

TRANSPORTATION LEADERSHIP ACADEMY



Transportation
for America



U.S. Department of Transportation
**Federal Highway
Administration**

SAMPLE MEASUREMENT EXERCISE

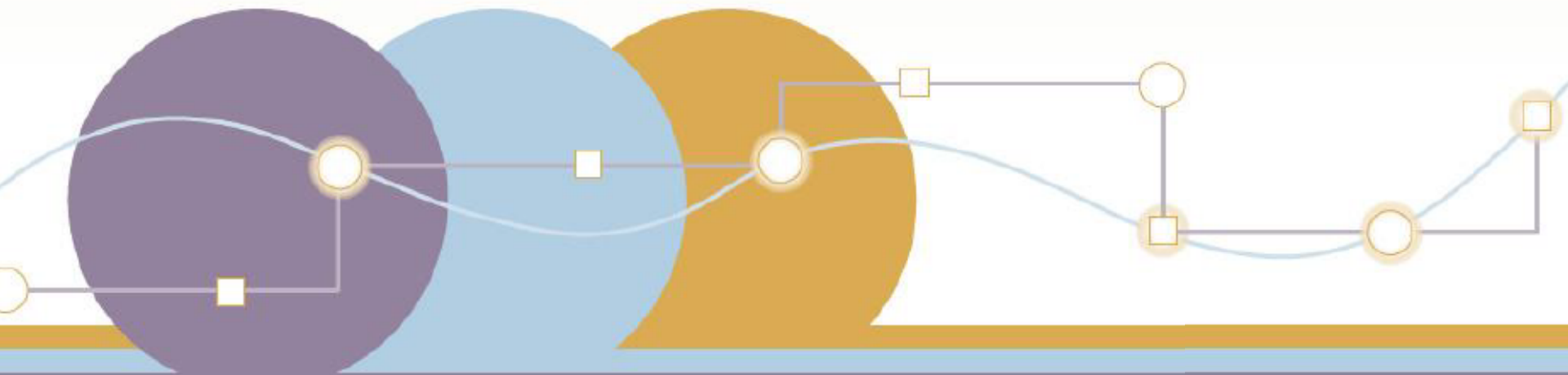
MICHAEL NESBITT

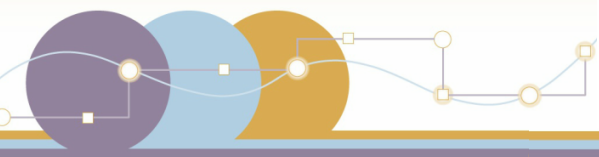
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Performance Management Leadership Academy

TPM and Performance-based Planning and Programming

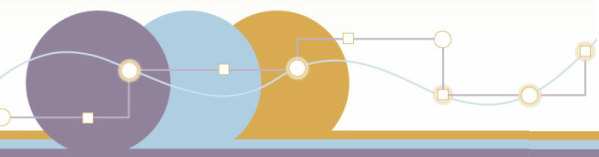
Michael Nesbitt
FHWA, Office of TPM
May 19 & 20, 2016





Overview

- What is TPM?
- What is PBPP?
- Performance-based Planning in a Nutshell
 - PennDOT and MnDOT examples
- Performance-based Programming in a Nutshell
 - -MassDOT, DVRPC, and MTA examples
- Exercise

