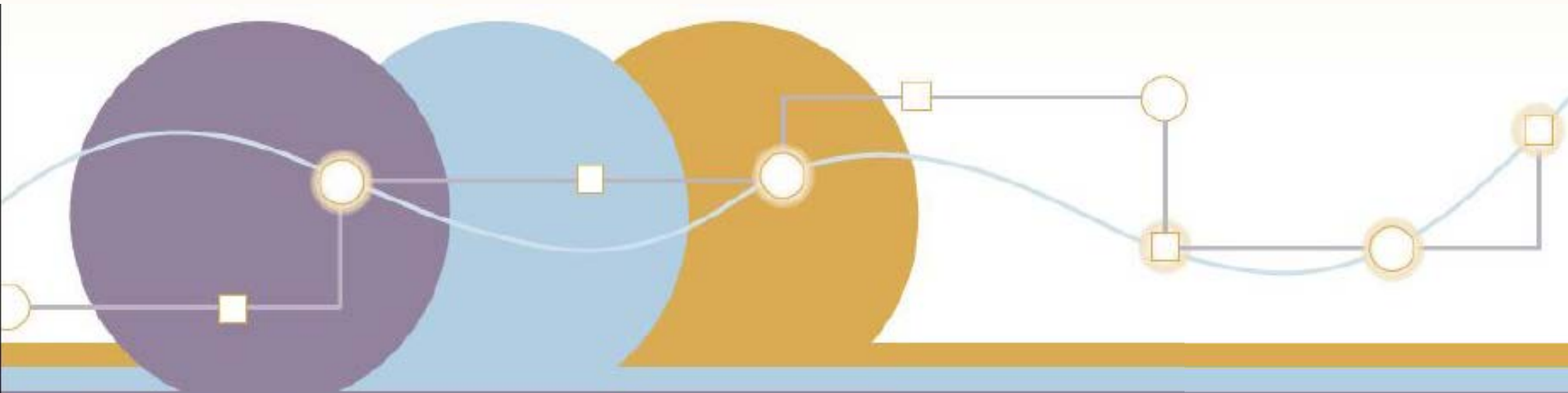
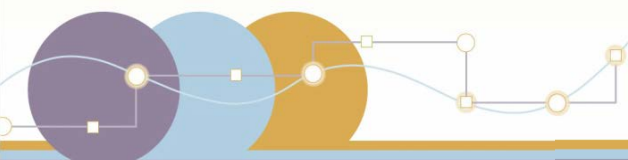


TPM State Workshop

FHWA TPM Toolbox

September 29 & 30, 2016
Lansing, MI



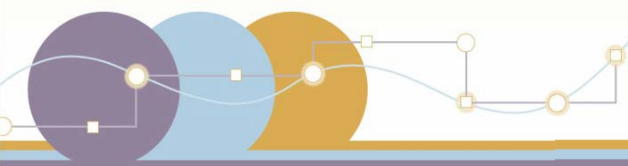


TPM Professional Capacity Building Program

- Goal: to ensure transportation agencies and local partners are prepared to carry out performance-based decision-making

- Elements:
 - FHWA-sponsored training
 - FHWA-sponsored workshops (this is one!)
 - TPM capacity development pooled fund
 - TPM implementation review survey
 - Let's Talk Performance webinar series





Toolbox Elements

Toolbox

Framework

Assessment

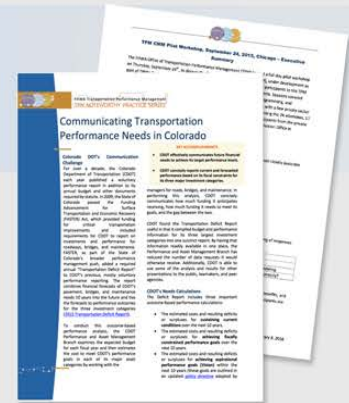
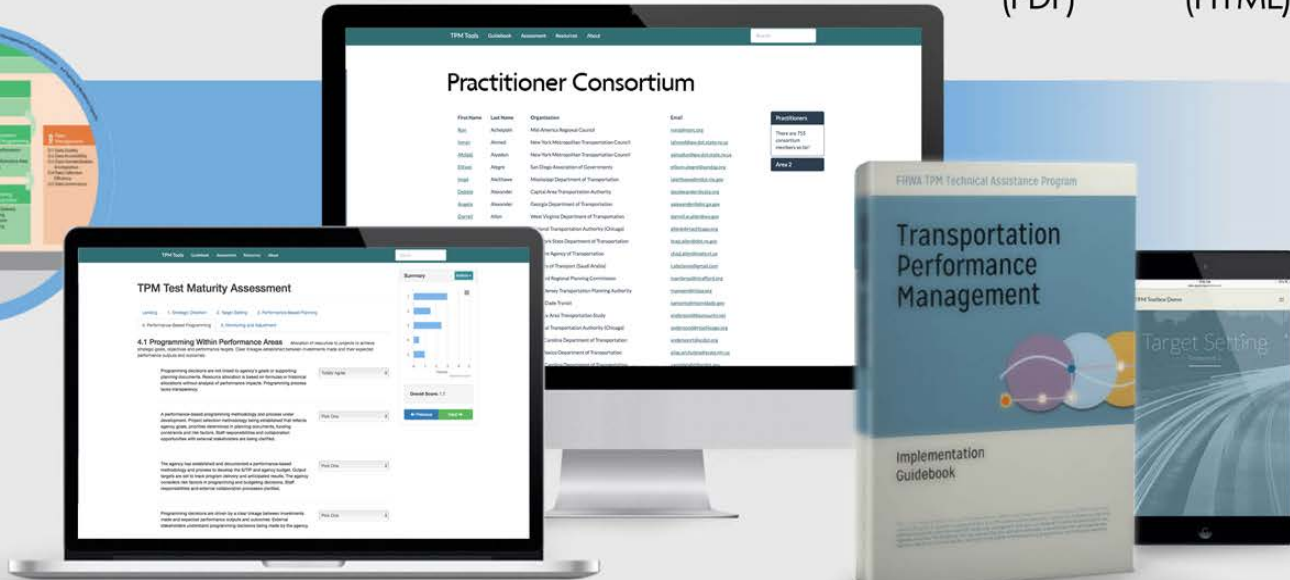
Consortium

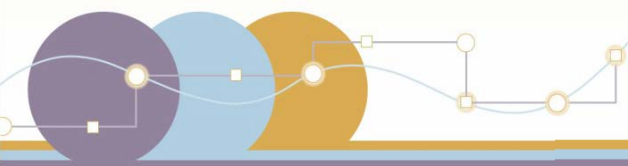
Guidebook

Resources

(PDF)

