Webinar objectives

- The purpose of this webinar is to reiterate performance management requirements. i.e., what does a “data-driven” realistic and attainable annual performance target involve?
What is Performance Management?

- Performance management is a strategic and outcome based approach that uses system information to inform investment and policy decisions.
### Key Safety Performance Management Milestones

<table>
<thead>
<tr>
<th>Year</th>
<th>Event</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009</td>
<td>NHTSA/GHSA Report</td>
</tr>
<tr>
<td></td>
<td>States voluntarily included PMs in FY2010 HSPs</td>
</tr>
<tr>
<td>2012</td>
<td>MAP-21 enacted</td>
</tr>
<tr>
<td></td>
<td>NHTSA Issued interim final rule</td>
</tr>
<tr>
<td>2013</td>
<td>PMs required in FY14 HSPs</td>
</tr>
<tr>
<td>2016</td>
<td>FAST Act enacted</td>
</tr>
<tr>
<td></td>
<td>NHTSA issued IFR</td>
</tr>
<tr>
<td></td>
<td>FHWA issued safety PM rule</td>
</tr>
<tr>
<td>2018</td>
<td>NHTSA issued FAST Act final rule</td>
</tr>
</tbody>
</table>
What are the requirements?

HSPs shall include—

• quantifiable **annual performance targets** for each performance measure;

• **justification** for each performance target, that explains why each target is appropriate and evidence-based;

• a **strategy** for programming funds apportioned to the State under this section on projects and activities **that will allow the State to meet the performance targets**.
What are the requirements? (Continued)

HSPs shall include—

• § 1300.11(c)(3) (HSP Contents)— “For program areas where performance measures have not been jointly developed (e.g., distracted driving, drug-impaired driving) for which States are using HSP funds, the State shall develop its own performance measures and performance targets that are data-driven.
State Performance Measures

• At least one performance measure (and target) for each program area.

• States must develop their own measures & targets for program areas where core NHTSA/GHSA agreed upon measures do not exist e.g., distracted driving, older drivers, child passenger safety, and EMS.

• Performance measures must specifically relate to the program area.

• States should not use total fatalities, serious injuries and fatality rate measures in lieu of program specific PMs as a “catch all” for projects that do not directly impact one of the 12 core PMs.
GAO Report: Improved Reporting Could Clarify States' Achievement of Fatality and Injury Targets

- In October 2019, the Government Accountability Office (GAO) published a report on whether or not States use performance measures to make traffic safety funding decisions.

- The audit concluded that many States did not provide the required assessments of fatality targets.

- “GAO found that in the 2019 plans submitted by states to NHTSA, less than a third of states reported how performance targets and funded projects were linked”.

GAO’s Recommendations to NHTSA

• Recommendation 1: The NHTSA Administrator should provide direction and clarification to States to ensure compliance with requirements to assess and report progress made in achieving fatality targets.

• Recommendation 2: The NHTSA Administrator should develop and implement a mechanism that communicates to Congress and other stakeholders, whether States achieve their fatality and serious injury targets.
Data driven = Linkage

- NHTSA regulation requires “a description of the linkage between program-area problem identification data, performance targets, identified countermeasure strategies and allocation of funds to planned activities.” (23 CFR Part 1300.11(d))

- Per the GAO Report – “We <GAO> examined the sections of 2019 HSPs where states are prompted to provide this linkage, and found, however, that less than a third of states (12 of 52) described all the linkages between their performance targets and the countermeasure strategies in those sections.”
Terminology

Achievable

Aggressive

Aspirational

Attainable

Evidence-Based

Goals

Projections

Targets

Realistic

Data-Driven
What does data-driven mean?

- “Data-driven means informed by a systematic review and analysis of quality data sources when making decisions…”.
Aspirational (Zero) Targets

- Aspirational targets are acceptable as a “vision” and as part of the State’s longer-term prevention strategy.

- Aspirational targets set the stage for collaboration.

