

MAP-21

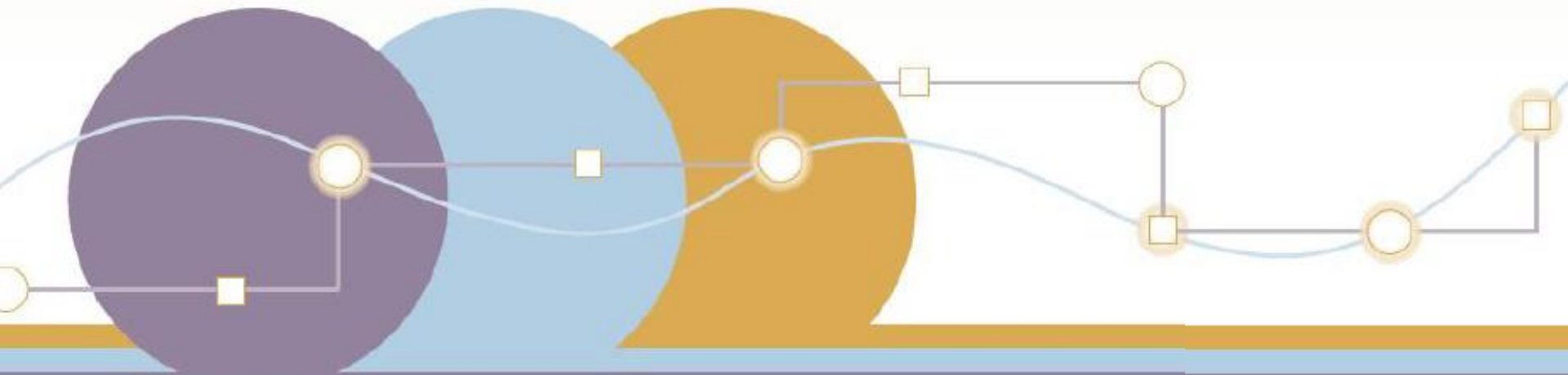
Moving Ahead with Progress in the 21st Century

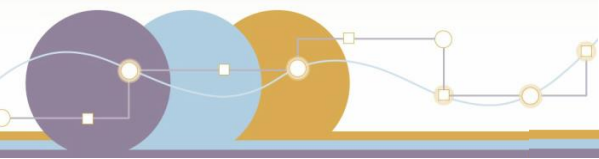
Performance Management Elements

An Overview of Requirements and Implementation Status

Northeast Pavement Preservation Partnership Meeting

April 29, 2013



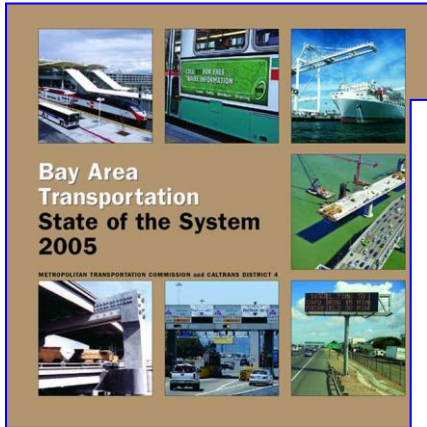


What is Transportation Performance Management?

Transportation Performance Management is a strategic approach that uses system information to make investment and policy decisions to achieve a desired set of national goals



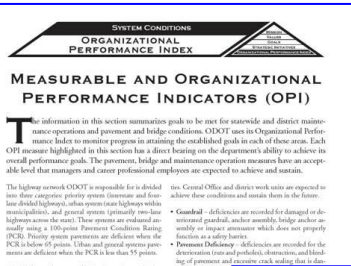
Performance Management In Action



Bay Area Transportation State of the System 2005

State of the System 2005 Bay Area Transportation

Business Plan 2004 & 2005 Ohio Department of Transportation



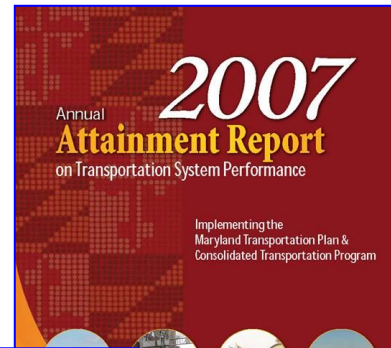
The information in this section summarizes goals to be met for statewide and district maintenance operations and pavement and bridge conditions. ODOT uses its Organizational Performance Index to monitor progress in attaining the established goals in each of these areas. Each OPI measure highlighted in this section has a direct bearing on the department's ability to achieve its overall performance goals. The pavement, bridge and maintenance operation measures have an acceptable level that managers and career professional employees are expected to achieve and sustain.

ODOT also conducts annual bridge inspections evaluating four categories:

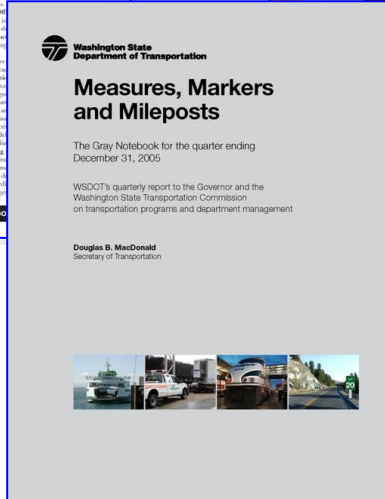
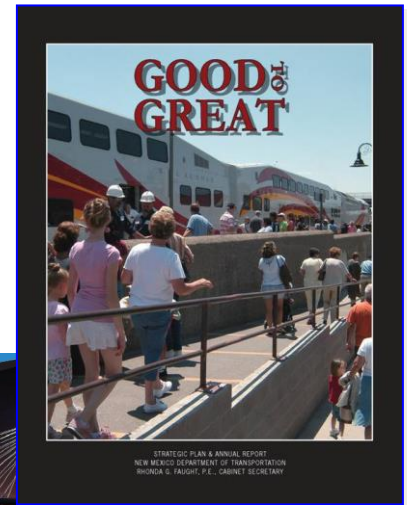
- General appraisal ratings** measure the overall condition of a bridge - bridges are considered deficient when this rating drops to 1 or below on a scale of 1 to 10 (the higher the number the better).
- Deck condition ratings** measure the condition of bridge decks - bridges are deemed to be deficient when the floor rating is 1 or 2 on a scale of 1 to 10 (the lower the number the better).
- Wearing surface ratings** measure the driving surface of a bridge - bridges are considered deficient when the wearing surface is evaluated as 1 or 2 on a scale of 1 to 10 (the lower the number the better).
- Paint ratings** measure the corrosion protection applied to the structural steel - bridges are deemed deficient when they are evaluated as 1 or 2 on a scale of 1 to 10 (the lower the number the better).

Statewide and district performance involving maintenance operations is also measured through several OPI categories. The charts included in this section for these basic maintenance conditions provide historical statewide and district condition levels and establish future goals for these activities.

