



Transportation Planning Capacity Building Program

North Dakota Metropolitan Planning Organizations Peer Exchange on Introducing Performance Management into the MPO Planning Process

A TPCB Peer Exchange

Location: Bismarck, North Dakota

Date: June 19, 2013

Host Agency: Federal Highway Administration (FHWA) North Dakota Division Office

Peer Agencies: Champaign Urbana Urbanized Area Transportation Study (CUUATS)
Rochester-Olmsted Council of Governments (ROCOG)
Thomas Jefferson Planning District Commission (TJPDC)

Federal Agencies: Federal Highway Administration (FHWA)
Federal Transit Administration (FTA)
Volpe National Transportation Systems Center (Volpe Center)



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

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Introduction

This report highlights key recommendations and noteworthy practices identified at the peer exchange on “Introducing Performance Management into the Metropolitan Planning Organization (MPO) Planning Process” held on June, 19, 2013 in Bismarck, North Dakota and via video teleconference. This event was sponsored by the [Transportation Planning Capacity Building \(TPCB\) Peer Program](#), which is jointly funded by the [Federal Highway Administration](#) (FHWA) and [Federal Transit Administration](#) (FTA). Additional information about the TPCB Program is available on page 18 of this report.

Overview of the Peer Exchange

Goals of the Peer Exchange

The North Dakota MPOs have varying levels of experience in performance management and performance-based planning. Two of the three MPOs have the additional challenge of working with two State DOTs, one of which is heavily involved in performance-based planning, while the other is relatively new to performance-based planning. The peer exchange focused on building the capacity of the North Dakota host MPOs to successfully conduct performance-based planning by benefitting from the experiences of the three peer MPOs.

The North Dakota MPOs, along with their State partners, would like their long-range transportation plans (LRTPs) to be performance-based. They would also like to be able to select performance measures that keep data collection and analysis simple and manageable.

Through this peer exchange the North Dakota MPOs sought to gain a better understanding of the following:

- Establishing a performance management program;
- Selecting appropriate performance measures for tracking progress of LRTP implementation;
- Choosing methodologies for data collection; and
- Evaluating the results of performance-based planning.

Selecting the Peers

In advance of the exchange, the TPCB Program worked to identify MPOs to share their experiences, lessons learned, and recommendations for developing and implementing a performance-based planning process. TPCB staff selected peers based on their experience in determining appropriate performance measures and providing information on progress. Special attention was granted to agencies with experience in involving the public in determining performance measures and to agencies similar in population to the North Dakota metropolitan planning areas (i.e., 75,000 to 175,000 population). Each of the chosen peers brought unique experience to the peer exchange, including experience with local collaboration, determining performance measures, and incorporating measures into planning and project selection processes, and evaluating targets.

The representatives from the three MPO peers for the exchange were:

Peers: Rita Morocoima-Black and Jeremy Borrego MPO: Champaign County Regional Planning Commission Transportation Entity: Champaign Urbana Urbanized Area Transportation Study (CUUATS) Urbanized Area: Champaign, IL Square miles: 47 Urbanized Area Population: 141,000

Peer: Charlie Reiter MPO: Rochester-Olmsted Council of Governments (ROCOG) Host Agency: Rochester-Olmsted Planning Department Urbanized Area: Rochester, MN Square miles: 657 Urbanized Area Population: 147,000
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Peer: Steve Williams MPO: Charlottesville-Albemarle MPO Host Agency: Thomas Jefferson Planning District Commission (TJPDC) Urbanized Area: Charlottesville, VA Square miles: 736 Urbanized Area Population: 125,000

A full list of attendees, including guest agencies, is available in Appendix B of this report.

Format of the Event

The one-day peer exchange was held on June 19, 2013, at NDDOT in Bismarck, ND. The peer presenters, guest agencies, NDDOT District staff, Fargo and Grand Forks MPO staff, TPCB staff, and Volpe Center facilitator all participated virtually via NDDOT's video teleconference (VTC) system. This exchange was the TPCB's first fully virtual peer exchange, and as such, will provide useful insights into how to best use this technology for future exchanges.

The exchange began with a brief round of introductions and background information. The two subsequent morning sessions focused on getting started with performance management and establishing a performance-based metropolitan area transportation planning process. These sessions included presentations from each of the three peers followed by discussion with the host agencies and other participants in the exchange. In the afternoon, each of the three peers gave a presentation on their experiences incorporating performance measures into the planning process. After a final question-and-answer session, the event concluded with action planning that summarized the key findings of the exchange. An agenda for the program is available in Appendix C of this report.

Key Concepts in Performance Management

Performance Management and MAP-21

The Safe, Accountable, Flexible, and Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 and prior Federal legislation encouraged MPOs to incorporate aspects of performance measurement in metropolitan area planning processes, for example, through the congestion management process. In 2012, Moving Ahead for Progress in the 21st Century Act (MAP-21) created a performance-based and multimodal program to strengthen the U.S. transportation system. The six steps of the transportation performance management process are outlined in *Figure 1* below. By focusing on national goals, increasing accountability, and improving transparency, these changes will improve decisionmaking through better informed planning and programming. Under MAP-21 States will need to set performance targets in each of seven national goal areas:

- Safety;
- Infrastructure condition;
- Congestion reduction;
- System reliability;
- Freight movement and economic vitality;
- Environment sustainability; and
- Reduced project delivery delays.



