Today’s Innovation, Tomorrow’s Best Practice: Performance Management and MAP-21

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Federal Highway Administration
Presentation Outline

- The Evolution of Transportation Performance Management (TPM)
- MAP-21 Performance Provisions
- The Future of TPM
Evolution of the Federal Program

- Build
- Project Oversight
- Process Review
- Expand
- Manage
- MAP-21
- Outcome Performance

Today's Innovation, Tomorrow's Best Practice
## Past USDOT Performance Reporting

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014 Target</th>
<th>2014 Actual</th>
<th>Met?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Percent NHS Good Pavements</td>
<td>55.0</td>
<td>54.3</td>
<td>57.1</td>
<td>57.6</td>
<td>58.4</td>
<td>59.0</td>
<td>Met</td>
</tr>
<tr>
<td>Percent NHS Structurally Deficient Bridges</td>
<td>8.3</td>
<td>7.8</td>
<td>7.1</td>
<td>6.7</td>
<td>6.6</td>
<td>6.0</td>
<td>Met</td>
</tr>
</tbody>
</table>
Changing Circumstances Required Us to Embrace Performance Management

- Infrastructure condition and resource constraints
- Public expectations
- Performance management has been proven in other industries
**The MAP-21 Charge** (23 USC 150(a) - Declaration of Policy)

<table>
<thead>
<tr>
<th>Performance Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Will:</td>
</tr>
<tr>
<td>• transform the Federal-aid highway program</td>
</tr>
<tr>
<td>• provide a means to the most efficient investment of funds</td>
</tr>
<tr>
<td>By:</td>
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<tr>
<td>• refocusing on national transportation goals,</td>
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<tr>
<td>• increasing accountability &amp; transparency, and</td>
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<tr>
<td>• improving project decision making</td>
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</tbody>
</table>
MAP-21 Performance Programs under USDOT

Highway Safety Programs

Federal-aid Highway Programs

Public Transportation Programs

NHTSA

FHWA

FTA
MAP-21 Background-Performance Elements

- National Goals
- Measures
- Targets
- Plans
- Reports
- Accountability and Transparency

www.fhwa.dot/map21
### MAP-21 National Goals

<table>
<thead>
<tr>
<th>Goal Area</th>
<th>National Goal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Safety</td>
<td>Reduce fatalities &amp; serious injuries on all public roads</td>
</tr>
<tr>
<td>Infrastructure condition</td>
<td>Maintain a state of good repair</td>
</tr>
<tr>
<td>Congestion reduction</td>
<td>Significantly reduce congestion on the NHS</td>
</tr>
<tr>
<td>System reliability</td>
<td>Improve the efficiency of the surface system</td>
</tr>
<tr>
<td>Freight movement &amp; economic vitality</td>
<td>Improve the national freight network, access of rural communities to markets, &amp; economic development</td>
</tr>
<tr>
<td>Environmental sustainability</td>
<td>Enhance system performance while protecting and enhancing the environment</td>
</tr>
<tr>
<td>Reduced project delivery delays</td>
<td>Accelerate project completion by eliminating delays in the project delivery process</td>
</tr>
</tbody>
</table>
Challenges and Opportunities

- Providing both consistency and flexibility
- Finding the right balance of national measures
- Managing performance across jurisdictions
- Data requirements and management
- Linking performance measures to investments
- Advancing technologies
**Principles Behind Proposals**

- Minimize the Number of Measures
- Phase in Requirements
- Increase Accountability and Transparency
- Consider Risk
- Understand that Priorities Differ
- Recognize Fiscal Constraints
<table>
<thead>
<tr>
<th>Performance Areas</th>
<th>NPRM</th>
<th>Comments Due</th>
<th>Anticipated Final Rule</th>
</tr>
</thead>
<tbody>
<tr>
<td>Highway Safety Improvement Program</td>
<td>March 28, 2014</td>
<td><strong>Closed June 30, 2014</strong></td>
<td>December 2015</td>
</tr>
<tr>
<td>Statewide and Metro Planning; Non-Metro Planning</td>
<td>June 2, 2014</td>
<td><strong>Closed October 2, 2014</strong></td>
<td>March 2016</td>
</tr>
<tr>
<td>Pavement and Bridge Performance Measures</td>
<td>January 5, 2015</td>
<td><strong>Closed May 8, 2015</strong></td>
<td>Early 2016</td>
</tr>
<tr>
<td>Highway Asset Management Plan</td>
<td>February 20, 2015</td>
<td><strong>Closed May 29, 2015</strong></td>
<td>Early 2016</td>
</tr>
<tr>
<td>System Performance Measures</td>
<td>Projected November 2015</td>
<td>120 days</td>
<td>n/a</td>
</tr>
</tbody>
</table>
Proposed Measures

- Safety Performance (4)
  - Number of fatalities
  - Rate of fatalities
  - Number of serious injuries
  - Rate of serious injuries

- Pavement and Bridge (6)
  - Percentage of pavements of the Interstate System in Good condition
  - Percentage of pavements of the Interstate System in Poor condition
  - Percentage of pavements of the non-Interstate NHS in Good condition
  - Percentage of pavements of the non-Interstate NHS in Poor condition
  - Percentage of NHS bridges classified as in Good condition
  - Percentage of NHS bridges classified as in Poor condition
Proposed Reporting Requirements

