



Organizing and Planning for Operations Program Plan Update

July 23, 2012



1. Organizing and Planning for Operations

Introduction

Ensuring effective use of
TSM&O requires a shift...



- **Away from project-focused responses**
- **Toward a strategic, objectives-driven and performance-based approach**

What is Planning for Operations?

- A joint effort between planners and operators to improve transportation system performance
- Focus on integrating management and operations strategies in the transportation planning process
- Driven by objectives and performance measures
- Enhances regional or statewide decisionmaking processes so that operations investments are on par with investments in construction & system preservation

Program Benefits

- Strengthen planning and operations functions to support multi-jurisdictional, multi-modal operations in an era of constrained resources
- Enhance regional and statewide decisionmaking processes to fully consider operations investments as transportation investment decisions are advanced

Program Benefits

- Supports Broader Operations Goals
 - Influence demand and manage resultant travel
 - Respond to weather and events
 - Manage congestion
 - Improve travel reliability
 - Support a safe and sustainable system
 - Develop the analytic tools and professional capabilities to deliver the program
 - Cost-effective investments

The Existing Goal

- Improve performance of regional transportation systems through:
 - Objectives-Driven, Performance-Based Approach
 - Enhance Collaboration and Coordination between Planners and Operators
 - Integrate Congestion Management Process (CMP) and Management & Operation (M&O) strategies in Metropolitan and Statewide Transportation Plans

THE RESULT: Better Decisions Made on Operations Projects & Programs Advanced

Linking Organizing and Planning for Operations

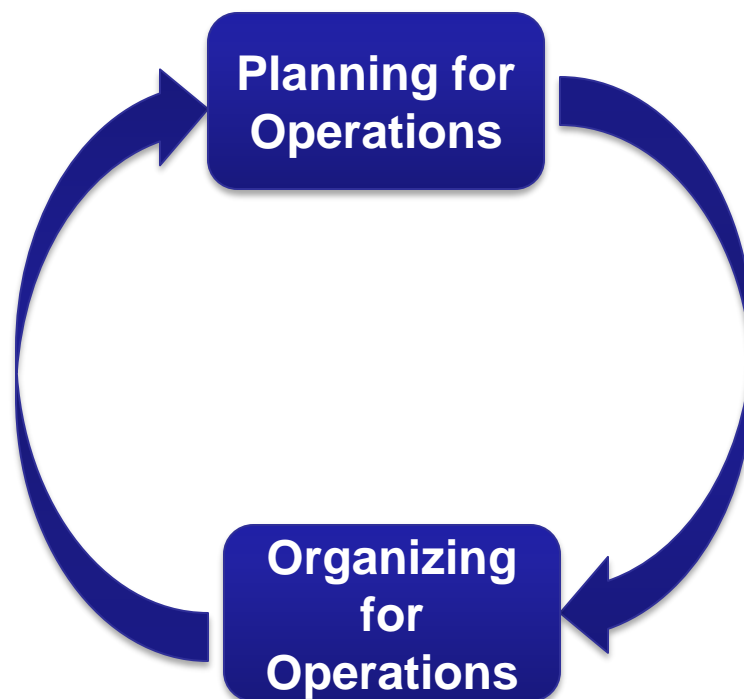
Organizing for Operations:

- Focused on creating organizational capabilities for operations
 - Business Processes (scoping, planning, programming, & budgeting)
 - Systems and Technology (including architecture and standards)
 - Performance Measures (including data and analysis)
 - Culture, organization, and collaboration
- Enables institutional collaboration – within and between organizations
- Reaches key decisionmakers

Key Relationship: Organizing and Planning for Operations

“Enabling”

Organizational capabilities: human resources, business processes, etc. needed to perform full-lifecycle of management and operations



“Informing”

Inter-agency collaboration, objectives, performance measures, methods, analytical tools and data needed to integrate operations into planning and operate transportation systems in a multi-jurisdictional context



2.