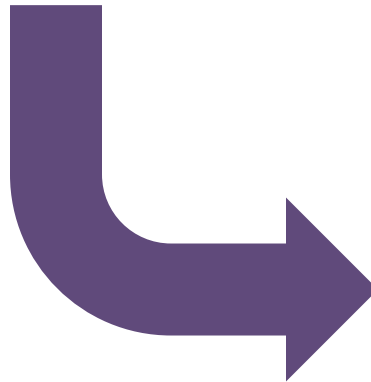
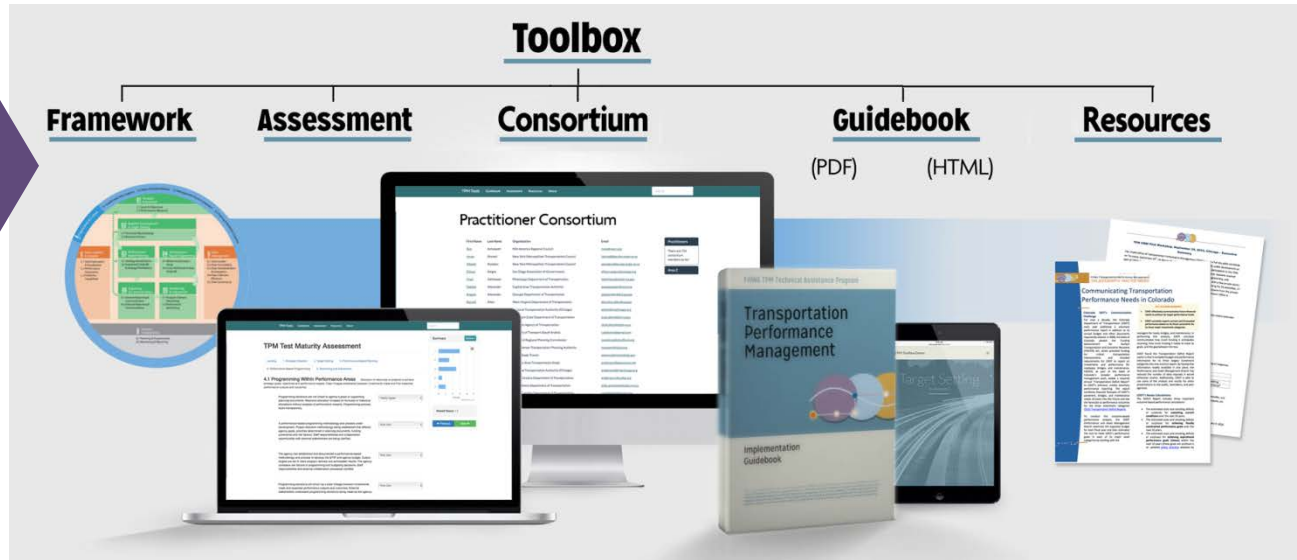
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What is the TPM Toolbox?

CAPABILITY
MATURITY MODEL



Peer Exchange

(May 9-10, 2016)

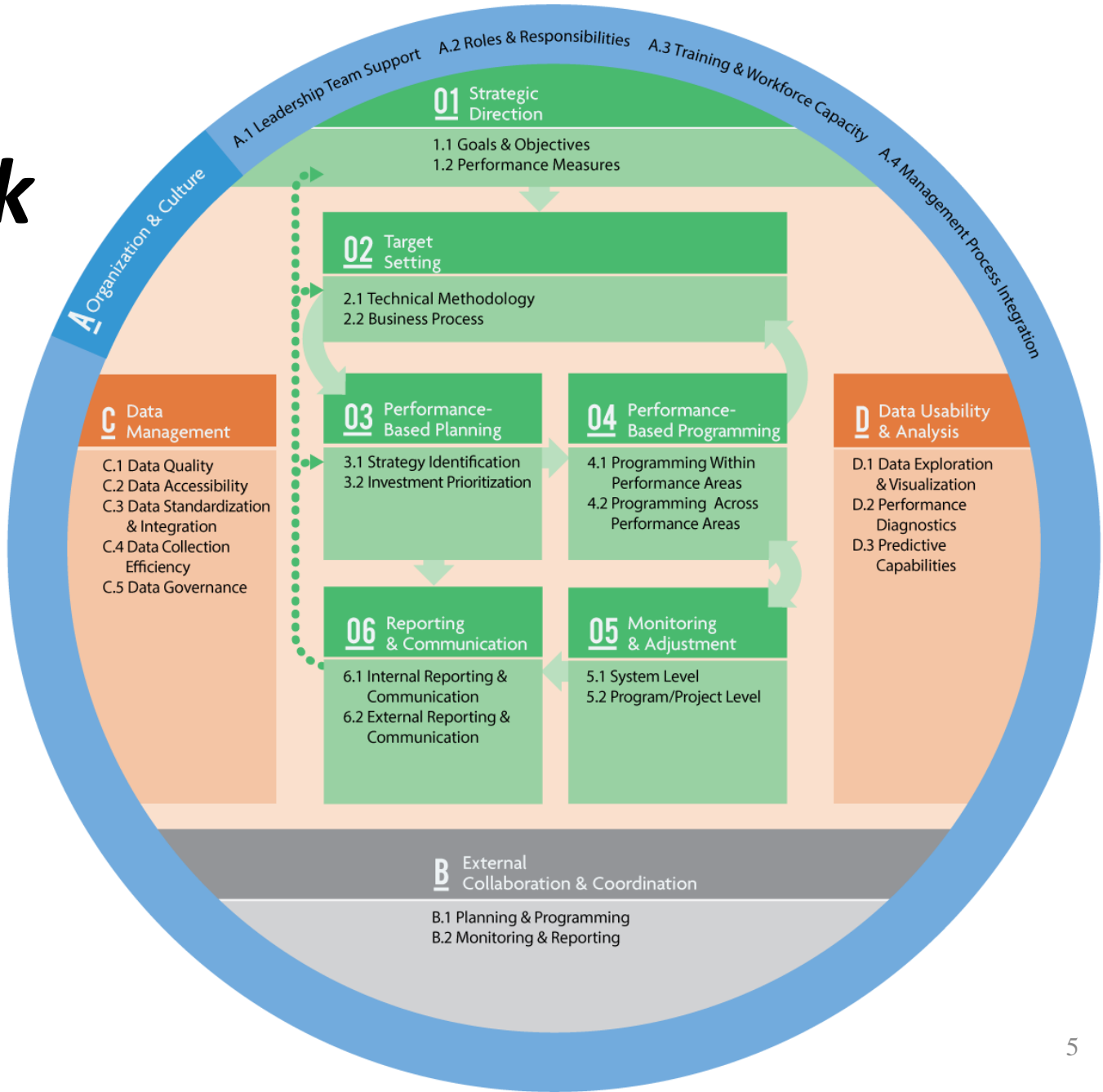
Workshops

(Michigan, Sept 29-30)



