Project No. 02-27

NCHRP 02-27

Managing Performance to Enhance Decision Making :
Making Targets Matter

IMPLEMENTATION PHASE

DRAFT FINAL REPORT

Prepared for NCHRP
Transportation Research Board of
The National Academies of Sciences, Engineering, and Medicine

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February 2023

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ABSTRACT

This report documents the research process, major findings, and resulting work products of the implementation phase of Making Targets Matter, a study of how transportation agencies can make their performance targets and related performance management activities more meaningful and impactful. Input obtained from four peer exchanges, participant surveys, and case study interviews produced all findings in the research. Implementation was in part a means to distribute the findings of the original research project's guidebook, as well as to solicit input on additional strategies to make targets meaningful, find new examples of agencies that are making performance matter, effective ways to talk to leadership about the importance of a performance-based approach, and surveying participants to gauge the relevance of the research to their roles.

SUMMARY

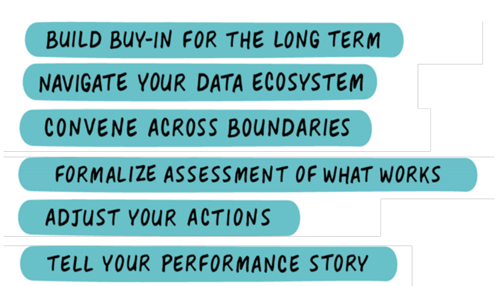
Making Targets Matter, the result of NCHRP project 02-27, is a guide for transportation practitioners on how to make performance management a more meaningful activity at their agencies. The original research led to the conclusion that more accurate and more frequent feedback from the people and data that experience the transportation network can help agencies identify which actions will improve performance and meet targets, thus making those targets more meaningful. The project's guidance presents concrete strategies agencies can apply to strengthen their gathering and use of feedback to inform actions and performance activities.

This implementation phase of the project included several connected activities to help a broad set of practitioners understand and quickly deploy Making Targets Matter strategies. These include an awareness campaign, a series of conference presentations, a hands-on peer exchange series, and updated strategies, case studies, and executive communications materials to help practitioners make performance activities and associated targets truly matter at their agencies.

Project Results

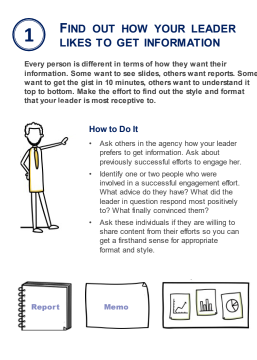
There are three major components of the new material that resulted from the implementation research. First are expanded tactics and details related to the project's six core strategies to improve feedback. The new tactics come from input received from the new round of peer exchanges conducted during the implementation phase in the fall of 2022. Second are four new case studies of agencies making use of feedback in common activities undertaken by transportation agencies in efforts to improve performance outcomes. Finally, given the importance of leadership support found in the initial phase of research, input was solicited on the most effective ways to engage with agency executives and get their buy-in for the leadership and resources required to make performance-based activities an agency priority.

Expanded Strategies for Better Feedback



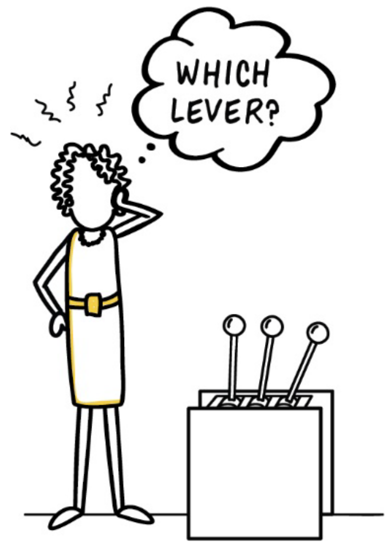
Case Studies of Feedback in Action

Executive Engagement



CHAPTER 1 PROJECT BACKGROUND

Project Purpose



What does it mean to make targets matter? This was the core question the research team set out to answer at the start of the project. Transportation practitioners who have made their targets matter have this answer: when targets matter, they drive agency decisions and actions.

When targets matter, an agency's performance is frequently compared to the targets they set and decisions up and down the organization are made with the specific intention of moving performance toward targeted levels. Decisions might vary depending on the targets set, because agency staff are able to pull the right levers the right amount to get performance to just the right level.

To achieve this reality, agencies need an answer to another question: How do they make sure targets drive decisions? How can staff determine which levers at their disposal will move performance to targeted levels?

Key Audiences for the Results

- Performance management staff at MPOs, state DOTs, or transit agencies;
- Senior management personnel tasked with configuring their organizations to make better use of performance information; and
- Practitioners engaged in long-range transportation planning, asset management planning, project programming, or budget development.

Project Thesis

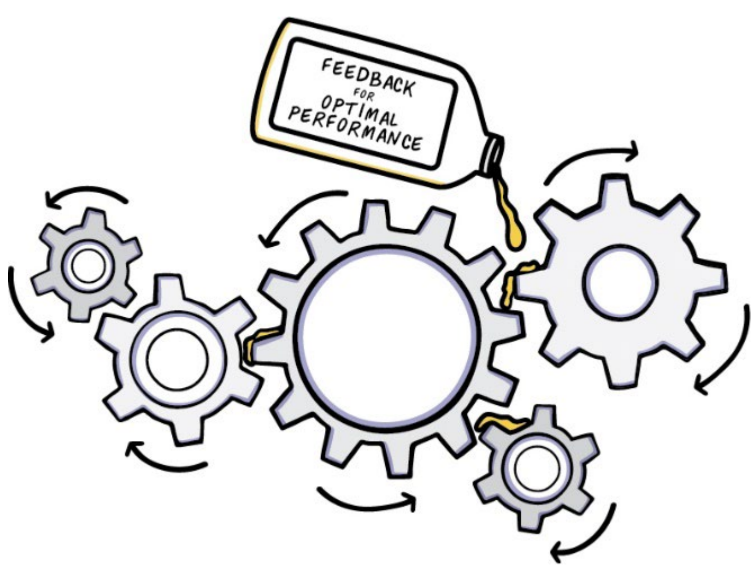
The central thesis of this project is that more accurate and more frequent feedback from the people and data with information about the transportation network will help agencies make decisions and take actions that improve performance and meet targets. In a large and interconnected transportation network, information on conditions and cause-and-effect is dispersed widely. A single entity, such as an agency, cannot know the status or results of everything on their own. They need ongoing help.

FEEDBACK

Evidence from the field suggests enriched feedback is the "engine oil" that helps the "gears" of transportation performance management (TPM) run smoothly and ultimately ensures the "engine" of a performance-based planning and programming (PBPP) framework fulfills its potential to improve performance outcomes and close gaps between measured performance and desired targets.

Around the country, pioneering practitioners at metropolitan planning organizations (MPOs), transit agencies, and state departments of transportation (DOTs) are beginning to enrich and expand their use of feedback as they work to close the gap between measured performance and targets for transportation systems. Rather than relying on thermostats or float valves, of course, they are learning how to integrate information from many people and large amounts of data into their decisions about actions to maintain and upgrade their systems.

This guide offers a set of feedback enrichment strategies illustrated by case studies on how agencies are effectively incorporating people- and data-based feedback into decision making on transportation issues, ranging from long-term strategy development to medium-term program development to day-to-day operations.



CHAPTER 2 RESEARCH APPROACH

There were six primary tasks in the implementation phase:

Task[1]	Purpose
1. Outreach and Peer Exchange Material	Market Research Results
2. Conference Sessions	Market Research Results
3. Peer Exchange Series	Engage Practitioners with Research Solicit Input for Updated Content
4. Participant Feedback & Surveys	Feedback on Research
5. Executive Content & Engagement	Updated Content
6. Final Report a. Expanded Strategies b. New Case Studies	Updated Content

More details on how the team implemented these research tasks, the key considerations that guided their development, and a summary of how each went follow.

Task 1: Outreach and Peer Exchange Material

The team developed simple forms of the content to feature the guide release, the video series, and the upcoming peer exchange sessions via social media. In addition, the team developed content for the TRB Performance Management Committee's newsletter broadcasting the release of the Making Targets Matter guide. The newsletter went out to all members and friends of the committee on July 28th.

Using the custom illustrations from the project, the team's graphic designer put together social media content, the first of which was shared from the High Street LinkedIn account in early August 2022. Other simple forms of the content were developed to feature the guide release, the video series, and the upcoming peer exchange sessions.

Each presentation to conferences or different groups has had a tailored slide deck for the focus of the audience and the event, which has provided many different forms of presentation content for the project that will inform the content for the peer exchange discussions.

[1] Tasks are numbered by the order in which they were implemented rather than the original order in the initial work plan.

The team developed the following content as part of Task 1 for use in the conference workshops and peer exchanges:

1. **TED Talk-style presentation(s)** – The team researched strategies for creating hard-hitting, energetic presentations that memorably communicate your core message, including from well-known speakers and the TED presenter guidance. In addition, new concepts relevant to transportation performance management from current thought-leaders were integrated with the project's existing core concepts to provide new philosophies and ways of thinking about performance management. The result was a presentation that briefly reviewed the original research, pivoted to new ways to think about our role as performance professionals, and what was needed from participants to get the most out of the peer exchange, all within TED's time-honored 18-minute limit for maximum audience absorption.
2. **Practitioner presentations** – The team identified compelling examples of relevant activity already happening at transportation agencies via connections made at the conference presentations, back-and-forth during peer exchange invitations, and internet research of agency activity. Select confirmed peer exchange attendees were enlisted to share their experiences and insights with the larger peer exchange groups using existing presentations or sharing materials such as dashboards and reports.
3. **Structured discussion guide and questions** – Detailed agendas and internal facilitation guides meant that everyone on the team was prepared for the discussions that needed to take place. The detailed agendas were shared with attendees prior to each event and included examples of the questions anticipated for each session to give everyone a clear idea of the topics of most relevance to the research. Additional facilitation prompts and a run-of-show plan was outlined for members of the facilitation team to aid in a smooth flow of events. This content was designed to drill down into the heart of practitioners' experiences, uncover the root cause of barriers, and identify the discrete actions and decisions leading to success
4. **A visually focused slide deck** – Slides served as a backdrop and to discussion, with detailed notes related to the nuances behind each strategy – such as what they entail, when they are best applied, and how to identify relevant situations at their own agencies – in advance of discussions.

For the peer exchanges, the team developed an entirely new set of presentation material, agenda, discussion guide, and activities. This content was submitted to NCHRP on October 5th, 2022.

Task 2: Conference Sessions

The project's principal investigator (PI) participated in three conferences over the late spring and summer of 2022. The final list of conference participation for the project is:

- **AMPO Technical Planning Symposium, May 2022** – Unfortunately the team's PI contracted COVID the week before the conference and was not able to attend in person. The conference organizers pivoted to allow for a virtual presentation and discussion session. Organizers and co-presenters in the room helped to facilitate breakout group discussions on topics related to the Making Targets Matter strategies.
- **Performance Best Practices Peer Exchange, June 2022** – The Utah DOT organized and hosted a half-day peer exchange on performance best practices with practitioners from agencies across the country that represented a core cross section of the project's target audience. After seeing a presentation on Making Targets Matter at an AASHTO webinar in May, the organizer invited the team to present at their peer exchange.
- **Tools of the Trade Conference, August 2022** – The team's PI presented at the TRB Tools of the Trade (ToT) conference. ToT targets transportation planning for smaller communities. Several contacts were made with practitioners interested in participating in the research further via the peer exchanges.

In addition to the above conference and peer exchange sessions, the team also presented at an AASHTO webinar in May. With these events, Making Targets Matter received successful exposure at different kinds of events across the country with the project's targeted audience and practitioners just outside the performance management space that may benefit from greater familiarity with the topics in the research.

Task 3: Peer Exchanges

The four peer exchanges held across the country in fall of 2022 were the core of the updates to Making Targets Matter strategies and case studies. The reactions of participants to the team's proposed solutions dictated the final products, and it was from the lively, nuanced discussions that the updated content and advice came.

Purpose of Peer Exchanges

The purpose of the peer exchanges was to spread the word about the primary research phase's findings, provide a forum where performance practitioners could engage directly with the project's strategies, and learn from a mix of agencies about how they build stronger links between performance targets and on-the-ground implementation. The team's concrete goals for products that could come out of the peer exchange series would build upon and enhance the current research, specifically to:

- Evolve the Framework that emerged from the original research;
- Deepen known strategies and discover new ones beyond those that we're already using; and
- Report on New Success Stories by hearing from our industry peers.

