



U.S. Department of Transportation
Federal Highway Administration

Peer Exchange Summary Report: One Vision, Many Goals, Many Objectives...

Exploring How to Put It All Together in Your Long Range Plans

August 1, 2017
Cincinnati, Ohio

Contract Number DTFH6116D00015

Prepared for Federal Highway Administration

Prepared by ICF

Technical Report Documentation Page

1. Report No. FHWA-HEP-18-053		2. Government Accession No.		3. Recipient's Catalog No.	
4. Title and Subtitle Peer Exchange Summary Report: One Vision, Many Goals, Many Objectives... Exploring How to Put It All Together in Your Long Range Plans			5. Report Date December 2017		
			6. Performing Organization Code		
7. Authors Janet D'Ignazio (ICF), Beth Zgoda (ICF)			8. Performing Organization Report No.		
9. Performing Organization Name and Address ICF International 9300 Lee Highway Fairfax, VA 22031			10. Work Unit No. (TRAIIS)		
			11. Contract or Grant No. DTFH6116D00015		
12. Sponsoring Agency Name and Address United States Department of Transportation Federal Highway Administration 1200 New Jersey Ave. SE Washington, DC 20590			13. Type of Report and Period Covered August 2017 – December 2017		
			14. Sponsoring Agency Code HEPP		
15. Supplementary Notes					
16. Abstract As the Transportation Research Board ADA10 Committee, American Association of State Highway and Transportation Officials (AASHTO) Standing Committee on Planning, and Federal Highway Administration (FHWA) began work to prepare for implementing the new performance management regulations the Moving Ahead for Progress in the 21st Century (MAP-21) and the Fixing America's Surface Transportation (FAST) Acts, they recognized a demand for additional technical assistance, research, and peer-to-peer learning. To help meet that demand, they sponsored a peer exchange workshop titled "One Vision, Many Goals, Many Objectives ... Explore How to Put It All Together in Your Long Range Plans" during AASHTO's August 2017 Conference on Performance-Based Transportation Planning, Financing, and Management in Cincinnati, Ohio. This report summarizes the workshop activities and discussions.					
17. Key Words Transportation planning, metropolitan planning, statewide planning, nonmetropolitan planning, long range, performance, targets, measures, FAST Act, MAP-21			18. Distribution Statement No restrictions. This document is available to the public from the National Technical Information Service, Springfield, VA 22161.		
19. Security Classif. (of this report) Unclassified		20. Security Classif. (of this page) Unclassified		21. No. of Pages 81	22. Price N/A

Form DOT F 1700.7 (8-72) Reproduction of completed page authorized

Contents

Peer Exchange Summary Report: One Vision, Many Goals, Many Objectives... Exploring How to Put It All Together in Your Long Range Plans	i
Introduction and Background	1
Overview	1
Pre-Peer Exchange Survey	3
Topic 1: Integrating PBPP Required by FAST/MAP-21	3
Summary of Survey Responses	4
Peer Presentation: Ohio DOT	4
Breakout Group Discussion	5
Topic 2: PBPP Process	6
FHWA Perspective	7
<i>Coordination Between State DOTs and MPOs</i>	7
<i>PBPP: Planning Agreements</i>	8
<i>PBPP: Integration of Other Performance-Based Plans</i>	8
Summary of Survey Responses	9
Peer Presentation: Texas DOT	9
<i>Summary</i>	11
<i>Group Discussion</i>	11
Topic 3: Communication Challenges and Strategies	11
Summary of Survey Responses	12
Peer Presentation: Communicating the One Nevada Transportation Plan Link	12
Breakout Group Discussion	13
Research and Capacity-Building Needs	13
Conclusion	14
Appendix A: Agenda	15
Appendix B: Survey and Responses	17
Appendix C: Topic 1: Slides	43
Appendix D: Topic 1 Discussion Notes	47
Appendix E: Topic 2 Slides	52
Appendix F: Topic 2 Discussion Notes	62
Appendix G: Topic 3 Slides	66
Appendix H: Topic 3 Discussion Notes	71
Appendix I: Research and Technical Assistance Needs Identified	76
Appendix J: Participant List	80

Abbreviations

Term	Definition
AASHTO	American Association of State Highway and Transportation Officials
CMAQ	Congestion Management and Air Quality
DOT	Department of Transportation
FAST Act	Fixing America's Surface Transportation Act
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
LRTP	Long Range Transportation Plan
LRSTP	Long-Range State Transportation Plan
MAP-21	Moving Ahead for Progress in the 21st Century Act
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NCHRP	National Cooperative Highway Research Program
PBP	Performance-Based Planning
PBPP	Performance-Based Planning and Programming
SFP	State Freight Plan
SHRP	Strategic Highway Research Program
SHSP	State Highway Safety Plan
STIP	State Transportation Improvement Program
TAMP	Transportation Asset Management Plan
TIP	Transportation Improvement Program
TRB	Transportation Research Board
TSMO	Transportation Systems Management and Operations
TxDOT	Texas DOT
USC	US Code

Introduction and Background

The Moving Ahead for Progress in the 21st Century (MAP-21) and the Fixing America's Surface Transportation (FAST) Acts have expanded the number of performance-based planning and programming (PBPP) requirements for State and regional transportation agencies. Compliance with Federal rules is but one consideration in the development of statewide and regional plans. Long range transportation plans (LRTPs), whether for a State or a metropolitan region, must continue to reflect the values and priorities of each agency, the public, and stakeholders. For those responsible for developing policy and investment plans, the challenge is how to best integrate all the different plans while maintaining a consistent and coherent message. With the completion of the Federal rulemaking, requirements and deadlines are now set and agencies are beginning to implement them.

As the Transportation Research Board [ADA10 Committee](#), American Association of State Highway and Transportation Officials (AASHTO) [Standing Committee on Planning](#), and [Federal Highway Administration](#) (FHWA) began work to prepare for implementing the new regulations, they recognized a demand for additional technical assistance, research, and peer-to-peer learning. To help meet that demand, they sponsored a peer exchange workshop titled "One Vision, Many Goals, Many Objectives ... Explore How to Put It All Together in Your Long Range Plans" during AASHTO's 2017 Conference on Performance-Based Transportation Planning, Financing, and Management in Cincinnati, Ohio.

The daylong workshop took place on August 1 of the five-day conference. In preparation for the workshop, the organizers circulated a survey to potential attendees on the ADA10 Committee and on AASHTO's Standing Committee on Planning. This survey asked respondents to briefly describe their current experiences in three primary topic areas: (1) integrating PBPP plans with their long range plans, (2) developing a PBPP process, and (3) communicating about PBPP to the public and to their political leaders. The organizers used the survey responses to frame the discussions on each topic.

Overview

The workshop provided practitioners an opportunity to share lessons learned and compare strategies for PBPP. The workshop also helped identify future research that will help State departments of transportation (DOTs) and metropolitan planning organizations (MPOs) advance the practice of aligning related planning processes with their long range plans.

The workshop built off the survey responses and was organized around the three topics: (1) integrating PBPP plans with long range plans, (2) developing a PBPP process, and (3) communicating about PBPP to the public and to political leadership.

See figure 1 for the abbreviated agenda and **appendix A** for the full agenda.

At the beginning of each topic session, a facilitator summarized the survey responses to frame the conversation. Representatives from a State DOT then gave a presentation describing their experience within the topic area, including challenges they encounter and strategies they are using. Additionally, a FHWA representative presented on the Federal requirements for PBPP.

After the opening presentations, attendees participated in facilitated group discussions. Participants identified challenges that they all face and brainstormed and volunteered strategies for addressing those challenges. See appendices C through H for more detail.

At the end of the workshop, participants identified ideas for research statements for the Transportation Research Board ADA10 committee and for technical assistance offerings that they would like FHWA to provide. These are summarized below and in more detail in **appendix I**.

Participants identified these key takeaways:

- We're all in a similar place. Nobody has all the answers yet.
- Anticipate and expect iterations and to evolve as we learn more.
- Integration may be easier for agencies that have or create an overall strategy, vision, goals, message, and process to guide the development of all plans; a core interdepartmental team to lead the integration; and an interdepartmental workgroup to coordinate use of performance measures.
- Commit to engaging in other plans, even if your department isn't the lead.
- Create a governance document to identify roles and responsibilities, performance measures, and data.
- Communications and trust are important.
- Champions can come from internal or external sources.
- Federal deadlines and responsibilities need to be clarified.
 - State DOTs and MPOs are required to coordinate on setting targets, and this coordination can be documented in planning agreements.
 - Encourage DOTs and MPOs to discuss performance measures and targets.

Agenda

Topic 1: Integrating FAST Act and MAP-21 Plans

- Scott Phinney, Ohio DOT presentation
- Breakout group discussion

Topic 2: PBPP Process Development Challenges and Strategies

- Harlan Miller, FHWA, National perspective
- Marc Williams, Texas DOT presentation
- Full group discussions

Topic 3: Communication Challenges and Strategies

- Sondra Rosenberg, Nevada DOT presentation
- Breakout group discussions

Discussion of research and technical assistance needs

Figure 1. Brief workshop agenda

- MPOs can develop their own targets or adopt DOT targets.

This report summarizes the survey responses, discussions on each topic, and research needs that the participants identified. Content for this report comes from notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Pre-Peer Exchange Survey

In advance of the workshop, organizers distributed a survey to prospective participants with questions related to implementing PBPP and plan integration. Representatives of 14 State DOTs and 2 MPOs responded.

Responses about plan integration and the establishment of PBPP processes showed:

- Most of the 16 agencies that responded are linking asset management, freight investment, and strategic highway safety plans, as well as congestion management processes, to their long range plans with varying approaches to integration.
- Most States or regions have adopted performance-based processes for developing one or more of their respective plans, with varying approaches to identifying measures/targets, procedural integration of technical elements, and project prioritization. Obstacles to the adoption of these processes include time and data limitations, as well as difficulties implementing change.

Responses about communication and coordination showed:

- Agencies had similar approaches to public communication, generally falling into four broad categories of dissemination and engagement.
- Most agencies indicated they had well-established processes for communicating with decision makers regarding the long-range planning process, but most indicated they had not begun to communicate about the overall relationship and coordination of multiple plans.

See **appendix B** for the full survey and compilation of responses.

Topic 1: Integrating PBPP Required by FAST/MAP-21

MAP-21 and the FAST Act require performance-based planning and programming (PBPP) to be integrated with existing transportation planning processes. The first topic of the workshop addressed plan integration and allowed practitioners to share their outlooks and approaches toward meeting this goal. A common view was that agencies are still learning how to address this challenge. This was highlighted in Ohio DOT's presentation to the group of the agency's need to coordinate goals, objectives, and performance measures across a variety of formerly disparate planning efforts.

Some of the key takeaways participants identified included:

- Integration may be easier if agencies develop an overarching vision, goals, message, strategy, and process to guide the development of all plans.
- Agencies can establish a core interdepartmental team to lead this integration and a performance measures workgroup to coordinate use of performance measures.
- Governance documents can identify roles and responsibilities, performance measures, and data.
- One strategic plan can guide the development of other plans.

See **appendix C** for the presentation slides used during this portion of the agenda.

Summary of Survey Responses

Most of the agencies surveyed had taken steps to integrate asset management, freight, and strategic highway safety plans, as well as congestion management processes, with their LRTP. Levels of integration varied from the incorporation of issues or challenges from individual plans in LRTP scenarios, all the way to top-down integration that aligned all plans to a single policy framework that could include an overarching vision, goals, and/or measures.

For example, Arkansas DOT developed four scenarios for their State LRTP. One scenario emphasized investing in better freight transportation to reduce congestion and improve reliability. The development of the scenarios then informed the development of investment types and locations. On the other hand, Iowa DOT incorporated numerous elements into their LRTP, including strategies, modal needs, and the analysis, identification, and ranking of freight bottlenecks from their State Freight Plan, as well as strategies and analyses from other plans such as the State Highway Safety Plan and Transportation Asset Management Plan.

See **appendix B** for more information about the survey responses related to topic 1.

Peer Presentation: Ohio DOT

With the passage of MAP-21 and the FAST Act, State DOTs are now required to produce a variety of performance-based plans, but each plan has its own goals, objectives, action items, recommendations, and performance measures. Scott Phinney of Ohio DOT presented on his department's efforts to integrate these plans and likened it to trying to connect a six-pack of beverage cans with one set of plastic rings (see figure 2). The combination of the LRTP, State Highway Safety Plan (SHSP), Transportation Asset Management Plan (TAMP), State Freight Plan, and Transportation Systems Management and Operations Plan (TSMO) resulted in hundreds of goals, recommendations, strategies, and performance measures.

Lacking the plastic thing that holds it all together

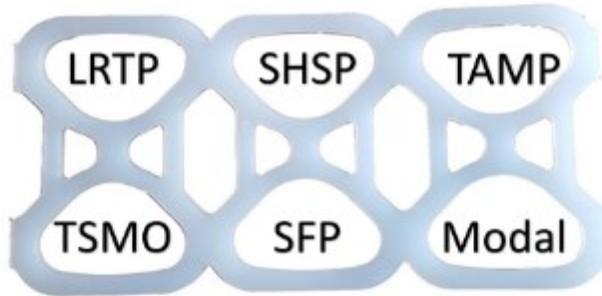


Figure 2. A six-pack of plans

Mr. Phinney identified a number of questions and challenges to integrating the different plans:

- How do DOTs coordinate these plans so that the various plans do not lead in divergent directions?
- How can action items and recommendations be coordinated to optimize resources?
- How can we reuse performance measures across plans so that we don't get buried in a pile of performance measures?
- Pulling people from different silos can help with integration, however, one has to be wary of creating new silos in the process.

To communicate their plan goals in their last cycle, the Ohio DOT created a pack of “baseball cards,” with each card summarizing one of the recommendations, goal areas, and initiatives. During the presentation’s discussion, one participant recommended creating a performance measure inventory. Participants also identified as obstacles to a cohesive plan the existence of different consultants and vocabularies for each plan, coordinating a very large number of internal DOT/MPO plans, managing data collection, and issues around competing stakeholder ownership and involvement.

Breakout Group Discussion

Following the peer presentation, the group identified these benefits of integrating asset management plans, freight plans, strategic highway safety plans, and the congestion management process to their long range plans:

- Compliance with Federal requirements
- Improved organizational efficiency
- Better decision making and allocation of funding
- Improved interagency collaboration

The group also identified these risks of not linking these plans:

- Loss of credibility
- Inefficient use of resources
- Inconsistent goals and working at cross-purposes
- Weakened communications that lack a cohesive message or objective(s)

The group then identified common challenges and strategies for addressing those challenges:

- *Challenge:* Timing and pace of change
 - *Strategies:* Adapt incrementally and don't expect perfection. Identify improvements for the next cycle.
- *Challenge:* Decentralized decision making
 - *Strategies:* Educate on the benefits of shifting from project-based decision making to centralized, performance-driven approach to decision making. Establish guidelines.
- *Challenge:* Leadership priorities, politics, and administrative change
 - *Strategies:* Develop the business case to use in getting executive's support: risks, buy-in, changing Federal requirements.
- *Challenge:* Managing the sheer number of plans and measures
 - *Strategies:* Develop overall strategic plan or agency vision to direct all of the plans.
- *Challenge:* Making these efforts effective and meaningful
 - *Strategies:* Tie funding decisions to performance outcomes.
- *Challenge:* Data analysis/management
 - *Strategies:* Create common, shared data portals.

See **appendix D** for more on the risks, benefits, challenges, and strategies identified at the breakout discussion. The content in appendix D is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Topic 2: PBPP Process

The process for implementing and developing PBPP seems daunting because of the multitude of performance measures, fiscal and political constraints that will affect outcomes, and challenge of coordinating between State DOTs and MPOs. The process is therefore expected to be iterative and will evolve with experience.

See **appendix E** for the slides used during this portion of the agenda and **appendix F** for details on the group discussions. The content in appendix F is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

FHWA Perspective

Harlan Miller from FHWA gave an overview of the PBPP implementation timeline and regulatory requirements, clarifying Federal deadlines and responsibilities.

Table 1: PBPP Implementation Timeline

Final Rule	Effective Date	States Set Targets By	MPOs Set Targets By	LRSTP, MTP, STIP and TIP Inclusion
Safety Performance Measures (PM1)	April 14, 2016	Aug. 31, 2017	Up to 180 days after the State sets targets, but not later than Feb. 27, 2018	Updates or amendments on or after May 27, 2018
Pavement/Bridge Performance Measures (PM2)	May 20, 2017	May 20, 2018	No later than 180 days after the State(s) sets targets	Updates or amendments on or after May 20, 2019
System Performance Measures (PM3)	May 20, 2017	May 20, 2018	No later than 180 days after the State(s) sets targets	Updates or amendments on or after May 20, 2019

Coordination Between State DOTs and MPOs

The rules:

- States and MPOs shall coordinate when setting targets to ensure consistency to the maximum extent practicable (23 U.S. Code 134(h)(2) and 135(d)(2)).
- An MPO may establish its own quantifiable performance targets or may adopt a State's performance targets and support the State's efforts at achieving those targets (23 Code of Federal Regulations 490.105).

Discussion

The group shared their experiences of coordinating between State DOTs and MPOs. In Nevada, a performance measures workgroup meets monthly made up of planning managers from each of the State's four MPOs. The group catalogued the measures each of them were currently reporting and then identified which measures were most important for plans. Through this process, they identified consistent measures across the plans and established a basis for setting targets. While this group had initially considered adopting the State targets, the MPOs decided to forge their own path upon learning that the State target followed the trend line rather than showing the improvements the MPOs desired.

In Utah, even before the new MAP-21 and FAST Act requirements, the State's MPOs and DOT had adopted common goals and measures for a few cycles. As a highly diverse State (with

extremely rural areas and two major MPOs), their decision-making process allows the flexibility to weigh goals and objectives independently to adjust for local conditions and context. (Virginia's MPOs and DOT follow a similar process). Utah's financial planning efforts are also very coordinated; they use the same GIS-based platform for all plans and studies, even the environmental review process.

Nevada DOT thought they were coordinating well with MPOs, but then they learned that the safety office had already submitted safety measures and targets. The MPOs' targets had already been set by the safety office, so the DOT realized that their coordination efforts were too late for this round.