Spur adoption
and
advancement
of TPM

TPM Framework



TPM Framework

1. Strategic Direction

2. Target Setting

3. Performance-Based Planning

4. Performance-Based Programming

5. Monitoring & Assessment

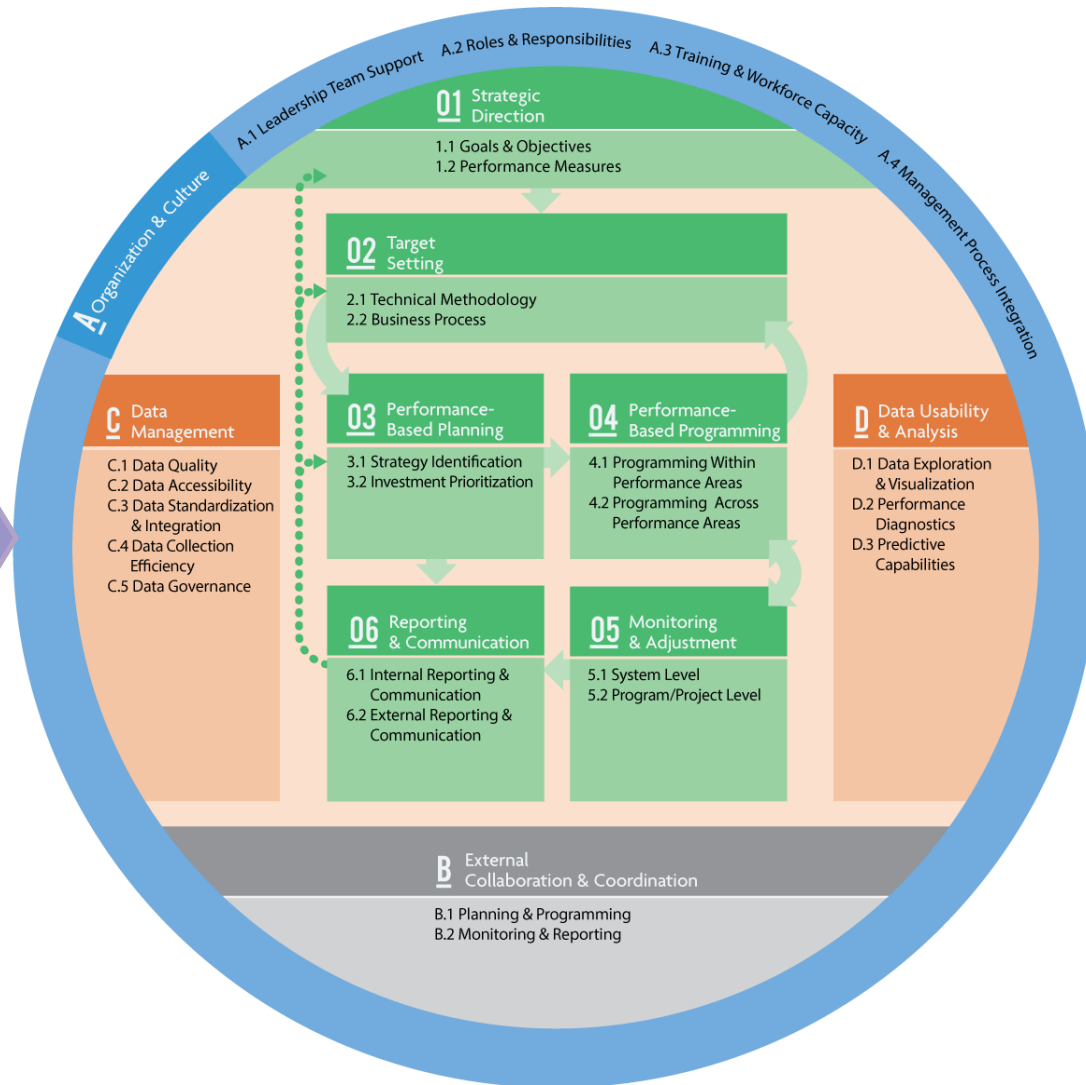
6. Reporting & Communication

A. Organization & Culture

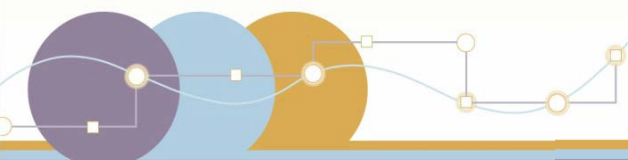
B. External Collaboration & Coordination

C. Data Management

D. Data Usability & Analysis



CMM has 10 components
with 26 Subcomponents



CMM: Capability Maturity Model

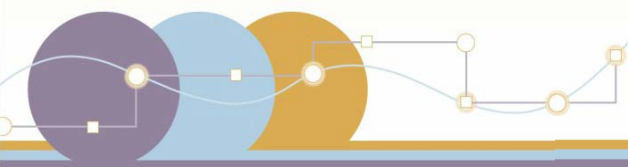
Purpose

- Assess current state of your agency
- Identify logical set of improvements
- Show benefit of moving to higher maturity levels

TPM CMM

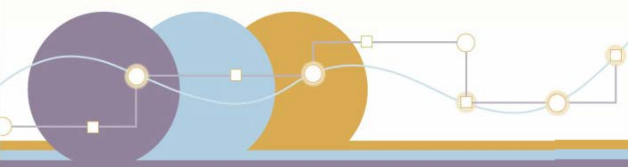
- Assesses maturity on 1-5 scale
- Serves as basis of Assessment Tool
- Interfaces with guidebook content





TPM CMM Levels of Maturity

Level	Definition
1. Initial	Ad hoc, uncoordinated, firefighting, champion-dependent
2. Developing	Nominal framework (e.g., organizational roles) being defined and systematic approaches starting to emerge
3. Defined	Framework and systems defined but not fully implemented or effectively supporting decision making
4. Functioning	TPM practices have been institutionalized, information used to guide actions, data improvements being pursued, basic predictive and tradeoff capabilities in place
5. Sustained	TPM will survive across new leadership, managers using performance information, data effectively managed, and external stakeholders view performance results as useful in promoting accountability and transparency