**Organizing and
Planning for Operations
Past Activities and Products**

—

Ongoing Efforts

U.S. DOT Planning for Operations Resources: The Collaborative Foundation



2003



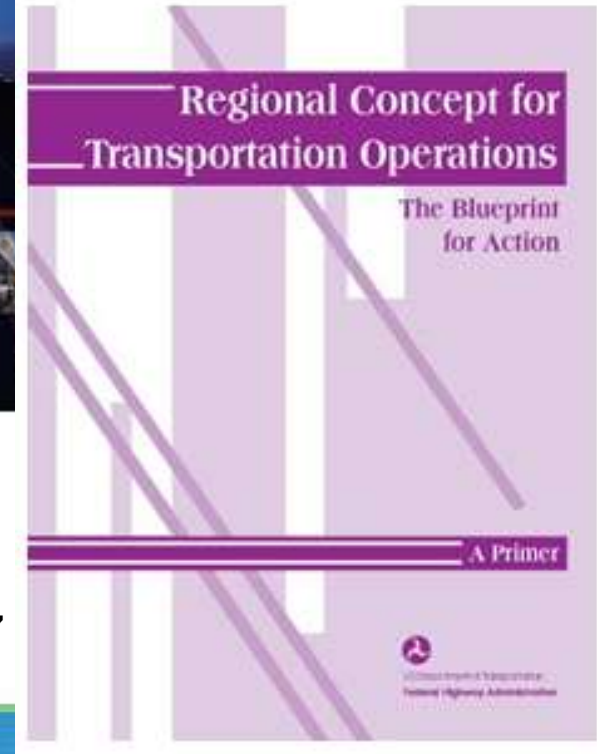
2007



2005



2007



U.S. DOT Planning for Operations Resources: Supporting the Objectives-Driven, Performance-Based Approach

APRIL 2009

Regional Concept for Transportation Operations Fosters Planning For Operations in the Tucson Metropolitan Area

Operator-Focused Planning For Operations

The Tucson metropolitan region embarked on developing a regional concept for transportation operations (RCTO) in 2005 as part of a Federal Highway Administration demonstration initiative to advance regional collaboration for operations. The RCTO is a management tool that operators and planners use to strategically plan for improving operations in their region. Through the development of the RCTO, the Pima Association of Governments (PAG) led a group of operations participants in identifying specific objectives and performance measures for arterial management, travel information, and work zone management. These objectives guided Tucson's selection of management and operations strategies and the approach for implementation. The RCTO group identified specific operations projects to be included in the PAG transportation improvement program (TIP) and funded through a half-cent transportation sales tax, which passed in 2006.

Introduction

In 2005, the Federal Highway Administration (FHWA) launched a demonstration initiative to encourage regions in the U.S. to increase multi-agency collaboration for the development and implementation of a regional concept for transportation operations (RCTO). An RCTO is a management tool that provides a strategic framework to guide collaborative efforts to improve transportation system performance through management and operations.

Requires Coordination Among Decisionmakers

Linkage

- Transit
- Bicycles
- Campuses
- Funding
- Intermodal
- Regional Metropolitan
- Regional Metropolitan

Figure 1. The regional concept for transportation operations and decision.

Applying Analysis Tools in Planning for Operations

2009

2009

U.S. Department of Transportation
Federal Highway Administration

Advancing Metropolitan Planning for Operations

An Objectives-Driven, Performance-Based Approach

2010

Advancing Metropolitan Planning for Operations

The Building Blocks of a Model Transportation Plan Incorporating Operations

A Desk Reference

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

2010

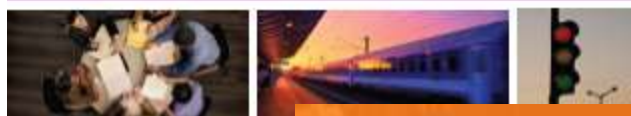
Statewide Opportunities: Released Summer 2010

- Use Momentum from Overall Guidebook Outreach to Advance Performance-Based Approach with the States
- Strong Example of Operations working with Planning & Safety to Advance Joint Strategic Initiatives
- Developed Jointly with AASHTO SSOM and Coalition of State DOTs