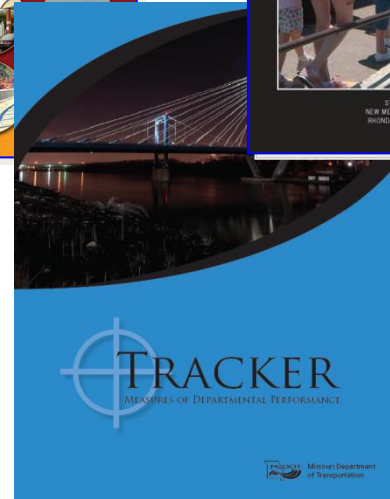
2007 Annual Attainment Report Maryland DOT



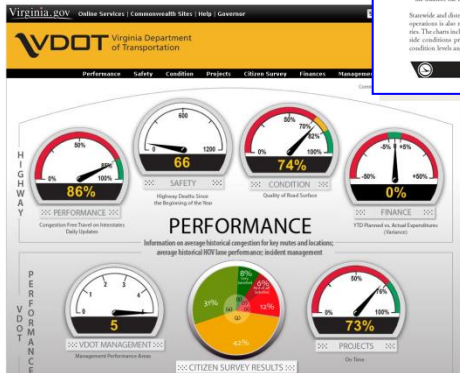
Good to Great Strategic Plan and Annual Report New Mexico DOT



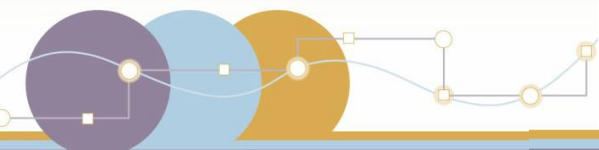
Measures, Markers and Mileposts Washington State Department of Transportation



Tracker Missouri Department of Transportation



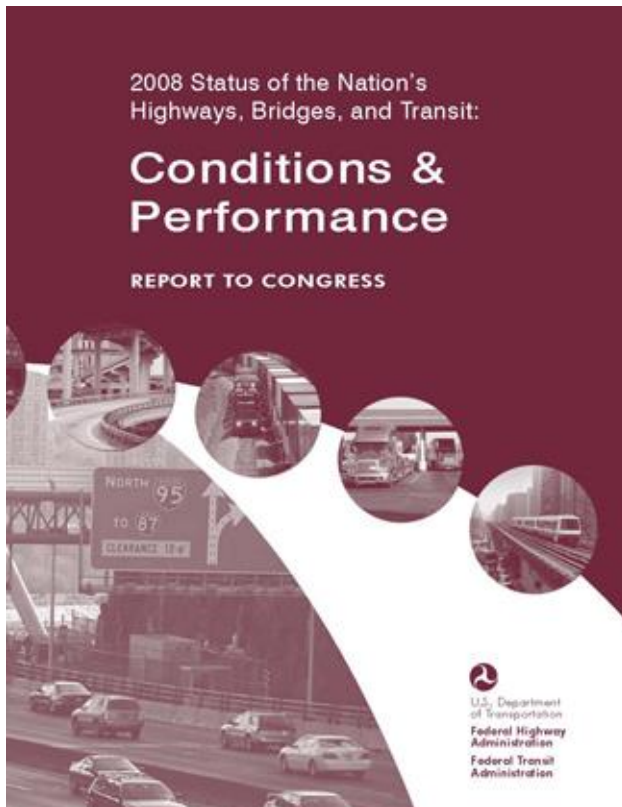
Virginia Department of Transportation



USDOT Performance Report

Performance Measure	2004	2005	2006	2007	2008	2009	2010 Target	2010 Actual	Met / Not Met
Percentage of travel on the National Highway System (NHS) meeting pavement performance standards for "good" rated ride.	52	52	54	57	56	57	58	58*	Met
Percentage of deck area on National Highway System (NHS) bridges rated as deficient, adjusted for average daily traffic.	32.0	29.9	29.2	29.7	29.5	29.2	28.9	28.7	Met

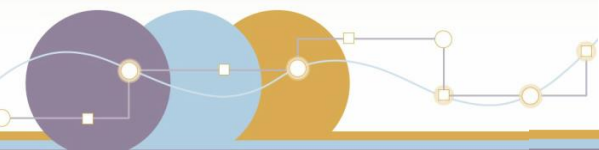
Condition Reporting



Report to Congress

- System Conditions
- Operational Performance
- Safety
- Revenue and Expenditures
- Investment Analysis

Difficult to associate performance with federal investments

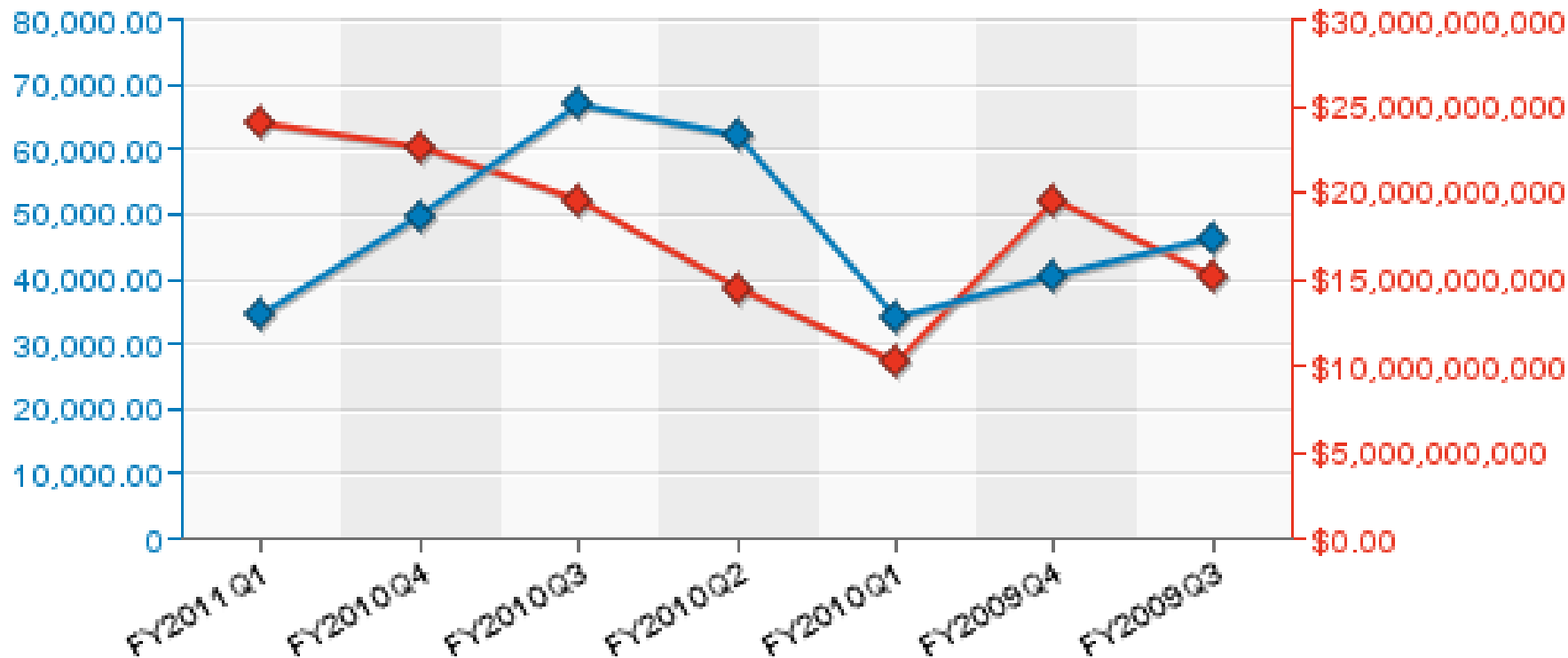


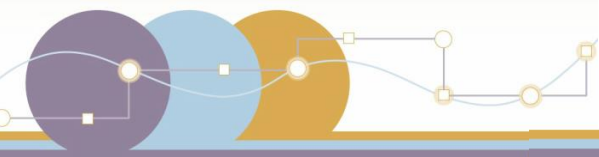
ARRA Reporting Outcomes

Displaying:

▼ Number Of Jobs, Funds R...

