

Value of Sharing Information: ITD Program and Social Media

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MWBPP Meeting

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Communication Initiatives

ITD

Industry Technology Demonstration

Pilot Project

Social Media

TSP2 Blog

Facebook

LinkedIn

Twitter

**ITD TSP2 PROGRAM:
INDUSTRY TECHNOLOGY
DEMONSTRATION**

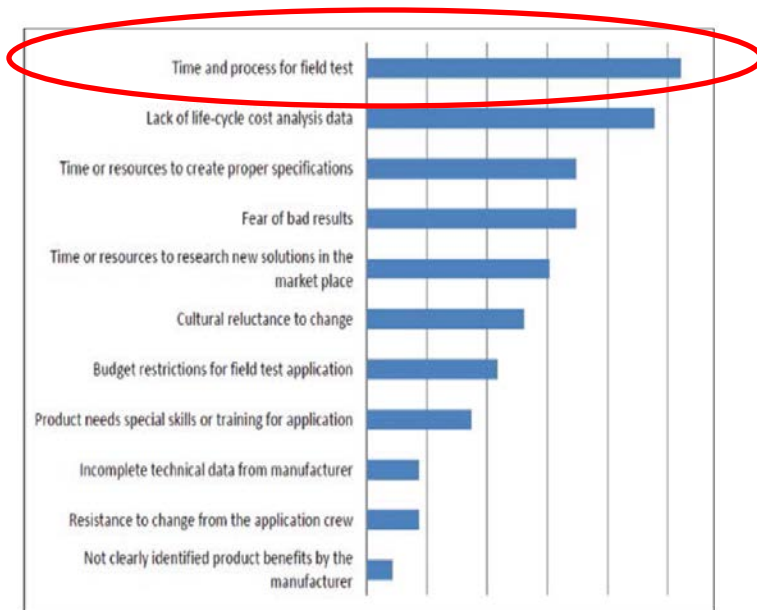
BP ETG Innovation Survey

GOALS:

- Information of new, innovative products released on the bridge preservation market and used by state DOTs in the past five years
- DOT's challenges in the adoption of new products
- Manufacturers' challenges in the development and launch of innovative products and technologies
- Ideas and suggestions that could facilitate the path to deploying new, innovative product for bridge preservation and their adoption by State DOTs

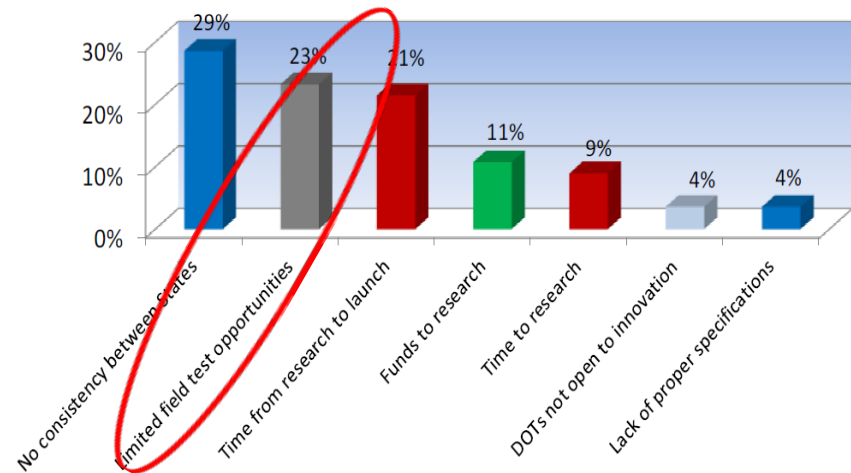
Field Applications

Voice of State DOTs



From Product Manufacturers

What challenges did you face in the product development process?



Innovation survey shows how field applications are a critical element for State DOTs in the adoption of new products and for product Manufacturers in their development

Transfer of Information

Cite use by other agencies and persons to be contacted concerning experience with use include the agency, contact name, title, address, years used, and whether use has been experimental/evaluating or routinely used.

Agency & Contacts Name	Contacts Title	Address	Phone Number	Used since (date) month/year	Experimental or Evaluating	Routinely Used
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Is it approved for use by other highway authorities or other agencies?	<input checked="" type="checkbox"/>	Yes	<input type="checkbox"/>	No	
If yes, list the states and whether use is routine or experimental. Also, attach any approval letters.					