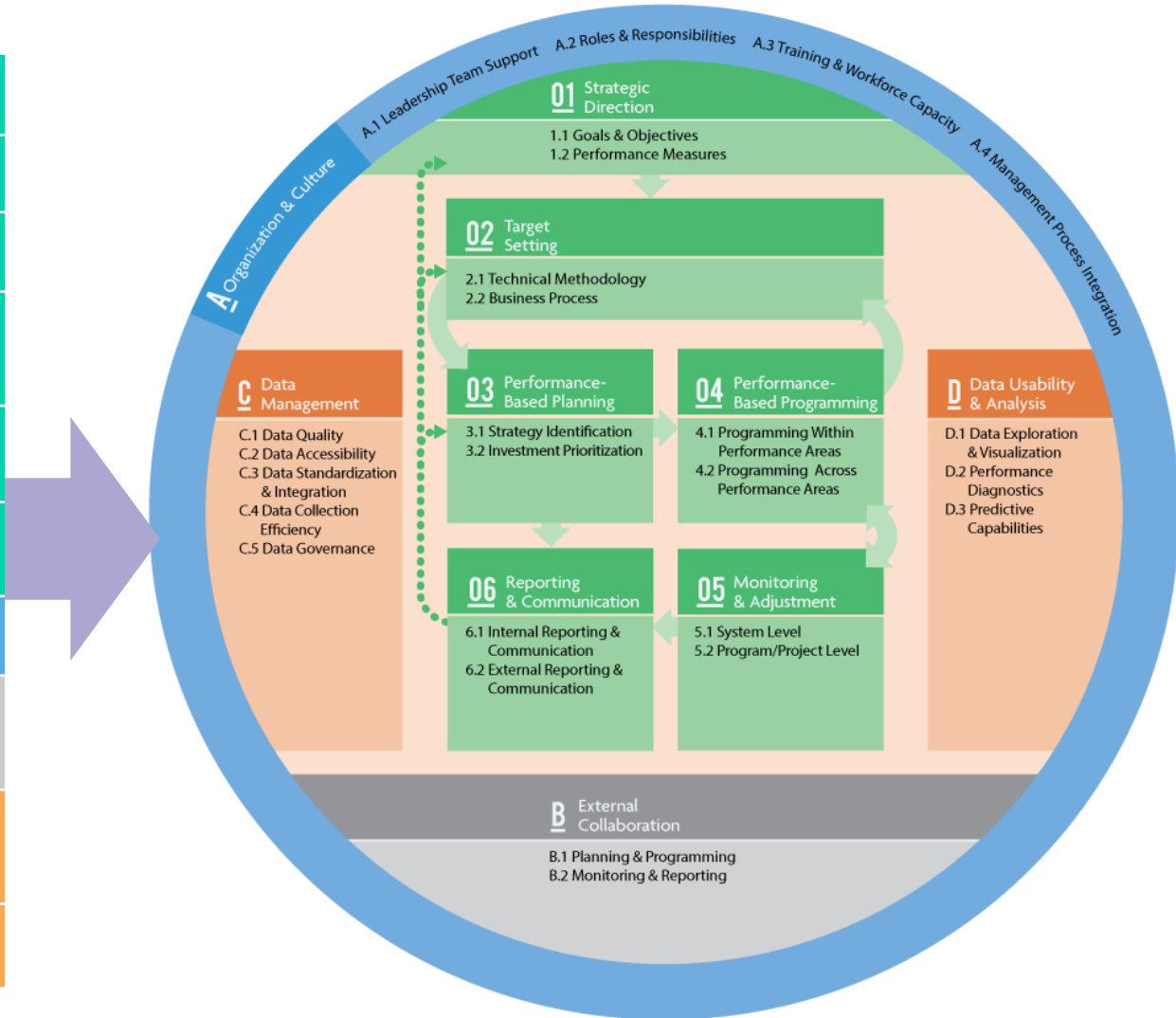


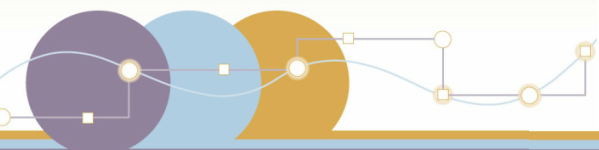
What is Transportation Performance Management?

- A strategic approach that uses system information to make investment and policy decisions to achieve performance goals.

What is Transportation Performance Management?

- 1. Strategic Direction
- 2. Target Setting
- 3. Performance-Based Planning
- 4. Performance-Based Programming
- 5. Monitoring and Assessment
- 6. Reporting and Communication
- A. TPM Organization & Culture
- B. External Collaboration and Coordination
- C. Data Usability and Analysis Capabilities
- D. Data Management

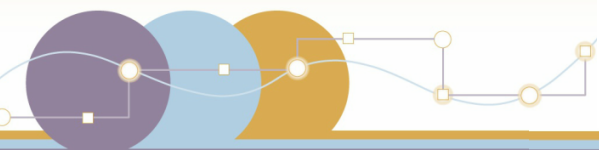




What is Performance-based Planning and Programming?

- Applies TPM to planning and programming processes to achieve desired performance outcomes
- Attempts to ensure that investment decisions are made based on ability to meet established goals
- Uses data on past trends and future projections to measure and progress towards meeting goals and objectives





What is Performance-based Planning and Programming? (Continued)

Performance-Based Planning

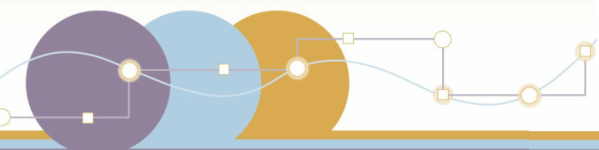
- **Strategy Identification**
 - Baseline Data
 - Targets
 - Forecasting Tools
- **Investment Prioritization**
 - Scenario Analysis
 - Establishing priorities