Figure 1: The six steps of the Transportation Performance Management Process under MAP-21

The U.S. Department of Transportation (USDOT) is implementing the new MAP-21 performance requirements through nine rulemakings that will be released in several phases. The MAP-21 Metropolitan and Statewide Planning Rule will establish a performance-based planning process at the metropolitan and state level. The rule will also define coordination in the selection of targets and the linking of planning and programming to performance targets.

Although this peer exchange was an excellent opportunity for the North Dakota Department of Transportation (NDDOT) and North Dakota MPOs to learn about new Federal performance measure requirements, the exchange focused more broadly on developing a successful overall performance based planning process and approach to performance management. MAP-21 provides a valuable point of reference for the exchange and will provide a valuable foundation for the North Dakota MPOs as they develop performance-based planning processes.

What is Performance-based Planning?

Performance-based planning and programming is an approach to applying performance management principles to transportation system policy and investment decisions. This approach (outlined in *Figure 2* below) provides a link between short-term management and long-range decisions about policies and investments that an agency makes for its transportation system. Performance-based planning and programming is a system-level, data-driven process to identify strategies and investments.¹ The FHWA Office of Planning makes available resources that define the characteristics of performance-based planning and programming and presents information to help assess the effectiveness of plans and programs in meeting performance goals.² For MPOs, performance measures provide a nuanced means of assessing progress toward meeting the intent of the LRTP.



Figure 2: The performance-based planning process under MAP-21

Focusing the Conversation

To focus the discussion at the peer exchange, the TPCB Program included the following questions in the agenda it sent to peers and host agencies in advance of the event. The peer exchange was organized in three sections: 1) Getting Started; 2) Establishing a Performance-Based Process; 3) Incorporating Performance Measures Into the Planning Process. Peers developed PowerPoint presentations in response to these questions, which the TPCB Program collected prior to the event and compiled into a single document. These materials are available in a supplemental appendix to this report.

Session 1: Getting Started on Performance-based Planning and Performance Management

- What your MPO's basic background?
- What is your overall approach to performance-based planning and performance management?

¹ [Performance-based Planning and Programming](#). Federal Highway Administration. May, 2012.

² http://www.fhwa.dot.gov/planning/performance_based_planning/

- Why did you undertake performance-based planning? When did you begin? What was your motivation?
- What is the role of MPO leadership, including boards and elected officials?
- What has been the level of stakeholder coordination (internal, DOT, interstate, city, county, transit, citizens, advocates, etc.)?
- Have you experienced any staff capacity issues?
- Who supported your efforts and who resisted?
- How did you overcome resistance? What did it take to move forward?
- How do you determine which goals would involve performance measures? Which ones were chosen and why?
- How do you consider data availability (balancing ideal vs. practical)?

Session 2: Establishing a Performance-Based Process

- How did you determine the correct measures?
- Do you focus on modal or multimodal/systems measures?
- What role does performance management have in the long range planning process, vision or scenario plans, and the development of the LRTP?
- What role does performance management have in project development, screening or selection? What role does it have in TIP/STIP development and coordination?
- Do selected measures contribute to improved collaboration between MPOs and DOTs?
- How did you decide which data to collect – practical vs. ideal?
- What role do measures play in communication and coordination with stakeholders or the public?
- Who supported, who resisted, and how did you respond?
- What was surprisingly easy or difficult?

Session 3: Incorporating Performance Measures into the Planning Process and Lessons Learned

- Where are you in the process now? Where are you going in the future?
- What are the overall benefits for the MPO, transit and other partners, or for the metropolitan area?
- Is performance management meeting your expectations, and how?
- How do you use performance targets to evaluate the results of the planning process and decisions? Do the measures provide the information you need? How do you know you are succeeding?
- What would you do differently if you knew what you know now?

Discussing Key Concepts

After each of the three sessions, the facilitator allowed time for the peer exchange participants to respond directly to the peers with questions and comments. Key questions generated by peer exchange participants during this portion of the peer exchange are listed below.

- How do you ensure that local jurisdictions and partner agencies are implementing performance targets?
- Are your performance measures applied at the project level or system-wide?
- Are your performance measures multi-modal or mode-specific?
- How did you select a manageable number of performance measures?
- What performance measures did you find most useful for implementing performance-based planning?
- What level of staff effort was necessary to get started with performance-based planning?
- How does your MPO secure funding to achieve set performance measures?
- How has performance-based planning shaped decisionmaking and funding allocation at your MPO?
- Where will your agency be in five years?

Key Recommendations and Lessons Learned

Over the course of the one-day exchange, peer agency staff delivered presentations and engaged in discussions about their experience with performance-based planning. This section highlights recommendations for North Dakota host MPOs and MPOs serving small metropolitan areas in other States with an interest in introducing performance management into the metropolitan area transportation planning process, led by MPOs. It summarizes the key recommendations that emerged from the peer exchange and profiles noteworthy practices employed by peer agencies.

A. Why Undertake Performance-based Planning?

Throughout the exchange the peers highlighted many of the benefits of performance-based planning and explained what initially motivated their organizations to adopt performance management principles.

Extending Priorities

One peer initially viewed its performance-based planning initiative as a way to make long term planning decisions and extend priorities beyond a near term timeframe, which had been a challenge for the MPO.

Providing Common Ground for Debate, Decisionmaking, and Fiscal Management

One peer noted that, prior to adopting performance-based planning, planning discussions at the MPO level were often political, abstract, and limited in the ability to objectively compare the strengths and weaknesses of proposed projects. Performance management can promote informed debate and strategic decisionmaking by fostering data-driven analysis of existing and future needs.