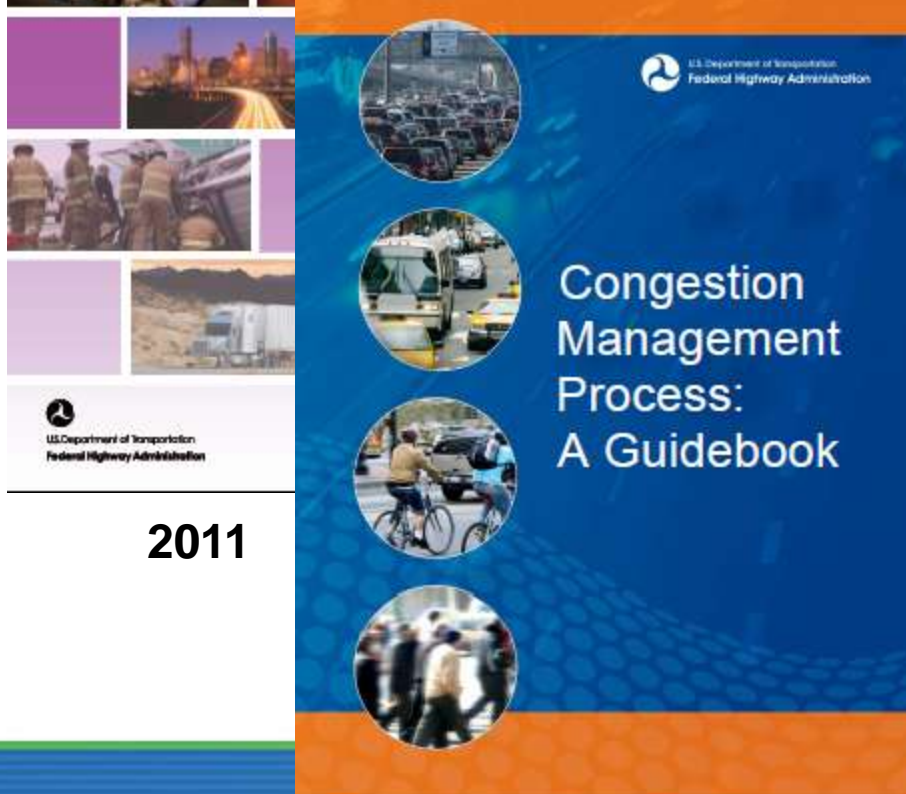


U.S.DOT Planning for Operations Resources: Supporting Broader Application

**THE REGIONAL CONCEPT FOR
TRANSPORTATION OPERATIONS:
A Practitioner's Guide**



**Congestion
Management
Process:
A Guidebook**



U.S. Department of Transportation
Federal Highway Administration

U.S. Department of Transportation
Federal Highway Administration

2011

Applying a
REGIONAL ITS ARCHITECTURE
TO SUPPORT PLANNING FOR OPERATIONS
A PRIMER



**The Role of Transportation Systems
Management & Operations in
Supporting Livability and Sustainability
A PRIMER**



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

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Federal Transit Administration



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Federal Transit Administration

2012

Highlights of Activities Supporting Planning for Operations

- Knowledge transfer
 - Guidance materials
 - Workshops and Webinars to Deliver Guidance
 - Peer Exchange Workshops
 - Case Studies
- Applied research and development
 - B/C Analysis Tool development
 - Advancing Planning for Ops Desk Reference
 - TIM and Operations
 - Dynamic Traffic Assignment
 - *We can go well beyond this*

Highlights of Activities Supporting Planning for Operations

- State of practice assessment
- Demonstration of concepts (e.g., RCTO Demonstration initiatives)

2010 – Present

100 Workshops and Webinars Delivered

Rate of Delivery Growing

Impacts of Planning for Operations Workshops/Webinars



- 12 MPOs indicated that because of the workshops/webinars, planning for operations is now addressed in their long range plans
- 11 MPOs indicated that because the workshops/webinars they have now identified performance based goals and measures
- 3 MPOs indicated that they did not have a planning for operations approach before the workshops/webinars, but are now starting the process
- 7 MPOs have improved data collection as direct result of their involvement in the workshops/webinars

From Conversations with MPOs during 2011 Planning for Operations Assessment

What We Heard...

The workshop has changed the way we do long-range planning. We now take a more quantitative look at what we do and how we can measure affects of projects.

Reading Transportation Study, PA

As an immediate result following the workshop, the MPO has placed more emphasis on the proper documentation of operations and management issues in its RTP.