See **appendix F** for more details on the coordination discussion. The content in appendix F is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

PBPP: Planning Agreements

The rule:

MPO(s), State DOTs, and public transit agencies shall establish written agreements for a metropolitan area describing roles and responsibilities for PBPP. Details can include coordination on target setting, data collection, data analysis, reporting on progress toward achievement, and data collection for the National Highway System asset management plan. These agreements shall be drafted cooperatively by the State(s), MPO(s), and public transit agencies serving the metropolitan area and can be documented in metropolitan planning agreements or in a separate document.

Discussion

To better enable planning agreements, Colorado has begun to develop a common template, which four of its five MPOs have already executed and incorporated into their metropolitan planning agreements. Likewise, West Virginia developed a blanket agreement among all MPOs with their State DOT counterparts as a means of ensuring buy-in across all different locations; the agreement's language is flexible enough to allow for individualized local arrangements without needing to revise the agreement.

PBPP: Integration of Other Performance-Based Plans

The rule: The goals, objectives, performance measures, and targets from other performance-based plans and programs shall be integrated into the transportation planning process.

Discussion

Mr. Miller noted that after the transition period agencies only need to include targets in their LRTPs when they are updating (or amending) the plans themselves; they are not required to redo their plans to match new targets. However, transportation improvement program (TIP) updates and amendments after the transition period must include a description of how the

program of projects will help achieve performance targets. During the discussion, an audience member suggested that the LRTPs reference a separate performance measures document that would be publicly available and kept more up to date; this would avoid having out-of-date information in the LRTP.

Summary of Survey Responses

Respondents to the survey indicated they were using planning processes, enterprise-wide performance measurement processes, and legislative or policy board directives to identify measures and targets. To prioritize projects, respondents were using scoring frameworks, planning factors, decision support tools and processes, and funding levels, and anticipated outcomes by objective. For example, Florida DOT uses unfunded needs plans, cost-feasible plans, and 5- and 10-year capital plans to prioritize projects for their Strategic Intermodal System (SIS) Policy Plan. These plans are updated to maintain consistency with the SIS Policy Plan and the Florida Transportation Plan. Florida DOT also uses strategic investment tools that reflect the goals and objectives of the Florida Transportation Plan and SIS Policy Plan to provide analytical support for project selection and prioritization.

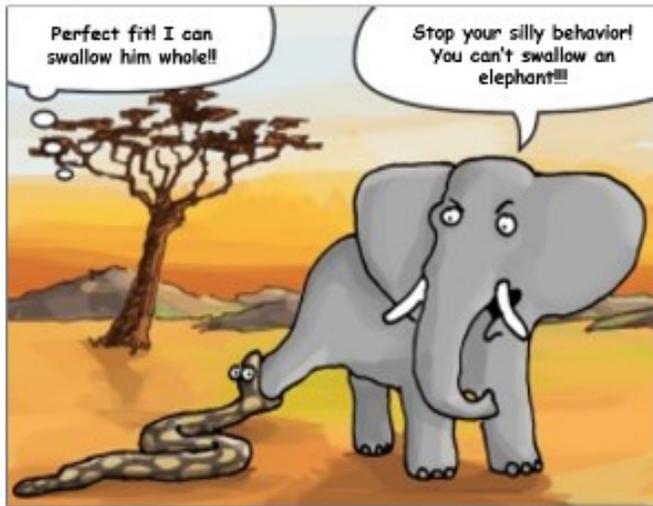
See **appendix B** for more information about the survey and responses.

Peer Presentation: Texas DOT

Marc Williams of Texas DOT (TxDOT) presented on implementing a PBPP process. In addition to the Federal requirements, TxDOT and MPOs must meet State-level reporting requirements, and many of the 25 MPO boards also have established performance measures and requirements. TxDOT established a performance measure workgroup to deal with alignment issues and is developing a governance document to lay out a management plan for PBPP activities. TxDOT meets with their MPOs on a quarterly basis to coordinate.

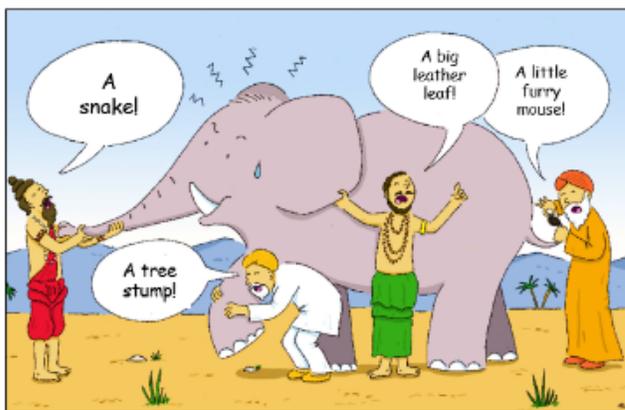
Data quality and sources is always a challenge. TxDOT finds and provides the data to MPOs so that they are all using a common data source. TxDOT is purchasing Decision Lens and licenses for all MPOs and TxDOT districts so that everybody is working from the same platform, but TxDOT does not require MPOs to use these tools if they prefer something else. TxDOT is also bringing all the data together in one central repository where it is accessible to all the MPOs. Further, TxDOT is working on an iterative process that engages the public; their feedback and performance objectives inform project prioritization and selection.

Mr. Williams then gave advice to the audience in the form of elephant analogies (see figure 3).

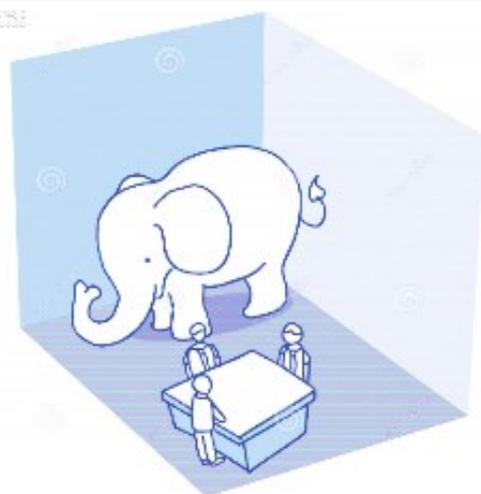


Don't choke on the elephant. You can't take in this major of a change in one swallow; just make incremental progress with each cycle.

How are you describing the elephant?



Performance measures mean different things to different people. There is a need to put performance measures into a broader perspective to view across silos and see what's reasonable – e.g., someone can look at percent structurally deficient in other States for benchmarking the status of a bridge.



Talk about the elephant in the room. Admit that it will take time. Keep communications open and admit and accept that it is an ongoing process, even when this is uncomfortable. Talk with the FHWA to let them know the agency's duties to the State DOT; talk to the State DOT to tell them about Federal duties.

Figure 3. Think of plans like elephants

Summary

PBPP is a robust and complex field. Agencies should use what resources they have, improve data sources, consider use of a governing document, rely on the expertise of others, and recognize the needs of stakeholders and the public to understand the role of performance measures. It is essential to link performance-based planning with projects and programming because, as Mr. Williams noted, an agency is only as good as the projects they can deliver.

Group Discussion

The group brainstormed ideas for addressing challenges they face, beginning with the sheer quantity of performance measures. Solutions proposed include pilot testing draft measures and retiring some measures altogether, as Florida DOT and TxDOT are currently exploring.

The group identified as another challenge that expected outcomes and targets may worsen over time given agencies' constraints (i.e., things will not necessarily improve over time without more money and expertise). One solution may be to use trend lines as benchmarks for progress. These will not necessarily indicate improvement upon today's measures but can show improvement from what would be.

Finally, the group highlighted the challenge of State DOT-MPO coordination. The perspectives of DOTs and MPOs often differ because MPOs do not face the same consequence for missing targets. For example, some MPOs want targets to reflect their adoption of Vision Zero policies, but State DOTs are reluctant to do so when they might face consequences for not meeting safety targets.

See **appendix F** for a full list of the challenges and strategies identified. The content in appendix F is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Topic 3: Communication Challenges and Strategies

Effectively communicating the goals, objectives, and measures of performance-based planning to the public and stakeholders is an important component of the implementation process. The peer group identified several strategies to help achieve this, including establishing trust and rapport; cultivating champions internally and externally; and creating interactive ways to demonstrate trade-offs of each decision. Setting up scenarios can help audiences answer, "What's in this for me?" Key takeaways identified by participants included:

- Communication and trust are important.
- DOTs are trying many interesting and innovative communications strategies.
- "Inreach" can be used to create champions throughout the agency.
- Champions can come from external partners (e.g., Florida DOT's use of AARP as a champion).

See **appendix G** for the slides used in this portion of the agenda and **appendix H** for details about the group discussions. The content in appendix H is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Summary of Survey Responses

When asked how they were communicating, respondents indicated three primary strategies:

- Public/stakeholder involvement processes (one-way dissemination and two-way feedback)
- Branding
- Collaboration with regional boards or groups of stakeholders

Colorado DOT hosted a series of interactive “telephone town halls” with a format similar to a radio talk show. The public could ask questions directly to decision makers and participate in polls using the numbers on their phones. Colorado DOT used these town halls to help shape and disseminate their message, giving audiences the opportunity to provide public input on transportation needs and priorities, and allowing them to consider the trade-offs inherent in the transportation planning process.

Florida DOT identified one internal leader or manager and one external partner to champion each goal in the State LRTP and coordinate related activities. Partner champions included organizations like AARP and the Nature Conservancy that shared a stake in the success of plan elements like transportation choices and environmental stewardship.

See **appendix B** for the full survey responses.

Peer Presentation: Communicating the One Nevada Transportation Plan Link

Sondra Rosenberg of Nevada DOT presented on how to communicate internally, with the public, and with political leaders about integrating the plans and PBPP. Ms. Rosenberg noted that Nevada’s previous LRTPs were policy-based and tended to sit on a shelf rather than guide decisions. To remedy this, her agency created a strategic plan they named One Nevada. The goal of One Nevada was to establish a transparent, defensible process to inform decisionmaking. Their process aims to develop consistency among goals, objectives, performance measures, projects, and policies in the various plans and programs. Existing plans fed into the development of One Nevada, and One Nevada will feed into later iterations of those plans. The tagline “One Vision, One Plan, One Nevada” promoted this vision.

Nevada DOT uses what they call “inreach” strategies to improve internal communications across departments as they develop their overarching strategic plan. When their board asked why they were developing this process, they explained that the robustness of the process will provide more information to improve decisions. For example, if a political leader asks Nevada DOT to accelerate a project, the One Nevada plan includes the information to explain what the trade-offs are for reallocating resources to that project. To get staff buy-in, the DOT surveys

employees to find volunteers to work on specific goals and provides reasonable resources to support progress to achieving that goal.

Nevada DOT usually adds itself to agendas for existing meetings to communicate with the public. A One Nevada-branded van travels among the counties to serve as an on-the-road, pop-up information shop. They collect public input via iPad surveys when on site at meetings or events, and they distribute surveys and cards so that the public can submit comments online at their convenience.

Breakout Group Discussion

Following the peer presentation, the group shared their approaches to communicating the overall relationship and coordination of these plans to each other with public and policy decision makers. The group also identified strategies for internal or “inreach” communications. Common communication challenges identified for all audiences include the sense of too much information to convey and a lack of relevant information. The group identified a number of challenges and strategies for improving communications, such as tailoring communications to lure in specific audiences and providing materials that are most interesting to them.

See **appendix H** for details about the group discussions. The content in appendix H is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Research and Capacity-Building Needs

Because integrating plans and implementing PBPP is generally uncharted territory, there is a need for research and capacity-building. Participants suggested identifying best practices for:

- Creating a DOT strategic plan that guides/coordinates the development of other plans
- Developing unified policy statements that cover a broad range of goals
- Integrating asset management plans
- Applying business processes for plan alignment
- Incorporating multiple plans together and identifying linkages and touchpoints

In addition, participants identified a few specific research needs relating to:

- Data and performance measures
- Trade-offs, resource allocation, and investment strategies
- Engagement and communications

The group also identified a few common threads regarding capacity-building needs, including:

- PBPP knowledge sharing
- Training related to coordination within and between agencies

- Developing tools and methods for communication and for increasing engagement/buy-in
- Tools and training for developing effective performance measures and reporting
- Developing data management, sharing, and analysis tools and strategies

See **appendix J** for a detailed list of identified research and capacity-building needs.

Conclusion

Participants were generally relieved to learn that other agencies are struggling with similar challenges. By working together to brainstorm and share strategies for addressing these challenges, the participants left the peer exchange more prepared to fully implement PBPP in their agencies.

Appendix A: Agenda

ADA10 STATEWIDE MULTIMODAL TRANSPORTATION PLANNING COMMITTEE/ FHWA/AASHTO PEER EXCHANGE

Tuesday, August 1, 2017
8:30 AM – 5:00 PM

One Vision, Many Goals, Many Objectives... Exploring How to Put It All Together in Your Long Range Plans

AGENDA

Welcome and Introductions	Jerri Bohard, Chair ADA10 Janet D'Ignazio
Topic 1: Integrating FAST Act and MAP-21 required plans <ul style="list-style-type: none"> ● Summary of survey responses ● Peer Presentation ● Breakout group discussion <ul style="list-style-type: none"> ○ What are the benefits to state DOTs of linking Asset Management, Freight Investment, Strategic Highway Safety plans and the Congestion Management Process to their Long Range Plans? ○ What are the risks if plans are not linked? ○ What are the challenges or obstacles to linking these plans? ○ What strategies are you using or considering using to link one or more of these plans together? 	Janet D'Ignazio Scott Phinney, Ohio DOT One hour facilitated breakout discussion (includes a 15 minute break) <u>Facilitators</u> Michael Grant Beth Zgoda Janet D'Ignazio
Topic 1: Wrap-Up <ul style="list-style-type: none"> ● Breakout group reporting out ● Session Summary 	Breakout group volunteers Janet D'Ignazio, facilitating
Topic 2: Performance-Based Planning Implementation <ul style="list-style-type: none"> ● Summary of Survey Results ● Peer Presentation 	Janet D'Ignazio Marc Williams, Texas DOT
Lunch (provided by AASHTO)	
Topic 2: Performance-Based Planning Implementation <ul style="list-style-type: none"> ● FHWA: National Experience in PBPP Implementation ● Group discussion: PBPP development process strategies <ul style="list-style-type: none"> ○ Has your state or region adopted a performance based plan development process for one or more of your statewide or regional plans? If yes, how are you: <ul style="list-style-type: none"> ○ Identifying measures and setting targets? ○ Integrating the more technical elements of the process (Data, Travel Demand Models, etc.)? ○ Prioritizing projects (if plans identify projects)? 	(continued) Harlan Miller, FHWA Janet D'Ignazio, Facilitating

<p>Topic 3: Communication Challenges & Strategies</p> <ul style="list-style-type: none"> ● Summary of survey results ● Peer Presentation ● Breakout group discussion <ul style="list-style-type: none"> ○ How are you communicating to your public the overall relationship and coordination of these plans to each other? ○ How are you communicating to your policy and political decision makers the overall relationship and coordination of these plans to each other? 	<p>Janet D'Ignazio Sondra Rosenberg, NVDOT</p> <p>One hour facilitated breakout discussion (includes a 15 minute break)</p> <p><u>Facilitators</u> Michael Grant Beth Zgoda Janet D'Ignazio</p>
<p>Topic 3 Wrap-Up</p> <ul style="list-style-type: none"> ● Breakout group reporting out ● Topic summary discussion 	<p>Breakout group volunteers Janet D'Ignazio, facilitating</p>
<p>Discussion of Future Research Needs</p>	<p>Michael Grant, facilitating</p>
<p>Wrap-up Closing</p>	<p>Janet D'Ignazio Jerri Bohard</p>

Appendix B: Survey and Responses

Appendix B is an executive summary of the survey responses (which was distributed at the workshop) and the full compilation of the survey responses.

Executive Summary:

1. Is your state or region linking its Asset Management Plan, Freight Investment Plan, Strategic Highway Safety Plan, and the Congestion Management Process to your Long Range Plan?

Yes	14
No	2

If yes, how are you doing so?

- Top-down integration including, for example:
 1. All plans align to a single set of over-arching vision, goals and/or measures
 2. All plans align to a single policy framework (which could include the items in #1 but may include other over-arching requirements)
- Partial integration including for example:
 3. Integrating elements (e.g., needs, strategies or recommended improvements) from individual plans into the LRP development
 4. Coordinate or rationalize LRP goals, objectives and measures to those included in individuals plans through a crosswalk process that evaluates the consistencies, inconsistencies, and gaps
 5. Incorporating issues or challenges from individual plans in LRP scenarios (e.g. developing a LRP scenario that includes freight alternatives)
- Including individual plans as appendices or by reference in the LRP

What are the obstacles to making these links?

- Time
- Examples of best practice to follow
- Syncing update cycles for the various plans
- Cultural/organizational (e.g., plans are currently completed by different parts of the DOT so it is difficult to get everyone on board)
- Changing requirements

2. Has your state or region adopted a performance-based plan development process for one or more of your statewide or regional plans?

Yes	14
No	2

How are you identifying measures and targets?

Answers generally fell into three broad categories:

- Through the planning process itself
- Through an enterprise-wide performance measurement process
- Through Commission or other policy board directive

How are you integrating the more technical elements of the process (data, travel demand models, etc.)?

Most of the answers to this question focused on what data sources were being used or the concern about the significant challenges related to having data to support the measures that have been identified. None of the responses provided examples of how these technical elements are being integrated to support a more integrated planning process.

Prioritizing projects (if plans identify projects)?

Many respondents indicated that they don't include projects in their plans but provided information on how they prioritize projects for STIP/TIPs. Some examples of responses included:

- Decision support tools or processes (e.g. Decision Lens, Multi-Objective Decision Analysis process, Strategic Investment Tool)
- Scoring frameworks that screen for policy factors, goal and objective alignment and general factors (sponsor priority, geographic equity, cost benefit or cost effectiveness and deliverability)
- Planning factors, agency mission and stakeholder input
- Funding levels and anticipated outcomes by objective

What are the obstacles to doing so?

- Time to do it
- Overall data availability
- Timely data
- Implementing change
- Need for some culture change to support implementation

3/4. How are you communicating to the public about how State or regional policies influence your plans? How are you communicating to your public about the overall relationship and coordination of these plans to each other?

