



Transportation Performance Management (TPM) is a strategic approach that uses system information to make investment and policy decisions to achieve performance goals. TPM involves determining what results are to be pursued, using information from past performance levels and forecasted conditions to guide investments, measuring progress towards strategic goals, and making adjustments to improve performance. TPM is grounded in sound data management, usability and analysis as well as effective communication and collaboration with both internal and external stakeholders. The key, however, to successful implementation of TPM practices lies in the organizational support and agency embrace of data-driven decision making.

Why TPM?

- Creation of Unifying Focus for Agency
- Prioritization of Investments Based on Performance Needs
- Feedback Loop between Decisions and Results
- Connect Individual Staff Activity to Agency Goals
- Transparent Decision-making
- Linking Funding Requests to System Performance
- Communication of the Benefits from Transportation Investments
- Fulfillment of Legislative Requirements

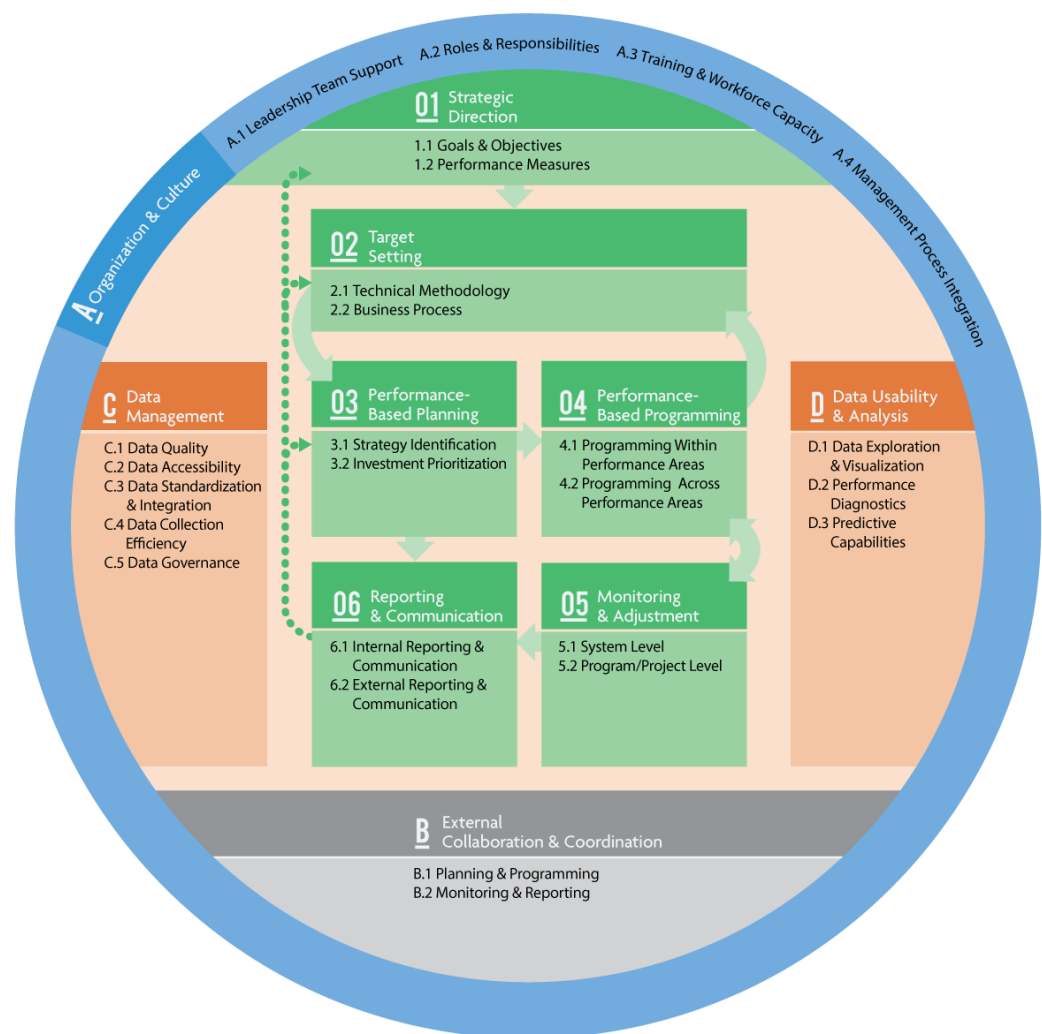
Above all else, TPM leads to improved performance.

Guidebook Purpose

The focus of this guidebook is to move the theory of TPM into practice by providing how-to information for agencies interested in implementing or improving the application of TPM. This guidebook is tailored to transportation agencies including State DOTs, MPOs, and transit agencies.

The TPM Framework

Building upon over a decade of transportation performance management research and agency practices, this guidebook introduces a comprehensive TPM Framework. Each numbered and lettered component below is discussed in a dedicated chapter within the guidebook.





What's Inside the Guide

Description of relationships between TPM Components

Component	Summary Definition	Relationship to the Strategic Direction
02. Target Setting	The use of baseline data, information on possible strategies, resource constraints and forecasting tools to collaboratively set targets	Targets turn goals, objectives and measures identified in the strategic direction into statements of success to promote accountability.
03. Performance Based Planning	Use of a strategic direction to drive development and documentation of agency strategies and priorities in the long-range transportation plan and other plans.	Strategies identified in the planning process define how an agency will achieve goals and objectives. Performance measures provide the means to evaluate/prioritize strategies.
04. Performance Based Programming	Allocation of resources to projects to achieve strategic goals, objectives and performance targets. Clear linkages established between investments made and their expected performance outputs and outcomes.	The selection of projects is guided by the goals and objectives and measures defined in the Strategic Direction.