The peer exchanges were therefore an end in themselves in that they got practitioners more familiar with the project's strategies, and a means to new findings and content.

Peer Exchange Locations

The team was able to conduct three in-person peer exchanges to take place in the fall of 2022, based on panel feedback to push the peer exchanges back to 1) avoid conflicts with vacations and 2) to ensure participants can explore the published material before participating. Locations were selected to maximize participation and took into account the following considerations:

- Ease of travel and good access to hotels and meal options;
- Potential to tie the peer exchange to relevant conferences around which participants are already convening; and
- A location where at least some participants will be local.

The team has finalized the hosts, locations, and dates for all the peer exchanges. A summary is below.

Event	Location	Date(s)
Peer Exchange 1	Baltimore Metropolitan Council Baltimore, MD	10/13/2022
Peer Exchange 2	Maricopa Association of Governments, Phoenix, AZ	11/15/2022
Virtual Peer Exchange	Teams	11/29/ 2022 and 12/01/2022
Peer Exchange 3 (half-day)	AASHTO Conference on Performance-Based Management, Planning, and Data Providence, RI	12/07/2022

Peer Exchange Participation

The team found it more difficult to secure participation for the in-person peer exchanges than anticipated, particularly among DOT staff. Numerous invitees cited agency-imposed travel restrictions or informal pressure from their bosses not to travel unnecessarily given high workloads and staffing shortages. There may also be hesitance to in-person events while Covid-19, and now RSV and flu, are a consideration. Two confirmed invitees for the Phoenix event canceled due to illness. Several transit practitioners were invited to the in-person peer exchanges but none accepted.

A list of the final participants for the first two peer exchanges is included in each event summary. For the virtual peer exchange. All previously invited participants who were unable to travel were directly invited, and then the event was broadcasted via the TRB Performance Committee newsletter. Registration for the half-day conference session was conducted through the overall conference registration and is currently capped at 20, though it is expected that others may walk into the event.

Peer Exchange Format

The first two peer exchanges were full-day, stand-alone events. The virtual peer exchange took place the week after Thanksgiving and were spread across two afternoons to maximize participant focus and avoid “Zoom fatigue”. The AASHTO conference organizers were only able to offer a half-day slot for a peer exchange there, but the conference attendees are likely to be such a rich cross section or the research’s target audience that the team did not want to miss out on the event, both in terms of spreading the research and gaining new insights. The agenda and material were adjusted to best suit the virtual and half-day formats.

Pre-Event Communications & Surveys – Each participant was encouraged to revisit the Making Targets Matter Guidebook and the series of short “Explainer” videos for a refresher. The team sent final agendas with anticipated discussion questions and a PowerPoint summary of the key messages from the initial phase of research to ensure all participants had the six core strategies and their tactics at top of mind for the discussion. In addition, participants completed a survey of topics of most interest to discuss that the team used to guide the peer exchange discussion questions. The pre-event survey also asked participants to share relevant experiences that could serve as presentations and examples to discuss during the events. The team reached out to those with interesting experiences to ask if they would present during the peer exchange. Some guidance was provided to these peer presenters, but in hindsight the team would have given more detailed and explicit parameters around time, level of detail, and the aspects of most relevance to the research.

Research Overview - Each peer exchange began with the "Ted Talk -style" opening presentation, which reviewed the initial research phase and its core findings. The talk then pivoted to reimagine new ways of thinking about performance management work, specifically highlighting the importance of "linkages" between agency vision and on-the-ground activities like maintenance and line striping . This concept formed the basis for one of the activities conducted during the events. It also took the idea of 'finite and infinite games' that was introduced at the very end of the *Making Targets Matter* guide and expanded on how the philosophy that an agency has toward performance improvement —finite or infinite —can influence its success in creating meaningful performance outcomes. Additional connections to philosophies of games were introduced to drive home the message that what we measure is not always THE thing we want. Metrics are just how we keep score of complex things we do want in simplified, easier terms.

Describe Your Agency's Performance Culture… – Every event began with introductions so that everyone knew who was in the room, their role, and their level of experience with performance management. In addition, each introductory opening included an icebreaker prompt to "Describe your agency's culture around performance in one word." The composite results across all peer exchanges are below, organized by terms given that had a negative (left), neutral (center), or positive (right) valence to them. By far the most common term was "evolving" and related terms like "developing," "growing," and "improving." This was a fun exercise that got participants thinking deeply about performance from the start, and resulted in a useful snapshot of the state of performance management at transportation agencies today.

Figure 1 Word cloud from peer exchange participants' description of agency performance culture

Facilitated Discussion –The team broke discussion into two primary categories based on the original research's strategies, plus an additional discussion session specifically on how to engage agency leadership on performance :

- **Coordination** , which encompassed the Making Targets Matter strategies of Buy-In, Convening, and Communication.

- **Data & Assessment**, which covered Navigating Data, Formalizing Assessments, and Taking Action.
- **Leadership Engagement** – Tips and advice for getting your leader's attention, effectively communicating insights from performance, and making the case for why greater resources for proven efforts are worth the investment.

For each session, the team developed a list of thought-provoking questions to get discussion going on the relevant topic. Questions were developed to get participants to share experiences and reflect on what has been most effective or what they still need at their agencies to see better outcomes. Not all questions were addressed in each session; instead, the questions spurred conversation, which was allowed to develop in directions the participants were most interested in or had the most to say about.

Activities – Because no one likes to sit still all day, the team wanted to incorporate an activity that would get participants out of their seats and interacting directly with others in the group. The team identified two activities for the peer exchanges:

- **Pie-In-the-Sky Assessments** – To get people thinking creatively and expansively about all the things they *could* measure if they had magical time and data, this activity has participants shout out what they most wanted to assess for a recent project or effort.
- **Drawing the Connection from Goals to Action** – To illustrate the concept of "linkages" introduced in the opening presentation, participants literally illustrated every link in the process to get from stated agency goal to the work on the ground that might see that goal realized.

Agenda – A sample agenda for the first peer exchange in Baltimore is shown below. Adjustments were made for each event based on survey feedback and differences in meeting format (webinar) and length of time (AAHSTO conference).

Table 1 Detailed agenda from the first peer exchange held in Baltimore

Time	Event	Details
8:00-8:30	**Coffee & Breakfast**	Informal socializing with coffee and catered breakfast
8:30-8:40	**Welcome from Our Hosts**	Statement by BMC staff
8:40-9:00	**How do we Make Targets Matter?**	• Introduce the framework behind Making Targets Matter and research strategies • Purpose and how the day will go • What we need from participants to make it successful
9:00-9:15	**Introductions**	Name, agency, role

Time	Event	Details
		Describe your agency's culture around performance in one word.
9:15-10:15	**Strategies to Enhance Collaboration on Performance** Participant presentation followed by a facilitated discussion	**Jamie Fischer, SRTA** SRTA, MARTA, GRTA, ATL, ARC-How does coordination happen? 1. Who are your most significant external partners? 2. Has an external collaboration led to a notably successful initiative that has improved outcomes? 3. Does your agency do enough to incorporate community desires into plans and projects? 4. Has your agency tried to incorporate any measure of performance related to community satisfaction? 5. What has been the most valuable community or performance-related meeting that you have attended? What made it so impactful? 6. How is internal collaboration within your agency around performance management? Are there improvements to communication between departments that could make performance work more impactful?
10:15-10:30	*Break*	
10:30-11:00	**Envisioning Optimal Performance Processes** Interactive group activity	Assessment is often a crucial but missing piece of performance management. If you could make it happen seamlessly, how would assessment ideally be integrated as a part of your performance management work?
11:00-12:00	**Strategies to Enhance Data and Performance Assessment** Participant presentation followed by a facilitated discussion	**Margie Ray, Virginia OIPI** Virginia's Transportation Data Hub • Has your agency incorporated regular assessment into any part of its processes? (E.g., project before-and-after studies, internal group tracking metrics, surveys) • What barriers are most significant to doing more assessments? (E.g., data, technical skill, lack of interest from key parties, lack of leadership support) • Who has access to or is included in the discussion of assessment results? Should this group be broadened? How could that be done at your agency?
12:00-1:00	*Lunch will be provided.*	

Time	Event	Details
1:00-1:30	**Drawing the Connection from Goals to Action** Interactive group activity	Performance management is the link between vision/ desires and on-the-ground realities. Link together all the decision points between your assigned goal-action pair. For each decision or action point, what other work, decisions, or information is needed to effectively meet goals? Where are there possible assessment points or metrics?
1:30-2:30	**Strategies for Action and Communication** Participant presentation followed by a facilitated discussion	**Chet Parsons and Sulabh Aryal, Richmond MPO** Richmond MPO's Performance-Based Programming Updates
		• Looking at the linkages from the activity, where are opportunities to influence decisions and actions toward desired performance? • What changes or initiatives has your agency implemented to try and improve performance? How did they go? • When are people most hesitant about making a change or starting something new? How can it be overcome? • What are the organizational barriers to change or new approaches? • What performance-related communication effort has been most effective? What made it so? • Are there terms that help? That you avoid? • How do you balance simplicity with interesting details? • How do you incorporate visuals? Who develops them?
2:30-2:45	*Break*	
2:45-3:30	**Summary and Wrap-Up**	• Takeaways • Where do we go from here?

Peer Exchange Reflections

Both the virtual and AASHTO conference peer exchanges attracted a greater number of participants than the stand-alone events, in-line with the team's initial suspicion that travel was a barrier for many other participants in the all-day in-person events.

It was notable how different format of events resulted in quite different conversations and levels of engagement. The all-day in-person events were both a small group of committed, intentionally selected participants. As a result, discussions were robust and dynamic. The facilitators often had to cut off conversation in order to stay on schedule and there were many interpersonal connections made between participants that were clearly a value-added element for several attendees.

The virtual event, unsurprisingly, was harder to keep people very engaged. Use of cameras was intermittent, several participants rarely spoke up, with conversation dominated by the most extraverted and experienced of the group. Even so, the first day of the two-day event resulted in a solid, dynamic conversation. The second day, however, was more of a challenge. Participants had less to say, either because of the topic (data and assessment, versus coordination on the first day) or because they had reached saturation. The team was glad to have spread the event over multiple afternoons.

The half-day peer exchange at the AASHTO conference also had good attendance, but because some of the participants were “dropping in” rather than making a concerted effort to travel to an event they knew was of interest to them, the discussion was thinner than at the smaller, all-day events. The day still resulted in a good number of insights for the overall summary, and a particular benefit was getting to hear from practitioners outside of the explicit “performance manager” role. The AASHTO event included a district engineer and an individual in charge of project delivery. Their insights were particularly valuable to understand the broader context of performance and challenges to doing a performance-based approach from an on-the-ground perspective. For this reason, the team was satisfied with the broader reach obtained with this event, even if conversation felt less robust and took more work from facilitators to keep moving.

With the different format of events, the team feels there was a good balance of breadth and depth to the discussions. The remainder of this section include summaries of basic information on the participants, discussion topics, and examples raised at each peer exchange.

PEER EXCHANGE 1 SUMMARY - BALTIMORE

Date: 10/14/2022

Host Agency: Baltimore Metropolitan Council

Table 2 Baltimore Peer Exchange Participants

Participant	Agency
Eileen Singleton Keith Kucharek Cindy Burch	Baltimore Metropolitan Council
Tom Edinger	Delaware Valley Regional Planning Commission (Philadelphia)
Meredith Hill	Maryland DOT State Highway Administration
Keith Miller	North Jersey Transportation Planning Authority
Chet Parsons Sulabh Aryal	Plan RVA (Richmond)
Jamie Fischer	Georgia State Road and Toll Authority
Margit Ray	Virginia DOT
Daniel Blevins	WILMAPCO (Wilmington, DE)

Coordination

a. The conversation started with the observation that performance management is a form of storytelling. The responsible staff are the story tellers, not just "data crunchers."

b. The Georgia State Road and Toll Authority (SRTA) has embarked on several initiatives aimed at bringing together entities that are critical to the "influence pathway" of performance results, including a data maturation effort, safety task force, and a multicriteria TIP process with the Atlanta MPO. "My job is to help the silos talk to each other." On data maturity, SRTA started conducting a survey of how easily staff could access data they needed. Improved areas were those where coordination and collaboration across entities was increased the most.

2. While MPOs tend to engage local stakeholders quite a bit, there is room to expand the network of individuals providing input. DVRPC noted that target setting discussions do not currently involve locals, which means they don't come into discussions of a project's performance with as much context and buy-in compared to if they were part of the discussion from the start. Richmond MPO staff feel that even though they are engaging locals on transportation, they could be engaging with economic development or others in related areas to provide a more holistic view of issues and outcomes.