Performance-Based Programming

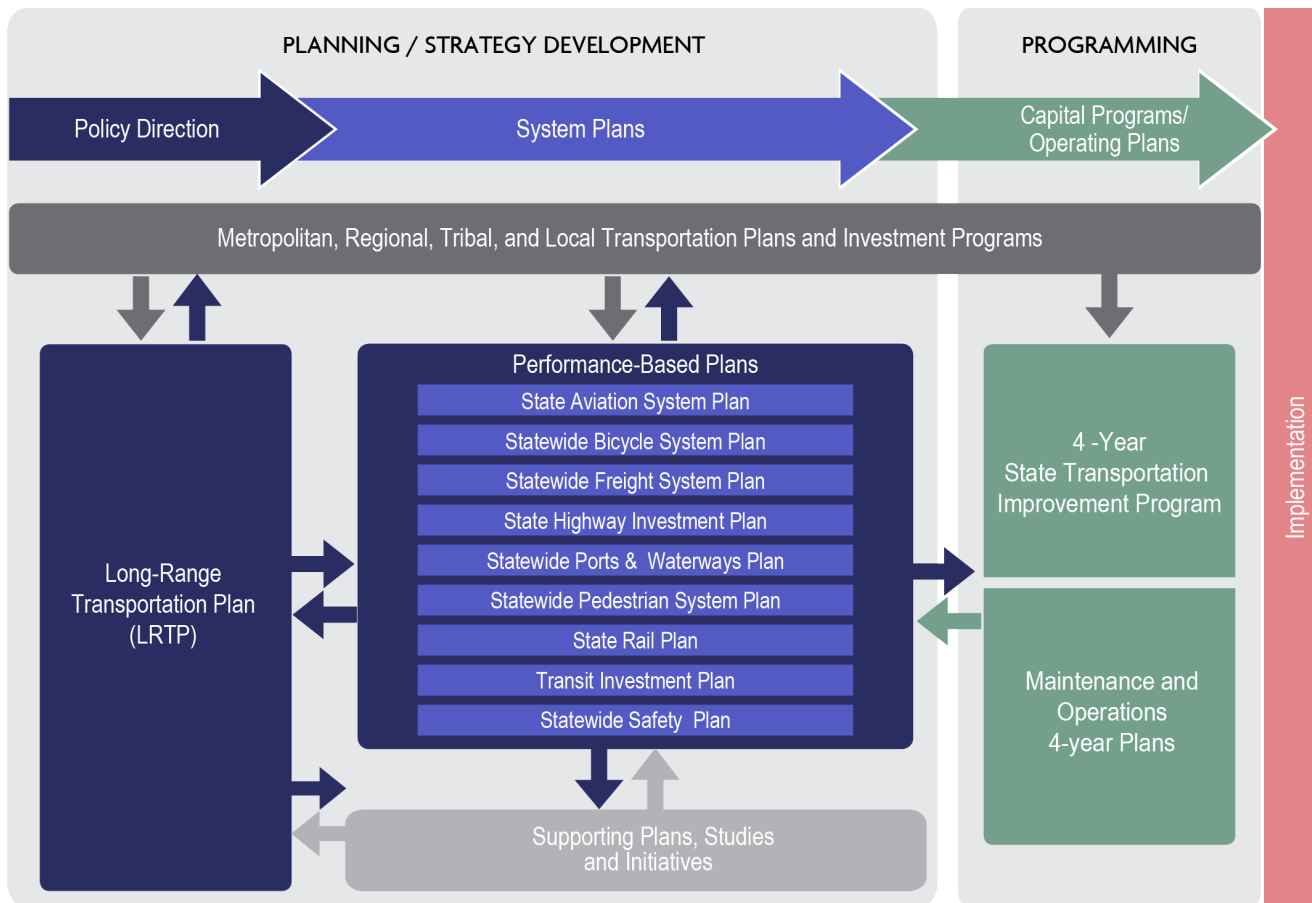
- Allocation and prioritization processes within performance areas
- Allocation and prioritization processes across performance areas

