Summary Report

TPM Capability Maturity Pilot Model Workshop

Held in Conjunction with the

2015 AASHTO Annual Meeting

Sheraton Chicago Hotel and Towers, Chicago, IL

Thursday, September 24, 2015

8:00 a.m. – 4:30 p.m. (Central Time)

U.S. Department of Transportation
Federal Highway Administration

Volpe

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Introduction

The 2015 AASHTO Annual Meeting was held September 24-28, 2015, at the Sheraton Chicago Hotel and Towers in Chicago, Illinois. The FHWA Office of Transportation Performance Management (TPM) hosted a full-day pilot workshop on Thursday, September 24th, to discuss the Capability Maturity Model (CMM), under development as part of TPM's Technical Assistance Program (TAP). The pilot workshop introduced participants to the TPM CMM, generally, while also highlighting a number of the model's subcomponents. Sessions covered Organization and Culture, Target Setting, Performance-based Planning and Programming, and Benchmarking. The workshop was conducted as a pilot project to determine the viability of similar workshops going ahead in the future. This report includes a discussion of the process of developing the pilot workshop exercises and materials, summaries of each of the pilot workshop sessions and accompanying exercises, evaluation results, as well as lessons learned regarding content, timing, and logistics.

Presenters

- **Michael Nesbitt, FHWA Office of TPM:** Opening and Introductions; Overview of TPM TAP and the TPM CMM; Designing Processes that make Target Setting Work; Performance Benchmarking: Comparing Apples to Apples in an Orchard is Still Really Difficult; Wrap-Up and Closing
- **Susanna Hughes Reck, FHWA Office of TPM:** Creating a Foundation for Performance Management: the Role of Organization and Culture
- **Pete Stephanos, FHWA Office of TPM:** Opening and Introductions
- **Christos Xenophontos, RIDOT:** Creating a Foundation for Performance Management: the Role of Organization and Culture
- **Deanna Belden, MnDOT:** Simple vs. Complex: Scaling Performance-based Planning and Programming to meet your Resource Allocation and Trade-off Analysis Capabilities
- **David Wasserman, NCDOT:** Simple vs. Complex: Scaling Performance-based Planning and Programming to meet your Resource Allocation and Trade-off Analysis Capabilities

Audience

The audience consisted primarily of State DOT representatives, with a few private sector and other public sector participants as well. In total, 24 attendees signed in. Among the 24 attendees, 17 were from State DOTs representing 15 unique states. There were also five participants from the private sector, one representative from AASHTO, and one participant from the FHWA Division Office in Montana. See Appendix A. Pilot Workshop Attendance List for the full list of workshop attendees, along with their organizations and contact information. Outreach was conducted by AASHTO through promotion of their Annual Meeting.

Pilot Workshop Session Summaries

1. Opening and Introductions

The opening session served to welcome attendees to the TPM Capability Maturity Model Pilot Workshop. Michael Nesbitt and Susanna Hughes Reck, both of the FHWA Office of TPM, welcomed participants and encouraged them to provide feedback on this interactive pilot workshop, as the Office of TPM aims to further refine these types of offerings in the future.

Christos Xenophonos, of RIDOT and Vice Chair of AASHTO's Standing Committee on Performance Management (SCOPM), provided a brief overview of SCOPM and encouraged the pilot workshop participants to become involved. Approximately half of the attendees present are already affiliated with SCOPM. Christos also announced the newly-appointed Chair of SCOPM, Mike Patterson, Executive Director of Oklahoma DOT and former Chair of the AASHTO's Subcommittee on Transportation Asset Management (TAM).

Michael Kay of the U.S. DOT Volpe Center provided participants with housekeeping items including a review of the day's agenda, folder contents, sign-in sheet, and audio recording for note taking purposes. He asked that the attendees introduce themselves and tell everyone their name, title, organization, and three words they most associate with TPM. As the participants introduced themselves and gave their three TPM words, Volpe staff recorded the words and generated a word cloud (see Figure 1 below) in real time using the terms provided. The word cloud visualizes the frequency of each word, such that those that were mentioned the greatest number of times appear the largest. Following the introductions, this word cloud was displayed for the audience. Asked if the word cloud accurately represents their idea of TPM, participants noted that some people in their State DOTs did not see TPM as an opportunity as much as a requirement, though they generally agreed that the image was a fairly good representation of TPM.

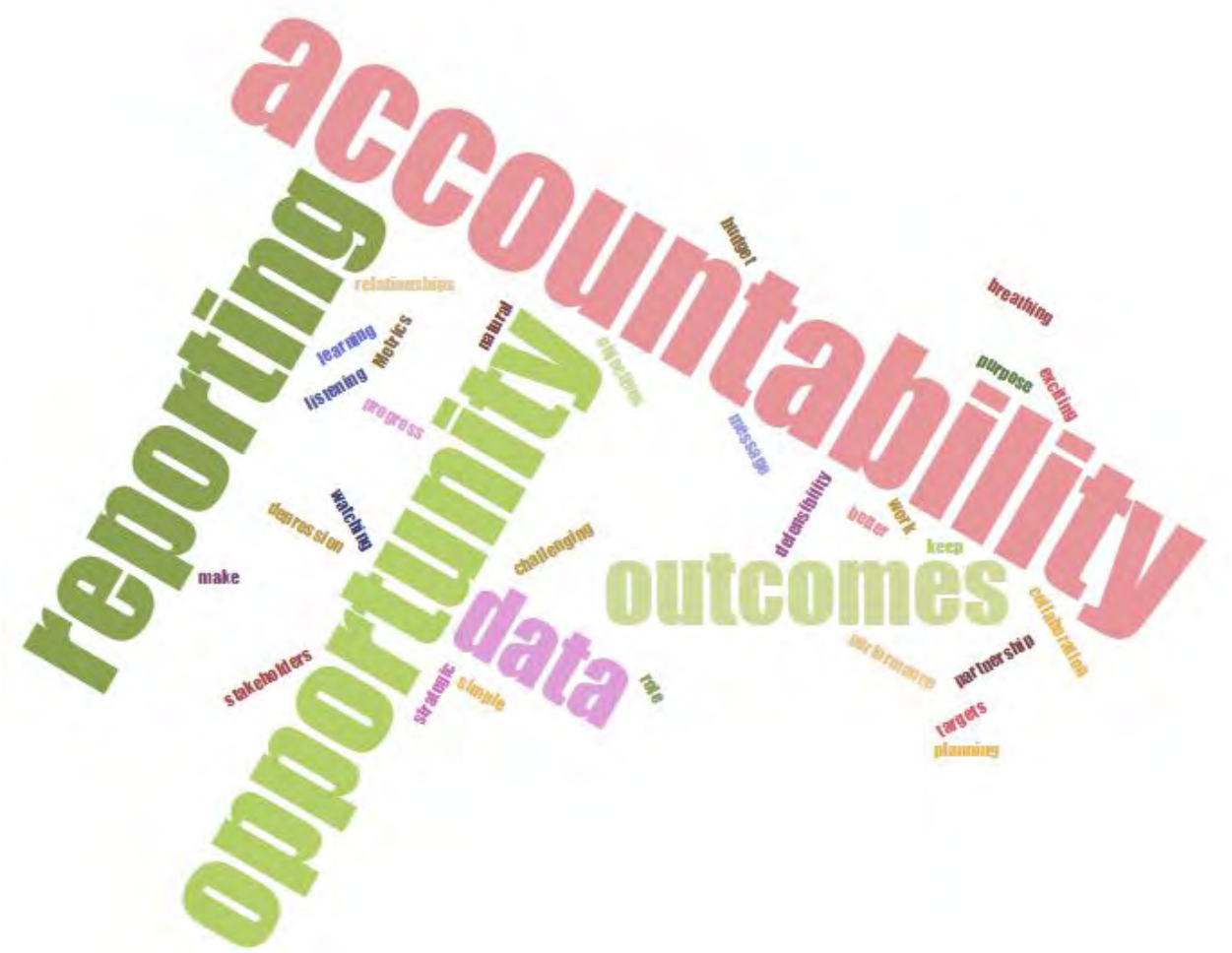


Figure 1: Word Cloud Generated from Participants' Terms Associated with TPM

2. Overview of TPM TAP and the TPM CMM

Exercise

The second session began with a group exercise. The participants gathered around round tables in one of three groups, each with a facilitator. The participants were asked "As someone committed to implementing TPM, what are the forces for and against TPM broadly (beyond MAP-21)?" They were also provided with a list of terms that could be enabling and/or obstructing forces. Using flip charts, each facilitator gathered suggestions from the small group for inclusion on the force field diagram (see Appendix B. Session 2: Force Field Diagrams).

