

# FHWA Overview

## 15<sup>th</sup> Arizona Pavement/Materials Conference

*Staying Ahead of the Performance Curve*

Tempe, Arizona

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FHWA

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# Outline

- **FHWA Strategic Plan**
- **Transportation Performance Management (Update)**
- **Innovation & Technology**
- **Research**

# FHWA Strategic Plan

- Adopted new Mission and retained Values
- Adopted USDOT goals
- Developed 6 Strategic Objectives



<https://www.fhwa.dot.gov/policy/fhwaplan.cfm>

# FHWA Strategic Goals



- **Safety** 
- **Infrastructure** 
- **Innovation** 
- **Accountability** 

# Transportation Performance Management (TPM) Update

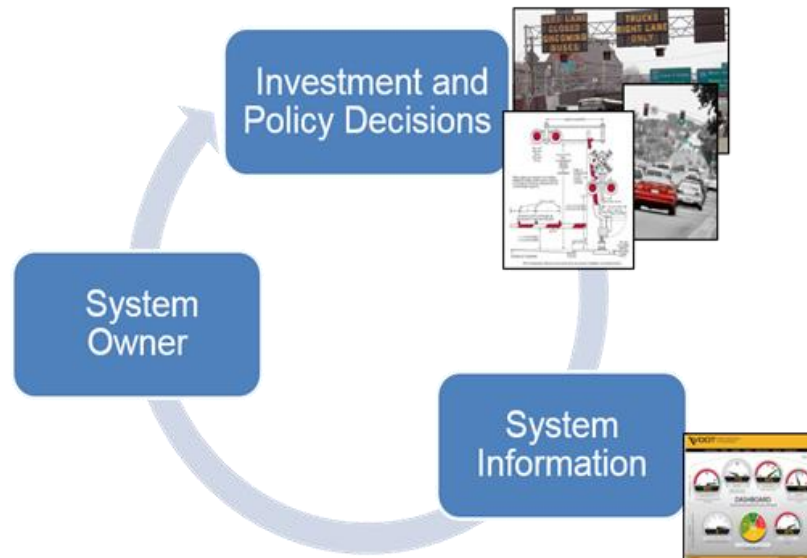
- Performance management
- Performance based planning and programming
- Asset management



**Focusing on Performance for Safe, Reliable Journeys**

# Transportation Performance Management (TPM)

A strategic approach that uses system information to make investment and policy decisions to achieve transportation system performance goals



# Performance Based Planning

The application of performance management within the planning and programming processes of transportation agencies to achieve desired performance outcomes for the multimodal transportation system.

# Asset Management Federal Requirements

Each State is required to develop a risk-based asset management plan for the National Highway System (NHS) to improve or preserve the condition of the assets and the performance of the system. (23 USC 119(e)(1), MAP-21 § 1106).





