



U.S. Department of Transportation
Federal Highway Administration

TRB 1471: Identifying New Technologies and Practices from the Front Lines

2019 TRB Annual Conference
January 15, 2019

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*



Meet the Office of Innovative Program Delivery



Tony Furst
Chief Innovation
Officer

Cindi Ptak
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)



Technology and Innovation Deployment Program Goals

- **Accelerate adoption** of innovative technologies in all aspects of highway transportation
- Provide **leadership and incentives**
- Construct **longer-lasting** highways
- **Improve** highway efficiency, safety, mobility, reliability, service life, environmental protection, and sustainability
- **Develop and deploy new tools**, techniques, and practices to accelerate the adoption of innovation



Center for Accelerating Innovation Core Programs

<https://www.fhwa.dot.gov/innovation>



National
STIC
Network

Every
Day
Counts

AID
Demo
Grants

Accelerating
Market
Readiness

Goodies

Coming
Very
Soon!



The logo features a stylized graphic of a road or ramp curving from the bottom left towards the top right. The road is composed of three parallel lines: a green outer line, a purple middle line, and a white inner line. To the right of this graphic, the text "On-Ramp to Innovation" is written in a bold, purple, sans-serif font. Below this, the phrase "every day counts" is written in a smaller, green, sans-serif font.

On-Ramp to Innovation

every day counts

“The EDC-5 innovations support FHWA’s goals of enhancing safety, improving infrastructure, deploying innovation and serving America efficiently and effectively. We look forward to building on the success of past EDC cycles to expand adoption of proven innovations that save lives, money and time.”

- FHWA Deputy Administrator
Brandy Hendrickson



Innovations

- ✓ **Game Changing:** How the innovation is transformative in saving time and money or improving quality.
- ✓ **Urgency and Scale:** Potential to shorten project delivery and positively impact the environment, safety, congestion, freight movement, construction techniques, contracting methods, project costs, maintenance, preservation, or emergency response.
- ✓ **Readiness:** Whether the innovation is ready to be deployed nationally.
- ✓ **National Impact:** Potential to benefit the transportation system.
 - ✓ **Staff Capacity:** *Ability to fully support Innovation Deployment Team*



EDC-5 Innovations



Safety

Reducing Rural Roadway Departures

Safe Transportation for Every Pedestrian

Operations

Crowdsourcing to Advance Operations

Weather-Responsive Management Strategies

Project Delivery

UAS (Drones)

Project Bundling

Advanced Geotech

Collaborative Hydraulics

Innovation

Virtual Public Involvement

Value Capture



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Center for Accelerating Innovation



State Transportation Innovation Councils: In the Driver's Seat

STIC Incentive Program

- Projects *identified by the STICs*
- Offsets some costs to **standardize innovative practices**
- Used to develop guidance, standards, and specifications; implement process changes; organize peer exchanges; offset implementation costs; or other activities the STIC identifies

STIC Incentive Projects from the Front Lines

Colorado: Local Innovation Summit

Maine: Construction Inspection Certification Program peer exchange

North Carolina: Performance-based tow and recovery program demonstration

Oklahoma: Special provisions/plan notes for Rubberized Asphalt Concrete using recycled finely Ground Tire Rubber

Pennsylvania: Salt and Snow Academy; Workforce preparedness for Electronic Contracting

Washington: Low Volume Pavement Rehabilitation Online Scoping Tool





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Center for Accelerating Innovation



AID Demo
Accelerated Innovation Deployment

Demonstrating the Value of Innovation

FHWA Home / OIPD / Accelerating Innovation / State Transportation Innovation Councils (STIC) / State Innovation Accomplishments

CAI Home Every Day Counts **STIC Network** AID Demonstration Resources

State Innovation Accomplishments

Click on map or text to view details.



