

Transportation Performance Management (TPM) Implementation Plan



Investment Decisions



Aimed at a Better Performing
Transportation System



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Acronyms

AASHTO	American Association of State Highway and Transportation Officials
AMPO	Association of Metropolitan Planning Organizations
CFR	Code of Federal Regulations
CMAQ	Congestion Mitigation and Air Quality
CMM	Capability Maturity Model
CO2	Carbon Dioxide
DDSA	Data Driven Safety Analysis
DOT	Department of Transportation
ETG	Expert Task Group
FAST	Fixing America's Surface Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
FY	Fiscal Year
GHG	Greenhouse Gas
HPMS	Highway Performance Monitoring System
HSIP	Highway Safety Improvement Plan
ITIP	Integrated Transportation Information Platform
MAP-21	Moving Ahead for Progress in the 21st Century
MPO	Metropolitan Planning Organization
NBI	National Bridge Inventory
NCHRP	National Cooperative Highway Research Program
NHI	National Highway Institute
NHPP	National Highway Performance Program
NHS	National Highway System
NHTSA	National Highway Traffic Safety Administration
NPMRDS	National Performance Management Research Data Set
NPRM	Notice of Proposed Rulemaking
PHED	Peak Hour Excessive Delay
PM	Performance Management
PM1	Performance Measure Rule 1 (Safety)
PM2	Performance Measure Rule 2 (Pavement and Bridge Condition)
PM3	Performance Measure Rule 3 (System Performance, Freight, and CMAQ)
PSR	Present Serviceability Rating
R&R	Roles and Responsibilities
S&O	Stewardship and Oversight
SHSO	State Highway Safety Office
SME	Subject Matter Expert
SOV	Single Occupancy Vehicle
TAMP	Transportation Asset Management Plan
TMA	Transportation Management Association
TPM	Transportation Performance Management

TRB Transportation Research Board
TTTR Truck Travel Time Reliability
VMT Vehicle Miles Travelled



Introduction

Goal Of The Plan

The *Transportation Performance Management (TPM) Implementation Plan* aims to support Federal Highway Administration (FHWA) field staff, State Departments of Transportation (State DOTs), Metropolitan Planning Organizations (MPOs), and other stakeholders with implementing TPM requirements through clear communication of overarching goals, specific activities, and timelines set forth by FHWA. The plan aligns with the performance management requirements in the Moving Ahead for Progress in the 21st Century (MAP-21) and Fixing America's Surface Transportation (FAST) Acts. The TPM Implementation Plan identifies the broad goals to be achieved through successful implementation of performance management requirements of the Federal-aid highway program, and the specific activities aimed at achieving those goals. This plan covers the first major push of resources under development by FHWA to meet stakeholder needs through the beginning of the second performance period in 2022. Performance management has been successful in many states, but is still new to others. FHWA recognizes many State DOT and MPO performance management activities go beyond the Federal requirements, using and tracking additional performance measures, and applying them to local roads. While FHWA is supportive of and encourages this practice, this plan focuses specifically on meeting Federal performance management requirements. FHWA is committed to helping leaders in this field continue to advance, while meeting the needs of those just getting started. This plan focuses on resources and activities to support the rule requirements, noting that as this field continues to develop, stakeholder needs will continue to evolve; FHWA aims to respond in kind with continued stewardship around the performance management requirements. This plan will therefore be a living document for both FHWA and its partners, and will remain consistent with other strategic plans developed by individual FHWA program offices (e.g., Safety, Operations, Planning, Asset Management, etc.) highlighting implementation of activities related to performance management.

Background

Under Section 1203 of MAP-21, as amended by the FAST Act, Congress established seven national goals and directed the FHWA to establish national performance measures for the Federal-aid highway program, promulgated through rulemaking, in support of six out of the seven goals established in MAP-21. To meet the new statutory requirements, FHWA pursued a number of significant rulemakings. Collectively, the rules establish performance management requirements that address safety, infrastructure condition, system performance, traffic congestion, on-road mobile source emissions, and freight movement. The requirements encourage the most efficient investment of Federal transportation funds. Performance management increases the accountability and transparency of the Federal-aid highway program and provides a framework to support improved investment decision making through a focus on performance outcomes for key national transportation goals.

FHWA defines TPM as a strategic approach that uses system information to make investment and policy decisions to achieve national performance goals. Successful TPM implementation will lead States and MPOs to have data-driven processes in place for setting targets and reporting on progress, to document the linkage between their investment decisions and intended outcomes. Following the passage of MAP-21, FHWA articulated five key desired outcomes of the national TPM implementation: optimizing investments of public funds, improving consistency across the country, increasing coordination of decision-makers, increasing our understanding of what works, and communicating Federal investment returns.

Transportation Performance Management: Desired Outcomes

Optimizing Investments of Public Funds

- Transportation funding is limited, so we must maximize the return on the investment of the public dollars entrusted to transportation agencies and planning organizations.
- Better decisions, made with the overall system performance in mind, will result in the best “mix” of investments that will collectively maximize the performance gains of the system.

Improving Consistency Across the Country

- Many states already are involved in decision-making performance management today. Consistency in terminology, standards, and metrics will result in an easier transfer of knowledge so that we can hold an effective national conversation on transportation performance and develop valuable national performance reports.
- We will strive for measures that can be implemented and that are meaningful rather than the lowest common denominator. The easiest measure is not necessarily the best.

Increasing Coordination of Decision-Makers

- State DOTs, MPOs, transit agencies, local governments, and others all share in the responsibility to support national performance needs through their local decision-making.
- The planning process, a tool that already exists, is a key part of successful coordination. We will build on what is already working there.

Increasing Our Understanding of What Works

- This is a critical role for FHWA: What investment strategies are useful in achieving the targets set and the desired outcomes?
- While we have some knowledge today through our existing data tools, the transportation performance management process provides us with an opportunity to develop that knowledge base even further with our partners.

Communicating Federal Investment Returns

- Without a common set of metrics and national reporting, we are challenged today in being able to effectively report on the outcomes of transportation investments and the impact of the \$40B annual federal investment on our nation’s highways.
- The story we need to tell is not only what we are able to do but also what we are unable to do with existing resource constraints. This will inform discussions on future authorizations and federal funding levels.
- We should engage the public and decision-makers to ensure that we understand their needs and interests. The tools, messages and reporting should meet both technical and non-technical audiences where they are. This might include a range of educational, informational and analytical efforts.

With these outcomes in mind, collectively, the three published performance measure rulemakings establish the regulations needed to more effectively evaluate and report on safety, infrastructure condition, on-road mobile source emissions, traffic congestion, freight movement, and National Highway System performance across the Nation.

Performance Management is closely connected to the strategic goals of the [U.S. DOT Strategic Plan](#), with the prominent emphasis on safety and infrastructure. In preparation for TPM implementation both FHWA and many State DOTs have undertaken steps to align resources in support of these strategic goals:

- SAFETY: Reduce Transportation-Related Fatalities and Serious Injuries Across the Transportation System.
- INFRASTRUCTURE: Invest in Infrastructure to Ensure Safety, Mobility and Accessibility and to Stimulate Economic Growth, Productivity and Competitiveness for American Workers and Businesses.
- INNOVATION: Lead in the Development and Deployment of Innovative Practices and Technologies that Improve the Safety and Performance of the Nation’s Transportation System.
- ACCOUNTABILITY: Serve the Nation with Reduced Regulatory Burden and Greater Efficiency, Effectiveness and Accountability.