Answers to these two questions were quite similar and generally fell into four broad categories:

- One-way dissemination of information to the public including, for example, press releases, social media, informational websites, chapters in the LRP document
- Feedback from the public with the public including, for example, outreach meetings, surveys, interactive town hall meetings (webinars)
- Collaboration with the public through regional boards or groups of stakeholders who have a formal role by making recommendations to the final decision making body
- Intentional “branding” by using consistent design, format, and organization of the various planning documents

5. How are you communicating to your policy and political decision makers about the overall relationship and coordination of these plans to each other?

Most respondents indicated that they have well-established processes for communicating with policy and political decision makers for their LRP process. However, most indicated that they have not started to communicate about the overall relationship and coordination of multiple plans as yet. Examples of current strategies include:

- Briefings and review meetings
- Involvement in LRP steering committees or advisory boards
- Workshop that engage policy leaders in setting overall plan visions, goals and objectives

Full Compilation of Responses:

Question/Response	Respondent
1. Is your State or region linking its Asset Management Plan, Freight Investment Plan, Strategic Highway Safety Plan, and the Congestion Management Process to your Long Range Plan?	
Yes	Atlanta Regional Commission (ARC), John Orr
Yes, partially	Oregon DOT, Jerri Bohard
No (at least, not yet)	Ohio DOT, Scott Phinney

Question/Response	Respondent
Yes	Arkansas DOT, Andrew Brewer and Kevin Thornton
Yes. The Montana Department of Transportation is in the final stages of updating Montana's long range plan, TranPlanMT. All plans are coordinated for consistency and, in some cases, reference the other planning documents.	Montana DOT, Charity Watt
Yes	Minnesota DOT, Mark Nelson
<p>#1 and #2 – All of the plans (Asset Management Plan, Freight Investment Plan, Strategic Highway Safety Plan and Congestion Management/Mobility plan) are all loosely (and some very directly) linked to the long-range Maryland Transportation Plan, which is a policy based plan with 6 goals which are then aligned with objectives and performance measures, reported in the Annual Attainment Report (AR) for Transportation system performance. The AR is required in State law, which aligns the performance measures with the goals of the Statewide long range plan. We have been working over the past decade or so to align all of our plans and projects to the goals and objectives of the long range plan, as outlined in Chapter 725 of the 2010 laws of Maryland.</p> <p>Our Attainment Report does have performance measures and targets. www.mdot.state.md.us/AR. The Maryland Transportation Plan is located at: http://www.mdot.maryland.gov/newMDOT/Planning/CTP/Final_CTP_16_21/Documents/2035_MTP_010816_Web.pdf.</p> <p>We are beginning to assess how to prioritize projects based on performance measures and other critical factors. Obstacles include timely data, realistic information and timeframes, and what data is available at what stage of the project development</p>	Maryland DOT, Michelle Martin
Yes, but currently those plans are only loosely connected.	New Hampshire DOT, Nicholas Alexander
(a) if yes	
(i) How are you doing so?	
MPO's are required – per federal planning regulations – to link the CMP to the long range plan. We use the results of the CMP to help inform RTP/TIP funding decisions.	ARC, John Orr
The Nebraska DOT will be updating its LRTP soon and will be attempting to incorporate the other plans that are listed. How we plan to do this has yet to be determined. Some of these plans are new to NDOT, so we will be looking to best practice (in other states) to guide our actions.	Nebraska DOT, Ryan Huff

Question/Response	Respondent
<p>At the state level, the Freight Investment Plan is part of the long range Oregon Freight Plan and is a part of the long range Oregon Transportation plan (OTP). Similarly, the Strategic Highway Safety Plan is a part of a long range policy plan called the Transportation Safety Action Plan (TSAP) and it too is part of the OTP. While ODOT does not intend to make our Asset Management Plan part of the OTP, we will be linking the federal performance measures and targets between these plans, so there will be some level of connection. It is important to note that in our first Freight Investment Plan, our focus for freight funds is not on system asset condition as much on system optimization and enhancements. Also, freight system optimization and enhancement, while not specifically called out as emphasis areas in the TSAP, they do support several longer range safety goals, policies, and strategies – particularly use of technology.</p>	<p>Oregon DOT, Jerri Bohard</p>
<p>The ArDOT is in the process of final approval for our Statewide Long Range Plan. In it, we consider four different future scenarios. One of those scenarios emphasizes investments to improve freight transportation (congestion reduction, improved reliability). The details in this scenario (investment types and locations) were coordinated with the development of scenarios considered in the State Freight Plan. Likewise, the details of the Strategic Highway Safety Plan are embedded in the Long Range Plan. The Asset Management Plan is under development. The intent is to use the recommendations of the Long Range Plan and other plans to help guide the development of the Asset Plan.</p>	<p>Arkansas DOT, Andrew Brewer and Kevin Thornton</p>
<p>Linkages between the Transportation Asset Management Plan (TAMP), State Freight Plan (SFP), Strategic Highway Safety Plan (SHSP), Transportation System Management and Operations (TSMO) Plan, and Statewide LongRange Transportation Plan (SLRTP) have been established and are anticipated to continue to grow in the future. These plans were all updated/adopted during 2016 and 2017. In particular, the TAMP, SFP, SHSP, and TSMO plans were all utilized for development of the SLRTP, which was adopted in May 2017. Elements of these plans were integrated into the SLRTP’s action plan, which included the identification of needs across modes and a listing of a wide range of strategies for the department to pursue. This included incorporating the following elements into the SLRTP</p> <ul style="list-style-type: none"> ● The analysis, identification, and ranking of freight bottlenecks from the SFP. ● Modal needs identified in the SFP. ● Strategies outlined in the SFP. ● Strategies outlined in the SHSP. ● The analysis and ranking of interstate corridors from an operations perspective from the TSMO plan. ● Strategies based on the TSMO plan. ● Strategies based on risks identified in the TAMP. 	<p>Iowa DOT, Andrea White</p>

Question/Response	Respondent
<p>NMDOT started an update to our LRP when the Transportation Asset Management (TAMP) requirements were included in MAP-21, and we have included information in the LRP on system preservation. The goals in the LRP related to the Agency Strategic Plan goals with one of the objectives of the Strategic Plan being the creation of the TAMP. Our LRP is more of a policy document, and the Freight Plan is an appendix to our LRP with most of the demographic data for the LRP. We need to revisit both of these plans to make sure that we can actually implement them based on existing staff and funding. We created a new Division within the Agency and Statewide Planning reports to the Division Director who is responsible for Asset Management. We've had some initial discussion on our FIP and how those projects also need to address safety. Our SHSP is also part of Planning so all of the plans/processes are focused in the same organizational unit of the agency.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>Other Plan Elements Reflected in the 2040 Statewide Transportation Plan (SWP)</p> <p>The link of other plans into the 2040 SWP occurred via discussions and strategy review with plan owners. More specifically, as outlined in the 2040 SWP Plan Integration Technical Memorandum, elements of plan visions, goals, additional key points for “moving forward”, top implementation actions, performance measurement, and other ways to integrate into the 2040 SWP were evaluated for each plan. As a result, the strategies outlined in the 2040 SWP reflect the essence of the visions, goals and strategies of the other CDOT plans. CDOT is looking to enhance plan integration in the development of the 2045 SWP.</p> <p>Coordination of Other Modal and Topical CDOT Plans</p> <p>CDOT staff, who were responsible for developing other plans that need to roll-up into the SWP, met throughout the Department quarterly, or if needed more frequently, to discuss planning and plan development issues, plan status, and how to share relevant information for integration.</p> <p>2040 SWP Goal Areas and Linkage</p> <p>The goal areas for our 2040 Statewide Transportation Plan (SWP) are safety, mobility, maintaining the system and economic vitality. The primary link of the 2040 SWP to other plans at CDOT moving forward is the goal structure. The SWP Goal areas now serve as the overarching goal areas for the Department and other plans at CDOT. This provides a greater connection between plans and in identifying needs and priorities. The SWP goal areas also serve as the platform for developing project selection criteria, and for project selection processes.</p>	<p>Colorado DOT, Jeff Sudmeier</p>
<p>Using TranPlanMT as an example, during the update process, MDT considered established plans and practices, such as the Comprehensive Highway Safety Plan, Transportation Asset Management Plan, Montana Rest Area Plan, and ADA Transition Plan, while looking to current data and trends regarding Montana’s transportation system.</p> <p>This information was used as a basis to set policy goals and strategies. Once the plan is finalized, part of the implementation process of TranPlanMT will be to ensure that plans and practices align with MDT’s long range policy plan. Following is a link to the draft update: http://www.mdt.mt.gov/tranplan/. Page 3 of the Management Volume describes the linkage.</p> <p>Other plans under development or in their update cycle (TAMP, Freight Plan, etc) are being coordinated with the TranPlan MT update process and each other to ensure that all planning documents provide consistent direction.</p>	<p>Montana DOT, Charity Watt</p>

Question/Response	Respondent
<p>Each plan utilizes a performance-based decision making process.</p>	<p>Connecticut DOT, Colleen Kissane</p>
<p>Prior to these requirements, MnDOT maintained what we refer to as the Family of Plans. At the highest level is our 50 Year Vision, which is a statement of our long term objectives. Based on this vision, MnDOT updates the state’s multimodal transportation plan (SMTP) every five years. The plan looks at all types of transportation. It evaluates the status of the transportation system, what’s changing, and how we’re going to move forward over the next twenty years. Congestion (mobility) and asset management are both elements of this plan with specific policies and strategies identified.</p> <p>MnDOT also develops investment plans by mode or system, e.g. transit, aeronautics, ports and waterways, rail, etc. The Minnesota State Highway Investment Plan (MNSHIP) directs capital investment in the state highway system over twenty years. The plan identifies investment priorities and funding levels by category given current and expected funding. Where quantifiable, objectives are identified in terms of performance targets. This plan is updated every five years. Congestion (mobility) and asset management have distinct categories within the plan. Prior to MAP 21, freight had not been separated from overall system performance.</p> <p>MnDOT is treating the Transportation Asset Management Plan and the Freight investment plan as supporting plans to the Statewide Multimodal Plan and MNSHIP. In other words, the output of these two federally required plans are inputs into our policy and investment plans. Ultimately funding levels for all highway objectives are established through MnSHIP where tradeoffs are discussed and established not only between freight, and asset management but also congestion mitigation (mobility), bike and ped needs, economic development, and safety, etc.</p> <p>We balance the federal requirements for these plans with the need to maintain a consolidated approach to investment in the state highway system.</p>	<p>Minnesota DOT, Mark Nelson</p>
<p>The Florida Transportation Plan (FTP) is Florida’s long range transportation plan under both state and federal law. The FTP is developed and implemented by the Florida Department of Transportation (FDOT), working with a wide range of state, regional, and local partners. It is intended to be a plan for all of Florida, guiding transportation decisions by all partners.</p> <p>The FTP is updated at least once every five years, most recently in 2015. The most recent FTP was restructured into three elements: a 50-year Vision Element; a 25-year Policy Element; and a 5-year Implementation Element.</p> <p>This structure has enabled the FTP to be aligned with a wide range of other state, regional, and local plans, through common goals, objectives, strategies, performance measures, and data.</p> <p>Florida’s Strategic Highway Safety Plan (SHSP) was updated in 2016 for consistency with new FTP. Both the SHSP and the FTP share the same vision of zero traffic fatalities on Florida’s roadway system. The SHSP emphasis areas and strategies are a more detailed roadmap for implementing the highway safety-related goals, objectives, and strategies of the FTP. The extensive public input during the FTP process (from more than 15,000 Floridians) informed the SHSP update process. SHSP implementation activities are being tracked as part of the FTP Implementation Element.</p>	<p>Florida DOT, Carmen Monroy</p>

Question/Response	Respondent
<p>The Florida Freight Mobility and Trade Plan (FMTP) was first created in 2013-2014 under state law; it currently is being updated to meet FAST Act requirements as Florida's freight investment plan and for consistency with the FTP. The FMTP objectives and strategies are consistent with and add detail to the freight-related objectives and strategies in the FTP; the FMTP includes a cross-walk to the FTP goals. Similar trends analyses, forecasts, and performance measures have helped align these plans. Public input has been coordinated through joint regional workshops covering both the FTP and FTMP.</p> <p>Florida's first Transportation Asset Management Plan (TAMP) was created in 2015 in parallel with the FTP update. The TAMP will be updated in 2018 for consistency with the final MAP-21/FAST rules as well as the updated FTP. The TAMP is the principal plan for implementing objectives of the FTP related to preservation and maintenance of state highways and state-maintained bridges. The FTP Implementation Committee has noted the importance of developing asset management strategies for local roads and bridges, transit systems, and other modes.</p> <p>Similar processes have been used to align the FTP with other plans, such as statewide modal plans, and the Strategic Intermodal System Policy Plan, which highlights Florida's high-priority network of transportation facilities.</p>	
<p>Caltrans has two levels of interrelated Long Range Transportation Plans – a) the statewide long range plan such as California Transportation Plan (CTP), Freight Mobility Plan, Bike and Ped Plan, Rail and Mass Transit Plan and b) regionally specific long range plans or Caltrans district long range plans (district system planning). The CTP provides broad policy framework and vision statewide that includes various modal investment strategies while the district system management plan provides regionally specific framework for transportation investments consistent with the vision of the CTP and modal plans. It is through the district system planning process that long range planning more directly links to asset management and project initiation documents. For example the district system management plan includes list of projects that provides a pool from which Project Initiation Documents (PIDs) are developed. Caltrans also implemented the State Highway System Management Plan/performance based asset management plan for the State Highway Operation Protection Plan (SHOPP). The SHSMP is linked to the California Transportation Plan.</p> <p>California Transportation Commission in partnership with the Caltrans has recently adopted a guideline for California Transportation plan (as well as regional plans) which will guide the next generation of the CTP.</p> <p>Caltrans also has a Strategic Management Plan that outlines the strategic objectives and performance measures for the Department which long range plans are intended to follow.</p>	California DOT, Coco Breiseno
<p>See the graphic below as it shows how VTrans is the statewide plan for multi-modal planning, both short range and long range. The SHSP safety focus is integrated in our planning process. The SHSP and the CMP are both lead by VDOT.</p>	Virginia DOT, Robin Grier
<p>(ii) What led you to do so?</p>	
<p>Required per federal regulations.</p>	ARC, John Orr
<p>Given the number of recent planning efforts and newly updated plans, it was natural to utilize these documents in the development of the SLRTP. It also aligns with the direction provided in final rulemakings for MAP-21/FAST Act planning requirements.</p>	Iowa DOT, Andrea White

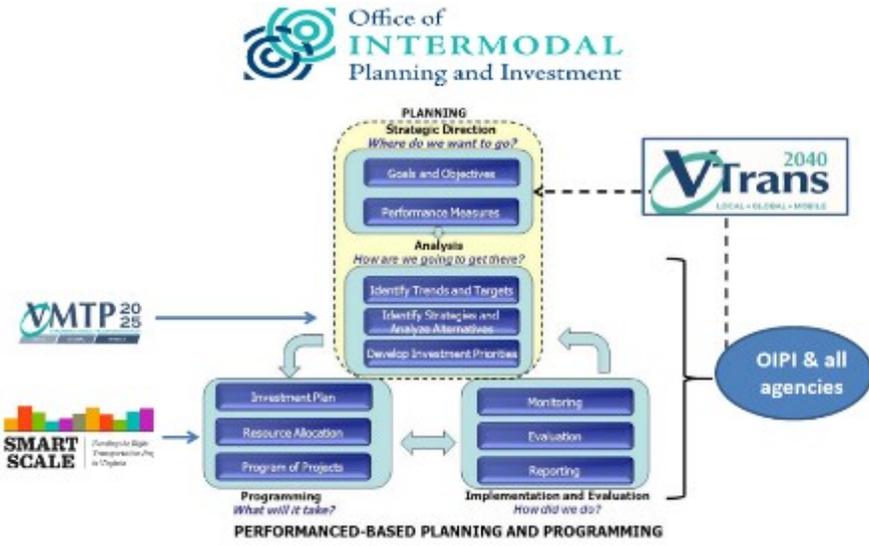
Question/Response	Respondent
MAP-21	New Mexico DOT, Tammy Haas
This happened for two reasons: typically in the past, other CDOT plans were integrated merely by reference. As the 2040 SWP was being developed, new topical and mode specific plans at CDOT were being developed such as the Transportation Systems Management & Operations (TSMO) Plan, Risk-Based Asset Management Plan, Bicycle and Pedestrian Plan, Transit & Rail Plan just to mention a few. Merely incorporating by reference would not be sufficient, nor would it address CDOT's desire to consider transportation priorities, needs, and solutions more holistically.	Colorado DOT, Jeff Sudmeier
MDT has good systems and practices in place, and is using the update processes for these plans to make them even better. The time had come to update TranPlanMT (formerly TranPlan21) to align with new federal requirements and ensure MDT priorities and policies are on track with future transportation resources and needs. Building on the systems in place and ensuring practices are tied with the long-range policy plan is sound business practice and something MDT continues to strive toward. The TranPlanMT is a policy based plan and has been vital in making difficult investment decisions and the department knows how important it is that all plans align with the overarching policies set in the long-range plan.	Montana DOT, Charity Watt
A strategic planning approach to maintaining the system's state of good repair, and sound financial management principles.	Connecticut DOT, Colleen Kissane
We've put a great deal of effort into developing our Family of Plans and advancing performance based planning. We felt it beneficial to maintain what had been built over time. We also felt these new federal planning requirements could be addressed while maintaining our current approach. In fact, the asset management planning effort and the freight investment planning effort provided a forum for discussing and refining policy, strategy and investment priorities through discussions with both our internal and external stakeholders and Federal partners.	Minnesota DOT, Mark Nelson
The decision to integrate the FTP with these other plans is primarily a reflection of FDOT's decision to view the FTP as a plan for all of Florida, which provides a framework for modal, system, and other plans.	Florida DOT, Carmen Monroy
Caltrans has always tied its modal plans with its long range transportation plan. Over last few years Caltrans has taken steps to strengthen linkage between planning, programming and project delivery in an effort to provide a more direct link between project selection and the Department strategic objectives. Caltrans believes projects should evolve out of a process that chains strategic plan, long range plans and district plans with programming and project initiation documents in order to realize its strategic objectives and help guide long term transportation strategies.	California DOT, Coco Breiseno