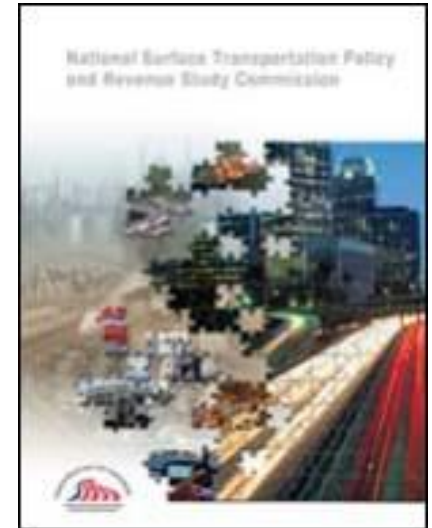
Fiscal Quarter ▼

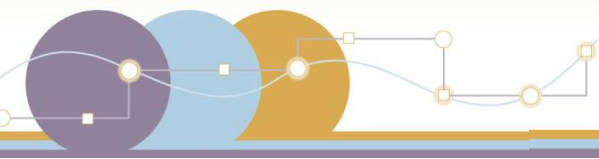




National Commission Report

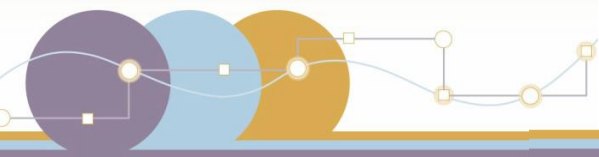
- Strong Federal role focused on national goals
- Consolidated program structure
- Performance management
- Many groups issued reports supporting many of the Commission's recommendations, all embraced a performance-based program (U.S. DOT, AASHTO, AMPO, APTA, GAO, and more)





MAP-21 Performance Elements

- National Goals
- Performance Measures
- Performance Targets
- Performance Plans
- Performance Reports
- Performance Accountability



Performance Measures

Highways

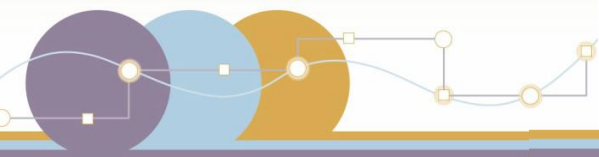
- Safety (4)
- Infrastructure Cond. (3)
- System Performance (2)
- Freight Movement (1)
- Traffic Congestion (1)
- On-Road Mobile Source Emissions (1)

Public Transportation

- State of Good Repair (1+)
- Safety Performance Criteria (1+)

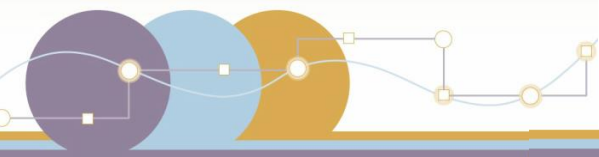
Highway Safety Programs

- 14 Measures
- “Traffic Safety Performance Measures for States and Federal Agencies” 2008



Performance Targets

- States, MPOs, and public transit providers set targets for each of the measures
- Coordination between States, MPOs and public transit providers to ensure for consistent targets
- Option to set different targets for urbanized and rural locations
- Identified through planning process with reference to individual performance plans



Performance Plans

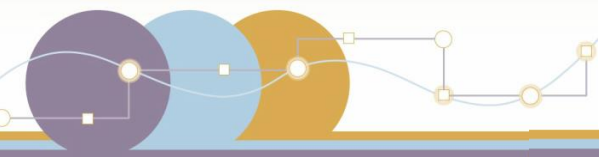
- Highway Safety Plan (1 yr)
- Strategic Highway Safety Plan (TBD)
- Transit Safety Plan
- NHS Asset Management Plan (4 yr)
- Transit Asset Management Plan (TBD)
- CMAQ Performance Plan (2 yr)
- State Freight Plan
- MPO System Perf. Report (4 yr)
- S/TIP Target Achievement Disc. (4 yr)

- National Strategic Freight Plan
- Transit Safety Plan

Performance Reports

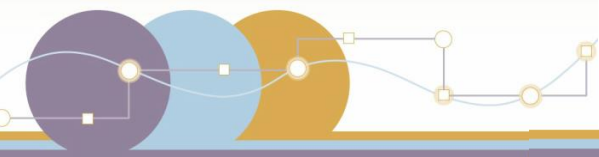
- Highway Safety Plan (1 yr)
 - HSIP Report (1 yr)
 - Performance Report (2 yr)
 - Transit Perf. Report (1 yr)
- CMAQ Performance Plan (2 yr)
- MPO System Perf. Report (4 yr)

- Perf Based Planning Reports
- Freight Conditions & Performance
- Conditions and Performance



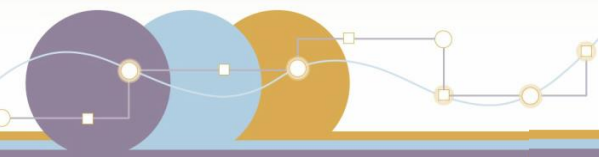
Performance Accountability

- Target Achievement Requirements
 - National Highway Performance Program
 - Highway Safety Improvement Program
- Standards
 - Interstate Pavements and NHS Bridges
 - Rural Road Safety and Older Driver Safety
- Planning Reviews
- State Performance-Based Planning Evaluation
- 5 Year Progress Evaluation



Rulemaking Process

- **Proposed Regulation**
 - Consultation with stakeholders
 - Drafting of the Notice of Proposed Rulemaking (NPRM)
 - Regulatory impact analysis
 - Coordination with other rulemakings
- **Public Comment**
 - 90 day minimum comment period required after NPRM is published (highways).
- **Final Regulation**
 - Consideration of all comments and publication of final rule in Federal Register with effective date.