State DOTs routinely ask for field application information from other States, both for commonly used and new products

ITD: 2 Pillars

- Field applications of new, innovative technologies for road and bridge preservation

- Transfer of information between State DOTs
- Transfer of information between State DOTs and other road / bridge Owners

ITD Program

Field application program designed to introduce new and innovative preservation materials and technologies to State DOTs and other US Owners of road pavements and bridges

Key elements:

- *Focus on field demonstrations*
- *Open to State DOTs and other US Owners*
- *Unbiased demonstrations through the aid of an independent consultant*
- *Field test evaluation through collaboration with NTPEP*

ITD Parties

- **AASHTO TSP2:** Reviews, approves and supports the programs
- **Manufacturer:** Proposes new and innovative preservation materials and technologies
- **Owner:** State DOTs and other Owners, who welcome an opportunity for field application and monitoring of new technologies
- **Consultant:** Third party consultant engaged by Manufacturers to manage the field program and report data
- **NTPEP:** Field test evaluation of applications. Evaluation of new technologies for road and bridge preservation

Goals

- **AASHTO TSP2:** To facilitate field demonstrations of new, innovative technologies
- **Manufacturer:** To demonstrate new, innovative technologies
- **DOTs and other Owners:**
 - To learn about new, innovative technologies
 - To share field demonstration experience
 - To help shape a new process that can help solve bridge preservation problems while saving time and costs
- **NTPEP:**
 - To expand the experience by learning about new, innovative road and bridge preservation technologies

Example of ITD Application



MassDOT ITD Application - Dec. 2014



MassDOT District 3: I-190 bridge near Exit 1, City of Worcester

9-in. cast-in-place concrete deck supported by steel I-beams

Bridge deck is topped by 1-in. thick latex-modified concrete overlay

Original latex modified concrete topping from 1962

3 patches in a heavily trafficked area reaching > 20,000 vehicles per day

Patching Application



- Three patches: spalled or cracked concrete
- Approx. 40 sq ft area for each patch
- Application during the night of December 4, 2014, starting at 8:30 pm
- Ambient temperature: 35 °F
- Concrete temperature: 23 °F

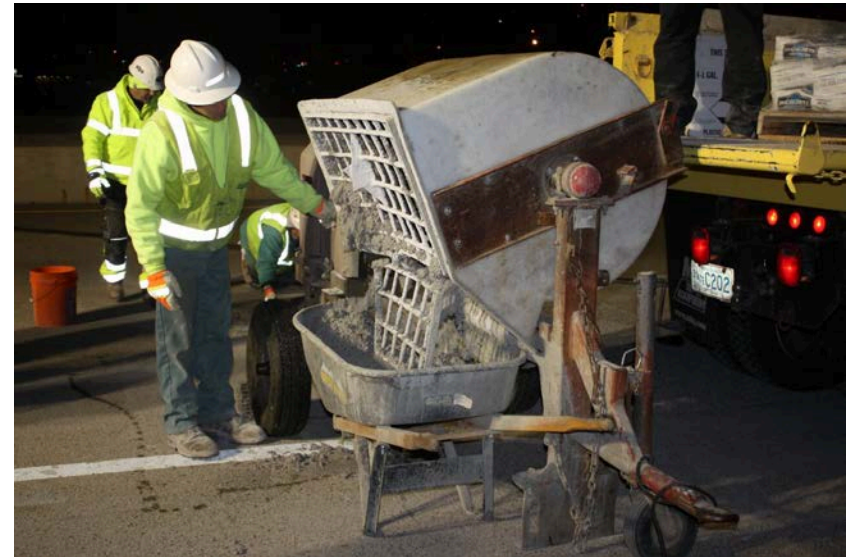
Shallow & Partial Depth Patches



Three different depths:

- R-shape: deep patch > 2 in., down about 1 in. below the rebars
- T-shape: deep patch > 2 in. exposed rebars
- L-shape: shallow patch < 2 in. above rebars

