FTA

U.S. Department
of Transportation

**Federal Transit
Administration**

ENHANCING PUBLIC PARTICIPATION IN REGIONAL PUBLIC TRANSPORTATION PLANNING

July 31, 2009

FINAL REPORT

http://www.fta.dot.gov/research

U.S. Department
of Transportation

**Federal Transit
Administration**

ENHANCING PUBLIC PARTICIPATION IN REGIONAL PUBLIC TRANSPORTATION PLANNING

July 31, 2009

Prepared by:

Anne Khademian, Ph.D., and Shinya Kikuchi, Ph.D.
Virginia Polytechnic Institute and State University
1021 Prince Street, Alexandria, VA 22314

Beth Offenbacker and Paul Coelus
Waterford, Inc.
1707 Osage Street Suite 201, Alexandria, VA 22302

Thomas Sanchez, Ph.D.
University of Utah College of Architecture + Planning
375 S 1530 E, Salt Lake City, UT 84112

REPORT DOCUMENTATION PAGE

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing this collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to Department of Defense, Washington Headquarters Services, Directorate for Information Operations and Reports (0704-0188), 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302. Respondents should be aware that notwithstanding any other provision of law, no person shall be subject to any penalty for failing to comply with a collection of information if it does not display a currently valid OMB control number. **PLEASE DO NOT RETURN YOUR FORM TO THE ABOVE ADDRESS.**

1. REPORT DATE	2. REPORT TYPE	3. DATES COVERED (From - To)
7-31-2009	FINAL REPORT	5-1-2007 to 7-31-2009

4. TITLE AND SUBTITLE

Enhancing Public Participation in Regional Public Transportation Planning

5a. CONTRACT NUMBER
VA-26-1010

5b. GRANT NUMBER
425793

5c. PROGRAM ELEMENT NUMBER

6. AUTHOR(S) Anne Khademian, Shinya Kikuchi, Tom Sanchez, Beth Offenbacker, and Paul Coelus

FTA Project Manager: Sharon Chan Edmiston

5d. PROJECT NUMBER

5e. TASK NUMBER

5f. WORK UNIT NUMBER

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Virginia Polytechnic Institute and State Univ.
1021 Prince Street, Alexandria, VA 22314

Waterford Inc., 1707 Osage St., Ste 201,
Alexandria, VA 22302

8. PERFORMING ORGANIZATION REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)
Federal Transit Administration
US Department of Transportation
1200 New Jersey Ave, SE
Washington, DC 20590
http://www.fta.dot/gov/research

10. SPONSOR/MONITOR'S ACRONYM(S)

11. SPONSOR/MONITOR'S REPORT NUMBER(S)
FTA-VA-26-1010-2009.1

12. DISTRIBUTION / AVAILABILITY STATEMENT

Available online [http://www.fta.dot.gov/research]

13. SUPPLEMENTARY NOTES

14. ABSTRACT
Public participation in public transportation planning requires an active and ongoing relationship between the public and transportation planners, and a regional, or networkwide approach. This report examines innovations by MPOs across the country to enhance public participation for public transportation planning through efforts to enhance diversity in regional planning efforts, to improve knowledge gathering and sharing with the public across the region, and to improve incentives for public participation. Results of a survey of 384 MPOs and three case studies are presented. MPOs often excel in efforts to educate the public and to include the public in MPO governance, but innovations in long term planning and project specific efforts are limited. Moving to more advanced levels of public participation will require improved knowledge gathering and management techniques and a more robust understanding of the incentives for participation. The report presents a knowledge management exercise and an incentives diagnostic for MPOs to facilitate that effort.

15. SUBJECT TERMS

16. SECURITY CLASSIFICATION OF:			17. LIMITATION OF ABSTRACT	18. NUMBER OF PAGES	19a. NAME OF RESPONSIBLE PERSON
a. REPORT Unclassified	**b. ABSTRACT** Unclassified	**c. THIS PAGE** Unclassified		133	**19b. TELEPHONE NUMBER** (include area code)

iv

FOREWORD

This report set out to identify innovations used by Metropolitan Planning Organizations (MPOs) to enhance public participation in public transportation planning in three areas:

1. By improving the diversity of participants in the planning process,

2. By improving the processes for gathering and sharing knowledge with the public, across the planning region,

3. By understanding and addressing the varied incentives for public participation.

Results of a survey administered to the 384 MPOs across the country, and three case studies of individual MPOs are presented in the report. We found that including the public in transportation planning, in general, is a significant challenge. Many MPOs excel in reaching out to the public for purposes of educating the public about the MPO and its planning process, and encouraging participation in the governing activities of the MPO.

Innovations in the implementation of public participation in long term planning and project specific efforts are present, but limited. Moving to more advanced levels of public participation will require improved knowledge gathering and management techniques that facilitate diverse participation across the region and that sustain ongoing interaction among the public, planners, decision-makers, and transportation providers.

