PERFORMANCE BASED PLANNING & PROGRAMMING

An Overview

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Agenda Item 10

National Capital Region
Transportation Planning Board

PBPP – Briefing Topics

- What Is It
- Why This Approach
- What is Involved
- Performance Goals – Overview
- Performance Measures – Overview
- Actions and Anticipated Dates

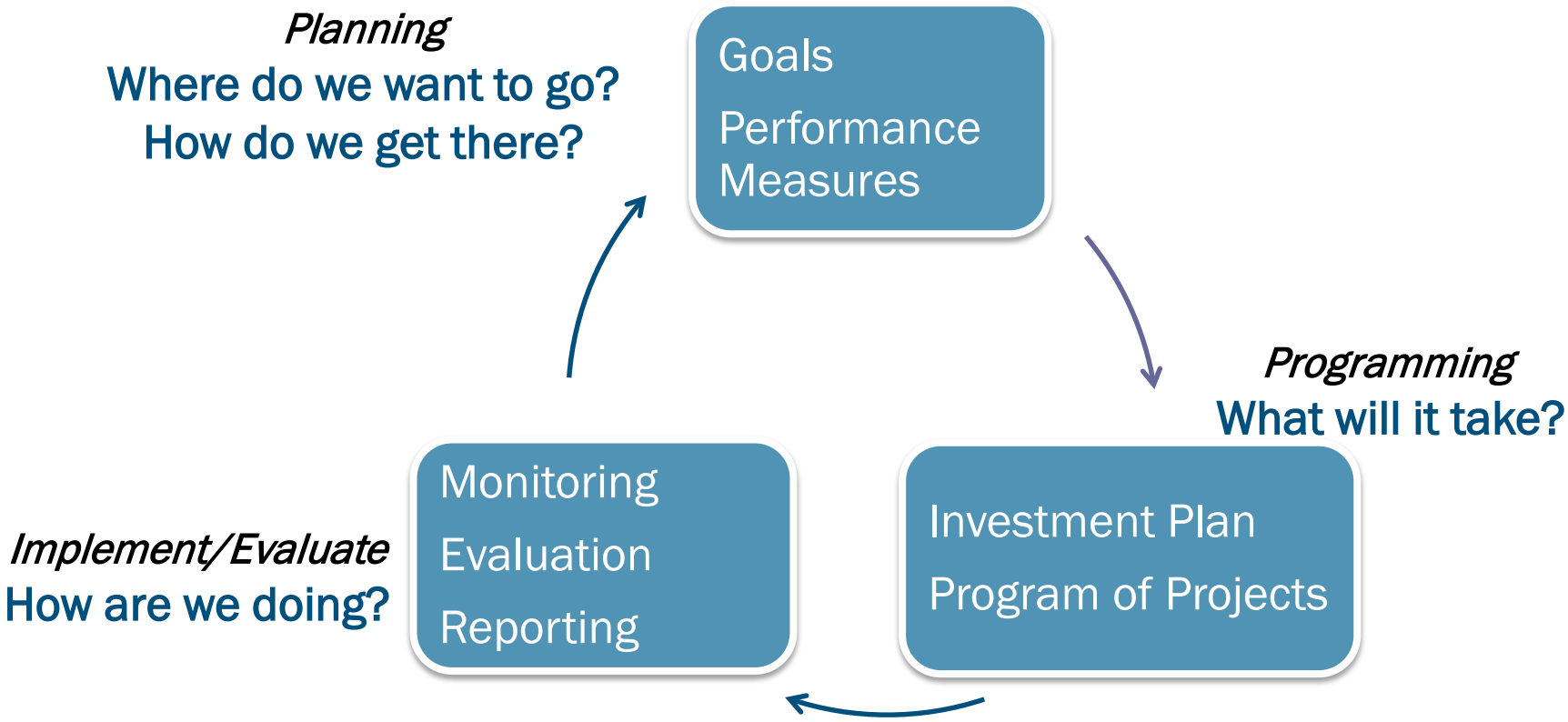
What is Performance Based Planning and Programming (PBPP)

