

CREATING INCENTIVES FOR HIGHWAY INNOVATION

NEW REPORT FROM TRB—

BUILDING MOMENTUM FOR CHANGE

CREATING A STRATEGIC FORUM FOR INNOVATION IN HIGHWAY INFRASTRUCTURE

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The recommendation of a study initiated by the Transportation Research Board could lead to greater innovation in highway goods and services. TRB Special Report 249, *Building Momentum for Change: Creating a Strategic Forum for Innovation in Highway Infrastructure*, examines institutional barriers to and incentives for innovation. The study was funded by the Federal Highway Administration, state highway agencies through the National Cooperative Highway Research Program, and eight private-sector organizations: the American Concrete Pavement Association, the Asphalt Institute, the National Aggregates Association, the National Asphalt Pavement Association, the National Lime Association, the National Stone Association, the Portland Cement Association, and 3M. The primary focus is on strengthening the market for private-sector technology development.

INSTITUTIONAL BARRIERS TO INNOVATION

The public and private sectors jointly provide highway infrastructure in the United States. As owners and operators of the highway system, state and local highway agencies as well as toll authorities purchase from private firms the various supply materials, products, and services used in the system's design, construction, operation, and maintenance. In general, this public-private market relationship has worked well, producing the most extensive highway system in the world. A shortcoming of the relationship, however, is limited incentives and opportunities for private industry to innovate. Because the public sector purchases highway goods and services on the basis of initial price (first-cost) rather than life-cycle cost, specifies procurements in a highly detailed and prescriptive manner, and evaluates

and accepts new highway products in a different manner across hundreds of jurisdictions, the private sector often perceives the highway marketplace to be unreceptive to innovation.

Concerned about these innovation barriers, TRB assembled a committee of experts—in the areas of highway management, design, construction, operations, and product development and marketing—to consider ways to strengthen public- and private-sector research and technology-development activities. The committee focused its attention on finding ways to strengthen the highway marketplace in general so that it naturally encourages and enables innovation. Because the highway industry involves thousands of public agencies and private companies, it provides a vast testing ground for the exploration of a wide range of marketplace reforms aimed at stimulating innovation. A major disadvantage of this industry fragmentation, however, is that promising ideas can take many years to be widely recognized and accepted in general practice. Nevertheless, even modest increases in overall incentives and opportunities for innovation are likely to yield tremendous public benefits, especially in this new era of highway renovation, maintenance, and modernization.

A STRATEGIC FORUM FOR INNOVATION IN HIGHWAY INFRASTRUCTURE

To accelerate the pace of innovation in highway technology, the committee recommended the formation of a strategic forum for innovation in highway infrastructure with a central mission to identify and effect positive change in the fundamental opportunities and incentives for innovation that must comprise the highway marketplace. By eliciting the active involvement of the most visionary leaders of the highway community—

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drawn primarily from the ranks of top highway designers, suppliers, and builders, as well as highway owners, technologists, researchers, and users—the forum should provide a strong and continuing voice for changes in policies, practices, and regulations that influence the market for innovation in the highway field.

Headway in overcoming institutional impediments to innovation will require a determined and enduring commitment on the part of both the private and public sectors. In recent years many public and private initiatives have increased industry cooperation and support for marketplace reforms that foster innovation. But no activity of national stature and continuity challenges the institutional status quo, develops and promotes ideas and strategies for encouraging innovation, and works to implement and gain acceptance of these ideas and strategies. The forum should assume such a constructive role, offering a common setting for the varied and dispersed segments of the highway industry to voice ideas for and to build interest in expanding innovation incentives and opportunities.



Special Report 249, *Building Momentum for Change: Creating a Strategic Forum for Innovation in Highway Infrastructure*, is available from the Transportation Research Board (see page 44 for ordering information).

The Transportation Research Board, under the auspices of its FHWA-sponsored Research and Technology Coordinating Committee, has elected to demonstrate the forum concept. Efforts to elicit broader interest in and organize the proposed forum are under way.

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