Southern California Association of Governments, CA

Ongoing Efforts

- Planning for Operations (P4O) Training
 - Workshops and NHI course
- Innovative Analysis Methods Report & Outreach
 - Case studies and workshops
- Statewide Planning for Operations
 - Reference and training
- Regional ITS architecture use in Planning for Operations
 - Primer and P4O workshop module

Ongoing Efforts

- Operations Benefit-Cost Guidance
 - Desk Reference, TOPS-BC, and workshops
- Travel Demand Management in the Planning Process
 - Reference and training
- Designing for Operations
 - Primer and peer exchange
- MPO program assessment effort
- Planning for Operations website update

Highlights of Organizing for Operations Activities



- FHWA Primer - Creating an Effective Program to Advance Transportation System Management and Operations
- AASHTO Online System Management and Operations Guidance (<http://www.aashtosomguidance.org>)
- Institutional Architectures to Advance Systems Operations – Report (SHRP 2 Report S2-L06-RR-1)
- Guide to Improving Capability for Systems Operations and Management (SHRP 2 Report S2-L06-RR-2)
- Workshops and Webinars (such as SHRP 2 L17)



3.

Organizing and Planning for Operations

State of the Practice

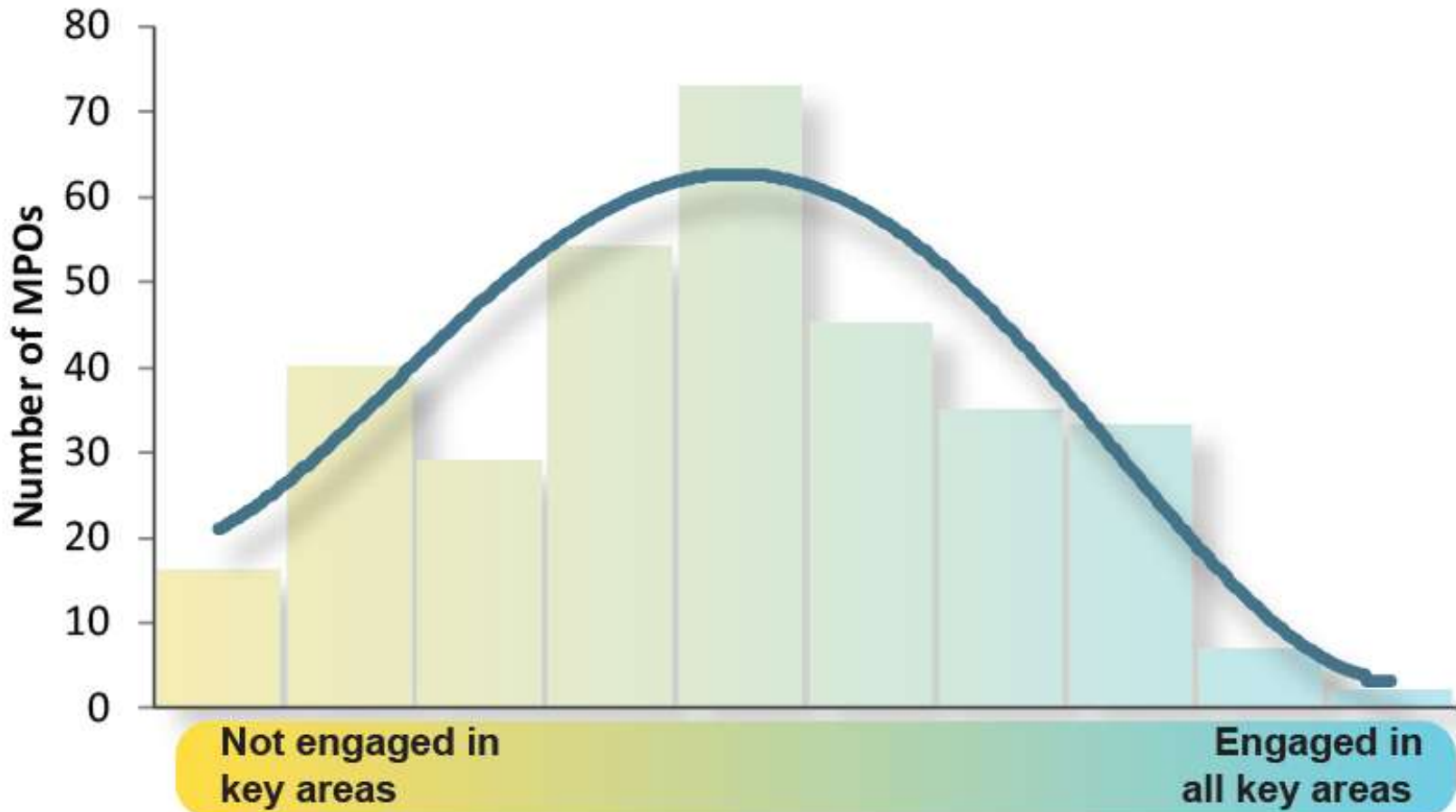
2011 MPO Program Assessment – Key Indicators