Stakeholder Outreach

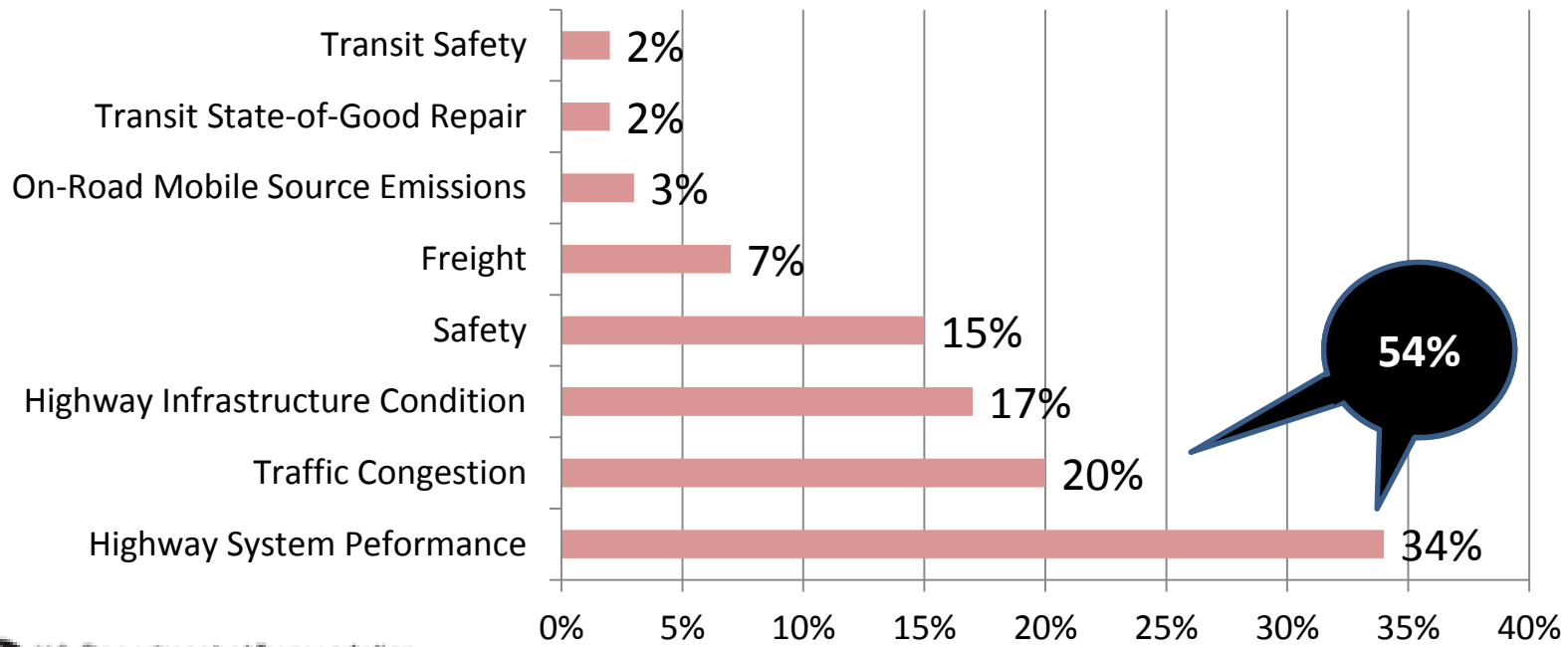
- Methods of Outreach
 - Webinars
 - National Online Dialogues
 - Virtual Town Hall Meetings
 - Subject Matter Meetings
 - Direct Contact to FHWA : PerformanceMeasuresRulemaking@dot.gov

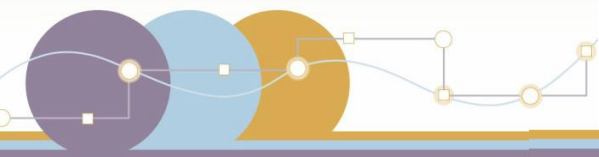
- Focused Areas for Outreach
 - Performance Measures
 - Target Setting Listening Session
 - Reporting and Assessment

Online Dialogue Summary

FTA has completed an online dialogue on asset management and is planning one for transit safety

- Visited 8,165 times
- 228 ideas, 293 comments, 3,695 votes
- 8 Campaigns





Coordinating Implementation

Measure Rules

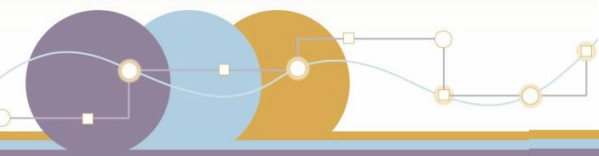
- Define Measure
 - Data Elements
 - Data Source
- Interstate Pavement Condition
- Target Setting Requirements
- Define Significant Progress
- State Performance Reporting
- Establish Timing

Planning Rule

- Performance-based Planning Process
- Target Setting Coordination
- MPO Performance Reporting
- STIP/TIP Discussion
- Transition Period

Program R/G

- Plan Requirements
- Special Rules
- Integrating Performance
- Transition Period

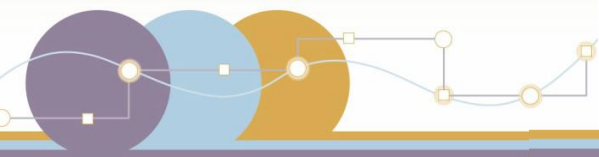


STAGED RULE SCHEDULE

Measures / Fiscal Year		Safety Measures	Pavement & Bridge Measures	CMAQ, Performance, and Freight Measures
FY / QUARTER		Status I	Status II	Status III
FY13 (Year 1 of MAP-21)	Q1	Consultation/ NPRM	Consultation/ NPRM	Consultation/ NPRM
	Q2			
	Q3			
	Q4			
FY14 (Year 2 of MAP-21)	Q1	Comments	Comments	Final Rule
	Q2	Final Rule		
	Q3		Final Rule	
	Q4	Final Rule		
FY15	Q1		Final Rule	Final Rule
	Q2			

Single Effective Date:
Spring 2015

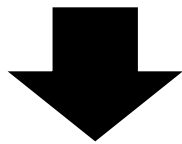




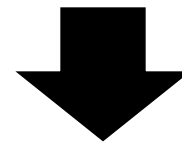
Evaluation of Candidate Measures

Is it Appropriate?
*Will the measure support
national programs?*

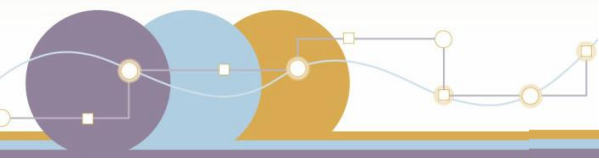
Are We Ready?
*Can data be in place to
support the desired measure?*



6 Factors



6 Factors



Is The Measure Appropriate?

Focused

- Is the measure focused on an area of national interest?

Collaborated

- Has the measure been developed in partnership with stakeholders?

Maintainable

- Is the measure maintainable to accommodate changes?

Impactful

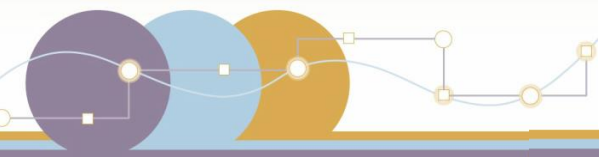
- Can the measure be used to support investment decisions, policy making and target setting?