Report Back

One volunteer from each group shared for the report back:

- **Group 1**: This group reported spending most of its time on the obstructing forces to TPM. Their conversation highlighted:

    - Many are afraid of change
    - Concern about how funding will change given new priorities as a result of TPM
    - How to handle benchmarking against states with different characteristics
    - State-to-state competition for federal funding
    - Breadth versus depth of data
    - Leadership as both an obstructing and enabling force
    - Implementing a vision and priorities will not just be based on state's needs, but also on new requirements
- **Group 2**: This second group noted that the list of provided terms could generally be considered as both enabling and obstructing forces. Their group's discussion was evenly split between the enabling and obstructing forces. Highlights include:
    - Supportive leadership is a critical enabling force
    - Data can work for or against TPM – too much granularity can be burdensome
    - Communication/messaging is crucial when beginning anything new
    - Difference between communication and availability of information – simply putting out information is not true communication and engagement of stakeholders
- **Group 3**: The final group agreed that all of the provided terms could be enabling and/or obstructing. This group's main focus was on resources, given that the focus on TPM ultimately comes from a need to look at measures and data due to a lack of resources. This group discussed:
    - Technology – while this was not included in the list of terms, it is an important aspect in data collection and is quickly evolving
    - Accountability – one may not have the authority to do something but is nonetheless being held accountable for it getting done
    - Staff misconceptions – they may think that it is just a game of whack a mole, though the purpose is to garner greater control over processes
    - Leadership and communication are the two keys
    - States have silos of excellence with gaps between them. These are both horizontal, between departments/divisions, as well as vertical, between levels of organizational hierarchy

Presentation

Following the force field analysis and report back, Michael Nesbitt provided an overview presentation on the TPM Technical Assistance Program as well as the TPM CMM. This included an explanation of the CMM framework, its 10 components, and the five CMM levels of TPM maturity.

Discussion / Q&A

Asked if the TPM CMM would be useful to the participants, one respondent noted that as someone working for a state that has focused on TPM for a decade, this model will be very helpful in identifying gaps and opportunities.

The Director of the FHWA Office of TPM, Pete Stephanos, remarked that this pilot workshop is the first all-day pilot workshop on the CMM and that the TPM Office is hoping to get feedback from participants throughout the day.

3. Creating a Foundation for Performance Management: the Role of Organization and Culture

Presentation

Christos Xenophontos presented on RIDOT's journey into TPM, with a particular focus on building an organizational culture that allows for the achievement of strategic objectives through TPM.

Discussion / Q&A

One participant asked Christos about the benefit/cost ratio of data collection for RIDOT's performance measures. His response was that data collection for many of those metrics does not add cost, as employees simply report more information as they go about their routines. With the metrics for which the data does have a cost, the trick is to find a balance in the frequency and extent of data collection. He also noted that RIDOT reviews its measures to make sure they are appropriate, adding and subtracting as needed.

Presentation

Susanna Hughes Reck presented on the Evolution of FHWA's TPM Roles and Responsibilities, explaining these through the three steps of preparing, transitioning, and implementing.

Discussion / Q&A

Pete Stephanos noted that while the Roles & Responsibilities document referenced in Susanna's presentation is an internal document to FHWA, ensuring that FHWA staff are ready for their own role changes through TPM will enable better technical assistance to states. One participant remarked that some of the high-level process and graphics (flowchart, etc.) would be very useful to use as templates for the states, also asking if the CMM would go into such detail. Michael Nesbitt replied that those types of resources would be included in the full CMM

launch in 2016. There was general agreement in the room that such resources would be of great use to the states.

Exercise

The attendees broke into four groups, each led by a facilitator. Each group was assigned a State DOT role (Executive/Leadership, Safety Program Manager, Data Manager, Planner) and asked to discuss the role changes, benefits, and challenges that their assigned employee could encounter with the addition of TPM. The facilitator recorded the participants' suggestions on the flip charts (see Appendix C. Session 3: Role Changes Flip Chart Diagrams).

Report Back

One volunteer participant from each group reported back to the full group following the exercise.

- **Group 1, Executive/Leadership:**
  - Role Changes: This employee needs to ensure increased communication, both internally and externally to help people understand what TPM is and why it is important. He or she must create champions within the organization. Politics influences all three areas of this chart (role changes, benefits, challenges).
  - Benefits: If this person is able to deliver on what is promised, his or her credibility will increase. Other staff will understand how they fit in. One can tell a story about how resources are being used to move state forward, which will mean political benefit.
  - Challenges: It is difficult to explain measures and results, especially why targets have not been met. The leader is being held accountable to deliver on goals and objectives.
- **Group 2, Safety Program Manager:**
  - Role Changes: TPM impacts the data and value of the data collected for safety. One must adapt to reconcile state and federal safety reporting requirements. TPM brings increased priority and elevated visibility to the area of safety.
  - Benefits: TPM creates more of an apples-to-apples comparison with the same metrics, and will also lead to a better understanding of what works and what does not.
  - Challenges**:** Limited funding is a primary challenge, along with data lag, and proving that an investment results in a particular safety outcome.
- **Group 3, Data Manager:**
  - Role Changes: This employee will need to move from back-of-the-room data collection to a more prominent position managing and being more visible. He or

she will need to work backwards and make sure the data being collected serves the needs of the state/customers, while knowing how it will be used.
    - Benefits**:** The data will actually be used, so there is an elevation and empowerment of this role. With reliance on data, there could be an influx of resources with more recognition that the benefits of better/more data will outweigh the costs of investing in getting it.
    - Challenges: It is difficult to determine whether there is a good benefit/cost ratio in the data collection process.
- **Group 4, Planner:**
    - Role Changes: There will be further communication with planning organizations, MPOs, other departments/divisions in the state, with more people involved in the decision making process. Need to shift from traditional planning framework to TPM framework; there may be more cycles of analysis.
    - Benefits**:** Better outcomes and greater understanding of the organization are likely. With new availability of information, the planner has the ability to present this information and will likely receive better decision support. The planner can also hope for greater buy-in from outside stakeholders.
    - Challenges: It is hard to include quality of life measures into decision making while still meeting targets. It is challenging to allocate money between different priorities. Some project proponents may end up with less funding and will not be pleased with such a change. Planners will need different and a more expanded array of skills.

4. Designing Processes that make Target Setting Work

Presentation / Exercise / Discussion

In this session, Michael Nesbitt presented on subcomponent 2.2 of the CMM, Target Setting Business Process. The exercise and discussion were embedded into the presentation such that towards the beginning of the presentation, before providing the audience with the detailed definitions of the levels of maturity for this subcomponent, they were asked to rank their state from 1-5 on its target setting business process.

Michael then proceeded to walk through the level of maturity definitions, asking them now to re-rate their states with this additional information. A discussion ensued as the participants were asked if and how their ratings had changed. A number of attendees reported that upon understanding the definitions, their rankings increased or decreased. They marked the before and after rankings on a handout, which was collected at the end of the session. The results of

those self-assessment rankings are below in Table 1. One participant noted during the discussion that definitions are critical, as she did not know exactly what was meant by certain terms used in the CMM level of maturity definitions, such as targets and cycles. Michael explained that it has been difficult to align definitions in the CMM before the rulemaking. The aim is to build flexibility along the different measures into the model.