Question/Response	Respondent
	Virginia DOT, Robin Grier
(b) If no, what are the obstacles to making these links?	
<p>Time (cross discipline conversation/coordination takes time);</p> <p>Models/Examples (Does making these links require changes to the DOT table of organization? Which units within the DOT need to be linked? How should they be linked? There are not any examples or materials available to guide a DOT on how to make these linkages, which is why we are having the peer exchange!)</p>	Ohio DOT, Scott Phinney
The timing was critical in the development or update of all these plans. This was the right time to make the connections in a proactive and tangible way while also coordinating this with ARDOT's updated Strategic Plan.	Arkansas DOT, Andrew Brewer and Kevin Thornton
Our challenge has been to get our Districts more engaged in the LRP. They've been engaged with developing the TAMP and in the FIP discussion/project selection. We haven't really addressed a Congestion Management Process.	New Mexico DOT, Tammy Haas
The major obstacle is the timing and effort involved in developing each of those plans taken together with the changes in requirements. Our initial TAMP is being developed to conform with the FHWA rules, but our Long Range Plan was completed several years before the rules. The same is true for the Freight Plan. Essentially these are connections that we're going to need to build over several years.	New Hampshire DOT, Nicholas Alexander
Transforming the goals and strategies in policy documents such as long range plans into investment strategies and programming documents is a complex process in practice. Many gaps and challenges exist procedurally and institutionally that make such direct link challenging and less than complete. However, through proper procedures, guidelines, training and directives the process could produce a reasonable outcome that the linkage can be made and generally measured.	California DOT, Coco Breiseno

Question/Response	Respondent
2. Has your state or region adopted a performance based plan development process for one or more of your statewide or regional plans?	
Yes	ARC, John Orr
<p>Prior to federal requirements to have a formal performance based planning and programming process, Oregon has had performance based long range plans. For example, the 1999 Oregon Highway Plan had performance measures and targets established for pavement and bridge conditions. We have used this in our STIP programming process for years. While we anticipate these processes will change a little under the new federal required performance measures, the basic approach is likely to remain the same. In our earlier policy plans, the performance measures were established to align with our core values and mission along with our statewide key performance measures for the state. These have slowly morphed as we gain new data and analytical tools. Our next step is ensuring these will align with the federal PM's and targets and that our federally required PBPP aligns with these other critical measures. Project prioritization on the asset condition side, has been based upon our established PM's from our Oregon Highway Plan for many years. For non-asset based program prioritization, ODOT has relied on a more qualitative approach across many different goal areas.</p>	Oregon DOT, Jerri Bohard
Yes	Ohio DOT, Scott Phinney
Yes	Arkansas DOT, Andrew Brewer and Kevin Thornton
Performance based planning was a primary consideration during the development of TranPlanMT as well as our other statewide plans.	Montana DOT, Charity Watt
Yes	Connecticut DOT, Colleen Kissane
Yes. Minnesota has been developing performance based plans for over a decade.	Minnesota DOT, Mark Nelson
No, we have not adopted performance based plans in those areas. The initial TAMP that is being developed is moving in that direction, but does not include targets.	New Hampshire DOT, Nicholas Alexander

Question/Response	Respondent
<p>The Caltrans Strategic Management Plan has established certain performance measures (safety and health, stewardship and efficiency, sustainability/livability/and economy, system performance and organizational excellence) that are intended to provide a roadmap for Caltrans operations, meeting statewide objectives, and to monitor progress. There are goal teams created to develop baselines, set targets, and measure for accessibility, livability, prosperity and resiliency. These performance measures and targets are finding their ways into long range planning as well as programming and project delivery by, for example, monitoring level of funding for complete streets projects and number of complete streets projects in programming documents. The multimodal system planning program is coordinating with Asset Management to develop a process/tool designed to compare multiple project groupings. The Multi Objective Decision Analysis (MODA) tool will integrate performance measures with geospatial data analysis.</p>	<p>California DOT, Coco Breiseno</p>
<p>(a) If yes, how are you:</p>	
<p>(i) Identifying measures and setting targets?</p>	
<p>We have extensive measures used in plan and TIP development but have put on hold the development of targets and are moving slowly with the state – per FAST Act.</p>	<p>ARC, John Orr</p>
<p>Targets are set by the DOT division developing a particular plan. ODOT has a series of enterprise wide performance measures called Critical Success Factors (CSFs). Various plans try to “re-use” the CSFs when possible/practical.</p>	<p>Ohio DOT, Scott Phinney</p>
<p>The Statewide Long Range Plan includes the introduction of performance measures as they relate to the goals and objectives identified in the plan. This includes the federally-identified measures as well as those performance measures that are relevant to the Arkansas road user. At this time, specific targets are not included. They will be set during the implementation phase of the Long Range Plan.</p>	<p>Arkansas DOT, Andrew Brewer and Kevin Thornton</p>
<p>We included performance measures in our LRP update adopted in 2016 and need to work on ensuring the measures are defined well and can be measured and tracked. We probably included way too many performance measures in the LRP. It seemed to be more like we listed every single performance measure for the agency rather than focusing on the measures that directly relate to the LRP implementation and measuring the projects that resulted from looking at improving performance of the system related to safety, preservation, freight movement or congestion.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>The Colorado Transportation Commission has a policy directive called PD 14.0 that guides the transportation planning process, sets goals, and establishes targets that CDOT hopes to reach by the end of the 10-year planning horizon. PD 14 is revised at the beginning of each planning cycle, and is reviewed annually after that. The most recent revisions, in 2015 and 2016, have goals that generally follow the performance areas of the FAST Act: safety, infrastructure condition, system performance, and maintenance. (The project delivery goal was not addressed in PD 14 because CDOT has many other methods of tracking how quickly projects are completed). Establishing a goal area for freight movement was postponed until completion of two freight plans – a Multimodal Freight Plan and a State Freight and Passenger Rail Plan.) The goals and objectives were set in consultation with subject experts within CDOT and with CDOT planning partners: 10 rural Regional Planning Commissions (RPCs) and five Metropolitan Planning Organizations (MPOs).</p>	<p>Colorado DOT, Jeff Sudmeier</p>

Question/Response	Respondent
<p>The 2040 SWP goals align with PD 14 goals. The SWP goals are: safety, mobility, maintaining the system, and economic vitality. Performance measures for economic vitality, however, were not established in the SWP because more economic, road/rail, and freight data was needed.</p>	
<p>Safety targets for fatality and serious injury numbers and rates were established during the 2015 update of the Montana Comprehensive Highway Safety Plan (CHSP). To set a target for non-motorized fatal and serious injuries, as required by federal rule, MDT convened the CHSP Advisory Committee in the spring of 2017. The committee used a data-driven and collaborative process to establish 2018 safety targets.</p> <p>For the other performance targets, MDT was awaiting final USDOT rules, and have begun the process now that the rules are available. MDT staff has followed and participated in all of FHWA’s rulemaking processes, attended webinars, and have begun evaluating the development of reasonable targets based on the proposed measures. MDT has also coordinated with Montana’s MPO’s to ensure they are aware of the proposed measures and their options and responsibilities for establishing targets. Now that final rules are published, MDT will engage the MPOs and begin the process of establishing targets appropriate for Montana.</p>	<p>Montana DOT, Charity Watt</p>
<p>While we are not completely clear on what a “performance based plan development process” is, we offer the following:</p> <ul style="list-style-type: none"> • Statewide Freight Plan: a working group of various DOT offices (including the staff from the Performance Management Unit), identified Performance Measures and Targets for each of the goals in the plan. • Transportation Asset Management Plan (TAMP), by definition, requires the identification of measures and targets. The TAMP is currently under development 	<p>Connecticut DOT, Colleen Kissane</p>
<p>Measures are developed internally. Targets that are consistent with priorities are proposed through the planning process and ultimately adopted as part of the SMTP or MNSHIP.</p>	<p>Minnesota DOT, Mark Nelson</p>
<p>FDOT has a long history of developing and monitoring performance measures. FDOT publishes an annual Performance Report that is aligned with the goals of the FTP. The Performance Report traditionally has focused on measures of activity directly under FDOT’s control, especially related to safety, infrastructure condition, and mobility. The Performance Report will be updated in 2017 to focus on a smaller number of measures and for consistency with the MAP-21 rulemaking.</p> <p>FDOT is working to set targets for the MAP-21 measures, beginning with the safety measures in 2017. FDOT has already begun coordination with Florida’s 27 MPOs through the statewide MPO Advisory Council on potential measures and targets related to safety, infrastructure condition, and mobility. This coordination has include a pilot study involving four MPOs to evaluate potential measures and data sources.</p> <p>The FTP Implementation Element includes measures of progress in implementing the FTP. This Element will be updated over time with a focus on progress and performance more generally, especially goals related to economic competitiveness, quality of life, and environmental stewardship.</p>	<p>Florida DOT, Carmen Monroy</p>
<p>The performance measures for the State Plan was driven by the Caltrans Strategic Management Plan and by utilizing other published statewide and regional plans such as the Smart Mobility Framework, Strategic Growth Council/San Diego Area Governments and measures that were developed with the California Statewide Travel Demand Model.</p>	<p>California DOT, Coco Breiseno</p>

Question/Response	Respondent
<p>It is required by state code (§ 2.2-229) and federal legislation to implement performance based planning. See diagram below for the cycle.</p> <p>Virginia develops an annual performance report that reports on performance measures that are directly related to the long range plan's (VTrans2040) vision, goals and guiding principles. The report:</p> <ul style="list-style-type: none"> • Establishes a 3-5 year trend • Provides a basis for setting targets and measuring progress • Measures reflect benefit of both CTB policy and SYIP investments addressing VTrans needs <p>VTrans2040 will be the first Virginia-wide transportation plan to fully incorporate performance-based planning. In addition to establishing measurable objectives, VTrans2040 will serve as a screen for projects identified through SMART SCALE, Virginia's process for programming capital improvements.</p>  <p style="text-align: center;">PERFORMANCE-BASED PLANNING AND PROGRAMMING</p>	<p>Virginia DOT, Robin Grier</p>
<p>(ii) Integrating the more technical elements of the process (Data, Travel Demand Models, etc)?</p>	
<p>See attached link for the technical elements of the process - http://documents.atlantaregional.com/transportation/projsolicitation/2017/project_eval_documentation.pdf</p>	<p>ARC, John Orr</p>
<p>We have had a data management system for bridge, preservation and safety since ISTEA and we continued to improve upon it over the years. We have a very developed Travel Demand model, actually an Activity Model. This model analyzes land use, transportation and economic development activity and has been used to really assess the how to prioritize our bridge improvements especially our most recent analysis around the economic impacts of not maintaining our system and how to prioritize based on seismic events.</p>	<p>Oregon DOT, Jerri Bohard</p>
<p>Good question. Our new TSMO plan has recommended adding dozens of new performance measures. ODOT does not know yet how we will gather massive amounts of data, analyze it, and report out on measures.</p>	<p>Ohio DOT, Scott Phinney</p>

Question/Response	Respondent
<p>This entails the use of collected and calculated data at the project level. The Statewide Travel Demand Model (AR TDM) is under consideration as a tool for measuring total performance of the entire system at the statewide level.</p>	<p>Arkansas DOT, Andrew Brewer and Kevin Thornton</p>
<p>We need to do more work in this area. We have had some issues with staffing and need to do a major update to our TDM in order to get good information in our LRP. We've also undertaken a major rehab project on our roadway inventory database as well as our traffic count program database. We haven't really figured out how to obtain and analyze our data for inclusion in our LRP or FIP.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>Data used for establishing the goal areas and accompanying objectives came from several CDOT plans that were in process or had been completed by the time work began on revising PD 14 and on updating the 2040 SWP. For example, one of the plans used in crafting the goal areas and objectives was CDOT's Risk-Based Asset Management Plan, published in 2013 as one of the nation's first DOT asset management plans. The asset management areas in the plan (pavement, bridge, maintenance, buildings, fleets, Intelligent Transportation Systems (ITS) equipment, tunnels, culverts, and rock fall mitigation sites) are reflected in a table that is part of PD 14. Another source of information were meetings with subject matter experts to determine long-term needs and where CDOT had potential funding gaps. The following categories of transportation needs were analyzed that resulted in a finding that, between 2016 and 2040, CDOT has an estimated \$24.9 billion gap between needs of \$46 billion and revenues of \$21.1 billion:</p> <ul style="list-style-type: none"> • Asset Management and Maintenance: This is for replacing and rehabilitating existing and future transportation facilities, including preventative maintenance. Maintenance is every day and annual maintenance, such as snow plowing. A state-mandated annual CDOT Transportation Deficit Report was relied on heavily for this category of needs, as well as an Asset Management Delphi Report. • Expansion: Investments that add capacity were separated into short-term (2016-2025) and long-term (2026-2040), and were determined from MPO and regional transportation plans, project lists that a few RPCs developed in their regional transportation plans (RTPs), proposed expansion projects from the CDOT Regions, and other existing project lists. CDOT safety data on level of service for safety (or LOSS), travel time data and speed data for the National Highway System from FHWA, and information from environmental documents and MPO plans also were used. Expansion projects were screened and validated based on such criteria as safety, low travel speeds, congestion levels, environmental document completion, and regional input. • ITS/Operations: Improving traffic flow without adding traffic flow, such as Intelligent Transportation Systems, were included in this category. The CDOT Strategic Highway Safety plan and the TSMO plan, as well as MPO and Regional Transportation Plans also were consulted. • Safety: Maps and a database showing the severity and locations of crashes and congestion were created, and the potential of various projects to address the identified issues was evaluated. 	<p>Colorado DOT, Jeff Sudmeier</p>

Question/Response	Respondent
<ul style="list-style-type: none"> • Bicycle/Pedestrian: When work on the SWP began, CDOT had only begun its first steps toward compiling an inventory of bicycle/pedestrian facilities on or along the state highway system. Once completed statewide beyond its initial pilot, the inventory can be used to identify the need for and quantify bike/pedestrian compatible features (wider shoulders, signs, new bridges, and sidewalks). • Rural, Small Urban, and Interregional Public Transportation: A preliminary analysis of rural and interregional transit needs was prepared for the SWP, using the current level of funding going to the rural and small urban transit agencies through CDOT and existing funding for interregional transit. This analysis didn't include MPO, interregional bus, or high-speed rail needs. 	
Generally, MDT long range planning efforts are policy based and do not provide a listing of specific projects. Rather, these documents provide foundational elements and strategic goals that must be considered as specific projects are proposed.	Montana DOT, Charity Watt
None to date	Connecticut DOT, Colleen Kissane
Statewide socioeconomic data trends are an input for the statewide plans. Travel demand models are used at the regional level by MPOs.	Minnesota DOT, Mark Nelson
FDOT is identifying potential data sources including exploratory use of new real-time sources and coordinated purchasing and/or processing of national data sets to be a resources for MPOs. FDOT also maintains a statewide travel demand modeling system that support technical analyses related to performance management in a coordinated manner.	Florida DOT, Carmen Monroy
In addition to traditional sources of data such as Household travel Survey and Highway Performance monitoring system, the California Air Resources Board Vision tool which modeled Greenhouse Gas Reduction strategies to meet California legislative requirements which were presented in the statewide long range plan was also utilized. Caltrans is looking into acquiring big data. Such sources of data have been used in development of the travel demand model and freight model. Caltrans has a state of practice travel demand model that has been applied in analysis of State transportation plan, freight plan and other system planning products and special projects.	California DOT, Coco Breiseno
The report is developed using baseline data, information on possible strategies, and forecasting tools to establish a quantifiable level of performance to achieve within a specific time frame.	Virginia DOT, Robin Grier
(iii) Prioritizing projects (if plans identify projects)?	
See link - http://documents.atlantaregional.com/transportation/projsolicitation/2017/project_eval_documentation.pdf	ARC, John Orr
In general, the NDOT utilizes performance measures in its decision making process; but target achievement doesn't make the decision for us. For example, the NDOT uses a combination of data (modeling or other), stakeholder input, cash flow, deliverability and economic analysis to develop projects for its STIP. In the end, we could do more to grow and mature in the use of best practices.	Nebraska DOT, Ryan Huff

Question/Response	Respondent
The Department is using DecisionLens to integrate performance management into the project selection process outside of the statewide long range planning process as that is a policy-based document and does not list projects.	Arkansas DOT, Andrew Brewer and Kevin Thornton
Our LRP is more of a policy document and does not address projects; however, through our TAMP efforts we are at the early stages of educating staff on how to identify projects based on data and prioritizing through a multi-objective decision analysis process.	New Mexico DOT, Tammy Haas
CDOT has a 10-year development program that draws from the RTPs that had project lists, CDOT Region project lists, MPO plans, and other project lists. The 10-Year Development Program is intended to serve as a bridge between the 20-year transportation plans and the 4-year Statewide Transportation Improvement Program (STIP) by capturing the major investment needs and priorities in the planning processes. This program is a repository of projects that can be pulled from if CDOT receives additional sources of state or federal funding. The 10-year development program is a subset of the Development Program Inventory of Major Investment Needs. the 10-year development program includes highway projects and is being updated to incorporate transit, bike/pedestrian, and operations projects and programs. The 10-year development program is the product of plans and planning processes that were undertaken under a performance based plan development process.	Colorado DOT, Jeff Sudmeier
Plans identifying strategies, objectives, or emphasis areas that are guided by the planning factors, MDT mission, and public and stakeholder input.	Montana DOT, Charity Watt
None to date	Connecticut DOT, Colleen Kissane
Although individual projects are not identified in long range statewide plans, funding levels and anticipated outcomes by objective are included	Minnesota DOT, Mark Nelson
The FTP is a policy plan and does not identify specific projects. FDOT identifies and sets priorities among specific projects for Florida's strategic intermodal system through an unfunded needs plan, cost-feasible plan, and 10- and 5-year capital plans. These plans are being updated for consistency with the updated FTP and SIS Policy Plan. A strategic investment tool that reflects the goals and objectives of the FTP and SIS Policy Plan is used to provide analytical support for project selection and prioritization.	Florida DOT, Carmen Monroy
The California long range plan does not include list of projects or prioritized project list. Prioritized project lists are done at the regional or route level, not at the statewide level. For example, Caltrans districts are asked to provide a five-tier priority from a project that is partially programmed to a conceptually planned long range need.	California DOT, Coco Breiseno
Virginia codified a transparent process to score projects through an application process. The policy guide can be found at: http://vasmartscale.org/documents/201606/sspolicy_guide_final_20160729.pdf SMART SCALE	Virginia DOT, Robin Grier