1. Regional Collaboration
2. Outcome-Based Operations Objectives
3. Performance Measurement
4. Management and Operations Strategies
5. Analysis and Evaluation
6. Use of the Regional ITS Architecture

334 MPOs assessed on this basis

State of the Practice

MPO P40 Program Assessment



Needs and challenges – making progress

- Obtaining buy-in for operations among decisionmakers and with the public
- Interagency coordination
- Planning for operations for small MPOs
- Data collection
- Operations analysis tools and estimates
- Cost-benefit analysis of operations
- Basic planning for operations



4. Organizing and Planning for Operations

Program Planning

Facilitated program planning workshop (Feb 2012)

- HQ and Field Ops, Planning, and Safety
- Focus on Needs and Issues
 - Institutional Prerequisites
 - Ties between program/project selection and planning activities
 - Tools responsive to technical and policy requirements
 - Outcomes - System Performance
 - Maintain momentum over time
- Based on needs, developed program goals, objectives, and several program emphasis areas identified to advance (a) state of the practice and (b) state of the art

Program Goals

A

MPOs, State DOTs, and partners use an **OBJECTIVES-DRIVEN, PERFORMANCE-BASED APPROACH** in planning, programming, and designing for operations and managing the full operations lifecycle

B

Decisionmaking at all levels is supported by use of an **ANALYTICAL PLATFORM** that takes both **OPERATIONS** and **CAPACITY** into consideration

Program Goals

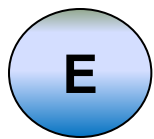
C

The **BENEFITS** of operations strategies are **QUANTIFIED** and **WIDELY ACCEPTED** among State and metropolitan leadership

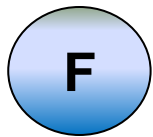
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Organizing and planning for operations is **UNDERSTOOD, SUPPORTED, AND COORDINATED** within the **U.S. DOT**

Program Goals



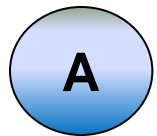
Operations is **MAINSTREAMED AND INTEGRATED** across organizational and functional areas



Ongoing **REGIONAL COLLABORATION AND COORDINATION** advances effective operations for system users

Supporting FHWA National Performance Objective SP-2

- National Performance Objective SP-2: ...improve system performance in safety and travel time reliability...while reducing emissions and fostering livable communities
 - National Performance Measures: Number of MPOs advancing an objectives-driven performance-based approach
 - National Initiatives, 2.5: Metropolitan and Statewide plans for implementing congestion reduction strategies will be developed utilizing an objectives-driven, performance-based approach