3. At the Maryland DOT State Highway Administration (SHA), Top Down (Legislative Mandates) versus Bottom Up (Staff Champions) initiatives affect the nature of the selected solutions to moving the needle.
    a. The Richmond MPO has increased participation in work groups that discuss key issues because “with virtual, it’s so easy for all of us to join all of them.”
    b. The Wilmington MPO would like its DOT to engage more on performance issues, citing a perceived “disinterest” in deeper performance discussions.
    c. Maryland DOT’s representative noted that if the intention was to have DOTs and MPOs develop targets at the same time, then the requirements should have been set up that way!
    d. Most participants felt that the mechanisms available for collaboration are weaker than the interest in collaboration. Agencies might consider how to improve the methods, strategies, and forums for bringing key players together.
4. The Baltimore MPO appreciated the work that Maryland DOT does on it’s annual “Tour” that provides good analysis for prioritization of major projects.
5. Performance management tasks may tend to move around from one employee to another. At the MPO level, if there isn’t much processing to do, it will likely be assigned to whoever has the most availability at the time. Further, if the state dominates the process, MPOs don’t have much motivation to contribute. Finding the right people with the institutional knowledge on performance efforts can therefore be a challenge.

Data and Assessment

1. Data availability may be misaligned with reporting deadlines. An example is the federal safety performance reporting period, which falls before safety data are made available.
2. Data silos may be making the organization less effective. Both Virginia’s Office of Intermodal Investment and Planning (OIPI) and Georgia’s SRTA are in the midst of data centralization efforts to improve data access in their organizations.
3. Data sharing can be scary. Efforts need to be taken to address data owners’ concerns. Getting leadership support for data centralization efforts is key, and Virginia’s experience of leadership declaring data an asset class sets parameters for how they are used and tells the whole agency that data is a

serious and important topic. Regular check-ins are helpful in demonstrating to owners how their data are being used by providing examples.

4. The challenges in project analysis often stem from the ability and capacity to model transportation impacts. The group had many examples of information and data they *wish* they had, but that were not currently available including:
    a. A bus rapid transit project in the Richmond region just got underway, and they more than doubled their ridership goal of 4,000 users to more than 8,000! They would like to analyze how many are new riders overall, how many are "choice" riders (meaning they have other options), and the economic impact of the new transit service.
    b. Automated speed enforcement is used in the Baltimore region, but anecdotal evidence suggests that drivers "game" the cameras by slowing down at a known location. They would like to assess the knock-on effects of the practice on overall safe driving habits.
    c. There have been equity assessments of congestion investments in the Northern New Jersey region. But they cannot analyze the impact of the project on individuals, which is what they would ideally like to assess.
    d. Virginia OIPI will be conducting before-and-after studies of major investments in an upcoming pilot. In many cases, the "before" data that would be ideal for the analysis was not calculated prior to the projects being built. Having this data "magically appear" would help the analysis.

Communication and Action

a. Establishing an agency's base performance management conditions could be considered a "compass" that orients your organization. This is an important step in understanding current practices and processes and to measuring progress.
b. Engage in more cross disciplinary conversations because certain measures are hard to communicate to public stakeholders without a holistic view of the issue.
c. Delineating work groups could be an important approach. They may be challenging to manage, especially with limited staff, but it is often an effective first step to starting the process.

Talking to Leaders

1. Bring in some level of data to review at every leadership meeting. Be sure to think about how "in the weeds" to get.

2. When notifying leadership of an issue or problem, bring in evidence and options for a solution.

Notable Examples

1. The **Virginia DOT** noticed that silos were making the organization less effective. This observation led to a ground-up recommendation to leadership for a centralized data hub. They were very supportive. Their Transportation Data Hub became a "system of record" that began to address the burden of one-off data requests. Data discovery sessions helped data owners realize "what else was out there," painting a more comprehensive picture of a broader "data lake." The result was that data were officially declared an asset and an "Operating Level Agreement" was established. Now there is more engagement among data owners and they are sharing data that they'd never shared before.
2. In the Atlanta region, **the State Road and Toll Authority (SRTA), the Georgia Regional Transportation Authority (GRTA), and the Atlanta-Region Transit Link Authority (ATL)** combine to form one organization focused on mobility. Within SRTA, GRTA, and ATL, there is one staff and three boards, a structure that easily lends itself to work siloes. Through a years-long effort to build relationships among staff within and outside of the organization, formerly siloed groups have successfully been communicating more regularly. For example, the three agencies' relationship-building efforts with the Atlanta Regional Commission (ARC) resulted in the first formal, multi-criteria Transportation Improvement Program (TIP) process in 2015. Other positive changes include performance management staff connecting closely with the IT team and data engineers and ensuring that all leadership meetings have some element of data review.

- The **Richmond Region Transportation Planning Organization/Plan RVA** moved from a more "goal-based *subjective*" approach to project prioritization to a "goal-based *objective,*" Performance-Based Planning and Programming (PBPP) approach. This evolution required connecting prioritization to the Vision, Goals, and Objectives using a data-driven, transparent, and understandable process. The agency focused on removing personal judgement and scoring projects based on its merit and performance. The new process provides a fairer evaluation methodology for all community types (e.g., urban, suburban, and rural) and all modes of transportation.

PEER EXCHANGE 2 SUMMARY - PHOENIX

Date: 11/15/2022

Host Agency: Maricopa Association of Governments

Table 3 Phoenix Peer Exchange Participants

Participant	Agency
Thor Anderson	Arizona DOT
Brian Rubin	Maricopa Association of Governments (Phoenix MPO)
Ryan Bailey	Utah DOT
Valerie Jimenez	Kansas DOT
Peter Koeppel	Farmington, NM MPO
Virginia Stubella	New Mexico DOT
Craig Casper	Corpus Christi MPO
Steven Montiel	Mid-Region Council of Governments (Albuquerque MPO)

Coordination

- The Maricopa Association of Governments (MAG) diligently brings data to every meeting with stakeholders and leaders, which has been critical to solidifying buy-in for what the data ultimately shows is the most appropriate action. They point out that a key element of success is bringing the information to stakeholders <u>before</u> an action or decision is required, often months in advance. This allows stakeholders to process the information on their own timeline and be more prepared for "the ask" in terms of action or decision.
- MPOs often have challenges in having a set of needs for the region based on performance, but then the projects submitted by local governments don't address any of them. Both MAG and the Mid-Region Council of Governments (MRCOG) have developed data-driven web portals that try to address this by allowing locals to visualize where high-need locations are and can conceptually "build" proposed projects in the map environment to understand how different projects will help the region in different ways.
- The Arizona DOT has found success in using the Lean principles of Plan-Do-Check-Act to help optimize bridge and pavement performance management. They gathered representatives from multiple teams in the agency to discuss appropriate metrics and clarify the overall process for improving bridge and pavement condition. They found that the federal measures were not adequate to give them all the information they wanted in the process and developed the

metrics that everyone in the room could agree on. The end result they found at the end of the discussion was that they would have to invest in more pavement than they currently were if they wanted to move the needle on performance.

- "I'm new with this and just trying to figure it out" can be a great phrase to set the right tone for collaborating with data. One of the DOTs recently began monthly meetings with their FHWA division office due to a "rough TAMP consistency determination" and because their contact was so new he kept asking lots of questions out of genuine curiosity. This led to some meaningful and helpful conversations that would not have happened with people who have done it all before an "just nod along".
- The representative from the Corpus Christi MPO has found that effective convening involves going to them, using their language, letting them choose the meeting method and venue, and saying "Yes, and" rather than "No" or "Yes, but". Doing so creates a more constructive tone and keeps people engaged more.
- Several of the MPO participants expressed frustration with DOT decision-making, with one calling it "a black box" and another expressing a desire "to see how the sausage is made" so they have more context for their own agency decision-making. One of the MPOs recently started FHWA "intervention" meetings to try and improve a particularly challenging DOT relationship.
- Participants from across agency types agree that working groups that involve a wide range of agencies and practitioners can be helpful in breaking down barriers and identifying promising strategies. When a NMDOT engineer got to know the MRCOG project selection process better through a working group, they realized they could work together to apply for funding on a few opportunities.
- Several participants found the need to re-establish relationship due to high turnover that was exacerbated by Covid. One strategy for continuity is to keep people who were "social" and engaged in the past involved in meetings even if they move to a new role that would not normally be involved.
- All agreed that online meetings are extremely convenient for transacting business, but the human element is really helpful for building trust.
- There is often a trade-off between using measures which are more technically accurate versus those that are more readily understood by decision-makers or the public.

Data & Assessment

- Data centralization "is a big thing" at MAG. They are creating a centralized database to track projects from conception to completion. In the past there were two different groups mapping things two different ways, putting out documents and maps that were not in sync. Everyone wanted more consistency
- The NMDOT have incorporated a lot of data into one central system, including information on traffic, rest area, bridges… anything they can get their hands on except for maintenance. Having a repository of information like this has been really helpful when someone has a question, and avoiding duplication of work. Challenges have included:
    a. Having people know it's there
    b. Keeping it up to date
    c. Conflation issues

  The agency has a plan for a larger Strategic Data Business Plan, on which they have great buy-in, but actually implementing it has been challenging.
- Kansas DOT has found that proactively bringing in a data warehouse manager to talk with data owners can help them see the benefits of contributing to centralized data resources.
- Corpus Christi MPO staff acknowledge TxDOT "has been great about sharing statewide data". Easy access to everything from travel time data to crash records has been very helpful.
- Because not all data available to an agency belongs to that agency, there are often sensitivities around performance data and how third parties may leverage it. The NMDOT gets a lot of support from their IT department to create a secure "data mart" that addresses some of these issues.
- Many participants agreed that IT department support is crucial to successful data collection because they can take submittals by data owners in any existing format and standardize for others' use and address security concerns.
- Some agencies have relied on university support on data-intensive work.
- The Utah DOT is in the process of designating data as an asset, just like pavement and bridges.
- Having the appropriate pay rates for data analysts is important for talent retention. This has been a challenge at several of the agencies, specifically because engineers are used to being at the top of the pay scale and the appropriate structures have not been developed for newer data analyst roles. Utah DOT has tried to highlight the benefits of dependability and better quality of life to keep and attract employees.

- Data for assessment needs to be collected well in advance, especially when the projects being measured have long timeframes. Having the foresight to get the "before" data for a project is the hard part.
- ADOT and UDOT both have process improvement teams dedicated to doing more assessments of effective processes, but this is technically separate from the performance office.
- Participants agreed that to see more assessment, there needs to be top-down support and a longer-term perspective.

Advice for Engaging Leaders

- Prepare them well in advance with information, before they have to make a decision.
- Clearly identify issues and decision points.
- Have good records of data and choices that have been made. Show your analysis.
- Have possible solutions already in mind, including a comparison to a baseline of "business as usual" or what peer organizations are doing. Indicate your recommended solution.
- Have practical comments about implementation, know who would be responsible, and have that person's explicit buy-in and support (it may be the presenter). Build a pyramid of support with the decision maker at the top, but a broad base.
- The right people need to be involved all along the leadership ladder, not just the top executive.
- Top-down and bottom-up implementations are not enough on their own; each needs the other to succeed.
- Ally yourself with those who are well-liked and well connected: the information bottlenecks.
- Practitioners should take time to understand individual decision makers' motivations and priorities.

Notable Examples

- **MRCOG** realized that local partners were submitting projects that did not perform well in an MPO's scoring structure, so they submitted projects that were better aligned with the criteria. As a result, the DOT obtained a large share of the available funding, and municipalities realized that they needed to improve their submittals to remain competitive.
- One of the participants recounted that they had seen data added or changed in order to get a course of action or a project submittal to "score" well, which resulted in prioritizing a project with political support over one with clear benefits to the public. Getting over this mindset among decision-makers will be crucial to being able to take a performance-based approach, and unfortunately will take time to see changes.
- The performance management group at the **Utah DOT** sent a survey sent to various managers asking how they would describe "performance management". Responses varied widely and rarely aligned with the team's internal expectations. As a result, the team was able to identify misunderstandings, unify language, and alleviate concerns over consequences for what staff considered "poor" performance.

