EDC every day counts

Idaho Asphalt Conference

Moscow, Idaho

October 26, 2017

U.S. Department of Transportation
Federal Highway Administration

OFFICE OF INNOVATIVE PROGRAM DELIVERY

FHWA Office of Innovative Program Delivery Mission

Improve transportation performance by driving innovation into action through partnerships, technology development, and capacity building

Foster a *Culture of Innovation*

U.S. Department of Transportation
Federal Highway Administration

innovation@dot.gov

OFFICE OF INNOVATIVE PROGRAM DELIVERY

OIPD Centers

Tony Furst
Chief Innovation Officer

Robert Ritter
Managing Director

- Center for Accelerating Innovation (CAI)
- Center for Innovative Finance Support (CIF$)
- Center for Transportation Workforce Development (CTWD)
- Center for Local Aid Support (CLAS)

STC
EDC
AID Demo
Accelerated Innovation Deployment

Innovative Finance Support

LTAP

CENTER FOR ACCELERATING INNOVATION

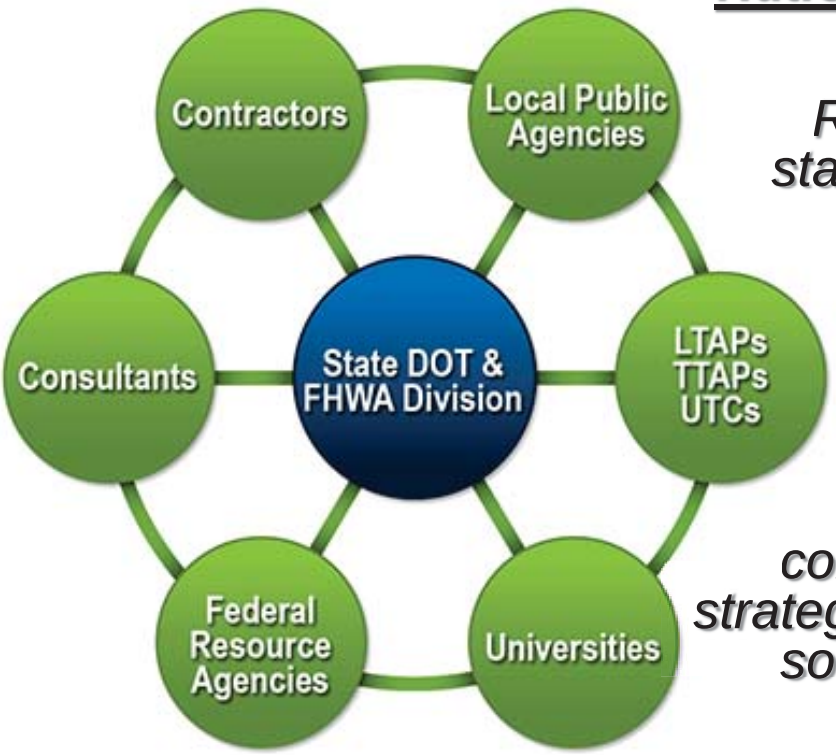
***Tom Harman**, Director*

Accelerates implementation and delivery of new innovations and technologies at the national and local levels

- Facilitates rapid deployment of innovation in the transportation community through the Every Day Counts initiative;
- Fosters & supports the State Transportation Innovation Councils' national network; and
- Supports innovation through the Accelerated Innovation Deployment grant program.

EDC
STC State Transportation Innovation Councils
AID Demo Accelerated Innovation Deployment