Respondent	First Ranking	Second Ranking	Change from First
1	1	0.5	-0.5
2	1	2.5	1.5
3	1	1	0
4	blank	3.5	N/A
5	3	4	1
6	3	4	1
7	3	2.375	-0.625
8	2	2	0
9	4	4	0
10	2	2	0
11	2	2	0
12	2	2.5	0.5
13	2	2	0
14	4	4.5	0.5
15	2	2	0
Average	**2.3**	**2.6**	**0.2**

Table 1: Session 4. Before and After Self-Assessment of Target Setting Business Process

Continuing the presentation, Michael showed the actions outlined in the CMM that can help a state to elevate to the next maturity level. The participants were then asked to discuss at their tables what actions they would take to improve their maturity in target setting business processes. Michael then concluded the presentation and noted that this type of self-assessment is available for all 26 subcomponents of the CMM.

5. Simple vs. Complex: Scaling Performance-based Planning and Programming to meet your Resource Allocation and Trade-off Analysis Capabilities

Presentation

Deanna Belden presented on Performance-based Planning at MnDOT, explaining how the state uses performance measures in its 20-year State Highway Investment Plan 2014-2033 (MnSHIP) by using the concept of performance levels and evaluating investment approaches.

Discussion / Q&A

Following Deanna's presentation, participants were offered an opportunity to ask questions. One attendee noted that MnSHIP looks great and that his state is using it as a model. Another asked how MnDOT is able to tie the targets to the 50-year look-ahead plan component of MnSHIP. Deanna explained that the goals are general, such that it is a broad-level policy vision.

Presentation

David Wasserman presented on North Carolina DOT's Strategic Prioritization Process. He provided a timeline of milestones and executive orders related to strategic prioritization and explained the state's current eligibility and scoring process for project programming.

Discussion / Q&A

Participants were again given time to ask questions after David's presentation. One attendee asked if NCDOT has looked at the performance of its system and the ability to achieve results based on this new strategic prioritization process. David responded that they have not been able to identify a direct link, but that indirectly they can tell that the new process is having an impact. Other participants asked about how politics in the state impact the process and David mentioned that there is discussion this year of removing legislative approval from the project programming process. Another participant asked if there was any push back from stakeholders thinking that their projects would be scored poorly in this new process, to which David responded that no, they did not encounter that problem. Susanna Hughes Reck noted that at times when there is more competition, it can decrease collaboration, though this does not appear to have been so for North Carolina in this case.

Exercise

Participants worked on a performance-based planning exercise in four small groups, each with one facilitator. The groups selected an appropriate long range transportation plan (LRTP) investment strategy from the three options provided, which varied in their allotment of funding to system preservation, mobility, safety, and environment (see Figure 2). Two tables received

information for "state 1" and two tables got information for "state 2." The handouts included details as to the states' goals and objectives along four areas (system preservation, mobility, safety, environment) along with some additional context. After having a few minutes to read the materials, the groups discussed and decided on one of the three investment strategies, based on the information provided. Once they had decided, they were provided with the other state's handout so that they could compare and contrast it with the one they had been assigned.

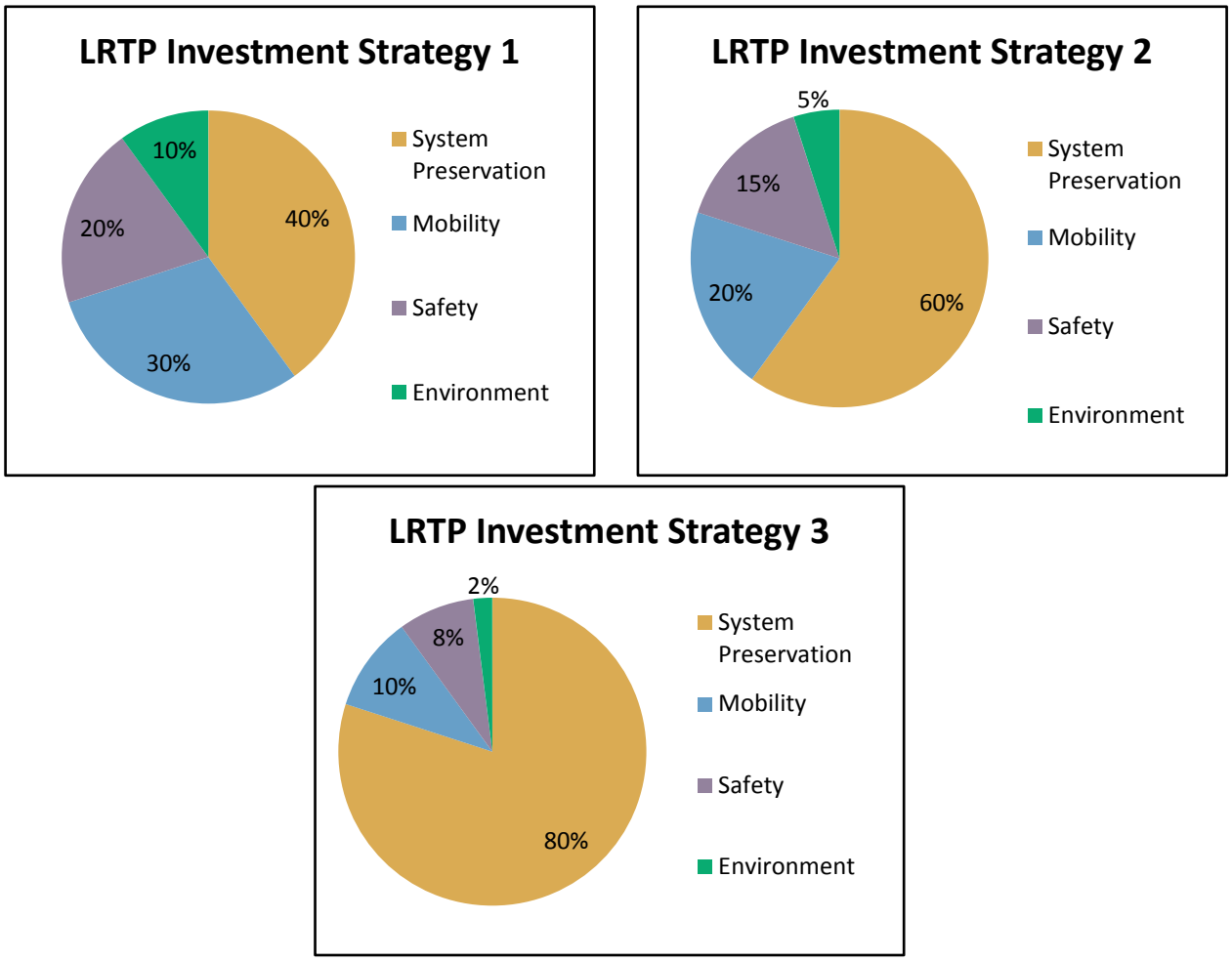


Figure 2: Session 5. LRTP Investment Strategy Options for Performance-based Planning Exercise

Report Back

- **Group 1, State 1:**
  - The group noted that its assigned state's goals and objectives were to improve on all four measures, with some shorter-term and some longer-term goals. Noting that their state context included recent environmental legislation, they

believed that the legislation would likely address the environmental issues without needing to allocate more than 5% of the funding to this area. This group decided on LRTP strategy 2 because of its strong commitment to system preservation, though not being as extreme as number 3. They estimated their assigned state to have a general TPM maturity level of 2.

- **Group 2, State 1**:
  - In assessing the goals and objectives, this group determined that congestion was not of primary concern. The state has a strengthening economy, but that may not decrease mobility. In terms of the environment, the group assumed that the state's environmental issues were likely not transportation-related. They thought that state 1 likely had a general TPM maturity level of about 2 or 3. This group chose LRTP investment strategy 3.
- **Group 3, State 2**:
  - This group believed that their assigned state was much more realistic in that it faced greater challenges and constraints than state 1. The group focused on state of good repair, environmental problems, and urban sprawl. They believed that their assigned state's goals were lofty and unachievable. This group considered the state to have a TPM maturity level of 1. They chose LRTP strategy 1, though with modifications: shifting 5% from safety to system preservation and also shifting 5% from mobility to system preservation.
- **Group 4, State 2**:
  - This group agreed that state 2 would be at an "initial" level 1 for TPM maturity. With the lagging economy and environmental issues, this group also chose the LRTP investment strategy 1.