PEER EXCHANGE 3 SUMMARY - VIRTUAL

Date: November 29 th and December 1 st, 2022 (2 pm –4pm EST)

Table 4 Virtual Peer Exchange Participants

DOTs		MPOs	
Alabama DOT	Asa Kirkus	Alamo Area MPO	Cecilio Martinez
Colorado DOT	Jacob Kershner		Clifton Hall
	William Johnson		Joey Pawlik
Connecticut DOT	Dhruval H. Patel		Wendy Dodson
	Michael B Cohen	CMAP (Chicago MPO)	Martin Menninger
	Ricky Milliner	COMPASS (Boise MPO)	Hunter Mulhall
District DOT	Spencer Wagner	Denver Regional COG	Alvan-Bidal Sanchez
Iowa DOT	Matthew Haubrich	East-West Gateway	James Fister
Minnesota DOT	Deanna Belden	**FHWA**	
Nebraska DOT	Linsey Sousek	FHWA	Mshadoni Smith-Jackson
Oklahoma DOT	Joni Seymour	FHWA	Peter Doan
Texas DOT	Christeen Pusch	FHWA	Peter Stephanos
	Erica Chan	FHWA	Steven Call
	Joe Alanis		

Coordination

- TxDOT is trying to build buy-in around connecting measures back to investments through a concerted effort to update their project prioritization criteria. More engagement mid-cycle could help.
  - The Alamo Area MPO, which is in Texas, expressed interest in being at the table for this effort. The TxDOT representative enthusiastically agreed and mentioned that the agency plans to develop a working group that will include MPOs.
- The Chicago MPO would like their DOT and transit agencies to talk with them more before finalizing targets. Currently the agencies give the MPO targets to react to, but not provide input on.
- The Minnesota DOT makes an effort to incorporate MPO input into federal targets, but finds the MPOs are less engaged.
- The East-West Gateway (EWG) needs to coordinate with two DOTs, which adds complexity and challenges. Each DOT has a different approach to performance, and they find themselves aligning with one more than the other.
- EWG also cited high turnover at the DOTs as a challenge to ongoing coordination. "We can get 3 people deep with no answer!"

- The Colorado DOT gives presentations to their regional partners, but finds the attendees tune out pretty quickly. The agency is working on providing data tailored to each region in an effort to get them more engaged in the details.
- The Chicago MPO has tried to increase engagement by focusing on only a few measures. They find that stakeholders can't engage on all of them.
- Getting useful information community input can be challenging. Statistically significant surveying is relatively rare, anecdotal data is relied upon, and feedback from public engagement is not tied to a person or location. Several of the DOT practitioners expressed skepticism that they could get useful input from community engagement because they hear complaints without the specifics on location or nature of the problem that will help solve it.
- Practitioners agreed that MPOs can act as aggregate voices for their region to DOTs, who are further removed from the community level and have a hard time integrating community concerns.
- The EWG has successfully used community input on identifying and prioritizing investments through crowdsourced dashboards. As a result of a focused outreach effort, the agency also undertook a new transit study.
- The representative from Iowa DOT noted that the public is not a monolith. In their state, they get very different input from rural and urban communities.
- Internal buy-in is also challenging. The Alabama DOT's pavement investment decision-making is done at a district level through longstanding processes. Getting agencywide buy-in on a performance-based approach is still ongoing.

Data and Assessment

- EWG outlined the TIP analysis related to a recent equity study in their region. They compiled where major investments—excluding those of clear regional benefit like Interstates—were made for the last 10 years. They could then start to examine which areas got lots of investment and whether certain demographics got more or less than others.
- Minnesota DOT is interested in conducting a similar investment analysis, but with a focus on accessibility rather than equity.
- The Iowa DOT representative reported that similar analyses are being discussed in asset management circles, but are still trying to overcome complications.
- It's not too different from the annual consistency report for the federal transportation asset management plan (TAMP), which has all agencies at least in the infancy of asking what they have been able to achieve with their infrastructure investments.

- The Alabama DOT tracks age of pavement and time since the last treatment. They would benefit from better data analysis tools for trade-off analyses, which could help show legislators and leaders where they most need to be making investments.
- The Minnesota DOT estimates the number of mile-years added to roadways with different pavement projects. They also conduct post-implementation evaluations for a small set of projects under a defined funding program, but they don't draw meaningful conclusions from evaluation- it's mainly to fulfill a reporting requirement.
- The Nebraska DOT's Lean office was tasked with coming up with a metric on dollars saved through efficiency improvements.
- Colorado DOT is undertaking predictive analytics to try and inform targets and investments, in particular linking leading and lagging indicators (e.g., reducing crashes and number of contents/trains). They have made an effort to hire staff who can gain insights from data and present information.
- Setting targets is helpful but only to a point when the goals and level of interest change dramatically from administration to administration. When they aren't seeing what they want, leadership can lose interest. Big shifts can happen between administrations, which is a challenge for maintaining momentum on a performance initiative. Some leaders care more about the short term, while others care more about the long term.
- The Iowa DOT is looking to better define the most important decisions that can be informed with data, which will help focus their data governance strategy.
- The Texas DOT is in early stages of centralizing data. They have a data lake that draws directly from raw data sources and can be automatically updated.
- The Colorado DOT is trying to engage planning partners to get a better understanding of their data needs. What data do we have and what data do they need?
- Iowa DOT would like to move to analyzing network outcomes in the future rather than just focusing on project-level outcomes.
- Multi-objective decision analysis (MODA) was an "unmitigated disaster" at one DOT. Spent too much time focusing on data, objectives, etc., but then no one wanted to use it to make decisions on investments. Right now, investments are decided on by a privileged few. They may give an explanation, but they're not asking for advice.
- Several agencies noted that they have plenty of data but lack the staffing resources and facetime with decision-makers that would be needed in order to turn that data into information to drive decision-making.

How to Talk to Leaders

Know Your Audience

Don't assume that you are there to advise. Learn their priorities, then provide information once you understand where leadership is coming from.

Be in a position to act quickly.

Leaders need to be engaged in the process, so they understand when things don't go as well as hoped.

Regionally tailored analysis and contextual narratives are helpful when contrasted with state data.

Sometimes the decision makers or analysts aren't matched up with who is responsible for implementation of programs that would move the needle on those performance measures.

Build committees under the board to give ideas more time to percolate through local organizations.

Show benefits to the districts – make it clear that we are going to be using data to drive decisions while acknowledging that there are limitations.

Performance Measures

Leadership is afraid to set aspirational targets because they're afraid they'll become requirements down the road.

Interest in performance measures varies broadly – it can be hard to reach consensus.

There is often not a clear distinction between federal measures, internal measures, and directors' priorities.

Equity Discussions

Work with local entities that track equity outcomes and request to use their data to develop a performance measure. Hard to convince partners and leaders that what we do can have a real and tangible impact.

Expanding the leadership's understanding of what equity is was very important, particularly in rural communities, who hear "equity" as "urban."

Data Analysis

Dashboards have been effective in developing national performance targets, visualizing asset condition, and analyzing trend data. Regional or MPO-specific dashboards are helpful with regional analysis.

Data visualizations are effective tools to deliver information in an easy to understand and engaging format for the public and leadership.

Notable Examples

Goal Area and Performance Measure Scorecard – Hunter Mulhall (COMPASS)

COMPASS, the Boise MPO, developed a scorecard that connects performance measures to four goal areas because the team doesn't get much time with the board (an hour every 2 years), and they needed something that would streamline communication. The scorecard has performance measures for goal areas that include a mix of federal, local, projection, and aspirational. It also includes placeholders where effective measures haven't yet been implemented. The scorecard also has two resources for users – a "Did You Know" section that provides information about the datasets and a glossary at the end, both of which help keep the sidetracked conversations to a minimum.

Gaining Buy-In on Equity Performance Though Persistent Engagement – James Fister (EWG)

In developing their most recent long-range plan update, East-West Gateway (EWG), the St. Louis MPO, decided to make equity the focus of the plan. In setting up the equity component, an equity advisory group was assembled to conduct a historical analysis of how transportation investments shaped various parts of the region and to provide the context for how transportation affected different groups in the region differently. At the same time, the team set out on an ambitious public outreach component that would create persistent contact with the public, DOTs, and their MPO board. Early findings from historical analysis and public outreach were brought to the board to develop guiding principles for the remainder of the study.

The public engagement process was designed to connect the public with decision makers in a meaningful way. The team focused on engaging with existing community structures and events (places and events that people already attend), rather than creating separate ones where they would have had to convince people to attend. The team believes that this was crucial to the success of the effort. They did this engagement during the summer, when there were lots of opportunities to attend community meetings, parties, and celebrations across the counties. They also hosted two virtual open houses, though they would like to explore ways to improve virtual engagement, which they felt could have been stronger.

The outreach and historical analysis was complemented by an analysis of historical spending. Approximately 10 years of projects in the transportation improvement program (TIP) were mapped and overlaid with demographics data to get a sense for which areas tended to benefit the most from investments and whether there were any demographic groups consistently left out of improvements. Results showed some skewing toward wealthier areas and identified at least one low-income, minority locality that did not have a single investment in that time period.

EWG would eventually like to develop measurable targets, but they are still working on developing some consensus about what should be measured and how to quantify tradeoffs. EWG is also looking for a consultant to revamp the TIP database because they were finding that additional historical analysis is needed. The money can skew results in unexpected ways (an interstate might dump a lot of maintenance money in a disadvantaged community while being a major negative contributor to the community's status). They need to know not only where they invested, but also what was achieved (e.g., years of lifetime added, miles treated, etc.)

Project Prioritization at Texas DOT - Cristeen Pusch (TxDOT)

TxDOT developed a project scoring approach that aims to separate need from impact, and tie measures to investment. The development team wanted to find a way to tie performance to investment without encouraging people to game the system. The ideal approach would align performance measures, assess need, and evaluate potential impact. This would create some level of consistency across investment cycles and allow planners to look back at how accurate their predictions are.

There are both requirements for certain selection criteria in the state and flexibility with some customizable criteria. Customizable criteria allow different funding groups to have their own weighting, which helps users feel that the scores are reflective of the projects' characteristics and their own priorities. However, it comes at a cost of losing some standardization or comparability. As a result, the biggest issue they face is lack of understanding on why projects are being scored where they are.

The project evaluation process is complex, which has made implementation challenging. Additionally, the overall data ecosystem suffers from communication barriers. When users lack sufficient information to utilize a dataset, they begin using their own. There are still blind spots that they will seek to improve going forward, and they are looking to incorporate feedback from stakeholders (including MPOs) to address them.

PEER EXCHANGE 4 SUMMARY –PROVIDENCE (AASHTO CONFERENCE)

Date: 12/8/2022

Host Agency: AASHTO

Table 5 AASHTO Conference Peer Exchange Participants

Name	Agency	Name	Agency
Jessica Miller	Indiana DOT	Connie Betts	Louisiana DOTD
Shane Tymkowicz	Iowa DOT	Regina Colson	Florida DOT
Charlie Purcell	Iowa DOT	Mary Joyce	MassDOT
Morgan Ballard	Tennessee	Kerri Woehler	Washington State DOT
Gwen Johnson	Oklahoma DOT	Bryan Pounder	Consultant
Patrick Cowley	Utah DOT	Brad Allen	Consultant
Erin Porter	South Carolina DOT	Dan Schack	Consultant
Sondra Rosenberg	Nevada DOT	Walter Satterfield	FHWA
Korey Donahoo	Nebraska DOT	Joseph Hausman	FHWA
Keshia Olopade	Rhode Island DOT	Danielle Betkey	FHWA

Coordination

- The sole district engineer (Iowa DOT) in the group pointed out that the voices that matter to stakeholders vary depending on where they sit in the process. District engineers have an ear toward local officials. Planners are attuned to statewide priorities, like the Governor. Keeping this in mind while coordinating is important to understand where the other is coming from.
- He and the project delivery coordinator from Indiana DOT noted that internal coordination is often more difficult than external. Planning outcomes feel like "fluff" to snowplow operators dealing with the realities of high turnover.
- Consider legislative initiatives and how to best work with them. Sometimes legislative requirements can spur positive action that would not happen otherwise, such as Utah's statewide transportation vision effort. The practitioner from Washington State DOT (WSDOT) noted that implementing these requirements leaves some discretion to the agencies to make the most of them and align them to things they care about.
- Several practitioners noted that in their experience consultants or others outside the agency sometimes have the most continuous view of events due to turnover. Bringing these individuals into discussions of past decisions is often essential.
- Bandwidth is a pervasive challenge. The Indiana project delivery coordinator mentioned that she would not want to be invited to additional meetings because of this, so instead leveraging natural handoff points is a good

approach to communicate key information, for example from planning to delivery and to construction.

