

# Trends and Fundamentals

## Guiding TRB to Its 2020 Centennial—and Beyond

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**A**nniversaries are important. They provide an opportunity to celebrate the achievements of the past and to contemplate the challenges and opportunities ahead. The Transportation Research Board (TRB) marked its 90th anniversary this year and convenes its 90th Annual Meeting in January 2011. This is not a gold or diamond anniversary, and TRB is still a decade shy of its centennial. But for any organization, reaching 90 years is a significant milestone, and a portion of this issue of *TR News* is devoted to reflections about TRB's past and future.

An essay by Thomas B. Deen, Executive Director from 1980 to 1994, reviews TRB's historical milestones and describes the unique role that the organization plays in our nation's transportation enterprise. Tom's reminiscences resonate with anyone who has struggled to explain TRB to friends and family who are not part of the transportation community. Included with his article are brief comments from a selection of TRB participants about what TRB has meant to transportation or to their own careers.

Their statements would gratify the farsighted founders of TRB. Farsighted though they were, when the founders gathered for the first Annual Meeting in January 1922, they could not have imagined how our transportation systems would evolve during the next 90 years or the role that TRB would play.

This major anniversary offers a good occasion to contemplate the future and to speculate about what lies ahead for TRB in the next decade. The older one becomes, the closer a 10-year horizon appears; to me, therefore, this is less speculation and more an acknowledgment of trends already under way, likely to continue, and—in some cases—certain to accelerate in the coming decade. It is also a recognition of fundamentals that have held true in the past and are likely to hold true in the future.

TRB's core activities—the Annual Meeting, standing technical committees, publications, and data-



Although the technology employed by TRB committee members and Annual Meeting participants has changed between the 50th Annual Meeting in 1971 (*above*) and more recent Annual Meetings (*below*), the core mission of the Transportation Research Board remains the same.



bases—will be as vital to the U.S. transportation community as ever.

These activities support the exchange of information on transportation research and practice, date from TRB's beginnings, and are the foundation on which TRB's other programs have been built. Even in

TRB's committees draw on the expertise and collegial synergy of transportation professionals from a variety of disciplines.



an electronic age, face-to-face interactions among researchers and practitioners in formal and informal settings are an essential component in the processes of innovation and career development.

In difficult economic times, attendance at the Annual Meeting has remained strong, as has the demand for standing committee membership. This is fortunate for TRB's research and policy study programs, which rely on these core activities to provide the technical talent for project committees and pan-

els, connections to universities and other research institutions, and outlets for project findings and recommendations.

**The current ways through which TRB interacts with its participants and delivers information will be supplemented and sometimes replaced by new information and communication technologies.**

E-newsletters, webinars, and web-only publications have become a regular part of TRB dissemination activities. These vehicles make TRB products and information more accessible and—in the case of webinars—represent a meaningful step toward virtual conferences. The details and timing for this development are unclear, but the course is set—the onset of new information and communication technologies and the new capabilities they provide will continue for many years, and TRB must take advantage of them.

In some cases, TRB will adopt technologies at more or less the same pace as the technical and business communities, as with the use of e-mail and the Internet. I do not foresee TRB getting ahead of the communities it serves in moving to electronic-only



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Accelerated construction innovations, such as self-propelled modular transporters used to build a bridge near Salt Lake City, Utah (*above*), are among the new technologies and techniques explored by TRB standing committees and adopted into practice. Since 1920, TRB has worked for the application of research results; (*left*) the Lincoln Highway near the Pennsylvania Tunnel, ca. 1921.

publication, although that day is coming. Social networking offers promising new opportunities, which TRB has not yet begun to exploit fully.

In other cases, we will be early adopters. For example, the growing size of the Annual Meeting and the short cycle for the peer review of papers created powerful incentives for TRB to move to a web-based review process as quickly as possible. Similarly, travel restrictions at many of our sponsors' organizations have created a strong incentive to find ways to provide for meaningful participation without travel. TRB quickly adopted webinars and can be expected to adopt other technologies that support active and effective participation by professionals from their own homes and offices.

### The pressures to expand the scope and depth of TRB activities will continue.

By the late 1960s, it was apparent that the Highway Research Board could not effectively address highway research and practice without including the other transportation modes in its scope. Too many interests and issues were intertwined among the modes. This was recognized officially in 1974, when Highway was changed to Transportation in the organization's name.

Since then, these intertwined interests and issues have extended well beyond the boundaries of what was once considered transportation, to include a growing list of environmental, community, economic, logistics, security, and emergency response issues. The pressure to involve groups associated with these issues in TRB activities is continual and can be challenging, because many of the groups do not necessarily think of themselves as transporta-



In 2006, George Giannopoulos, Hellenic Institute of Transport, Greece (*left*), and TRB Executive Director Robert E. Skinner, Jr., signed a Memorandum of Understanding between the European Conference of Transportation Research Institutes and TRB. International collaboration is a growing focus of TRB.

tion organizations. Nonetheless, engaging these groups is important, and TRB standing committees and research programs have been effective in drawing them into TRB activities.

