

Communicating the Value of Transportation Research

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Research plays a critical—and growing—role in the national transportation debate. Transportation research is vital for improving mobility, building better roads, providing safer conditions for drivers and pedestrians, and increasing the service life of bridges.

For example, issues of funding and finance dominate the discussion of surface transportation in the United States. Two national commissions have addressed the topic, and the U.S. Government Accountability Office recently added transportation financing to the list of high-risk areas for oversight by Congress. The ongoing dialogue and debate at the federal, state, and local levels point to the need for robust transportation research programs and for compelling ways to communicate the value of that research for solving transportation system problems.

Communicating the value of transportation research can be difficult. Although most people conceptually grasp the value of research and its results, they do not make the direct connection to the need for research funding—particularly for innovations or new technologies that may take years to develop.

Decision making and budget cycles proceed in the here and now.

Communication Matters

The value of transportation research is measured in terms of the good it does—or can do. Although technical research reports provide quantifiable results, the information can be complex and not easily understood. Communication is a key for furthering the transportation research agenda—to tell the story of how society can benefit from the research in ways that decision makers, elected and appointed officials, the media, and the public can understand and appreciate.

Communicating value requires more than presenting quantifiable statistics and dollar amounts. The task is to translate the benefits into understandable terms. A National Cooperative Highway Research Program (NCHRP) project has developed NCHRP Report 610, *Communicating the Value of Transportation Research—Guidebook*, which presents a blueprint for integrating communication into research programs. The blueprint is designed for use



The devastating and tragic collapse of the steel deck truss bridge in Minneapolis, Minnesota, in August 2007 (*left*, four days after) and its rapid and effective replacement (*right*, 13 months later) are objective examples of the need for federal and state transportation research programs that solve problems today for tomorrow's users.

FIGURE 1 Elements of the communication process.



by state and federal transportation officials, research managers, and others in the transportation research community (see sidebar, below).

The guide contains practical advice on how to communicate the results and the return on invest-

ment from research programs to diverse audiences—including Congress, state lawmakers, and other decision makers. The approach highlights the importance of integrating communication from the onset of research planning—during the proposal stage, when key communication objectives can be established. The guidance is based on an empirical examination of communication efforts to promote federal and state investments in various transportation research programs.

Decision makers assess the value of transportation research in terms of the perceived worth of the expected outcomes. A skillfully applied communication process markets that value effectively. Successful communication links researchers and results with their intended audiences by strengthening and channeling the flow of information throughout the research process. The elements of the communication process can be represented as a funnel (see Figure 1, this page).

Getting Started: Five Steps

The communication process funnel demonstrates that communicating the value of research is a multilayer challenge. The upper layers of context, strategy, and content—representing what to say—are as important for focus as the lower layers of communication channels and style—representing how to say it.

1. Context

The context in which communication takes place—including the problem to be addressed by the proposed research—influences communication strategy, content, channels, and style. Communication takes into account historical, social, political, and cultural considerations in responding to a particular situation. For example, transportation research programs that originate in legislation often raise issues about public visibility and about trade-offs with other programs that perhaps are more popular. Learning what the audience deems politically, publicly, and technically acceptable is critical.

2. Strategy

Strategies for communicating value depend on an ability to understand the audience and the purpose of the message. The goal is to influence perceptions of value; therefore the strategy must begin with a clear understanding of the people to be influenced and their priority concerns—also called their value profiles. A value profile identifies the criteria the audience will use to evaluate the exchange of information—how the target audience determines, defines, and expresses value.

How the Guidebook Is Organized

Extensive research and examination of best practices in communication, within and outside of the transportation community, informed NCHRP Report 610, *Communicating the Value of Transportation Research—Guidebook*. The research assembled practical tips, a model process, case studies, and examples of good communication methods that all transportation researchers can use. The guide is organized into four chapters and two appendixes to explain the process:

Chapter 1: Signs of Good Communication Practices presents seven indicators drawn from best practices inside and outside of the transportation community.

Chapter 2: The Communication Process explores the key steps for planning, talking about, writing, and creating the context, strategy, and content, and choosing the appropriate channels—media and contacts—and style.

Chapter 3: Planning and Evaluating Your Research Communication presents ways to understand how target audiences will hear the message.

Chapter 4: Putting It All Together: Communicating to Specific Audiences provides examples of how to communicate with audiences that matter: research peers, transportation policy and program officials, legislative leaders and staff, the news media, and the public.

Appendix 1: Transportation Case Studies illustrates good communication practices through experiences from seven transportation research projects.

Appendix 2: Nontransportation Best Practices summarizes the approaches of four organizations that have excelled in communicating the value of research.



Effective research programs often recruit communications professionals to assist in conveying the value of research.

3. Content

The content of the message depends on the context and the strategy. Selecting accurate and appropriate content is critical. If the content is inappropriate, the audience is likely to dismiss the communication; if the content is too complex, the audience will disregard it; if the content is inaccurate, the communication loses credibility. Determining the appropriateness of the content involves considering the target audience, its values, and the action to be advocated.