Question/Response	Respondent
<p>Virginia's SMART SCALE (§33.2-21.4) is about picking the right transportation projects for funding and ensuring the best use of limited tax dollars. It is the method of scoring planned projects included in VTrans that are funded by HB 1887. Transportation projects are scored based on an objective, outcome-based process that is transparent to the public and allows decision-makers to be held accountable to taxpayers. Once projects are scored and prioritized, the Commonwealth Transportation Board (CTB) has the best information possible to select the right projects for funding.</p> <p>SMART SCALE Process</p> <p>Virginia's SMART SCALE Process includes five overarching steps, as identified in the figure below. The preliminary step requires project sponsors to determine their eligibility prior to beginning the SMART SCALE applications process. The final step in the prioritization process includes programming of selected projects.</p> <p>* The responsible agency for each process step is identified in italics in the figure above.</p>  <p style="text-align: right;">10</p> 	

Question/Response	Respondent
(b) If no, what are the obstacles to doing so?	
<p>We have been addressing these requirements as they have been finalized and incorporating performance-based requirements and additional transparency into the overall planning and programming progress. We have not adopted a specific “performance-based plan development process.”</p>	Iowa DOT, Andrea White
<p>Change and changing culture. We allocate our federal funds to each of our 6 Districts, and they prioritize projects for the STIP which may not tie to the LRP. Education of the LRP and how to use it.</p>	New Mexico DOT, Tammy Haas
<p>The initial TAMP that is being developed is moving in that direction, but does not include targets. At our current maturity level we are developing the plans and beginning to identify performance measures that can be used to monitor progress as well as setting targets. Our approach is to identify applicable goals at a senior level and then to have subject matter folks determine the best measures to monitor progress toward those goals. From a pragmatic standpoint, we also recognize that in many cases we do not have the data to support measurement of the best metrics, so that group also identifies measures that could be helpful and calculated readily.</p>	New Hampshire DOT, Nicholas Alexander
<p>The size and complexity of California, along with the different requirements for the various funding sources, makes it difficult to develop a prioritized list of projects, therefore we leave the Project lists to the regional or local plans.</p> <p>Also a need for better and more cost effective data is constant. In certain areas a complete set of data do not exist i.e., bike and pedestrian. Actual modal counts is not comprehensive. Big data is begging to be commercially available or reliable. Caltrans is piloting a new sensor technology for truck counts on the state highway system.</p>	California DOT, Coco Breiseno
<p>3. How are you communicating to the public about how state or regional policies influence your plans?</p>	
<p>Through a variety of mechanisms, including regional surveys and community engagement.</p>	ARC, John Orr
<p>The NDOT uses a combination of social media, press releases, public hearings and targeted stakeholder meetings.</p>	Nebraska DOT, Ryan Huff

Question/Response	Respondent
<p>This is an important element of our planning process, and it can also be difficult to fully capture all the intricacies and impacts these policy choices have for the public, but is our number one planning goal in the state. One of the key ways that we do this is through our Area Commissions on Transportation. We have 12 ACTs that cover the entire state. The composition of these ACTs is elected officials as well as key stakeholders – universities, tribes, ports. There is also representation from all modes. We use these committees to share our policy direction and they assist in the prioritization of projects for inclusion into the STIP. They provide recommendations to our Transportation Commission and there is a policy adopted by our Commission that guides their work.</p>	<p>Oregon DOT, Jerri Bohard</p>
<p>We don't really do that ... yet.</p>	<p>Ohio DOT, Scott Phinney</p>
<p>A key to the development of the long range plan are a robust public and stakeholder involvement process. Two different rounds of public and stakeholder meetings were conducted as a part of the long range plan development. In the first round of meetings, stakeholders were invited to indicate preferences for goal areas. The second round of meetings reported these goal areas as well as how the various future scenarios would affect these areas. Both in the development of the Long Range Plan and other statewide transportation plans, we have found that stakeholder education is critical – regardless the topic. Once there is a basic understanding by both the Department and stakeholders regarding the policies, practices, opportunities, and limitations involved in development transportation investments, the conversation is much more productive.</p>	<p>Arkansas DOT, Andrew Brewer and Kevin Thornton</p>
<p>Planning and programming efforts, including the development of the SLRTP, the 5-year Program, and the STIP, all involve outreach to the public through a variety of methods, including news releases, public meetings, and providing easily accessible information. These documents also provide information regarding what policies helped shape them.</p>	<p>Iowa DOT, Andrea White</p>
<p>We haven't done any of this yet.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>CDOT used a wide variety of communication tools and techniques to obtain public input on policies for the 2040 Statewide Transportation Plan.</p> <p>CDOT developed bilingual mail-in and electronic surveys that both informed the public and gathered thoughts on overarching statewide transportation issues at the regional level. The purpose of the surveys was to help CDOT gain a better understanding of what is important to the public and how to better prioritize transportation investments in the face of limited funding. The surveys were posted on the Colorado Statewide Transportation Plan website (www.coloradotransportationmatters.com) and made available locally at libraries and other government offices. The survey provided insights into what citizens' value about their transportation system today and tomorrow. More than 2,500 Coloradans weighed-in on the future of transportation in our state during November and December 2013.</p> <p>These plan development surveys were customized based on the various areas of the state. Planning partners (rural Transportation Planning Regions [TPRs] and MPOs) and CDOT Region staff were instrumental in identifying content for regional customization of each survey. Results of the surveys were then reflected in the 2040 SWP and RTPs.</p>	<p>Colorado DOT, Jeff Sudmeier</p>

Question/Response	Respondent
<p>In early April 2014, CDOT hosted interactive telephone town halls around the state. The purpose of these meetings, with a format similar to a radio talk show, was to hear from the public about their transportation needs and priorities and have the public obtain answers to transportation questions they have directly from Colorado Transportation Commissioners (TC) for their area (the decision-makers). During the telephone town halls, the public was able to weigh-in on policy-related issues via interactive polling on push-button phones. This public input from the telephone town halls was later reflected in the Statewide Transportation Plan. Together the 16 town halls covered all areas of the state, and included raising the following questions with participants on the call:</p> <p>What is most important to you about transportation? How should CDOT invest limited dollars? What kinds of transportation improvements can best help the economy in your area?</p> <p>Additionally, the telephone town hall scripts were developed in a collaborative manner with contributions from a wide range of CDOT staff to ensure regional information in the scripts on transit, bike and pedestrian infrastructure and programs, and highway maintenance and engineering were accurate. Also, during each of the telephone town halls multimodal subject matter experts from local CDOT Regions and CDOT HQ were on hand to assist in responding to questions from the public.</p> <p>More information: http://www.coloradotransportationmatters.com https://www.codot.gov/programs/colorado-transportation-matters/documents/public-involvement-draft-tech-report-march-17-2015</p>	
<p>Throughout the TranPlanMT update process, MDT has emphasized in all communications to the public that this plan is the guiding document for department decisions and actions.</p>	<p>Montana DOT, Charity Watt</p>
<p>The Connecticut Department of Transportation has recently updated its Public Involvement Procedures (PIP). The draft is currently on our website for review: http://www.ct.gov/dot/lib/dot/documents/dplans/PIP.pdf</p>	<p>Connecticut DOT, Colleen Kissane</p>
<p>We make a point of linking all of our plans together, using a single style, format and overall appearance and by articulating in each plan how it advances the SMTP and the overall Vision.</p>	<p>Minnesota DOT, Mark Nelson</p>
<p>#3, #4 & #5 – This is outlined in the Consolidated Transportation Program (CTP), or the State Report on Transportation, each year, which is shared around the State prior to being finalized. www.ctp.maryland.gov.</p>	<p>Maryland DOT, Michelle Martin</p>
<p>We communicate with the public and our partners primarily through our planning process. Many years ago NH developed a process that includes the MPOs, NHDOT, the public, and elected officials to create and revise (every 2 years) a project specific 10-Year Plan. Through that effort and associated public hearings we have an opportunity to discuss how plans fit together and projects are created. The plans are connected, but due to the issues described in #1 often loosely so.</p>	<p>New Hampshire DOT, Nicholas Alexander</p>
<p>The FTP was designed as a public-friendly document to communicate the value of transportation and how transportation supports broader statewide and regional goals. FDOT continues ongoing public and partner engagement activities related to the FTP and statewide planning.</p>	<p>Florida DOT, Carmen Monroy</p>

Question/Response	Respondent
<p>Caltrans recognized that the State Plan or other modal plans are a critical part of transportation investment decision making, and residents and stakeholders should have an opportunity to participate in the plan’s development to ensure they understood the transportation needs of California and the policy recommendations needed to guide future investment decisions. As part of CTP development Caltrans conducted a multi-faceted outreach campaign to solicit input, provide public education and awareness, and gauge public support for the plan’s proposed goals, policies, and recommendations. Caltrans applied the following techniques during the CTP 2040 public participation process to reach a diverse group of people, groups, stakeholders, and partner agencies.</p> <ul style="list-style-type: none"> • Convening a policy and technical advisory committee • Conducting seven statewide focus groups • Facilitating four statewide tribal listening sessions • Hosting seven interactive statewide public workshops • Making presentations to local and regional stakeholder groups • Holding public and tribal webinars • Providing two public review and comment periods • Maintaining an interactive public participation website • Distributing promotional materials and other media (English and Spanish) • Utilizing email blasts, surveys, and social media (Facebook, Twitter, Craigslist) <p>Caltrans Planning Program has a public participation engagement program with certain funding available that is typically used as task orders to help with public participation elements of the various plans and projects.</p>	California DOT, Coco Breiseno
<p>Virginia regularly shares analysis and draft recommendations with stakeholders and the public. For the VTrans statewide plan, the Office of Intermodal Planning and Investment coordinates statewide webinars and workshops, regional meetings, district meetings and the web to share and collect comments. For district or regional plans, agency staff manage/conduct planning-level studies with a multi-disciplinary team, including localities.</p>	Virginia DOT, Robin Grier
<p>4. How are you communicating to your public about the overall relationship and coordination of these plans to each other?</p>	
<p>We now do a more comprehensive plan as it relates to transportation and other elements – see link - http://atlantaregionsplan.com/</p>	ARC, John Orr
<p>Social media and press releases are too brief to convey the relationships; instead, these things are conveying in person during public hearings or during stakeholder meetings.</p>	Nebraska DOT, Ryan Huff

Question/Response	Respondent
<p>While complicated, we are working to help explain the planning process in Oregon on a continuous basis, looking at new and innovative tools and techniques to help explain the value and benefits of transportation planning. Particularly how planning can help establish priority investment choices that consider many costs and benefits. We have also developed an online resource called OrPlan. The Oregon Department of Transportation has nine statewide plans that guide state transportation decision making and investment. The OR-Plan tool is an easy way for you to find policies and strategies related to specific issues, modes or plans. This is primarily used by our practitioners from consultants to local governments. We really have not worked with the public to show the connections to these plans.</p> <p>http://www.oregon.gov/ODOT/Planning/Pages/OR-Plan.aspx</p>	<p>Oregon DOT, Jerri Bohard</p>
<p>We aren't coordinating the plans, so there is nothing to communicate to the public.</p>	<p>Ohio DOT, Scott Phinney</p>
<p>See above</p>	<p>Arkansas DOT, Andrew Brewer and Kevin Thornton</p>
<p>This is most clearly communicated through the SLRTP. The introductory chapter provides a description of the overall planning and programming process, and shows how plans such as the SLRTP, SFP, and TAMP interact with tools and analysis efforts to help define what is ultimately programmed. The concluding chapter includes a more detailed discussion of program development and management, and walks through the steps that will be used to develop, scope, and advance projects towards programming.</p>	<p>Iowa DOT, Andrea White</p>
<p>We haven't done this. We will develop a communication plan as part of the TAMP implementation.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>Statewide Transportation Plan (SWP) utilized Prezi interactive presentations to allow the public and CDOT stakeholders obtain additional details on a range of topics covered by the plan. The Prezi, titled 'Introduction and the Planning Process' explains the Colorado statewide planning process including the relationship between other modal and policy plans and the statewide plan.</p> <p>The 2040 SWP is CDOT's first web-based plan. The SWP website, therefore, served as the central hub of all transportation plan education, communication, and interaction. Additionally, the statewide plan serves as the primary location for the public to find other CDOT plans, including but not limited to: the Statewide Transit Plan, Strategic Highway Safety Plan, TSMO Plan, Statewide Freight Plan, Bicycle and Pedestrian Plan, the CDOT Asset Management Plan, Aviation Plan, and the Colorado State Freight and Passenger Rail Plan. The comment collection feature on the website allowed for comments to be received on all modal and policy plans.</p> <p>To honor the commitment of reporting progress made on the 2040 SWP adopted by the TC in March 2015, CDOT hosted a planning progress webinar for the Colorado Municipal League (CML). The Colorado Municipal League is the leading nonpartisan resource for municipal officials in Colorado. The CML webinar covered topics such as transportation funding, progress on key projects including multimodal projects, and next steps.</p>	<p>Colorado DOT, Jeff Sudmeier</p>

Question/Response	Respondent
Throughout the update process in all messaging to the public, MDT has made clear that TranPlanMT is the guiding document for the department and is the basis for other plans, which contain more detailed information on how MDT will achieve goals and move identified strategies forward.	Montana DOT, Charity Watt
Each plan references the other, and they are mutually supporting	Connecticut DOT, Colleen Kissane
Both the Statewide Multimodal Plan (SMTP) and State Highway Investment Plan (MnSHIP) require broad public and stakeholder review by Federal and State Law. Outreach has been a point of emphasis. For the 2017 update, we presented at more than 125 events and had over 7,500 website visits. How plans work together is usually an element of our presentation or material.	Minnesota DOT, Mark Nelson
See Above	Florida DOT, Carmen Monroy
Each of the statewide modals plan describes the relationship of the plans including the long range statewide plan. All of these plans include extensive public outreach and comment period and provides an opportunity to communicate the relationship and coordination of these plans.	California DOT, Coco Breiseno
The public is invited to 2 meetings per year – the SYIP Hearings where the draft program is shared and the Fall Transportation Meetings where problem locations and solutions can be recommended by the public. All draft and final documents are provided on the web and social media for sharing and reference.	Virginia DOT, Robin Grier
5. How are you communicating to your policy and political decision makers about the overall relationship and coordination of these plans to each other?	
Through periodic briefings.	ARC, John Orr
As individual plans are developed, they are vetted through a series of review meetings. During these meetings, staff explains how the documents work together.	Nebraska DOT, Ryan Huff
ODOT has a strong connection to policy makers at the state, regional, and local level and we work hard to maintain these connections. One tool we use is through the Area Commissions on Transportation (ACTS) and are critical tool to help build a strong policy and programming connection between our long range policy plans and transportation system plans that identify needed transportation investment choices and priorities. We also coordinate with many other statewide and regional groups such as MPOs, statewide League of Cities organization, and statewide Association of Oregon Counties organization among many others. Again, the emphasis has been more on the individual plans than the connections between the plans.	Oregon DOT, Jerri Bohard
We don't ... yet.	Ohio DOT, Scott Phinney
Our administrative officials have been involved in the goals and objectives for several of our planning documents. Part of the goal setting activities of which they have been a part, stress the relationship of these plans on each other.	Arkansas DOT, Andrew Brewer and Kevin Thornton

Question/Response	Respondent
<p>Updates on these various planning efforts have been and will continue to be regularly provided to the Iowa Transportation Commission, which formally adopts the SLRTP and the 5-year Program.</p>	<p>Iowa DOT, Andrea White</p>
<p>This is another area that we need improvement on and to develop a communication plan. We haven't really talked too much about our TAMP at this level but have been concentrating on communicating internally to staff and some initial discussions with our MPOs.</p>	<p>New Mexico DOT, Tammy Haas</p>
<p>CDOT conducts ongoing coordination and engagement with policy and political decision makers before, during, and after the development and implementation of the long-range Statewide Transportation Plan, RTPs, and other model and operational plans. This engagement takes the form of:</p> <ul style="list-style-type: none"> • Monthly briefings to the Statewide Transportation Advisory Committee (STAC) during the SWP/RTP plan cycle with discussion and feedback from the membership. During these meetings we discussed the importance of plan integration and worked with the members to improve it throughout the process. • Regular briefings to the TC including a specific presentation on the topic of plan integration. This group worked very closely with CDOT staff on the concept of plan integration, its importance to the success of the planning effort, and the best way to message it with stakeholders and the public. • Monthly meetings of the TC Statewide Plan Subcommittee to provide guidance and feedback on the development of the 2040 SWP, including how to best connect the multiple concurrent planning efforts into a cohesive whole. • Colorado's 15 TPR structure composed of regional elected officials and staff, who coordinate and guide the development of 10 rural and 5 MPO Regional Transportation Plans (RTPs) and engage in ongoing discussion of local transportation planning issues between SWP/RTP cycles. This group also learned about and discussed the importance of plan integration at the regional and local level and how it affects their communities. • The Project Priority Programming Process (4P), which consists of individual, yearly county meetings to discuss anticipated STIP projects, available funding, and upcoming planning activities. 	<p>Colorado DOT, Jeff Sudmeier</p>
<p>TranPlanMT is the overarching policy planning document used to coordinate other planning efforts. As part of the update, transportation stakeholders from all levels, as well as the public, were engaged through workshops and document review. Development of other, more specific plans (Freight Plan, Rest Area Plan, Comprehensive Highway Safety Plan, etc.), also include development of plan specific stakeholder lists as well as public review.</p>	<p>Montana DOT, Charity Watt</p>
<p>Through the continuous planning processes, and regular updates.</p>	<p>Connecticut DOT, Colleen Kissane</p>
<p>MnDOT's senior leadership served as the Steering Committee for the SMTP and MnSHIP.</p>	<p>Minnesota DOT, Mark Nelson</p>

Question/Response	Respondent
<p>See above. Also, for the first time, FDOT has asked the steering committee assembled to develop the FTP to remain intact as an implementation committee to help coordinate ongoing implementation including plan alignment and integration. This committee includes representation of state agencies, MPOs, regional planning councils, local governments, all modes of transportation, business and economic development organizations, community and environmental organizations, FHWA, and others. FDOT has appointed two champions for each FTP goal – one internal FDOT leader or manager, and one external member of the implementation committee who can help champion and coordinate activities related to that goal. For example, champions represent the Florida Defense Alliance (Safety and Security), Transportation and Expressway Authority Membership of Florida (Infrastructure), MPO Advisory Council (Mobility), AARP Florida (Transportation Choices), Floridians for Better Transportation (Economic Competitiveness), Florida Regional Councils Association (Quality of Life), and The Nature Conservancy (Environmental Stewardship).</p>	<p>Florida DOT, Carmen Monroy</p>
<p>The relationship between the plans is typically discussed with local and regional agencies, along with the public, during all stages of plan development. The California State Transportation Agency and the California Transportation Commission (CTC) are also involved. The relationship between the plans is included in each of the plans to ensure everyone understood how the plans linked together. Regular implementation meetings are held to ensure the objectives and implemented and partners understand their roles.</p>	<p>California DOT, Coco Breiseno</p>
<p>Commonwealth Transportation Board is responsible for DOT and Rail and Public Transportation funds. This board meets monthly where updates are provided on study or planning efforts. Presentation materials for this board can be found at: www.ctb.virginia.gov/meetings.asp</p>	<p>Virginia DOT, Robin Grier</p>

Appendix C: Topic 1: Slides

Peer Exchange on Implementation of MAP-21 and FAST Acts in Transportation Planning

August 1, 2017
Cincinnati, Ohio



U.S. Department of Transportation
Federal Highway Administration

Challenge

- Expanded requirements for the number of performance based planning requirements for state and regional transportation agencies
- Plans must continue to reflect the values and priorities of each agency and the citizens and stakeholders of each state
- **How to best integrate all of these different plans while maintaining a consistent and coherent message?**

Objectives

- Share current and identify potentially new strategies to address the challenge of integrating variety of performance based plan
- Identify research needs to inform ADA10's research agenda.

