



SHRP2 SOLUTIONS

TOOLS FOR THE ROAD AHEAD

Tools for the Road Ahead

Overview Presentation



U.S. Department of Transportation
Federal Highway Administration



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES

What is SHRP2?

(Second Strategic Highway Research Program)

Save lives. Save money. Save time.



- Products developed from objective, credible research
- Solutions that respond to transportation community challenges – safety, aging infrastructure, congestion
- Tested products, refined in the field

SHRP2 Solutions offer new technologies and processes to enhance the efficiency of transportation agencies

Why is SHRP2 Important?

Tools for the Road Ahead

SHRP2 Solutions have the power to change the way transportation agencies do business. SHRP2:

- ➔ *Provides new research-based tools and innovative products and processes*
- ➔ *Creates efficiencies*
- ➔ *Uses State and Federal taxpayer investment more effectively*



SHRP2 is a Partnership



Collaborative Effort of FHWA, AASHTO, and TRB

- National partnership to address critical transportation challenges:
 - Making highways safer
 - Repairing deteriorating infrastructure
 - Reducing congestion
- Aims to advance innovative ways to plan, renew, operate, and improve safety on the Nation's highways

Focus Areas



Safety: fostering safer driving through analysis of driver, roadway, and vehicle factors in crashes, near crashes, and ordinary driving



Renewal: rapid maintenance and repair of deteriorating infrastructure using already-available resources, innovations, and technologies



Reliability: reducing congestion and creating more predictable travel times through better operations



Capacity: planning and designing a highway system that offers minimum disruption and meets the environmental and economic needs of the community

What is Implementation?

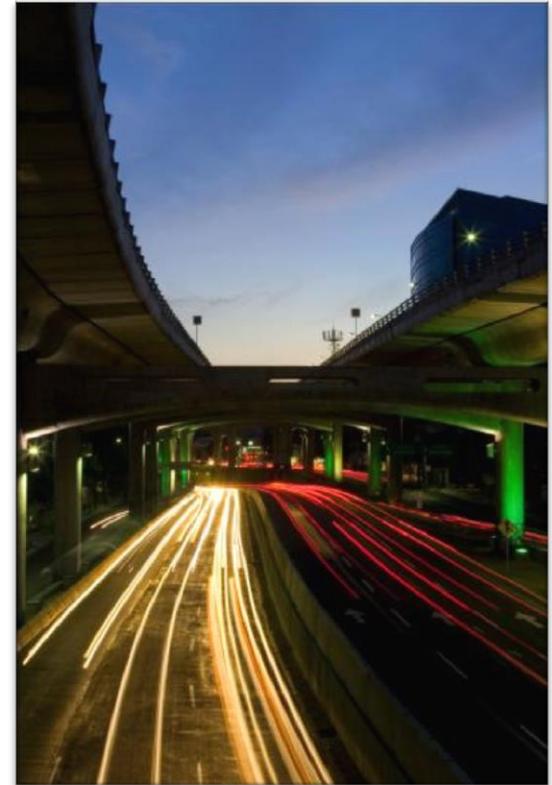


- Implementation is the routine use of a SHRP2 product
- Implementation is carried out by users: State DOTs, MPOs, resource agencies, and other stakeholders
- SHRP2 Implementation Program is designed to take high-priority products to the tipping point of national adoption

Implementing SHRP2 Solutions

Moving Forward

- Approximately 66 products will be introduced in the coming years
- Users run the gamut of the transportation industry
- Selected products will be integrated into current transportation practices



SHRP2 Implementation Assistance Program (IAP)

- Available to help State DOTs, MPOs, local agencies, and other interested organizations deploy SHRP2 Solutions
- Open for applications twice per year
- 24 SHRP2 Solutions have been included in Rounds 1-4

Round	Launched
1	February 2013
2	August 2013
3	January 2014
4	May 2014



Implementation Assistance Round 1 Products

Capacity



Implementing *Eco-Logical* (C06)

Renewal



Managing Risk in Rapid Renewal Projects (R09)