National STIC Network

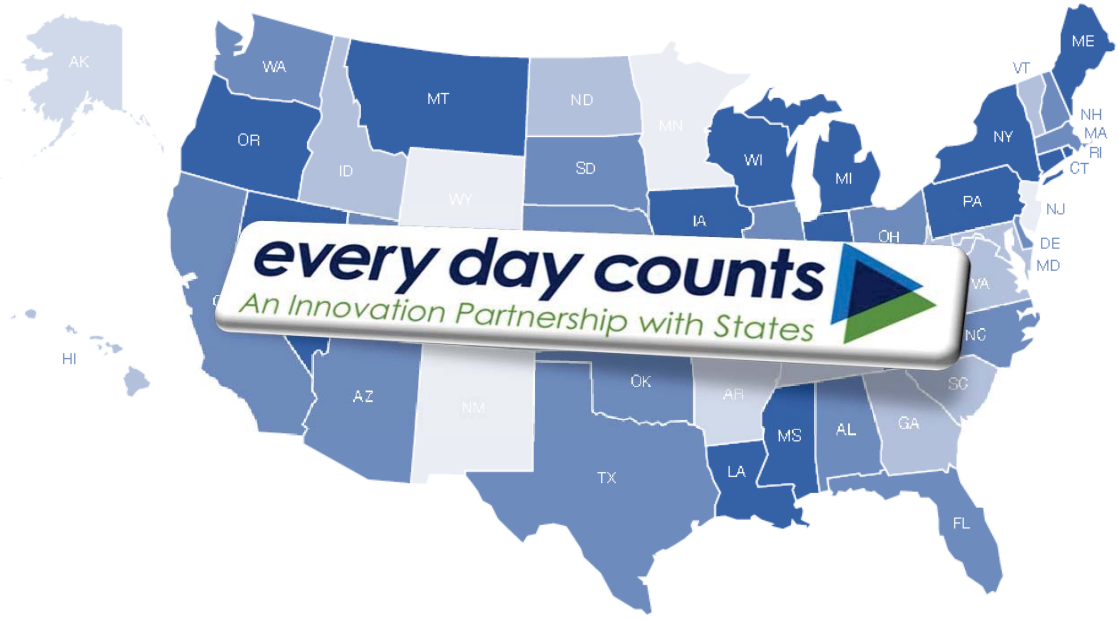


Represents multiple stakeholders from the transportation community

comprehensively and strategically considers all sources of innovation

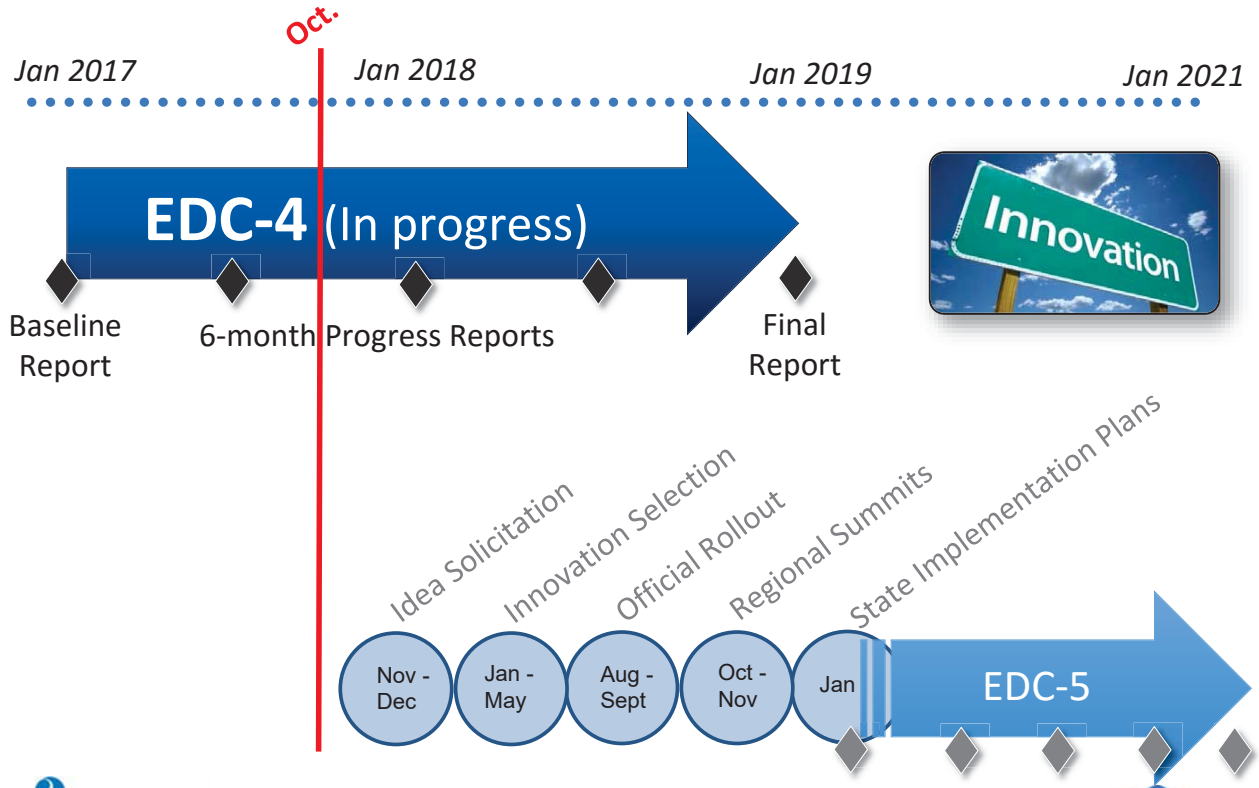
EDC
every day counts

What is "Every Day Counts"?



Stakeholder-based model to identify and rapidly deploy **proven** innovations

EDC Timetables



How EDC Works: Deployment

Multidisciplinary deployment teams:

- Assist states to finalize implementation plans
- Provide technical assistance and support:
  - Training
  - Webinars and workshops
  - Demonstrations