Outcomes

- Summary report
 - Survey results
 - Peer exchange discussions
- Strategies for you to take back to your agency

Agenda

- Topic 1: Integrating FAST Act and MAP-21 Plans
 - Scott Phinney, Ohio DOT Presentation
 - Breakout group discussion
- Topic 2: PBPP Process Development Challenges and Strategies
 - National Perspective, Harlan Miller, FHWA
 - Mark Williams, Texas DOT
 - Full group discussions
- Topic 3: Communication Challenges and Strategies
 - Sondra Rosenberg, Nevada DOT
 - Breakout group discussions
- Research Needs

Integrating FAST Act and MAP-21 Plans

Survey Results



U.S. Department of Transportation
Federal Highway Administration

Is your state or region linking its Asset Management Plan, Freight Investment Plan, Strategic Highway Safety Plan, and the Congestion Management Process to your Long Range Plan?

- Including individual plans as appendices or by reference in the LRP
- Partial integration
- Top down integration



IOWA – Integrating Elements

“This included incorporating the following elements into the SLRTP:

- The analysis, identification, and ranking of freight bottlenecks from the SFP
- Modal needs identified in the SFP
- Strategies outlined in the SFP
- Strategies outlined in the SHSP
- The analysis and ranking of interstate corridors from an operations perspective from the TSMO plan
- Strategies based on the TSMO plan
- Strategies based on risks identified in the TAMP”



ARKANSAS: Scenario Planning coordination

- Developed four state long range plan scenarios
- One emphasized investments to improve freight transportation (congestion reduction, improved reliability)
- Investment types and locations from this scenario were coordinated with the development of scenarios for State Freight Plan



Ohio DOT: How to put it all together

Presentation at FHWA/ADA10/AASHTO Peer Exchange on Implementation of MAP-21 and FAST Acts in Transportation Planning August 1, 2017 Cincinnati, Ohio

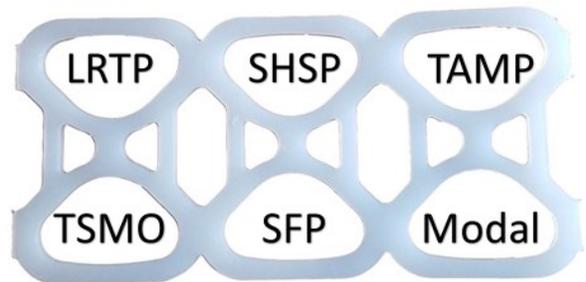


Quotes from Employee Performance Evaluations

- “Since my last report, this employee has hit rock bottom and has started to dig.”
- “Works well when under constant supervision and cornered like a rat in a trap.”
- “If you see two people talking and one looks bored, he’s the other one.”
- “If you give him a penny for his thoughts, you’d get change.”
- “He doesn’t have ulcers, but he’s a carrier.”
- “He set’s low personal standards and then consistently fails to achieve them.”
- “Got the full 6-pack, but lacks the plastic thing to hold it all together.”



Lacking the plastic thing that holds it all together

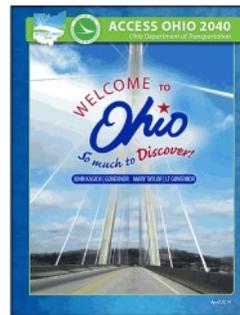


Overview of presentation

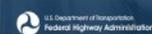
Ohio's 6-pack

1. Long Range Transportation Plan (LRTP)
2. Strategic Highway Safety Plan (SHSP)
3. Transportation Asset Management Plan (TAMP)
4. Transportation Systems Management & Operations (TSM&O)
5. Statewide Freight Plan (SFP)
6. Modal Plans (Transit / Rail / Maritime)

Long Range Transportation Plan



- Published in 2014
- 6 goals areas
- 22 objectives
- 11 recommendations
- No new performance measures
 - “Re-used” 18 measures already established by ODOT

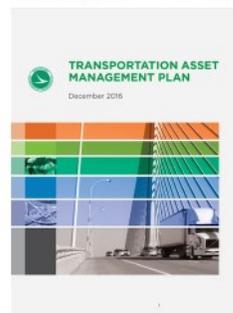


Strategic Highway Safety Plan



- Published in 2014
- 4 emphasis areas
- 28 goals
- 70 Strategies
- 30 performance measures

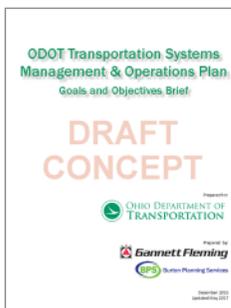
Transportation Asset Management Plan



- Draft in 2016
- 3 focus/goal areas
- 22 Action Items
- 8 performance measures

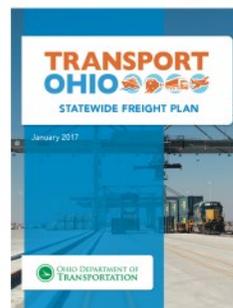


Transportation Systems Management & Operations Plan

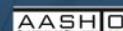


- Draft in 2017
- 7 strategic goal areas
- 32 objectives
- 30 Recommended Actions
- 43 new performance measures

Statewide Freight Plan



- Published in 2017
- 7 National goal areas
- 6 Ohio goal areas
- 14 performance measures
- 3 new recommended initiatives
- 19 continued initiatives



Other Modal Plans



- Transit plan
- Rail plan
- Maritime plan
- Corridor plans

Summary

- State DOTs are required to produce several different types of plans
- Each plan has its own goals, objectives, action items/recommendations, and performance measures
- What coordinates these plans so that a DOT is not going in divergent directions with each plan?
- How can action items/recommendations be coordinated to optimize resources?



Questions?

Scott Phinney, P.E.

Ohio DOT

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Appendix D: Topic 1 Discussion Notes

This appendix provides the results of the discussion of plan integration benefits, risks, challenges, and strategies held during Topic 1: Integrating PBPP plans and long range plans. Content is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Benefits of linking asset management, freight investment, strategic highway safety plans and the congestion management process to LRTPs:

- Help public understand needs
- Comply with Federal requirements
- Improve organizational efficiency
- Effectively evaluate trade-offs among different programming decisions in the State Transportation Improvement Program (STIP)
- Improved decision-making: project and programming decisions based on clear objectives
- All parts of agency moving toward a common purpose
- Easier to communicate
- Investments more likely to achieve objectives, which saves resources
- Able to address multiple needs from same funding
- Establish long-term perspective to manage risk

Risks if the plans are not linked:

- Loss of credibility
 - Confusion for stakeholders
 - Tendency to manipulate outcomes – decisions are more politicized
 - State might overcommit and overpromise if only looking at one plan at a time
- Inefficient use of resources
 - Lack of clear direction and resulting indecision wastes staff time and money
 - Competing projects and funding could counteract each other's goals
 - Risks duplicating efforts
 - Contributes to plan-writing fatigue: "They might as well be journalists"
 - Spending money on short-term wish lists rather than to achieve long-term strategy.
 - Lack of accountability and ownership

- Inconsistent goals and working at cross-purposes
 - Institutional infighting and confusion
 - Lack of ownership and internal accountability
 - Inability to adequately assess trade-offs
 - Won't make performance targets if working at cross-purposes
- Weakened communications because not a cohesive message or objective(s)
 - Missed-stakeholders – don't know how to get involved
 - Engagement fatigue (staff and public)

Challenges	Strategies
Timing and pace of change	<ul style="list-style-type: none"> ● Adapt incrementally. ● Don't expect perfection. ● Reducing duplication will save time. ● Synchronize: What do you need to know and when? ● Identify improvements for the next cycle.
Political, regional, and engineering preferences for project-based decision making Decentralized decision making	<ul style="list-style-type: none"> ● Educate on the benefits of shifting from project-based decision making to centralized, performance-driven approach to decision making. ● Evaluate how we allocate funds to get to our STIP; increase transparency. ● Explain Federal requirements and why we benefit. ● Explain the trade-offs at play. ● Demonstrate budgetary benefits of PBPP. ● Impose requirements on them to report their own performance objectives and goals through this process so there is accountability at the local or MPO level (Texas). ● Legislative changes: Oregon legislation makes the commission responsible for long-range and multimodal (freight/people) planning. ● Washington State: Practical solutions approach. Establish a performance framework to articulate the major objectives decisions and investments should achieve. Develop State performance goals by pulling from the common elements in MPO/local plans' visions. Rather than legislature dictating solutions, the legislature tasks DOT with solving the problems. Strong champion in DOT secretary. ● Report on the connection between goals, measures, and progress. Explain how project-based decision making is affecting that progress on various goals. ● Establish guidelines for them to meet. (Caltrans re MPOs/counties involvement in asset management). ● Delegate the achievement of targets to the MPOs, locals. (Minnesota)

Challenges	Strategies
Leadership priorities, shifts, and politics	<ul style="list-style-type: none"> ● Match cycles to political cycles so that you can get through the update process before a change in political leadership. ● Develop the business case to use in getting executive’s support: risks, buy-in, changing Federal requirements. ● Recruit a champion from the leadership circle. ● Manage expectations.
State-Federal law conflicts	<ul style="list-style-type: none"> ● Research where there is flexibility in what the Federal law allows.
Silos	<ul style="list-style-type: none"> ● Develop interdepartmental teams, including the different modes and performance measure working groups. ● Schedule for facetime, relationship-building. ● Use facilitation and mediation techniques to build common understanding. ● Regular (monthly or bimonthly) meetings among managers to discuss integration. (Minnesota, Colorado) ● The teams creating each plan have representatives from the other plan areas. ● One primary long range plan feeds into development of the other plans, which reduces the need for cross-silo work on those plans. (Minnesota, Pennsylvania)
No dedicated staff for coordination; “not my job”	<ul style="list-style-type: none"> ● Designate career staff in each department who understand their plan. (Florida) ● Get support from leadership to make this a priority. ● Tie funding decisions to long range plan and alignment of performance goals and objectives. ● Evaluate current work flow and practices. ● Have one person common across many plans. (Vermont)
Staff capacity	<ul style="list-style-type: none"> ● Clarify roles and responsibilities to reduce duplication or assign accountability. ● Use the process of integration to look for opportunities to reduce duplication. ● Follow the money to other resources, e.g., universities, MPOs, consultants, and think tanks. Develop clear scopes of work for them. ● Increase the budget. ● Use technology to save staff time.

Challenges	Strategies
Sheer number of plans and measures	<ul style="list-style-type: none"> • Develop overall strategic plan or agency vision to direct all of the plans. • Create a strategic plan cheat sheet to map how plans fit together: dates, data linkages, content, communication flows and process. Update it frequently to maintain alignment. • Inventory and categorize performance measures to identify options for coordination and simplification. Identify measures that are appropriate across multiple plans. (Nevada) • Assess which performance measures are appropriate for what purpose. Measures in a report to the legislature would be higher-level than the detailed measures that technical staff need for assessing progress. Different measures would be appropriate for assessing outcomes versus for use in project selection. • Oregon. Key PMs are used in legislature reports. Others measure success of the plan. Leadership team picks the top items. • Colorado. Policy Directive uses 14 lag measures. Lead measures rotate every two months. For every high-level lag measure that drives budget decisions and is public-facing, management has identified lead measures, which are the operational measures that the internal staff level uses to achieve the lag measures. • Texas. Cross-team workgroup is creating a performance measure governance document to define ownership and coordination roles. • Arkansas. Update LRTP, SFP, SP, SHP at the same time, and identify details to align.
Difficult to find similar content in different plans	<ul style="list-style-type: none"> • Develop a common story and communications strategy: format, vocabulary, and template. (Texas) • Articulate in each plan the statewide vision and how it flows down to influence the other plans. • Build all plans from an overall strategic plan, agency vision, or from the long range plan. Evaluate routinely. (Florida, Minnesota, Arizona)
Making it meaningful, not “check the box”	<ul style="list-style-type: none"> • Tie funding decisions to performance outcomes. • Invest to achieve the long-term goals and objectives.
Data analysis/management	<ul style="list-style-type: none"> • Make incremental improvements. • Seek training opportunities and research. • Create common, shared data portals. (Utah UPlan GIS data integration) • Use website and online tools for sharing. • Identify improvements for the next cycle.

Challenges	Strategies
Different stakeholders for different plans; costs of outreach	<ul style="list-style-type: none"> • Plan for communications using common vision and goals. • Vet vision and goals with the public. Then flow that into the development of the specific plans. • Develop a cross-classification table to demonstrate trade-offs among LRTP/SFP. (Iowa) • Focus on core needs and functions rather than wish lists. • Dedicate staff to answering questions. • Make use of website to communicate common planning products and info. (One Nevada Plan, Utah, Minnesota, Florida)

Appendix E: Topic 2 Slides



ADA-10 Peer Exchange on Integration of Plans

Performance Based Planning and Programming (PBPP)

Harlan Miller, Office of Planning

Cincinnati, OH
August 1st



Learning Objectives

- Implementation timeline
- Federally required performance measures
- PBPP requirements
- PBPP guidance
- PBPP resources
- Hear from regional leaders
- Questions



2



Implementation Timeline

Final Rule	Effective Date	States Set Targets By	MPOs Set Targets By	LRSTP, MTP, STIP and TIP Inclusion
Safety Performance Measures (PM1)	April 14, 2016	Aug. 31, 2017	Up to 180 days after the State sets targets, but not later than Feb. 27, 2018	Updates or amendments on or after May 27, 2018
Pavement/ Bridge Performance Measures (PM2)	May 20, 2017	May 20, 2018	No later than 180 days after the State(s) sets targets	Updates or amendments on or after May 20, 2019
System Performance Measures (PM3)	May 20, 2017	May 20, 2018	No later than 180 days after the State(s) sets targets	Updates or amendments on or after May 20, 2019



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3



Safety Performance Measures

Five annual safety targets are required for State DOTs and MPOs:

- Number of fatalities
- Number of serious injuries
- Rate of fatalities per 100 million VMT
- Rate of serious injuries per 100 million VMT
- Number of nonmotorized fatalities and nonmotorized serious injuries



4



Pavement Condition Performance Measures

Four pavement measures:

- % of Interstate pavements in Good condition
- % of Interstate pavements in Poor condition
- % of non-Interstate NHS pavements in Good condition
- % of non-Interstate NHS pavements in Poor condition



5



Bridge Condition Performance Measures

Two bridge measures:

- % of NHS bridges in Good condition
- % of NHS bridges in Poor condition



6



System Performance Measures

Two system performance measures:

- % of reliable person-miles traveled on the Interstate
- % of reliable person-miles traveled on the non-interstate NHS



7



Freight Movement on the Interstate Measure

One freight performance measure:

- Truck travel time reliability on the Interstate system (average truck reliability index)



8



CMAQ Measures

Two measures:

- Traffic congestion
 - Peak Hour Excessive Delay (PHED) measure: annual hours of PHED per capita
 - Non-Single Occupancy Vehicle Travel (SOV) measure: % of non-SOV travel
- On-road mobile source emissions
 - Total emission reductions



9

PBPP and TPM: Bringing It All Together



PBPP Framework	PBPP Element	TPM Framework	TPM Elements
Strategic Direction <i>(Where do we want to go?)</i>	Goals and Objectives Performance Measures	National Goals Measures	Goals and Objectives Performance Measures
Performance Based-Planning (Analysis) <i>(How are we going to get there?)</i>	Identify Targets and Trends Identify Strategies Develop Strategy/Investment Priorities <i>Results in long-range plans</i>	Targets Plans	Targets: Technical Approach and Business Process Strategy Identification Investment Prioritization
Performance Based-Programming <i>(What will it take?)</i>	Investment Plan Resource Allocation Program of Projects	Plans	Programming Within Program Areas Programming Across Program Areas
Implementation and Evaluation <i>(How did we do?)</i>	Reporting Monitoring Evaluation	Reports Accountability Transparency	Monitoring & Adjustment (System, Program, Project) Reporting & Communication (Internal & External)
Cross-Cutting Elements <i>(Apply to Entire Framework)</i>	Public Involvement Data Management Data Analysis		Organizational Culture External Collaboration & Coordination Data Management Data Usability & Analysis



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10



PBPP: Target-Setting Coordination

States and MPOs shall coordinate when setting targets to ensure consistency to the maximum extent practicable



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11



PBPP: Target-Setting Coordination

MPO Target Setting

- An MPO may establish its own quantifiable performance targets or
- An MPO may adopt a State's performance targets and support the State's efforts at achieving those targets

Either way, the MPO is establishing targets



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12



PBPP: Planning Agreements

MPO(s), State DOTs, and Public Transit Agencies shall establish written agreements for a metropolitan area describing roles and responsibilities for PBPP including:

- Coordination on target setting
- Data collection
- Data analysis
- Reporting on progress toward target achievement
- Data collection for the NHS asset management plan



13



PBPP: Integration of Other PB Plans

The goals, objectives, performance measures, and targets from other performance based plans and programs shall be integrated into the transportation planning process

- Examples:
 - Highway and transit asset management plans
 - Strategic Highway Safety Plan
 - Freight plans
 - Congestion management process (CMP) and plan



14



PBPP: MTP and LRSTP

The MTP and LRSTP shall include:

- Performance measures and targets
- A description of progress made toward target achievement since the plan's last update



15



PBPP: STIP and TIP

- The TIP shall be designed to promote achievement of the performance targets in the plan
- The STIP and TIP shall, to the maximum extent practicable, describe how the investments in the STIP and the TIP make progress toward achievement of the targets in the plan.



