



SHRP2 Implementation Update to the Technology Implementation Group

Pam Hutton, AASHTO
Ken Jacoby, FHWA
May 28, 2014



U.S. Department of Transportation
Federal Highway Administration



TRANSPORTATION RESEARCH BOARD
OF THE NATIONAL ACADEMIES



What we will cover

- Renewal Program Update
- Update on SHRP2 Implementation Assistance Program
- What's Ahead



SHRP2 Moving Forward

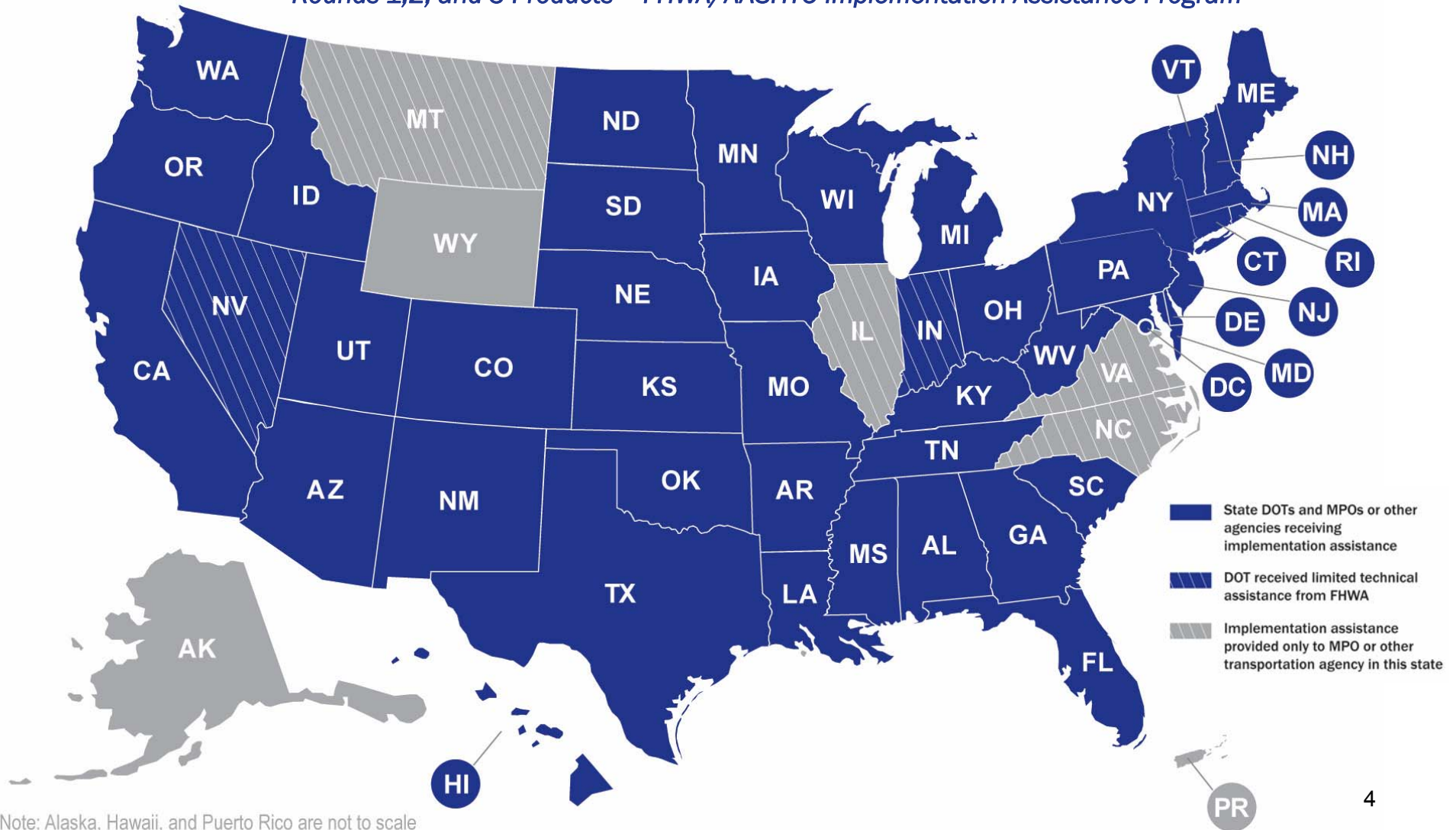
Implementation Assistance Program

Renewal Area Update



Transportation Agencies Begin Implementing SHRP2