4. Channels

Communication channels are the modes or pathways through which the content is delivered. There are four basic channels: printed or published materials; oral channels—that is, personal contacts; broadcast media, such as radio, television, and videos; and the Internet and other computer-based modes. Some channels are well-suited for particular contexts or audiences—choosing the appropriate channel for the message and the audience is a key tactical decision.

5. Style

Style is the packaging of the communication, serving as the physical wrapping or features that distinguish one communication activity from another. The most visible aspects of packaging—the physical features such as design, layout, color, and typeface—may affect the perception of value. The thickness of a report, the arrangement of images and text on a website, the folder for presenting fact sheets—the physical packaging immediately influences every encounter between a member of the audience and the transportation research advocate. Packaging also is an important consideration for oral or face-to-face communication. Speakers who lack good communication skills have difficulty reaching the target audience and influencing perceptions.

Communication is continuous. Advocating support for a single research project or program usually takes an extended period. Within this time frame, opportunities arise to learn, adapt, and improve. The effort or approach calls for continuous reassessment of the context, as well as of the strategy, content, channels, and style.

Signs of Good Practice

The guidebook examines best practices in communicating the value of research by reviewing successful research projects and programs inside and outside the transportation community. Several characteristic objectives emerged among the most effective efforts:

- ◆ **Involve communications professionals.** Tailor the communication to the audience, the message content, and the channel of communication.
- ◆ **Understand the audience.** Identify the target audience and research its characteristics and interests.
- ◆ **Demonstrate a tangible benefit.** Connect the audience to a tangible benefit. What does the target audience value? How does the target audience express those values?
- ◆ **Recognize that timing is relevant.** Understand the current mood and concerns of the audience or constituents.
- ◆ **Build coalitions.** Enlist the support of credible and effective champions and allies.
- ◆ **Build two-way relationships.** Give and gather information.
- ◆ **Tailor the packaging.** Produce packaging that is appropriate to the purpose and to the audience in design, layout, and color.



NCHRP Report 610, *Communicating the Value of Transportation Research—Guidebook*, is available from the TRB online bookstore, www.trb.org/bookstore/; to view the book online, go to http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_610.pdf. The contractor's final report on the research associated with NCHRP Project 20-78, which produced the guidebook, was published as Web-Only Document 131, http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_w131.pdf.

Photo: Virginia DOT



One of the projects highlighted in NCHRP Report 610 is the preservation of the historic Hawthorne Street Bridge in Covington, Virginia, by Virginia DOT and the Virginia Transportation Research Council.

The guidebook presents these key lessons from detailed case studies, along with examples of good practice from successful research projects and programs, some from outside the transportation community.

Taking Communication Seriously

Communication must be integral to the research process, not an add-on after the research concludes. Ongoing communication assembles a network of researchers, decision makers, and other stakeholders and ultimately builds lasting relationships.

A serious approach may involve working with communication professionals to craft and deliver messages to different audiences, building the communication skills of researchers, and providing

resources to support and enhance the communication capacity within the research team itself. Resources may include printed materials, such as communication manuals and guides; workshops and forums to share best practices and review communication processes; and programs to provide researchers with funds to improve or expand communication to target audiences.

Ongoing communication builds a bridge between researchers, decision makers, and stakeholders. Not all transportation researchers can excel as effective communicators. Research teams can bring in communication professionals to assist with planning, to monitor the ongoing communication, and to engage in a dialogue with key audiences throughout the process.

Quoting the Value of Research

"A recent demonstration of accelerated bridge construction research in Utah saved almost \$1 million in construction costs and over \$3 million in road user costs," notes a new brochure (*right*), *Transportation Excellence Through Research*, published by the American Association of State Highway and Transportation Officials (AASHTO). Developed by the AASHTO Research Advisory Committee's (RAC) Task Force on the Value of Research, the publication provides senior executives and decision makers with key messages reinforcing the value of transportation research.

The text cites proven results—for example, "By applying its research on managing pathogens related to animals killed on the road, the New York State Department of Transportation (DOT) has solved a major environmental problem and saved millions of dollars in disposal costs." The brochure also quotes Pete Rahn, Director of the Missouri DOT, on the value of research: "Transportation research is about finding better ways to get the job done. Good research is an investment, with a payoff that helps us deliver better systems and services." The AASHTO RAC brochure can be viewed or downloaded



at http://research.transportation.org/Documents/NCHRP_BrochureWEB.pdf.

Working in tandem, the National Cooperative Highway Research Program (NCHRP) has launched the *Impacts on Practice* series of brochures to communicate the tangible benefits of its research program and projects (*below*). The series provides a snapshot of ways that state DOTs have deployed NCHRP research results to save time and money and improve the

operations and safety of their transportation systems. The series of brochures is available online at www.trb.org/NCHRP/NCHRPImpactsOnPractice.aspx.