16



Group Exercise

Discuss how the State and MPO(s) are coordinating in your State on:

- Target setting
- Data collection
- Data analysis
- Progress reporting
- Data for the NHS asset management plan



17



PBPP/TPM Resources

- Planning Capacity Building Website: <http://www.planning.dot.gov>
- TPM Website: <http://www.fhwa.dot.gov/tpm/>
- Asset Management Website: <http://www.fhwa.dot.gov/asset/>
- FHWA MAP-21 Website: <http://www.fhwa.dot.gov/map21>



18



PBPP/TPM Resources

- **Currently Available**
 - NHI-138007: Performance-based Planning and Programming
 - NHI-151053: Transportation Planning Process
 - NHI-138004: TPM Overview for the MAP-21 and FAST Acts
 - NHI-138006: TPM for Safety
 - NHI-138012: Steps to Effective Target Setting for TPM
- **In Development**
 - NHI-131106 and 131106B: TPM – Transportation Asset Management and Asset Management Plans
 - NHI-138005: TPM Overview (web-based)
 - NHI-138008: TPM for Bridges
 - NHI-138009: TPM for Pavement
 - NHI-138010: TPM for Congestion (Including Freight)
 - NHI-138011: The Role of Data in MAP-21 TPM



PBPP/TPM Resources

- TPM Capability/Maturity Model Workshop



TPM Resources

- Safety Performance Measures: Met or Made Significant Progress Determination Fact Sheet: https://safety.fhwa.dot.gov/hsip/spm/pm_progress_fs.cfm
- Technical Guidance to Support Local Computation of VMT-based Safety Performance Targets: https://www.fhwa.dot.gov/planning/processes/tools/technical_guidance/index.cfm
- Operations Performance Management: https://ops.fhwa.dot.gov/perf_measurement/



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Corbin Davis, Corbin.Davis@dot.gov, 202-366-6072

Questions?



Performance Based Plan Process Development Survey Results



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How are you identifying measures and targets?

- Planning process
- Enterprise wide performance measurement process
- Legislative or policy board directive

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Integrating the more technical elements of the process (Data, Travel Demand Models, etc)?

Prioritizing projects (if plans identify projects)?

- Decision support tools or processes
- Scoring frameworks
- Planning factors
- Funding levels and anticipated outcomes by objective

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FLORIDA – Strategic Investment Tool

- Florida has the Strategic Intermodal System (SIS) Policy Plan and the Florida Transportation Plan (FTP)
- Project priorities for Florida's Strategic Intermodal System established through:
 - Unfunded needs plan
 - Cost feasible plan
 - 10 year and 5 year capital plans
- These plans are updated for consistency with the FTP and the SIS Policy Plan
- Strategic Investment Tools that reflects the goals and objectives of the FTP and the SIS Policy Plan provides analytical support for project selection and prioritization

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Texas Department of Transportation Performance Based Planning Approach

Presentation at FHWA/ADA10/AASHTO Peer Exchange on
Implementation of MAP-21 and FAST Acts in Transportation Planning
August 1, 2017
Cincinnati, Ohio



TRB

AASHTO

U.S. Department of Transportation
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Background

- Along with federal PBP requirements, TxDOT and its planning partners must also address various other state and agency performance and planning requirements.
- Often these requirements, and the approaches taken to address them, are inconsistent with one another --- potentially creating confusion and adding work for staff.

"An unclear approach to project selection and prioritization risks creating confusion between TxDOT and planning organizations as significant new money is put to use."

Texas Sunset Advisory Commission



Topic 2: PBP Approach

Recognizing the need to better align performance-based planning, the Texas Department of Transportation (TxDOT) has established a Performance Measure Workgroup within the department.

- Assist with aligning all PM activities department-wide.
- Develop common standards, guidelines, conversions, and metrics.
- Provide regular review of existing metrics for appropriateness of use, reporting, and potential update.
- Monitor ongoing PM and PBP activities across different departmental divisions and with stakeholders.
- Develop and maintain governance document for all agency PMs.



Topic 2: PM Governance Document

TxDOT has recognized the need for a "governance" document to help manage PBP activities. It will include:

- Measures (by title)
- Policy area for measure (safety, preservation, etc.)
- Most recent measure results
- Target associated with measure
- Owner of measure (TxDOT division)
- Data source(s) and reporting standards
- Conversions of data for different reporting requirements
- Date of next update for measure
- Where measure is reported/used



Topic 2: Setting Measures and Targets

System Performance Measures

- Portfolio Management and Unified Transportation Program (UTP)
- Federal Transportation Performance Management (TPM)

Agency Performance Dashboards

- Commission (Public)
- Administration (Agency management)
- Division and District (Program management)

State Legislative Requirements

- HB 20 (Project prioritization)
- SB 312 (Agency Sunset)
- Agency Strategic Plan
- Legislative Appropriations Request

Federal Requirements

- Data Submissions
- Target Setting
- MPO Coordination
- Biennial Performance Reports
- FHWA Stewardship & Oversight Report

Reporting Performance

- Legislative Budget Board
- Statutory Reports
- TxDOT Website/Dashboard
- Federal TPM Process

Plan Integration

- Long-Range Transportation Plan
- Transportation Asset Management Plan
- Transit Asset Management Plan
- Transit Safety Plan
- Highway Safety Plan
- Texas Freight Mobility Plan
- Unified Transportation Program
- Highway Safety Improvement Plan
- Statewide Transportation Improvement Plan
- Metropolitan Transportation Plans
- Inclusion of Goals, Strategies, Measures, Targets, and Performance in all Plans
- Cross-References
- Development and Publication Schedules

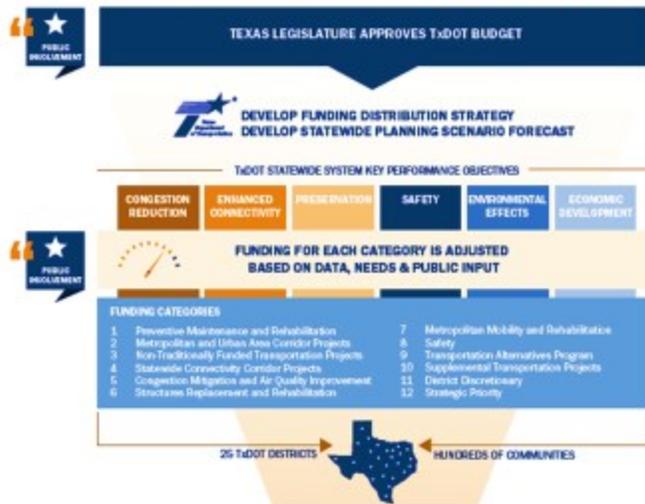


Topic 2: Integrating Technical Elements

- Measures and targets are only as good as the data used to support them.
- Need good and consistent data sources.
 - TxDOT is working to implement an agency-wide information system (MPPM) to streamline the management and delivery of transportation projects and programs statewide. This system will replace up to 40 legacy engineering operation systems and provide a 'one stop shop' for performance data.
- Share data with planning partners.



Topic 2: Project Prioritization – System Performance



Topic 2: Project Prioritization – Project Selection



Topic 2: Project Prioritization – Project Selection Criteria

TxDOT uses performance metric criteria, by portfolio objective, to assist with project selection.

Portfolio Objective	Performance Metric Criteria	Metric Subcriteria
Safety	Crash count	Fatal and incapacitating injury crashes Total crashes
	Crash rate	Fatal and incapacitating injury crashes Total injury crash rate
	Safety Project Classification	-
	Hurricane Evacuation Route	-
Preservation	Bridge condition	Structurally deficient deck area addressed Good deck area maintained (by sufficiency rating) Poor or worse lane miles addressed (by Ride Score)
	Pavement condition	Good or better lane miles addressed (by Ride Score) Poor or worse lane miles addressed (by Distress Score)
		Good or better lane miles addressed (by Distress Score)
	Congestion Reduction	Lane miles of current congestion addressed
Lane miles of future congestion addressed		-
Intermodal connector		-
Lane miles of new connectivity		-



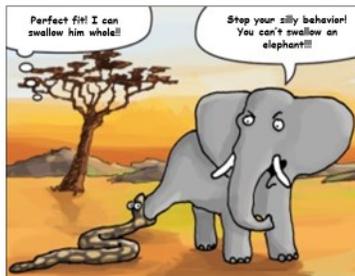
Topic 2: Project Prioritization – Project Selection Criteria

Portfolio Objective	Performance Metric Criteria	Metric Subcriteria
Enhance Connectivity	Lane miles of current congestion addressed	-
	Lane miles of future congestion addressed	-
	Trunk system route	-
	Intermodal connector	-
	Lane miles of new connectivity	-
Effects on Economic Development	Economic Importance	National Highway System (NHS) route National Highway Freight network (NHFN)
	System usage	Base ADT Base percent trucks
		Energy sector route
Effects on the Environment	-	Category 5 (Congestion Mitigation and Air Quality) projects
	-	Hazardous paint removal and landscape and scenic enhancement projects
	-	Environmental work (e.g. wetland mitigation)



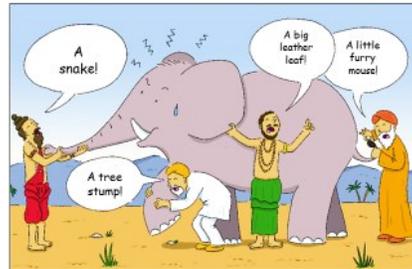
Topic 2: Challenges and Risks

Don't choke on the elephant.



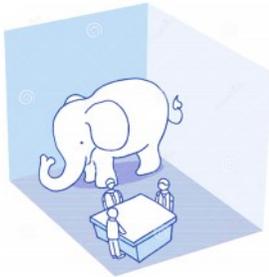
Topic 2: Challenges and Risks

How are you describing the elephant?



Topic 2: Challenges and Risks

Talk about the elephant in the room.



Summary

- It's a **BIG** job! And, it's a **COMPLEX** topic!
 - Use what resources you have
 - Consider use of a governing document
 - Improve data sources
 - Rely on expertise of others
 - FHWA
 - Other state DOTs
 - MPOs
 - Universities
 - Recognize needs of stakeholders and public to understand PMs.
- It's essential to link performance planning with project portfolio planning and development.

You're only as good as the projects you're able to deliver!



Appendix F: Topic 2 Discussion Notes

This content is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Discussion of Coordination Between State DOTs and MPOs

- Nationally, many MPOs want to wait and see where the States are. Or the MPOs might just go with the State on the first round and then deviate later when they have more experience. Smaller MPOs tend to gravitate toward using the State targets, and larger MPOs are more inclined to set their own.
- Nevada has four MPOs, which are mostly also the transit providers. A group of planning managers from each organization meets monthly, and they also created a performance measures working group. They first catalogued all the measures each of them was reporting (to the Federal government or to others). Then they filtered those measures to determine what was important for plans. Now, they have consistent measures across the agencies and plans, and they are working on targets. Initially, the MPO had planned to use the State targets. When the MPOs saw that the State target follows the trend line rather than showing improvements, the MPOs began reconsidering.
- Alabama is using workshops to coordinate with its 14 MPOs and its transit agencies.
- California is taking a similar approach as Nevada and is organizing the coordination around measures. They are also holding tribal listening sessions to make sure they have the information needed for government-to-government consultation. The MPOs seem likely to use the State targets but might re-evaluate.
- Utah: The MPOs and DOT have set goals and measures in lock-step for a few cycles now. As a highly diverse State (extremely rural areas and one major MPO), their decision-making process allows for flexibility to weight goals and objectives independently to adjust for local conditions and context.
- Virginia has a similar process as Utah.
- Utah is also very coordinated on financial planning efforts. All plans and studies are in the same GIS-based platform, and even environmental reviews pull their information from this same database/process.
- New York has a State and MPO working group and a FAST Act implementation group. The executive directors meet every few weeks. These groups and meetings are venues for sharing perspectives and establishing processes that vary by performance measure area. On safety, there was a statewide goal first, and then a workshop with MPO directors where the MPOs asked the DOT for a policy directive directing MPO boards to follow State goals in the first round. To handle the data issues, the modeling workgroup brought in a university. All of their coordination work builds off of existing working relationships. The DOT drafted language for MPOs to use to document the process.
- Iowa. Two MPOs have three States; three MPOs have two States. Which targets do those MPOs set?

- Answer from FHWA: Of the 17 different target areas, only two require agreement – congestion management and air quality and congestion. All the other measures can be unique between the States and the MPOs.
- New Jersey. So the entire New York metropolitan urbanized area would all have one target and the Philadelphia area (three States)? So that would mean coordination among all the active States.
- Answer from FHWA: Congestion is regional. Worst is Boston which has nine MPOs.
- Florida DOT began coordination early by having MPOs meeting regularly to coordinate all along.

Group Discussion of PBPP Process Strategies

The group discussed the challenges they face with the PBPP process and brainstormed strategies for addressing those challenges.

Challenge: Too many performance measures

- Leave room for draft measures that you can pilot test.
- Consider retiring some measures.
 - Texas is debating putting some measures in the “parking lot” to see if they can get along without them. Although some measures might not be ideal, there is value in measures that have a long history. Must balance the interests in having the perfect measures and being able to track change over time.
 - Many measures are the “best we can do right now” e.g., miles of sidewalks or bike lanes until can measure those modes more directly. Then we will sunset the less ideal measures.
 - The Atlanta MPO has been helping Florida’s DOT review their performance measures for ones to sunset. It can be helpful to label some as indicators of progress – it’s less loaded than a performance measure and useful for managing expectations.

Challenge: Expected outcomes (and targets) that worsen over time given our constraints. Not everything is going to improve over time without a lot more money and expertise.

- For some performance measures, it might make sense to have an aspiration goal but a realistic target.
- New Jersey recommends communicating that the outcomes would be even worse without the DOT’s ongoing efforts. Consider tailoring your story to your audience: primary stakeholders and politicians.
- The Texas legislature established performance measures that don’t necessarily align with the Federal measures. Most of the MPOs’ TIP funding comes from the State with

relatively smaller amounts from the Feds. This means that the Feds have less weight, and MPOs will tailor their message to the State.

- FHWA recommends using trend lines as a benchmark for where you are going. Progress doesn't necessarily mean that you will improve upon today's measures, but you can still improve from where the trend line is going.
- Michigan's revenue package went out right before setting targets. They would have preferred to set their realistic (and worsening) targets right during revenue negotiations; then they could have that information in negotiations.
- Identify opportunities to ask the policy questions. Explain to the legislators how the recent revenue package is likely to affect the outcomes. Challenge the legislature to establish what takes priority from among the limited funds.
- Turnover in legislators complicates the issue because the DOTs have to keep re-educating new legislators.

Challenge: Coordination with MPOs

- MPOs' perspectives differ from DOTs' because MPOs don't face the same consequences for missing the targets. For example, on safety targets, MPOs want to be ambitious and support the Vision Zero policies they have worked hard to adopt. DOTs, however, don't want to be penalized and are less willing to be ambitious.
- Aspirational goals are challenging for communications.
- Recurring theme: ongoing regular meetings build trust over time, and the States/MPOs doing this seem to be having an easier time coordinating. (Michigan, New Jersey, Colorado, Oregon)
- Coordination requires defining each other's roles and data needs. States are generally willing to provide data, but they are not willing to do the analysis for every measure an MPO might want.
- Nevada. On some measures, the State does the analytics. On one measure, an MPO is doing the analytics because they have lots of tools and data. To maintain consistency statewide, they use one specialist agency for the analytics. During the budgetary pressures of the recession, the FHWA division office recommended that the DOT and MPOs work together to create a unified voice advocating for transportation in the State, rather than vying with each other for limited resources. Although it took a few years to build trust, the meetings now remain open and honest even when participants disagree with each other.
- Texas saw the business case for coordinating on data: once Texas DOT (TxDOT) covers its own data needs, the incremental cost of making data available, even to 25 MPOs, is very small. TxDOT covers costs and training for the MPOs. Due to the way the State legislature and Federal funding divvies up the pots of funding, decision making is distributed among the MPOs and TxDOT, and it's only manageable if they work together. TxDOT provides training to ensure that planning is consistent across the State.

- Virginia also shares data with MPOs. Virginia DOT has an interactive tool that allows MPOs to run “what if” comparisons to show their boards how different targets will affect the outcomes.
- Remind your MPOs and transportation management associations of the technical assistance that you (or FHWA) has available.

Appendix G: Topic 3 Slides

**Communication
Survey Results**

U.S. Department of Transportation
Federal Highway Administration

How are you communicating to the public about how state or regional policies influence your plans and the overall relationship and coordination of these plans to each other?

- Public/stakeholder involvement processes
 - One-Way information dissemination
 - Two-way feedback
- Branding
- Collaboration with regional boards or groups of stakeholders

U.S. Department of Transportation
Federal Highway Administration

COLORADO --- Interactive Town Hall Meetings

- 16 interactive telephone town halls with a format similar to a radio talk show
- Capability for interactive polling on push-button phones
- Public input on transportation needs and priorities
- Q & A with Colorado Transportation Commissioners
- Raised the following questions with participants on the call:
 - What is most important to you about transportation?
 - How should CDOT invest limited dollars?
 - What kinds of transportation improvements can best help the economy in your area?