Project Management Strategies for Complex Projects (R10)

Innovative Bridge Designs for Rapid Renewal (R04)

Guidelines for the Preservation of High-Traffic-Volume Roadways (R26)

Reliability



Organizing for Reliability Tools (L01/L06)

Round 1 FHWA Contacts

Implementing <i>Eco-Logical</i> (C06)	Michael Lamprecht Office of Project Development & Environmental Review
Innovative Bridge Designs for Rapid Renewal (R04)	Shay Burrows FHWA Resource Center
Managing Risk in Rapid Renewal Projects (R09)	Carlos Figueroa Office of Innovative Program Delivery
Project Management Strategies for Complex Projects (R10)	Carlos Figueroa Office of Innovative Program Delivery
Guidelines for the Preservation of High- Traffic-Volume Roadways (R26)	Thomas Van Office of Asset Management
Organizing for Reliability Tools (L01/06)	Joe Gregory Office of Transportation Management

Implementation Assistance Round 2 Products

Capacity



Expediting Project Delivery (C19)

Renewal



Performance Specifications for Rapid Renewal (R07)
Managing Risk in Rapid Renewal Projects (R09)
Railroad-DOT Mitigation Strategies (R16)

Reliability



FHWA's Every Day Counts (EDC) Initiative
National Traffic Incident Management Responder
Training Program (L12)

Round 2 FHWA Contacts

Expediting Project Delivery (C19)	Damaris Santiago Office of Human Environment
Performance Specifications for Rapid Renewal (R07)	Jennifer Balis Office of Infrastructure
Managing Risk in Rapid Renewal Projects (R09)	Carlos Figueroa Office of Innovative Program Delivery
Railroad–DOT Mitigation Strategies (R16)	Joseph Taylor Office of Infrastructure

Implementation Assistance Round 3 Products

Capacity



Freight Demand Modeling and Data Improvement (C20)

Renewal



GeoTechTools (R02)

Precast Concrete Pavement (R05)

Identifying and Managing Utility Conflicts (R15B)

Pavement Renewal Solutions (R23)

Round 3 FHWA Contacts

Freight Demand Modeling and Data Improvement (C20)	Ed Strocko Office of Freight Management and Operations
GeoTechTools (R02)	Silas Nichols Office of Bridge Technology
Precast Concrete Pavement (R05)	Sam Tyson Office of Pavement Technology
Identifying and Managing Utility Conflicts (R15B)	Amanda Rutherford Office of Program Administration
Pavement Renewal Solutions(R23)	Steve Mueller FHWA Resource Center

Implementation Assistance Round 4 Products

Capacity



Economic Analysis Tools (C03/C11)

Advanced Travel Analysis Tools (C10/C04/C05/C16)

Reliability



Reliability Data and Analysis Tools (L02/L05/L07/L08/C11)

Safety



Concept to Countermeasure – Research to Deployment
Using the SHRP2 Safety Data

Implementation Assistance

Round 4 Products (cont.)

Pavements

New Composite Pavement Systems (R21)

Tools to Improve PCC Pavement Smoothness During Construction (R06E)

Technologies to Enhance Quality Control on Asphalt Pavements (R06C)

Structures

Nondestructive Testing for Concrete Bridge Decks (R06A)

Nondestructive Testing for Tunnel Linings (R06G)

Service Life Design for Bridges (R19A)

Project Delivery

Managing Risk in Rapid Renewal Projects (R09)

Project Management Strategies for Complex Projects (R10)

Renewal



Round 4 FHWA Contacts



**Advanced Travel Analysis Tools
(C10/C04/C05/C16)**

Brian Gardner
Office of Planning



Economic Analysis Tools (C03/C11)

Stefan Natzke
Office of Human Environment



**Reliability Data and Analysis Tools
(L02/L05/L07/L08/C11)**

Doug Laird
Office of Operations



**Concept to Countermeasure – Research to
Deployment Using the SHRP2 Safety
Data**

Aladdin Barkawi
Office of Safety Research &
Development



Round 4 FHWA Contacts (cont.)