MALP Concrete Product & Mixing



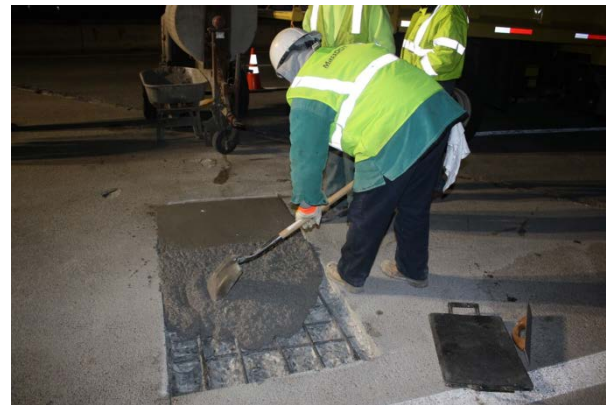
MALP concrete:

- 50 lbs. bag of magnesium-alumina-aggregate dry powder
- 9 lbs. jug of mono-aluminum-liquid phosphate activator

Added powder to the liquid in a Whiteman easy clean paddle mixer

Mixing time: up to 3 minutes per batch

MALP Concrete Application



Each patch required three batches of MALP concrete

- Clean surface, square corners and saw-cut edges
- 10 mins time between batches when the previous batch is still workable (MALP Concrete working time: 15 mins)

No bonding agent

No steel rebar sanding

Finishing



MALP Concrete was trowelled immediately after pouring

No curing compound

On average one patch was completed in 30 minutes from mixing to trowelling

Visual Inspection at 1 Month



January 2015

- R-Shape: almost intact
- L-Shape: crack at the corner of the bituminous concrete patch.
- T-Shape: lack of surface continuity between the batches. Application issue

Visual Inspection at 7 Months



July 2015: No significant change from January

- R-Shape: A few minor reflective cracks
- L-Shape: Concrete spalling in a close-by area adjacent to bituminous concrete.

Job Site Team



MassDOT District 3 Office

- Mohamed Nabusi, Bridge Engineer
- Kouk Chiang, Staff Engineer

At the job site:

- Szczepan “Steve” Ucher, Staff Engineer with MassDOT
- Michael “Mickey” Splaine, Assistant Bridge Engineer with MassDOT
- Peter Montenegro, Consultant
- Don Visel, Application Specialist with Phoscrete
- Ed Welch, Bridge Engineer with TSP2

Voice of the Team

“These demonstrations are being held to showcase a technology, not a single supplier product,” Welch said. “They provide an opportunity for technology transfer, a way for states to be exposed to a new and different technology,” he said.

Ed Welch,
TSP2

“If the performance of MALP products proves to be successful, it will fill a definite need for a patching material that can be placed quickly in frigid temperatures – without the need to preheat and protect the patch during curing,” he said.

Mohamed Nabusi
MassDOT

Next Steps

- Feedback from MWBPP
- Definition of product categories and costs
- Completion of ITD Guidelines
- Publication on the TSP2 web site
- Uploading reports in the web site
- From a pilot to an accepted program

SOCIAL MEDIA

We Need To Do This...