- The Nebraska DOT performance manager mentioned the importance of talking about carrots as well as sticks, and to celebrate when good things happen and targets are achieved. This builds more excitement for the next effort.
- Both Iowa and FHWA staff pointed out that the individuals who collect data – often maintenance staff – are a phenomenal investment and not paid enough. Making staff realize the importance of what they do will help get buy-in. Pay doesn't always communicate that value. (Recognition of staff is also a place where leaders can help to improve throughout the agency buy-in.)

Data and Assessment

- At Indiana DOT, data products clearly communicate the "point in time" nature of data with a timestamp and a statement of the data owner's confidence level, expressed as a percentage, that the data is correct. This is important because it lets users of the data know that it could change quickly if that same data is accessed at a different time and is not necessarily a "problem". Otherwise, people get concerned when data changes.
- Underscore the importance of data collectors' and owners' work as they are all in the crucial chain of data and information. The Iowa district engineer sees firsthand that these individuals may never be told their importance and how much others rely on the data they are collecting, and their pay probably doesn't reflect this importance.
- Ownership is great. Stewardship is hard. Practitioners have found that data owners like owning their data, but sharing it out takes additional effort to ensure there are not errors, it doesn't conflict with other data, and that nuances are communicated. Data owners can get very nervous about sharing because of these issues.
- Both Nebraska and Indiana DOTs track estimates compared to actual costs on large projects and conduct analyses of bids to determine why they may not get better bids at times. The analyses of looking back at what caused less-than-ideal bid situations is a kind of post-hoc analysis, though of agency operation rather than system performance. The significant amount of time between planning a project and its letting – at times six or more years – to often a challenge because circumstances on the ground change.
- A FHWA staff, who previously worked at Ohio DOT, noted that "historic reviews need to be baked into the system." If assessments of past projects is to happen, practitioners need to plan for before and after data.

Talking to Leaders

- Show them pictures. The Iowa DOT performance manager uses images of bridges at different inspection scores when talking about "poor condition" and setting targets.
- In answer to "Why should we invest in performance management?": The planning director from Nevada has found success in using performance results as an answer back to localities or legislators as to why this or that project didn't get funded. "Because it didn't improve performance."
- The WSDOT practitioner says it can be helpful to tie performance efforts back to legislative priorities, directives, and requests. "We need to do this because it will help the agency look good in complying with these requirements" or "Legislators asked us to do this – this is what doing it looks like." It can also be helpful to tie it back to what the voting public will want: "Because that's what we heard from constituents."
- Know what language is positive for your leader and which terms and phrases to stay away from. For example, some leaders don't want to hear "reduce congestion" (Nevada) while others don't want to hear "climate change" (more conservative states).
- Understand the cost of communication overload. Make a report that leaders and legislators might actually read. In Nevada revamping a recurring but formerly ignored report ("It was the same as it had always been for 15 years") led to much more engaged and honest discussions about cross-performance outcomes.

Notable Examples

- The **Utah** legislature passed SB 136 that directed the DOT to develop statewide strategic initiatives across all modes of transportation in collaboration with local, regional and statewide partners, in an effort to further integrated statewide planning. In response, UDOT reached out to a greater number of stakeholders than ever before to develop a singular statewide vision: UVISION. UDOT asked the governor to help convene a stakeholder committee, which led to the identification and involvement of 25 different governmental, nonprofit, and community groups. The result was a vision for transportation to create "Pathways to Quality of Life" that is the foundation of a current effort to redefine performance measures and outcomes. A notable challenge has been to maintain the vision as projects are handed down the pipeline from planning to design and then construction.
- The **Nevada DOT** had been setting very unrealistic targets for some of their performance measures given the level of investment in those performance

areas, then reporting results in a long report that no one was reading. The DOT director insistent on three changes:

1. Reign in the targets to more realistic levels.
2. Increase investment to actually meet targets.
3. Revise the report to something very short that the state transportation board could actually engage with.

By setting realistic targets, the DOT could make the case to the board that more funding was needed to meet the target. They had the data to back this up and could show the worsened performance without the increased funds. When they showed through the long-range planning analysis that they needed to double investment to get the performance desired, leaders initiated a new funding proposition to secure the necessary funds.

- When floods hit **Nebraska,** the DOT put together a dashboard very quickly using the best information they could get on recover to communicate to the public. Neither the dashboard nor the data were perfect, but it was important to show stakeholders and the public that they were being proactive and transparent by publishing what they had when they had it.

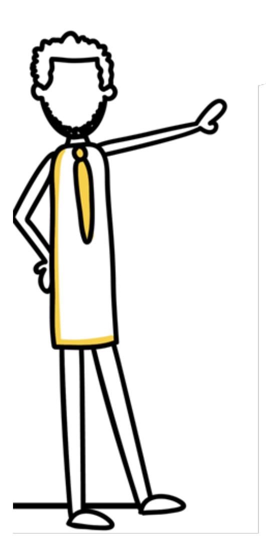
Task 4: Executive Engagement Content

One discussion session at each peer exchange was dedicated to advice for talking to leaders about a performance-based approach and how to get those leaders to better support and improve performance management within an agency. These insights form the basis of communication guidance aimed at helping practitioners get the attention of the executive leadership. This content was shaped by team member Kyle Schneweis, former CEO of the Nebraska DOT, who can recall firsthand what was most conducive to engaging his attention and had a chance at resulting in meaningful agencywide impact.

A summary of the final set of strategies includes:

- Find Out How your Leader Likes to Get Information
- Connect to What They Care About
- Show AND Tell
- Involve Successful Peer Agencies
- Offer Performance as a Way to Control the Message
- Enlist the Support of Others with Influence
- Be In It for the Long Haul
- Find Ways to Get Your Information in Front of Leaders
- Have an Ask
- Bring Receipts

Each strategy stems from advice heard during the peer exchanges, which was then refined and amplified by details from Kyle's experience. A one-page format was selected to keep the content accessible and digestible. The importance and definition of each strategy are briefly summarized at the top of each page, then concrete "How to Do It" tactics help make it actionable. Each page features one of the drawings developed for the *Making Targets Matter* guide and videos that evokes the primary message of that page, which increases visual appeal and engagement. Collectively the one-pagers will hopefully give practitioners usable advice, confidence to engage their leadership, and inspiration to do it creatively and constructively.



Task 5: Participant Surveys

Use of Survey Results

All peer exchange participants, except those at the AASHTO event, received a survey after participation 1) to improve the later events, and 2) to inform the level of interest and success of the research. Surveys were developed before peer exchanges took place, and results obtained after each session.

Based on comments and feedback, the team adjusted each subsequent peer exchange session. For example, after the first peer exchange in Baltimore some feedback indicated that the prepared participant presentations were a little too long and unfocused. As a result, the Phoenix peer exchange was adjusted to keep participant input more informal. However, the responses after this event requested more details about what peers were doing! There is therefore likely an optimal balance to leverage peer presentations but to provide more guidance to presenters on length and what to focus on.

Response Rate

Feedback from participants via surveys was both helpful and limited. The response rate for the in-person peer exchanges was between 25% and 40%, but only three of the more than twenty participants in the webinar completed the post-event survey for less than 10%. “Survey fatigue” is a known phenomenon that needs to be addressed for more effective feedback on research efforts. One approach could be to have participants complete shortened versions of the survey questions in the session, rather than sending via email after then event. Participants were generally more willing to complete the pre-event surveys, which 13 of the combined 16 in-person peer exchange participants completed. Only one webinar participant completed the pre-event survey, an indication of a lower level of commitment and engagement for that format.

Table 6 Peer Exchange Survey Responses

Peer Exchange	Participants	Responses
Phoenix	8	3
Baltimore	8	2
Webinar	32	3

Survey Findings

Nonetheless, the responses the team did get helped guide the format and content for the remaining peer exchanges and gave some indication that the research was meaningful and helpful. A summary of the responses received across peer exchanges is included here. Because the format varied across stand-alone in-person events, a webinar, and a conference session, questions were tailored to each event and some are unique only to one event. Where the same question was asked for multiple events, results are combined. A full summary of all survey questions is available in the companion document, "02-27 Peer Exchange Survey Analysis."

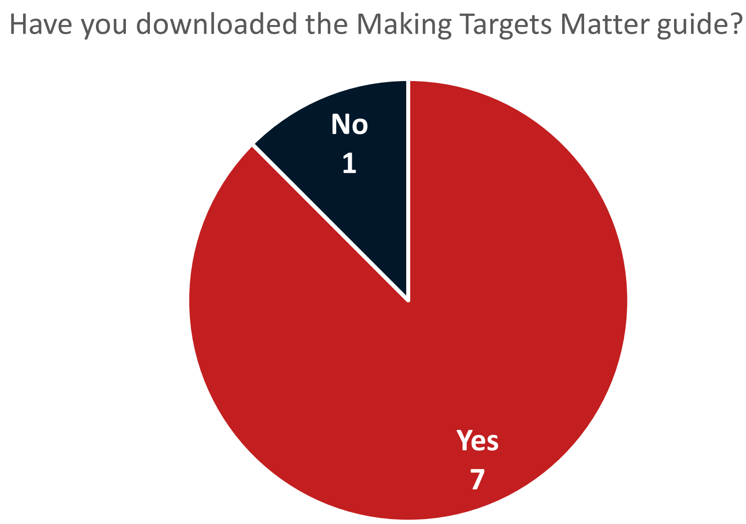


Figure 2 Survey question and responses on guide access

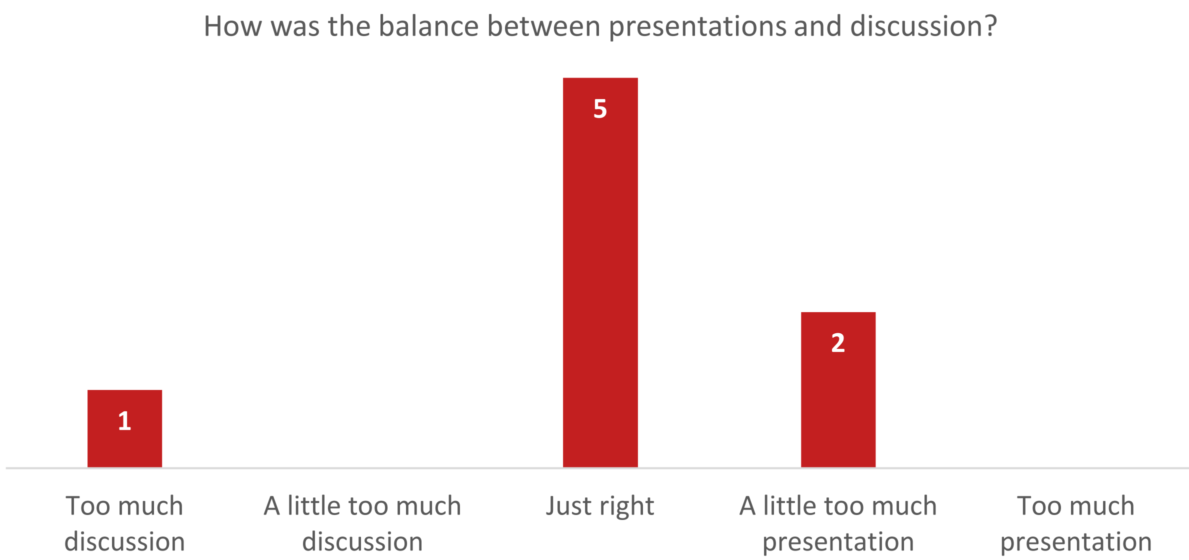


Figure 3 Survey question and responses on peer exchange content balance

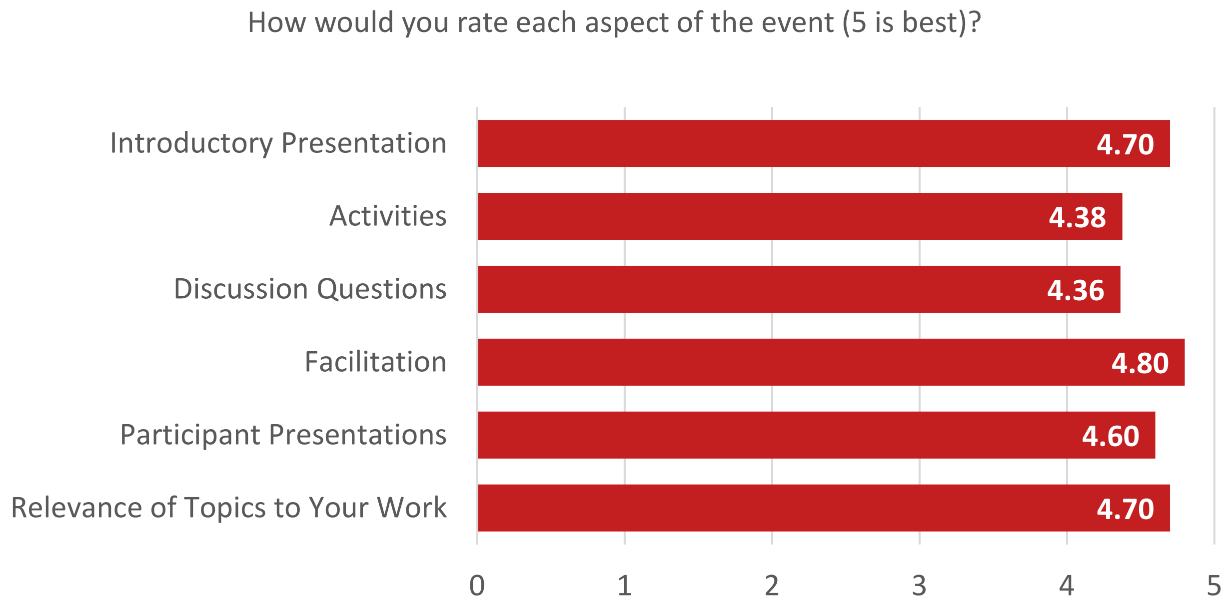


Figure 4 Survey question and responses on quality of key event elements

In addition to discrete multiple-choice questions, the surveys included open-ended requests for comments. A summary of these is below.