Table 1 provides specific information about the performance measures as well as respective linkages to the three published performance measure rulemakings, effective dates, and regulatory references.

Table 1: Performance Measure Rules

Measure Area	Performance Measures
Safety (PM1) <i>Rule Effective Date: April 14, 2016</i> <i>Regulatory Chapter: 23 CFR 924; 23 CFR 490 (Subpart A & B)</i>	<ul style="list-style-type: none"> • Number of fatalities • Fatalities per 100 million vehicle miles traveled • Number of serious injuries • Serious injuries per 100 million vehicle miles traveled • Number of non-motorized fatalities and non-motorized serious injuries
National Performance Management Measures to Assess Pavement Condition (PM2) <i>Rule Effective Date: May 20, 2017</i> <i>Regulatory Chapter: 23 CFR 490 (Subpart A & C)</i>	<ul style="list-style-type: none"> • 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

Measure Area	Performance Measures
<p>National Performance Management Measures to Assess Bridge Condition (PM2)</p> <p><i>Rule Effective Date: May 20, 2017</i></p> <p><i>Regulatory Chapter: 23 CFR 490 (Subpart A & D)</i></p>	<ul style="list-style-type: none"> • Percentage of NHS bridges classified as in Good condition • Percentage of NHS bridges classified as in Poor condition
<p>Performance of the National Highway System (System Performance) (PM3)</p> <p><i>Rule Effective Date: May 20, 2017</i></p> <p><i>Regulatory Chapter: 23 CFR 490 (Sub. A & E)</i></p>	<ul style="list-style-type: none"> • Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the Interstate that are reliable • Non-Interstate Travel Time Reliability Measure: Percent of person-miles traveled on the non-Interstate NHS that are reliable
<p>Freight Movement on the Interstate System (PM3)</p> <p><i>Rule Effective Date: May 20, 2017</i></p> <p><i>Regulatory Chapter: 23 CFR 490 (Sub. A & F)</i></p>	<ul style="list-style-type: none"> • Freight Reliability Measure: Truck Travel Time Reliability (TTTR) Index
<p>Measures to Assess the CMAQ Program: Traffic Congestion (PM3)</p> <p><i>Rule Effective Date: May 20, 2017</i></p> <p><i>Regulatory Chapter: 23 CFR 490 (Sub. A & G)</i></p>	<ul style="list-style-type: none"> • Peak Hour Excessive Delay (PHED) Measure: Annual Hours of Peak Hour Excessive Delay (PHED) Per Capita • Non-Single Occupancy Vehicle Travel (SOV) Measure: Percent of Non-Single Occupancy Vehicle (SOV) Travel
<p>Measure to Assess the CMAQ Program: On-Road Mobile Source Emissions (PM3)*</p> <p><i>Rule Effective Date: May 20, 2017</i></p> <p><i>Regulatory Chapter: 23 CFR 490 (Sub. A & H)</i></p>	<ul style="list-style-type: none"> • Emissions Measure: Total Emission Reductions

Additionally, three rulemakings related to safety, planning, and asset management establish additional requirements associated with performance based planning, programming, and coordination, as described in Table 2.

Table 2: Additional Performance Management-Related Rules

TPM-Related Rules	Rule Effective Date	Regulatory Chapter	Requirements
Highway Safety Improvement Program (HSIP)	April 14, 2016	23 CFR 924	Integrates performance measures, targets, and reporting into HSIP
Statewide and Non-Metropolitan Planning; Metropolitan Planning	June 27, 2016	23 CFR 450 and 49 CFR 613	Defines coordination for target selection and performance-based planning and programming requirements
Highway Asset Management Plans for NHS	October 2, 2017	23 CFR 515	Defines the Asset Management Plan, as well as minimum standards

A timeline of all performance management and asset management plan key implementation dates is available on the TPM website at <https://www.fhwa.dot.gov/tpm/rule/timeline.pdf>, and is referenced again in the appendix to this plan. It includes specific statutory and regulatory references for easy reference.

Implementation of these rules involves multiple offices across the U.S. Department of Transportation (U.S. DOT). FHWA is coordinating within its own organization on implementation, and with relevant offices in the Federal Transit Administration (FTA) and the National Highway Traffic Safety Administration (NHTSA).

Desired Outcomes of Successful TPM Implementation

FHWA is committed to supporting effective implementation of TPM to ensure States and MPOs are using a performance-based approach in their transportation planning and programming, setting meaningful targets for the TPM measures, and reporting at a level of detail needed for a national conversation on transportation performance. FHWA aims to provide State DOTs, MPOs, and other stakeholders with the information and resources they need to implement TPM and achieve a performance-based transportation system.

In order to carry out this mission, FHWA has established three overarching goals:

- FHWA field staff, State DOTs, MPOs, and other stakeholders have the information they need to implement TPM.
- FHWA field staff, State DOTs, MPOs, and other stakeholders build the professional capacity they need to carry out a performance-based program.
- State DOTs, MPOs, and other stakeholders integrate TPM into their way of doing business.

Below is a vision of full implementation of the TPM requirements, based on three primary goals and associated objectives. The next part of this report will discuss specific activities to achieve the vision.

Overarching Goal 1: FHWA field staff, State DOTs, MPOs, and other stakeholders have the information they need to implement TPM.

Timeline: While there will be ongoing activity to provide information related to the TPM rules, FHWA aims to complete critical guiding documents by the end of 2019.

How it's achieved: in order to achieve this goal, FHWA will:

1. Ensure that all State DOTs, MPOs, and FHWA field staff have clear information regarding rule requirements and expectations
2. Ensure that stakeholders understand processes and expectations for calculating performance measures and setting targets
3. Ensure that the processes for performance reporting and target achievement evaluation are clear to State DOTs, FHWA Division Offices, and FHWA Headquarters
4. Incorporate lessons learned from TPM implementation activities into ongoing programs and policies
5. Maintain clear information on milestones, roles, requirements, and resources available
6. Provide information in multiple formats, geared toward multiple audiences, including the general public, practitioners, and executives

Overarching Goal 2: FHWA field staff, State DOTs, MPOs, and other stakeholders build the professional capacity they need to carry out a performance-based transportation program.

Timeline: This goal reflects ongoing activities to support professional capacity building in order to fulfill initial regulatory requirements, as well as continuous program enhancement and evolution, up through and beyond the 2022 time horizon of this plan.

How it's achieved: in order to achieve this goal, FHWA will:

1. Provide technical assistance and learning opportunities on various topics, in a range of formats and levels of detail, to support TPM implementation
2. Develop in-person and web-based training through NHI, available as requested by State DOTs and MPOs
3. Foster opportunities for State DOTs and MPOs to learn from peers
4. Develop and disseminate high level analysis and discussion of State and MPO practices
5. Develop FHWA Division office staff's technical skills to ensure consistent implementation of the rules
6. Increase capacity for State DOTs and MPOs to use existing analytical tools and approaches to support relevant analyses for TPM
7. Update and maintain national data sets used for key analyses and measure calculations
8. Identify needs for and support development of new and expanded analytical tools and approaches

Overarching Goal 3: State DOTs, MPOs, and other stakeholders integrate performance management into their way of doing business.