Track-able

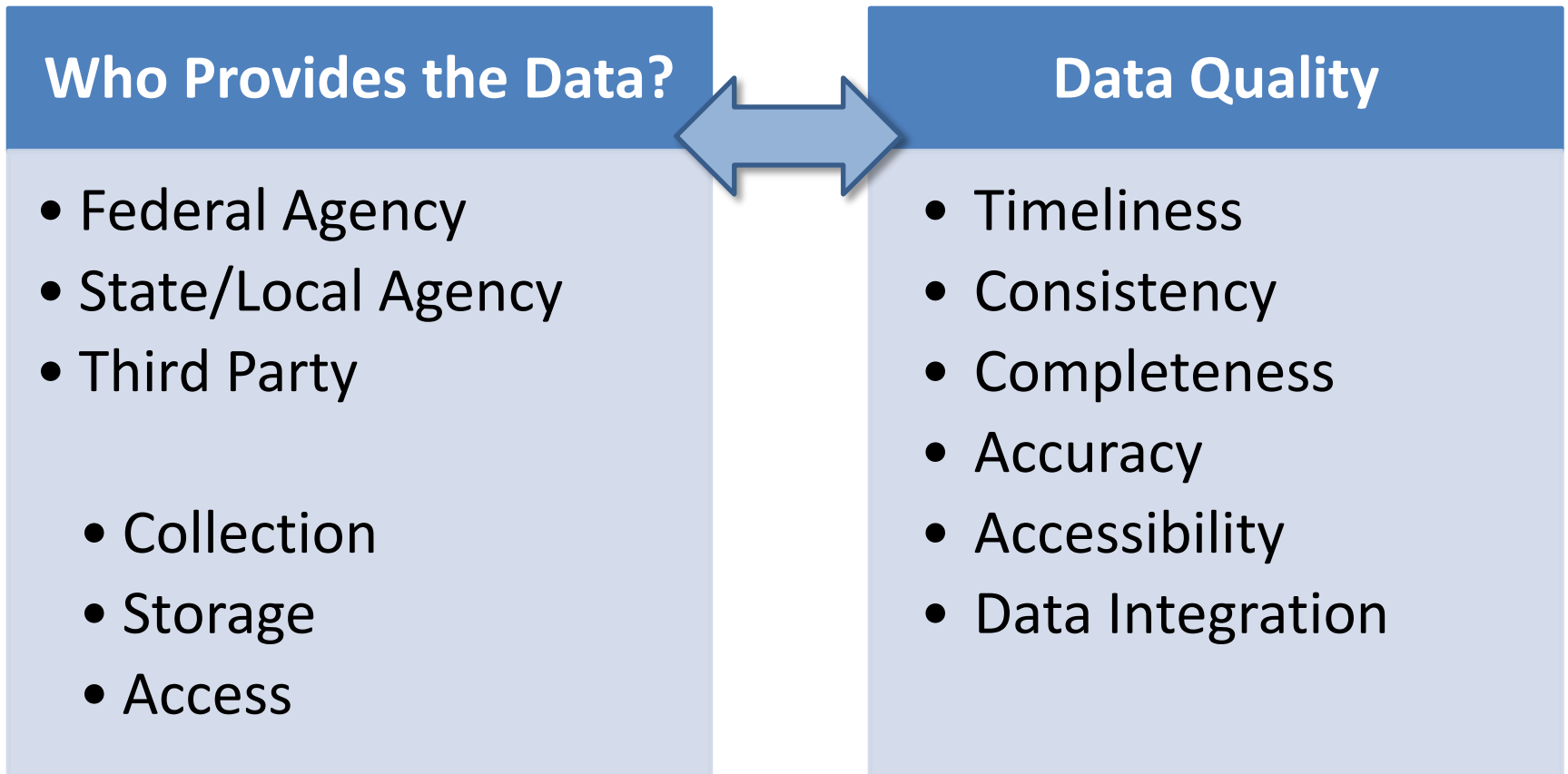
- Can the measure be used to analyze performance trends?

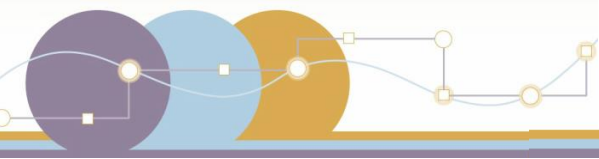
Feasible

- Has the feasibility & practicality to collect, store, & report data for the measure been considered?



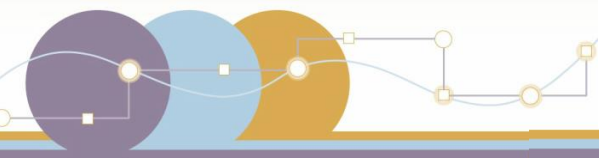
Are We Ready to Use the Measure?





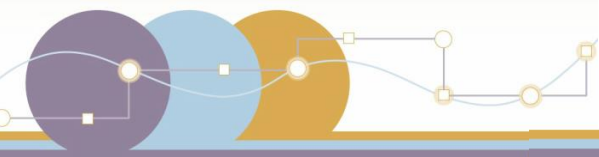
Implementation Challenges

- Does “One Size Fit All”
- Setting Challenging Targets
- Trade-Off Decisions
- Predicting Outcomes
- Integrating into an Existing Process
- Multiple Performance Areas
- Managing Uncertainty/Risk
- Program Transparency



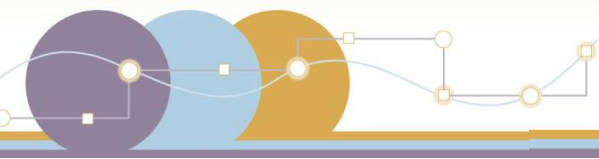
Safety Measures

- Considerations
 - Defining serious injuries
 - Time lag associated with national data
 - Coordination with Highway Safety Plan
 - Target setting
- Current Efforts
 - Highway Safety Plan Interim Final Rule
 - Target setting best practices
 - Highway Safety Improvement Program guidance



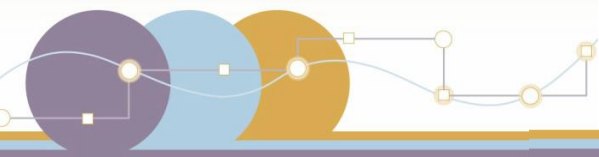
Traffic Congestion and NHS Performance

- Considerations
 - Data sources, availability, coverage
 - Trip information, movement of people
 - Modes of transportation
 - Scalability
 - Target setting
- Current Efforts
 - Acquiring data
 - Exploring measure alternatives
 - Evaluating feasibility for implementation



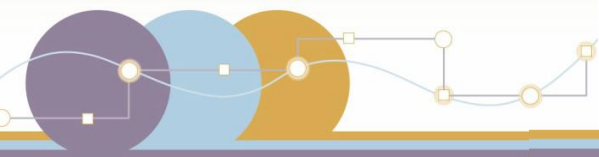
Infrastructure Condition Measures

- Considerations
 - Data sources, availability, coverage
 - Measures linked to decision making
 - NBI element level data requirements
 - Advancing technologies
 - Target setting
- Current Efforts
 - Evaluating data (HPMS 2010+)
 - Exploring measure alternatives
 - Evaluating feasibility for implementation (pilot studies)



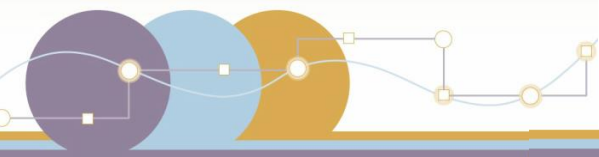
Infrastructure Pilot Studies Conducted

- **1st Pilot Study - 2010**
 - Objective – Evaluate how 3 states report pavement and bridge performance for the same corridor
 - Corridor – I-95 in DE, MD, and VA
- **2nd Pilot Study - 2011**
 - Objective – Test out Tier 1 and 2 approaches to report pavement and bridge condition for the same corridor
 - Corridor – I-90 in WI, MN, and SD