Best Practice Example: TJPDC uses scenario planning and easily understood performance measures to assist the public and political leaders to move from ideological positions to a practical focus on future transportation priorities and choices. The scenarios offer different conceptual approaches to meeting the long term needs of the area. Each scenario includes proposed projects that the MPO evaluates at a system level to determine performance using a balanced set of measures of mobility, economy, environment, community, and cost impacts. This assessment provides the foundation for the long range plan update.

Best Practice Example: ROCOG takes a practical approach to performance-based planning by using performance measurement to achieve sound fiscal management and targeting of resources. ROCOG advises peers to view performance measures not as absolutes but as guides for informed political choices. As resources allow, ROCOG would like to evolve to provide a “report card” to demonstrate the results of investments.

Tracking Progress

The peers remarked upon the value of identifying specific, measurable objectives to track progress toward set goals for mobility, safety, and other conditions as a major incentive for implementing a performance management system. The peers recognized that tracking progress toward goals increases organizational accountability and attracts positive public attention and support for future decisions.

Best Practice Example: ROCOG incorporated performance management in its 2012 Bicycle Master Plan by tying goals and objectives to targets and measures as a means to heighten attention for non-motorized transportation by establishing a framework to track the progress being made in implementing its Bicycle Master Plan. The plan features performance targets such as the annual construction of at least one mile of bikeway facilities. ROCOG has found that the plan’s measurable targets attract positive attention from the public.

B. Getting Started on Performance-based Planning and Performance Management

The peer exchange’s first session focused on the peers’ experiences getting started with performance management and included discussion of developing goals, selecting performance measures, working with MPO leadership, and collecting data.

Visioning and Setting Goals

Visioning is the strategic planning process, which is focused on setting goals to define the desired result of a plan. Goals take into account national goal areas and State or regional goals, as appropriate. Once goals have been identified, the next component of the performance-based planning process is developing objectives and measures to determine how performance in each goal area will be tracked and evaluated.

Best Practice Example: When CUUATS first integrated performance measures into its 2025 Metropolitan Transportation Plan (MTP), the MPO selected regional transportation goals based on the eight recommended planning factors listed in SAFETEA-LU. For each of the 12 goals, CUUATS defined objectives and measures of effectiveness, as well as strategies and the parties responsible for each strategy (see *Figure 3* below).

Best Practice Example: In developing goals for its performance management system, TJPDC focused on five categories: multimodal system performance; cost and cost efficiency; and economic, environmental, and community impacts of transportation improvements.

SAFETEA-LU Planning Factor #4 Increase the accessibility and mobility of people and freight				
PLANNING PROCESS LEVEL	DESCRIPTION			
GOAL	5. All transportation system users will have convenient, multi-modal access to all parts of the urbanized area and will travel with increased mobility during peak traffic hours			
OBJECTIVES	Improve average vehicular travel time by at least 1.5 minutes during peak hour periods on major traffic corridors by 2035	Improve access for persons with disabilities to all parts of the urbanized area by 2035	Improve truck freight movements in the urbanized area and reduce their effect on mobility and accessibility for other transportation modes by developing and implementing a truck route plan by 2035	Improve the mobility of all transportation system users by applying the CUUATS Access Management Guidelines to selected major corridors by 2035
MEASURES OF EFFECTIVENESS	Level of Service	Number of APS Systems Installed	Truck ADT Volumes on Selected Major Corridors	Number of Corridors with Managed Access
	Travel Time Studies			
	Congestion	Number of ADA Accessible Sidewalk Ramps Constructed		
STRATEGIES	Continue signal upgrades, periodic re-timing, and coordination of all new and existing signalized intersections	Install APS systems at intersections with high traffic volumes and/or high pedestrian crossing volumes	Prepare a comprehensive truck route analysis to determine the safest and most efficient routes for trucks in the urbanized area	Review Access Management Guidelines every five years
	Educate residents about the monetary, health and environmental benefits of mode shift. Encourage the use of other modes of transportation in place of personal vehicle use	Retrofit existing ramps and crosswalk entrances to meet ADA standards	Identify congested intersections resulting from increased truck volumes and recommend solutions	Evaluate access point locations and traffic circulation patterns for all new development as part of the plan review process
	Utilize car sharing programs and park and ride facilities to remove vehicle trips from the roadway network	Fill in gaps which assist in the current sidewalk network	Set delivery times for businesses in high traffic areas, particularly on campus and in the two downtowns	Work with property owners and developers to eliminate unnecessary access points along major corridors to improve mobility and safety
	Continue adding connected pedestrian, bicycle and transit facilities to the existing transportation network, making the travel modes more efficient	Fix sidewalks that are in disrepair to make them more accessible and easier to use for disabled persons and all other users	Evaluate loading areas in the urbanized area to determine proper space, timing and roadway geometry	
RESPONSIBLE PARTIES	IDOT, CUUATS Staff, Cities and Villages, CU-MTD	IDOT, Cities and Villages, CU-MTD	IDOT, CUUATS Staff, Cities and Villages	IDOT, CUUATS Staff, Cities and Villages, Developers, Property Owners

Figure 3: Chart summarizing Goal #5 in CUUATS's 2025 Metropolitan Transportation Plan, featuring objectives, measures of effectiveness, strategies, and responsible parties.