Performance-based Planning and Programming

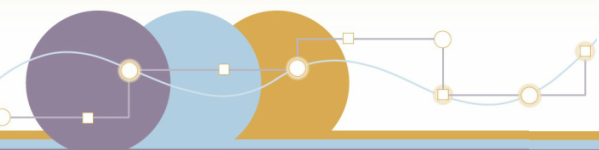




Model of DOT Planning and Programming Relationships



Adapted from MnDOT Plans and Programs



How to do Performance-based Planning in a Nutshell

Strategy Identification

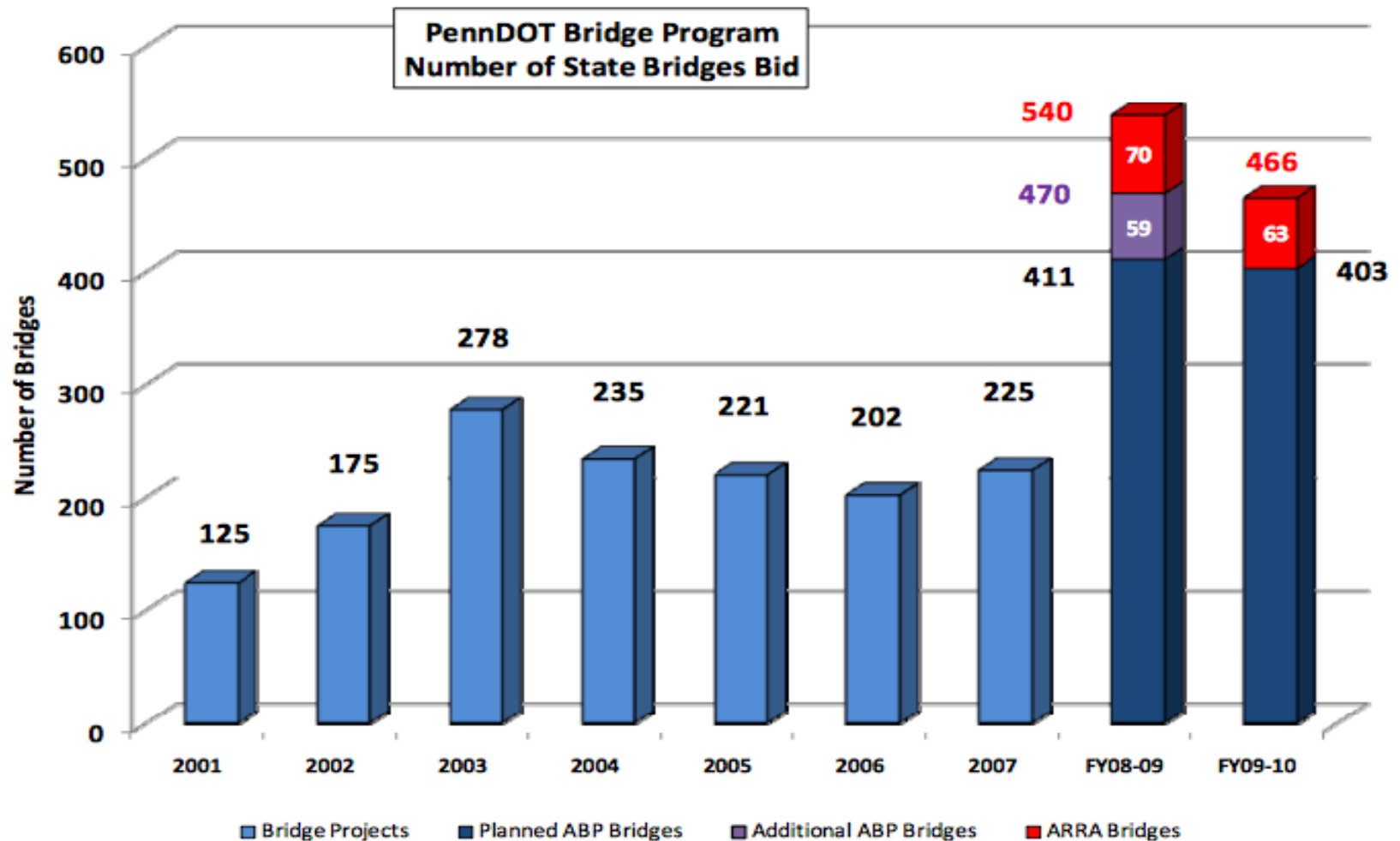
1. Clarify internal and external roles and responsibilities for effective collaboration
2. Identify key issues for each strategic goal and objective
3. Assess a strategy's effect on outcomes
4. Evaluate strategies against desired characteristics
5. Document strategy identification process

Investment Prioritization

1. Assign internal stakeholders roles and responsibilities
2. Develop scenarios to evaluate strategies
3. Establish relative importance of strategic goals to guide strategy prioritization
4. Document investment prioritization process