Rounds 1,2, and 3 Products – FHWA/AASHTO Implementation Assistance Program



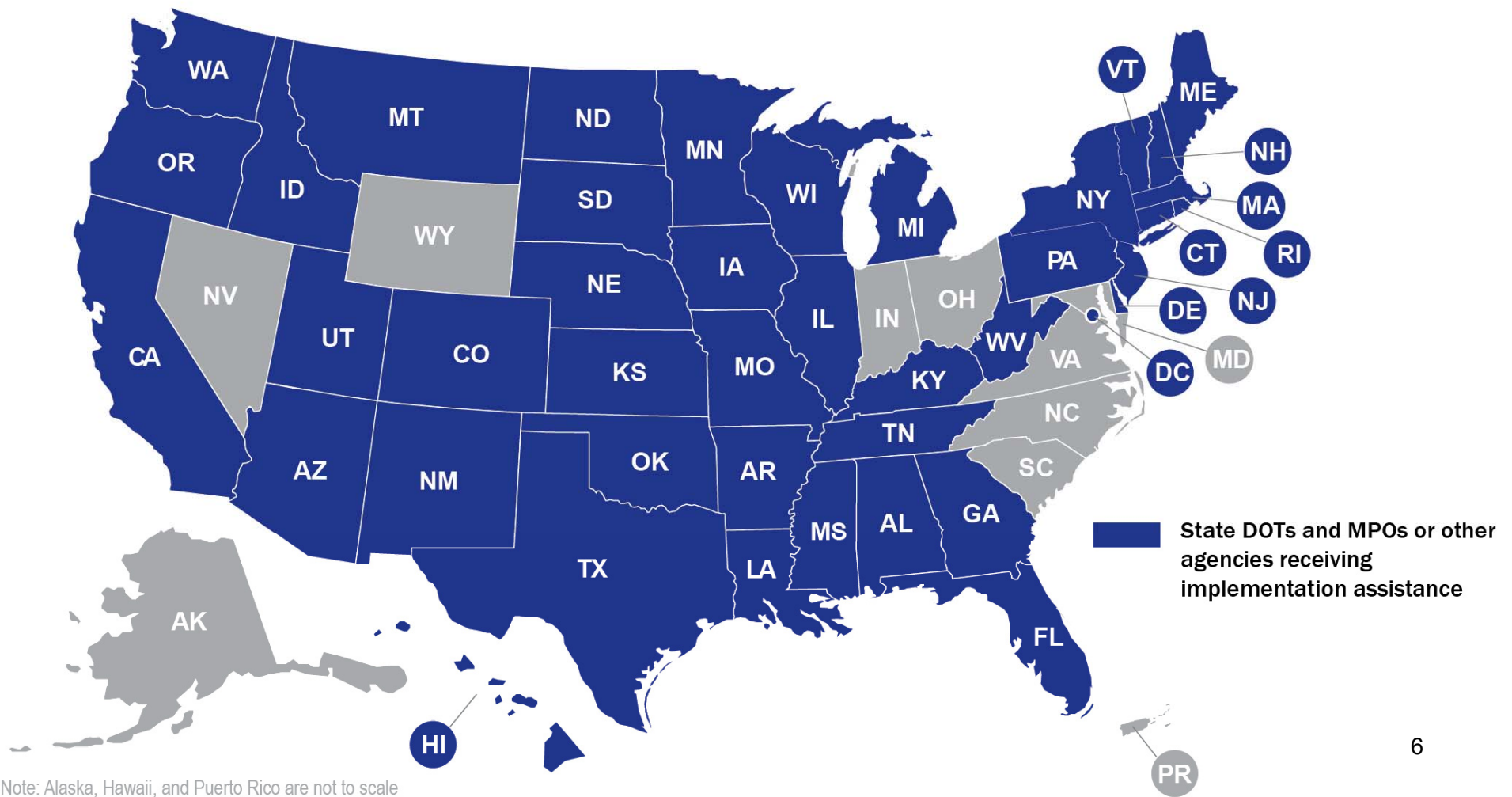
SHRP2 Implementation Assistance Process Timeline

First Four Rounds (2013-2014)

- First round of awards announced in May 2013 (6 products - **4 renewal**, 2 reliability and 1 capacity)
- Second round of awards announced in October 2013 (4 products - **3 renewal**, 1 capacity)
- Third round of solicitations were announced on March 28, 2014 (5 products - **4 renewal**, 1 capacity)
- Fourth round of solicitations will open on May 30 and close on June 27, 2014 (12 products)