CMM

Maturity Level
Descriptions



Assessment

Questions

Actions to
Improve



Results



TPM Self-Assessment

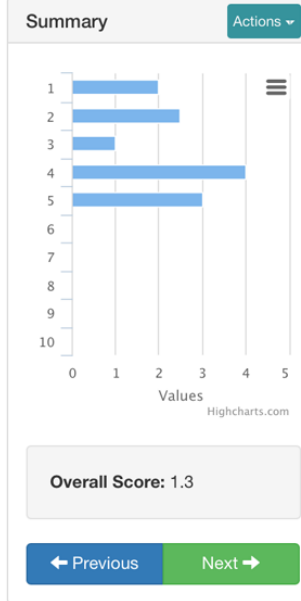
TPM Test Maturity Assessment

Quick Version

- [Landing](#)
[Strategic Direction](#)
[Target Setting](#)
[Performance-Based Planning](#)
[Performance-Based Programming](#)
- [Monitoring and Adjustment](#)
[Reporting and Communication](#)
[Organization and Culture](#)
[External Collaboration](#)
- [Data Management](#)
[Data Usability and Analysis](#)

	Level 1	Level 2	Level 3	Level 4	Level 5
3.1 Strategy Identification	Strategy identification is not driven by established goals and performance measures or an understanding of current performance and risk factors. There is limited dialogue among stakeholders in developing a full range of strategies.	The agency is defining a data-driven process for understanding current and future performance and identifying and evaluating strategies to achieve performance goals. The agency is working with a range of internal and external stakeholders to define this process.	The agency has identified and documented a process for strategy development including scope, data sources, analysis requirements, stakeholder involvement, roles and responsibilities and buy-in. The agency has identified exogenous factors that may impact strategy effectiveness (e.g. VMT, population, fuel prices).	Strategy identification is driven by goals and based on analysis and review of current and projected performance trends. Strategies are evaluated on contribution across multiple goals and agency priorities. Future projections incorporate consideration of risks. Strategies are formulated with an understanding of the broad agency-wide or regional context. The agency conducts scenario analysis to evaluate impacts of exogenous factors (e.g. VMT, population, fuel prices) on strategy effectiveness.	A collaborative, data-driven process to identify strategies is well-established. Strategy identification is informed by analysis of the effectiveness of alternative strategies (before/after analysis) with respect to established goals. Risk assessments are regularly conducted, resulting in mitigation strategies that reduce the likelihood of negative events occurring that will impact overall performance.
3.2 Investment Prioritization	The agency lacks information necessary to prioritize strategies based on need, risk, resource constraints and effectiveness towards achieving	The agency is defining methods and processes for analyzing tradeoffs based on established agency goals and priorities, relative performance areas and alternate investment scenarios. The	The agency has defined methodologies and processes for analyzing tradeoffs and prioritizing strategies based on established goals and priorities. Staff roles and responsibilities have been established. The agency has the necessary data and analysis capabilities in place to analyze tradeoffs across	Agency has applied tradeoff analysis and strategy prioritization process for more than one cycle. Prioritization takes into account synergistic effects across strategies, and the effect of a strategy on multiple goals. Long-range transportation plan and other performance-based plans have been	Agency has applied tradeoff analysis and strategy prioritization for multiple cycles. Process and methodology is periodically refined to provide a better understanding of relative needs and strategy effectiveness on mitigating risk and

This is a new description.



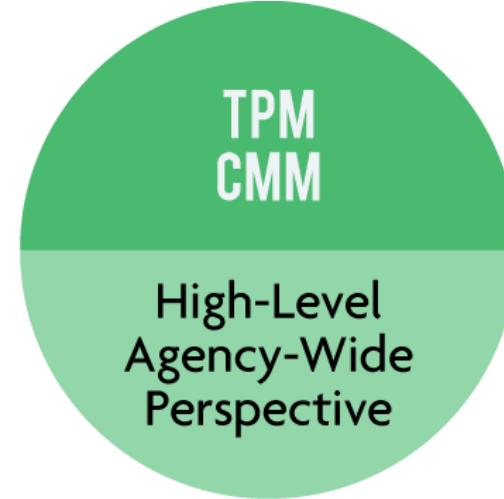
TPM Self-Assessment

[Back](#) [Export to Excel](#)

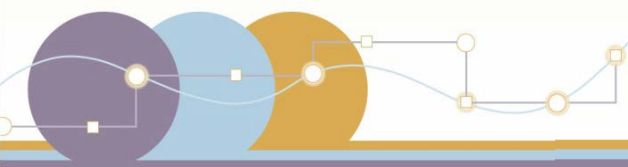
Assessment Results



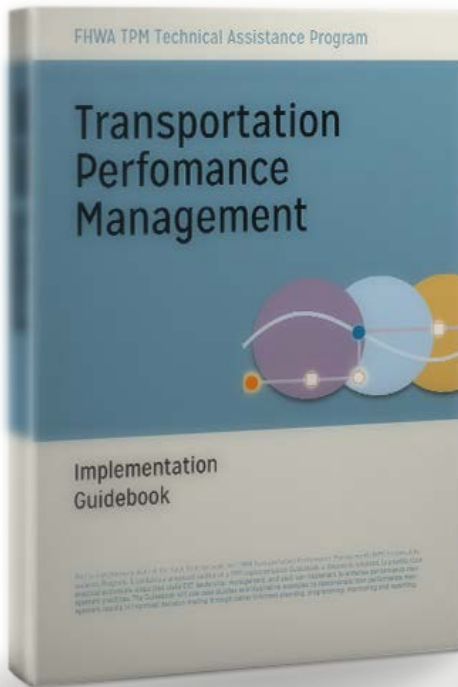
Relation to Other Frameworks and Tools



- Roadway Safety Data Capabilities Assessment
- HSIP
- Asset Management Gap Analysis Tool
- System Operations & Management
- Corridor Management TPM Model
- Incident Management
- In Progress: Traffic Management, Road Weather, Special Events, Work Zones, Signals

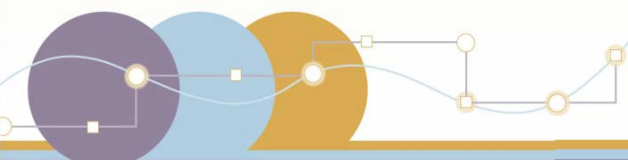


TPM Guidebook



- Focuses on “how” rather than “what”
- Implementation steps and related agency examples
- Self-contained and modular
- Note: *not intended for regulatory compliance*





TPM Guidebook

Component 01: Strategic Direction

Overview

- Subcomponents and Implementation Steps
- Clarifying Terminology
- Relationship to Framework
- Regulatory Resources

Implementation Steps

- 1.1 Goals and Objectives
- 1.2 Performance Measures

Resources

Action Items

Figure Index

Table Index



TPM Guidebook Fact Sheets

FHWA Transportation Performance Management Guidebook Fact Sheet

Strategic Direction

A **Strategic Direction** establishes an agency's focus through well-defined goals and objectives, enabling assessment of the agency's progress towards meeting goals by specifying a set of aligned performance measures. The Strategic Direction is the foundation upon which all transportation performance management rests and should be included in an agency's business plan.