Timeline: FHWA aims to achieve this goal over a period of at least five years, or sometime within the second performance period.

How it's achieved: This goal is longer term, using the efforts of FHWA associated with the first two goals and ongoing State DOT and MPOs activities to initiate this transformational change to broadly integrate

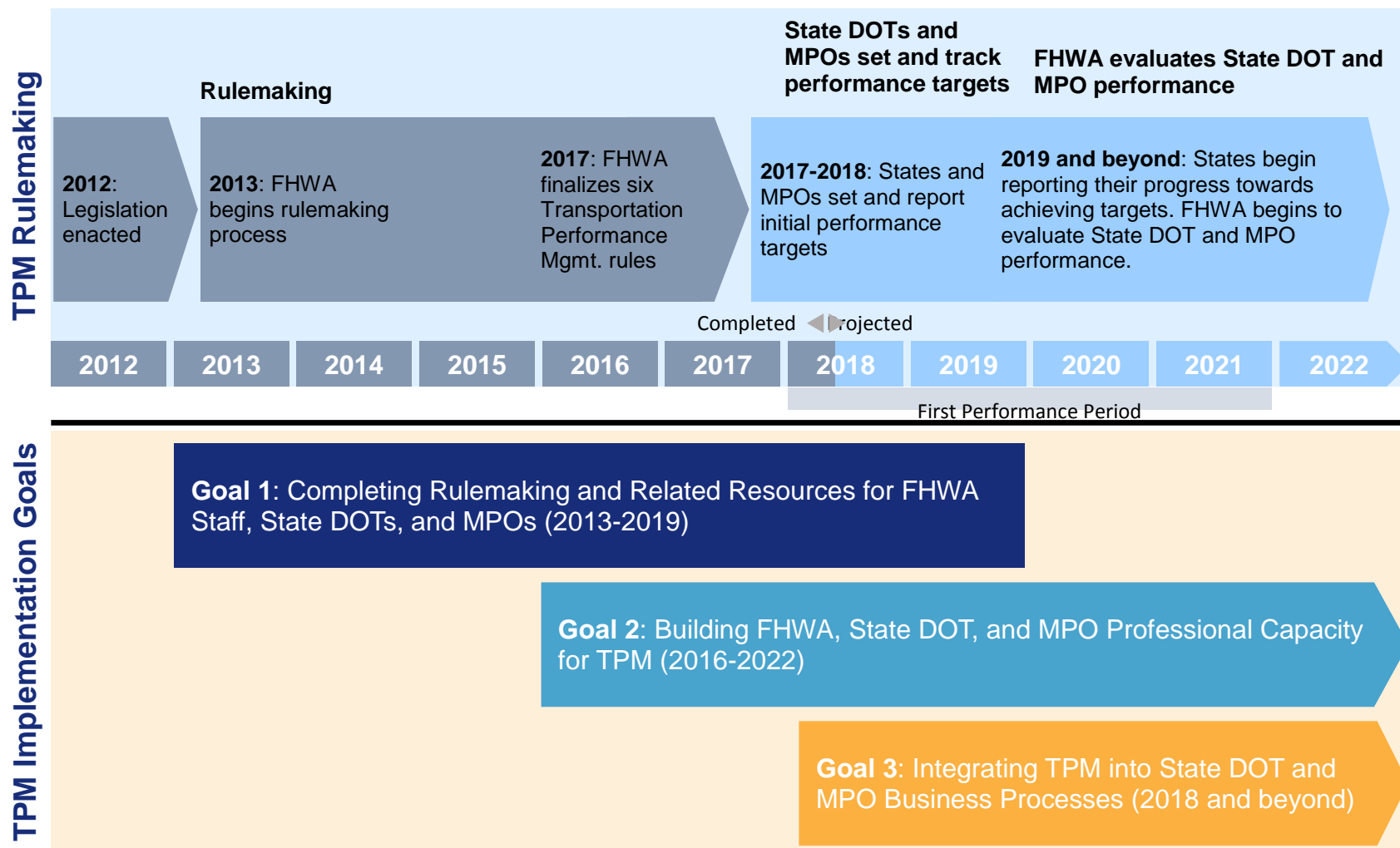
performance management and risk management strategies into business activities across the organization. The bullet points below describe some of the vision for this desired outcome:

1. State DOTs and MPOs will institutionalize TPM into every day business practices.
2. FHWA will continue to support TPM through Stewardship and Oversight
3. FHWA will regularly assess the effectiveness of the performance management program and technical assistance needs
4. FHWA will be a leader in communicating change management best practices around TPM

Figure 1 illustrates the timeline of rulemaking activities and the overarching goals.



Figure 1. TPM Implementation Plan Timeline





Supporting TPM Implementation

FHWA Activities Are Based On Stakeholder Needs

The activities in this implementation plan are grounded in feedback received from stakeholders over the past several years. FHWA is focused on helping State DOTs and MPOs to meet the requirements of the MAP-21 and FAST Acts for performance management. Feedback has been collected from readiness surveys with Division Offices, subsequent interviews with all 52 FHWA Division Offices to better understand the results, feedback at peer exchanges sponsored by FHWA, outreach with stakeholders at national association meetings, and through Frequently Asked Questions (FAQs) captured at the TPM target setting and implementation workshops held in 2016 and 2017.

FHWA will also continue to coordinate with the Federal Transit Administration (FTA) and National Highway Traffic Safety Administration (NHTSA), with whom FHWA shares responsibility over some of the rule-related activities.

FHWA Will Provide Programmatic Support for the TPM Program

In order to achieve the desired outcomes, FHWA has largely organized its activities associated with TPM outreach and rulemaking implementation support according to the following four (4) tracks. FHWA will continue to develop additional research and analysis as the field continues to move forward.

- **Policy and guidance:** FHWA will develop resources to provide policy clarification or supplemental guidance for the performance management rules as appropriate. Supplemental guidance will provide explanations, examples, and otherwise further clarify the expectations associated with rule implementation. This is distinct from training and technical assistance, which provide examples of possible approaches to rule implementation. FHWA will also flag issues for further analysis and evaluation to inform future program and policy decisions.
- **Capacity building and technical assistance:** FHWA will identify key needs and develop resources and materials to increase both FHWA and State DOT and MPO institutional capacity regarding TPM practices. This may include: noteworthy practices reports, templates, peer exchanges, targeted and tailored technical assistance, and technical tools and resources.
- **Data and Analytical tools/approaches:** FHWA will continue to identify needs and develop tools and analytical approaches to support States and MPOs in conducting the necessary analyses associated with TPM. FHWA notes that in some cases there will need to be new tools developed, but in many cases there are appropriate tools that States need more support in using.
- **Outreach and communications:** FHWA will continue to maintain clear communications with relevant internal and external stakeholders, making sure that all stakeholders know what is happening, when, and what they can and should do. This includes internal communication with and between FHWA headquarters and field offices, as well as external outreach to MPOs, state DOTs, and other appropriate partners.