I-95 Corridor Study - Findings



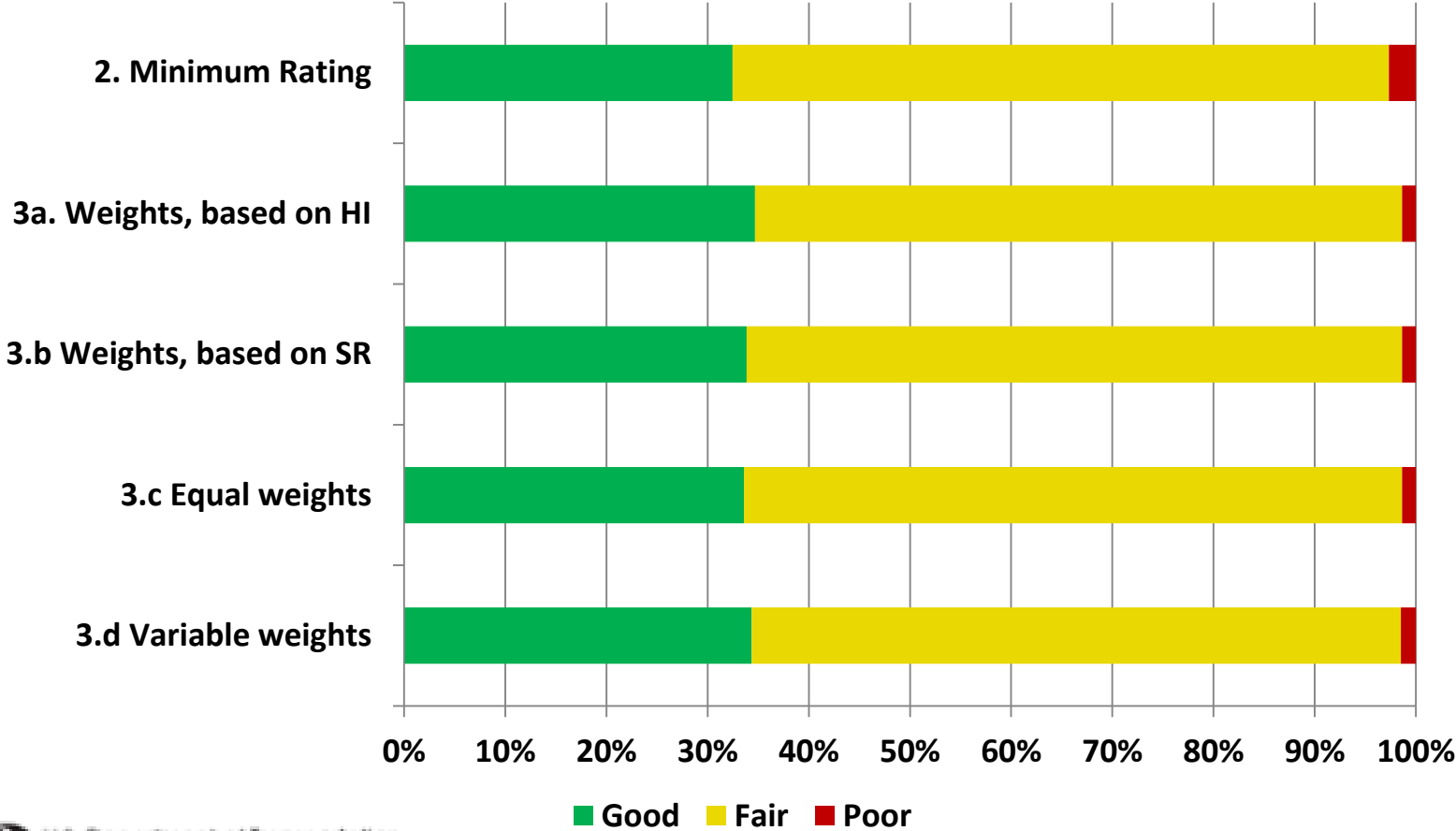


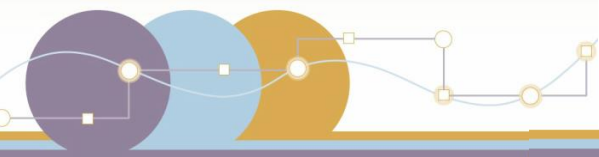
I-90 Pilot Study Corridor



I-90 Bridge Conditions - Metrics

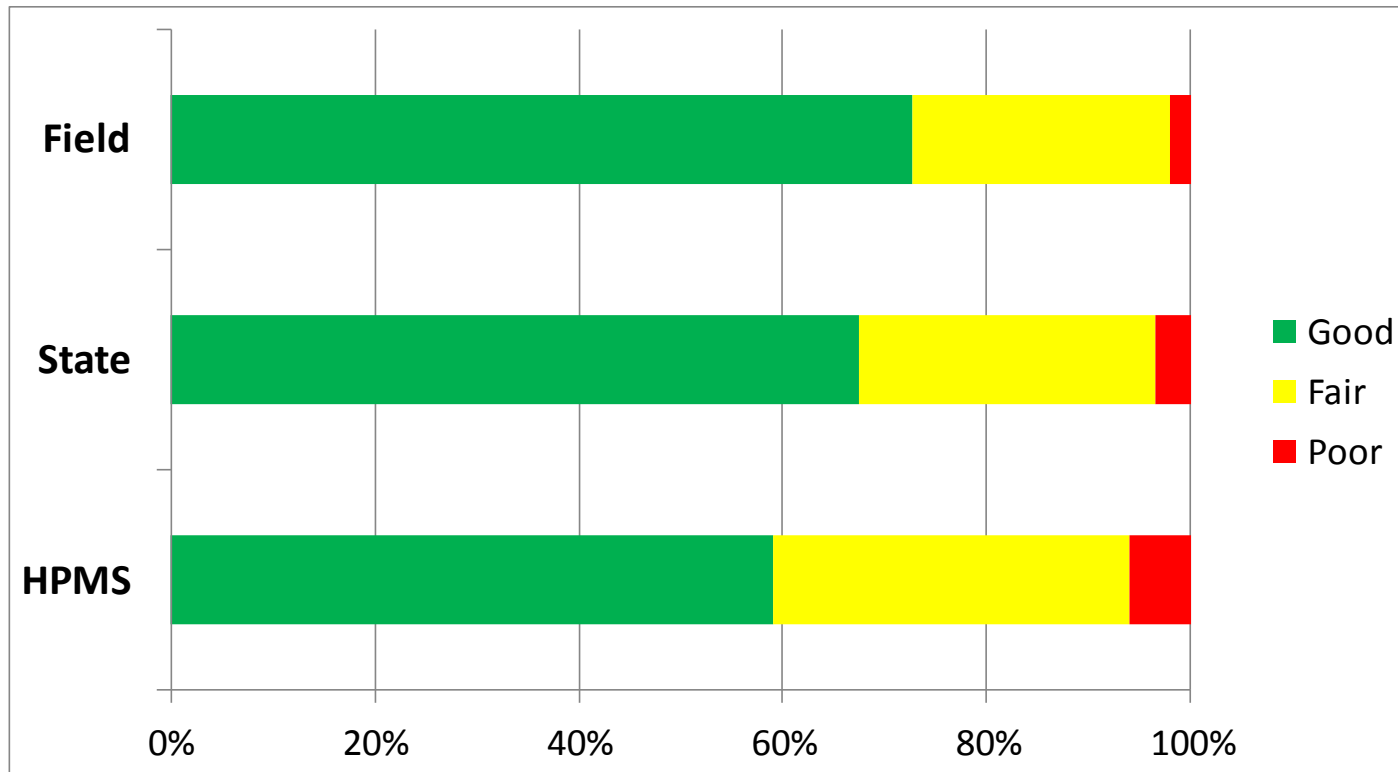
- Structurally deficient – 3%

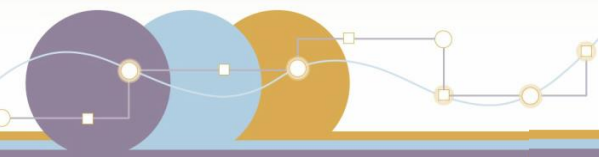




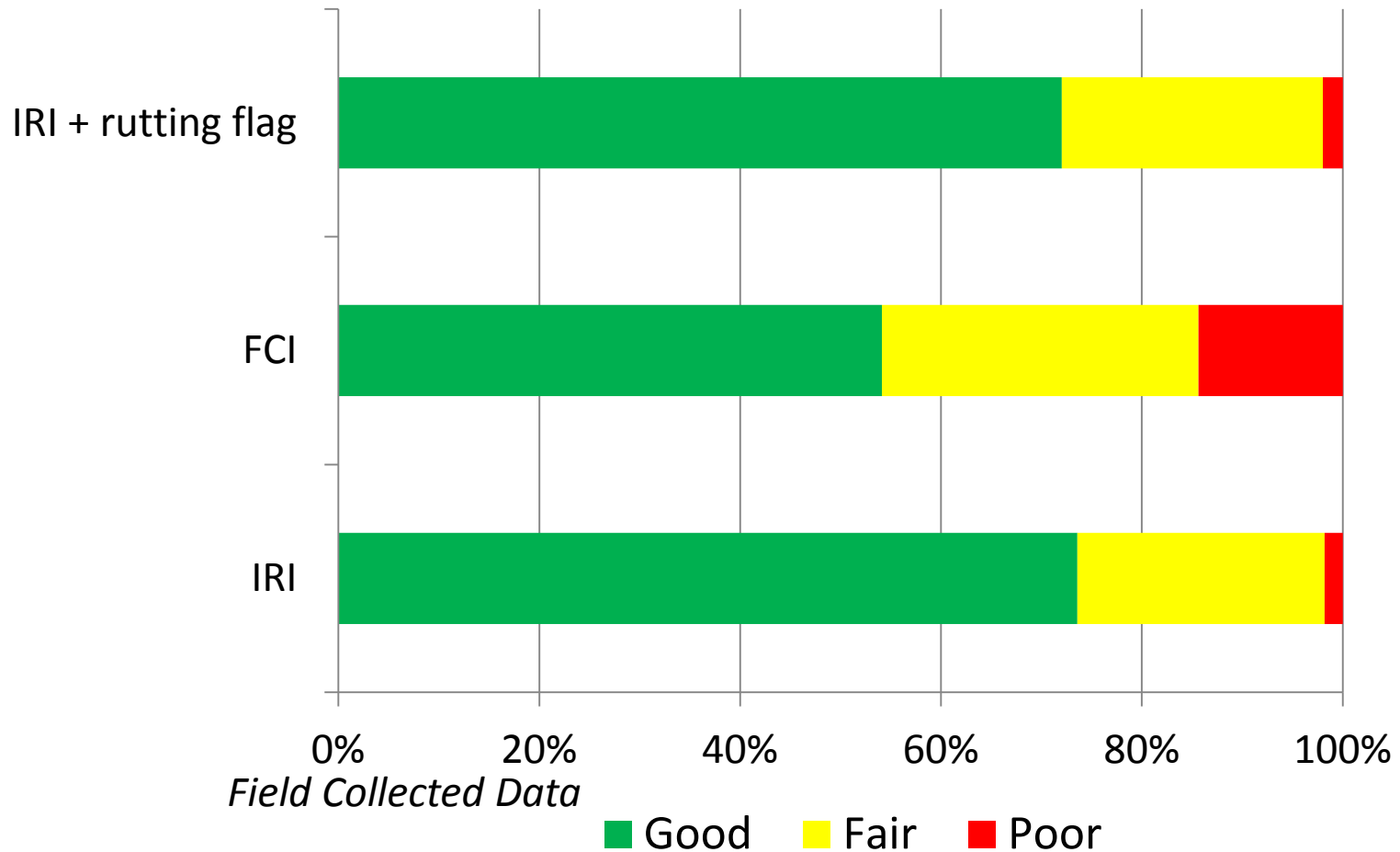
IRI Comparison – Summary

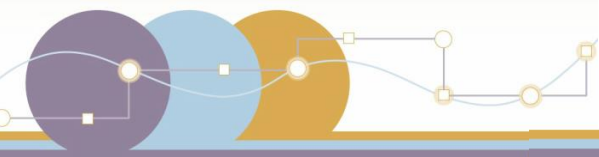
Do HPMS, state, and field data collection methods tell us the same thing?





Comparing Good/Fair/Poor Options





What Are We Doing Now?

Building Our Strength

- ➡ Awareness
- ➡ Capacity Building Plan
- ➡ Information Access
- ➡ Tools

The Performance Story

- ➡ Workshops
- ➡ Benchmark Studies
- ➡ Pilots
- ➡ Case Studies

Designing a Program

- ➡ New Measures
- ➡ Framework Elements
- ➡ Guidance
- ➡ Coordinating Efforts

Transportation Performance



Our system at work



HOME

About Transportation Performance

Our Transportation Investment

Our Economic Well-Being

Our Mobile Lifestyle

Performance Measures