Pavements

New Composite Pavement Systems (R21)

Technologies to Enhance Quality Control on Asphalt Pavements (R06C)

Tools to Improve PCC Pavement Smoothness During Construction (R06E)

Steve Cooper
Office of Technical
Services



Structures

Nondestructive Testing for Concrete Bridge Decks (R06A)

Nondestructive Testing for Tunnel Linings (R06G)

Service Life Design for Bridges (R19A)

Matthew DeMarco
Office of Technical
Services



Project Delivery

Managing Risk in Rapid Renewal Projects (R09)

Project Management Strategies for Complex Projects (R10)

Carlos Figueroa
Office of Innovative
Program Delivery

Implementation Assistance Levels of Engagement



Proof of Concept Pilot

- Funds for piloting products to evaluate readiness for implementation
- Contractor support to collect data and evaluate the application

Lead Adopter Incentive

- Funds for early adopters to offset implementation cost and mitigate risks
- Recipients required to provide specific deliverables designed to further refine the product, and possibly “champion” the product to other States and localities.

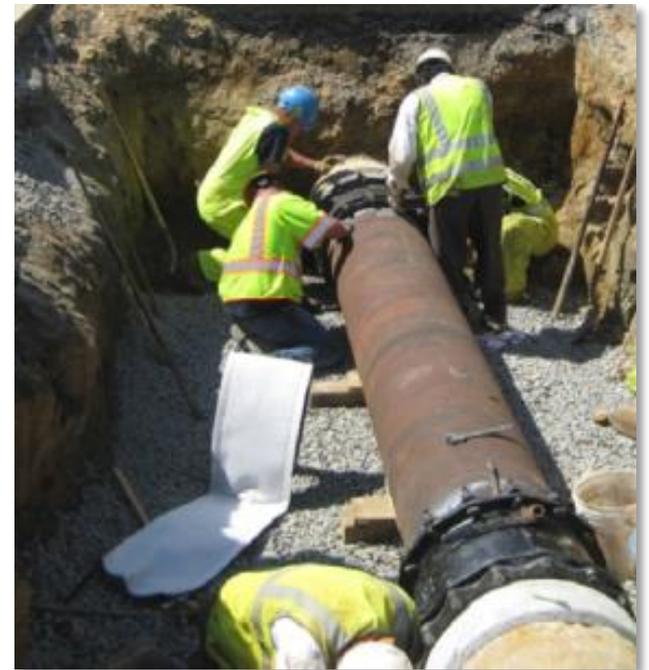
User Incentive

- Funds for implementation support activities after early adopter use
- Used to conduct internal assessments, build capacity, implement system process changes, organize peer exchanges, or offset other implementation costs

Round 1 Implementation Assistance

First Round at a Glance

- 34 States and the District of Columbia
- 6 solutions at work on 108 projects
- 2 proof of concept pilots
- 74 lead adopter incentives
- 24 user incentives
- Limited technical assistance to 8 States



Round 2 Implementation Assistance

Second Round at a Glance

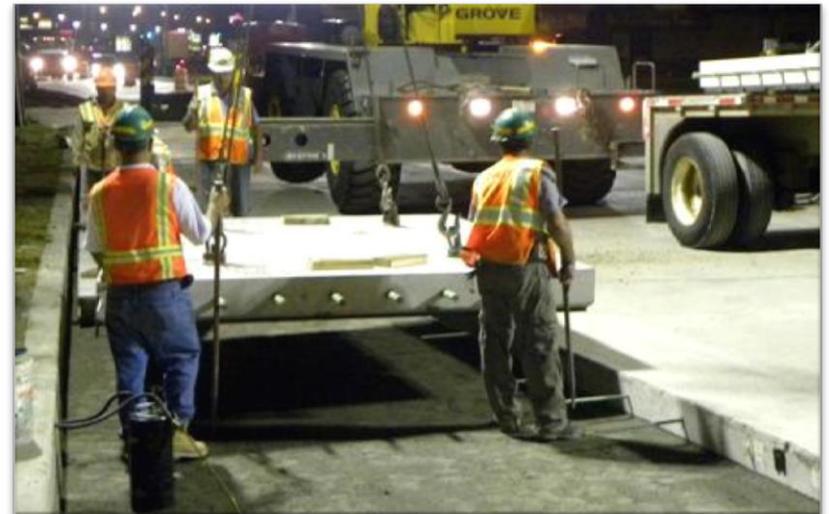
- 18 States and 2 MPOs
- 4 solutions at work on 27 projects
- 18 lead adopter incentives
- 9 user incentives