FHWA has been preparing for the transition to a performance-based program for several years, including prior to MAP-21. As such, there are many useful resources available that pre-date this

document. A current compilation of TPM resources can be found on the FHWA TPM website at <https://www.fhwa.dot.gov/tpm/resources/resources.pdf>.

Implementation Activities By Goal Area

The following list of strategies and associated activities reflects current implementation efforts budgeted in Fiscal Year (FY) 2018, and proposed activities for FY 2019-2022. Congressional appropriations are needed for out year efforts, so all FY 2019 activities and beyond are proposed and may need to be adjusted based on specific budget appropriations in a given year. The tables indicate whether the activities apply to all performance areas (e.g., one of the three performance measure rules discussed in Table 1, or one of the process and planning-related rules discussed in Table 2. Leading up to and since the rules were published FHWA has undertaken many activities to in support of TPM implementation. Many of the activities completed in 2016-17 are detailed in the tables in Appendix 2. FHWA will continue to track status and completion of activities, and publish an annual list highlighting key activities completed in that year.

Goal 1: FHWA field staff, State DOTs, MPOs, and other stakeholders have the information they need to implement TPM

The activities mentioned here are in the areas of policy and guidance, and outreach and communications. FHWA aims to complete key policy clarification and guidance documents by the end of 2019, with continued ongoing outreach and communications activities.

Strategy: Policy and Guidance

TPM Rulemaking took several years to complete. Final rule publication was just the beginning of the roll-out of supplemental guidance, answers to Frequently Asked Questions, and in-person workshops on target setting and rule implementation.

Objective 1.1: Ensure that all State DOTs, MPOs, and FHWA staff have clear information regarding rule requirements and expectations

This objective focuses on providing specific details on the regulatory requirements, in order for all stakeholders to understand what they need to accomplish. Already completed activities include the final rules themselves and associated fact sheets and presentations (both in-person and virtual), information regarding target setting, and details associated with consequences of State DOTs not meeting or making significant progress toward safety targets.

Activity	Performance area	Timeframe
1 Maintain and regularly update online FAQs on rule requirements and expectations	All	Ongoing
2 Provide resources and assistance on the national definition for serious injuries	PM1	2017-19
3 Develop guidance on Transportation Asset Management Plan Development Processes, including Consistency Determination, Certification, and Recertification	Asset Management	2018
4 Develop guidance on pavement Data Quality Management Program	PM2	Ongoing

Activity	Performance area	Timeframe
5	Develop guidance on Alternative Pavement Condition Methods to Estimate a present serviceability rating (PSR)	PM2 2019
6	Develop CMAQ Performance Plan manual for MPOs	PM3 2018
7	Make applicability determination for CMAQ performance measures and MPO Performance Plans; maintain accurate and publicly available lists	PM3 2017; every four years
8	Share noteworthy examples to State DOTs and MPOs on coordination and planning agreements	Planning 2019
9	Develop informational resources on target setting for multi-state MPOs	Planning 2019
10	Share noteworthy examples for State DOT and MPO system performance reports	Planning 2019

Objective 1.2: Ensure that stakeholders understand processes and expectations for calculating performance measures and setting targets

This objective focuses specifically on supporting stakeholders in collecting and using the correct data, as well as analytical processes to calculate the performance measures. FHWA has previously provided some of this support associated with analyzing trends and using 5-year rolling averages for the safety performance measures, and has more recent and ongoing activities associated with the bridge, pavement, and system performance measures.

Activity	Performance area	Timeframe
11	Develop guidance on Safety Performance Measure computation methods	PM1 2018
12	Develop guidance on Pavement and Bridge Condition Measure computation methods and NHPP significant progress determination	PM2 2018
13	Review HPMS Pavement Data Report Card Results with State DOTs	PM2 Ongoing
14	Conduct or assist in PM2 pavement related compliance reviews	PM2 2019-22
15	Develop Measure Calculation method for Data Quality Improvement in HPMS/integrated transportation information platform (ITIP) Integration	PM2 2018-19
16	Develop method for calculating the emissions measure	PM3 2018
17	Develop guidance on freight reliability measure computation method	PM3 2018

Activity		Performance area	Timeframe
18	Develop guidance on how to calculate travel-time based performance measures	PM3	2018-19
19	Develop guidance on freight bottleneck analysis requirement	PM3	2018
20	Develop guidance on State reporting of performance metrics to HPMS	PM3	2018

Objective 1.3: Ensure that the process for target and report submission and evaluation is clear to State DOTs, FHWA Division Offices, and FHWA Headquarters

This objective focuses on ensuring that all stakeholders understand the process and their roles for target and report submission and evaluation, as some of these processes may be new for both State DOTs and for FHWA. FHWA has already developed and provided some of these details associated with submitting HSIP targets, and is currently developing the appropriate processes and documentation for PM2 and PM3.

Activity		Performance area	Timeframe
21	Partner with NHTSA to ensure coordination with SHSOs on targets and timelines	PM1	Ongoing
22	Provide information to State DOTs on how to submit targets and other required condition/performance information	PM2, PM3	2018
23	Develop processes for FHWA Headquarters and Division offices to coordinate on minimum condition requirements and penalties	PM2	2018
24	Develop training and resources for Division Office staff for Oversight of asset management plan development, reporting, including target submissions and integration into long range and state freight transportation plans	PM2, PM3, Planning, Asset Management	2019
25	Develop training and resources for Division Office staff on actions following assessment of target achievement (i.e., significant progress determination)	PM2, PM3	2019-20
26	Develop externally facing materials to communicate to State DOTs, MPOs, and other key partners the process for actions related to reporting, target achievement, and performance assessment	PM2, PM3	Ongoing
27	Identify areas for improvement based on analysis of biennial performance reports	PM2, PM3	2018-19
28	Develop guidance on how performance measures are incorporated into state freight planning requirements	PM3	2019-20

Objective 1.4: Incorporate lessons learned from early TPM implementation activities into ongoing programs and policies

This objective focuses on FHWA’s ongoing efforts to learn from early TPM implementation activities and experiences at State DOTs and MPOs to inform ongoing programs and policies. This information provides a useful continual feedback cycle as FHWA and partners look to the future, framing the ongoing evolution of performance management.

Activity		Performance area	Timeframe
29	Identify opportunities to improve integration of Safety PM in HSIP program assessments	PM1	2018-22
30	Provide information to assist State DOTs in incorporating Safety PM into SHSP updates	PM1	2018-22
31	Share best practices on how to address lag time between target setting, project programming and completion, and availability of data for evaluation.	PM1	2018-22
32	Review pavement Data Quality Management Plan guidance and update (as needed) for second performance period	PM2	2021-22
33	Use data on nationally significant freight bottlenecks and trends to support development of the National Freight Strategic Plan	PM3	2018-19
34	Gather information from stakeholders to inform future policy discussions and capacity building strategies	All	2019
35	Prepare Report to Congress on Performance Based Planning and Programming	Planning	2018
36	Use results from national TPM survey to inform future policy discussions and proposals	All	2018-19

Strategy: Outreach and Communication

FHWA has been regularly communicating with stakeholders since the passage of MAP-21 on rulemaking, and now on implementation. Outreach and communication will continue throughout the entire first performance period and beyond as FHWA, States and MPOs gain levels of organizational maturity around TPM, Asset Management and performance-based planning and programming.