PennDOT: Identify Key Issues for each strategic goal and objective



PennDOT: Assess a strategy's effect on outcomes

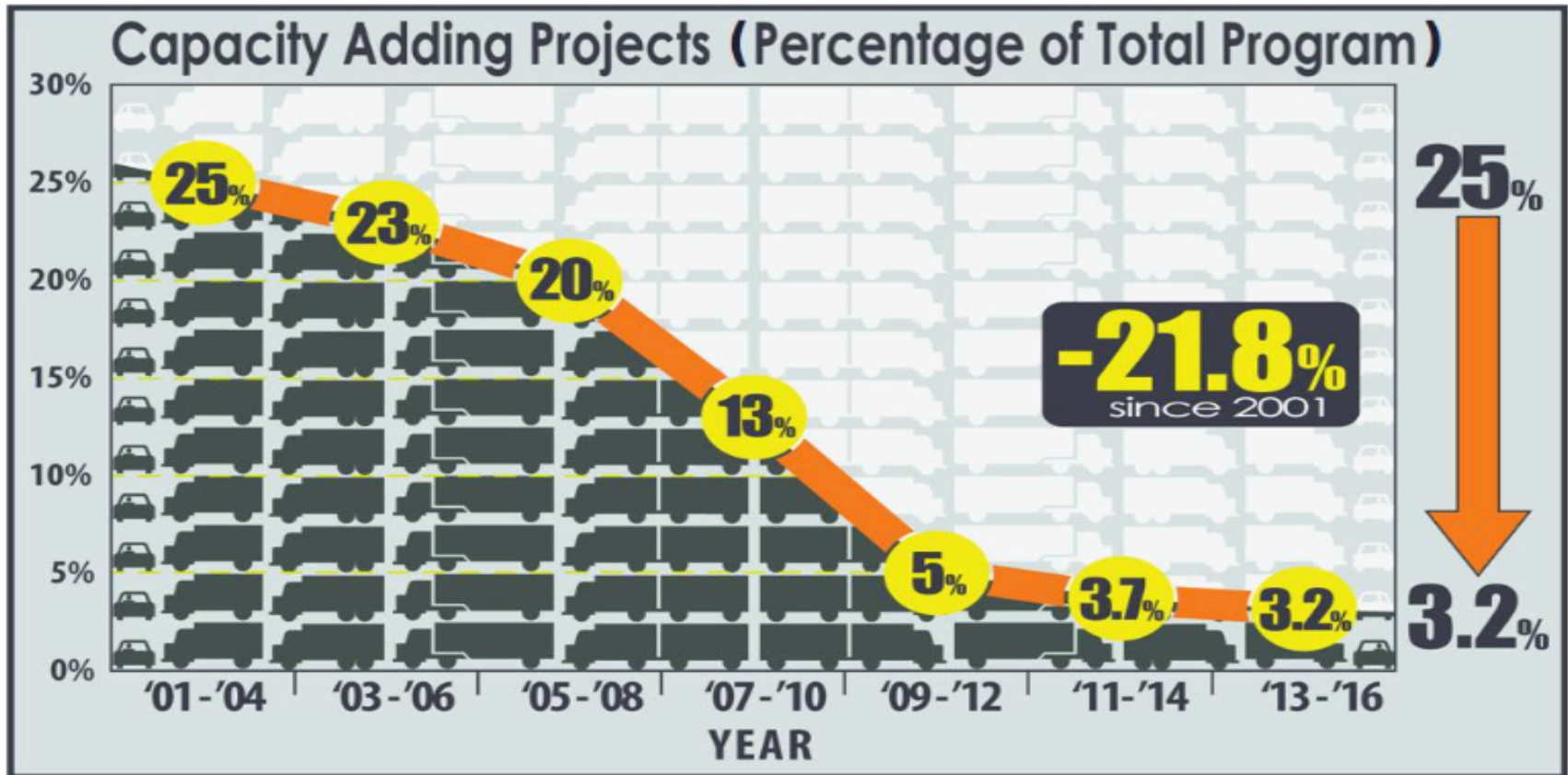
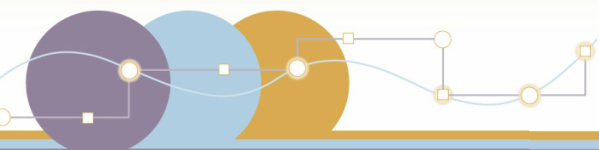