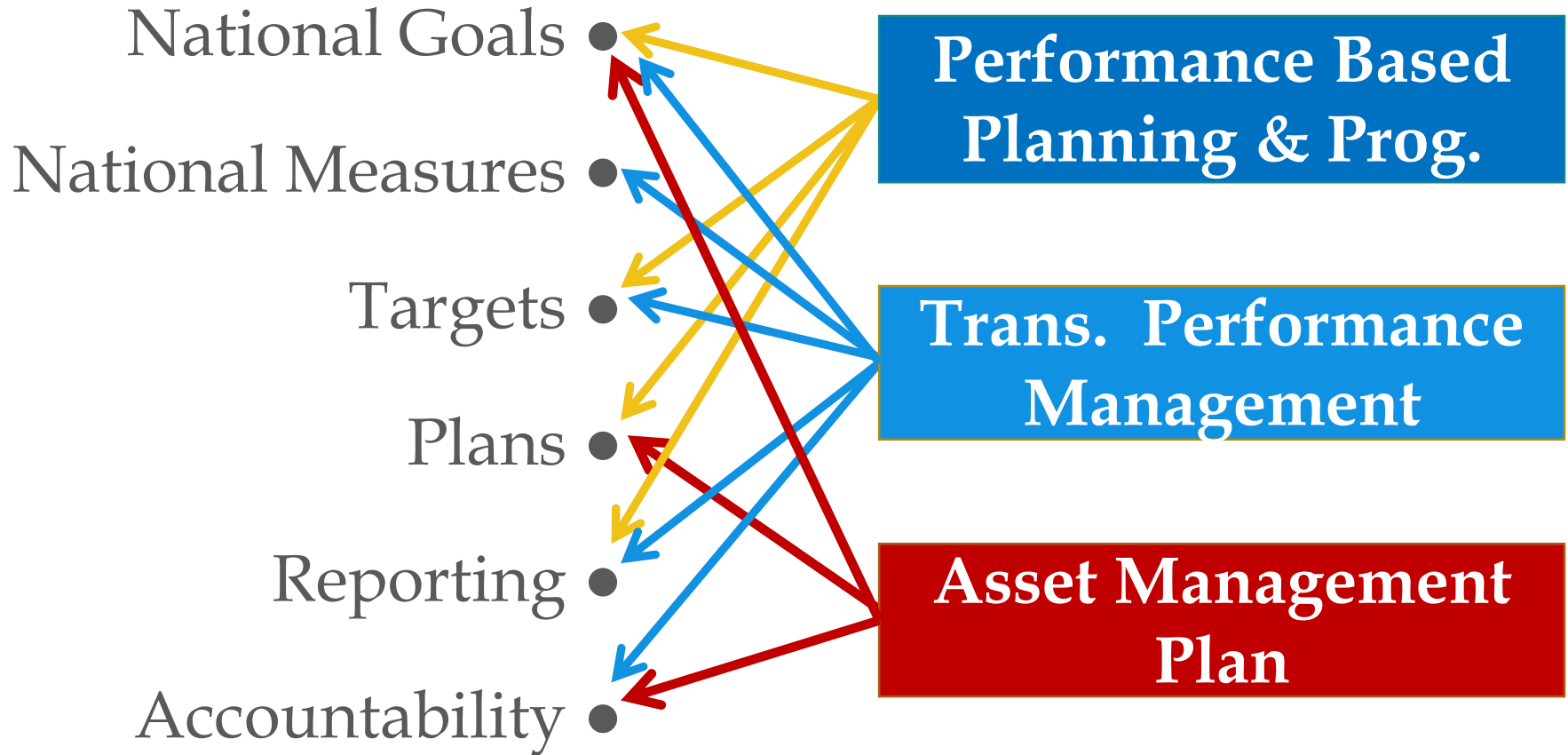
# Risk-based Asset Management Plan

## Plan Contents:

- Pavement and bridge inventory and conditions on the NHS
- Objectives and measures
- Performance gap identification
- Lifecycle planning
- Risk management analysis
- Financial plan
- Investment strategies



# Linking TPM to PBPP and AM



# Pavement TPM Regulations

- Address “State of Good Repair”
- Targets for good and poor lane miles
- Measure based on smoothness, cracking, and rutting/faulting
- States are assessed on significant progress toward targets
- Minimum condition on the Interstate

# Data Quality Management Program Requirements

- Data collection equipment calibration and certification
- Certification process for persons performing manual data collection
- Data quality control measures to be conducted before data collection begins and periodically during the data collection program
- Data sampling, review and checking processes
- Error resolution procedures and data acceptance criteria

# TPM Challenges

- Ownership
- Information gaps
- Resource inequities
- Local vs. State vs. national priorities
- Regional economies
- Political realities
- Statewide targets vs. local targets



# FHWA Commitment

**Advance the maturity of Performance Management in the U.S. to more fully realize the benefits of performance based planning and programming, asset management and performance management principles.**

# Innovation and Technology

- **National Dialogue on Highway Automation**



- **Every Day Counts**



- **And more...**

# Highway Automation



## National Dialogue on Highway Automation

### Desired outcomes for FHWA

- Assess national issues and priorities
- Develop guidance, best practices, standards
- Support necessary research
- Adapt program and policies
- Create a national community or coalition.



# Highway Automation



## Early Themes:

- FHWA has a clear role as a facilitator
- A lack of consistence (i.e. traffic control devices, policies) can hinder adoption
- Information sharing is important for enabling automated vehicles
- There will be a transition period of a mixed-vehicle fleet, which will require interoperability
- Condition of system is important

# Every Day Counts (EDC)



State-based model to identify and rapidly deploy proven but underutilized innovations to:

- Shorten the project delivery process
- Enhance roadway safety
- Reduce congestion
- Improve environmental sustainability