The Role of MPO Leadership

Several peers emphasized the importance of involving the MPO's Technical and Policy Committees early when considering the incorporation of performance-based planning principles in their programs. The peers agreed that these committees are most interested in performance management as a data-driven approach to understanding and confirming existing and future needs and to maximize the impact of limited funding for the good of the community.

Best Practice Example: CUUATS secured Technical and Policy Committee support for the City of Urbana's performance-based Bicycle Master Plan by demonstrating that its performance measures would result in the informed use of funding to achieve well-supported community objectives.

Best Practice Example: ROCOG was able to gain support for its use of performance-based planning principles from its Technical Committee and Policy Board by presenting performance management as a strategic tool for planning rather than an implementation tool for making investment decisions. The Policy Board now supports the use of performance management as a high-level strategic approach to identifying priorities in the area's Long Range Transportation Plan.

Overcoming Capacity Limitations

The peers acknowledged that developing a performance management system is a difficult process for smaller MPOs due to resource limitations related to data, funding, and staff time. Given that collecting and analyzing data can be the most time-consuming and labor-intensive aspects of establishing a performance management program, the peers identified several ways to make the most efficient use of limited resources, including: selecting performance measures that are simple to collect and analyze; utilizing data that is already being collected and relying on existing analytical tools; and shifting the responsibility for data collection onto partner agencies by demonstrating the value of the information to MPO partners.

Measuring Existing Conditions

After selecting appropriate performance measures, part of establishing a performance management program is using these measures to create a frame of reference for identifying progress in accomplishing goals. Establishing a baseline for comparison for future actual or forecast results is an important element of tracking progress.

C. Determining Appropriate Performance Measures

The peers explained their processes for selecting performance measures in the development of the LRTP and other planning documents and processes. Peers stressed the importance of selecting measures that are specific, measurable, and realistically achievable.

Modal and Multimodal/systems Measures

A key first step in selecting performance measures is characterizing the desired measures. Deciding whether performance measures should be multi-modal or mode-specific, for instance, guides the selection of appropriate performance measures.

Best Practice Example: TJPDC initially organized its approach to performance-based planning according to five concepts; multi-modalism, broad-based, easily measurable through existing data, easily understood by the public, and cost-based. As a result, TJPDC's measures allow for comparison of all modes and provide metrics to assess transportation impacts on the environment and local community.

Using the SMART Approach

Two peers noted the utility of the *SMART* approach to performance management, which focuses on targets that are:

- Specific
- Measurable
- Agreed upon by collaboration with stakeholders
- Realistically achievable within budget
- Time-bound

Best Practice Example: CUUATS incorporates *SMART* objectives and performance management into all of its planning documents, including its greenway, trails, and safety plans, in order to feed into its LRTP. CUUATS has found that the *SMART* approach results in measurable and realistically achievable planning outcomes, such as increased miles of dedicated bike facilities or decreased hours of delay per traveler per year.

Stakeholder Coordination

Public involvement is an essential aspect of developing LRTPs, as it is useful for informing the goals, objectives, performance measures, and strategies articulated by the MPO. Several peers emphasized the value of soliciting input from local citizens, Technical and Policy Committees, and LRTP Steering Committees in the selection of performance measures.

Best Practice Example: After developing an initial set of goals and objectives for its 2025 LRTP, CUUATS refined its performance management plan incrementally through a series of reviews with the LRTP Steering Committee. The committee includes MPO member agency managers and stakeholder group representatives. CUUATS then presented the plan to the MPO Policy Committee for review, and finally submitted it to the public for further feedback. CUUATS has found that a high level of public involvement in this process leads to a greater level of support for the finished product, whether it is a new plan or specific project decision.

Making Use of Federal Resources

The FHWA and FTA Offices of Planning offer resources to assist MPOs and DOTs develop performance-based planning processes and aid in the selection of performance measures. Many of these resources, including best practice case studies, are summarized in Appendix D. The peer MPOs provided helpful examples of how they are successfully building performance measures into their planning processes, and their plans for the future.

Best Practice Example: TJDPC's performance management system makes use of five categories of performance measures. Within these categories, TJDPC selected 18 measures from a list of transportation performance measures suggested in FHWA's performance-based planning resources on performance-based planning³ that were easy to calculate, simple to understand, and suitable for its needs. At the State level, TJDPC is planning to coordinate with the Virginia Department of Transportation (VDOT) during their implementation of performance management for MAP-21 to ensure that the MPO's performance measures do not conflict with VDOT's new measures and targets.

Collaborating and Aligning with State DOTs

Several State transportation agencies have already incorporated performance management into their statewide planning processes. Upcoming MAP-21 rulemaking will establish a performance-based planning process at the State level. MPOs within States that are already using performance-based planning may determine that it is valuable to adapt the metropolitan area transportation planning process to incorporate the goals, performance measures, or targets currently being used by State DOTs in the statewide planning process.

Best Practice Example: Because MnDOT has relied on performance targets and a performance-based approach to investment decisions for several years, ROCOG has made efforts to assess the possibility of aligning with State-level performance measures. In considering aligning with MnDOT's performance measures, ROCOG developed a chart that listed measures

³ http://www.fhwa.dot.gov/planning/performance_based_planning/resources/

from the State Policy Plan and noted whether the State was actively using each measure, whether the measure would have validity for ROCOG’s purposes, and the level of data available for each measure (see *Figure 4* below).