  - Peer exchanges
  - Case studies
  - Guidance and specifications

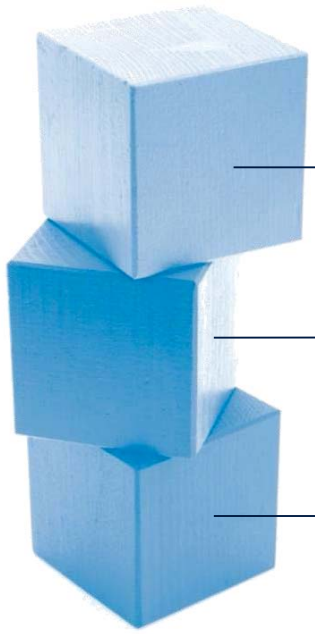
How EDC Works: Reporting

FHWA monitors and reports on state-of-the-practice and successes in accelerating innovations:

- Website
- EDC News (weekly e-newsletter)
- Innovator (bi-monthly e-newsletter)
- EDC Progress reports
- Articles
- Videos

- Institutionalized
- Assessment
- Demonstration
- Development
- Not Implementing

Building on our Achievements



EDC-4 *(2017-2018)*
- 11 innovations *(2 from EDC-3)*

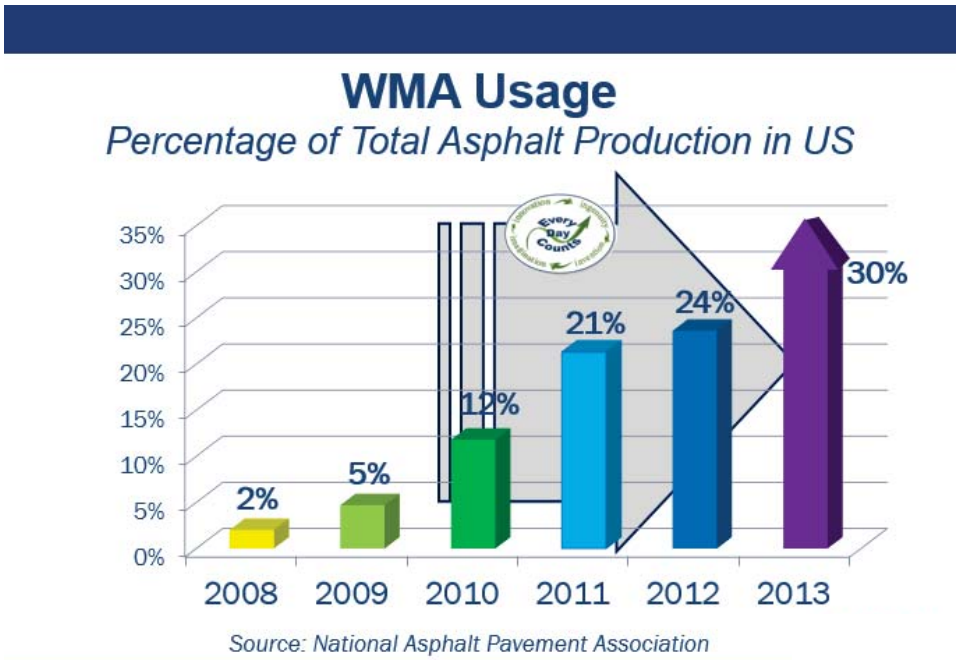
EDC-3 *(2015-2016)*
- 11 innovations *(1 from EDC-2)*