Comments on Logistics	*"Perhaps share the slides and discussion questions in advance so people feel ready to respond."* *"I found many of the participant presentation slides hard to read. Please review the peer presentations beforehand or provide minimum font size guidelines."* *"Sometimes virtual events can be a bit challenging anticipating who will speak. Using the "raise hand" function can help identify a queue."* *"It would be great to have a compendium of performance measures (e.g., resiliency, equity, safety, infrastructure condition)."*
Comments on Event Length	*"It seems like it should have been longer. We sped through the material very quickly and I didn't have time to process it."* *"I honestly think it could have benefited from a little more time. We could have dug into some of the information a little deeper."* *"We didn't really spend any time talking about performance assessment. The presentation in that section was all about data modeling, and we didn't have any time afterwards to talk about the performance assessment piece."*

Which presentation or discussion topics were particularly relevant or informative?	*"All presentations were relevant but different enough to show the spectrum of the topic and agency maturity levels."* *"One MPO did a great job presenting the measures they used as part of transportation project evaluation."* *"I really liked the videos. They are going to be extremely useful."* *"I found the opening presentation the most helpful. Most of the peer presentations didn't seem particularly targeted toward this audience (i.e., too dense, in the weeds)."* *"I liked when we talked about how states are connecting their measures to the workers and how they are sharing the message."*
Was there a topic you wished had been featured or discussed?	*Perhaps more discussions on the data behind the performance measures (i.e., what they are and are not measuring)."* *"Maybe have an expert in how to speak truth to power?"* *"I would have liked to learn from State DOTs with advanced measures that are linked to federal measures."* *"I wish we had a few states talk about what they do well and come with a few slides to present on them."* *"Perhaps another event could take a deeper dive into some of the performance measure data challenges in setting the targets and discuss forces outside DOT or MPO control (e.g., COVID-19 that affects travel patterns and the resulting impacts on targets)."* *"It might have been interesting if we could have done a non-attributional presentation of some of our individual experiences."*
Closing Thoughts	*"Hearing the [participant] presentations was awesome. Knowing that others are making discoveries inspires me to do the same."* *"Great content and discussions"* *"Thanks for the opportunity to join! I have already connected with attendees from other MPOs."* *"Just the right number of participants to encourage participation by all. Good work managing conversation to keep it relevant to all attendees."* *"Excellent job facilitating, always bringing in new people or referencing the chat."*

Task 6: Final Report

This document represents the final task in the NCHRP 02-27 implementation work plan. As well as a summary of how the research was conducted and the interim findings, work under this task included synthesizing what was heard in the peer exchanges into expanded tactics for each *Making Targets Matter* strategy and development of four new case studies.

A separate addendum to the original guide includes updated tactics for the Making Targets Matter strategies in the form of generalized advice along with the four new case studies and advice for engaging leadership on performance issues.

Deliverable	Contents
Final Report	• Project Background • Task-by-Task Conduct of Research • Interim Findings & Synthesis of Results • Conclusions and Suggested Research
Guide Addendum	• Updated Strategies • New Case Studies • Executive Engagement Guidance

CHAPTER 3 RESEARCH RESULTS AND FINDINGS

Interim Findings: Peer Exchange Takeaways and Themes

After each peer exchange, the team summarized the experiences, advice, and challenges that were shared during the event. From these straight summaries, the team synthesized notable messages and concepts that were present in conversations across peer exchange events. Relevant details from the case study interviews were also integrated. These synthesized results form the basis for the recommended tactics for the Making Targets Matter summaries.

PEER EXCHANGE TAKEAWAYS

The project team's interpretation of a few high-level reflections on participants' interests and needs are below. These reflections give a sense for where transportation practitioners are in the effort to use performance for enhanced decision making and what aspects could benefit from increased exploration.

- **"Coordination" is generally acknowledged to be an accepted element of good performance management, but consensus on the extent to do it and the mechanisms by which to do it are still developing.** The coordination between MPOs and DOTs in particular is highly variable with friction between agencies common. MPOs have acknowledged the benefit of the national performance target setting requirements in providing more opportunities for engagement on performance, but they often still feel outside the process. Other DOTs and MPOs have found meaningful collaboration through working groups and research initiatives, opportunities that some feel have expanded in a positive way under pandemic conditions and the move to virtual meetings. Within each peer exchange, there were polar opposite experiences when it came to interagency collaboration. On the one hand, some MPOs cited being completely ignored by their DOT, others grumbled that engagement is superficial, and some DOT practitioners expressed outright resistance at the idea that MPO input would or should influence DOT investments. On the other hand, several MPO representatives cited positive arrangements where DOTs relied on the MPO for support in areas the DOT was not strong in and vice versa.
- **Discussion on "Assessment" was limited.** Discussion of the project's core strategies were grouped into "Coordination" which covered Buy-In, Convening, and Storytelling, and "Data and Assessment", covering Navigating Data, Formalizing Assessments, and Taking Action. The Coordination conversations were robust, requiring facilitators to end the discussions to avoid straying too far from the agenda. Data and Assessment discussions required much more effort by the project team to keep them going. Agencies seem to be making progress

on more sophisticated data management strategies, with several examples of agencywide data compilation and centralization efforts underway. However, there was very little volunteered about assessment of decisions and actions across all four peer exchanges. This consistency across the peer exchanges points to the fact that, just as was found after the first round of research and peer exchanges, real assessment remains one of the weakest elements of performance-based management structures at transportation agencies.

- Some useful insights on "making the connection" between on-the-ground actions and desired outcomes were conceptualized in the activities of the peer exchanges, but **discussion of how agencies institutionalize these connections during decision-making in an ongoing manner was not robust.** Advanced practitioners are considering how to maintain the spirit and integrity of performance-based decisions as projects and initiatives move from concept to implementation, but, overall, there are few concrete efforts to rely on. An area for exploration going forward could be developing a clearer picture for how transportation agencies' desired performance outcomes and overarching vision connect to everything that an agency does, including every stage of project development and every step in other initiatives' implementation.

Notable Themes

These themes are a synthesis of related ideas that practitioners proposed at multiple peer exchanges, and that garnered enthusiasm and discussion when they surfaced. Where deemed appropriate, agencies are not identified for statements that border on provocative or touch sensitive topics.

- **There is an opportunity to build better standard practices around coordination between agencies, particularly on the MPO-DOT relationship.** This topic was an extended discussion point in every peer exchange, with lots of examples shared for how coordination can be improved:
    - One MPO reported outright disdain from their DOT district contact when they were not being ignored altogether. This practitioner reported no coordination at all on performance-based decision in their region.
    - Several MPO staff expressed mild frustration that their DOTs communicate decisions on national performance target setting only after the fact and not during the discussions around the statewide targets. This means they miss much of the context, analytical results, concerns, and rationale for final targets that could inform how they approach target setting and communication.
    - Responses from DOT practitioners ranged from silence to statements bordering on defiant. One explained that if the federal government

intended for the state and MPO targets to be discussed at the same time they should have timeline requirements that reflect this. Another expressed skepticism that MPO input on "their" investments should even be on the table.
    - Other DOT practitioners mentioned that their MPOs do not seem interested in the federal targets when they approach them.
    - MPO staff do acknowledge that they "have a seat at the table" thanks to federal performance requirements and their ability to "convene" discussions of importance to their agencies.
    - One practitioner pointed out that the mechanisms available for collaboration are weaker than the interest in collaboration, indicating that more focused attention on better mechanisms could improve the situation.
- **Those in a "performance manager" role must be more than someone to calculate metrics and post them to a dashboard.** Performance professionals are increasingly "connectors" in large and complex agencies that have offices that don't always talk internally, let alone coordinate with external partners.
    - The performance manager from the Georgia SRTA describes her jobs as "figuring out how to connect the silos" within her agency.
    - Participants in the Baltimore peer exchange noted that performance management is a form of storytelling. The responsible staff are the story tellers, not just "data crunchers."
    - Utah's performance director is responsible for interfacing with large planning efforts, like the statewide transportation vision created by more than 20 different governmental and community organizations, being part of the process to operationalize the vision through metric identification, AND finding ways to communicate the original vision in the plans and measures all the way through the project delivery pipeline during the design and construction of projects.
- **MPOs and DOTs have complementary skills and strengths.** An ideal arrangement would make use of them for different purposes.
    - The Phoenix MPO calculates the travel-time-based national measures for their state DOT because they already have skilled data analysts looking at congestion and reliability.
    - MPOs may be better situated to listen to community needs and desires, as they are "closer to the ground". DOTs found synthesizing public input a challenge, feeling like they are "putting together anecdotes without data on who or where it's coming from". DOTs can leverage MPOs for this element of connecting investments to community needs.

- **The Covid -19 pandemic has greatly impacted the way we meet and the landscape of relationships.** Re-building relationships may look different going forward, and practitioners may have to make a concerted effort to create trust in a virtual environment, particularly between agencies.
    - Several agencies cited turnover in key positions as a challenge in ongoing performance improvement and reporting efforts. This is especially challenging for MPOs depending on a DOT contact from one performance cycle to the next.
    - The Richmond MPO has increased participation in work groups that discuss key issues because "with virtual, it's so easy for all of us to join all of them."
    - Conversely, the Chicago MPO reported needing to *eliminate* committees to comply with open meetings rules during the pandemic. It is now much hard to get in front of a committee to discuss issues and the agency to still working on new outlets for partner engagement.
    - While virtual meetings have proliferated and are "extremely convenient," practitioners acknowledge that face-to-face meetings are helpful for building trust.
    - One agency makes an effort to include individuals who have transferred to a new position in performance meetings, even if their new title would not normally be involved, to improve the continuity of information.
    - Documenting processes can help alleviate turnover issues as good documents can bring people up to speed independently.
    - One practitioner recommended that if you want to be involved in an effort, get yourself invited to relevant meetings!
- **Improving internal data access is a focus at many agencies**, with notable pushes toward data sharing and centralization alongside greater integration between performance managers and IT departments.
    - Virginia DOT and OIPI recently developed the Transportation Data Hub, a centralized repository for select data sets that have value for analyses beyond the data's original collection purpose. VDOT and OIPI staff can request access to sets of interest through a central IT repository, based on pre-arranged agreements with data owners.
    - Georgia's State Road and Tool Authority (SRTA) is in the midst of improving data access and maturity using a focused coordination effort

across silos, a data maturity assessment, and surveys of staff on how easily they can access data they want.
    - NMDOT gets a lot of support from their IT office to overcome security concerns from data owners. They set up accessible copies of data in a centralized "Data Mart" that doesn't require all the sources to have a standard format. IT created the system to translate the native data format from the owner into the Data Mart format.
    - The Kansas DOT has brought in the Data Warehouse Manager to the performance conversations with data and measure owners to talk about the benefits of adding data to the central database. Having leadership really want to see the data, have it available, and update automatically has gotten data-owning offices more willing to do this.
- The team introduced the idea of bringing in feedback directly from communities' expressed needs. **Many practitioners were uncertain how to usefully incorporate community input into performance-based decisions, and at times were skeptical that it was a worthwhile effort.** State DOT practitioners, in particular, found the prospect difficult.
    - One DOT practitioner cited challenges in getting useful information from community engagement, saying that complaints are general in nature and do not help to identify where the problem area is or what kinds of projects will address it.
    - Another DOT representative said that they collect a lot of anecdotes, but it is not a statistically significant survey that they can make generalized findings from and at times do not even have information on who is giving the feedback.
    - Minnesota DOT is planning to do focus groups on performance topics soon. Practitioners there are "open to the possibility" that they will get something interesting from the engagement.
    - The Utah DOT conducted a significant statewide outreach effort to develop a unified transportation vision across modes and agencies for the state. Their outreach effort was not direct public engagement, but it included more than 20 civic and nonprofit organizations.
    - The East-West Gateway created three "crowdsourced" dashboards to inform committee discussions and project investment decisions.
    - The Chicago MPO will begin paying non-profit groups that represent hard-to-reach communities in their region to provide feedback into their plans and processes.

