

Moving from Research to Implementation

Judith Corley-Lay, Ph.D., PE
Director, NCPP

A bit of history...



- 1967 Silver Bridge collapse-eyebars fracture
- 1968 National bridge inspection program initiated (regular and periodic inspections)
- 1971 NBIS standards adopted
- 1987 Schoharie Creek bridge collapse- scour
17 NCHRP research projects on scour in next 15 years.
- 2007 I-35W collapse in Minnesota- undersized gusset plate designs

History continued...

- April 16, 2012 FHWA memorandum on collection of element level bridge inspection data.
- 2013 AASHTO Guide for Bridge Element Inspection
- 2013 NHI course on Bridge Element Inspection
- By 2015 Most states had guide manuals on Bridge Element Inspection.



NATIONAL BRIDGE PRESERVATION PARTNERSHIP CONFERENCE 2018

PRACTICES WE CAN NOT AFFORD TO DEFER

What does the history tell us?

- Each major bridge failure was followed by research.
- As research was completed, the work that related to design, safety, and inspection was likely to be implemented.
- No one wants to be the next failure.



But...

- It has been harder to implement findings that were not tied to these key safety issues.
- Maintenance and preservation research can fall into this group.



Our topic

- How do we implement research that is NOT directly related to bridge failure?



Dissemination

- Targeted distribution of information to a specific audience.

Examples: NCHRP report, conference presentations, webinars, small group training.



Implementation

- Use of strategies to integrate a new approach in a lasting way.
- Much harder than dissemination. Requires acceptance and action.



Who is Responsible: Researcher, Practitioner or Policy Maker?

- Researchers, program developers, workers, funders and politicians all believe that the responsibility lies elsewhere.
- Increasing implementation is often haphazard.



A few comments on implementation...

- “We need to make the “right thing to do” also the “easy thing to do.”
- Passive approaches “train and pray” are generally ineffective.



Implementation is actually studied in the Medical field- Their strategies...

- Provide interactive assistance-
Peer to peer work, or hire a consultant whose task it is to provide implementation assistance (SHRP2)



Implementation Strategies (continued)

- Adapt and tailor to context: Bridge types; Large state vs small state; cold weather climate vs warm weather climate.
- Develop Stakeholder Interrelationships- Could the Bridge Technical Working Group at the Committee on Maintenance have an implementation group? Could a **partnership have an implementation task group?**



Implementation Strategies (continued)

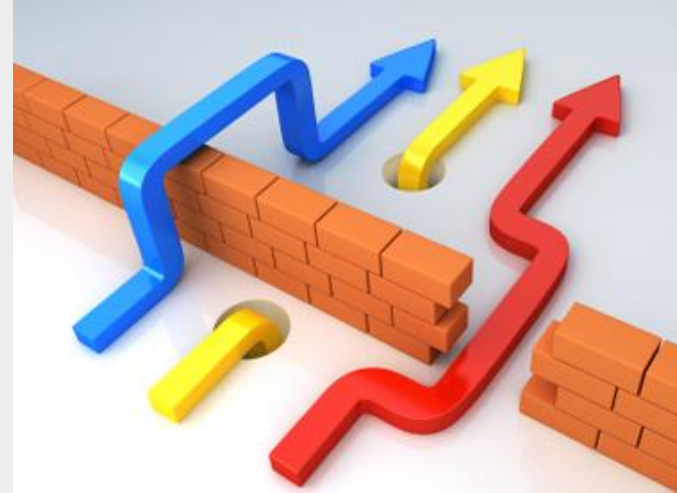
- Train and educate stakeholders- Webinars, Peer to Peer exchanges, Presentations at Partnership meetings
TRB prioritizes webinars on NCHRP projects over other topics.
- Support Implementers- Get a small group started. Work together. Learn what works. Success is contagious.



Implementation Strategies (continued)

- Engage the target audience. What do they want? What do they need to make a change? What are the obstacles? This could be through **surveys, or from the peer to peer exchanges.**

This is making the right thing to do also the easy thing to do.



Implementation Strategies (continued)

- Utilize financial strategies- This is hard in a DOT environment. But...
FHWA funds peer to peer exchanges which would cover travel costs for participants. They may even fund a facilitator.
The Every Day Counts initiatives use financial incentives to get states to participate.



Implementation Strategies (continued)...

- Change infrastructure: Does the new research require a change in how we organize? Are there organizational barriers that a different organization would solve?



Implementation Strategies (continued)

- Use evaluative and iterative strategies.

We need to use a variety of strategies, evaluate them as we go, and change them to make it easier for those not leading the charge.



Things you could do...

- Submit an NCHRP proposal for implementation of one of the recent projects.

NCHRP 12-104 Guidelines to Improve the Quality of Element Level Bridge Inspection Data is scheduled for completion very soon. Can and should the results be implemented?



Things you can do (continued)...

- Create an implementation task group at the Maintenance Committee. States on this group should be willing to implement within their agency.
- Spend time studying the research report to identify the steps to implementation.



More steps...

- Identify obstacles and whether implementation needs to be tailored to context.
- Have a leader and regular calls. Establish benchmarks.
- As soon as you have 3 or 4 agencies who have implemented the work, seek support for Peer to Peer exchanges.



More steps

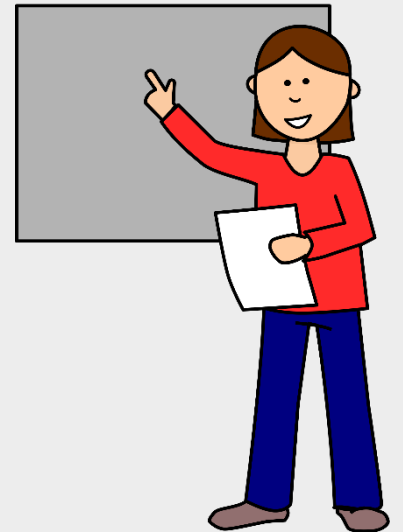
- Make presentations about the implementation, focusing on the value to the agency in making the change. Be honest about the work involved.
- Consider hosting an implementation webinar with tips and lessons learned.
- As more agencies implement, welcome them to the implementation task group.



I have led implementation myself...

- Automated distress data collection (used peer to peer trip to Virginia DOT, data reviews)
- Pavement ME-design (led the task force, training within NCDOT, national webinars, many presentations, regional meetings, customer surveys, customer quarterly update).

Implementation is not easy, but it is very satisfying.



Call to action!

- Read the report.
- Disseminate the findings.
- Create a group for implementation.
- Work within your organization.
- Share results and improve process.
- Expand the group.



Are there any questions?

My contact information:
Judith Corley-Lay
corleyla@egr.msu.edu