EDC-2 *(2013-2014)*
- 13 innovations *(3 from EDC-1)*

EDC-1 *(2011-2012)*
- 14 innovations

Accelerating deployment of 43 innovations

Achievements:



"Mission Accomplished"

47 States and all 3 Federal Lands Highway Divisions have specifications and/or contractual language that allows **Warm Mix Asphalt** on projects

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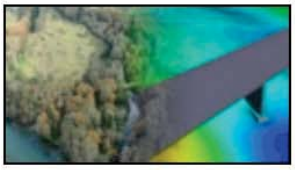
Every Day Counts

Better, Faster, Smarter

EDC-4
(2017-2018)

EDC Overview Video

ATSPMs



Collaborative Hydraulics (CHANGE)

Community Connections

Data-Driven Safety Analysis

e-Construction and Partnering

Integrating NEPA and Permitting

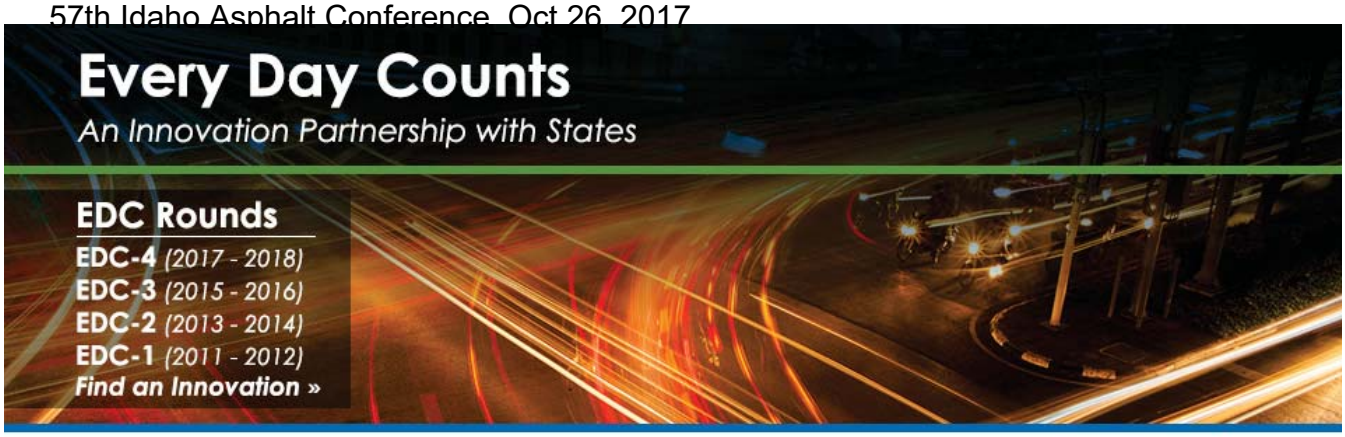
Pavement Preservation (When, Where, How)

Road Weather Management – Weather-Savvy Roads

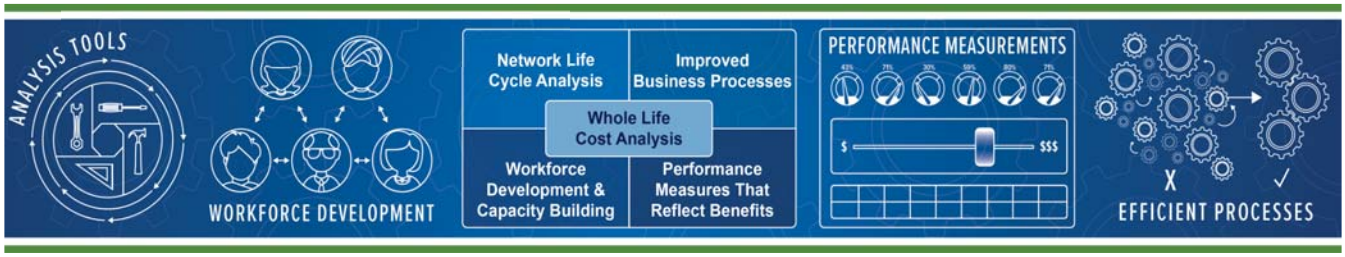
Safe Transportation for Every Pedestrian

Ultra-High Performance Concrete Connections

Using Data to Improve Traffic Incident Management



Pavement Preservation: When and Where



Benefits to Using a Whole-Life Approach to Pavement Preservation Project and Treatment Selection

Pavement Preservation: When and Where

Vision

- Focus the use of preservation to **promote** effective strategies that **reduce** the annual cost of managing the pavement network at acceptable performance levels.