State Measure	Status	ROCOG Validity	Data Availability
Policy 1: Traveler Safety			
Fatalities and Type “A” Injuries on all Roads	Active	Would be a valid safety measure	Data is available
Fatalities or Type “A” Injuries by Roadway type	Active	Would be a valid safety measure	Data is available
Motorcycle Related Fatalities & Type A injuries on all roads	Active	May be of limited value due to low number & random nature	Data is available
Fatalities and Type A related to Heavy Commercial Traffic	Active	May be of limited value due to low number & random nature	Data is available
Bicycle and Pedestrian Related Fatalities & Injuries	Active	Would be a valid safety measure	Data is available
Railroad Crossing related Fatalities & Crashes on all roads	Active	May be of limited value due to low number & random nature	Data could be obtained though not readily available
\$\$ spent on HSIP Stand Alone Safety Projects	Active	May be a valid measure – possibly to infrequent to be meaningful	Data is available
Transit Incidents in Metro Area, General Aviation Fatalities & Accidents, Passenger Carrier Safety Ratings	Active	Probably not a valid local measure	Data could be obtained though not readily available
Miles of Highways with Edge Treatments	In development	Would be a valid safety measure	Data Collection would be required
Greater Minnesota Transit system incidents	In development	Would be a valid safety measure	Data is available
Train Derailments	In development	May be a valid measure – possibly to infrequent to be meaningful	Data could be obtained though not readily available
Policy 2: Infrastructure Preservation			
Structural Condition of State & Local highway bridges	Active	Would be a valid preservation measure	Data can be obtained though not readily available
Ride Quality Index of (State) highway pavements	Active	Would be a valid preservation measure	Data would have to be obtained from MNDOT
Ride Quality Index of (County) Highway pavements	Active	Would be a valid preservation measure	Data proposed to be collected on a four year cycle
Remaining Service Life of (State) Highway Pavements	Active	May be a valid measure but not of high priority since comparable local data not available	Data would have to be obtained from MNDOT / no comparable local data readily available

Figure 4: Alignment of MnDOT performance measures with ROCOG’s purposes.

D. Choosing Methodologies for Data Collection and Analysis

With the appropriate performance measures in place, the next step in the development of a performance management system is the selection of practical and realistic methodologies for data collection and analysis.

Making Use of Existing Data

All three peers identified the use of existing data as a key strategy for streamlining data collection and making the greatest use of limited staff resources.

Best Practice Example: Although ROCOG does not have the in-house capabilities to collect traffic, safety, and roadway data, the MPO has been able to draw this information from MnDOT and other sources. For example ROCOG has made use of available public health data, such as emergency room visits, and traffic volume data for congestion thresholds and roadway risk assessments from MnDOT-sponsored research.

Collecting Data through Member Agencies

Small MPOs with limited staff for data collection and analysis must be able to leverage their relationships with local agencies to collect data on local roadway and transit systems. An added benefit of this approach is that it provides an MPO the opportunity to check in with its constituent bodies on progress toward specific performance measures.

Best Practice Example: CUUATS has enhanced its data capabilities by relying on its constituent agencies, as well as the Illinois Department of Transportation (IDOT), for the collection of data. Although the collection of reliable traffic data, for example, is not always feasible for rural townships and other resource-limited agencies, CUUATS has generally met with success in

drawing data from its various jurisdictions. CUUATS submits spreadsheets to local agencies to collect the various forms of data it requires to track its performance measures. This partnership approach for data collection is made possible by CUUATS's positive relationships with its member agencies, which results in part from the close-knit nature of the Champaign-Urbana community and the planning and engineering services that CUUATS provides these agencies. CUUATS has also established several committees to ensure the involvement of its local agencies in performance management and has generally met with strong support from its local partners.

Improving Data Interoperability

Although tapping into existing data resources at partner agencies is essential for MPOs' data collection efforts, one important caveat is the interoperability of data from different sources. ROCOG in particular, made note of the potential difficulty of working with incompatible data sets and the time-consuming reformatting that such data can require.

Best Practice Example: Within ROCOG's metropolitan planning area county, city, and State-owned roadway data are stored in three different databases, each with its own unique format. Consequently, ROCOG cannot easily develop a picture of the regional roadway system. With a full-time staff of three and a geographic information system (GIS) staff that is shared with the joint city-county planning agency, ROCOG faces difficulty in using these various data sets given the time needed to merge the information together. To overcome this, ROCOG is working on developing a roadway network database with linear referencing linkages that would provide a more seamless connection to the databases. As part of this effort ROCOG is also working on the ability to exchange data with MnDOT in order to allow ROCOG to function as a roadway data clearinghouse for smaller local member agencies and to run basic analysis on the local street network.

Conducting Data Analysis

In addition to the collection of the data necessary to track performance measures, MPOs must analyze the data to produce reports that track progress toward performance-based objectives.

Best Practice Example: CUUATS conducts an annual update to its database using data collected by CUUATS staff and several other partner agencies. The data housed in this database include vehicle miles traveled (VMT), crash frequency, travel time delays, miles of bike facilities, and many other roadway attributes. CUUATS staff analyzes this data in preparation for the annual report card that it presents to local agencies with updates on each measure of effectiveness defined in its LRTP. This roadway and traffic data is also incorporated into the MPO's GIS inventory for the purposes of analysis and project prioritization.