- The Road to Zero acknowledges “it will take a generation” to bring about this change. – RTZ Coalition: A Vision for Achieving Zero Roadway Deaths, by 2050
Goals of Safety Performance Management

- Augment planning
- Increase coordination
- Set goals

- Connect goals to action (linkage)
- Direct resources to where most needed
- Assess progress

- Communicate priorities and results
- Other goals?
Limitations of Performance Management (Data challenges)

- **Fall 2019:** CY 2018 FARS ARF data released
- **Winter/Spring 2020:** States establish CY 2021 PMs
- **July 1, 2020:** States submit CY 2021 targets in the FY21 HSP
- **August 31, 2020:** States submit CY 2020 targets in the 2019 HSIP report
- **Fall 2020:** CY 2019 FARS ARF data released
- **December 30, 2020:** States report progress on CY 2020 targets
- **2020 FARS released Fall 2021**
- **2021 FARS released Fall 2022**
Limitations of Performance Management

Many factors affect highway safety performance:

- Other agencies’ safety efforts
  - State mandates
  - TZD movement
  - Emerging risk factors
  - Changes in public safety consciousness

- Economic fluctuations
  - Weather
  - Demographic and travel pattern changes
  - Employment patterns and changes
Basic “Data Driven” Target Setting Process

- Analyze trends
- Assess expected strategy impacts
- Anticipate levels of effort
- Adjust for external factors
When setting targets, consider the following:

- Were quality data sources used to inform the target?
- Is the CY 2021 target attainable (by 12/31/2021)?
- Is there a clear linkage between problem ID, targets, countermeasures, and funding? (Activities/investments should allow the State to meet its targets)
- Does the 2021 target guide your FY 2021 investments?
- Do strategies need to be adjusted?
Data-Driven

- Compare the targets to historical trends to assess what is reasonable and attainable (use baselines).

- Do the targets align?

- Is there adequate justification for the target selections (including external factors and investments made outside SHSO, if needed)?
**Baselines**

- Compare the targets to historical trends to assess what is reasonable and attainable.

- NCSA Tools, Publications, and Data webpage: [https://cdan.nhtsa.gov/](https://cdan.nhtsa.gov/)
Select on the map below to see a State report or View USA Crash Location Map

View Native American Traffic Safety Facts

STS1 Reports Contain Additional Information From The Following Sources

Federal Highway Administration: Highway Statistics Series
United States Census Bureau: Population Data

Contact NCSARequests@dot.gov for any questions or comments.
Fatality and Injury Reporting System Tool (FIRST)

The new query tool allows users to construct customized queries using data not only from NHTSA's Fatality Analysis Reporting System (FARS) but also from the General Estimates System (GES) / Crash Report Sampling System (CRSS) to generate injury estimates.

Select Fatality and/or Injury

- Fatal Motor Vehicle Crashes
- Estimated Injury Only Motor Vehicle Crashes
- Estimated Property-Damage-Only (PDO) Motor Vehicle Crashes
- Estimated Injury and PDO Non-Fatal Motor Vehicle Crashes
- All Motor Vehicle Crashes

Select Time Frame

Select State or Region

Filter Your Selection

Build Your Reports

Current Criteria:
Crashes ➤ Fatal Motor Vehicle Crashes ➤ Years: 2014-2018 ➤ Report Type: Table > Rows (Crash Date (Year)); Columns (Crash Date (Month))

Contact NCSAResquests@dot.gov for any questions or comments.

https://cdan.dot.gov/query
Sample Trend Line

Linear Trend Analysis
5 Most Recent Years

Annual Counts

y = 4x + 468
R² = 0.1882
Target alignment

• Targets for individual core performance measure targets (e.g. traffic fatalities (C-1) should be aligned with other core performance measure targets (e.g., number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above (C-5) and pedestrian fatalities (C-10).

• Due to interrelationship, States may inadvertently set conflicting targets that result in unaligned targets. For example, a State sets a target to reduce traffic fatalities C-1 by 30% and sets remaining core performance measure targets to “maintain” at current levels.
Target justification

- Does this justification:

  (1) Explain how the target is data-driven, realistic and attainable?

  (2) Discuss influencing factors? Address external factors (if needed)?