The exercise results are summarized below in Table 2.

Group	Assigned State	Estimated TPM Level of Maturity	Chosen LRTP Investment Strategy	Modifications to LRTP Strategy
1	1	2	2	N/A
2	1	2-3	3	5% from safety to system preservation, 5% from mobility to system preservation
3	2	1	1	N/A
4	2	1	1	N/A

Table 2: Session 5. Performance-based Planning Exercise Results

Discussion

Following the exercise on performance-based planning, corresponding to subcomponent 3.2 of the CMM, "Investment Tradeoffs & Strategy Prioritization," Michael Nesbitt asked the

participants if they have a performance-based planning and/or programming process in place in their home states. Two attendees responded that yes, this is what they are trying to do by developing an investment strategy and doing outreach. Pete Stephanos noted that the presentations in this session represented top-down and bottom-up approaches, both of which are important.

6. Performance Benchmarking: Comparing Apples to Apples in an Orchard is Still Really Difficult

Presentation

Michael Nesbitt presented a brief overview on benchmarking, noting how it is useful in learning from peers, while also highlighting the importance of considering attributes.

Exercise: Round One

The final exercise of the day focused on benchmarking. With four flip charts set up around the room, representing States A-D, participants were instructed to choose the state against which they, as their home state, would like to be benchmarked. Each flip chart had information for seven characteristics, with data based on real states, though the actual state names were not revealed until the end of the session. For round one, participants were told they would be benchmarked on system performance (reliability and delay). Each attendee took one post-it note with his or her own state's name on it and stuck it to the flip chart they wanted to select for round one.

Discussion: Round One

As each participant remained at his or her chosen flip chart, the Volpe Center's Cynthia Maloney facilitated a discussion with the whole room, asking for volunteers standing at each station to share their decision-making processes.

- **State A: Selected by 2 Participants**
  - One participant noted that the most important criteria were weather, transit ridership, and density. This state has a comparable system to the participant's.
- **State B: Selected by 4 Participants**
  - One person noted that the low transit ridership, mild weather, and extent of the highway system was similar to his own, which is why he selected State B. Another noted that he was between selecting State B and State D, but ended up choosing B as it was a bit more similar to his own state.
- **State C: Selected by 3 Participants**

- One participant said he had a hard time picking at first, as his state could fit at least one of the parameters from each of States A-D, but finally determined that State C was the closest fit. Another person said the fit was near exact.

- **State D: Selected by 2 Participants**
  - Both participants who chose State D were from the same home state and said they picked it because its large scale was very similar to their own state. It was an easy decision.

Exercise: Round Two

For the second round of the exercise, the participants were instructed to now base their selection on a new performance measure: pavements. Taking a new post-it note with their home state written on it, each participant placed their note on either the same or a different flip chart and remained standing by that chart.

Discussion: Round Two

Cynthia asked that some who stayed at the same State A-D for round two, and some who changed, share what went into their decisions. Most participants stayed while only a couple changed. Those who stayed mentioned that the weather attribute was a critical factor for them when considering pavements. One who changed noted that the number of lane miles being high was important in his selection, while another who changed said she was looking for a state with severe winters and high population density.

The group was asked if knowing the level of performance maturity would inform the benchmarking decisions they just made. They all generally agreed that it would not, as the most important attributes depended on the performance measure in question.

Pete Stephanos noted that the benchmarking selections in this exercise were made from the perspective of State DOT employees, not users of the system. Customers may be more interested in bordering states, especially for the two performance measures considered here: system performance and pavements.

At this point, the identities of States A-D were revealed. Participants from two states ended up choosing to benchmark themselves against their own state. See Appendix D. Session 6: Benchmarking Exercise Outcomes for the full results and flip chart set ups for each of the four states.

7. Question Round Robin

With a panel made up of all five of the day's presenters, and moderated by Cynthia Maloney, participants had an opportunity to ask questions and provide feedback on the pilot workshop and exercise contents.

- Feedback on the Exercises
    - The exercise for session 5 could be improved by providing more baseline information about the current state of affairs. While participants are told the objective is to lower state backlog by 20%, they do not know the starting point.
    - Also on the session 5 exercise, one person noted that while more data would be useful, it could bog the participants down in details and that the exercise could be about identifying what data are missing/needed and what types of collaboration would be necessary. If there is too much detail or material to review, the participants end up having to spend a lot of time simply reading it and understanding it, which is not as useful as the discussion itself.
    - Many exclaimed that they really enjoyed all of the exercises, with one noting that having the presentations followed by an interactive exercise to cement the topic was very beneficial.
- Communication and Stakeholders
    - One participant asked how to handle performance management in light of benchmarking by advocacy groups trying to push one particular agenda.
        - Christos Xenophotos suggested setting performance measures before the advocacy groups do. He also noted that SCOPM will help provide meaningful comparisons.
        - Michael Nesbitt noted the Let's Talk Performance Webinar series and that a recent one with CDOT indicated that they were having success in being open with their information in order to shape a message with the public. With TPM, it is often difficult to convince people to put their data out there, but once they do, they realize that everyone is on the same page.
- CMM
    - One participant asked if the CMM helps to identify low-hanging fruit for relatively easy improvement, as well as the appropriate order in which to make improvements.
        - Michael Nesbitt responded that yes, the steps in the CMM will demonstrate what steps could help to take first and to identify the low-hanging fruit. The online model will be easy to dive into more quickly and thoroughly.

- Understanding that rulemaking is still underway, one participant asked if guidance would be ready for states as soon as the rulemaking process is complete.
    - Susanna Hughes Reck and Pete Stephanos said that yes, guidance and technical assistance efforts, both internally and externally focused, are well underway with the aim that once the rules are in place, states will be able to receive the assistance they need promptly.

8. Wrap-Up and Closing

Michael Nesbitt thanked everyone for attending and encouraged those who are interested in being part of the process to review the CMM in the next round later this year to contact him directly.

Evaluation Results

Participants were asked to fill out an evaluation at the end of the pilot workshop. For those who were unable to stay until the end of the day, a follow-up email to participants offered the option of completing the evaluation via an online survey with identical questions.

The evaluations covered the following areas:

- Workshop Content & Structure
- Content Knowledge
- Presenter/Facilitator Evaluation
- Areas for Improvement
- Interest in Personalized Technical Assistance

A total of 7 evaluations were collected on the day of the event. Additional evaluations are being sought via an online survey sent out on October 7, 2015, and results will be made available at a later date. Each question was aggregated and a mean score and standard deviation is provided for review.

Respondents were overwhelmingly positive about the value of the pilot workshop across all categories.

	Average	Standard Deviation	Median
The pilot workshop… (1 = Strongly Disagree; 5 = Strongly Agree)			
1. Will help improve my job performance	4.57	0.73	5
2. Subject matter was well organized	4.67	0.47	5
3. Content was consistent with workshop description and objectives	4.57	0.49	5
4. Content was relevant to my job.	4.71	0.70	5
5. Exercises aided in my understanding and skill development	4.71	0.70	5
6. Provided opportunities for me to participate	5.00	0.00	5
7. Pace was appropriate for the amount of content covered	4.57	0.49	5

8. Training materials effectively presented the subject matter	4.29	0.70	4
9. Training materials were clear and legible	4.71	0.45	5
10. Was a satisfactory learning experience	4.57	0.49	5
Your knowledge/skill level in the subject matter (1 = None; 5 = Advanced)			
11. Before the workshop, could be rated as…	3.43	0.73	4
12. After the workshop, could be rated as…	3.86	0.64	4
The presenters/facilitators… (1 = Strongly Disagree; 5 = Strongly Agree)			
13. Clearly stated all learning outcomes.	4.57	0.49	5
14. Kept discussions focused on relevant topics.	4.71	0.45	5
15. Explained theories and concepts effectively	4.43	0.49	4
16. Related the subject matter to my job	4.57	0.73	5
17. Used appropriate visual aids in support of learning outcomes	4.71	0.45	5
18. Clearly demonstrated subject-matter expertise	4.86	0.35	5
19. Provided a positive learning environment	4.71	0.45	5
20. Was enthusiastic	5.00	0.00	5
21. Increased my interest in the subject	4.43	0.73	5
22. Provided a satisfactory learning experience	4.71	0.45	5

23. Describe any part of the pilot workshop that needs improvement or topics that you feel should be added or deleted.

"Use additional real life examples."