Safety

- State DOTs establish and report targets and progress in the annual HSIP report
- MPO report to State DOTs annually and report on progress in their System Performance Report as part of their transportation plan

Pavement and Bridge

- Baseline Performance Period Report – two- & four-year targets, baseline conditions, relationship with other performance expectations
- Mid Performance Period Progress Report – two-year condition/ performance, investment strategy effectiveness, progress discussion, target adjustment*, extenuating circumstances*, target achievement discussion if fail to demonstrate significant progress (* = optional)
- Full Performance Period Report – Same content as Mid Period report but reporting on four year targets
- MPOs report targets and progress to State DOTs per the Metropolitan Planning Agreement
Proposed Target Setting

Safety

- State DOTs shall establish targets annually for each performance measure identified.
- Be identical to the targets established by the SHSO for common performance measures.
- Represent performance outcomes anticipated for the calendar year following the HSIP annual report date.
- Represent the anticipated performance outcome for all public roadways within the State regardless of ownership or functional class.
- Reported in the HSIP annual report that is due after one year from the effective date of this rule and in each subsequent HSIP annual report thereafter.
- Include in the HSIP Report 10 years of serious injury data.
- Unless approved by FHWA, State DOTs shall not change their target once it is submitted in the HSIP annual report.
Proposed Target Setting

Pavement and Bridge

- All State DOTs and MPOs establish targets for each performance measure, aligned with biennial reports
- Targets to be established for the entire NHS network, regardless of ownership
- State DOTs may adjust four-year targets at the performance period midpoint
- State targets are statewide
- State DOTs have the option to establish additional urbanized/non-urbanized targets
- MPOs establish four-year targets by committing to support the State target or by establishing a quantifiable target when applicable
- If State adjusts target, any MPO adjustments must occur within 180 days
- If MPO changes a quantifiable target, must be done in a manner agreed upon and documented in Metropolitan Planning Agreement
Proposed Data Requirements

- Safety
  - Data taken from the Fatality Analysis Reporting System (FARS)
  - Data taken from the State motor vehicle crash database
  - Exposure data for the serious injury and fatality rate measures are calculated per 100 million VMT as reported in the HPMS.
  - Serious injuries shall be coded (A) in the KABCO injury classification scale through the use of the NHTSA serious injuries conversion tables.
  - Within 18 months of the effective date of the final rule, serious injuries must be determined using the latest edition of MMUCC
**Proposed Data Requirements**

- **Pavement and Bridge**
  - Pavement data provided to the Highway Performance Monitoring System (HPMS), 0.1 mile uniform pavement sections
  - Bridge data provided to the National Bridge Inventory (NBI)
  - Pavement metrics are IRI, cracking, rutting and faulting with thresholds corresponding to “Good/Fair/Poor”
  - Bridge metrics are condition of deck, superstructure and substructure (or culvert) with “Good/Fair/Poor” thresholds
  - Measures are % lane miles “Good/Poor”, and % deck area “Good/Poor”
System Performance - Input from Stakeholders

- Measure movement of people or vehicles?
- Performance perspective of the user or the planner/designer/operator?
- Speed vs. travel time
- Capturing impact of increased transportation choices
- Ability to tell a local, regional, and national story
- Data availability and technology advancements
- Impact of NHS expansion to arterials
The Future of Transportation Performance Management
Better Outcomes!

- Improved communication of the link between investments and results
  - Depict future scenarios under varying funding levels
- Increased consistency across the country
- Increased coordination across agencies and jurisdictions
- Greater understanding of what works
Improved Measures of Performance

- Synergies between National and other measures used by agencies
- Further refinement of the National measures
- Spur discussions on the value of future areas for performance management
- Improved data collection, integration, mining, reporting, and visualization
Communicating Transportation Performance

Infographics

National Safety Report

Are We Making Our Roads Safer?

While the number of fatalities on our roads continues to decline, injuries have slightly increased. Certain driver behaviors and crash types have remained a persistent threat to the safety of our roadways.

<table>
<thead>
<tr>
<th>Number of Fatalities</th>
<th>Projection</th>
</tr>
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<tbody>
<tr>
<td><strong>33,210</strong> (Annual 5-Year Average)</td>
<td>States are projected to reduce fatalities below <strong>28,000</strong> by 2017</td>
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<tr>
<td><strong>1.14</strong> (Per 100M VMT)</td>
<td>States expect the fatal crash rate to decrease by 40%</td>
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</table>

Data: Annual Fatal Crashes from FARS; Data are from latest available year.

Performance Reports
Communicating Transportation Performance

America In Motion!
It's hard not to marvel at the transportation system that keeps America — and you — going.

Demographics Changing Transportation
As we look to the future of transportation, we see that America’s needs are evolving.

How is Transportation Funded in the U.S.?
Learn more about how the United States funds transportation and why innovative funding sources are needed.

Mobile Moments: Bicycle Safety Infographic
630 cyclists died on U.S. highways in 2009.
Transportation Performance Management

Thank You

FSWhitson@dot.gov

http://www.fhwa.dot.gov/tpm/