Our Mobile Lifestyle



No matter where you live or what your age, your lifestyle depends on transportation

>>read more

BORING BUT IMPORTANT

- Bridges in the U.S.: 599,766
- Bridges requiring repairs: 152,324
- Cost to repair them: \$140 billion
- What Americans spend each year on soft drinks: \$65 billion
- What the US spent in 2008 repairing bridges: \$12.8 billion

Source: AASHTO, ASCE, National Soft Drink Association

In the Spotlight

SEARCH



Mobile Moments: Bicycle Safety Infographic

630 cyclists died on U.S. highways in 2009.



Performance Report Showcase: Maryland's Annual Attainment Report.

This report gives Maryland residents a transparent assessment of the performance of their transportation system.



Infographic: How Long is It Taking Americans to Get to Work?

New York and Chicago have the longest commutes. What about your city?

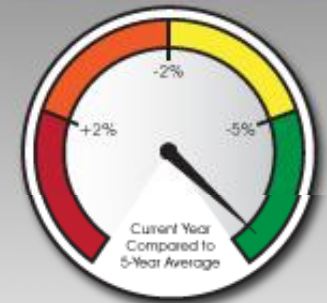
By AutoInsuranceCenter and posted at Visual.ly (<http://visual.ly/how-long-it-taking-americans-get-work>)

HOW ARE WE MEASURING UP?