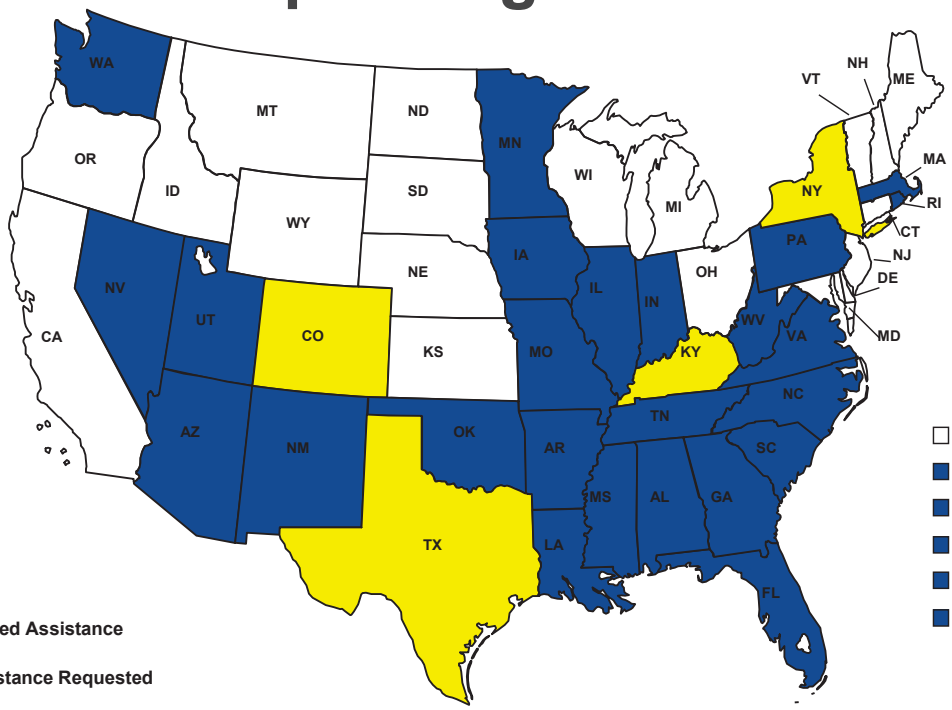
Mission

- Provide **guidance** and **implementation tools** that
  - ✓ **Assist** agencies in selecting cost-effective pavement preservation projects that **sustain** pavement performance programs
  - ✓ **Demonstrate** the cost savings and other benefits that can be realized through effective pavement preservation programs
  - ✓ **Facilitate** accelerated national deployment of proven practices that support inclusion of pavement preservation as an asset management strategy.

National Goal

By the end of the project, at least **10** of the **States or local agencies** that have requested assistance have institutionalized policies governing the selection of pavement preservation projects to support sustainable pavement performance.

States Requesting Assistance



- Alaska
- Hawaii
- DC
- PR
- VI
- FLH

- Requested Assistance
- No Assistance Requested
- No Response

Why is this important?

- Performance-based investment decisions
- Development of a 10-year Transportation Asset Management Plan
  - Includes consideration of life cycle planning & risk
  - Sets minimum standards for the use of pavement management systems
  - Links investments to performance targets

Challenges

- Shifting from a worst-first strategy when funding is tight
  - Agencies tend to fight fires
- Availability of qualified contractors, strong construction practices, & good candidates for preservation treatments
- Quantifying the benefits to pavement preservation
  - Lack of adequate distress information
  - Inconsistency in terminology
  - Inconsistencies in treatment use

Challenges

- Aligning District/Region project selection with agency performance targets
  - Inconsistencies across the state
  - Project selection may or may not lead to statewide goals
- Allocating funding based on need (i.e., conditions)
  - Districts or Regions using preservation are penalized