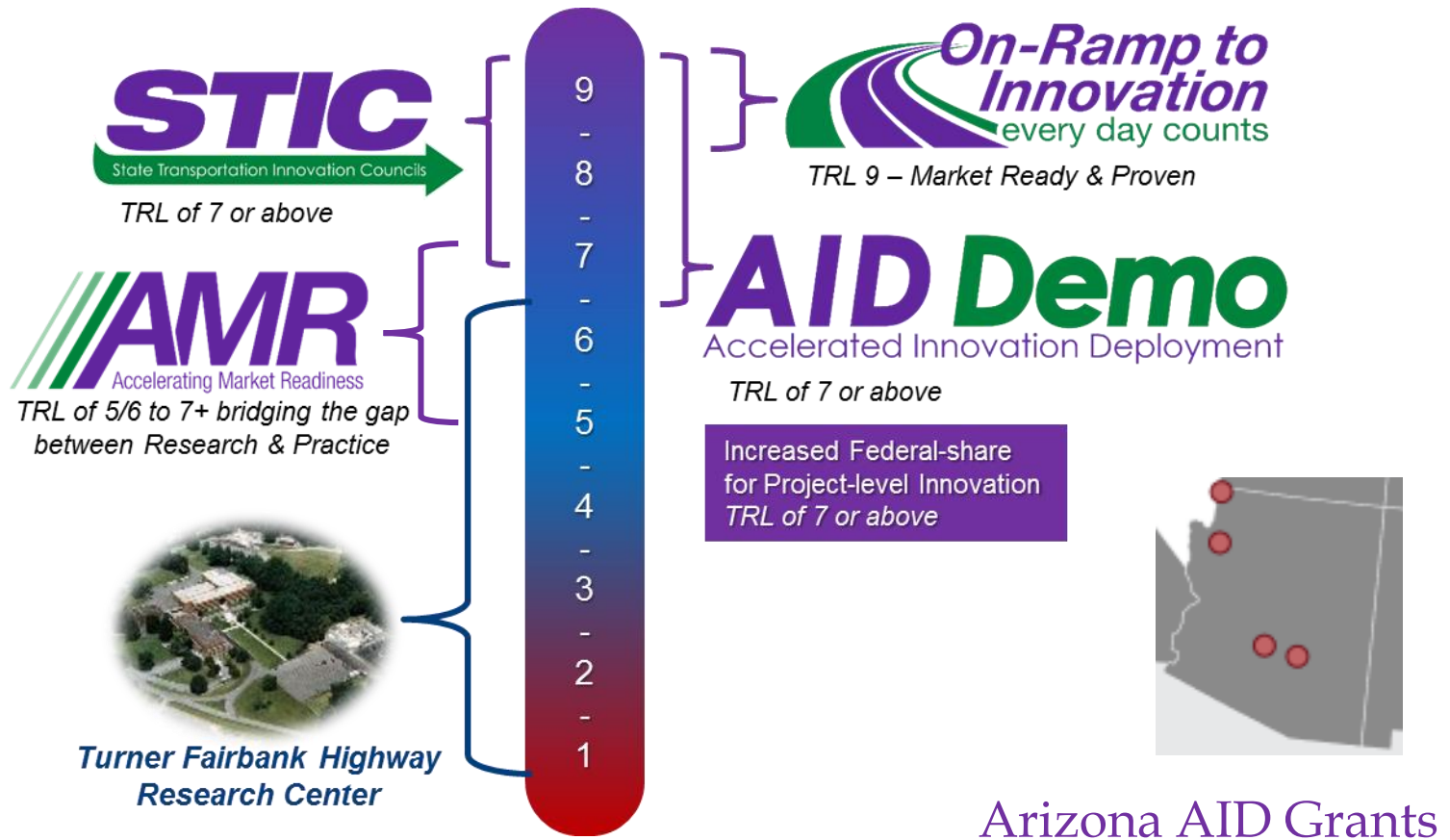
EDC Rounds are on two-year cycles:

- Initiating 5<sup>th</sup> Round (2019-2020) with 10 innovations
- To date: 4 Rounds, over 40 innovations

# EDC 5 Innovations

- Advanced Geotechnical Exploration Methods
- Collaborative Hydraulics: Advancing to the Next Generation of Engineering (CHANGE)
- Project Bundling
- Reducing Rural Roadway Departures
- Safe Transportation for Every Pedestrian (STEP)
- Unmanned Aerial Systems (UAS)
- Use of Crowdsourcing to Advance Operations
- Value Capture: Capitalizing on the Value Created by Transportation
- Virtual Public Involvement
- Weather-Responsive Management Strategies