- **Application of performance management** within the planning and programming process **to achieve desired performance outcomes** for the multimodal transportation system.
- Includes a range of activities and products.
  - Development of **long range transportation plans**
  - Federally-required plans and processes -- such as Strategic Highway Safety Plans (SHSPs), Asset Management Plans, the **Congestion Management Process** (CMP), Transit Agency Asset Management Plans, and Transit Agency Safety Plans
  - Programming documents, including State and metropolitan Transportation Improvement Programs (STIPs and **TIPs**)
  - Other plans

Why a PBPP approach

- Federally required for MPOs and States – MAP-21 and FAST Acts
- Improved Outcomes
  - Investment decision-making
  - Return on investments and Resource allocation
  - System performance
  - Accountability and Transparency
- Demonstrates link between funding and performance
- Common Themes within a PBPP Process:
  - Cooperation and coordination
  - Data and tools
  - Linkages across performance-based planning activities
  - Feedback mechanisms
  - Public and stakeholder involvement

What is Involved in PBPP



Federally Prescribed Goals

	GOAL AREAS	NATIONAL GOALS
1	SAFETY	Achieve significant reduction in traffic fatalities and serious injuries on all public roads
2	INFRASTRUCTURE CONDITION	Maintain highway system in a state of good repair
3	CONGESTION REDUCTION	Achieve significant reduction in congestion on the National Highway System
4	SYSTEM RELIABILITY	Improve efficiency of surface transportation system
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	Improve Freight Network; Support regional economic development; Rural communities access to national and international markets
6	ENVIRONMENTAL SUSTAINABILITY	Enhanced transportation system performance while protecting and enhancing natural environment
7	REDUCED PROJECT DELIVERY DELAYS	Elimination of delays on project development and delivery

Federally Prescribed Performance Measures

	GOAL AREAS	PERFORMANCE MEASURES
1	SAFETY	• Highway – Traffic Fatalities and Serious Injuries • Transit – Fatalities and Injuries; Derailments, Collisions, Fires, Evacuations for life safety
2	INFRASTRUCTURE (ASSET) CONDITION	• Roadway – Pavements and Bridges • Transit – Revenue vehicles, Non-revenue equipment, Track infrastructure, and Facilities/Stations
3	CONGESTION REDUCTION	Delay per capita
4	SYSTEM RELIABILITY	• Highway – Reliable Travel Times • Highway – Peak Hour Travel Times Meets Expectations • Transit – Major / Other Mechanical System Failures
5	FREIGHT MOVEMENT AND ECONOMIC VITALITY	• Reliable Truck Travel Times • Interstate System Mileage Uncongested
6	ENVIRONMENTAL SUSTAINABILITY	Criteria Pollutants Emissions Reduced

Actions And Anticipated Dates

Federal Rule	State DOT/Transit Agency	M P O (TPB)
Mar 2016 - Highway Safety	Aug 2017 - Set targets for Highway Safety	Feb 2018 - Set targets for Highway Safety
May 2016 - Planning Rule	May 2018 - Adopt conforming Statewide Plan and STIP	May 2018 - Adopt conforming Metropolitan Transportation Plan and TIP
July 2016 - Transit Asset	**Oct 2016** - Set targets for Transit Assets	Mar 2017 - Set targets for Transit Assets
Oct 2016 - Transit Safety	Oct 2017 - Set targets for Transit Safety	Mar 2018 - Set targets for Transit Safety
Nov 2016 - Highway Asset	Oct 2018 - Set targets for Highway Assets	Oct 2018 - Set targets for Highway Assets
Jan 2017 – System Performance	Feb 2018 - Set targets for System Performance	Aug 2018 - Set targets for System Performance

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Highway Safety Performance Measures (Final)

	Performance Measure	Description
1	Number of Fatalities *(5 year rolling average)*	Total number of fatalities during a calendar year
2	Rate of Fatalities per 100 million VMT *(5 year rolling average)*	Ratio of total fatalities to VMT
3	Number of Serious Injuries *(5 year rolling average)*	Total number of serious injuries during a calendar year
4	Rate of Serious Injuries per 100 million VMT *(5 year rolling average)*	Ratio of total serious injuries to VMT
5	Number of Non-Motorized Fatalities and Serious Injuries *(5 year rolling average)*	Total number of fatalities and serious injuries during a calendar year

Highway Asset Condition Performance Measures (Proposed)