State Practices Illustrate Benefits

A whole life approach reduces the annual cost of preservation, which allows agencies to redirect available funding to other agency priorities

Increased investments in

Pavement Preservation Treatments
- Crack sealing
- Chip seals
- Microsurfacing

Bridge Preservation Treatments
- Sealing of bridge decks
- Cleaning bridges

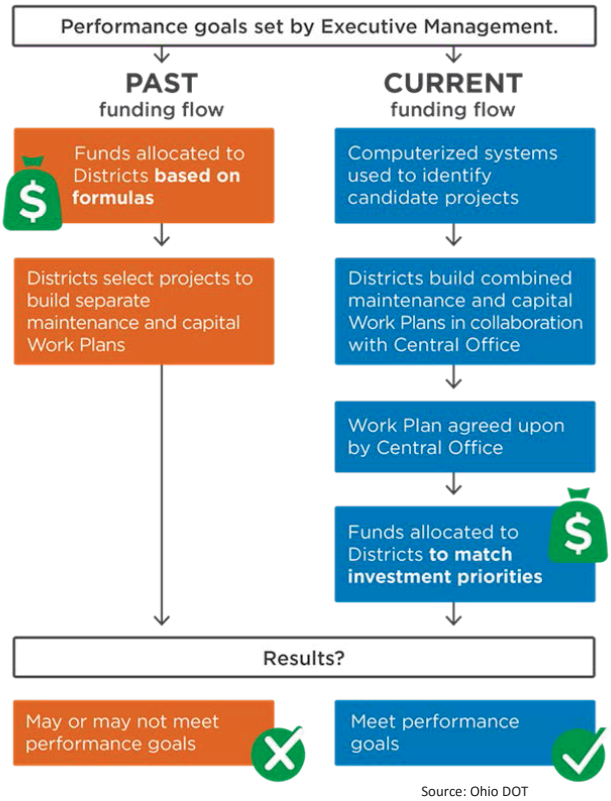
Culvert Preservation Treatments
- Debris removal
- Erosion protection

Graphic: Ohio DOT

Allowed the Ohio DOT to redirect **$300M** over 6 years to other pavement, bridge, & culvert priorities

Additional Benefits

The development of a network-level preservation strategy helps ensure agencies will meet performance targets



Source: Ohio DOT

Additional Benefits

- Building workforce competencies helps ensure the success of the new way of doing business

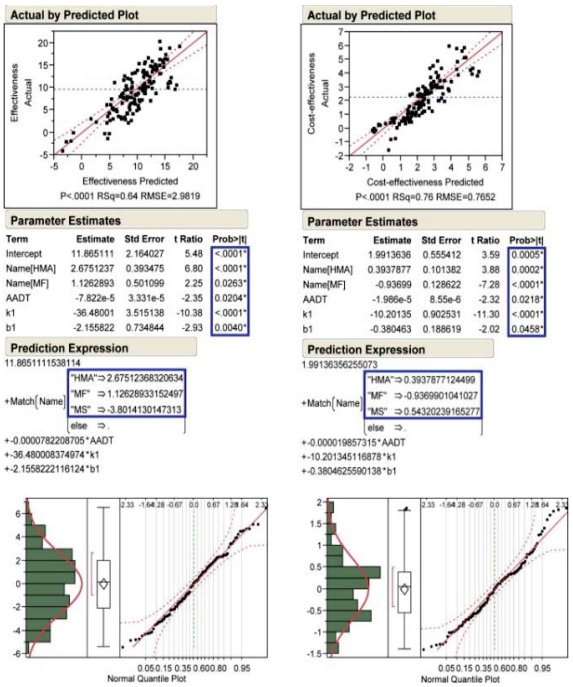
Source: Ohio DOT

The Knowledge Management Plan is designed to ensure that:

- Employees are prepared to identify when actions are needed
- Share what they've learned with others.