Perspectives

"The real world examples and practitioner quotes provide a reality check to the guidebook. This isn't just another academic publication, but a resource that provides feasible ideas for agencies to implement to improve their practices."

— *Karen Miller, MoDOT*

"I can envision many uses and audiences for the factsheets, and have already used several of the guidebook examples in conversations here."

— *Lori Richter, WisDOT*

"When we prepared our 3rd Quarter Performance Report, we used a lot of the information from the draft guidebook."

— *Brian Hoeft, Regional Transp. Commission of Southern Nevada*

"I especially like how the callouts link related and important research that provide greater context."

— *Greg Slater, MD State Highway Administration*

"The easy to use format has helped us assess our level of maturity and anticipate next steps to share with our regional partners."

— *Monique de los Rios-Urban, Maricopa Assoc. of Governments*

Definitions of common terms

Common Term	What do they really mean?	Example
Vision Statement	An overarching statement of desired outcomes that is concisely written, but broad in scope, a vision statement is intended to be compelling and inspiring.	Ministry's (multinational) transportation systems maximizes the benefits of people, the environment, and our economy.
Mission	Statement that reflects the core functional purpose of an agency.	Plan, build, operate and maintain a safe, accessible, efficient and reliable national transportation system that connects people to destinations and markets throughout the state, regionally and around the world.
Goal	A broad statement of intention, a single job.	
Objective	A quantifiable statement, additional specificity.	
Performance Measure	A quantifiable indicator of achievement.	
Target	Level of performance achieved within a specific time frame.	2020
Output	Quantity of activity delivered through a project or program, focus on the "strategic level monitoring" subcomponent (3.1).	Miles of pavement repaired, miles of new pavement and area miles, the number of bridges rehabilitated, the number of new buses purchased.
Outcome	Results or impacts of a particular activity that are of most interest to system users. Focus on the "system level monitoring" subcomponent (3.2).	Travel time reliability, fatality rate, percent of users within useful life.

Distinct steps for implementation

STEP 1.2.4 Establish governance process

Description
With final measures approved, the agency is then ready to document the process and move to target setting. However, the performance measures selection process is not a one-off activity; measures should be continually assessed and modified. A governance process must be created to manage these adjustments to ensure changes reflect the needs of the agency and external stakeholders, data constraints, and other factors.

Important questions to ask:

- Obtain internal feedback from different users across the agency: will the selected measures support decision-making?
- Gather feedback from external stakeholders on higher-level measures: do they resonate?
- Consider gaps: what does the agency want to measure, but can't, because of data limitations? What new data sources are in the pipeline?

From answers to the above questions, the agency should adjust selected measures, develop supplementary measures that will provide additional support for decision-making, and explore the feasibility of collecting new data to fill gaps. Data may already be collected, but is not in an accessible or usable form; consider options to make such data useful for decision-making.

Examples
The **Stratford MPO**, which covers the Dover-Rochester-Berwick, ME urbanized area in New Hampshire, has a well-defined performance measuring governance process. Initial measure selection considers a number of factors as shown below.

Links to Other TPM Components
Component A: Organization & Culture
Component B: External Collaboration
Component C: Data Management
Component D: Data Usability & Analysis
(See TPM Framework)

Real-world examples

List of relevant resources

Resource	Year	Link
Performance Based Planning and Programming Guidebook	2013	http://www.fhwa.dot.gov/planning/performance_based_planning/tpm_guidebook/
Model Long Range Transportation Plans: A Guide for Incorporating Performance-Based Planning	2014	http://www.fhwa.dot.gov/planning/performance_based_planning/tpm_guidebook/tpmbrpl14045.pdf
Integrating Business Processes to Improve Travel Time Reliability	2011	http://onlinepubs.trb.org/onlinepubs/hqrp2/SHRP2-21(01)-89-1.pdf
NCHRP 806: Guide to Cross-Asset Resource Allocation and the Impact on Transportation System Performance		
Risk-Based Transportation Asset Management: Evaluating Threats, Capitalizing on Opportunities	2012	http://www.fhwa.dot.gov/asset/tpm/tpm12035.pdf
FHWA Scenario Planning Guidebook	2011	https://www.fhwa.dot.gov/planning/scenario_and_evaluation/tpm/scenario_planning_guidebook/tpmguidebook.pdf

Customizable action plan

ACTION PLAN

1. What TPM process will be discussed in this chapter, and if one exists, what do you want to work on?
 1.1 Technical Methodology 1.2 Business Process

2. What aspect of the TPM process listed above do you want to change?

3. What "stop" (discussed in this chapter) do you think could help you address the change listed above?
Technical Methodology: Establish a baseline Analyze historical trends Identify influencing factors and assets (aka, internal and external) Define target parameters Forecast future performance Document technical methodology
Business Process: Assign internal responsibilities and responsibilities Clarify purpose of the target Gather information through benchmarking Reflect external stakeholder interests Document the business process

4. To implement the "stop" identified above, what actions are necessary, who will lead the effort and what resources are needed?

Action(s)	Lead Staff	Dependencies

5. What are the potential barriers to success?

6. Who is external (internal and/or external) will collaborate with to implement this action plan?

7. How will success of these action plan projects be tracked/measured?

Quotes from practitioners

Connect Online

Visit the TPM Toolbox online to learn more about transportation performance management and to take your own TPM Capability Maturity Self-Assessment: www.tpmtools.org