AK AL AR AZ CA
 CO CT DE FL GA
 HI IA ID IL IN
 KS KY LA MA MD
 ME MI MN MO MS
 MT NC ND NE NH
 NJ NM NV NY OH
 OK OR PA RI SC
 SD TN TX UT VA
 VT WA WI WV WY

- District of Columbia
- Federal Lands Highway
- Federal Land Management Agencies
- Puerto Rico
- Tribal Governments
- US Virgin Islands

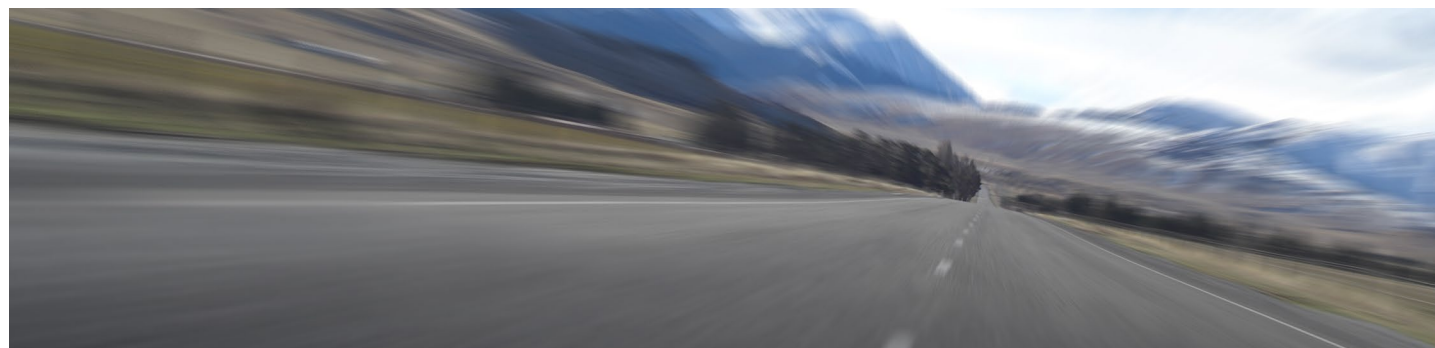
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https://www.fhwa.dot.gov/innovation/stic/state_innovation.cfm