Objective 1.5: Maintain clear information on milestones, roles, requirements, and resources available

This objective focuses on providing stakeholders with clear and timely information on rule-related milestones and deadlines, as well as new and existing FHWA resources that can support them in accomplishing those milestones. FHWA will continue to work with State and MPO partners to develop messaging that explains TPM implementation at Federal/State/local levels, and relationships between national and state-level performance measures.

Activity	Performance area	Timeframe
37	Continue to coordinate with NCHRP and AASHTO to develop and maintain Asset Management web and TPM portal	All Ongoing
38	Work with AASHTO to develop coordinated messaging on communicating performance results	All 2018 / Ongoing
39	Maintain Safety PM and HSIP websites with critical and timely information	PM1 Ongoing
40	Publish targets and progress made (as available) on U.S. DOT external website	PM1, PM2, PM3 Annual
41	Develop comprehensive handout of relevant FHWA resources and when/how to use them to support Asset Management, and Bridge and Pavement Condition	PM2 Ongoing
42	Share information on approved State Pavement Data Quality Management Programs	PM2 Ongoing
43	Maintain websites with critical and timely information	PM2, PM3 Ongoing
44	Support regular communication between FHWA HQ, Divisions, States/MPOs, and other stakeholders	PM2, PM3 Ongoing
45	Develop comprehensive handout of relevant FHWA resources and when/how to use them to support freight, congestion, and system performance	PM3 Ongoing

Objective 1.6: Provide information in multiple formats, geared toward multiple audiences, including the general public, practitioners, and executives

FHWA will continue to communicate with stakeholders about important issues and lessons learned related to performance management, and to develop materials that State DOTs and MPOs can use in communicating with their own stakeholders.

Activity	Performance area	Timeframe
46	Develop and contribute to regular public communications products (annual or biannual)	All Ongoing
47	Coordinate with FHWA Offices of Policy and Planning, as well as FTA, to provide consistent information related to implementation at MPOs, including coordination between State DOTs and MPOs	All Ongoing
48	Develop Safety PM Target Setting Communications Plan and Toolkit for safety practitioners	PM1 2018
49	Communicate results of broader biennial Transportation Performance Management survey	PM2, PM3 Biennial
50	Include relevant information on TPM in the national Conditions and Performance Report	PM3 Biennial

Goal 2: FHWA field staff, State DOTs, MPOs, and other stakeholders build the professional capacity they need to carry out a performance-based transportation program

FHWA aims to provide tools and resources necessary for State DOTs and MPOs to build basic professional capacity within three to five years, recognizing that this will be an ongoing process of change and improvement at their agencies. The activities mentioned here are in the areas of capacity building and technical assistance, and data and tools.

Strategy: Capacity Building and Technical Assistance

Providing professional capacity building opportunities and technical support to State DOTs and MPOs is a core FHWA activity, and a high priority associated with TPM implementation. FHWA began such activities well before the TPM rules were finalized, developing resources that have and continue to provide some of the conceptual framework to guide FHWA, and State and MPO TPM implementation activities.

Since passage of MAP-21, FHWA has incorporated and highlighted TPM concepts and implementation into ongoing activities such as developing best practices reports, conducting peer exchanges, and providing individualized technical assistance, in order to provide examples to other States and MPOs of how they could undertake similar efforts. One of the primary efforts for FHWA leading up to and since the rule finalization has been to develop and deliver formal training courses (both web-based and instructor-led) on many of the concepts, analyses, and processes associated with TPM implementation. As of March 2018 at least 15 web-based and instructor-led training courses through the National Highway Institute (NHI) that relate directly to TPM concepts and implementation activities have been developed, updated, or are in process.

As States and MPOs continue to move forward with implementation FHWA will continue to communicate closely and gather information on stakeholder needs for resources, training, and technical assistance, in order to most effectively support partners with implementation.

Objective 2.1: Provide technical assistance and learning opportunities on various topics, in a range of formats and levels of detail, to support TPM implementation

This objective focuses on providing a wide range of capacity building opportunities for stakeholders to gain necessary knowledge and skills for TPM implementation.

Activity	Performance area	Timeframe
51 Provide targeted support on how to use and interpret data for target setting	All	2017 / Ongoing
52 Provide targeted technical assistance on cross-cutting and program specific topics based and tailored to needs of State DOTs and MPOs	All	2017/Ongoing
53 Conduct targeted technical assistance on use of the capability maturity model in order to assist DOTs and MPOs with continual self-assessment and program improvement	All	2017 / Ongoing
54 Develop resources such as: best practices reports, templates, peer exchanges/targeted technical assistance, and technical tools and resources	All	Ongoing

Activity		Performance area	Timeframe
55	Provide targeted support on Asset Management Plan development and how to conduct an Asset Management Gap Analysis	Asset Management	2017 / Ongoing
56	Host internal and external webinars focused on how to use NPMRDS data to analyze and calculate measures	PM3	2017 / Ongoing
57	Provide web-based training on CMAQ Public Access System	PM3	2018

Objective 2.2: Develop and deliver in-person and web-based training through FHWA (NHI), available as requested by State DOTs

As part of this objective, FHWA has committed to developing new trainings and updating existing trainings to support State DOTs and MPOs and other stakeholders in all areas of TPM implementation – both in terms of overall approach and philosophy, as well as specific to the measure areas. Many of the courses are now available (as highlighted in Appendix 2), and courses identified below are expected to be available the end of 2018. All of the courses will be available for ongoing delivery, as needed.

Activity		Performance area	Timeframe
58	Develop Transportation Performance Management Overview for the MAP-21 and FAST Acts Web-Based Training (NHI 138005)	All	2018
59	Develop Effective Target Setting for Transportation Performance Management Web Based Training (NHI 138013)	All	2018
60	Develop TPM for Bridges Training Course (NHI 138008)	PM2	2018
61	Develop TPM for Pavements Training Course (NHI 138009)	PM2	2018
62	Develop TPM for Congestion Including Freight Course (NHI 138010)	PM2	2018

Objective 2.3: Foster opportunities for State DOTs and MPOs to learn from peers

Through this objective, FHWA will continue to provide and facilitate opportunities for State DOTs and MPOs to learn from one another and share experiences, resources, and lessons learned associated with TPM implementation.