"Exercises need some work and it would be nice to have the leaders/facilitators give the workshop perspective or 'answers' from their perspective."

"More states involved."

"More on performance based planning and programming - good topic! Need more on benchmarking. Share (public and private) best practices."

"Other parts of CMM however this hit the relevant priorities of the states."

24. Please explain why you thought this pilot workshop was or was not a satisfactory learning experience.

"It is always beneficial to learn from the peer states."

"Was worth my time. The best part is interacting with peers."

"Focused on needs of states, which was very helpful."

"It was good to see what other states are doing. Model will be a good tool for DOTs."

"Interactive at tables was great."

25. Are you interested in additional, personalized technical assistance?

Yes	2
No	1
Left blank	4

26. If so, please provide your email address for more information:

- rwoo@sha.state.md.us
- jason.siwula@ky.gov

27. Any other comments?

"Appreciate the opportunity to participate."

"Ask people at beginning what their role is in their state related to performance management."
"Look at private sector examples."

"Great job!"

Lessons Learned

Recommendations and lessons learned from Facilitator 1

- **"**I found the workshop excellent in all aspects."
- **"**I wish we had more people at the workshop to witness that and to have a better feedback loop back (rather than the handful of responses we received)."
- "The one exercise that I think could have spent more time was on Workshop No. 5 on Performance Based Planning and Programming. Deanna's and David's presentations were excellent and provided a good background but in retrospect we could have spent some more time developing the exercise on the different investment scenarios. Spy Pond partners produced a report for us (under the previous administration) on the funding of our programs that might have some interesting scenarios to play off."
- "The workshop could easily span 2-days given the subject matter that needs to be covered and as the TMP CMM is rolled out it might need to be a good 2-3 days if not longer, but given the time constraints that most people have I think having it as a one day workshop was the best use of time. It also allows for the workshop to be incorporated as part of other events either before or after those events (as was the case in Chicago)."
- "Overall there was a good balance of presentations, exercises and discussions with the exception of the time spent on the Performance Based Planning and Programming exercise that needs more refinement to make it more appropriate."
- "One comment that I would make about my presentation is about the "Line of Sight" that needs to be provided to all employees so that everyone knows how their role impacts the organizational performance and how they are helping their agency achieve its mission. This is an area that in my opinion many organizations fail and not enough time is spent on the subject. As part the exercise on "Roles and Responsibilities" I could have asked them to also come up with suggestions based on "what role each table had" on how to tie that "individual role" with the Agency Mission and to provide employees in those classifications (i.e. Data Manager) with the line of sight."
- "One of the comments received was to provide more private sector examples. In the case of my presentation, I actually have a much earlier version that Corey and I used to give as part of our Introductory Course on TPM to our employees where I do that, but the reality is that State DOTs are not given enough credit about doing the right thing so in the interest of time I took that part out."

Recommendations and lessons learned from Facilitator 2

- "I was happy to participate in the workshop. Overall I think it was great. I do have some feedback on some of the exercises now that they were tried in practice."

- "Session 2: Force Field Analysis and Session 3: Changing Roles & Responsibilities worked very well."
- "Session 6: Performance Benchmarking was appropriate for the time of day (late afternoon it was good to get up and walk around) and it was fun. But, I'm not sure we learned that much from the results. I think it would have been nice to still have more participants in the room. Overall it was a nice exercise to wrap up the day."
- "Session 4: CMM Target Setting, Business Process needs more definition about what is meant by Target setting. There was too much room for interpretation without a really clear definition."
- "Session 5: Performance Based Planning has great potential if more information is provided about how much investment would be needed to meet the objectives, and if there were more time, the possibility of making your own size pie slices. The additional context is very detailed, but some of the items are a little contradictory and made it hard to interpret (e.g., state one is only minimally constrained financially, but is highly overcommitted to mega projects)."
- "One day is a good length. (Attrition certain was not related to) the content. People just must have had other things to do or wanted to go outside on that beautiful day."
- "It was really a perfect balance of presentation, exercises, and discussion. I think the performance based planning exercise needed more time, or perhaps once the material is a little re-worked the time that was planned would be fine."
- "You all were awesome. It was a pleasure to participate."

Recommendations and lessons learned from Volpe Center

The following feedback focuses primarily on the structure of the pilot workshop and the execution of the sessions and exercises. A later section of this report details recommendations related to logistics.

General

- Time adjustments for each session are captured later in this report, however need to be re-evaluated if doing this pilot workshop again in the future.

Opening/Introductions

- Sort out audio issues in advance so that everyone can hear the introductions and the words associated with TPM for the word cloud exercise.
- Word cloud design from wordle.net may be preferable to jasondavis.com. Legibility is better on Wordle, as in the example below using the same word inputs:

Exercise 2: Force Field Analysis

- Having this exercise at the beginning, even prior to the presentation, set a nice tone that the day was going to be particularly participatory. It took a few minutes for people to get their bearings and to engage in the content, but the discussion was engaging and the output tremendously valuable.
- This got people to open up about challenges/fears and also look at opportunities/benefits.
- Giving the terms was helpful. It provided a bit of context and ensured the conversation kept moving along.

Exercise 3: Organization and Culture (Role Changes)

- Worthwhile to trim the number of groups from 5 to 3. This allowed for slightly larger groups and better discussion, and also allowed us to utilize the roles with which the participants would have the most interest and familiarity.
- The “pie chart” setup of the flip charts was a nice deviation from a typical list structure.

Exercise 4: Target Setting

- The strategy of embedding the exercise into the presentation is a good one, and helps to break up the structure of the day.
- More time should be devoted to the various levels of the CMM so that the participants are better informed about their choices.
- The first rating, prior to going through the levels, needs a bit more introduction so that people understand the task.
- Although many people stayed at the same level the exercise proved useful overall since some people changed their numbers and it led to a worthwhile discussion about why participants moved up or down.
- Using polling software or providing a level of anonymity could lead to better results and should be tried if internet and texting options are available.

Exercise 5: Performance-based Planning and Programming (PBPP)

- This exercise had the most mixed feedback. Some tables wished they had more information, while others suggested that having less information led to more interesting conversation.
- Several people, including a few from Volpe and Susanna Hughes Reck, thought the discussions at the tables for this exercise were the best of the day.
- One option for consideration is to not provide any LRTP Investment Strategy at all and just provide participants with the four categories: system preservation, mobility, safety, and environment. In other words, participants would be allowed to create their own pie chart. However, providing them the three strategies allowed for them to more easily deliberate the tradeoffs among them.

Exercise 6: Benchmarking

- This exercise was a fitting end to the substantive content for the day, and it was important to get people up and moving around the room.
- People seemed to have enjoyed this exercise.
- It was particularly fun to see the participants from TX and NJ choose their own states. In the future, this exercise could be tailored to include participant members' states if there is pre-registration and we know who is planning to attend.
- The discussions after each round went very well and it worked well to ask for a show of hands to see who changed for round 2 and who stayed where they were.
- If we do this again, we could select PMs that are more different from each other. Pete Stephanos mentioned this towards the end, saying the results would be very different for safety.

Round Robin Discussion

- The discussion flowed well, people provided feedback, and they had plenty of questions and comments.
- It's always worthwhile to have this type of discussion at the end of the day. For one thing it allows for some slack in the agenda in case other items run long --- this discussion can always be pared back. It's also important to provide a forum for people to get any final questions answered that they may not have had a chance to ask earlier.