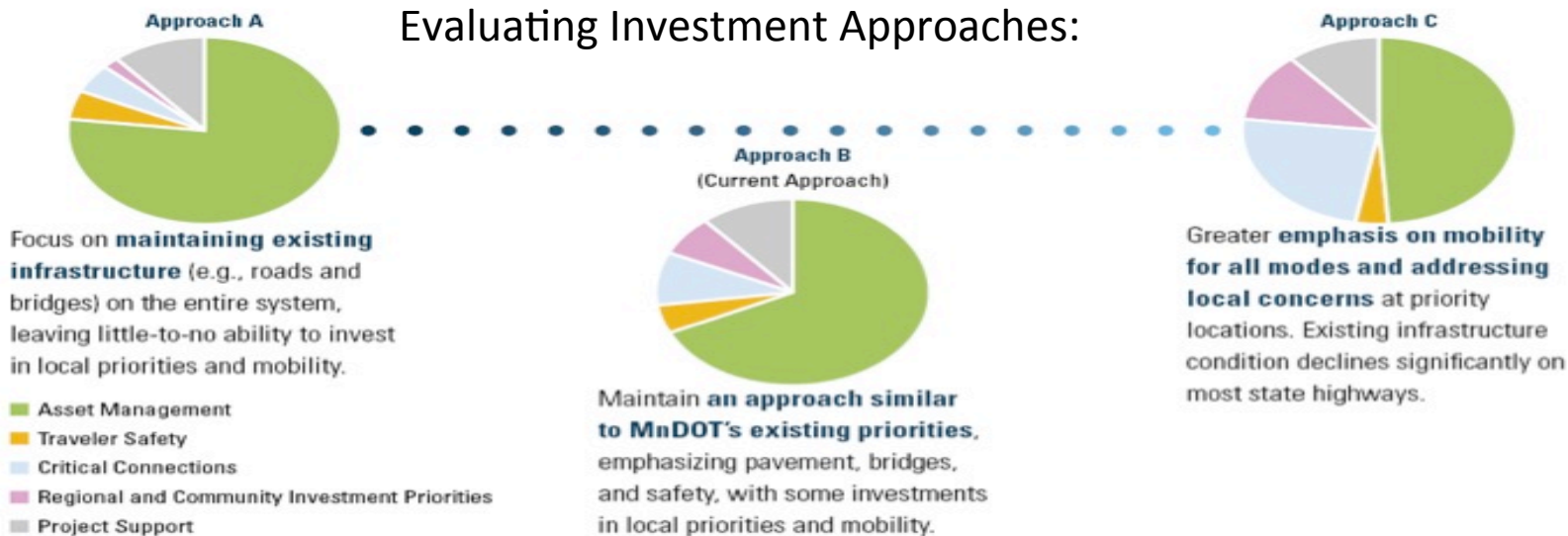
Figure: "Bridges," 2014 Report Card for Pennsylvania's Infrastructure, with data from the Pennsylvania Transportation Performance Report 2013, Source: http://www.pareportcard.org/PARC2014/downloads/PA_2014_RC_Bridges.pdf



Transportation Performance Management

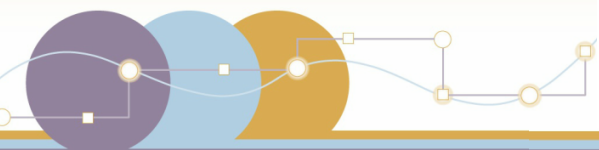
MnDOT: Develop scenarios to evaluate investment strategy prioritization

Evaluating Investment Approaches:



Scenario	A: Focus on maintaining existing infrastructure	B: Maintain existing approach	C: Focus on mobility for all modes and on local concerns
Pro	Improving performance regarding system preservation	Seemingly more equitable distribution of investment	More funding for mobility and local priorities
Con	Little funding left available for mobility enhancements (system expansion) and / or local priorities.	Business as usual, less progress towards some performance goals	Significant deterioration of conditions on state highways





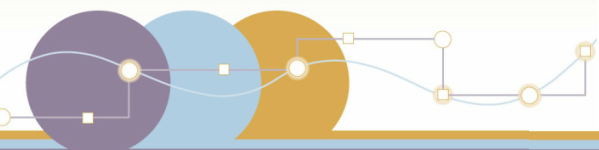
How to do Performance-based Programming 101