Round 3 Implementation Assistance

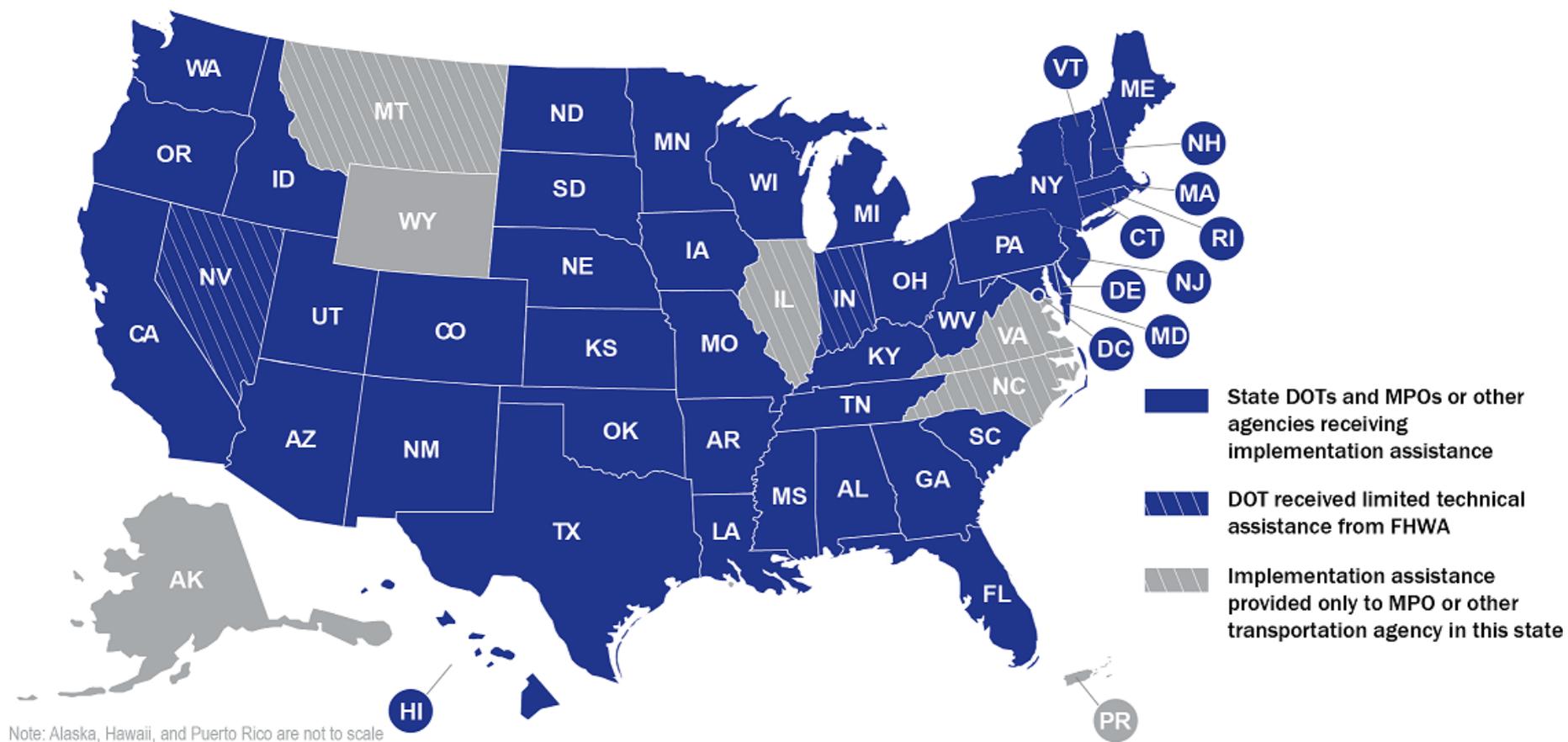
Third Round at a Glance

- 31 States selected
- 5 solutions at work on 48 transportation projects
- 11 proof of concepts
- 17 lead adopter incentives
- 20 user incentives



Participating States

Transportation Agencies Begin Implementing SHRP2 Rounds 1, 2, and 3 Products – FHWA/AASHTO Implementation Assistance Program



Implementation Assistance Selection Criteria



General Criteria for Participants (will vary somewhat among products)

- Geographic diversity of participants
- Demonstration of culture to implement new products or processes
- Demonstration of past interest and/or efforts to implement similar products or processes
- High commitment to making institutional/organizational changes
- Commitment to conduct demonstration workshops
- Willingness to share experience by facilitating peer-to-peer activities
- Commitment to dedicate staff to the implementation project

SHRP2 Tuesdays

Research Results

- Bimonthly Webinars about specific SHRP2 research and products
- Attendees can earn professional development hours/credits
- Learn more on the TRB SHRP2 website at:
<http://www.trb.org/StrategicHighwayResearchProgram2SHRP2/SHRP2Webinars.aspx>



SHRP2 on the Web

- **GoSHRP2**

www.fhwa.dot.gov/GoSHRP2

- Information website for SHRP2 implementation
- Links to other SHRP2 websites

- **SHRP2 @TRB**

www.TRB.org/SHRP2

- Research information

- **SHRP2 @AASHTO**

<http://SHRP2.transportation.org>

- Implementation information for AASHTO members

The screenshot shows the SHRP2 SOLUTIONS website homepage. The header features the SHRP2 SOLUTIONS logo with the tagline 'TOOLS FOR THE ROAD AHEAD' and navigation links for Home, About, Solutions, Your SHRP2, Resources, News & Events, Get Involved, and FAQ. A search bar is located in the top