  (3) Address investments beyond the SHSOs influence (if needed)?
Coordination

- Strategic Highway Safety Plans (SHSP), updated every 5 years, have longer term goals.

- To the extent possible, NHTSA should be invited in SHSP planning and State annual target setting meetings.
Example of an Aggressive Target that Appears Unrealistic and Unattainable – 2021 HSP

- 2017-2021 total fatalities C-1 target: 425

- 2015-2019 moving average (baseline): 480 fatalities

- The FY21 target is 11.5% less than the baseline.

<table>
<thead>
<tr>
<th>2015-2019 Baseline:</th>
<th>480</th>
</tr>
</thead>
<tbody>
<tr>
<td>2017-2021 Target:</td>
<td>425</td>
</tr>
<tr>
<td>Reduction:</td>
<td>11.5%</td>
</tr>
</tbody>
</table>
Example of an Aggressive Target that appears Unrealistic and Unattainable – 2021 HSP

• However, for the State to reach their 2021 target using a 5-year moving average (2017-2021), the State must have no less than an average of 330 fatalities for 2020 and 2021. This represents a 31% decrease in traffic fatalities (compared to the average in 2017-2019).

  
  
  • Base Ave. 480  
  • 2015 - 475  
  • 2016 - 460  
  • 2017 - 500  
  • 2018 - 480  
  • 2019 - 485 (estimated)  
  
  • Target Ave. 425  
  • 2017 - 500  
  • 2018 - 480  
  • 2019 - 485 (estimated)  
  • 2020 < 330  
  • 2021 < 330
Example of Aggressive Target without Adequate Justification and Alignment – 2021 HSP

- C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021.

- Justification: The performance target was selected by using a polynomial trend line.

- Target Alignment: Targets for C-5, C-6, and C-10 are all set to “increasing”.
Example of Aggressive Target with Adequate Justification – FY 2021 HSP

C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021

**Justification:**

<table>
<thead>
<tr>
<th>Overall economic conditions</th>
<th>Improvements to overall programming and funding changes</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gas prices</td>
<td>Publicity</td>
</tr>
<tr>
<td>Per capita alcohol consumption</td>
<td>Heightened enforcement</td>
</tr>
<tr>
<td>Gas prices</td>
<td>Educating motorist</td>
</tr>
<tr>
<td>Anticipated Vehicle Miles Traveled</td>
<td>Additional safety investments from agencies outside the SHSOs</td>
</tr>
<tr>
<td>Vehicle technologies</td>
<td>State Legislative changes</td>
</tr>
</tbody>
</table>
Example of Aggressive Target with Adequate Alignment – FY 2021 HSP

C-1 Number of traffic fatalities, requires a 31% average reduction in fatalities in 2020 and 2021

Target Alignment:

- C-5 Number of fatalities in crashes involving a driver or motorcycle operator with a BAC of .08 and above decreases 25%
- C-6 Number of speeding-related fatalities decreases 8%
- C-10 Number of pedestrian fatalities decreases 5%
Data driven performance management

- Establish Targets
- Align activities with problem ID
- Use targets to direct resources
- Fund proven effective (or innovative) activities
- Routinely monitor progress
- Adjust strategies, as needed
Transparency & Accountability

Performance measures:

• Help decision makers understand the effects of investment decisions.

• Improve communications between decision makers, stakeholders, and the traveling public.

• Enhances coordination among different safety agencies and plans.
SAFETY PERFORMANCE MANAGEMENT TARGET SETTING

COMMUNICATION PLAN AND TOOLKIT

https://safety.fhwa.dot.gov/hsip/spm/fhwasa18006/
Tying it all together

- Performance management allows for objective, data-driven discussions for how to best achieve highway safety goals.