Programming Within Performance Areas

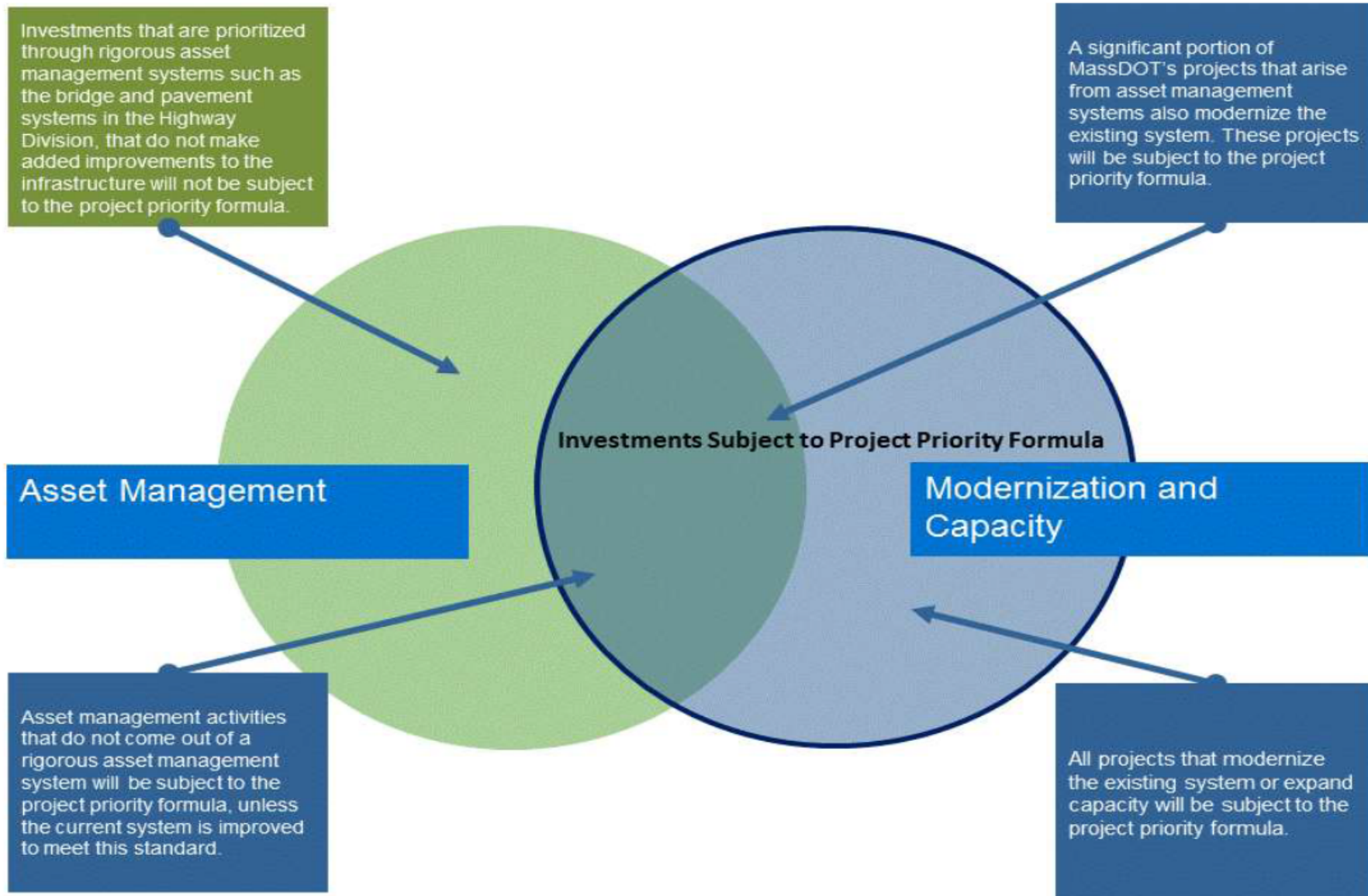
1. Clarify roles of internal and external stakeholders
1. Develop project selection criteria
1. Establish a formal input process to gather performance-based project information
1. Document the process

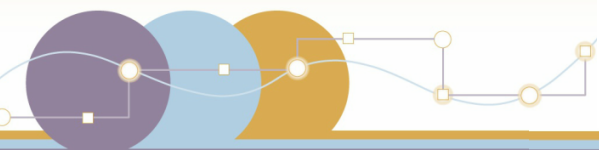
Programming Across Performance Areas

1. Identify and assign internal stakeholder roles and responsibilities
1. Clarify purpose of cross area prioritization
1. Develop a methodology that reflects agency priorities and external stakeholder interests
1. Document the process



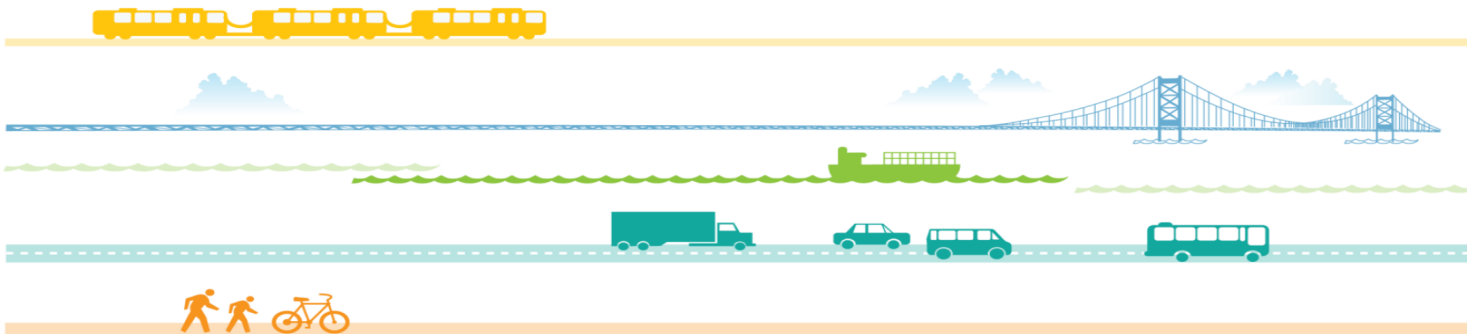
MassDOT: Develop Project Selection Criteria



