NCHRP contracts for proof of concept; validation; prototypes, or further development.
- Demonstration or pilot projects in a host agency.

NCHRP Implementation Plan Template

Project number and title: \_\_\_\_\_

Total budget and anticipated contract completion date: \_\_\_\_\_

Implementation leader(s) name and contact information: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Research objectives and expected results: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Benefits of the research products (such as increased safety, reductions in time or cost, or improvements to efficiency, mobility, quality of life, aesthetics, or the environment): \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

The target audience(s) for the research products: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Key decision-makers who can approve or influence implementation: \_\_\_\_\_

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Barriers or constraints to implementation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Plans to overcome these barriers and constraints: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Methods of tracking and measuring the impacts of implementation: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Planned activities to facilitate implementation and current status: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Names and email addresses of individuals committed to supporting implementation within their agencies as lead states: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Note: Letters of commitment for implementation champions are encouraged and preferred.**

[Appendix C – Request for Implementation Funding Assistance Form](#)

# APPLICATION

## **Request for NCHRP Implementation Funding Assistance**

The NCHRP is making funding available for products or activities that will facilitate the implementation plans of NCHRP project panels. The total amount available in FY2016 is approximately \$1.5 million, and requests can range from \$2,000 to \$150,000 depending on the nature of the proposed activity. For funding requests in excess of \$150,000, the project panel should prepare a continuation request for the next cycle of the full NCHRP program. Funding requests will be reviewed and approved by NCHRP Panel 20-44, who will also help panels coordinate with other national implementation funding programs, such as Every Day Counts (EDC), Accelerated Innovation Deployment (AID), Transportation Pooled Fund, and others.

The range of eligible products and activities is broad; some examples are listed in the *Guide to NCHRP Implementation Plans*. Eligible expenses include essential travel, production of materials, professional services, meeting costs, and necessary equipment.

The requests must be submitted by the chair or a member of the NCHRP project panel.

To apply for implementation funding assistance, please complete the following form, attach a copy of the panel's implementation plan, and return them to NCHRP Manager at [Chedges@nas.edu](mailto:Chedges@nas.edu).

If the funding request is approved, a report will be provided to the NCHRP Manager within 3 months of completion. The report should describe the activities that were carried out, an assessment of how they facilitated implementation, and how the impacts will continue to be monitored over time.

Date: \_\_\_\_\_

NCHRP project number and title: \_\_\_\_\_  
\_\_\_\_\_

Submitted by (name, organization, email, and telephone numbers): \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Circle one: you are (a) the panel chair, (b) the panel implementation leader, (c) other (please describe). \_\_\_\_\_

NCHRP Staff Officer: \_\_\_\_\_

Amount requested: \$ \_\_\_\_\_

Results of the project to date: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Implementation activities planned for the funding requested: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Do you have a commitment from all parties that will be involved in this effort? (Yes / No)



Lead state(s) and other participating organizations or agencies: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

In-kind or other contributions from participating agencies: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

When will these activities be completed? \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe how these activities will facilitate implementation of the research findings: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

Describe how the success of these activities will be tracked, measured, and reported back to NCHRP: \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Please attach a copy of your panel’s implementation plan.**

## Appendix D

### Project Implementation Checklist

Stage	Activity
Problem statement solicitation	The NCHRP solicitation memo will stress the need for applied research producing implementable results, and provide a definition for determining successful implementation for the results. Submitters will include a basic implementation plan and identify potential champions to facilitate implementation. Submitters will be encouraged to request adequate funding for both the research and initial implementation activities.
Problem statement review	Reviewers should focus on two key criteria: the potential value of the research and the likelihood of achieving implementable results. Reviewers should also make a recommendation whether additional funding should be provided for implementation activities.
Panel formation	NCHRP staff should identify the possible target audiences for the research and determine whether representatives of each are needed on the panel. Clearly communicate the roles of panel members, the chair, and the AASHTO monitor in serving as champions for implementation.
RFP Development	Panels will be encouraged to include products to facilitate implementation that can fit within the project budget without compromising the quality and extent of the actual research. A preliminary implementation plan will be drafted during the first panel meeting.
Project Selection	NCHRP staff and others should communicate the selection of new projects to the appropriate practitioner communities, as well as partner organizations such as ITE, NACE, ASCE, and AMPO.
Project initiation	New projects should be announced to a general audience and to specific target communities.
During the research	<p>Interim reports – if technically acceptable – should be made available to the practitioner community.</p> <p>Update the implementation plan after key deliverables.</p> <p>Identify implementation products and activities that were not included in the original scope of work. Prepare and submit requests for funding assistance to the NCHRP 20-44 panel, or develop a request for continuation funding for the next NCHRP cycle.</p> <p>NCHRP staff, panel members, and researchers present status reports at appropriate venues.</p> <p>Initiate dialog with FHWA for possible inclusion in EDC, AID or other deployment programs.</p> <p>Schedule a meeting of the project Implementation Working Group to initiate and identify future implementation and tracking activities.</p>

Revised draft report	<p>Issue preprints of selective reports after a review of sensitivity and technical acceptability. If appropriate, instruct the PI to complete a TRB webinar application form.</p> <p>Identify and prioritize research results for staff-led activities such as webinars and other communication activities.</p>
Research completed	Implementation Working Group continues to track and report on implementation results and successes.
Ongoing	<p>Identify various communications products to distribute and promote the value of research projects and program to practitioners and senior management.</p> <p>Reach out to other local, state, regional, and national organizations and meetings and explore opportunities to communicate the results of NCHRP research – individual projects, bundled by topic, or programmatic.</p>

## Appendix E

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