right corner. The main content area includes a large banner with the text 'Save lives. Save money. Save time.' and a description of the second Strategic Highway Research Program (SHRP2). Below the banner are several sections: 'Your SHRP2' with a list of stakeholders (Transportation Agencies, Private Industry, Research Community, Stakeholders and Users); 'Solution Spotlight' featuring 'Implementing Eco-Logical' with a practical guide to address ecological priorities; 'Get Involved' with a call to action to apply for funding and support; 'SHRP2 Nationwide' with a map of the United States; 'Talking About SHRP2' with a quote from John Little, US Tech Director, Department of Transportation; 'Tools You Can Use' with a description of effective solutions to meet real challenges; and 'Resources' with a video player showing 'One Design: 10,000 Bridges'. At the bottom, there is a 'Solutions by Focus Area' section with four categories: Safety (Identifying the behaviors that cause and avert collisions), Renewal (Enabling faster, minimally disruptive, and longer-lasting improvements), Reliability (Championing predictable travel times), and Capacity (Bringing greater collaboration to road building).

Ways to Get the Word Out

- Talk to your colleagues
 - Add a SHRP2 slide to your next presentation
 - Speak at a committee meeting
 - Post a question, photo, or SHRP2 fact on your social media sites
 - Add our widget to your website – find the code in the Outreach Toolkit at www.fhwa.dot.gov/GoSHRP2/Resources/Publications
- Be a panelist at an industry event
- Promote your organization's perspective upcoming webinars
- Sign up for SHRP2 emails



Additional Information

SHRP2 Implementation Assistance:

www.fhwa.dot.gov/GoSHRP2

SHRP2 at AASHTO:

<http://SHRP2.transportation>

SHRP2 Research:

www.TRB.org/SHRP2

Email: GoSHRP2@dot.gov