Logistics

Pilot Workshop Development Timeline

Mon. 7/13/15	Email from FHWA confirming date and time for pilot workshop. Request for initial phone call to discuss Volpe role.
Wed. 7/15/15	Call with FHWA and Volpe to discuss Volpe support to pilot workshop. Draft agenda for pilot workshop sent by FHWA.
Thurs. 7/23/15	Volpe initiates task order with on-site contractor for invitational travel support.
Fri. 7/24/15	Email from AASHTO to SCOP and SCOPM members (scop@aashto.org; scopm@aashto.org; scop_am@aashto.org) inviting them to pilot workshop, and offering invitational travel support if requested by 8/11.
Wed. 8/5/15	Volpe sends initial "Facilitator's Agenda" to FHWA for review. Comments received and times adjusted by FHWA 8/7.
Mon. 8/10/15	FHWA confirms 1st set of presenters and facilitators. Confirmation with additional presenters follows on 8/13. Invitational travel offered to each.
Fri. 8/14/15	Volpe begins direct outreach to invitational travelers, requesting they fill out forms by 8/24.
Tues. 8/17/15	Volpe informed of two additional invitational travelers for whom lodging and per diem assistance only will be provided. This request arrives after the 8/11 deadline.
Fri. 8/28/15	Volpe sends to FHWA revised Facilitator's Agenda, Exercise 2 (Overview – Force Field), Exercise 3 (Organization and Culture), and Tracking Spreadsheet
Tues. 9/1/15	Initial conference call held with presenters/facilitators.
Thurs. 9/3/15	Volpe sends to FHWA Exercise 5 (PBPP) and Exercise 6 (Benchmarking).
Wed. 9/9/15	FHWA visits Volpe for meetings on several topics, including Chicago pilot workshop.
Thurs. 9/10/15	Volpe sends to FHWA draft evaluation.
Fri. 9/11/15	Volpe sends to FHWA Exercise 4 (Target Setting).
Mon. 9/14/15	Volpe sends to FHWA revised Exercise 5 (PBPP) and Exercise 6 (Benchmarking).
Tues. 9/15/15	Volpe sends to FHWA full Facilitator's Package, including Facilitator's Agenda and all exercises.
Wed. 9/16/15	Volpe sends to FHWA draft email to attendees.
Thurs. 9/17/15	Second (final) conference call held with presenters/facilitators.
Fri. 9/18/15	Volpe sends to FHWA revised full Facilitator's Package and Participant's Package, containing all content.
Mon. 9/21/15	Volpe sends to FHWA draft intro/housekeeping slides.
Wed. 9/23/15	Walk-through in Chicago

Thurs. 9/24/15	TPM CMM Pilot Workshop, Chicago
Tues. 9/29/15	Volpe sends to FHWA evaluation results from Chicago, and draft outline of Closeout Report
Thurs. 10/1/15	Volpe sends to FHWA draft follow-up email to participants
Wed. 10/7/15	Volpe sends follow-up email to participants containing PDF of presentations and a request to fill out a Survey Monkey if they did not complete an evaluation on-site.
Wed. 10/14/15	Volpe sends to FHWA draft-in-progress of Closeout Report
Fri. 10/23/15	Volpe sends to FHWA draft Closeout Report
Wed. 10/28/15	FHWA sends to Volpe comments on Closeout Report
Wed. 11/18/18	Volpe sends to FHWA final Closeout Report

Pilot Workshop Timing Flow

Session	Time on Agenda	Actual Time (Est.)	Notes
1	8:00-8:30am	8:10-8:20am	20 min less than planned
2	8:30-9:45am	8:20-9:20am	15 min less than planned
Break	9:45-10:00am	9:20-9:35am	
3	10:00-11:00am	9:40-10:45am	
4	11:00-12:00pm	10:45-11:40am	
Lunch	12:00-1:00pm	11:40-1:05pm	25 extra min of lunch than planned
5	1:00-2:30pm	1:05-2:35pm	2nd presentation lasted 25 mins, not 15
Break	2:30-2:45pm	2:35-2:45pm	5 min less break than planned
6	2:45-3:45pm	2:45-3:30pm	15 min less than planned
7	3:45-4:15pm	3:30-4:00pm	
8	4:15-4:30pm	4:00-4:05pm	10 min less than planned

Logistics Recommendations

Volpe first sent a "logistics tracking spreadsheet" to TPM on August 28, 2015, nearly a full month prior to the pilot workshop. Most of the logistical items were handled in a timely manner. The few that were not compromise Volpe's ability to deliver an effective pilot workshop on behalf of the Office of TPM. Fortunately, each situation was dealt with in an effective manner, thanks in large part to the support of the Office of TPM, AASHTO and its conference organizers, and the staff at the Sheraton Chicago Hotel and Towers.

Specific issues and proposed recommendations are catalogued below:

1. Invitational Travel Requests
    - *Issue:* Need to adhere to deadlines for invitational travel requests. The deadline for invitational travel requests was 8/11/15, however Volpe staff responded to requests that came in several days later.
    - *Recommendation:* If the deadline for invitational travel is missed, Volpe should be asked if special accommodations can be made before confirming such assistance with travelers. Develop internal process to allow for more flexibility in facilitating invitational travel requests.

2. Flip Charts
    - *Issue:* No flip charts or easels were provided at the meeting site. This required scrambling on the eve of the pilot workshop to obtain the flip charts, and additional scrambling on the morning of the pilot workshop to populate content on the flip charts.
    - *Recommendation:* Confirm availability of flip charts and other related items in advance of arrival, preferably in writing. In future cases this may be easier if FHWA is able to have a key point of contact at the meeting site.

3. Room Setup
    - *Issue:* The setup was similar to what was requested, however the number of tables was insufficient. Fortunately Volpe staff members were able to find hotel staff members who were able to accommodate us.
    - *Recommendation:* Request diagram of room setup prior to arrival.

4. Audio Setup / Microphones
    - *Issue:* There was confusion on the morning of the pilot workshop as to what was needed for microphones. Ultimately the service provided was sufficient, and credit goes to the hotel A/V staff for being particularly attentive to our needs.
    - *Recommendation:* Submit A/V requirements to conference organizer well in advance of the pilot workshop, and confirm setup in advance of arrival, preferably in writing. FHWA should request a point of contact at the meeting location.

5. Internet / Wi-fi
    - *Issue:* Volpe staff required internet access to develop and populate the “word cloud” as part of the Introductions. Additionally, it was anticipated that internet

access may be required if any factual information needed to be verified throughout the day. Volpe staff members were able to gain internet access using a Personal Hotspot via a personal cell phone.

- *Recommendation:* Convey internet requirements to conference organizer well in advance of the pilot workshop, and confirm setup in advance of arrival, preferably in writing. If no internet is available on-site, there should be a backup plan for selected activities.