Performance Measure	Data
(1) Percentage of pavements on the Interstate System in Good condition	*four metrics*: 1. IRI (International Roughness Index) 2. Cracking_Percent 3. Rutting (*asphalt only*) 4. Faulting (*jointed concrete only)* *three types of pavements:* 1. Asphalt pavements 2. Continuously Reinforced Concrete Pavement (CRCP) 3. Jointed Concrete Pavements
(2) Percentage of pavements on the Interstate System in Poor condition	
(3) Percentage of pavements on the NHS (excl. Interstate System) in Good condition	
(4) a Percentage of pavements on the NHS (excl. Interstate System) in Poor condition.	
(5) Percentage of NHS Bridges Classified as in Good Condition	*four condition ratings:* 1. Deck 2. Superstructure 3. Substructure 4. Culverts
(6) Percentage of NHS Bridges Classified as in Poor Condition	

- Pavement data submitted to Highway Performance Monitoring System (HPMS)
- Bridge ratings submitted to National Bridge Inventory (NBI)

System Performance Measures: NHS, Freight, and CMAQ (Proposed)

	Performance Measure	Data
Performance of the NHS	(1/2) Percent of the Interstate System / non-Interstate NHS providing for Reliable Travel Times	Level of Travel Time Reliability (LOTTR)
	(3/4) Percent of the Interstate System / non-Interstate NHS where Peak Hour Travel Times meet expectations	Peak Hour Travel Time Ratio (PHTTR)
Freight Movement	(5) Percent of the Interstate System Mileage providing for Reliable Truck Travel Times	Truck Travel Time Reliability (TTTR)
	(6) Percent of the Interstate System Mileage Uncongested	Average Truck Speed
CMAQ Traffic Congestion	(7) Annual Hours of Excessive Delay Per Capita	Total Excessive Delay
CMAQ On-Road Mobile Source Emissions	(8) 2- and 4-year Total Emission Reductions for each applicable criteria pollutant and precursor	Annual Tons of Emission Reductions by project for each applicable criteria pollutant and precursor

Transit Asset Performance Measures (Proposed)

	Performance Measure	Assets
Rolling stock (Age)	Percentage of revenue vehicles within a particular asset class that have met or exceeded useful life benchmark ULB.	40 foot bus, 60 foot bus, vans, cutaways, locomotives, rail vehicles
Equipment - (non-revenue) service vehicles (Age)	Percentage of vehicles that have met or exceeded their useful life benchmark (ULB).	Cranes, prime movers, vehicle lifts, tow trucks
Infrastructure-rail fixed-guideway track, signals, and systems (Condition)	The percentage of track segments, signal, and systems with performance restrictions.	Signal or relay house, interlockings, catenary, mechanical, electrical and IT systems
Stations/ Facilities (Condition)	The percentage of facilities, within an asset class, rated below 3 on the TERM scale.	Maintenance, Administration, Depots, Terminals, Parking Garages

Transit Safety Performance Measures (Proposed)

	Performance Measure	Data
Fatalities	a) Customer b) Employee c) Public	total number of reportable fatalities and rate per total unlinked passenger trips by mode
Injuries	a) Customer b) Employee c) Public	total number of reportable injuries and rate per total unlinked passenger trips by mode
Safety Events	a) Derailments b) Collisions c) Fires d) Evacuations for life safety	total number of reportable events and rate per total vehicle miles, by mode
System Reliability	a) Major Mechanical System Failures b) Other Mechanical System Failures	mean distance between failures by mode

Rulemaking Schedule

	Planning Rules	Proposed Rulemaking	Final Rulemaking
Planning	• Statewide and Metropolitan and Non-metropolitan Planning	June 2014	May 27, 2016
Highway Safety	• Safety Performance Measure Rule • Highway Safety Improvement Program (HSIP)	March 2014	March 2016
Highway Conditions	• Pavement and Bridges Performance Measurement • Asset Management Plan	January/February 2015	*November 2016*
Congestion / System performance	• System Performance Measures Rule (NHS, Freight and CMAQ)	April 2016	*January 2017*
Transit	• Transit Asset Management • National Public Transportation Safety Plan • Public Transportation Agency Safety Plan	September 2015 (Transit Asset) February 2016 (Transit Safety)	*July 2016* (Transit Asset) *October 2016* (Transit Safety)