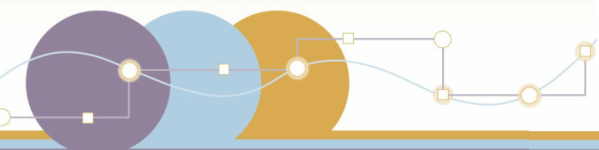


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DVRPC: Develop a methodology that reflects agency priorities and external stakeholder interests



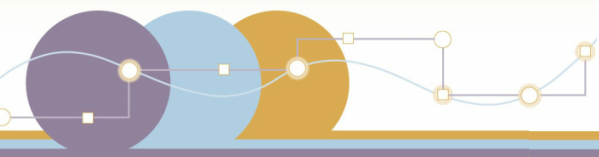
Facility / Asset Use	Daily VMT	Roadway Management System (RMS),	1 point if the average AADT of all road segments multiplied by the total length of the segments within the project limits is more than 500,000; else total daily VMT divided by 500,000. For computation of VMT, projects that only involve bridges or intersections assume that each of these facilities is 1 mile in length. In this case the value will be the average AADT multiplied by the number of bridges or intersections. Projects where bridge or intersection improvements are a part of a larger scope will rely on the limits of the larger project.
	Daily Trucks	Roadway Management System (RMS),	1 point if the average road segment has more than 7,500 trucks or truck equivalents per day; else trucks or truck equivalents per day divided by 7,500.
	Daily Transit Riders	Transit Agencies,	1 point if the number of daily transit riders affected is 50,000 or above; else daily affected ridership divided by 50,000.



Transportation Performance Management

MTA: Develop a methodology that reflects agency priorities and external stakeholder interests

Category	System Preservation	Grow Ridership/Expand Service	Operational Impact	Environmental Enhancements	Safety	Customer Service Enhancements	Mandate	
Weight	3	1	3	1	3	1	4	
Score	2	Past useful life during CTP (FY16-21)	Major ridership increase (>5%) or major expansion (increase of service area or capacity increase within existing service area of more than 10%)	Operations critical (potential operational failure if project is not implemented)	Critical (potential dire environmental impacts if project is not implemented)	Critical (potential death or serious injury likely if project is not implemented)	Major customer service enhancements (impacts >10% of customers)	Legal mandate
	1	Past useful life after CTP (FY21+)	Minor ridership increase (1-5%) or minor expansion (increase of service area or capacity increase within existing service area of less than 10%)	Moderate operational improvement (improvement to current operational abilities)	Yes (increased environmental impact over current)	Yes (increased safety over current)	Minor customer service enhancements (impacts <10% of customers)	Political mandate
	0	Does not replace/renew asset	No ridership impact	No operational improvement	No environmental impact	No safety impact	No customer impact	No mandate



Exercise

■ Activity Explanation: minutes:

- Participants work as a group at their tables to select an investment strategy. Half the groups represent the same state (State 1) and other half a different state (State 2).

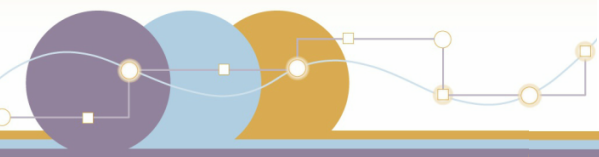
■ Exercise: 20 minutes

- 5 minutes for review of materials (individual),
- 5 minutes to determine Investment Strategy (Individual),
- 10 minutes for small group discussion (group)

- Why did you choose the LRTP Investment Strategy? How is this decision going to affect performance-based outcomes for your state?
- Which pieces of information did you focus on most in making your determination?



■ Discussion: 25 minutes



Contact

www.fhwa.dot.gov/tpm

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Federal Highway Administration

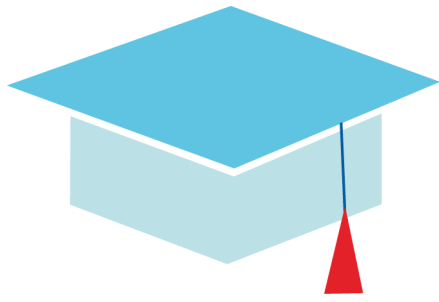
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“Because throughout our history, improved transportation has been one of the best examples of what one generation can leave to the next.”

—Secretary Foxx, USDOT





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QUESTIONS & COMMENTS
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