# FHWA Innovation Programs (in addition to EDC we have...)



# Research



## Turner Fairbank Highway Research Center

# FHWA Infrastructure Materials Research

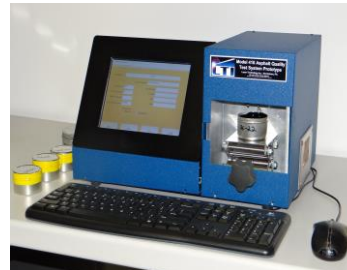
## Laboratories

- Aggregate – Petrographic
- Asphalt Binder & Mixtures
- Chemistry Lab
- Coatings & Corrosion Lab
- Concrete Lab
- Geotech Lab
- Pavement Testing Facility



## Research Activities

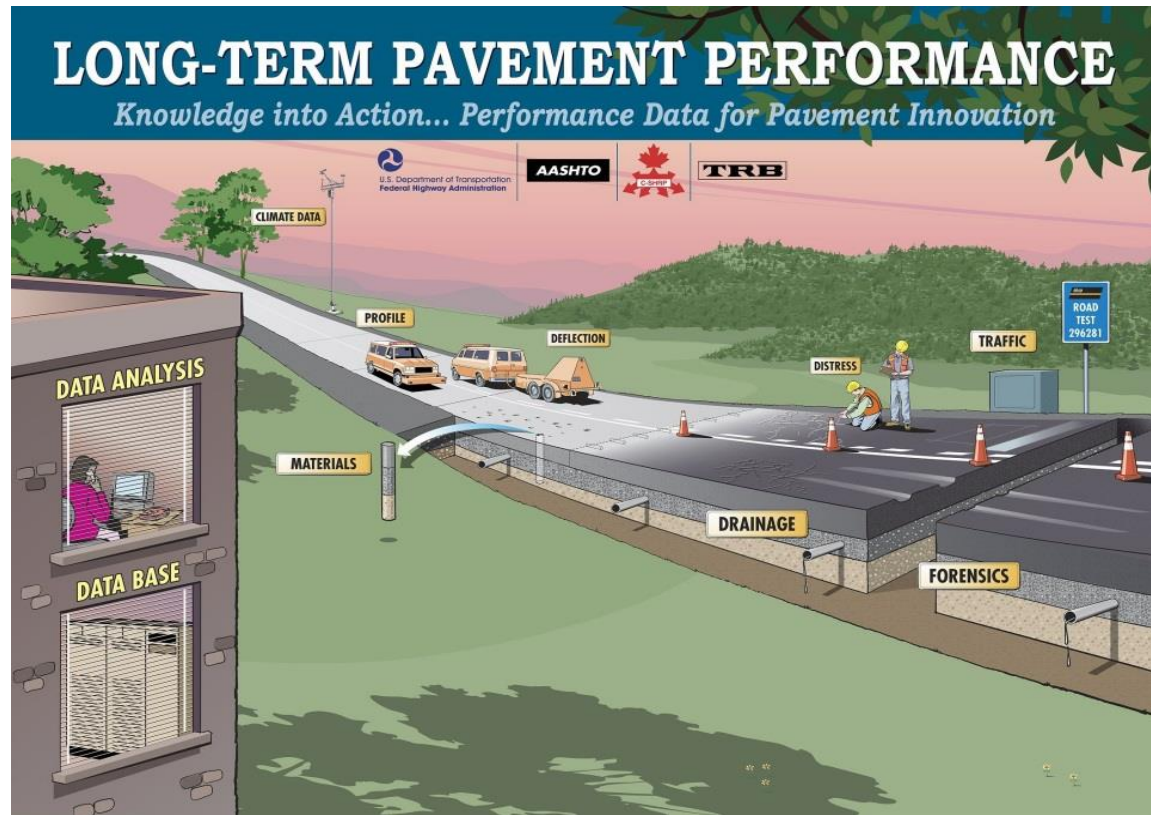
- Durability
- Sustainability
- Material Variability
- Forensic Studies
- Technical Assistance
- Congressional Studies





# Long-Term Pavement Performance (LTPP Program)

- Data Collection (437 LTPP test sections, 40 in Arizona)
- Last month, installed two WIM systems in AZ on I-10 and I-40
- July 2018 marked the 32<sup>nd</sup> LTPP data release: [InfoPave](#)



*Please visit us at the 2019 TRB Annual Meeting (Session on Monday morning and Exhibit Booth Sunday to Tuesday)*

# Summary

- **FHWA Strategic Plan**
- **Transportation Performance Management (Update)**
- **Innovation & Technology**
- **Research**
- **Safety Message**



# Questions