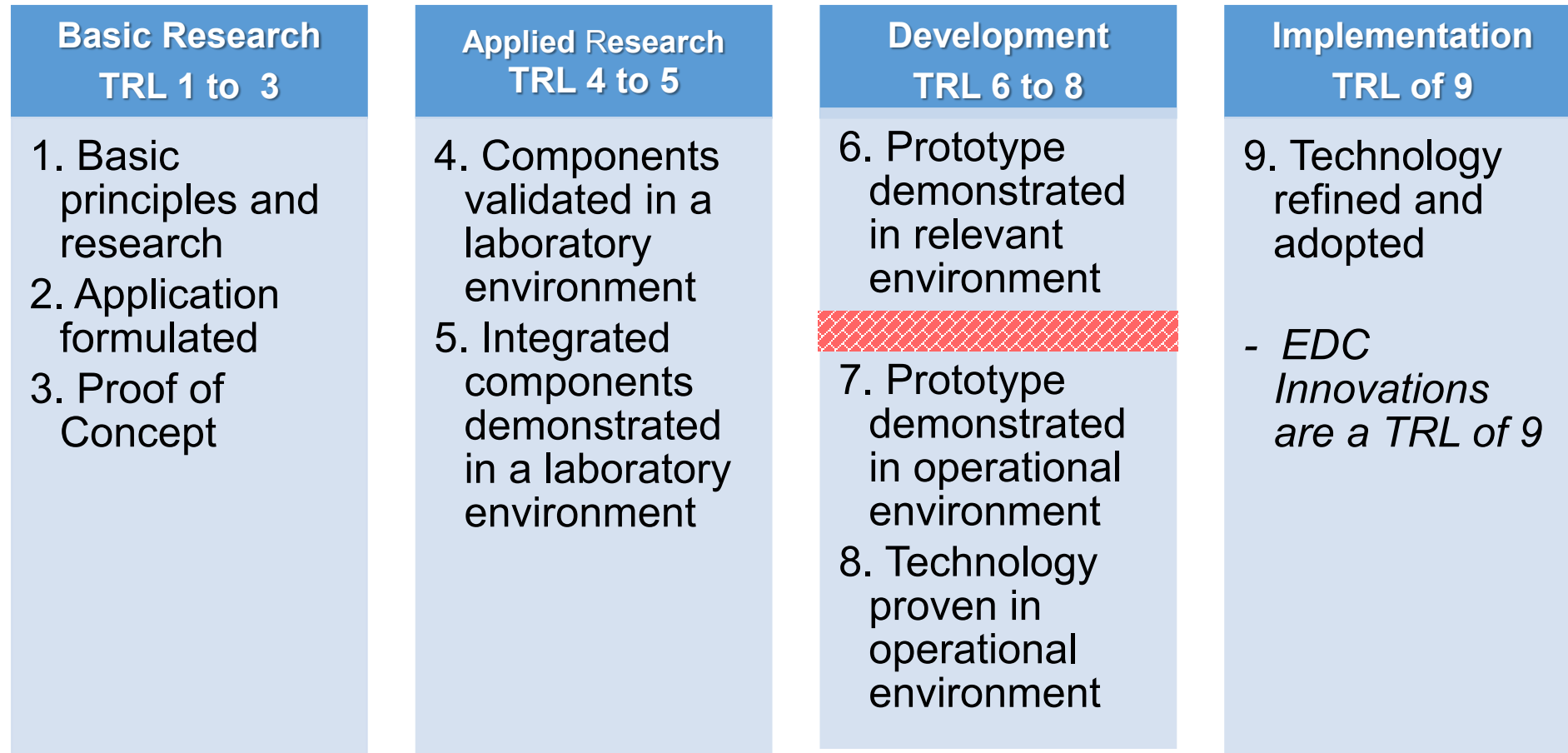
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Center for Accelerating Innovation



Building a New Bridge Between Research and Practice

Technology Readiness Level: Frame of Reference



Accelerating Market Readiness Goals

- *Provide a rapid, national assessment of emerging innovations* in a **shared-risk environment**
- Provide sound, objective, detailed, and coordinated **evaluation and reporting**
- Provide **marketing and communication** of AMR project findings through the National STIC Network and other Stakeholder Partners
- Feed the **EDC pipeline** (or other deployment efforts)