When and Where Program: Resources

- Selection Guide
- Analysis Tool
- Peer-to-Peer Exchanges
- Communications Plan
- Asset Management Strategy Guidance
- Cost Effectiveness Metrics



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Pavement Preservation – How

EDC

Source: Applied Pavement Technologies, 2016

Source: VSS Macropaver, 2016

Source: FHWA, 2013

Source: American Concrete Pavement Association, 2016

Pavement Preservation: How

Quality Construction and Materials

Flexible Pavements

- Micro surfacing
- Chip Seal
- Slurry Seal/Scrub Seal
- Ultrathin bonded wearing course

Rigid Pavements

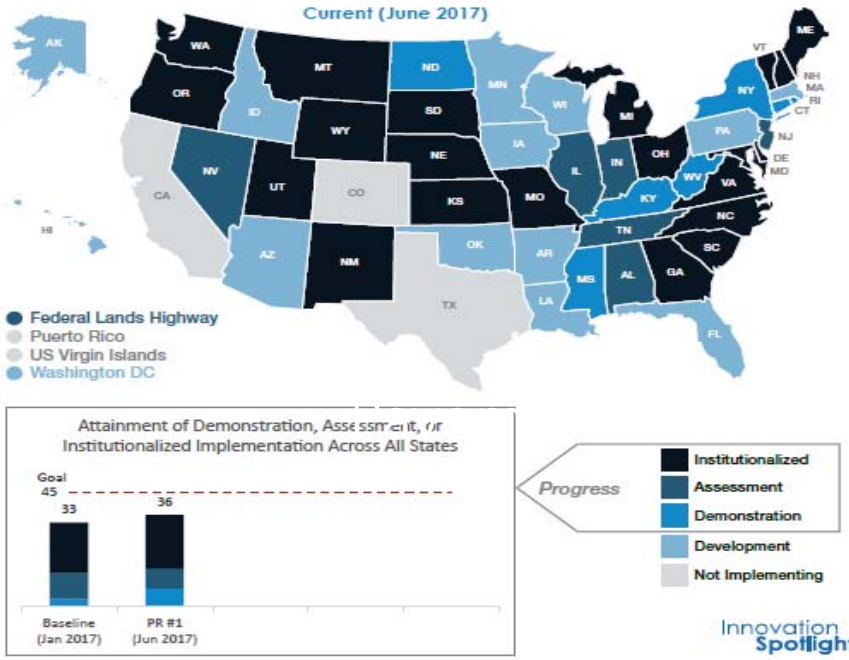
- Diamond grinding
- Partial-depth repair
- Full-depth repair
- Dowel bar retrofit/cross stitching

"How" Program Resources

- Peer-to-Peer Exchanges
  - ✓ Share experiences and collect specifications
- Update Pavement Preservation Checklists
- Develop and Deliver Web-based Training
  - ✓ Flexible and Rigid Pavements
- Develop Best Practice Technology Briefs
- Videos Highlighting Best Practices

Pavement Preservation: When and Where

Thirteen States and Washington, DC, are developing implementation plans and learning more about when and where to apply pavement preservation treatments. Fourteen States and FLH are demonstrating and assessing the when and where component of pavement preservation. Another 21 States have made it a standard practice to manage pavements proactively to preserve highway investments.



Innovation Spotlight

U.S. Department of Transportation
Federal Highway Administration

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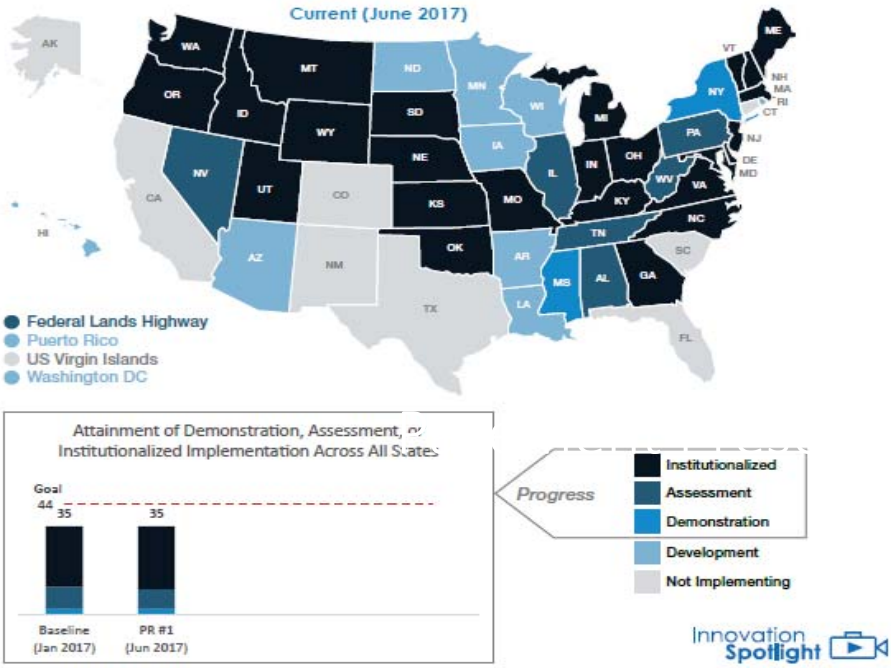
Pavement Preservation: How