Appendices

A. Pilot Workshop Attendance List

Name	Organization / Affiliation
Richard Woo	Maryland DOT
John Selmer	Iowa DOT
Jason Siwula	Kentucky Transportation Cabinet (KYTC)
Michael Kies	Arizona DOT
Tim Gatz	Oklahoma DOT
Kevin Thornton	Arkansas State Highway and Transportation Department (AHTD)
Karen Miller	Missouri DOT
Amy Hauck	TXDOT
Moses Garcia	TXDOT
Michael lk	Wisconsin DOT
Ed Sniffen	Hawaii DOT
David	North Carolina DOT
Matt Hardy	AASHTO
Dave Kuhn	New Jersey DOT
Eric Kalivoda	Louisiana DOT
Harriet Chen	TomTom
Kevin McLaury	FHWA- MT
Mark Dykstra	TomTom
Patrick	New Hampshire DOT
Sandra Larson	Iowa DOT
Richard Hill	Parsons
David	Michigan DOT
Rich Hoke	Digital Traffic
Mara Campbell	CH2M Hill

B. Session 2: Force Field Diagrams

Table 1 (Facilitator: Cynthia Maloney)

What are the forces for and against TPM broadly?	
Enabling Forces	**Obstructing Forces**
• Leadership – need multiple champions. TPM integrated into organizational culture	• Fear • Funding tied to performance – negative outcomes • Public opinion – comparison to other states • Constrained resources – time, data, systems • Concern over scope • Limited data / data integrity • Leadership – lack of leadership

Table 2 (Facilitator: Michael Kay)

What are the forces for and against TPM broadly?	
Enabling Forces	**Obstructing Forces**

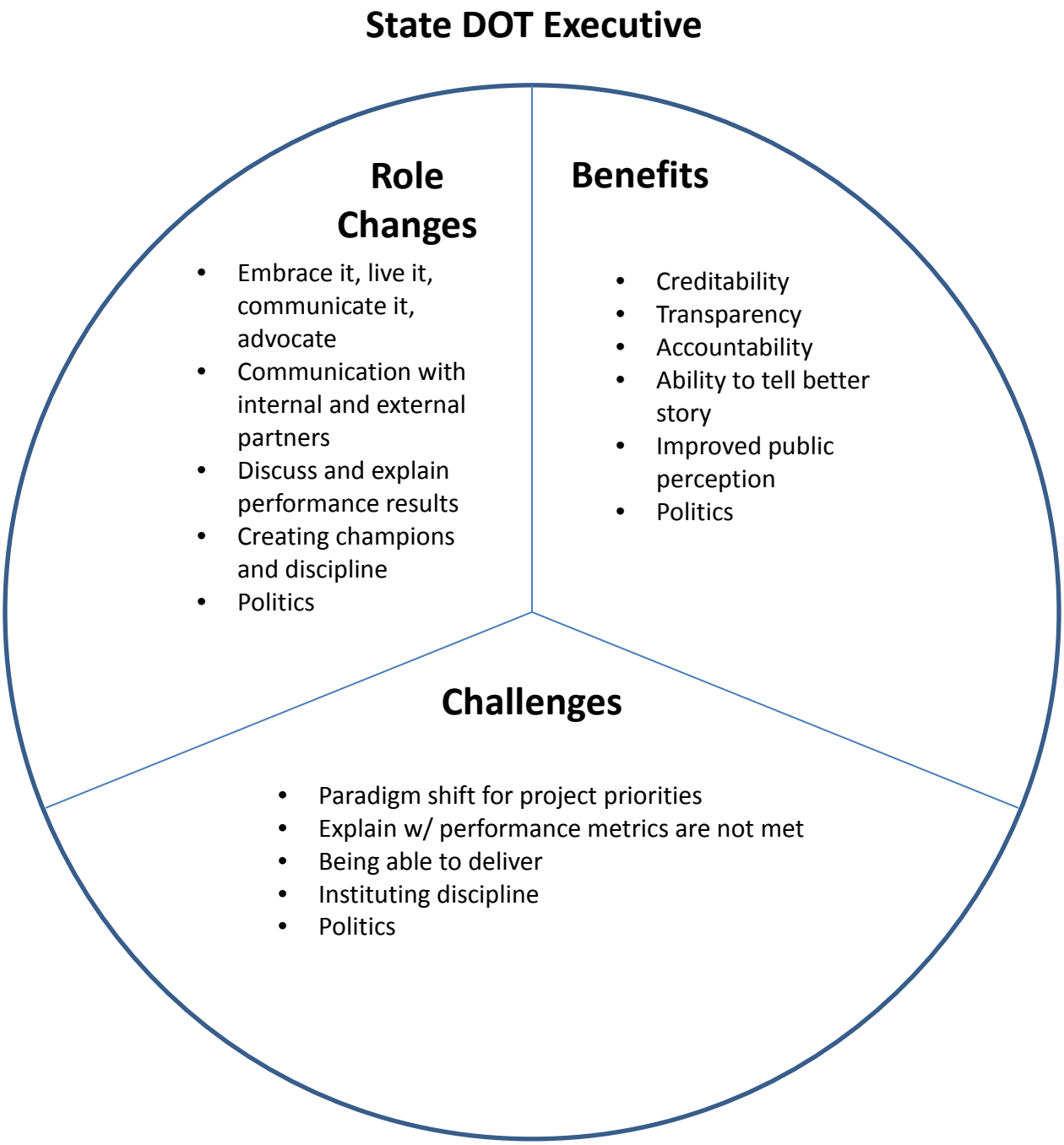
• Resources – opportunities for analysis
• State admin shifts – opportunities to start fresh
• Communication – **if** I can convey accurately/effectively
• Data takes competition out of the equation
	• Resources – cost variance in models
	• Organizational culture
	  o Set up decades ago
	  o Structural shift needed
	• Technology – are we leveraging it correctly?
	• Data – useful but expensive
	• State admin shifts – always changing course
	• Revenue lacking
	• Need to account for qualitative elements in our models
	• Staff not fully engaged / interested

Table 3 (Facilitator: Christos Xenophontos)

What are the forces for and against TPM broadly?	
Enabling Forces	**Obstructing Forces**
• Supportive Leadership • Transparency (under SL) • Investment accountability • Accountability • Good data – business analysis • Efficiency • Communication	• Lack of resources • Politics • Lack of transparency • Lack of investment in right projects • Fear of change • Accountability • Data (difficult to collect, too much) • Implementation • Communication

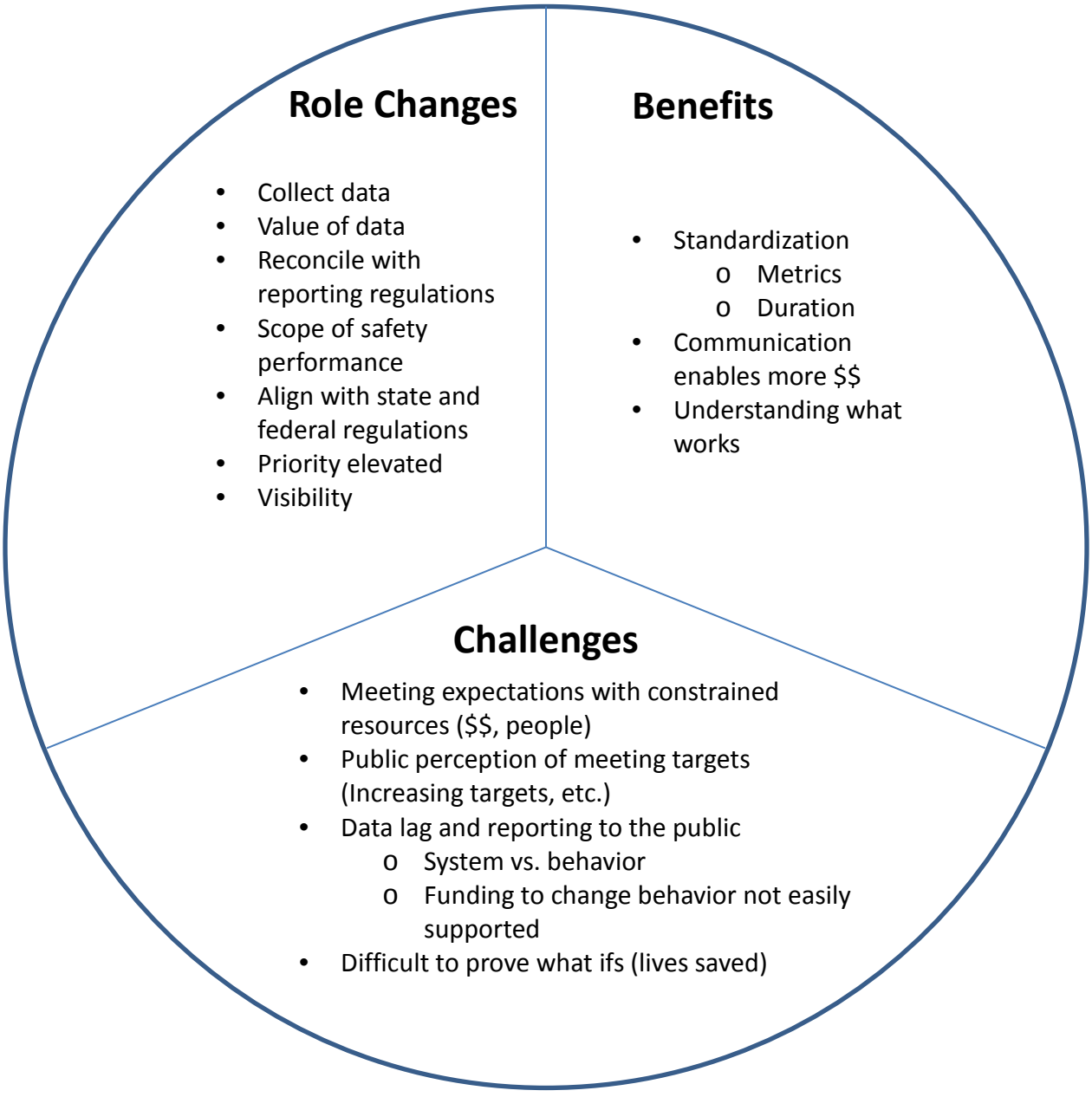
C. Session 3: Role Changes Flip Chart Diagrams