Activity		Performance area	Timeframe
63	Partner with industry groups to provide technical assistance to State DOTs and MPOs	All	Ongoing
64	Foster opportunities to learn from peers through peer exchanges, webinars and meetings	All	Ongoing

Activity	Performance area	Timeframe
65	Develop a communication forum to link Subject Matter Experts (SMEs) and peer practitioners	All Ongoing
66	Coordinate with industry partners such as AASHTO, AMPO, and TRB, to host events and develop resources on relevant topics	All Ongoing
67	Conduct regional workshops jointly with AASHTO, AMPO, and FTA, on performance based planning and programming, and TPM	Planning 2018-19
68	Provide ongoing technical support to the AMPO performance based planning and programming work group	Planning 2018-21
69	Conduct workshops for State DOTs on life cycle planning, risk and asset management financial planning	Asset Management 2018
70	Continue and build upon activities of the Asset Management Expert Task Group (ETG)	Asset Management Ongoing

Objective 2.4: Develop and disseminate high level analysis and discussion of State and MPO practices

This objective focuses on FHWA activities to share information about State and MPO practices associated with TPM implementation, including information on the range of approaches, and high level analysis of their relative strengths and challenges, or context for their applicability.

Activity	Performance area	Timeframe
71	Provide information on general trends and approaches related to target setting and investment tradeoff analysis	All Ongoing
72	Share examples of how State DOTs and MPOs have communicated results	All Ongoing
73	Document noteworthy and effective practices to highlight activities among DOTs and MPOs	All Ongoing
74	Provide information on each State's targets and the methodologies used	All Annual
75	Develop a synthesis/white paper on how States and MPOs are linking investments to targets	Planning 2022
76	Share practices on how States link HSIP investments to targets and long term safety outcomes	PM1 Ongoing
77	Identify noteworthy practices and State DOT needs associated with TAMP development	Asset Management 2018
78	Analyze pavement Data Quality Management Programs for areas of improvement	PM2 2019
79	Share noteworthy practices of establishing targets for travel time measures – both initial and subsequent years	PM3 2019

Activity	Performance area	Timeframe
80	Develop examples of how to use performance management principles to manage the overall system and influence investment decisions	Ongoing

Objective 2.5: Develop FHWA Division office staff’s technical skills to ensure consistent implementation of the rules

This objective focuses on ongoing activities to ensure that FHWA Division office staff have the necessary knowledge and skills to support and review State DOTs and MPOs in TPM implementation.

Activity	Performance area	Timeframe
81	Ensure that FHWA Division office staff are aware of available resources to build their own technical skills and support States and MPOs with TPM implementation	Ongoing
82	Train FHWA Division office staff in how States and MPOs will submit data to the TPM reporting portal	Ongoing
83	Train FHWA Division office staff on how to review life cycle, risk, and financial analyses for asset management plans	Ongoing
84	Train FHWA Division office staff on how to use and analyze HPMS data	Ongoing
85	Train FHWA Division office staff on how to review analysis for identifying freight bottlenecks and integration into long range and freight transportation plans	Ongoing
86	Train FHWA Division office staff on how to use NPMRDS data for analysis of travel time reliability and freight bottle necks	Ongoing
87	Train FHWA Division office staff on how to use travel time analysis and visualization tools	Ongoing

Objective 2.6: Increase capacity for State DOTs and MPOs to use existing analytical tools and approaches to support relevant analyses for TPM

This objective focuses on providing training and technical assistance to support State DOTs and MPOs in using existing FHWA-developed or supported tools and analytical approaches in order to fulfill analytical requirements for TPM.

Activity	Performance area	Timeframe
88	Develop technical assistance resources on the Role of Analysis in TPM implementation	2018
89	Develop training and resources on investment strategies and scenarios	Ongoing

Activity		Performance area	Timeframe
90	Develop training on bottleneck analysis	PM3	2019-20
91	Conduct research on connections between performance based planning and data sources and tools	PM1, PM2, PM3, Planning	Ongoing
92	Raise awareness of existing tools and how they can be used	All	Ongoing
93	Demonstrate how existing data driven safety analysis (DDSA) tools can be used to support a performance-based HSIP.	PM1	Ongoing
94	Promote training on safety analysis tools	PM1	2019-22
95	Provide regular webinars and other opportunities to support States and MPOs in use of NPMRDS	PM3	2017/ Ongoing
96	Provide technical assistance to improve use of NPMRDS data and associated tools	PM3	Ongoing

Strategy: Data and Tools

Full implementation of TPM depends heavily on use of data driven processes to make investment decisions and identify strategies for improving the safety, condition, and performance of our national transportation system. In some cases this requires use of new data or analytical methods, or expanding their use in new ways. Requirements associated with data analysis vary among the performance area rules, with some requiring that States and MPOs use specific tools and analytical methods, while others provide some discretion to States and MPOs as long as they can demonstrate that they are using a valid process to make decisions.

FHWA is heavily involved with several data sets used for performance analysis, which are referenced in this plan – the Highway Performance Monitoring System (HPMS), the National Performance Management Research Data Set (NPMRDS), the National Bridge Inventory (NBI), and the CMAQ Public Access System. Though not specifically referenced in this plan, FHWA also provides significant resources and technical assistance to State DOTs on data driven safety analysis, which support a wide range of activities to improve roadway safety and move toward a performance-based HSIP. FHWA remains committed to the accessibility, timeliness, and quality of data used in TPM analyses. In the coming years FHWA will continue to update and maintain specific tools and data sets, and support development of new or expanded tools and data sets that assist State DOTs and MPOs in performing the necessary analyses and developing performance measures, targets, and investment strategies.

Objective 2.7: Update and maintain national data sets used for key analyses and measure calculations

This objective focuses on FHWA activities to update and maintain national data sets for use in measure calculation related to the three performance measure rules.

Activity	Performance area	Timeframe
97	Improve capabilities to estimate VMT at the MPO level through the Highway Performance Monitoring System (HPMS) to ensure statewide data quality and consistency	PM1 Ongoing
98	Leverage the Office of Safety's 2 nd Roadway Data Capabilities Assessment for information on where data improvements can be realized and work with those States to enhance their data efforts	PM1 2019-22
99	Support efforts in safety data management, governance, and the integration of state and local/MPO safety data	PM1 2018-22
100	Add and maintain data in HPMS format for use by States and FHWA Divisions	PM2 Ongoing
101	Initiate update to AASHTO Standards on pavement condition data collection and analysis	PM2 Ongoing
102	Update Interstate Highway Pavement Sampling data and report to reassess minimum condition level	PM2 2019
103	Update Practical Guide for Quality Management of Pavement Condition Data	PM2 2020
104	Provide automated data to pre-populate the online Performance Management Form	PM2, PM3 2018-19
105	Provide NPMRDS data to use in calculating metrics for first performance period. FHWA will continue to work to improve the NPMRDS and HPMS conflation.	PM3 2018-21

Objective 2.8: Identify needs for and support development of new and expanded analytical tools and approaches

While primarily focusing on increasing capacity for using existing tools and analytical approaches during this initial implementation period, FHWA continues to identify needs for and support development of additional or enhanced tools, at a range of scales or levels of detail.