Goal: OBJECTIVES-DRIVEN, PERFORMANCE-BASED APPROACH directly addresses SP-2

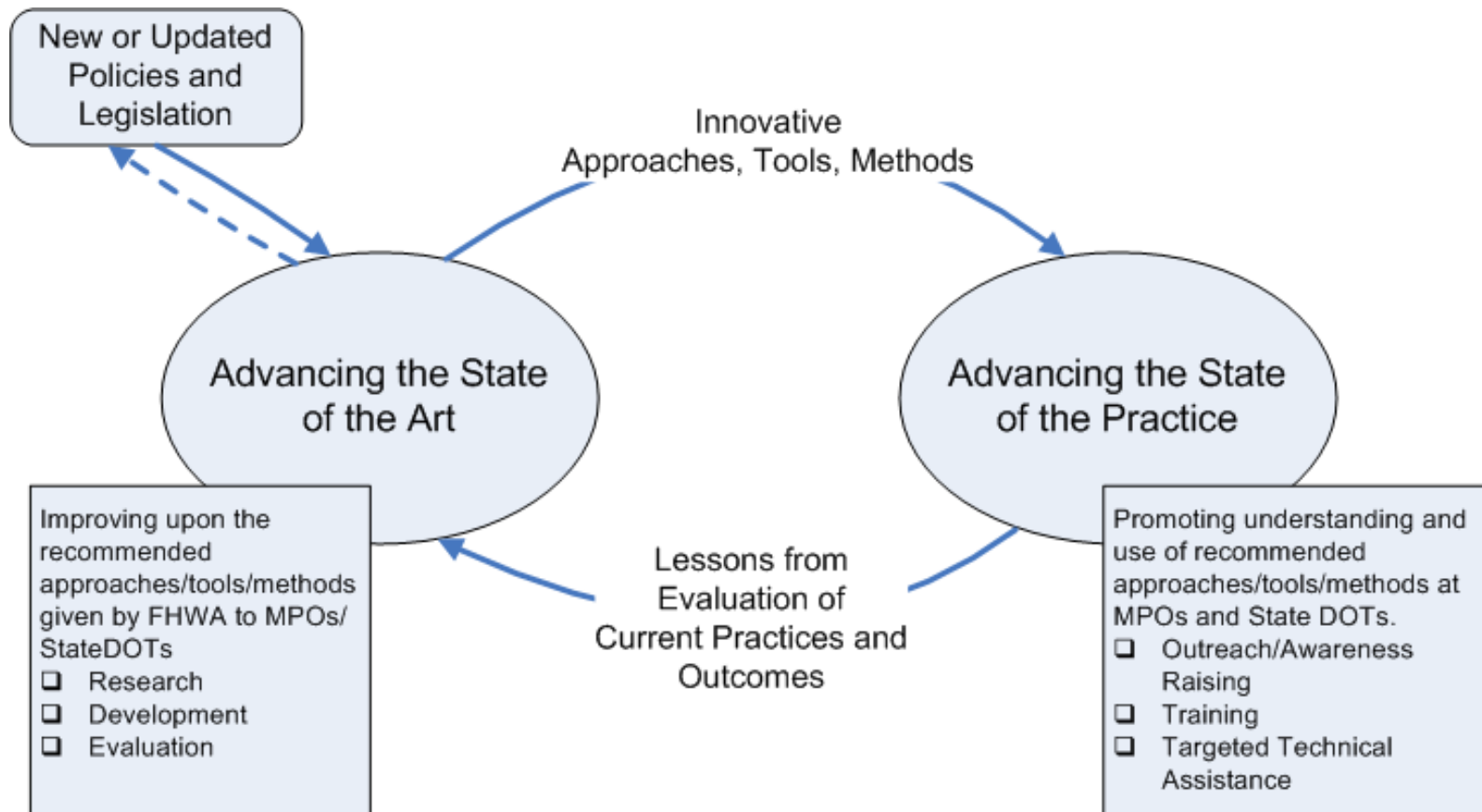




Program Tracks

1. Overarching Planning for Operations Approach
2. Operations Analysis and Making the Case for Operations to Support Decisionmaking
3. Positioning the U.S. DOT as an Organization to Better Support Organizing and Planning for Operations
4. Mainstreaming Operations Institutionally and Functionally
5. Regional (or Interagency) Collaboration and Coordination

Two Overarching Themes



Track 1. Overarching Planning for Operations

GOALS



OBJECTIVES

- By year Y, X% of MPOs and State DOTs:
 - Use SMART objectives and performance measures to include operations solutions in MTP or SLRTP
 - Use an S/TIP prioritization process directly connected to objectives
 - Identify operations strategies in the S/TIP to support objectives
- By year Y, X% of MPOs have M&O strategies in their Plans.