E. Communicating and Coordinating with Stakeholders and the Public

There are important benefits to using performance measures to communicate information about transportation planning and decisions to metropolitan area stakeholders and the public. Transparent communication of planning goals leads to higher levels of accountability for MPOs, which can lead to more broadly based support for the planning process. In general, this leads to progress toward stated goals. In the Charlottesville area, for example, TJPDC has received enthusiastic input from the public and even noted that many community groups have incorporated TJPDC's performance measures into their discussion of local transportation needs.

Documenting Performance Measures

All three peers commented on the value of "report cards" and other reporting documents that track performance measures in communicating with the public.

Best Practice Example: Since 2010 CUUATS has been collecting data on the performance measures laid out in its LRTP, *Choices 2035*, to develop report cards to make the public aware of the metropolitan area's progress toward stated goals. The first iteration of this report card was

simple and basic, but it has improved and expanded with each annual edition. CUUATS staff always take the LRTP report card to public meetings to demonstrate what the MPO has accomplished and what it hopes to accomplish with future plans and programs. The latest CUUATS report card is available at <http://www.cuuats.org/lrtp/lrtp-report-cards/2012-lrtp-report-card-1>.

Best Practice Example: Because TJDPC’s approach to performance-based planning relies on a large number of performance measures within four different future scenarios for the metropolitan area, the MPO must track an extraordinary volume of data. Communicating this volume of data to the public in a clear and comprehensible way has been a major challenge for the organization. To address this issue, the MPO has created a document that tracks percentage change from the base for each performance measure. The MPO uses a shading hierarchy to indicate how a particular scenario supports each goal (see *Figure 5* below). The public has responded positively to this method of communicating performance measures because it is an effective way to display progress toward meeting each target and advancing accomplishment of the agreed-upon goals.

Performance Measurement	Base		Scenario 1A	
	Value	Unit of Measure	Value	% Change
Mobility				
Congestion (% of roads at LOS E or F)	14.1%	% of Roads	12.6%	10.6%
Congestion (hours of delay per day)	23,181.0	Hours	20,187.0	12.9%
Mode Share (percent of Trips)	759,319	Trips/Day	759,334	0.0%
Auto	88.1%	Percent of Trips	88.1%	0.0%
Transit	2.5%	Percent of Trips	2.5%	0.0%
Bike	2.7%	Percent of Trips	2.7%	0.0%
Walk	6.7%	Percent of Trips	6.8%	1.5%
Vehicle Occupancy (passengers per vehicle)	1.2	People/Vehicle	1.2	0.0%
Vehicle Mobility (vehicle miles traveled)	6,228,031	Miles/Day	6,145,450.8	1.3%
Vehicle Crashes (crashes per year)	2,865.0	Crashes/Year	2,827	1.3%
Bicycle Connectivity (% in largest connected area)	68.2%	Percent of largest area	73.4%	5.2%

Figure 5: TJDPC’s report card for mobility performance measures

Innovative Communication with the Public

In addition to soliciting public feedback on long range planning initiatives and presenting information to the public at stakeholder meetings, MPOs may see the value in engaging the public through any number of non-traditional means that benefit from use of performance-related information.

Best Practice Example: CUUATS staff makes use of social media networks such as Twitter and Facebook to publicize information related to its performance-based planning efforts and comprehensive set of measures (see *Figure 6* below). CUUATS has also increased public input and local agency feedback in its planning processes through promotional bus trips to community events during the LRTP update process.



Figure 6: CUUATS Facebook post advertising the use of performance measures in its LRTP.

F. Using Performance Targets to Evaluate the Results of the Planning Process

During the final session of the exchange, peers shared the overall benefits of performance management to the MPO, its partners, and its metropolitan area. The peers also discussed the use of performance targets to evaluate the results of planning processes and decisionmaking and evaluated the overall success of their performance-based planning initiatives. Peers discussed the importance of output measures such as miles of bicycle facilities as well as outcome measures that might correspond to mode shift goals or other results such as congestion relief or safety.

Achieving Objectives

The peers agreed that the primary measure of success for a performance management system is the implementation of the strategies and investments included in a performance-based plan. CUUATS, for example, has seen increased construction of new bicycle facilities and signed bike routes, which was a key strategy for the implementation of its objective to improve bicycle facilities and its goal to promote non-motorized modes of travel.

Guiding Investment Decisions

The peers discussed the possibility of using performance measures to establish criteria for reviewing, prioritizing, and selecting projects to be included in the Transportation Improvement Program (TIP) and other fiscally constrained plans.

Best Practice Example: CUUATS uses performance-based objectives to identify investment priorities for its fiscally constrained Surface Transportation Program (STP). The MPO selects projects for STP funding according to the “CUUATS Project Assessment Guidelines for Assessment of STP (U) Funds,” in which projects are scored based on how well they address regional priorities such as safety and congestion. Although these guidelines are not directly connected to the performance-based objectives of the LRTP, they do support the achievement of the goals in the LRTP.

Best Practice Example: TJPDC applies performance management to prioritize projects in terms of its focus on mobility, economy, environment, community, and cost efficiency. The wealth of data generated by its performance management efforts supports the MPO’s shift from large scale construction projects to small-scale improvements by demonstrating the contribution these projects can make to area-wide priorities without the need to construct large, expensive facilities.