At the same time, TRB is pressured to adjust its standing committee structure and other programs to incorporate new technologies and new approaches. The constant evolution of TRB's committee and program portfolio, crucial to TRB's long-term success, will continue. In the decade ahead, I expect more in-depth treatment at TRB of topics such as nanomaterials, real-time systems to detect the condition of infrastructure components, accelerated construction, and a host of environmental and community design issues.

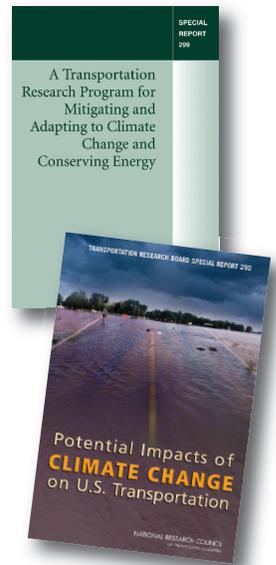
### Energy, environmental, and climate change issues will be at the forefront of TRB's agenda for many years to come.

Some issues wax and wane in importance. They surface, stimulate research, are addressed through some combination of technical and institutional changes, and then fade into the background. This obviously is not the case with the interrelated issues of energy, environment, and climate change that confront our transportation system, our nation, and the world. The issues are too numerous, too complicated, and too far-reaching for simple solutions. Moreover, both our technical understanding of the issues and our societal beliefs about their importance are evolving.

In recent years, these issues have motivated major studies at TRB and the National Academies; have appeared increasingly on the research agendas of TRB's cooperative research programs; and have supplied spotlight themes for Annual Meetings. But developing and implementing transportation strategies for mitigation and adaptation are still in the early stages. Extensive research and intense policy debates will unfold in the years ahead.



TRB's annual output of publications, both in print and on the web, exceeds 200 titles.





The Transit Cooperative Research Program Oversight and Project Selection Committee guides one of TRB's research management programs.

#### TRB's international outreach will increase.

TRB always has had a presence internationally, in part because of the scale of its Annual Meeting and publications. In the past 10 years, however, a heightened awareness has developed that the United States has much to learn from other countries, that international coordination can leverage resources for research programs, and that issues are increasingly global in nature and require global solutions.

TRB activities have reflected this awareness. TRB is well positioned to facilitate individual collaborations among researchers from multiple countries and to introduce more collaboration at a programmatic level through the research programs it manages.

#### TRB will continue to provide an attractive institutional environment for research management and special studies.

TRB's institutional home within the National Academies, coupled with its foundational core programs, has led to significant growth in its cooperative research programs, management of the second Strategic Highway Research Program (SHRP 2), and important policy study assignments. The National Academies ensure independence, rigorous quality control, and credibility. TRB's core program provides standing and recognition within the transportation community, as well as connections with transportation professionals working in virtually every mode, discipline, and organizational affiliation involved in transportation.

These activities may not increase in the coming decade, and the scheduled phase-out of SHRP 2 will bring a decline in total TRB activity. Nevertheless, TRB will continue to be one of a select set of organizations that others turn to for conducting special studies and managing stakeholder-driven research programs.

#### Wild cards will alter strategies.

The past decade has taught us how quickly new concerns can emerge and shift our priorities. The Sep-

tember 11, 2001, terrorist attacks raised transportation security concerns to a new level dramatically and immediately. Hurricane Katrina reintroduced the nation to the importance of emergency response and evacuation preparations and demonstrated the vulnerabilities in the transportation infrastructure of our coastline. The worldwide economic crisis has added a new, complicating twist to transportation finance and has placed extraordinary strains on state and local transportation programs.

To imply that these concerns were not on the radar screen would be wrong, but these events gave the concerns a reality and an urgency that had not existed before. New demands and challenges arose for the transport system and introduced research needs to which TRB and other research organizations have responded. The events of the past decade are a reminder of how tricky the future can be. Further economic turmoil, new crises, or even changes in federal-aid programs that could significantly affect transportation and TRB are not difficult to imagine.

TRB has demonstrated remarkable resiliency and adaptability during its 90-year history. It has flourished in its efforts to remain relevant to the nation's transportation providers and users. The credit goes to our volunteer participants, for contributing their time and talents to promote transportation innovation, and to our sponsors, for investing in a unique organization with payoffs that are difficult to measure but are far-reaching, influencing transportation professionals and agencies around the world.



Transportation and infrastructure priorities can change dramatically in the face of catastrophic events such as Hurricane Katrina in 2005—transportation research must respond and adjust to these changes.