- Performance management is both a planning tool and an evaluation tool.
Target Achievement Assessment and Significant Progress Determination

Dana Gigliotti

FHWA Office of Safety
PY2018 Target Cycle

Target Setting Coordination
- By Spring, begin engaging DOT, SHSO, and MPO stakeholders
- Set targets for PY2018

Target Approval
- By June, secure PY 2018 target approval from DOT/SHSO leadership

2017
- July 1: SHSO submits HSP to NHTSA including 3 identical safety targets

2018
- August 31: State DOT submits HSIP Annual Report to FHWA, including safety targets
- By February 27: MPOs establish safety targets

2019 - 2020
- December 2019: Data available to evaluate targets
- March 2020: States notified whether they met or made significant progress toward PY2018 targets
A State DOT is determined to have met or made significant progress toward meeting its safety performance targets when **at least four of the five** established targets:

a) are met

--- or ---

b) the outcome performance is better than the baseline
Actual vs Baseline Performance

PY2018 Target
(2014-2018)

PY2018 Actual Performance
(2014-2018)

PY2018 Baseline Performance
(2012-2016)
<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>Data Source for Target Achievement Assessment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fatalities*</td>
<td>2018 FARS Annual Report File (ARF)</td>
</tr>
<tr>
<td>Fatality Rate per 100M VMT*</td>
<td>2018 FARS ARF &amp; 2018 HPMS VM-2 Table</td>
</tr>
<tr>
<td>Number of Serious Injuries*</td>
<td>2019 HSIP Annual Report</td>
</tr>
<tr>
<td>Serious Injury Rate per 100M VMT</td>
<td>2019 HSIP Annual Report &amp; 2018 HPMS VM-2 Table</td>
</tr>
<tr>
<td>Number of Non-motorized Fatalities and Serious Injuries</td>
<td>2018 FARS ARF and 2019 HSIP Annual Report</td>
</tr>
</tbody>
</table>

* Identical Targets in the HSIP and HSP
## PY2018 Target Assessment Example

<table>
<thead>
<tr>
<th>Performance Measure</th>
<th>5-year Rolling Averages</th>
<th>Target Met?</th>
<th>Better than Baseline?</th>
<th>Met or Made Significant Progress?</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of Fatalities</td>
<td>420.6</td>
<td>390.0</td>
<td>398.4</td>
<td>No</td>
</tr>
<tr>
<td>Fatality Rate</td>
<td>1.406</td>
<td>1.320</td>
<td>1.330</td>
<td>No</td>
</tr>
<tr>
<td>Number of Serious Injuries</td>
<td>1,730.6</td>
<td>1,650.0</td>
<td>1,653.8</td>
<td>No</td>
</tr>
<tr>
<td>Serious Injury Rate</td>
<td>5.792</td>
<td>5.585</td>
<td>5.526</td>
<td>Yes</td>
</tr>
<tr>
<td>Number of Non-Motorized Fatalities and Serious Injuries</td>
<td>104.4</td>
<td>112.0</td>
<td>116.0</td>
<td>No</td>
</tr>
</tbody>
</table>

(4 out of 5 targets were either made or significant progress was made towards meeting the targets)
States Not Meeting Safety Performance Targets

• Develop and submit an HSIP Implementation Plan for FY 2021 by June 30, 2020 that meets the applicable statutory and regulatory requirements as described in the HSIP Implementation Plan Guidance.

• Use the FY 2017 HSIP apportionment only for HSIP projects in FY 2021
Safety Target Assessment Process

**Target Achievement Assessment**
- Data available approximately December 2019 to begin assessing State target achievement
- Notifications made no later than March 31, 2020

**FHWA Office of Safety**
- Notify Division Offices of official State determination of target achievement determination

**FHWA Division Offices**
- Notify State DOTs of official determination of target achievement by March 31, 2020
- Ensure States that do not meet or make significant progress submit FY2021 HSIP Implementation Plan by June 30, 2020
- Completed plan due to Office of Safety prior to October 1, 2020
Performance Measure Computations

Guidance Available:

*FHWA Procedures for Safety Performance Measure Computation and State Target Achievement Assessment*

Ongoing Training Opportunities

• Transportation Safety Institute (TSI) Trainings
  • “Data-Driven Highway Safety Planning” course
  • “Foundations of Highway Safety”

• National Highway Institute Trainings
  • “Transportation Performance Management for Safety” course.

• FHWA Office of Safety Website