- **Better ways to communicate data continues to be in-demand among performance professionals.** From simply feeling like there is too much data to lacking the tools to adequately summarize important findings in the data, agencies are still looking for new and better ways to grapple with data, find the story behind it, and clearly tell it.
    - The Boise MPO recently redeveloped their performance metrics communication to focus on four primary goal areas, because they only get about an hour every two years with their board to discuss performance results.
    - The staff responsible for pavement performance at the Alabama DOT stated a need to implement better data analysis tools for pavements and trade-off analysis, and better tools to show leadership and legislators where investments are most needed.
    - The representative from the Chicago MPO noted that it is difficult to get engagement across too many measures, and agencies need to focus on only a few to get meaningful engagement.
    - Those agencies that report success on communicating complex data to stakeholders have recently developed new tools for this purpose, such as the Albuquerque and Phoenix MPOs.
- **Investment analysis is becoming more common and sophisticated at transportation agencies**. Project-level before-and-after studies are still rare, though some agencies undertake them in limited circumstances.
    - The St. Louis MPO conducted a historical TIP analysis during its equity study to evaluate where investments were made and characteristics of the populations in these areas.
    - The Chicago MPO designates whether each project in their TIP supports one of the federal measures, and then tracks funding source, funding program, project type, and who is responsible for the project funds in a regular obligations report.
    - The Colorado DOT conducts a similar analysis and identifies all funding that contributes to any of the federal performance areas during the investment decision making process.
    - Minnesota DOT conducts post-implementation evaluation of projects across traffic and safety changes for one specific program of funding aimed at supporting economic development in the state.

Project Result 1: Expanded Feedback Strategies

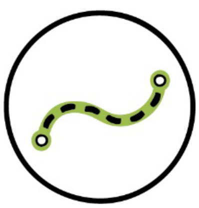
The initial phase of research resulted in six strategies to help agencies improve the quality of their feedback, access it more regularly, and successfully integrate it into decision-making. The strategies are organized into three types:

- Strategies that improve the agency's relationship to its people and data **sensors**;
- Strategies that provide **pathways** for information to reach the agency from its sensors; and
- Strategies that help agencies to **integrate feedback** into decisions and their performance story.

Each strategy is outlined in detail with concrete tactics practitioners can implement immediately in their efforts to make targets meaningful. The major concepts for each are visualized in custom illustrations that accompany each chapter and are also used in a series of short "explainer" videos intended to introduce the foundational concepts to those who either will not read the guide or who want to understand what the project is about before they pick up the guide.

Prepare Your Sensors

- Build Buy-In for the Long-Term
- Navigate Your Data Ecosystem

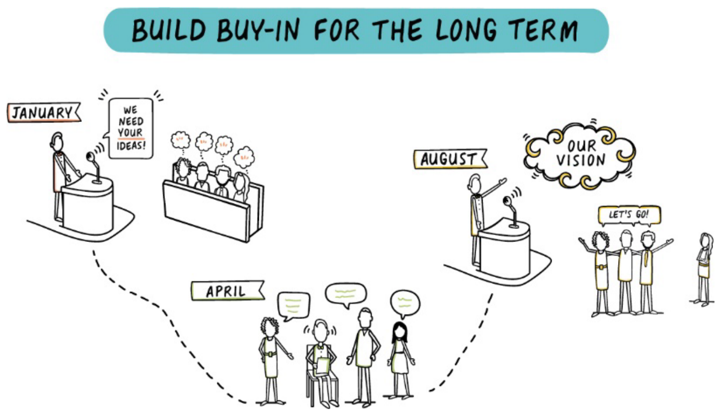
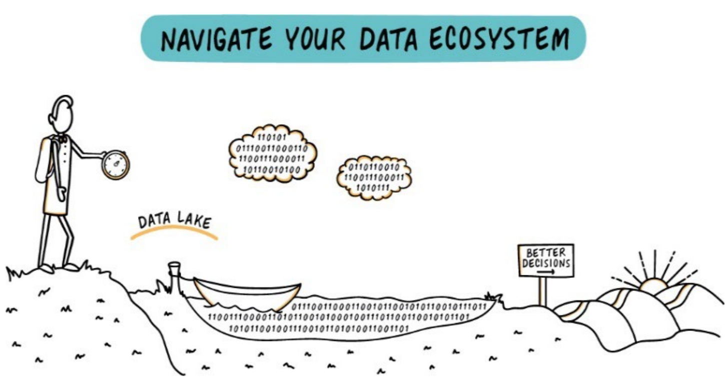


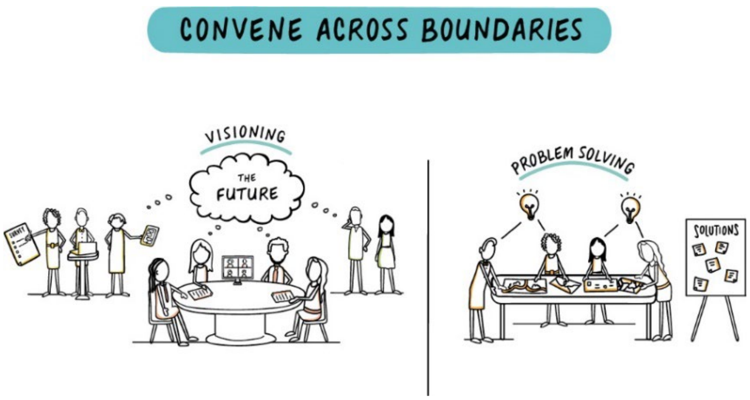
Establish Pathways

- Convene Across Boundaries
- Formalize Assessment of What Works

Put it To Work

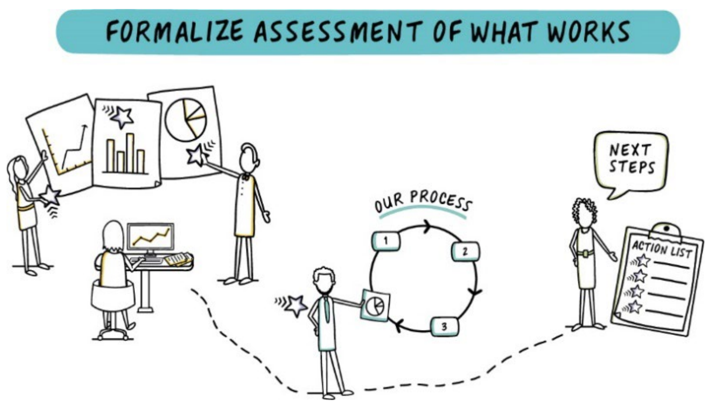
- Adjust Your Actions
- Tell Your Performance Story

Strategy	New Tactics
 	Leverage the relative strengths of partner agencies. Embrace your role as a connector across the silos in your agency. Let stakeholders into the discussion leading up to decisions. Explore new ways to solicit, document, and integrate community input. Understand the context for why your stakeholders might have the perspective they do. Recognize that staff turnover can create gaps in seamless collaboration and look for ways to bridge these gaps.
 	Make the case that data is an asset. Get IT on your team. Convince data owners of the benefits of centralized data. Clearly denote that data is from a single point in time and subject to updates. Use self-assessments and surveys to monitor progress in creating seamless data access. Underscore the importance of data collectors' work.

<table>
<tr><th>Strategy</th><th>New Tactics</th></tr>
<tr><td>
</td><td>Meet participants where they are.

Regularly include new participants.

Re-imagine convening post-pandemic.

Leverage natural handoff points to communicate key information.</td></tr>
<tr><td>
</td><td>Connect measures to investments wherever possible.

Plan well in advance for project-level assessments.

Be patient for results.

Make plans to hire data scientists now.

Leverage your partners' data scientists in the meantime.</td></tr>
<tr><td>
</td><td>Recognize that every handoff from one phase to the next may change the initial vision.

Be prepared for the reality of how long each intervention will take.

Connect to a sense of urgency behind why action is needed now.

Don't be afraid to change what didn't work.</td></tr>
</table>

Strategy	New Tactics
	Invest in new tools that can blend data and storytelling. Find a report "no one reads" and make it more meaningful. Tell the story at the scale your audience cares about. Talk about carrots more than sticks. Keep simplifying.

Project Result 2: Case Studies

A number of agencies' experiences stood out as notable examples of using feedback to advance performance management. The team conducted interviews with practitioners from four of these agencies to find out and document more details about each effort. Interviews were primarily to inform the development of a new set of case studies, but they also provided additional details and tactics for the strategies outlined in the guide.

Each case study developed under this project illustrates the principles from the feedback framework and showcases real-world use of the tactics and strategies presented in the guide. These examples cover common performance-related activities so other practitioners can recognize similar opportunities in their own agency and take steps to enact them.

Each case study followed the same structure that answers the following questions:

- What is the main story in one page or less?
- What makes up the feedback anatomy?
- What is the full story?
- How did feedback strategies contribute to success?

Interviewees and case study topics included:

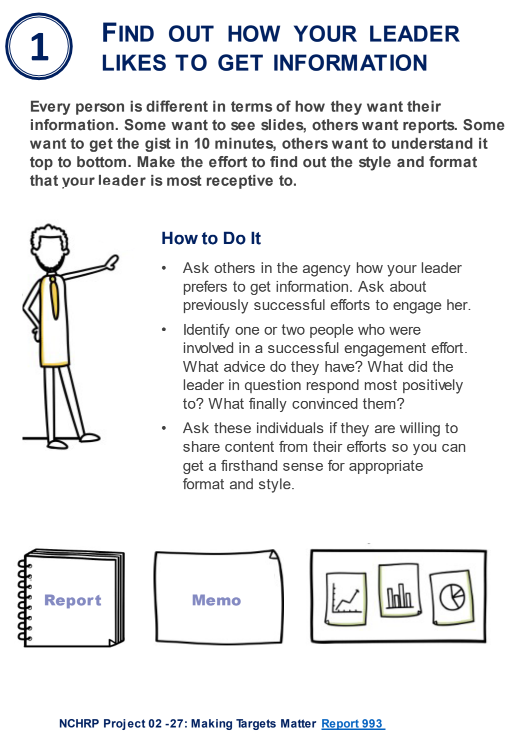
Agency & Interviewees	Case Study Topic
Utah DOT Patrick Cowley, Director of Transportation Performance Management	*Gathering Feedback for a Unified Statewide Vision: The Quality-of-Life Framework*
East-West Gateway (St. Louis MPO) James Fister, Transportation Planner	*Gathering Feedback for a New Performance Area: Equity in Transportation Investment*
Minnesota DOT Deanna Belden, Director of Performance, Risk and Investment Analysis Michael Iacono, Performance and Investment Data Analyst Alexandra de Alcuaz, Senior Planner	*Gathering Feedback via Post-Implementation Project Evaluation: Corridors of Commerce*
Virginia Office of Intermodal Planning and Investment Margit Ray, Program Manager Beverly Quinlan, Senior Analyst	*Gathering Data to Better Gather Feedback: The Transportation Data Hub*

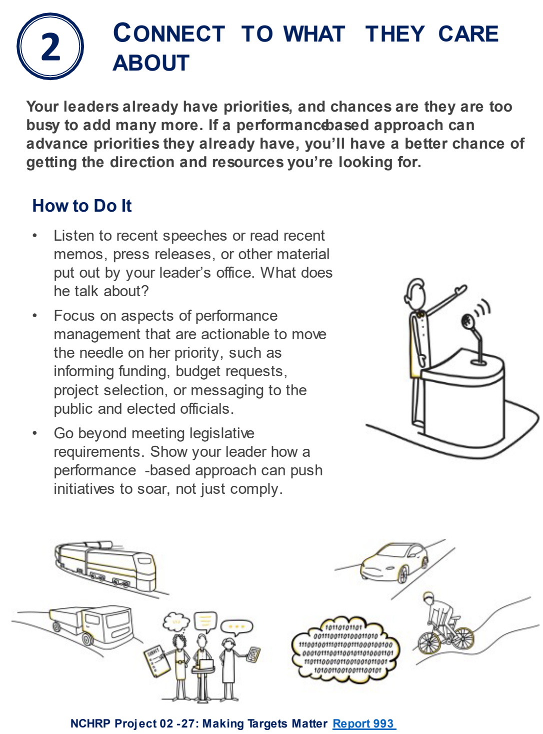
Project Result 3: Executive Engagement Content

The strategies in the Making Targets Matter Guide are primarily aimed at mid-level practitioners and senior managers, for both those new to performance management activities and those looking to dig deeper. However, executive leadership support for the Making Targets Matter approach will allow for more successful implementation within agencies. The research team created a separate series of content aimed specifically at helping practitioners to engage with agency executives on the benefits of a feedback-based performance approach and garner support for the vision and resources needed for meaningful performance initiatives.

