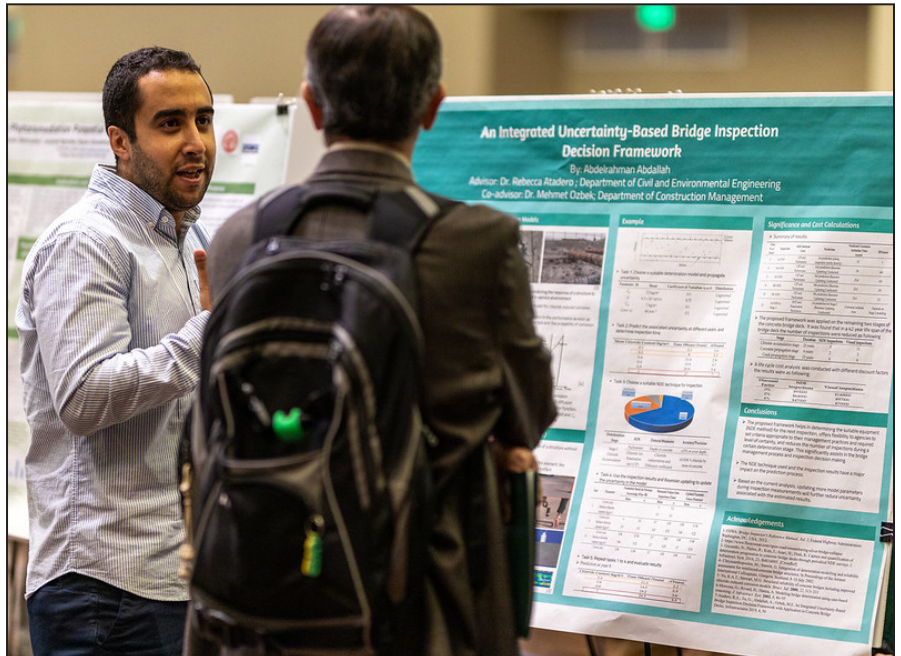


MOUNTAIN-PLAINS CONSORTIUM

RESEARCH BRIEF | MPC 22-456 (project 594) | March 2022

Transferring Research Innovations in Bridge Inspection Planning to Bridge Inspection Practice



the ISSUE

Over the last two decades, many researchers have focused on providing new ideas and frameworks that can help improve conventional bridge inspection practices. However, little guidance is provided for implementing these new ideas in practice. This, along with resistance to change and complexity of the proposed ideas, resulted in a lack of success in applying new technologies in bridge inspection programs.

the RESEARCH

To help the transportation community develop a research implementation infrastructure and facilitate research transfer in DOTs, the objectives of this research are to:

1. Analyze the current situation in bridge inspection practices by engaging with different DOT staff members and investigating their opinions on some of the approaches they use in current inspection practices, such as the 24-month inspection cycle used in routine inspections, NDE methods, and visual inspections.
2. Identify the factors that can help improve research efforts in the field of bridge inspection to provide the transportation community with usable and implementable research products.

There is a strong connection between research implementation and organizational change; hence, another important objective of this qualitative study is to identify the barriers to the adoption of new inspection techniques and planning methods from an organizational culture and change perspective. To address our specific research objectives, and given the practical and exploratory nature of our study, we selected a qualitative research method that involves interviews and questionnaires. The aim of this methodology was to help us gain in-depth descriptions and insights from a variety of DOT employees about how to improve current bridge inspection practices and facilitate the implementation of new research findings and technologies.



A University Transportation Center sponsored by the U.S. Department of Transportation serving the Mountain-Plains Region. Consortium members:

Colorado State University
North Dakota State University
South Dakota State University

University of Colorado Denver
University of Denver
University of Utah

Utah State University
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Project Title

Transferring Research
Innovations in Bridge
Inspection Planning to Bridge
Inspection Practice

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the FINDINGS

We identified that collaboration between practitioners and researchers can help improve research products. Also, to facilitate change in transportation organizations, it is suggested that change leaders should focus on showing the need for change, gaining support from the FHWA, allocating the required resources, and enhancing the capacity of DOT staff members through training and effective communication.

the IMPACT

This research provides DOTs and researchers with practical and theoretical solutions to help accelerate change and research transfer. While we studied these concepts within the specific context of bridge inspection, this study also provides insights about how major changes that might be more generally applied to other aspects of transportation may occur in DOT practices.

For more information on this project, download the Main report at <https://www.ugpti.org/resources/reports/details.php?id=1063>

For more information or additional copies, visit the Web site at www.mountain-plains.org, call (701) 231-7767 or write to Mountain-Plains Consortium, Upper Great Plains Transportation Institute, North Dakota State University, Dept. 2880, PO Box 6050, Fargo, ND 58108-6050.



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