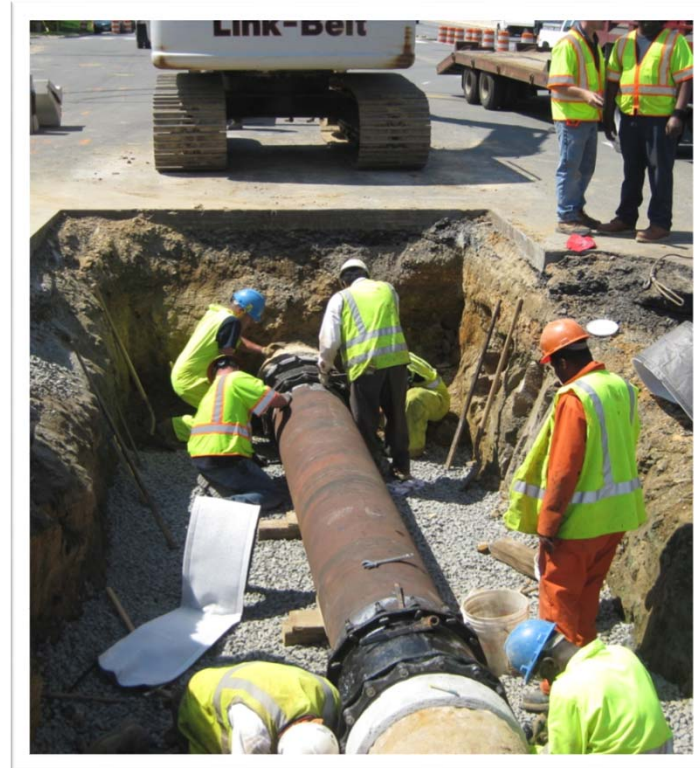
Renewal Focus Area

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



Renewal in the IAP

- 41 states engaged
- Implementing 10 Renewal products
- More than 115 renewal projects are in process



Innovative Bridge Designs

Activities:

- 7 states (including the Gila River Indian Community) receiving IAP funds
- Teleconferences held and information collected for each project
- Showcases scheduled in Missouri and Arizona with two others in planning
- Four peer exchanges planned for 2015
- PBES workshop at 2015 TRB meeting

Innovative Bridge Designs

Rhode Island – East Providence – Interstate On-Ramp

- Project Details: Current bridge in need of replacement; closure must be less than 30 days; total est. cost \$1.9 million
- Substructure assembled with bar slicers; super to be delivered in 2 longitudinal pieces



Rhode Island

Wisconsin – Road Over I-39/90

- Project Details: ABC being applied to pier construction; saving of 3 weeks; est. cost \$6.9 million; Precast columns and caps on cast-in-place footings; 5 median piers between I-39 lanes planned

Kentucky – Knox County, Stewarts Creek Bridge

- Project details: 3 weeks max closure permitted; total project: 38 days; A + B bidding (Cost plus time); est. \$700,000 cost; two bridges; galvanized and painted steel superstructure

Innovative Bridge Designs



Maine – Route 1 Kittery Overpass to I-95

- Project details: Maximum allowed closure time is 30 days; est. \$2.56 million cost; precast abutment elements on cast-in-place footing on rock

California – Route 96 over Fort Goff Creek

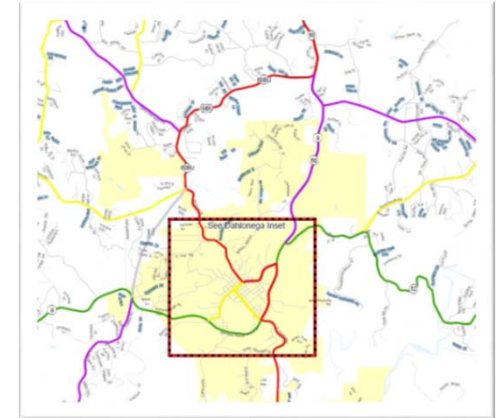
- Project Details: Remote location in Northern California; estimate \$1.77 million cost; simple span for seismic reasons; Summer 2014 delivery

Missouri – Route B bridge over Route 70

- Project Details: One-two week closure planned; estimate \$695,000 cost; proposed concrete prestressed boxes to sit directly on GRS abutments; no concrete abutment body needed, no approach slab needed; using ABC and Geosynthetic Reinforced Soil Abutments (GRS)

Pavement Preservation on High-Volume Roadways

- 13 states and DC engaged
- Quarterly conference calls
- Matrix developed of activities by state
- Workshop in **Alabama** at NCAT
- **Rhode Island** showcase, July
- Marketing materials and pocket guide under development




Georgia - SR 60
Mill and Thin
HMA Overlay
Test Site
Location

Precast Concrete Pavement Technology



- Five lead adopters
- Pilot workshops in **Hawaii, Nevada**
- Presentations to **Delaware DOT**, Northeast Pavement Preservation Partnership
- Webinars in planning stage
- Technical assistance being provided to additional states

