

# TR NEWS



## Applying Knowledge Management

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The **Transportation Research Board** is one of seven major programs of the National Academies of Sciences, Engineering, and Medicine. The mission of the Transportation Research Board is to provide leadership in transportation innovation and progress through research and information exchange, conducted within a setting that is objective, interdisciplinary, and multimodal. The Board's varied committees, task forces, and panels annually engage about 7,000 engineers, scientists, and other transportation researchers and practitioners from the public and private sectors and academia, all of whom contribute their expertise in the public interest. The program is supported by state transportation departments, federal agencies including the component administrations of the U.S. Department of Transportation, and other organizations and individuals interested in the development of transportation.  
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\* Membership as of October 2016.

# TR NEWS

NUMBER 305

SEPTEMBER–OCTOBER 2016

## APPLYING KNOWLEDGE MANAGEMENT

### 3 INTRODUCTION

#### **Learning as We Go: Transportation Knowledge, Networks, and Communities of Practice**

*Frances Harrison, Andrew Lemer, Leni Oman, and Hyun-A Park*

Transportation knowledge management enables an agency to build, sustain, and leverage the know-how and experience of its employees and partners to deliver transportation projects and services and to manage systems. The assembled articles provide perspectives on this interdisciplinary field, its applications, and innovations.

### 4 Knowledge Management: A CEO's Perspective

*John S. Halikowski*

A state transportation agency, at its core, is a knowledge organization that specializes in transportation—therefore the way that knowledge is managed can determine an agency's success or failure, according to this author, a noted CEO, who presents 10 facets of knowledge management practice and describes three exemplary programs.

### 8 Knowledge Management Beyond Transportation: Responding to Business Drivers

*Denise Bedford and Maureen Hammer*

The goal of knowledge management is to enable an organization to leverage all of its knowledge assets—tangible and intangible—to become more than the sum of its parts and remain competitive and relevant in a changing economy. The authors explore the common business drivers related to knowledge management and supply many leading examples.

### 12 Knowledge, Teams, People, and Transportation Agencies: Building a Successful, Productive Workplace Culture

*Shane Brown and Andrew Lemer*

Transportation agencies can adopt management tools and approaches that are more people-centered and that enhance the application of people's knowledge through team-building and fostering positive feelings about the workplace, the authors maintain, pointing to many model practices.

### 17 Supporting Strategic Change with Knowledge Management: Washington State's Work in Progress

*Leni Oman*

The Washington State Department of Transportation is drawing on lean management and knowledge management to design new, more efficient ways of working, to maximize the use of staff knowledge, as well as of data and information, under a grant from the Federal Highway Administration. The author presents the goals and reports on the progress.

### 22 Preserving Institutional Knowledge Through Knowledge Books: Models, Insights, and Impacts

*Nanako Mura*

To protect against the loss of institutional knowledge, organizations must identify knowledge areas critical to business continuity and effectively capture that knowledge. The author presents experience and insights in creating knowledge books that preserve and structure critical tacit knowledge and are accessible to all employees.

### 27 Leading In, Leading Out, and Leading from Behind: Knowledge Management at Alberta Public Service

*Colleen Delany*

Alberta Public Service (APS) has invested in building a leadership and competency model with shared values that reinforce one another. The author relates how APS traffic safety leaders are applying the model in working with community partners and stakeholders, fostering networks, and entering into interagency partnerships.



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COVER: Knowledge management draws from a variety of fields, from learning theory to communications to computer programming, to make connections among agency staff, management, stakeholders, and the general public. (Image: Thinkstock)

# TR NEWS

features articles on innovative and timely research and development activities in all modes of transportation. Brief news items of interest to the transportation community are also included, along with profiles of transportation professionals, meeting announcements, summaries of new publications, and news of Transportation Research Board activities.

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Javy Awan, Editor and Publications Director  
Lea Camarda, Associate Editor  
Juanita Green, Production Manager  
Michelle Wandres, Graphic Designer

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**Editorial Correspondence:** By mail to the Publications Office, Transportation Research Board, 500 Fifth Street, NW, Washington, DC 20001, by telephone 202-334-2972, by fax 202-334-3495, or by e-mail [jawan@nas.edu](mailto:jawan@nas.edu).

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## 32 Developing a Knowledge Management Practice: One State's Experience

*Polly Kent, Laura Mester, Kirk Steudle, Scott Thayer, Mark Van Port Fleet, and Randy Van Portfliet*

Taking conscious steps to capture and manage knowledge and to share it widely has helped the Michigan Department of Transportation survive and thrive despite budget cuts, downsizing, and rapid employee turnover. The authors describe innovative measures and solutions integrated into programming and project development.

## 36 Advancing Transportation Knowledge Management Through Research: Projects Develop Guidance and Tools

*Andrew Lemer and Frances Harrison*

Adapting knowledge management to transportation agencies presents multidisciplinary challenges. The Transportation Research Board and its Cooperative Research Programs have produced an array of guidance and tools to assist in applying knowledge management to improve the performance of the agency and the transportation system.

## ALSO IN THIS ISSUE:

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Travel demand modeler and planner Gregory T. Giaimo; data researcher and analyst Catherine T. Lawson

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*Karen Febey*

Five Years of the Six-Minute Pitch: A Transportation Startup Challenge, 44  
*Shana Johnson*

Cooperative Research Programs News, 45

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## COMING NEXT ISSUE

Feature articles in the November–December issue trace out the history and influence of the Federal-Aid Road Act, which 100 years ago established federal funding to the states for highways; examine national and international policies to reduce the carbon emissions from freight; and present an overview of the revised sixth edition of the

*Highway Capacity Manual*, a key reference, now subtitled *A Guide for Multimodal Mobility Analysis*.

Additional topics include the sharing of operations data among agencies, best practices for stormwater management, geographic information system–based asset management, resource allocation and system performance—and more.

Old Albany Post Road in Philipstown, New York, is listed on the National Register of Historic Places. At the turn of the 20th century, the need for well-maintained roads for mail delivery and in national parks and forests drew attention to the federal government's role in road building and preservation.

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