Benefits of Performance-based Planning

In their conclusions, the peers noted several benefits of performance-based planning for their MPOs, partner agencies, and metropolitan areas. The peers emphasized that performance management focuses the planning process on achieving needed system improvements, increases input from the public and stakeholder agencies, and improves the accountability of planning agencies and the transparency of the planning process. Key benefits of performance-based planning identified by the peers during the wrap-up session of the exchange included:

- **Excitement and interest from local agencies and stakeholders.** CUUATS noted that increased local involvement in its planning processes has resulted in a corresponding increase in accountability due to well-known and highly publicized goals.
- **Effective reporting.** TJPDC explained that its method of reporting on performance measures has generated a positive response from both the public and MPO leadership alike as an effective way to track progress and demonstrate the community benefits of proposed projects.
- **Creative decisionmaking.** The introduction of performance measures has allowed TJPDC to consider innovative, system- and corridor-level approaches to solving various transportation problems.
- **Strategic policymaking.** TJPDC reported that performance-based planning had resulted in a focus on high-level planning decision on strategic goals and an understanding of the risk of solely focusing on individual projects, rather than system-wide improvements, in making budget decisions.
- **Targeted funding.** ROCOG noted the utility of performance measures in appropriately targeting funding to its constituent jurisdictions.

Due to the numerous benefits of performance management, all three peers predicted that their organizations would continue to apply performance-based planning principles in their planning processes in future years, while also refining data collection, measurement, reporting, and other aspects of performance management. In conclusion, the peers encouraged exchange participants to consider the potential benefits of incorporating performance management into their planning processes as an effective strategy for meeting the unique needs of the traveling public in their particular metropolitan planning areas.

Action Planning and Next Steps

During the final stage of the exchange, the peer MPOs and North Dakota host MPOs worked with the facilitator to summarize their next steps to develop performance-based planning and to use the information shared during the exchange. The result was an agreed-upon set of next steps the host agencies can take to develop their own performance-based planning processes. These include:

- Generate enthusiasm and participation for performance management by selecting understandable and easily communicable measures;
- Provide information to stakeholders and the public to gain support for their efforts and to develop useful partnerships related to performance;
- Work with other local agencies and leverage relationships to enlist support in data collection and other elements of performance management;
- Benchmark performance-based planning efforts, including use of goals, measures, and targets, against peer agencies with similar metropolitan planning areas and similar levels of familiarity with performance measures;
- Set a clear plan for the use of performance measures, whether as part of programming or for prioritizing the fiscally-constrained list of projects;
- Focus on data that are already available to minimize the effort required to measure performance targets;
- Manage the expectations of stakeholders related to performance analysis and expected results – these may not always be realistic or attainable;
- Complete performance-based planning efforts in-house as opposed to relying on a consultant; and
- Set realistic roles and responsibilities for staff members and partner organizations.

Evaluating the Effectiveness of the Peer Event

In advance of the peer exchange, the host agency identified the following measures for evaluating the effectiveness of the event:

- Whether MPOs would be able to identify and implement the use of performance measures appropriate for their metro areas;
- Whether performance measures are included in the next update of the LRTPs; and
- Whether MPOs will be able to provide annual reports to their member communities, NDDOT, and Federal agencies.

Although it is far too soon to determine whether the North Dakota MPOs will be able to move forward with their plans to institute performance-based planning, the TPCB Program will follow up with the host agencies in the future regarding these evaluation metrics.

About the Transportation Planning Capacity Building (TPCB) Program

The [Transportation Planning Capacity Building \(TPCB\) Program](#) is a joint venture of the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) that delivers products and services to provide information, training, and technical assistance to the transportation professionals responsible for planning for the capital, operating, and maintenance needs of our nation's surface transportation system. The TPCB Program website (www.planning.dot.gov) serves as a one-stop clearinghouse for state-of-the-practice transportation planning information and resources. This includes over 70 peer exchange reports covering a wide range of transportation planning topics.

The [TPCB Peer Program](#) advances the state of the practice in multimodal transportation planning nationwide by organizing, facilitating, and documenting peer events to share noteworthy practices among State departments of transportation (DOTs), Metropolitan Planning Organizations (MPOs), transit agencies, and local and Tribal transportation planning agencies. During peer events, transportation planning staff interact with one another to share information, accomplishments, and lessons learned from the field and help one another overcome shared transportation planning challenges.

Appendices

A. Key Contacts

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B. Event Participants

Name	Agency
Deanna Belden	Minnesota Department of Transportation
Jeremy Borrego	Champaign Urbana Urbanized Area Transportation Study
James Cheatham	FHWA Office of Planning
Ben Ehreth	Bismarck-Mandan MPO
Stephanie Erickson	Grand Forks-East Grand Forks MPO
Rebecca Geyer	North Dakota DOT
Stacey Hanson	North Dakota DOT
Earl Haugen	Grand Forks-East Grand Forks MPO
Stephanie Hickman	FHWA North Dakota Division
Carl Hokenstad	Bismarck-Mandan MPO
Michael Johnson	North Dakota DOT
Wade Kline	Fargo-Moorhead Metro Council of Governments
Teri Kouba	Grand Forks-East Grand Forks MPO
Dustin Lang	North Dakota DOT – Grand Forks District
William Lyons	Volpe National Transportation Systems Center/US DOT
Wendall Meyer	FHWA North Dakota Division
Scott Middleton	Volpe National Transportation Systems Center/US DOT
Susan Moe	FHWA Minnesota Division
Rita Morocoima-Black	Champaign Urbana Urbanized Area Transportation Study
Eloise Powell	FHWA Connecticut Division
Charlie Reiter	Rochester-Olmsted Council of Governments
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Spencer Stevens	FHWA Office of Planning
Kenneth Shooshan-Stoller	FHWA Connecticut Division
Betsy Tracy	FHWA Illinois Division
Jane Williams	City of Grand Forks
Stephen Williams	Thomas Jefferson Planning District Commission