Findings highlight key lessons for MPOs in the effort to enhance the quality of public participation in public transportation planning. The report presents a "learning" or knowledge management exercise that can assist MPOs in meeting the public participation challenges including the incentives in the participation process.

TABLE OF CONTENTS

LIST OF TABLES AND FIGURES

EXECUTIVE SUMMARY

This report set out to identify innovative ways in which MPOs are enhancing public participation in when planning public transportation in three areas:

- By improving the diversity of participants in the planning process,

- By improving the processes for gathering and sharing knowledge with the public across the planning region, and

- By understanding and addressing the varied incentives for public participation.

A survey administered to the 384 MPOs across the country, and three in-depth case studies were conducted to identify MPOs' practices in these three areas that could be modeled by other MPOs to: 1) facilitate diverse public participation and knowledge management, and 2) to foster ongoing long term interaction and dialogue between the public, planners and transportation providers. Public transit services are interdependent networks serving members of the public with diverse needs. Effective management of the knowledge collected through public participation across a region is vital for meeting mandated responsibilities for efficiency, mobility, and accessibility while addressing environmental and social concerns.

Findings

Results of the survey and case studies found that including the public in public transportation planning, in general, is a significant challenge for MPOs. Many MPOs reach out to the public and provide information about the planning process and the role of the MPO, and include the public in MPO governance—such as service on a citizens committee. Innovations in the areas of long term planning and project specific efforts are present, but limited. Developing the quality of public participation will require improved knowledge management techniques that facilitate diverse participation across the region and sustain ongoing interaction with the public. Three broad lessons for MPOs can be emphasized:

- **Public participation for public transportation planning takes place in the context of broader, ongoing public participation activities for regional planning**.

- **Effective inclusion of the public in public transportation planning requires an understanding of the different knowledge management challenges, the different planning responsibilities and the different incentives for public participation than those of the general transportation planning.**

- **Effective inclusion of the public in public transportation planning requires the application of a variety of engagement techniques.**

- **There is no finish line. MPOs must continuously assess their efforts to include a diverse public and to enhance knowledge gathering and sharing efforts for public transit planning.**

Drawing upon the findings in the survey and the case studies, the report presents a knowledge management exercise that can assist MPOs in meeting the public participation challenges, including the incentives for the public to participate in the process.

CHAPTER 1

INTRODUCTION

FTA's broad agency announcement sought research projects that will improve the state of the practice of public participation (P2) in public transportation planning, particularly at the regional metropolitan level. This report examines efforts by Metropolitan Planning Organizations (MPOs) to enhance the diversity of public participation in public transportation planning, and to improve processes for gathering knowledge from the public and using and sharing that knowledge in regional planning efforts.

Diverse public participation in the planning process and effective knowledge management of public input by MPOs are essential to foster a regional or enterprise-wide approach to public transportation planning, and to build the capacity for ongoing dialogue and engagement with the public, rather than short term, often stove piped engagement around particular projects. Key to these objectives is to understand the incentives that individuals face in participating on both a long and short-term basis. As such, key components of effective public participation include (see Table 1.1):

- Ensure that MPO plans respond to the needs and concerns of the diverse population groups in the region,

- Consider how people are brought to the table and why, and understanding of how and why people are motivated to participate,

- Focus on sharing knowledge and capturing knowledge throughout the plan-making and decision-making stages, and connect the public's input with the product (a long-range or project-based plan) and the outcome of the public transportation projects.

This chapter describes the challenge of developing a long term, enterprise wide approach to public participation through enhanced diversity and knowledge management practices and why these efforts are important, and provides background on the role of MPOs in supporting public participation. An overview of the report is provided, as well as information on the research team.

Table 1.1: Elements of Effective Public Participation

Element	Purpose
Enhanced Diversity	Improves knowledge of potential positive and negative impacts of public transit plans on all population groups, especially traditionally underserved and vulnerable stakeholders in a region.
Incentives for Participation	Encourages participation, particularly by traditionally underserved and vulnerable stakeholders
Knowledge Management	Considers how information gathered from stakeholders in P2 processes may be utilized and shared as knowledge to enhance plans or service within a region

1.1: The Problem: Fostering ongoing public participation and a regional perspective

Traditionally, P2 in public transportation planning has been conducted in the context of small areas or specific projects, such as the extension of subway service in a particular corridor, rather than the context of an entire metropolitan region. Recognition has grown that such localized efforts may be too narrow. For example, when planning a change in bus service, an MPO may collect input only from current bus riders, neglecting prospective riders or non-riders whose use of rail or roads could be impacted by a change in bus service. This is problematic for several reasons:

Public transit services must be viewed as an interdependent service network. Unlike other transportation networks, public transit networks consist of multi-modal service attributes and modes such as walking, bicycling, buses, light rail, heavy rail, etc., that must be both integrated and spread across a region. A change to one mode or aspect of the service and network (*e.g.,* frequency of trains or location of bus stops) may significantly affect other parts of the network.