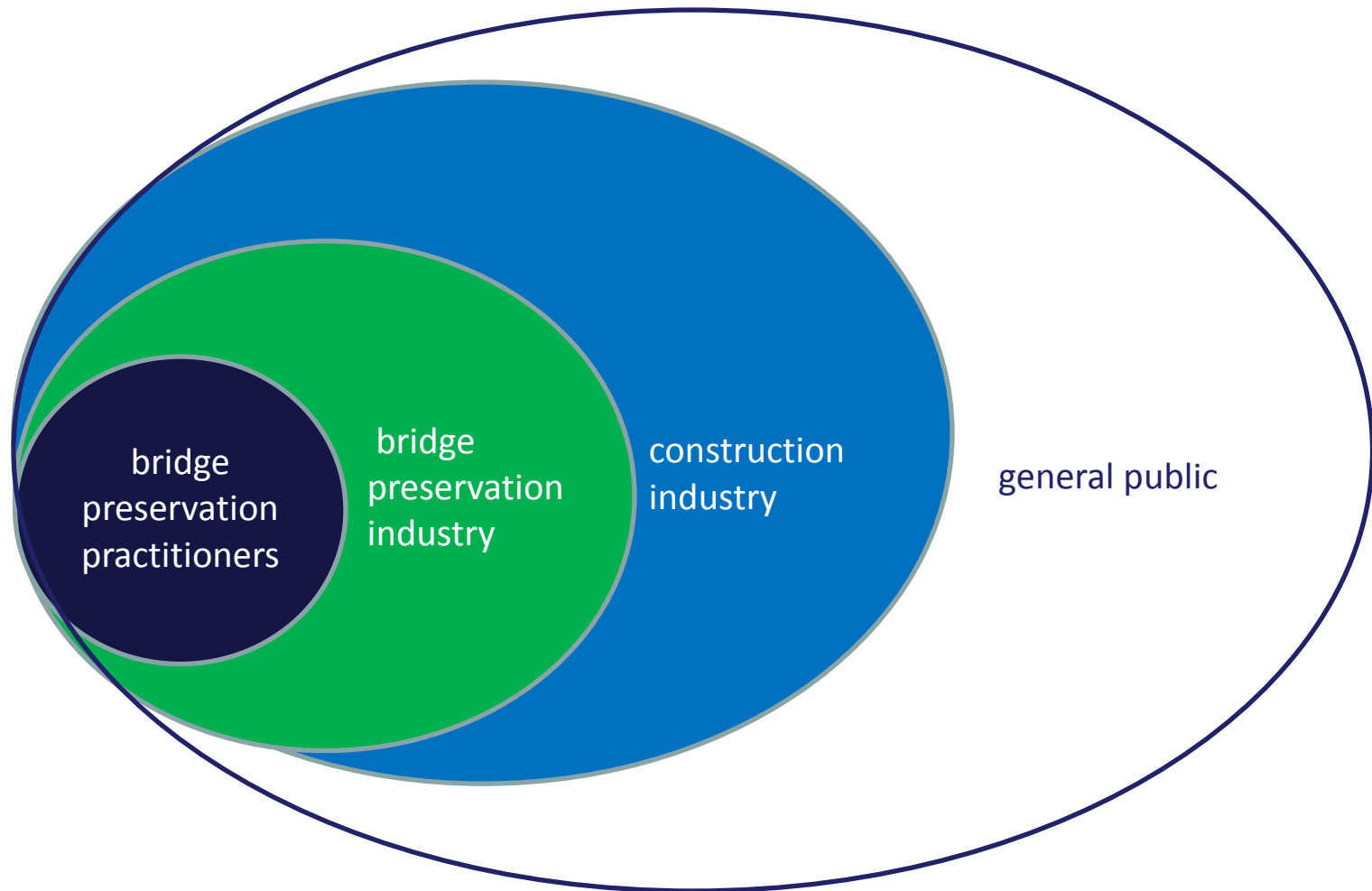
Courtesy of McGuireWoods Consulting

But Also This...



Courtesy of McGuireWoods Consulting

Target Audience



Goals

- Spread information of the value of bridge preservation practices to bridge preservation insiders, construction industry and general public
- Foster communication between different groups:
 - Bridge preservation practitioners within DOTs and other Owners
 - Industry, such as product Manufacturers, Contractors and Consulting Engineers
 - General public
- Create and feed a community of bridge preservation advocates

Blog



**Transportation System Preservation
Technical Services Program**

Bridge Preservation Blog

"A Conversation About Bridge Preservation"

"A Conversation about Bridge Preservation"

- Bridge preservation practitioners
- Preservation experts in the construction industry
- Stories about product applications
- Interviews to industry leaders
 - 500 + subscriptions
 - Leads: Ed Welch and Lorella Angelini

Future: LinkedIn

- Main Target Audience:
 - Construction Industry
- Content:
 - Job opportunities, also internships
 - People on the move
 - People stories
 - Industry trends
 - Slideshare decks



Facebook

- Main target audience:
 - General Public
- Content:
 - Photos and videos
 - Benefits of bridge preservation
 - “Fun” stories
 - People related to bridge preservation



Twitter

- Main target audience:
 - Bridge preservation industry
- Content:
 - Technical information
 - Industry trends
 - Hashtags
 - Links



You Tube

- Main target audience:
 - Bridge preservation insiders
- Content:
 - Job site applications
 - New product applications
 - Interview to bridge preservation experts and supporters



Next Steps

- Resources!
 - Activate the tools
 - Build a narrative
 - Establish a liaison with current Social Media activity of State DOTs

Contacts

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