What it Takes

For a strategic direction to become engrained in the agency culture and embraced by external stakeholders, it should be grounded on four major building blocks:

- Performance information,
- Internal buy-in,
- External buy-in, and
- Continuous messaging of goals.

Performance information ensures selected goals, objectives and measures focus an agency's policy and investment decisions on the appropriate performance areas. In other words, what key area(s) does current performance data and future projections suggest an agency should focus on? **Internal buy-in** ensures individual staff can see the connection between their daily activities and progress towards agency goals. **External buy-in** ensures agency goals align with regional priorities and are relatable to the public. **Continuous messaging of goals** in internal and external communications and in regular business activities cements the strategic direction at an agency.

Implementation Steps

The Strategic Direction is broken down into two complementary subcomponents, each with its own implementation steps:

- **Goals and Objectives:** Goals are broad statements articulating a desired end state that provide strategic direction for an agency. Objectives are specific, measurable statements that support achievement of a goal.
- **Performance Measures:** Measures are used to establish targets and assess progress toward achieving established targets. They are indicators that track progress towards goals and objectives. They should be manageable and sustainable, and based on collaboration with partners. Measures provide an effective basis for evaluating strategies for performance improvement.

Goals and Objectives	Performance Measures
1.1.1 Understand the performance context to create goals and objectives	1.2.1 Inventory data, tools, and performance reports
1.1.2 Build inclusive internal process to develop goals and objectives	1.2.2 Engage internal staff and external stakeholders
1.1.3 Engage external stakeholders to refine goals and objectives	1.2.3 Evaluate potential measures
1.1.4 Evaluate and finalize goals and objectives	1.2.4 Establish governance process
1.1.5 Document the process	1.2.5 Document the process and measure details

Making the Connection

The **Strategic Direction** (Component 01) establishes the strategic focus for an agency and lays the foundation for tracking progress towards goals by specifying performance measures. Goals and objectives guide Planning (Component 03) and Programming (Component 04) while performance measures enable Monitoring & Adjustment (Component 05) of agency strategies. The Strategic Direction is the language used for Reporting and Communication (Component 06).

The Strategic Direction and the TPM Framework



For more information on the Strategic Direction and the other components of the TPM Framework visit: www.tpmtools.org

FHWA Transportation Performance Management Guidebook Fact Sheet

Strategic Direction

Case Study: Implementation Step 1.1.5

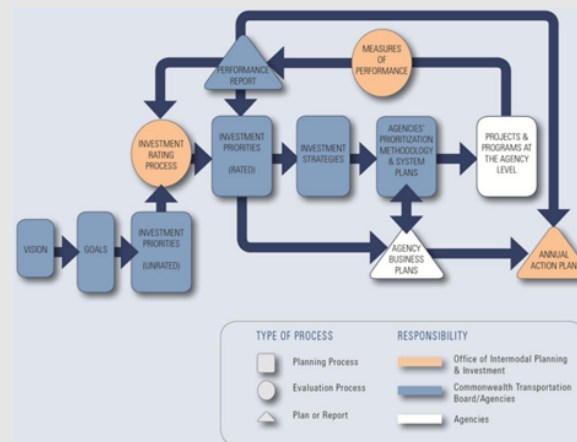
Virginia VTrans 2035 Update

The update to VTrans2035 seeks to link projects to VTrans Goals by describing how goals will permeate through the later planning and programming processes. As measurable statements, Investment Priorities are analogous to Objectives. In each cycle, Investment Priorities are rated based on performance measures (which indicate need) and cost-effectiveness. Investment Strategies are key tactics that modal agencies can implement through plans and programs to achieve Investment Priorities and therefore drive attainment of Goals. Specific projects from state and regional plans are linked to Goals through the succession of Investment Priorities and Investment Strategies. The diagram below shows how the VTrans2035 LRTP documents how Goals impact the planning and programming processes.

The VTrans 2035 Update includes the following:

"Agency processes such as needs evaluations, performance rating, and project prioritization can be shaped in terms that relate directly to VTrans. This consistency...promotes the alignment among policies, plans, and funding programs that is necessary to gauge accurately the effects of transportation decisions on system performance."

VTrans 2035 Documentation



Perspectives

"Agency goals should be the steady drumbeat that inspires action—goals should be ingrained in the subconscious of workers so they live the performance management culture."

— *Moving from Reactive to Strategic Decision Making, TR News 293 July-August 2014*

"Why do we look at performance information? We are investing money in our transportation system and want to know what we get for it. Performance measures let us understand the relationship between investments and results."

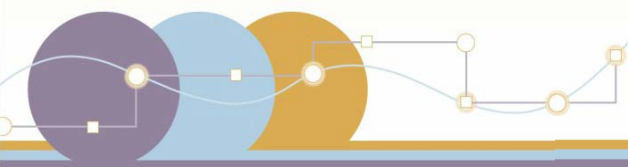
— *Camelia Ravanbakht, Hampton Roads Transportation Planning Organization*

"Bay Area LRTPs have expanded beyond traditional goals like system preservation to now more fully reflect the priorities of our region's residents. Understanding how the Plan addresses key issues like healthy communities and equitable access is critical in an era of integrated planning."