Track 1. Overarching Planning for Operations

OBJECTIVES CONT'D

- By year Y, X%, project development and design processes address operations
- The full life cycle of M&O strategies is planned for and actively managed
- Increased allocation of funding for management and operations within S/TIPs

Track 1. Overarching Planning for Operations

APPROACHES

Activities for Advancing the
State of the Art

- Identify common performance measures to use for planning for operations
- Develop methods for linking long and short-term objectives
- Develop approaches for maintaining and managing operations over time

Activities for Advancing the
State of the Practice

- Integrate operations into project and agency design manuals
- Continue to use workshops to provide technical assistance
- Assist MPOs/State DOTs in developing action plans for use of approach
- Integrate the message of planning for operations into other operations programs' workshops

Track 2. Operations Analysis and Making the Case

GOALS



OBJECTIVES

- All MPOs use analysis methods to evaluate M&O strategies by year Y
- MPOs adopt analysis methods more reflective of the state of the art
- Increase the capabilities of analytic tools and methods
- Improve analytic measures
- Improve communication of analytic results and overall benefits of operations
- Improve the utilization of data (inputs and outputs)

Track 2. Operations Analysis and Making the Case

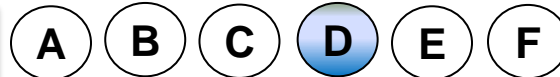
APPROACHES

- Promote the use of tools and the capabilities of the agencies to use the tools (HQ, RC, TAT)
 - Outreach and training
 - Engage leaders
 - Case studies
 - User guidelines
- Improve the tools and our ability to interpret the results coming from the tools (HQ, RC, TAT)
- Strengthen the ability to make the case for operations at all levels (HQ, RC, TAT)

Track 3. Position U.S. DOT to Better Support Organizing and Planning for Operations

OBJECTIVES

GOALS



- FHWA Headquarters, Resource Center, Division Offices, and Federal Lands staff understand/communicate the core concepts
- All FHWA staff provide consistent message to partners
- Program messages are embedded in senior FHWA leadership core messages
- Program part of ongoing monitoring and reviews at State DOTs and MPOs
- Planning for operations integrated across relevant program areas
- Outreach and training efforts within the program are coordinated and strategically delivered

Track 3. Position U.S. DOT to Better Support Organizing and Planning for Operations

APPROACHES

- Educate planning and operations staff and establish POC at divisions
- Increase communication between operations engineers and planners at divisions
- Develop common material on program to integrate into in other areas in operations, such as ATDM, ICM, TIM, Traffic Signals, and TSM&O
- Continue a strong partnership with Office of Planning and NTOC
- Create standard training curriculum
- Ensure recipients of outreach/training are ready and able to implement
- Regularly conduct “light” version of MPO assessment
- Coordinate and market training/messages with AMPO

Track 4. Mainstreaming Operations Institutionally and Functionally

GOALS

A

B

C

D

E

F

OBJECTIVES

- By year Y, X% State DOTs and MPOs have integrated operations into at least Z different functional and organizational areas within their agencies
- Operations strategies are used to support multiple goals such as safety and multi-modal transportation in metropolitan and statewide transportation plans

Track 4. Mainstreaming Operations Institutionally and Functionally

APPROACHES

- Educates infrastructure departments within transportation agencies on considering operations in infrastructure projects
- Facilitates collaboration between operations staff and other departments or agencies such as safety, infrastructure, etc.
- Supports operations champions at MPOs
- FHWA creates outreach materials that explain the significance and contribution of operations to other functional areas

Track 5. Regional Collaboration and Coordination

GOALS



OBJECTIVES

- All top 40 metropolitan areas conduct routine multi-agency discussions on operations program areas
- Operations coordinating teams are established
- A planning for operations champion exists at each MPO and State DOT – with close coordination
- New interagency groups established where and existing groups are strengthened

Track 5. Regional Collaboration and Coordination



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

APPROACHES

- Advancing the State of the Practice
 - Encourage agencies to share information obtained from operations evaluations
- Advancing the State of the Art
 - Refining and improving upon strategic regional operations plans to help create, expand, or maintain even more productive collaborative efforts



8. Planning for Operations

Next Steps

Next Steps

- Develop program plan document and have it reviewed by others at FHWA
 - Convene a second program plan workshop
 - Strengthen the link between organizing and planning for operations
 - Make program track objectives and approaches more specific
 - Define program projects for 2013 - 2015
- Develop a program white paper for review by external stakeholder groups
- Continue a successful program

Questions & Discussion