Activity	Performance area	Timeframe
106	Identify gaps and needs related to data analysis and tools	All Ongoing
107	Identify gaps and needs related to tools and data analysis necessary to implement a performance based HSIP	PM1 Ongoing
108	Promote improvements in nonmotorized data collection related to exposure and interactions with motor vehicles	PM1 2022
109	Continue to develop and update CMAQ Emissions Calculator Toolkit	PM3 2017 / Ongoing
110	Continue to enhance the CMAQ Public Access System to incorporate performance measures	PM3 Ongoing

Activity		Performance area	Timeframe
111	Continue to seek and document ways to improve processes for estimating emissions	PM3	Ongoing
112	Update and maintain CMAQ project tracking system	PM3	Ongoing
113	Participate in pooled fund study with AASHTO and State DOTs and MPOs to develop a tool to assist with travel time data-based measure calculations	PM3	2018 / Ongoing

Goal 3: State DOTs, MPOs, and other stakeholders integrate performance management into their way of doing business

During this third and final stage of TPM implementation, FHWA is focused on stakeholder empowerment and making sure that the business practices and guidance established during the implementation of the first two goals are institutionalized into a new way of doing business.

Objective 3.1: State DOTs and MPOs will institutionalize TPM into every day business practices

Beyond the first performance reporting period, as State DOTs and MPOs become more acclimated to the paradigm shift towards performance management, key stakeholders will be well on their way towards “institutionalizing” TPM into their everyday business practices across their respective organizations. While this goal is ultimately achieved by State DOTs and MPOs, FHWA has developed initial indicators of success, keeping in mind the desired outcomes articulated at the beginning of this report. Initial indicators include:

- State DOTs and MPOs use their long term goals and objectives to develop targets and focus project selection in supporting target achievement
- State DOTs and MPOs coordinate appropriately on data analysis and target setting
- State DOT and MPO performance targets inform program development/project delivery
- State DOTs and MPOs approach operating, maintaining, and improving assets in a systematic and strategic way
- State DOTs and MPOs regularly use data analysis to identify and program the types of projects that will have meaningful impact on maintaining and improving condition of the transportation assets, appropriately balancing issues related to risk and considering life cycle costs of the alternatives
- State DOTs and MPOs are able to manage and ensure data quality to support the required performance measures
- State DOTs and MPOs have documented agreements for performance-based planning
- State DOTs and MPOs regularly evaluate opportunities for improvement in data analysis, project selection, and program delivery

Performance-based planning requirements will ensure that States and MPOs are better positioned to succeed with TPM implementation. Requirements for written agreements among State DOTs, MPOs, and transit agencies will dictate clear roles and responsibilities for performance-based planning including coordination on target setting, data collection and analysis, and reporting on progress towards target achievement.

Objective 3.2: FHWA will continue to support TPM through Stewardship and Oversight

FHWA will continue to play its Stewardship and Oversight (S&O) role as defined in 23 USC 106, while recognizing that States now have more authority to carry out project responsibilities traditionally handled by FHWA. FHWA's primary S&O interest is documented in S&O agreements between FHWA Division Offices and State DOTs, and ensuring periodic updates at critical junctures, including after passage of significant new legislation, adoption of executive orders affecting the responsibilities of either or both parties, or leadership changes. FHWA headquarters and field offices will continue to coordinate with State DOTs and MPOs, thus communicating consistent messages and cross-promoting connections to performance management, asset management, and performance based planning and design.

Objective 3.3: FHWA will regularly assess the effectiveness of the performance management program and technical assistance needs

FHWA is committed to continuing to provide useful and timely support to State DOTs and MPOs, and to tailoring activities to ensure that its program is effective and meets the ongoing and evolving technical assistance needs of State DOTs and MPOs.

FHWA will continue to review and adapt activities based on feedback mechanisms such as evaluations of events and workshops, training evaluations, the national TPM surveys, review of targets and reports and progress determinations, discussions with national transportation stakeholder organizations, TMA Planning Certification Reviews and results of national meetings.

Objective 3.4: FHWA will be a leader in communicating change management best practices around TPM

Effective performance management requires the ability to adapt to change, both in policy and within organizational structures. As such, FHWA is promoting change management as an essential tool to weather uncertainty. FHWA has and will continue to be a leader in promoting change management at a host of national association gatherings, including AASHTO, TRB, and AMPO annual meetings.

Among the ways FHWA is aligning change management and TPM is through the TPM Capability Maturity Model (CMM), a self-assessment tool for agencies to gauge their TPM capabilities in 10 component areas, including Organization and Culture, and External Collaboration and Coordination. The CMM tool articulates both current competency levels and steps needed to advance to more robust levels.

FHWA is also embracing change management within its own organization through the internal TPM Roles and Responsibilities (R&R) Tool, which articulates roles, responsibilities, and activities for FHWA to undertake as part of implementing a performance-based approach to the Federal-aid program. FHWA has actively shared its own experiences in development and use of this tool as an example of the type of organizational change needed to support TPM implementation. FHWA will continue to share its own experiences with States and MPOs to share an example of how change management is working at the Federal level, and to learn from best practices from States and MPOs at the same time.

Next Steps

As part of developing this plan, FHWA coordinated internally across multiple Headquarters, Resource Center, and Division offices, as well as with the AASHTO Performance-Based Management Committee, and incorporated feedback from its members. This plan is intended to be a living document. Once the

first full reporting cycle for all rules is complete, FHWA may decide to update it to respond to stakeholder needs as TPM evolves.

As previously discussed, FHWA is committed to ongoing communication and transparency with stakeholders regarding TPM implementation activities, and to continuing to gather feedback on challenges and needs. FHWA will continue to work with partners such as States, MPOs, FTA, and NHTSA, to review and adapt activities based on feedback mechanisms such as evaluations of events and workshops, training evaluations, the national TPM surveys, review of targets and reports and progress determinations, discussions with national transportation stakeholder organizations, TMA Planning Certification Reviews and results of national meetings.



Appendix 1: Statutory References – Performance Measures and Asset Management Plan Key Implementation Dates

A timeline of all performance management and asset management plan key implementation dates is available on the TPM website at <https://www.fhwa.dot.gov/tpm/rule/timeline.pdf>.

Appendix 2: Key Completed Implementation Activities

The following tables highlight some of the foundational implementation-related activities that FHWA has completed since the passage of MAP-21/FAST and the rule publications, and this publication of this plan in 2018. These activities constitute an important component of the full suite of resources and support that FHWA currently does and will continue to provide to State DOTs and MPOs.