C. Peer Exchange Agenda

Introducing Performance Management into the Metropolitan Planning Organization (MPO) Planning Process

Virtual Peer Exchange: North Dakota Department of Transportation Bismarck, North Dakota

Date: June 19, 2013, 8:30 am to 2:00 p.m. Central Time

Host Agency: FHWA North Dakota Division Office

Facilitator: William Lyons, USDOT/Volpe National Transportation Systems Center (Volpe)

Peers:

Rita Morocoima-Black and Jeremy Borrego, Champaign County Regional Planning Commission

Charlie Reiter, Rochester-Olmsted Council of Governments

Steve Williams, Thomas Jefferson Planning District Commission

FHWA Representatives: Wendall Meyer and Stephanie Hickman, FHWA North Dakota Division, James Cheatham and Egan Smith, FHWA Headquarters Office of Planning

FTA Representative: Larry Squires, FTA Region 8

North Dakota Department of Transportation: Steve Salwei

Format:

- Brief presentations by peer MPOs
- Informal facilitated discussion among all participants
- Opportunity to exchange ideas at all points: during and after presentations
- Although the focus is on developing a successful overall approach to performance based planning, participants should use specific examples of performance measures when possible

Time	Topic	Lead Presenter
8:30 a.m. Central Time	Welcome and Overview FTA and FHWA staff welcomes attendees, review the agenda, describe documentation/follow-up, and establish ground rules for discussions.	James Cheatham, Wendall Meyer, Steve Salwei, Larry Squires, Bill Lyons
8:40 a.m.	FHWA North Dakota Division Welcome and Goals FHWA Division welcomes participants and opens the exchange. Provides context on what motivated the peer exchange request and North Dakota's goals for the day.	Stephanie Hickman

D. Additional Resources

Federal Resources

FHWA Office of Transportation Performance Management Implementation Plan
<http://www.fhwa.dot.gov/tpm/about/action.pdf>

FHWA Transportation Planning Update Newsletter
<http://www.fhwa.dot.gov/resourcecenter/teams/planning/publications.cfm>

FHWA Website on Performance-based Planning
http://www.fhwa.dot.gov/planning/performance_based_planning/

FHWA Website on Transportation Performance Management
<http://www.fhwa.dot.gov/tpm/>

MPO/State DOT Best Practice Case Studies
http://www.fhwa.dot.gov/planning/performance_based_planning/case_studies/

TPCB Homepage
<http://www.planning.dot.gov/>

USDOT MAP-21 Homepage
<http://www.dot.gov/map21>

Champaign Urbana Urbanized Area Transportation Study

CUUATS Homepage
www.ccrpc.org

2035 Long Range Transportation Plan update (*Choices 2035*)
<http://www.ccrpc.org/transportation/lrtp2/>

CUUATS 2012 LRTP Report Card
<http://www.cuuats.org/lrtp/lrtp-report-cards/2012-lrtp-report-card-1>

Thomas Jefferson Planning District Commission

TJPDC Homepage
<http://www.tjpd.com/index.asp>

2035 Long Range Transportation Plan update (*UnJAM 2035*)
<http://www.tjpd.com/unjam2035/index.asp>

Rochester-Olmsted Council of Governments

ROCOG Homepage

www.co.olmsted.mn.us/planning/

2012 Bicycle Master Plan (featuring a full list of goals, objectives, measures, and targets)

<http://www.co.olmsted.mn.us/planning/trnsprtnplng/>

2040 Long Range Plan update (Chapter 3 provides the initial foundation for the “report card” process)

<http://www.co.olmsted.mn.us/planning/rocog/lrtp/Documents/chap03d.pdf>

Transit Development Plan (examples of how performance-based planning principles are incorporated into ROCOG’s transit planning process begin on page 120)

http://www.rochesterbus.com/transit_dev_plan/Draft

E. Acronyms

CA MPO	Charlottesville-Albemarle Metropolitan Planning Organization
CUUATS	Champaign Urbana Urbanized Area Transportation Study
DOT	Department of Transportation
FHWA	Federal Highway Administration
FTA	Federal Transit Administration
GIS	Geographic Information Systems
IDOT	Illinois Department of Transportation
LRTP	Long-Range Transportation Plan
MAP-21	Moving Ahead for Progress in the 21 st Century
MnDOT	Minnesota Department of Transportation
MOE	Measure of Effectiveness
MPO	Metropolitan Planning Organization
MTP	Metropolitan Transportation Plan
NDDOT	North Dakota Department of Transportation
NHS	National Highway System
ROCOG	Rochester-Olmsted Council of Governments
RPO	Rural Planning Organization
SAFETEA-LU	Safe, Accountable, Flexible, Efficient Transportation Act: A Legacy for Users
STIP	Statewide Transportation Improvement Program
TDP	Transit Development Plan
TIP	Transportation Improvement Program
TJPDC	Thomas Jefferson Planning District Commission
TPCB	Transportation Planning Capacity Building
USDOT	U.S. Department of Transportation
VTC	Video Teleconference
VDOT	Virginia Department of Transportation
VMT	Vehicle Miles Traveled