This content on engaging executives includes handouts ready to go to leaders that summarize relevant aspects of the literature for them, as well as content meant for practitioners to use in conversations with their leadership on these topics, such as discussion guides and a standard presentation.

In developing the content, the team was supported by High Street's Kyle Schneweis, former Director of the Nebraska DOT, in crafting messages and approaches most likely to work with senior leadership.





CHAPTER 4: CONCLUSIONS AND SUGGESTED RESEARCH

Conclusions on Feedback for Performance Management

Feedback remains a key to uncovering cause-and-effect relationships between agency actions and performance outcomes, knowledge of which empowers agencies to act to meet performance targets. Strengthening performance management practices through a better use of feedback is a concept that is advancing at transportation agencies. Even since the last round of peer exchanges in 2019, the team noticed more agencies undertaking meaningful efforts to expand data access to staff, greater evidence of ongoing conversations between far-flung sides of agencies, and new and creative mechanisms for collaborating with partners.

Strengthening these elements involves identifying and building relationships with the people who know and use the transportation system, who understand system needs and condition, and whose support will make actions to meet targets more successful. It involves being acquainted with data on transportation network conditions, knowing how to access it, and understanding how to position it to answer important questions. And it involves providing for focused, honest discussions and assessments of how things are going, and plans for acting and communicating on the results.

Conclusions on Research Methods

Peer Exchange Format – In hindsight, the peer exchanges were too rushed for all the content and to accommodate participants' desire to connect with one another. The pre-event socializing dinner that was held the evening before the two stand-alone, in-person peer exchanges was very popular with those who attended, but not all participant travel arrangements would allow for them to join. Having the peer exchange take place over one and a half days would have allowed for an unrushed evening to socialize between the first and second days, even if it would add a night of hotel cost for each participant. Because the additional day would allow for longer discussion sessions, more of them, or more breaks, this would also address participant feedback that the day itself was too rushed. The team feels the additional expense for hotels would have been a good use of funds.

Surveys – It is challenging to get anyone to complete a survey once their attention has moved on from an event or effort. The research team could have tried different approaches to increase survey responses, including conducting the surveys within the peer exchange itself, either in paper form or online using phones, tablets, and laptops. Having more time in the peer exchanges would have allowed for this tweak as well, as the peer exchanges were too rushed to do this.

Benefits of different meeting formats – Each small, stand-alone peer exchange had only eight participants. These individuals had to travel expressly for the purpose of attending this all-day meeting to talk about performance management. As such, only individuals with significant responsibilities related to performance were invited. The conversations were robust and engaged, easily filling up the full day agenda and leaving participants leaving feedback that it should have been longer.

The webinar, on the other hand had nearly 30 participants. Most of these individuals were also primarily responsible for performance management at their agencies, as these are who the research team targeted invitations to, but several people joined that were not directly invited by the team thanks to a newsletter blast from the TRB Committee on Performance Management. Another handful joined who were shy about their agency's work in this area, but said they were interested "to listen and learn." Both sets of individuals would not have come to an all-day meeting, thus expanding the footprint of practitioners engaging with the research results.

The webinar also had the benefit of a chat box, a perfect record of what practitioners said which in-person meetings do not have. This can be a great vehicle to get input from individuals not inclined to speak up in groups, and in this case several participants were active in the chat discussion who rarely spoke up verbally. It also allowed for tangential and side conversations between the participants on topics of interest to them, and provided an outlet for fun and informal joking and repartee among peers. The chat element was the team's favorite aspect of the webinar.

Finally, the AASHTO conference event had participation levels more like the webinar and similar in that it included individuals who likely would not have been invited or come to a stand-alone event on the topic. The conference covered performance, asset, and data management, providing a range of potential participants very relevant to the research, but only some specialized on the performance side. Many were also walk ins, which meant that commitment to the particular topic was weaker. This made for conversation that felt thinner and was more work to sustain, even in a half-day format. The benefit, however, is that several individuals brought a perspective and contributed very helpful insights that would never have made its way into the research otherwise. Particularly helpful in this regard were a district engineer and a project delivery manager, whose ideas for performance from their unique perspectives in different parts of project development and implementation provided much-needed reality checking for a group that often does not leave the central office.

Suggested Research

New Areas of Suggested Research

Improving the MPO-DOT Relationship – Challenges surrounding the MPO-DOT relationship was an extended discussion point in every peer exchange, with lots of examples shared for where coordination can be improved. This points to an opportunity to build better standard practices around coordination between agencies. Specific research elements could include:

1. How each agency can best leverage the strengths of its partners on aspects of performance that are most challenging for them.
2. Leveraging national performance measure target setting and requirements for broader coordination.
3. Mutual input on decision-making.
4. "Institutional ego" and the barriers to authenticity it creates.
5. Long-term changes to policy and the regulatory landscape that would best support authentic and ongoing collaboration.

Tying State Measures and Priorities to National Measures – Several practitioners mentioned wanting to discuss this topic, though discussions did not cover it in detail. It seems that practitioners are still struggling with how to conceptualize of and make friends with the national measures, even though the processes to set and report on targets are fairly well established. Some participants mentioned their distaste for the term "target" for the national measures, since their short-term nature means they are effectively predictions of likely outcomes for decisions already made. Developing a national consensus of how to fit the national measures into state-level performance management efforts would be helpful for practitioners to tell a holistic performance story and connect efforts on national reporting to the work they do every day.

This is likely to be addressed by the upcoming NCHRP project 08-168 Analysis and Assessment of the National Performance Management Data

Originally Suggested Research Addressed

At the end of the first phase of project 02-27 several research directions were suggested. Those largely remain as fruitful areas of research, though a few have been partly addressed or have seen improvement in agency practice that reduce their urgency.

Leadership Engagement – The importance of leadership's support for meaningful performance assessment—assessment that is honest, thorough, and supported with resources—was mentioned repeatedly during this research. Any efforts to communicate the benefits of such assessment to agency leaders would therefore be beneficial to broader efforts to make targets meaningful. Focused executive peer exchanges or similar activities could help to achieve this.

Addressed by NCHRP 02-27 Implementation

Improved Data Sharing – Improving access to data is a core strategy in the *Making Targets Matter* guide, and remains an area where practitioners can improve. However, agencies are making great strides in sharing and centralizing key data sets in a way that improves access throughout the agency. The blueprint for doing this is out there – what is most needed now is sharing practices and getting more agencies on board.

This is likely to be further addressed by the current NCHRP project 23-23 Data Governance Design and Implementation

ORIGINALLY SUGGESTED RESEARCH THAT REMAINS RELEVANT

Below are the research directions that the team feels are still greatly needed and relevant. NCHRP research in the works may begin to address some of these, which is noted where applicable.

Organizational, Cultural, and Interpersonal Performance – The strong interest by project participants in discussing the organizational, cultural, and interpersonal sides of performance management indicates potential for more research in this area. The performance community should first discuss the differences, inextricable connections, and nature of the relationship between system performance and organizational performance, then map out a strategy for pursuing research at the intersection.

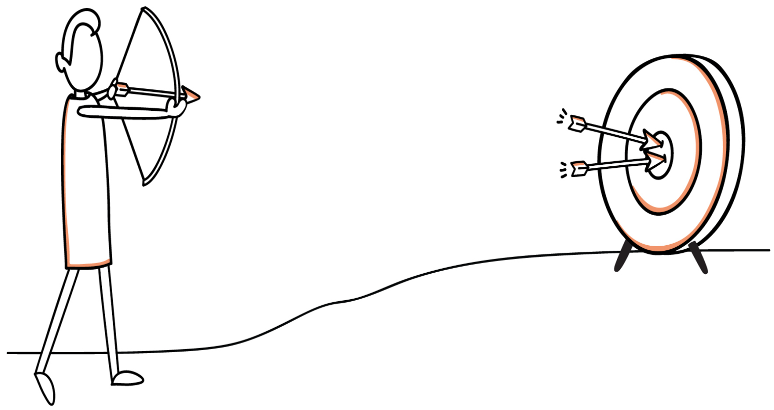
The most benefit from work surrounding organizational topics will likely involve learning from boots-on-ground implementation of different strategies in different settings and documenting what is learned. This kind of information could come from additional peer exchanges like those conducted in this project, but perhaps more impactful would be "pilots" of making incremental organizational changes or trying out new conversations among peers and partners. This would be a more anthropological form of research than is traditionally pursued, with researchers observing and assessing activity at agencies rather than bringing agencies together for discussion.

Institutionalizing Practices – Closely related to the above topic, the work under this project showed a pervasive gap in agencies' institutionalization of key practices, notably the assessment of results and impacts. A study specifically on the process of instituting a new practice at transportation agencies could help practitioners uncover the nuances of making new habits stick. Included in the study could be documenting how the practice got started, who was involved to get it off the ground, who and what was needed for ongoing activity, which disruptions derailed its continuation or success, strategies to defend against or handle these disruptions, and other circumstantial or environmental keys to success.

Understanding Cause and Effect – One of the most persistent needs expressed throughout the project, beginning with the survey responses, was a better understanding of the cause-and-effect relationship between agency actions and performance results. The strategies in the guide indirectly address this by helping agencies build the processes and habits that integrate improved feedback into decisions on actions, which over time will improve understanding of cause and effect. However, there is still a strong desire for more formal analyses that can quantify or otherwise capture the expected effects of various actions on performance. This "holy grail" of performance management research would span many different practice areas, so research would likely be done within practice areas across multiple research efforts.

This is likely to be addressed by the upcoming NCHRP project 08-170 Post-Implementation Evaluation of Transportation Projects

APPENDIX A: MAKING TARGETS MATTER POST-EVENT PEER EXCHANGE PARTICIPANT SURVEY



* Required Information

Making Targets Matter Peer Exchange - Post Event Survey

Thank you for attending the Making Targets Matter Peer Exchange in Baltimore! In order to ensure successful peer exchanges in the future, we would like to hear about your experience at the event.

1. Logistics: Please rate your experience at the Making Targets Matter Peer Exchange in the following areas:

	1	2	3	4	5
*(a) Location	O	O	O	O	O
*(b) Food	O	O	O	O	O
*(c) Hotel Accommodations	O	O	O	O	O
*(d) Logistics Communications	O	O	O	O	O
*(e) Length of Overall Event	O	O	O	O	O
*(f) Pre-Event Evening Reception	O	O	O	O	O

2. Comments on the above?

3. Content: Please rate the following content elements of the Peer Exchange:

	1	2	3	4	5
*(a) Introductory Presentation	○	○	○	○	○
*(b) Activities	○	○	○	○	○
*(c) Discussion Questions	○	○	○	○	○
*(d) Length of Each Session	○	○	○	○	○
*(e) Facilitation	○	○	○	○	○
(f) Relevance of Topics to Your Work	○	○	○	○	○

4. Comments on the above?

5. Was the balance between presentations and discussion about right? **(Select one)**

1	2	3	4	5
○	○	○	○	○

Not enough presentation	Just right	Too much presentation

6. Which presentation or discussion topics were particularly relevant or informative?

7. Was there a topic you wished had been featured or discussed?

8. Have you downloaded a copy of the Making Targets Matter guide? **(Select one option)**

- Yes
- No

9. How likely are you to apply the concepts from Making Targets Matter into your work? **(Select one option)**

1	2	3	4	5	6	7	8	9	10
Not Likely									Very Likely

10. Any other comments on the event that the team should consider for similar events in the future?