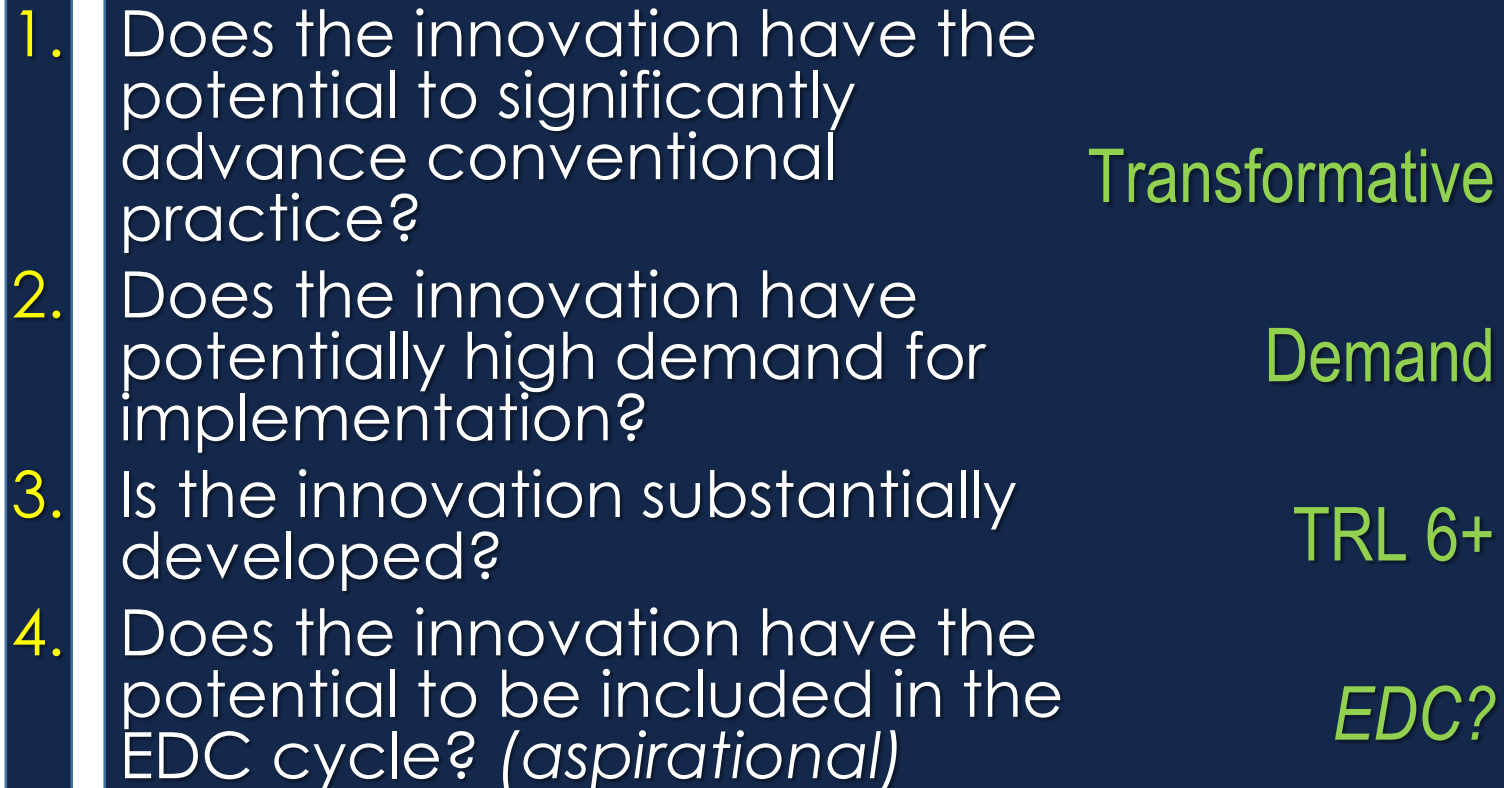
Anticipated Benefits

- Spotlight on a **wider range of innovations** available for the transportation community to deploy
- **Enhanced connections** between the research and practitioner communities
- Enhanced use of available resources to capture and **share knowledge and information** on innovative practices
- Stronger engagement with **National STIC Network**
- Stronger engagement with **AASHTO Innovation Initiative**

How will the AMR Program Work?

- Solicitation of ideas through a **Broad Agency Announcement**: open to *all sources*
- **AASHTO Innovation Initiative** representatives as **Peer Evaluators** of proposals received
- **FHWA will issue awards** for recommended projects
- **Applicant conducts activities** per their proposal/plan (e.g., field assessments, documentation of findings, etc.)
- FHWA and others **communicate** the results of the completed project to transportation community

Evaluation Criteria

- 
1. Does the innovation have the potential to significantly advance conventional practice?
Transformative
 2. Does the innovation have potentially high demand for implementation?
Demand
 3. Is the innovation substantially developed?
TRL 6+
 4. Does the innovation have the potential to be included in the EDC cycle? (*aspirational*)
EDC?



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Newsletters



<https://www.fhwa.dot.gov/innovation/resources/>





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Thank You!!

Jeffrey Zaharewicz

Senior Advisor

Center for Accelerating Innovation

FHWA OFFICE OF INNOVATIVE PROGRAM DELIVERY