Managing Risk in Rapid Renewal Projects



- Two pilots in **Florida** and **Georgia** were completed (Round 1)
- 4 Lead Adopters in Round 2
- **Penn DOT**: Demonstration workshop for Potter Mills Gap project
- **Florida DOT**: Train the facilitator session; Florida to acquire risk analysis/management software, update policies and procedures; conduct workshops
- **Oregon DOT**: Workshop and technical assistance; I-5 South Jefferson interchange with US20
- **Minnesota DOT**: Workshop planned; northbound exit ramp from I-35W to 28th Street

Innovative Management Strategies for Complex Projects

- Five Lead Adopters in Round 1
- **Massachusetts DOT**: Reconstruction and widening of 3.2 miles of Route 20; workshop held; summary report; action plan and comprehensive risk analysis discussed
- **Georgia DOT**: Northwest Corridor project; 30 miles of managed lanes on I-75 and I-575; largest project in state history; demonstration workshop held and report developed
- **New Mexico DOT**: Silver City; workshop held; planned are additional workshops and update to state design manual
- **Michigan DOT**: I-94 and I-75 projects; workshop, project management plan developed for I-94; additional workshops to assess incorporating into standard MDOT project development and management practices
- **Western Federal Lands** project: Gardiner Gateway at Yellowstone National Park in Montana

More Renewal Products

- **GeoTechTools (R02):** Series of NHI courses and training and technical assistance to all 15 states that applied
- **IPWs held and tactical plans in development from Rounds 1 - 3**
 - **Performance Specifications (R07)**
 - **Identification of Utility Conflicts and Solutions (R15B)**
 - **Railroad-DOT Mitigation Strategies (R16)**
 - **Pavement Renewal Solutions (R23)** – Work underway to develop scopes, budgets, timelines; technical assistance in development
- **Other products**
 - **3D Utility Data Repository (R01A);** IPW held, possible Round 5 product
 - **Advanced Methods to Identify Pavement Delamination (R06D)** – knowledge transfer webinar held; possible Round 5 product
 - **Worker Fatigue Risk Management (R03);** Texas DOT and TTI deploying through FHWA
 - **Service Limit State Design for Bridges (R19B)** IPW, Fall 2014

SHRP2 Moving Forward

SHRP2 Implementation Assistance Program – Round 4



Implementation Assistance For Round 4 Products



Economic Analysis Tools (C03/C11)
Advanced Travel Analysis Tools (C10/C04/C05/C16)



Nondestructive Testing for Concrete Bridge Decks (R06A)
Technologies to Enhance Quality Control on Asphalt Pavements (R06C)
Tools to Improve PCC Pavement Smoothness During Construction (R06E)
Nondestructive Testing for Tunnel Linings (R06G)
Managing Risk in Rapid Renewal Projects (R09)
Project Management Strategies for Complex Projects (R10)
Service Life Design for Bridges (R19A)
New Composite Pavement Systems (R21)



Reliability Data and Analysis Tools - Bundle (L02/05/07/08/C11)



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

Round 4 Opportunities

SHRP2 Solution	Proof of Concept	Lead Adopter	User Incentive
Concept to Countermeasure – Research to Deployment Using the SHRP2 Safety Databases	(≤\$100K per selected proposal)		
Partnership to Develop an Integrated, Advanced Travel Demand Model and a Fine-Grained, Time-Sensitive Network (C10)	3-4 (≤\$700K)		
Improving our Understanding of How Highway Congestion and Price Affect Travel Demand (C04)		1-2 total (≤\$150K)	
Understanding the Contribution of Operations, Technology, and Design to Meeting Highway Capacity Needs (C05)			
The Effect of Smart Growth Policies on Travel Demand (C16)			5-7 (≤\$50K)
Transportation Project Impact Case Studies (TPICS)(C03)			10-12 (≤\$25K)
Tools for Assessing Wider Economic Benefits of Transportation (C11)		5-6 (≤\$125K)	
Reliability Data and Analysis Tools (L02/L05/L07/L08/C11)	4-8 (≤\$400k)		

¹⁸
*dollar amount is per award

**Local agencies and contractors must work with their State DOTs to submit the application.

Round 4 Opportunities (cont.)