Facilitator: David Wasserman, NCDOT



Facilitator: Michael Nesbitt, FHWA

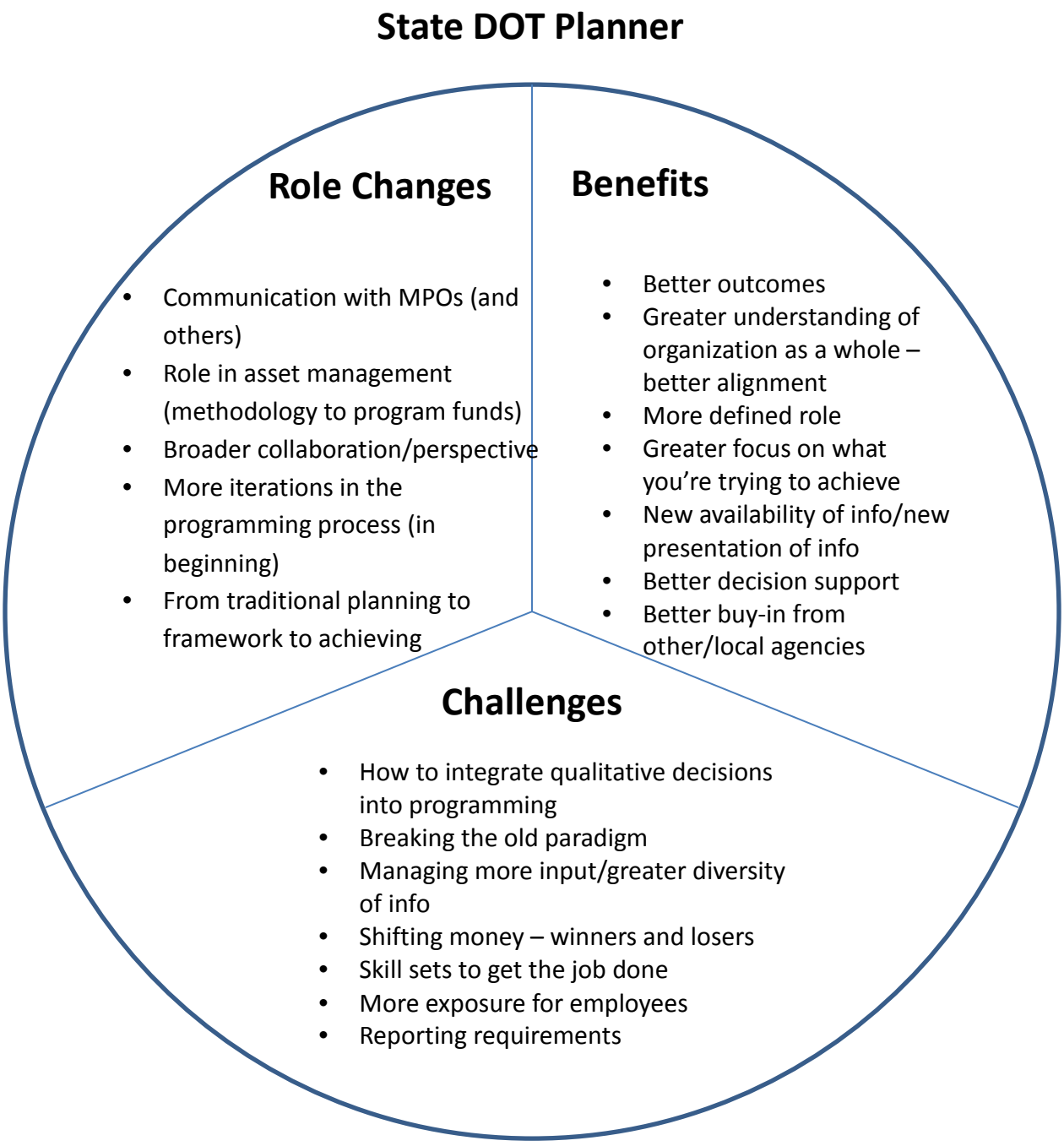
State DOT Safety Program Manager



Facilitator: Michael Kay, USDOT Volpe Center

State DOT Data Manager

Facilitator: Deanna Belden, MnDOT



D. Session 6: Benchmarking Exercise Outcomes

State A: Wyoming

- Population Density[1]: VERY LOW
- Transit Ridership[2]: VERY LOW
- MPO Boundaries[3]: SINGLE STATE ONLY
- Weather: SEVERE WINTERS
- Population Distribution[4]: 65% URBAN / 35% RURAL
- Location: INLAND
- State DOT Lane Miles[5]: 16,000 (25% of state total)

Round One: System Performance	Round Two: Pavements
□ Iowa □ Wisconsin	□ Iowa □ Wisconsin

State B: Tennessee

- Population Density: MEDIUM
- Transit Ridership: LOW
- MPO Boundaries: FOUR MULTI-STATE MPOs
- Weather: MILD, RARE TORNADOES
- Population Distribution: 65% URBAN / 35% RURAL
- Location: INLAND
- State DOT Lane Miles: 35,000 (15% of state total)

Round One: System Performance	Round Two: Pavements
□ Missouri □ Minnesota □ North Carolina □ Louisiana	□ Louisiana

[1] http://www.census.gov/2010census/data/apportionment-dens-text.php
[2] http://www.rita.dot.gov/bts/sites/rita.dot.gov.bts/files/publications/state_transportation_statistics/state_transportation_statistics_2011/html/table_04_04.html
[3] http://onlinepubs.trb.org/onlinepubs/archive/NotesDocs/NCHRP08-36(44)_FR.pdf
[4] http://www.census.gov/compendia/statab/2012/tables/12s0029.pdf
[5] https://www.fhwa.dot.gov/ohim/hs00/hm81r.htm

State C: New Jersey

- Population Density: VERY HIGH
- Transit Ridership: HIGH
- MPO Boundaries: ONE MULTI-STATE MPO
- Weather: SEVERE WINTERS
- Population Distribution: 95% URBAN/ 5% RURAL
- Location: COASTAL
- State DOT Lane Miles: 8,000 (6% of state total)

Round One: System Performance	Round Two: Pavements
□ New Jersey □ Maryland □ Rhode Island	□ New Jersey □ Maryland □ Rhode Island □ Minnesota

State D: Texas

- Population Density: MODERATE
- Transit Ridership: MODERATE
- MPO Boundaries: TWO MULTI-STATE MPOs
- Weather: HIGH HURRICANE RISK, DROUGHT
- Population Distribution: 80% URBAN / 20% RURAL
- Location: COASTAL
- State DOT Lane Miles: 190,000 (25% of state total)

Round One: System Performance	Round Two: Pavements
□ Texas attendee 1 □ Texas attendee 2	□ Texas attendee 1 □ Texas attendee 2 □ North Carolina