HIGHLIGHTED MEASURE

LOWERING FATAL CRASHES

snapshot



trend





Our system at work



HOME

About Transportation
Performance

Our Transportation
Investment

Our Economic
Well-Being

Our Mobile
Lifestyle

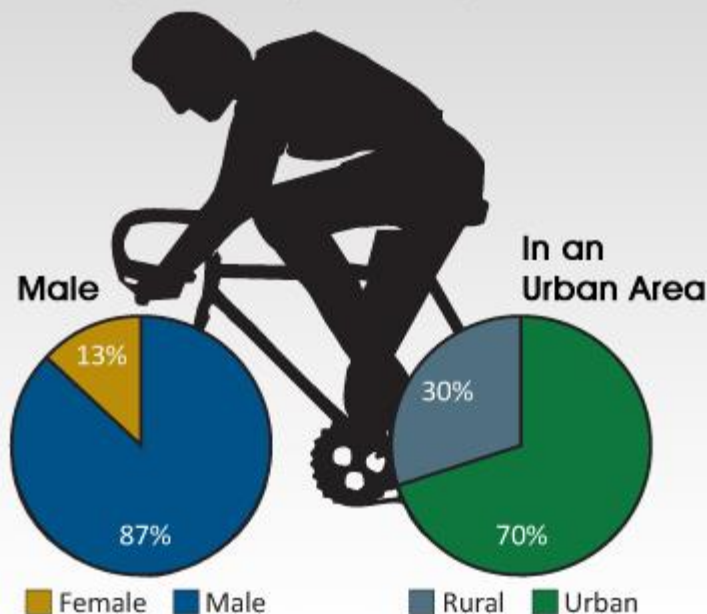
Performance
Measures

Mobile Moments: Bicycle Safety Infographic

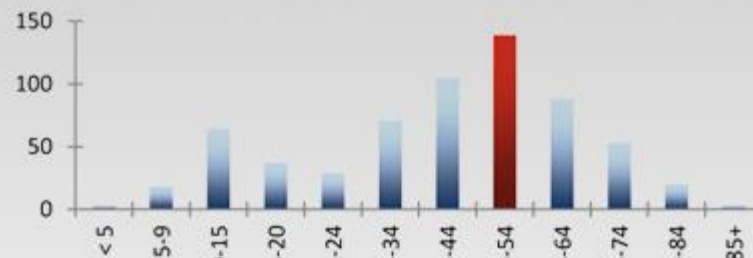
FOR DEMONSTRATION ONLY

630 cyclists died on U.S. highways in 2009.

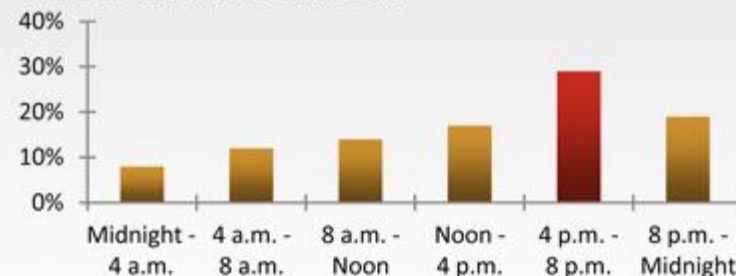
The typical bicycle fatality victim was:



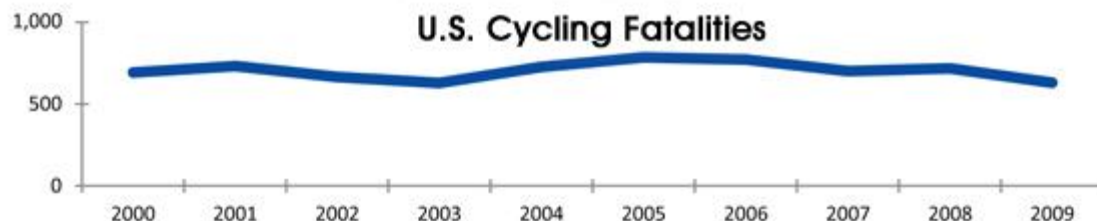
Between 45 and 54 Years Old



The accident occurred:



Between 4 p.m. and 8 p.m.



The number of trips by bicycle was up 25% between 2001 and 2009.

Source: National Household Travel Survey (2009).

>> [Transportation Performance: Learn More About Our System at Work](#)





Our system at work



HOME

About Transportation
Performance

Our Transportation
Investment

Our Economic
Well-Being

Our Mobile
Lifestyle

Performance
Measures

Select the
Report Type and
Measures You
Would Like to See

REPORT TYPE

>> NATIONAL

>> STATE

>> LOCAL

MEASURES

>> ALL

>> SAFETY

>> PAVEMENT
CONDITION

>> BRIDGE
CONDITION

>> CONGESTION

>> RELIABILITY

>> FREIGHT

>> ENVIRONMENT

>> PROJECT
DELIVERY



Transportation Performance

Learn More About Our System at Work

FOR DEMONSTRATION ONLY

Transportation Performance Report

This report summarizes transportation performance measures at the **NATIONAL** level.

HIGHLIGHTED MEASURES

These measures are recommended as a National Priority.

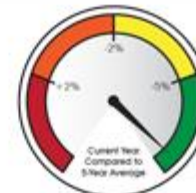
Are We Reducing Fatalities on our Roads?

YES

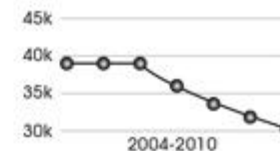
EXPLANATION

THE NUMBER OF FATAL CRASHES IS DOWN. The past five years have shown a steady decline in fatal crashes, but certain driver behaviors and crash types have remained a persistent threat to the safety of our roadways. There was a 19% reduction in fatal crashes in 2010 (versus the five-year average).

SNAPSHOT



TREND



Data Sources: Annual Fatal Crashes from FARS.

THE FACTS

- Fatal crashes in 2010 were at a 15-year low.
- Approximately 40,000 people are killed on the road every year.
- Seatbelt usage has shown an increasing trend since 1994. In 1994 usage was at 58%. In 2011 usage was 84%.¹ Studies have found seatbelts to be 56% effective at reducing fatalities.²
- Road departure crashes account for over 50% of fatal highway crashes.

ACTIONS

- FHWA and state DOT's have developed a focused approach to safety through the adoption of State Highway Safety Plans which establish strategic goals and include evaluation processes.
- Since the 1990's states have enacted graduated drivers licensing laws for teen drivers.
- Forty-eight states and D.C. have restricted nighttime driving and 45 states and D.C. have passenger restrictions.³
- Click it or Ticket mobilizations have been effective at increasing seatbelt usage.⁴



TPM and MAP-21

Engagement

Resources

Events

Transportation Performance Management



FHWA > Transportation Performance Management



North Carolina

Refining a Performance Management System



NC Refining a Performance Management System

NCDOT recognized they needed to refine their performance management system and therefore began a transformation process. (.pdf, 0.6 mb)



What is TPM?



NC Refining a
Performance
Management System



WSDOT's Effective
Communication of
Performance Drives
Results



Transportation Data
Palooza

TPM and MAP-21

- [What is TPM?](#)
- [National Goals](#)
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News and Events

- [FHWA Webinar Series: Asset Management Book Club Webinar](#)
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