SHRP2 Solution	Proof of Concept	Lead Adopter	User Incentive
Technologies to Enhance Quality Control on Asphalt Pavements (R06C)	2 for GPR, (≤\$50K) + in-kind	5 for Pave-IR, (≤\$60K in-kind)	
Tools to Improve PCC Pavement Smoothness During Construction (R06E)		5-10 (≤\$60K in-kind)	
New Composite Pavement Systems (R21)		5 (\$300K)	
Nondestructive Testing for Concrete Bridge Decks (R06A)		8 (≤\$100K)	
Nondestructive Testing for Tunnel Linings (R06G)	2 (≤\$250K)		
Service Life Design for Bridges (R19A)		4 (≤\$150K)	
Managing Risk in Rapid Renewal Projects (R09)			8 (≤\$30K)
Project Management Strategies for Complex Projects (R10)			8 (≤\$30K)

*dollar amount is per award

**Local agencies and contractors must work with their State DOTs to submit the application.

Implementation Opportunities – Safety



- New concept in the IAP – more complex, phased approach
- States that are selected manage research - contract with researchers, oversee work product, etc.
- States that are selected agree to implement counter measure or champion change
- Phase I - funding up to **\$100,000**
- **Only DOTs** can apply
- States are encouraged to **team with researchers**

Come by the SHRP2 Exhibit



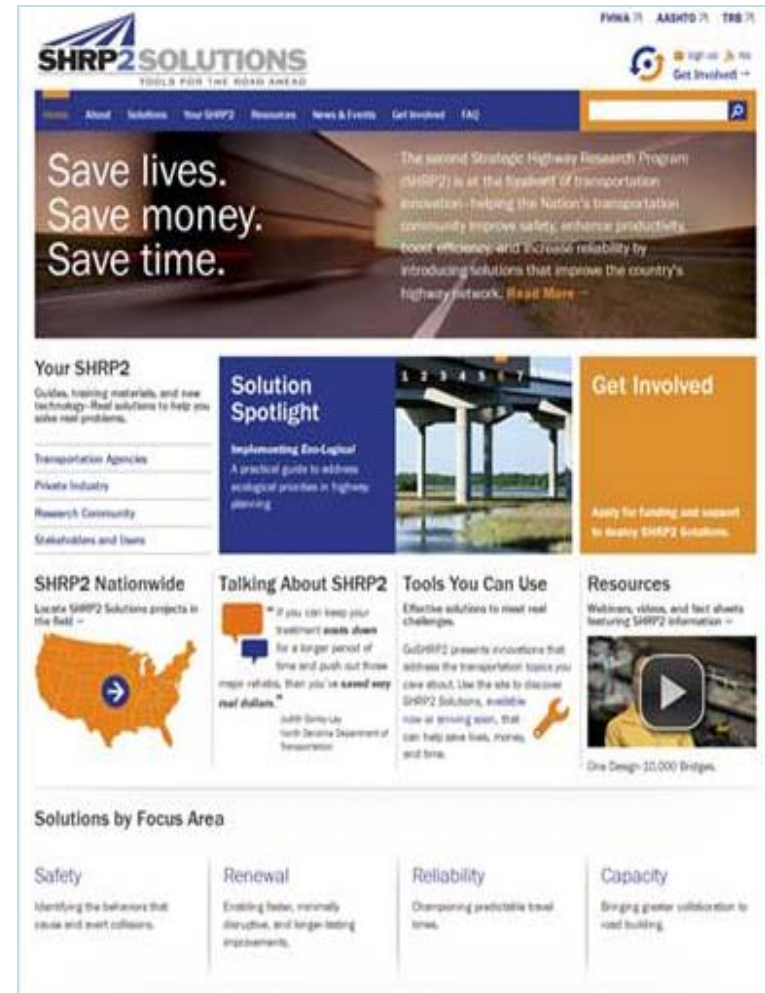
Implementation Assistance Round 4 Schedule



- **Informational Product Webinars**
Held in April and May; Recording available at www.fhwa.dot.gov/GoSHRP2
- **Key Dates**
 - May 30 – Implementation Assistance Program Round 4 opens
 - June 27 – Final date for Round 4 applications
 - August – Selections announced

SHRP2 on the Web

- **goSHRP2 website**
www.fhwa.dot.gov/goSHRP2
 - Product details
 - Information about SHRP2 implementation phase
- **SHRP2 @TRB**
www.TRB.org/SHRP2
 - Information about research phase
- **SHRP2 @AASHTO**
<http://SHRP2.transportation.org>
 - Implementation information for AASHTO members



Questions?

Stay informed and stay tuned!

Pam Hutton

AASHTO SHRP2 Implementation Manager

phutton@aashto.org

303-263-1212

Ken Jacoby

FHWA SHRP2 Renewal Program Coordinator

Ken.Jacoby@dot.gov

202-366-1747

For more information: www.SHRP2/transportation.org or

GoSHRP2 (www.fhwa.dot.gov/goSHRP2)