— *Dave Vautin, Metropolitan Transportation Commission*

Connect Online to Learn More

Visit the TPM Toolbox online to learn more about the Strategic Direction and to take your own TPM Capability Maturity Self-Assessment www.tpmtools.org

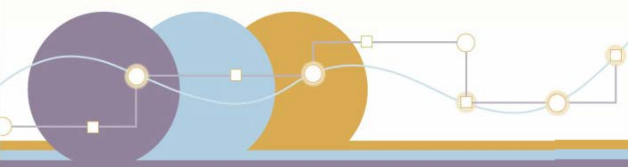


TPM Practitioner Consortium



- Database of public agency employees with TPM expertise
- To be used by FHWA/FTA and state agency staff to identify experts
- Dynamic filtering

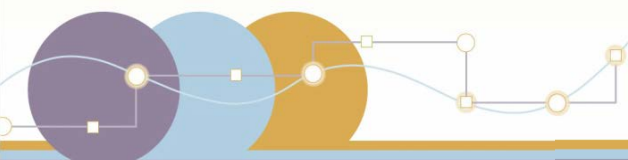




TPM Resources

- Compilation of NCHRP, SHRP2, FHWA, and others
- Provide additional detail and background for 10 TPM Components
- Categorized by Component, TPM area, and resource type

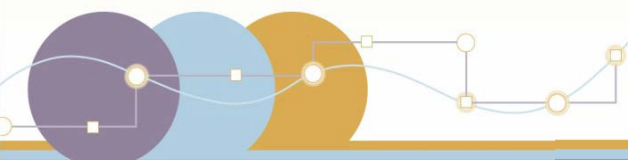




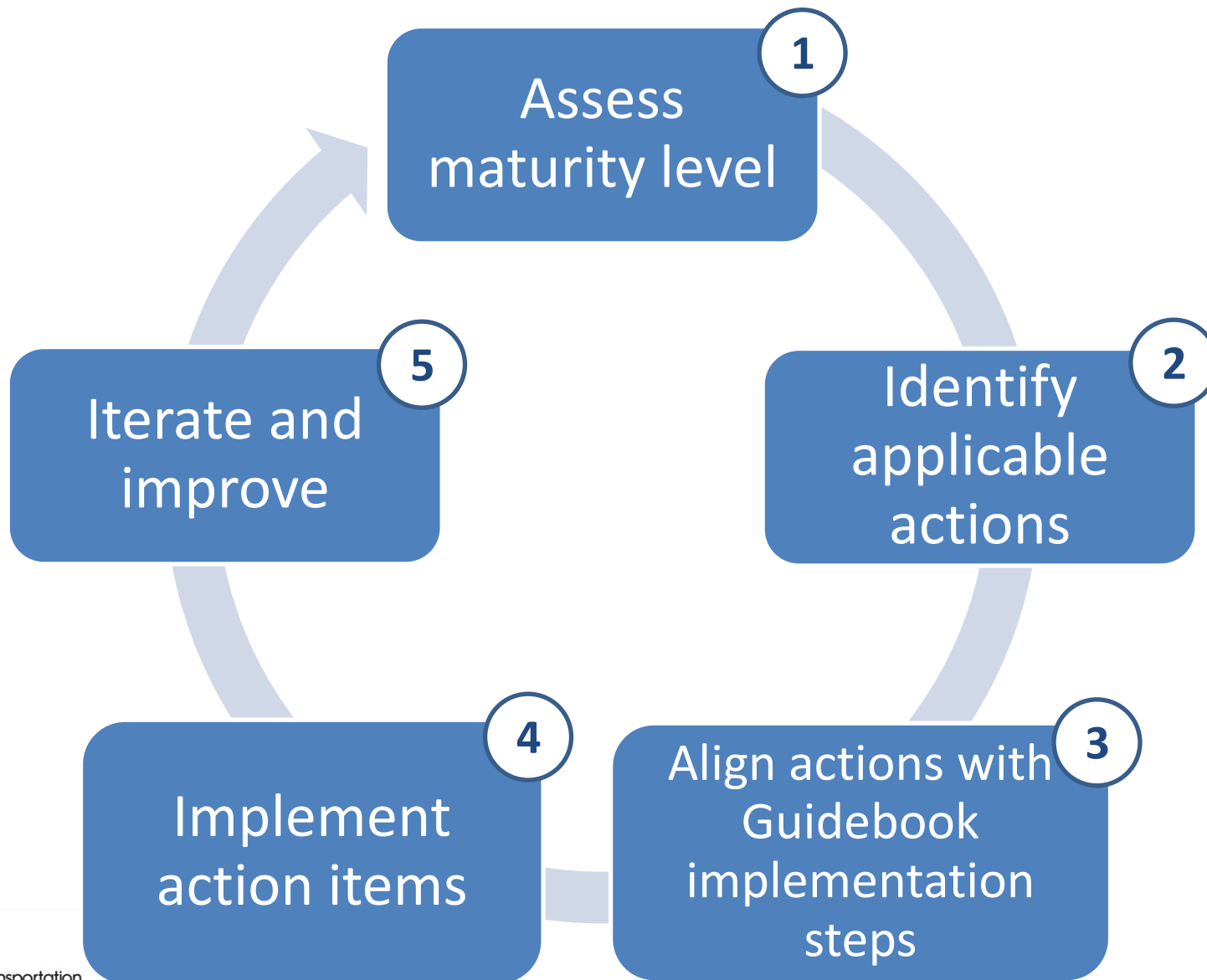
TPM Workshops/Exchanges

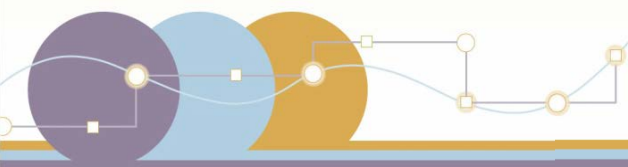
- ✓ Peer exchange
- ✓ Pilot workshop
- Additional workshops upon requests
 - An opportunity to test tools