Activity	Objective	Performance area	Timeframe
Publish final rules and associated fact sheets	1.1	All	2016-17
Conduct safety target setting workshops in each State	1.1	PM1	2016-17
Provide information for MPOs regarding safety target setting	1.1	PM1	2017
Provide information on consequences related to Safety funding if States do not meet or make significant progress towards meeting targets	1.3	PM1	2017
Conduct regional implementation workshops across the country	1.1	PM2, PM3, Planning, Asset Management	2017
Develop guidance on financial plans for developing Transportation Asset Management Plans	1.1	Asset Management	2017
Develop guidance on Incorporating Risk Management into Transportation Asset Management Plans	1.1	Asset Management	2017
Develop guidance on using a Life Cycle Planning Process to Support Asset Management	1.1	Asset Management	2017
Provide technical assistance and resources to support State DOT and MPO analysis of trends and targets based on rates and 5-year rolling averages	1.2	PM1	2017
Provide information to State DOTs and MPOs on submitting annual targets in the HSIP report	1.3	PM1	2017
Provide information on the requirements when States do not meet target achievement	1.3	PM1	2017
Develop comprehensive list of relevant safety resources to support Safety PM	1.5	PM1	2017
Develop a capability maturity model for DOTs and MPOs to use for self-assessment	2.1	All	2016

Activity	Objective	Performance area	Timeframe
Develop resources with greater level of detail on implementing life cycle planning, risk and asset management financial planning	2.1	Asset Management	2017
Develop Freight PM Primer to introduce concepts of using multimodal performance measures for freight planning and analysis	2.1	PM3	2017
Develop Introduction to Performance Measurement Web Based Training Course (NHI 138003)	2.2	All	2014 (available)
Develop Transportation Performance Management Overview for the MAP-21 and FAST Acts Course (NHI 138004)	2.2	All	2016 (available)
Develop The Role of Data in Transportation Performance Management Course (NHI 138011)	2.2	All	2017 (available)
Develop Effective Target Setting for Transportation Performance Management (NHI 138012)	2.2	All	2017 (available)
Develop Performance Based Planning and Programming Course (NHI 138007)	2.2	Planning	2017 (available)
Develop TPM for Safety Course (NHI 138006)	2.2	PM1	2016 (available)
Update Introduction to Asset Management Course/Workshop (NHI 136106 and 136106A)	2.2	Asset Management	2017 (available)
Develop Financial Planning for Transportation Asset Management Course (NHI 136002)	2.2	Asset Management	2017 (available)
Develop Highway Performance Monitoring System: Concepts, Data Collection and Reporting Requirements Course (NHI 151056)	2.2	PM2, PM3	2017 (available)
Develop Fundamentals of Freight Data Course (NHI 139011)	2.2	PM3	2017 (available)



Appendix 3: TPM Implementation Plan Communication Strategy

Since the passage of MAP-21, FHWA has actively communicated with and engaged stakeholders. This continues today, as the Transportation Performance Management requirements are implemented by State DOTs, MPOs and transit agencies across the country. Below are the guiding strategies that are consistent with how FHWA has engaged stakeholders to date and will continue to do so as the agency works to fully implement TPM nationally.

1. The [FHWA TPM website](#) is the central point for TPM communications, housing all documents intended for an external audience. The information is coordinated with all the relevant FHWA Program Offices; related Program Office and TPM pages are linked here as follows:
 - MAP-21: <https://www.fhwa.dot.gov/map21/>
 - Asset Management: <https://www.fhwa.dot.gov/asset/>
 - Asset Management Plan Development: <https://www.fhwa.dot.gov/asset/plans.cfm>
 - Safety Transportation Performance Management: <http://safety.fhwa.dot.gov/hsip/tpm/>
 - Applying Safety Data and Analysis to Performance-Based Transportation Planning: <http://safety.fhwa.dot.gov/tsp/fhwasa15089/>
 - Performance-Based Planning and Programming: https://www.fhwa.dot.gov/planning/performance_based_planning/
 - Highway Performance Monitoring System (HPMS): <https://www.fhwa.dot.gov/policyinformation/hpms.cfm>
 - National Bridge Inventory (NBI): <https://www.fhwa.dot.gov/bridge/nbi.cfm>
 - Operations and Performance Measurement: http://ops.fhwa.dot.gov/perf_measurement/index.htm
 - Freight Performance Measurement: http://www.ops.fhwa.dot.gov/freight/freight_analysis/perform_meas/index.htm
 - Congestion Mitigation and Air Quality Improvement (CMAQ) Program: https://www.fhwa.dot.gov/environment/air_quality/cmaq/
 - FTA Performance-Based Planning and Programming: <https://www.transit.dot.gov/regulations-and-guidance/transportation-planning/performance-based-planning-and-programming-0>
 - Report on USDOT Significant Rulemakings: <http://www.transportation.gov/regulations/report-on-significant-rulemakings>

2. TPM resources are communicated through a variety of channels as outlined in the table below.

TPM Resources	Communication Channels
Guidance Documents	Guidance documents are posted to the TPM website; an internal email is sent to FHWA staff announcing guidance; an external GovDelivery announcement goes out for public

TPM Resources	Communication Channels
	announcement. Internal and external webinars are held as appropriate.
FAQs	FAQs are posted to the TPM website and related program office websites.
Training	TPM training is available through NHI and TMS. Training is listed on the TPM website, can be found in the NHI catalogue , and FHWA staff can see a list of TPM related courses available in TMS on the TPM SharePoint page.
Workshops and Peer Exchanges	Capability Maturity Model Workshops are offered on request and sign up is available through the TPM website. FHWA is committed to offering implementation workshops and peer exchanges nationally based on stakeholder needs. Each event will be coordinated by the relevant Program Office and FHWA Division Offices. Communication for each workshop and peer exchange will vary by event. In general, for external events, FHWA will send a GovDelivery notice and update the online calendar.
Webinars	Upcoming webinars are announced via email, Outlook invitation, via the internal FHWA calendar, and through GovDelivery notices (subscribe here). Archives of recorded webinars are available on the TPM website.
TPM Readiness Assessment	FHWA relies on information from stakeholders to refine and improve implementation materials made available to stakeholders. FHWA sends surveys to FHWA Division Offices for response on behalf of their State and MPO partners.
TPM Office Hours	This flip teaching approach is used to allow learning before a webinar, and focus discussion during office hours on specific Q&As related to implementation. Opportunities for Office Hours are announced through GovDelivery notices.
Data and Tool Updates	Communication on data and tools will vary by program area and by tool. Updates may be delivered as guidance, via webinar, or communicated internally through a FHWA Program Office to its respective Discipline.

3. FHWA leverages planned national events to promote resources and upcoming events.
 - FHWA leverages existing networks and tools, as well as TPM workshops to engage and inform grantees.
 - FHWA seeks to be on the agenda for national association meetings to provide regular updates on the TPM Program.
 - Example organizations include AASHTO, AMPO, and APTA.
 - The TPM Roundtable will also be used to promote new information and to enlist stakeholder feedback.
 - FHWA regularly participates in TRB and its subcommittees on management, providing regular status updates on implementation.

4. FHWA HQ, Resource Center and Field Staff will continue to coordinate.
 - For each planned event and major policy update or change Division offices are notified followed by a GovDelivery notice.
 - Training for Division staff is coordinated through the discipline system, and respective Program Offices.

5. FHWA will update stakeholders on TPM activities identified in this plan.
 - The TPM Office will continue to offer regular webinar series such as the Executive Exchange, Let's Talk Performance and TPM Readiness webinars to highlight new resources, and showcase best practices from across the country.
 - FHWA will publish an annual list of highlights on the TPM website.

6. The TPM Implementation Plan is a living document.
 - FHWA will post the plan externally on the TPM website.
 - FHWA will rely on input from stakeholders to support implementation, and will refine the plan and associate products needed to support our partners.
 - FHWA will use any survey results received as inputs to future updates of this plan.
 - FHWA plans to update the TPM Implementation Plan at the end of the first performance period in 2021. FHWA will use a variety of approaches to actively engage stakeholders in the development of the update.



FHWA Transportation Performance Management