U.S. Department of Transportation
Federal Highway Administration

FLORIDA – Goal Champions

- Two champions for each FTP goal to support implementation
 - FDOT leader or manager
 - External stakeholder of the implementation committee who can help
- Help champion and coordinate activities related to that goal
- Examples of external champions
 - Florida Defense Alliance -- Safety and Security
 - Transportation and Expressway Authority – Infrastructure
 - MPO Advisory Council – Mobility
 - AARP Florida – Transportation Choices
 - Floridians for Better Transportation -- Economic Competitiveness
 - Florida Regional Councils Association -- Quality of Life
 - The Nature Conservancy -- Environmental Stewardship

U.S. Department of Transportation
Federal Highway Administration

**Nevada Department of Transportation:
Communicating the One Nevada
Transportation Plan Link**

August 1, 2017
Cincinnati, Ohio

U.S. Department of Transportation
Federal Highway Administration

TRB AASHQ

Overview of presentation

- Background
- Communicating the One NV Plan Concept
- Summary

U.S. Department of Transportation
Federal Highway Administration

TRB AASHQ

Background

- Prior LRTPs were Policy based
- NDOT had recently completed/updated or nearing completion: TAMP, Freight Plan, SHSP
- All MPOs had recently or were in process of updating RTPs
- Excellent working relationship with MPO and shared concern/focus on funding
- Goal: Develop a transparent, defensible process to show performance-driven prioritization across categories.
- Our approach focuses on consistency with:
 1. *Goals and objectives*
 2. *Performance measures*
 3. *Proposed projects and policies*

Background



Communication

Tagline: **One Vision, One Plan, One Nevada.**

- Leadership/Policy Makers
- Across the Department (Inreach)
- Across Partner Agencies
- Public

Communication: Leadership

Department Strategic Plan in line with "Nevada Strategic Planning Framework"

- Develop new Vision, Mission, Values, Goals
- Develop working groups for goal areas
- Employee surveys

Presentation of Concept to Board of Directors:

- Not another plan, but a process to use the information we have from TAMP, Freight, Safety to develop a transparent process for informed decisions



Communication: Inreach

Met with divisions to understand existing processes, needs, concerns.

Map out processes to show how each program area fits into larger process to emphasize coordinated rather than whole new process (goal)



Communication: Partner Agencies

NEVADA



- NDOT/MPO monthly leadership meetings –policy & funding, coordinated messaging
- Planning Executive Group (PEG) – monthly planning process meetings
- PEG PM working Group – coordination on Performance Measures for all agencies
- Transportation Planning Advisory Committee – statewide multiagency steering committee
- Annual County Consultation



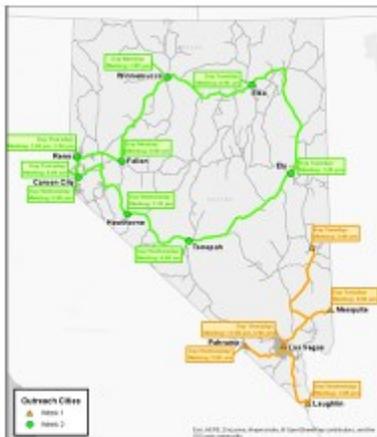
TRB

AASHTO

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Communication: Public

NEVADA



TRB

AASHTO

U.S. Department of Transportation
Federal Highway Administration



Communicating the One NV Plan Process



From prioritization by allocation to allocation by performance based prioritization



Challenges & Risks



Challenge: Agency buy in

A new planning process can only be effective with leadership and agency-wide staff buy in

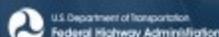
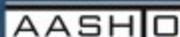
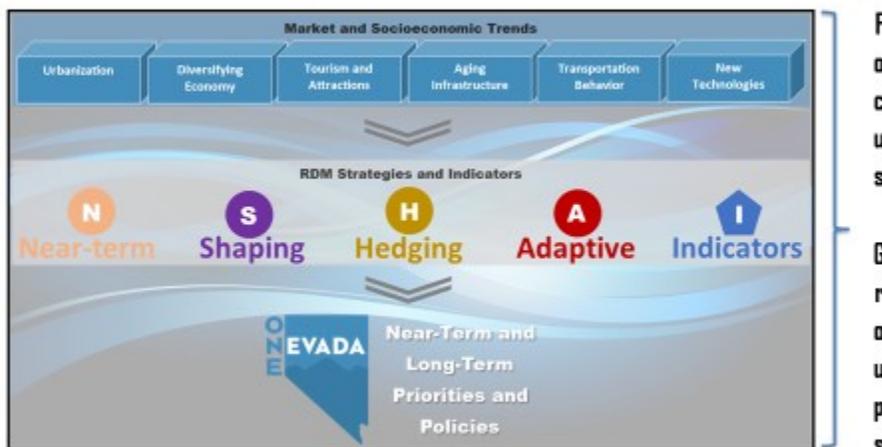
Approach: Start with leadership visioning and agency "Inreach" – Help formalize leadership direction (Strategic Plan) and existing processes and needs rather than assuming we know and can do better.

Challenge: Appearance of discontinuity or duplication between One NV Plan and modal or program area plans

Approach: Engage stakeholders who participated in other plans
Clearly describe how developed processes/plans are being used as the foundation.



Risks and Challenges



Summary



- NDOT is changing how planning is done internally and how it fits culturally within the Department. Communicating this as a One NV Plan outcome.
- Significant collaboration with partners was achieved up front before the One NV Plan was started.
- Recognize that fully integrating modal plans with the One NV Plan will be an ongoing refinement effort both internally and externally.
- Emphasizing that the One Nevada Plan is a process, not just a document.



Appendix H: Topic 3 Discussion Notes

This content is based on notes taken at the workshop and has not been vetted by the participating agencies for accuracy.

Peer Presentation Discussion

How do you pull from the county-level expressions of transportation needs to determine statewide needs? The counties generally get more specific than the DOT would get, but DOT catalogues the requests to identify categories and patterns.

- California DOT: Rather than making a list of specific people to invite to workgroups and inreach activities, they have opened up the invites to the whole department. This brought in many good participants (and info/contributions) who would have otherwise not been identified.
- Outreach costs have increased, but not by much because they are mostly using DOT staff and time. Consultants help build the tools, but most of the extra time is taken up by DOT staff.
- Persuasion techniques:
 - When a leader takes an interest, lead them along the path so that they can come to the same conclusion as you.
 - If they aren't quite getting there, say, "What I think I heard you say was this..." And try translating their nugget of an idea into something more complete.
 - Treat it like a mediation, and use language that both sides can agree upon. Avoid trigger words and inflammatory language.

Breakout Group Discussion

Audience	Challenge	Strategies
All Audiences		Have multiple ways of getting your message out and for taking in information.
	Information overload	Have a CliffsNotes version of the plan. Use a common theme, language, and branding across plans so that they are all clearly connected. Thoughtfully curate your information to meet the needs of each audience.
	Lack of relevant information	Create pictures and visual graphics to explain how the data supports your scenarios. "A map can solve every problem." But have to keep it simple: e.g., show maps in red, yellow, and green to highlight problem areas.

Audience	Challenge	Strategies
Public	Excited public: NIMBY People come with specific project needs but don't understand the process.	Engage early and often. "I hear you." Discuss opportunity costs and trade-offs; propose alternatives. Educate about the process. Connect them with the appropriate modal (or other) agency representative to listen to their concern.
	Apathy and low attendance	Recognize and accept that traditional open houses won't address this challenge, and find more effective ways to connect. Hold a radio town hall – like a talk show with surveys via touch-tone phone. Host a fun community event, like a BBQ with activities for children. Ride bus routes. Go to where people are already gathering: churches, granges/lodges or other civic organizations, community events, and sports events Provide 24/7 access via the internet with full range of information and commenting options. Electronic open house On-demand video Social media: Twitter, Facebook, and Facebook live Web surveys Make it easy to find info on your website Create online games Hook them with a hot-button issue. Figure out what is most relevant to your audience using research and info from your local partners. Tailor your materials, message, and techniques to appeal to each segment of your target audience. Once they're hooked, draw them into the broader context. Use activities to draw out meaningful feedback. Maintain your stakeholder contact list. Reach out to people who have participated in the past. Develop a brand and good graphics to get the message out.
	Lack of diversity	Adapt the strategies used to address apathy and low attendance (above) and participation fatigue (below).
	Modal imbalance	Piggyback on other meetings. Solicit the right person to get balance of input at meeting.

Audience	Challenge	Strategies
	Participation fatigue; don't believe they are being listened to	<p>Have and communicate a plan for how public input will influence decisions.</p> <p>Demonstrate how you are being influenced by their previous input and how you are drawing on public input received during other planning processes.</p> <p>Follow through to build trust.</p> <p>Maintain your stakeholder contact list; acknowledge their past efforts and ask to re-engage.</p> <p>Maintain public input in a way that it can be used for more than one plan or process.</p> <p>Make it easy for participants to find the information that is most important to them.</p>
	Lack of long-term perspective	Lay out the trade-offs between short-term decisions and long-term outcomes.
	Expense of good outreach	<p>Make the business case to directors: Reduce project delivery time by vetting projects with the public as they are developed rather than risking big controversy to a finished product.</p> <p>Save money by reusing materials and public input received in the past. Don't need to re-create the wheel each time.</p>
Inreach		
	Not understanding what planning does; not taking planners seriously	<p>PBPP 101:</p> <p>PM requirements help spend funds more wisely.</p> <p>Provide cross-asset allocation tools to help staff understand trade-offs.</p> <p>Communicate the benefits of taking a more holistic approach.</p> <p>Educate on accountability and reporting laws.</p> <p>Be a resource to the other departments, not a regulator.</p> <p>Turn planners into a resource for the other departments.</p>
	Engineers' resistance	<p>Educate on how and why the planning product will benefit them and the costs/risks of not planning.</p> <p>Rotate engineers through the planning office on detail assignments and vice versa.</p> <p>Build mutual symbiotic relationship between planning and engineering.</p>

Audience	Challenge	Strategies
	Silos and funding pots	<p>Find a champion in each silo to train staff.</p> <p>Create a planning coordination team that integrates the skills and interests of the various offices/departments.</p> <p>Talk to more than one person in each office.</p> <p>Tell multiple people, many times.</p> <p>Schedule regular internal coordination meetings</p> <p>Take advantage of existing cross-agency structures, such as asset management or sustainability groups.</p> <p>Set expectations and explain the values of the different roles.</p> <p>Hold annual conference to talk about the long range planning efforts with the entire agency.</p>
	Decentralized; regions	<p>Offer training on vision and goals to staff statewide.</p> <p>Develop the statewide goals from the bottom up, letting the regions/districts' plans and goals feed up into the top-level plan.</p> <p>Find champions in each district.</p> <p>Involve internal partners who the regional staff trust.</p>
	Complexity of planning rules baffle non-planning staff	Assign champions or district-riders to go out to districts.
	Federal rules may not be compatible with State goals	Involve internal partners in discussions.
	Nobody reads newsletters	<p>Create weekly 3-minute video that everybody watches.</p> <p>Engage executive leadership to deliver the message from their bully pulpit.</p>
Political Leaders		
	Lack of preparation before meetings; short attention span	<p>Rather than expecting them to read reports in advance, use meetings as opportunity to educate them while they hold you accountable.</p> <p>Be concise. Have a clear ask.</p>

Audience	Challenge	Strategies
	Apathy; Maintenance is not exciting	<p>Stop doing things, e.g., snow plowing; they will suddenly realize that they need it. When they complain, that's your opportunity to start a conversation about spending priorities.</p> <p>Build credibility with transparency.</p> <p>Tailor your communications to your audience and their constituents.</p> <p>Let local staff lead meetings and workshops to show that this is not just a product of the bureaucracy.</p> <p>Recognize that the elected officials respect their peers; recruit an elected official to act as champion.</p> <p>Hook them by connecting it to their other political priorities (e.g., economic or environmental issues).</p> <p>Engage them in decision making and let them hold us accountable.</p> <p>Recruit partners/champions who are important to them, e.g., AARP.</p>
	Not understanding more technical issues	<p>Heavy on graphics; light on text.</p> <p>Annually re-train, but in an engaging way.</p> <p>Keep communications simple and relevant to your audience.</p> <p>Explain the trade-offs involved; e.g., Utah got a gas tax increase by showing different "if x, then y" scenarios.</p> <p>Brownbags with legislative staff (Minnesota).</p> <p>Organize one-on-one meetings.</p>
	Hunger for ribbon-cuttings; Focus on short-term political cycle rather than long-term planning cycle	<p>Educate on the process: project in plan and TIP to get funded.</p> <p>Explain the costs of not maintaining roads, etc., e.g., Oregon's Rough Roads report.</p> <p>Diplomatically explain the impacts/risks/cost benefits of their preferred solutions.</p>
	High turnover	<p>Be prepared to re-educate by creating a reusable curriculum.</p> <p>Communicate simply.</p> <p>If a turnover is coming, leave space in ongoing planning activities for the new administration to put their imprint on it without totally derailing the process.</p>
	Different communication needs/interests	<p>Give them a simple and compelling message to deliver.</p> <p>Listen and adapt to respond to their needs.</p> <p>Develop a message that supports their goals and your goals.</p>

Appendix I: Research and Technical Assistance Needs Identified

Research Needs:

In addition to the research needs listed here, several of the capacity-building requests listed in the next section could be reframed as research needs.

- Data and Performance Measures
 - How do we assess how well we are doing?
 - How do we conduct before-and-after studies to determine whether what we expected to improve actually improved, and whether it improved to the extent that we expected?
 - Also: statistical evaluation of performance metrics to determine their ability to predict desired outcomes (e.g., safety)
 - What tools are available for data analytics? For economic impact analysis?
 - What are the performance measures and data needs for the various plans?
 - What data and performance measures can be used across multiple performance areas and plans?
 - How to reduce the number of performance measures?
 - Can statistical analysis validate which are the best performance measures?
 - What are the best practices for developing a cohesive set of performance measures and supporting data?
 - What is the state of the practice among DOTs on performance measure workgroups and common performance measure data sources and governance?
 - What are the best economic development performance measures, and can we measure effects on the economy and economic competitiveness on a statewide basis?
 - What processes or tools are available to normalize or weight measures used across and within organizations?
- Trade-offs, Resource Allocation, and Investment Strategies
 - Conduct part 2 of the ADA10-committee sponsored National Cooperative Highway Research Program [Synthesis 510: Resource Allocation of Available Funding to Programs of Work](#).
 - How are States and MPOs making these decisions?
 - How do we integrate investment strategies?
 - How should governance documents relate to investment processes?
 - How can the many different plans lead to one investment strategy?

- What are the different models for linking investment strategies and prioritization across plans?
- How do we programmatically optimize resource allocation to achieve the desired performance outcomes?
- How do we factor in multimodal connections into our investment analysis?
- How do we assess the performance of our investment strategies?
- How can performance-based planning and performance measures/goals be used to streamline project delivery or to more efficiently move a long range plan's strategic initiatives into the project pipeline?
- Engagement and Communications
 - What are the most effective ways to engage public/stakeholders in long range planning?
 - How do you make a long range plan relevant to the average person?
 - What tools to use when, and for what audience?
 - How can we leverage relationships built during scenario planning to feed into our performance-based planning?
 - What are proven, effective methods for public outreach and inreach, and how do you measure success?
 - What are effective strategies and governance approaches for managing the agency message/vision given the diverse set of plans?
 - How can we use scenarios and visualizations to present options and engage stakeholders?
 - How do we create a partner out of a stakeholder?
 - What are the best practices for coordinating among State DOTs and MPOs?
- Other: How do people want to get from place to place in the future? Recent surveys in Ohio suggest that modal preferences have more to do with life-stage than generation.

Capacity-Building Needs:

Many of the research needs could also be reframed as capacity-building needs. Additional capacity-building needs identified include:

- General:
 - Hold listening sessions on the regulations on the performance plans that are being issued by FHWA/Federal Transit Administration.
 - Promote existing technical assistance resources so that practitioners know what is available.

- Provide training on technical skills and competencies for staff at State DOT and MPO planning offices.
- Provide State-specific workshops on performance management including the performance-based planning and programming process (PBPP).
- Arrange more peer-to-peer exchanges (1½ days) to share best practices, especially among similar States.
 - Give at least one month’s advance notice for out-of-state travel.
 - Break up the meetings. Some DOTs are limited to one attendee per meeting even when multiple disciplines are addressed.
- Report lessons learned from the States in the performance management workshops.
- Create “executive” level version of National Highway Institute planning courses, which would have executives as the target audience rather than as practitioners. Train executives on how good planning processes will help them achieve their goals.
- Continue to streamline the FAST Act website on PBPP, expand with examples of best practices, and include Federal Transit Administration requirements.
- Develop a planning framework on how to align planning products, including timing.
- Provide peer exchange or other training on how to use the Transportation Asset Management Plan (TAMP) to get projects into the State Transportation Improvement Program (STIP).
- Identify how DOTs and MPOs can prepare themselves for future opportunities provided by USDOT. For example, the MPO that already had all their data in order and already had rapport/relationships with many neighbor MPO/cities were in a good position to positively respond to the opportunity (also Columbus, Ohio, became a SMART city).
- Coordination:
 - Training of staff in other disciplines about the planning process and what’s in it for them.
 - Training on techniques for coordinating MPO and State DOT measures and targets.
 - Training on befriending MPOs and strategies to help DOTs make friends and influence people.
 - Training on effective strategies for intra-agency coordination and buy-in to cross-topic prioritization and resource allocation.
 - Training on developing or updating planning agreements or providing sample DOT/MPO performance measure planning agreements.
 - Training on the opportunities for aligning with and supporting rural economies.
- Communications
 - Tools and methods for communicating with public, internal, and elected officials about the role of the planning department, the long range plan, and trade-offs

- Tools and methods for increasing engagement and buy-in
- Performance Measures and Reporting
 - Workshop on how to set targets for PM2 and PM3
 - Course on identifying best practices for meeting performance measures, especially Congestion Management and Air Quality and system performance (delay)
 - Quick facts cards/sheets on the performance measures
 - Training on efficient and effective data mining for Transportation Performance Management (TPM)
 - Training to prepare for TPM reporting, including instructions for DOTs and MPOs on how/when/what to report
 - Tools to explore trade-offs between different performance objectives, including assumptions of the costs needed to achieve the objectives
 - Training on how to update performance targets and plans in future cycles
- Data
 - Tools to perform data analysis
 - Data management strategies
 - Methods for sharing data across agencies

Appendix J: Participant List

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