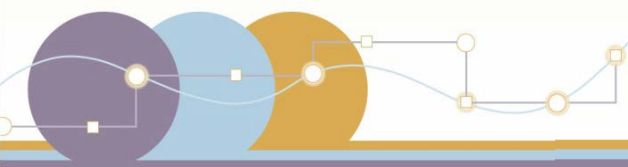


Implementation Process



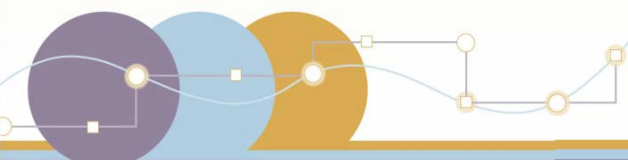


Discussion: Assessment Results

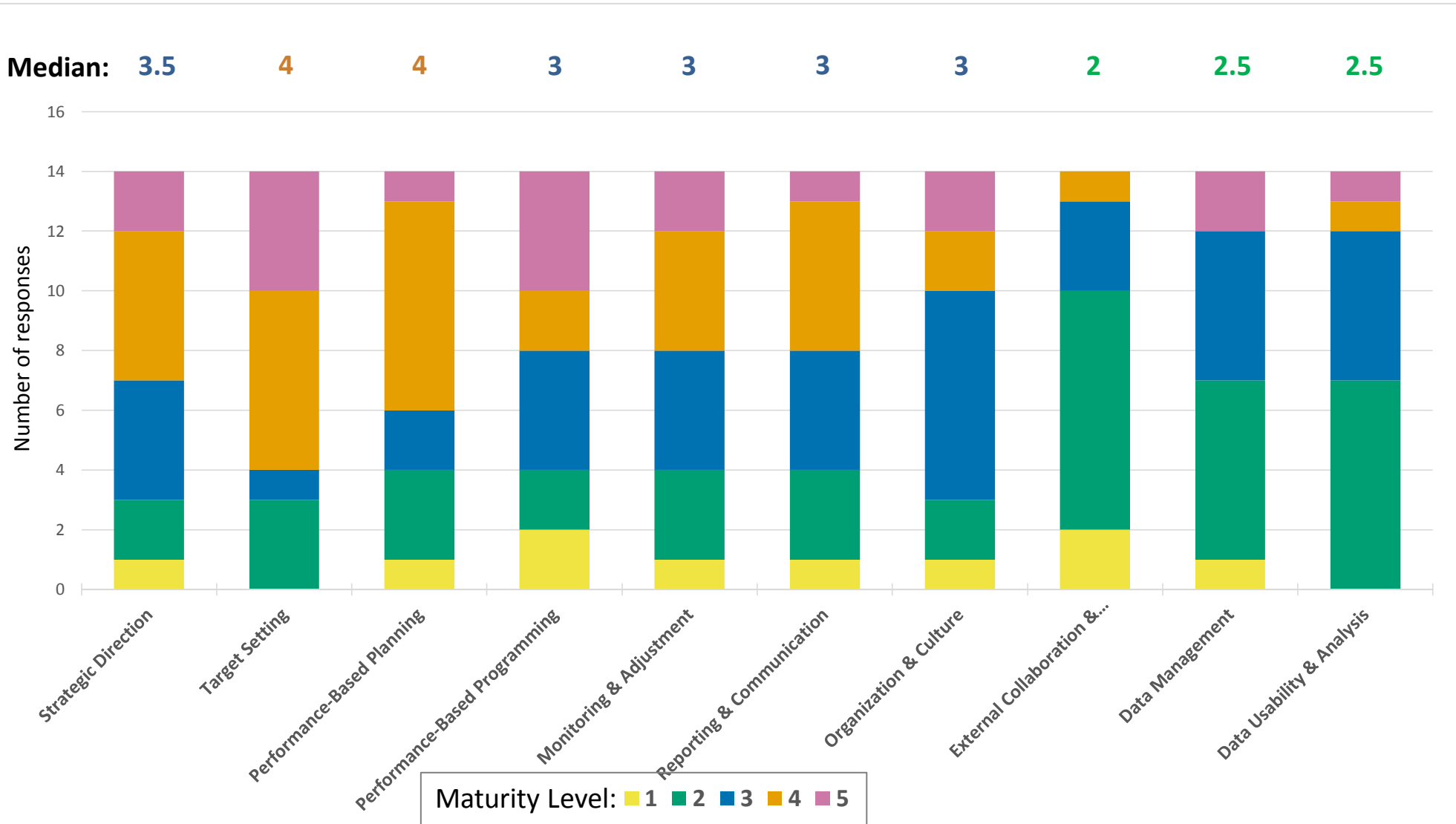


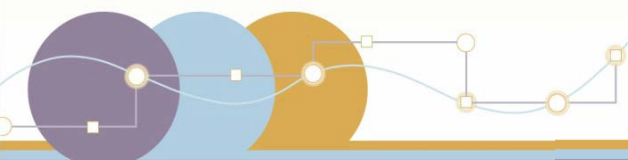
Assessment Results

- Two sets of aggregated results
 - Michigan DOT
 - All others
- Non-MDOT agencies will get individual results in later sessions
- Charts show the distribution and median maturity levels for each component