Nine States, Puerto Rico, and Washington, DC, are developing implementation plans and learning more about how to apply pavement preservation treatments. Nine States and FLH are demonstrating and assessing the how component of pavement preservation. Another 25 States have institutionalized the use of quality construction and materials practices to preserve pavements.



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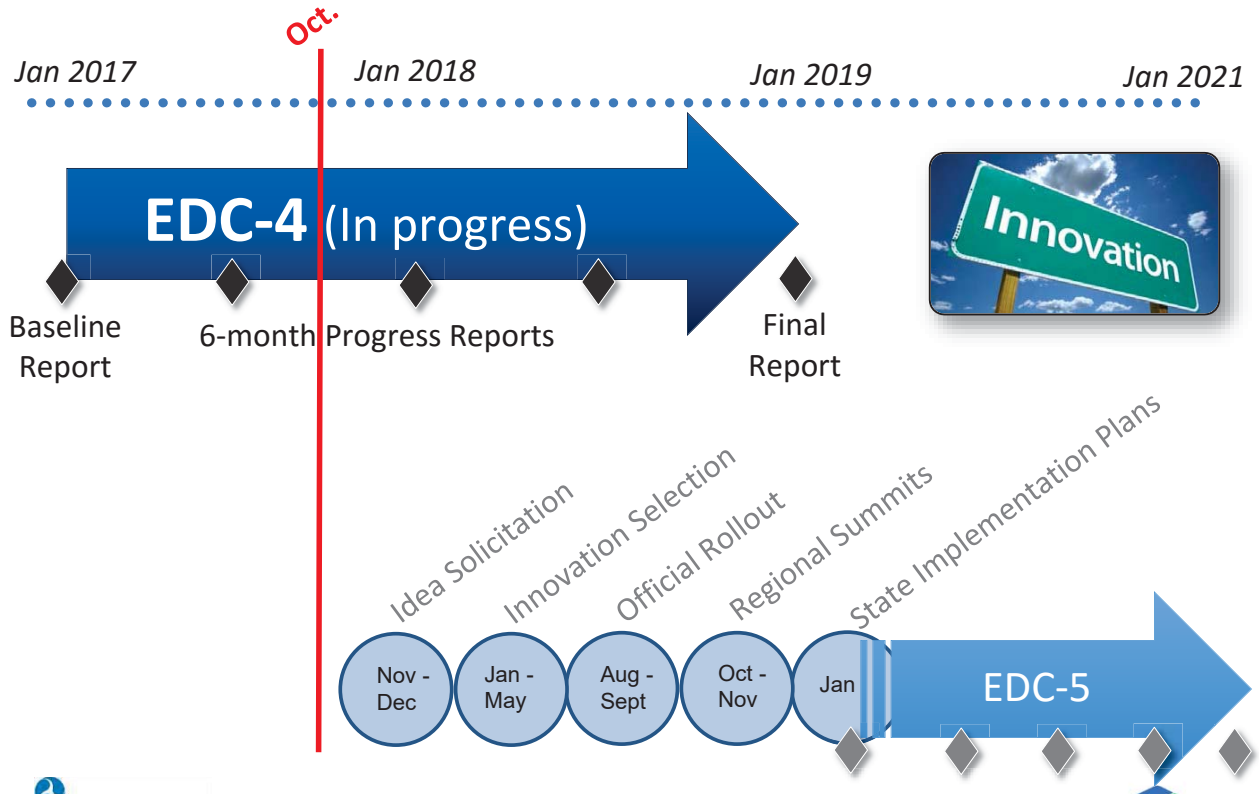
EDC Timetables



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Thank You!!!

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