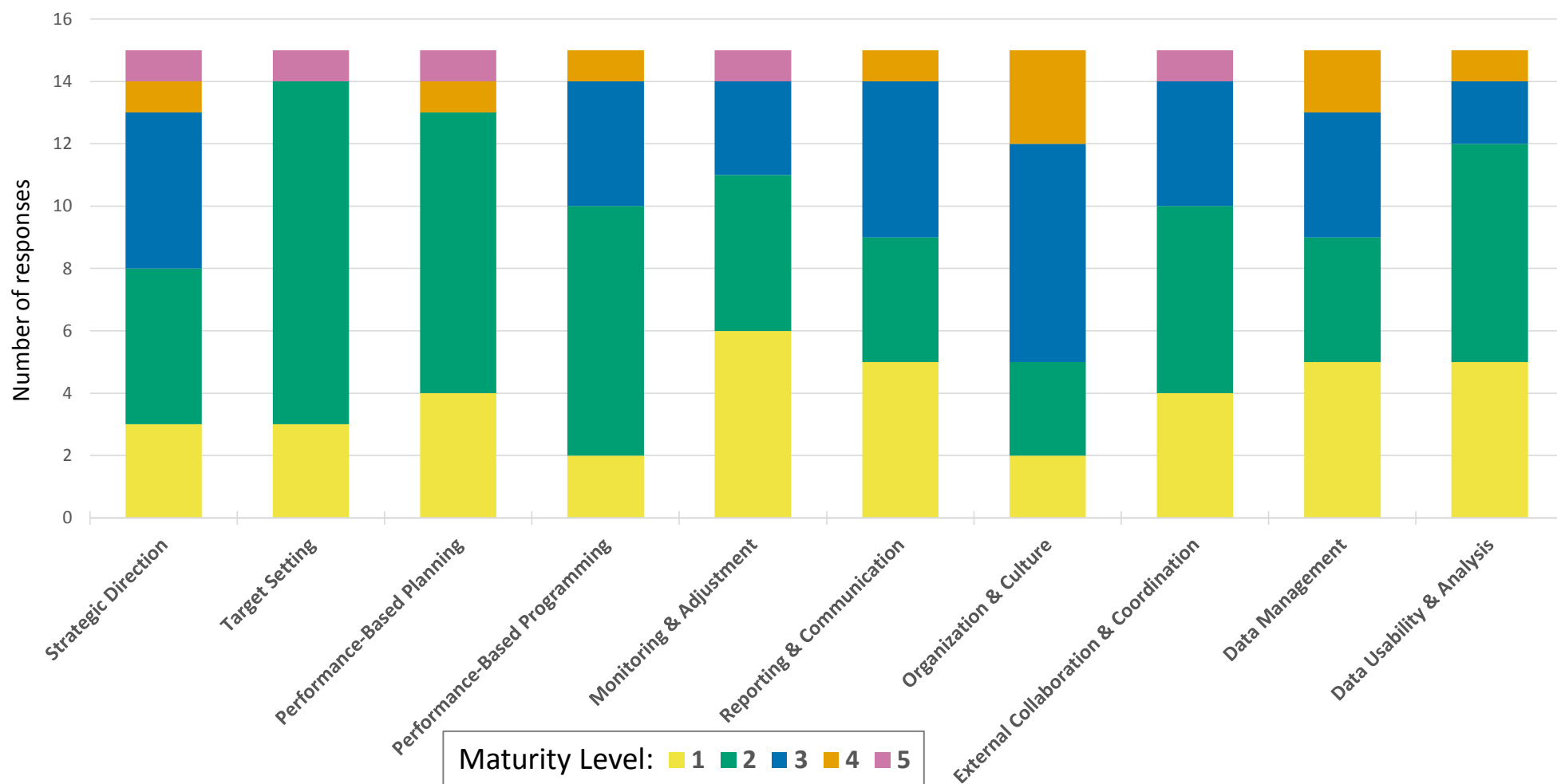
Michigan DOT

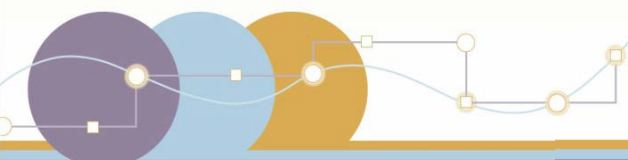




Non-MDOT Agencies

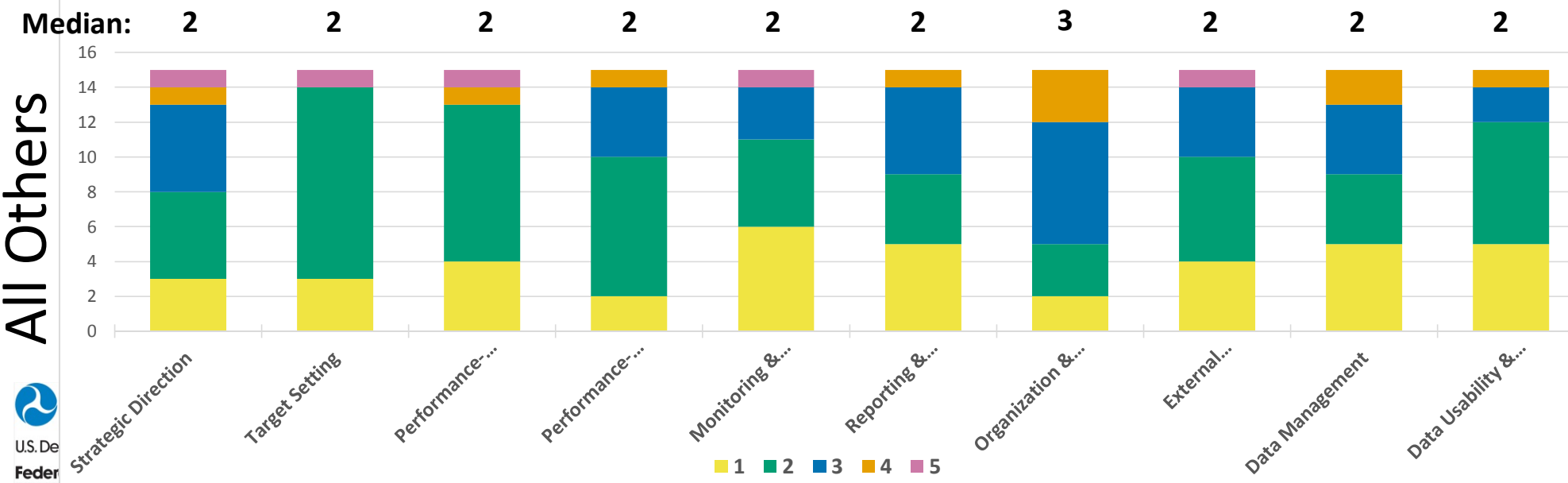
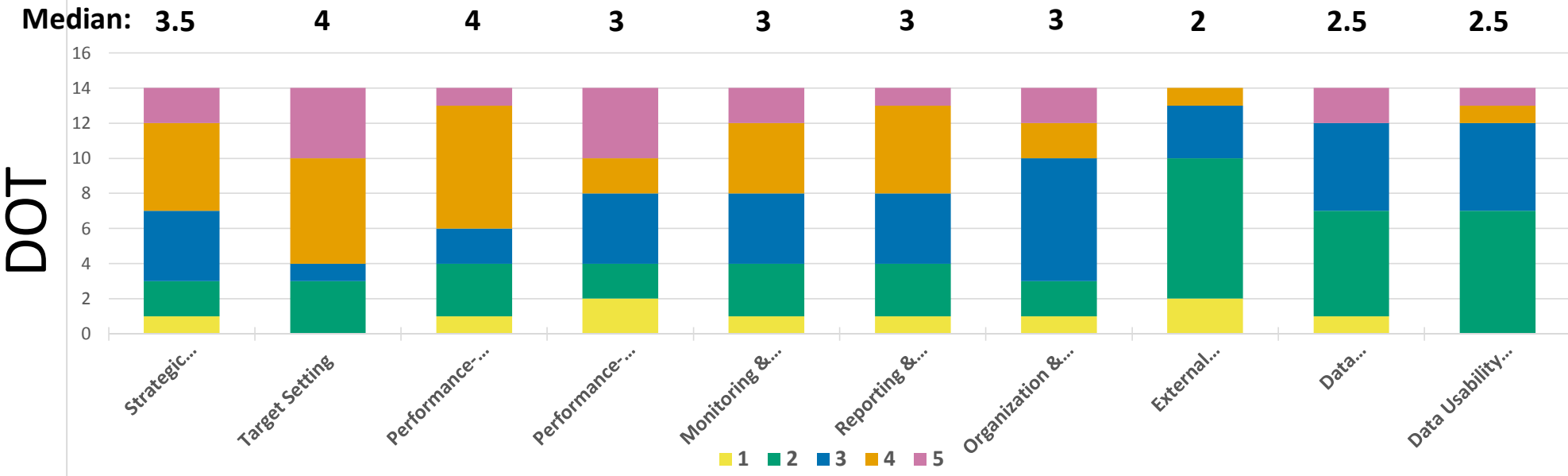
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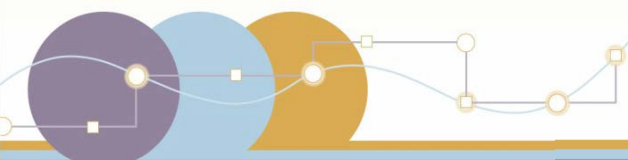




Transportation Performance Management

Comparison





Agency-Level Results