At the regional level, public transit networks often lack a coordinated, enterprise-wide view of P2 inputs collected in multiple projects or studies. There is often little emphasis on or encouragement for network-wide "learning" in public participation efforts. Since P2 is usually conducted by the agency managing a specific project, the knowledge tends to remain compartmentalized and might not even be available for sharing throughout the network for other transit planning. MPOs must gather, share and utilize knowledge for short and long term planning, but the lack of a network or broad regional perspective with respect to public participation complicates this task. Effective regional planning for public transportation requires effective management and utilization of knowledge gain from different projects in different areas.

Public transit services use public funds to provide services to people with diverse needs. As publicly funded entities, transit agencies have a special accountability to those they serve. They must ensure their services reflect the needs of all people in the region, with particular concern for equity for the vulnerable, the traditionally disenfranchised, and those with special needs. Affirmative steps to stimulate diversity of participation at all stages of the planning process, from needs assessment to development to implementation, are critical to the success of the network and its component services.

Localized or project specific efforts can detract from developing and maintaining an ongoing dialogue with the public on regional transportation planning. Effective participation of the public in transit planning requires an ongoing dialogue with the public focused on the services and their effectiveness in meeting their transportation needs. Periodic engagement with the public provides vital knowledge, which must be incorporated into a broader regional perspective.

The challenge for MPOs is to facilitate and conduct public participation processes and manage the flow of information gathered from these processes to support strong, ongoing dialogue with a diverse public across the region. The ways in which MPOs work to enhance diversity, and the methods used to gather, share and use the knowledge can provide insights for addressing this challenge.

1.2: The Role of MPOs in Public Participation

By federal statute, a metropolitan planning organization, or MPO, is designated for each urbanized area with a population of more than 50,000 individuals to carry out the transportation planning process required by federal law. MPOs are the entities principally responsible for regional transportation planning and public involvement. This planning must achieve transportation system

efficiency, mobility, and accessibility while addressing environmental and social concerns. Sources mandating public participation, environmental justice and social equity mandates include:[1]

- Title VI of the Civil Rights Act of 1964.

- Executive Order 12898 (1994), which requires each federal agency to identify and address disproportionately high and adverse human health or environmental effects on minority populations and low-income populations.

- ISTEA (Intermodal Surface Transportation Efficiency Act) and TEA-21 (Transportation Equity Act for the 21st Century) and implementing regulations, which require "early and continuous" public involvement and require state DOTs and MPOs to "seek out and consider the needs of those traditionally underserved by existing transportation systems, including but not limited to low income and minority households."

- The U.S. DOT's core principles of environmental justice, which include the requirement to ensure full and fair participation by all potentially affected communities in the transportation decision-making process.

- SAFETEA-LU (The Safe Accountable Flexible Efficient Transportation Equity Act, a Legacy for Users), whose P2 component requires that decisions be made "in consultation with all interested parties."

Planning and decisions about public transportation are most successful within a democratic framework. Involving the public in planning processes "not only improves communications but also redistributes authority and responsibility" (Hoch, Dalton, and So, 2000). Effective outcomes are achieved when those participating have "a full awareness of their interests and have sufficient power to assure representativeness and equity in outcomes" (Kaiser, Godschalk, and Chapin 1995). In order for the public to share needs, experiences and preferences regarding public transportation in a meaningful way, however, MPOs must insure the availability of information and analysis, continuity of participation, transparency of decision making, and integrity of the decision making process.[2]

Network-wide Knowledge sharing

One of the fundamental elements of public participation is the exchange of knowledge across the regional network.[3] In order to participate in a meaningful way, members of the public need to

---

[1] For an overview of these mandates and regulations and links to descriptions, please see http://www.fhwa.dot.gov/environment/pi_leg.htm and http://www.fhwa.dot.gov/safetealu/safetea-lu_summary.pdf.

[2] Since ISTEA was adopted in 1991, the role of public participation has been emphasized by the Federal Highway Administration (FHWA) and the Federal Transit Administration (FTA) and these agencies (sometimes referred to jointly as "the federal agencies") are required to periodically jointly review and certify that each MPO's transportation planning process complies with federal standards (23 USC § 134 and 49 USC § 5303). While the federal agencies are inadequately staffed and resourced to conduct these certification reviews in a comprehensive manner for each MPO, the existence of this certification requirement serves to emphasize that public participation in regional transportation planning is an important national policy. State DOTs often carry out auditing responsibilities to ensure MPO compliance with these laws.

[3] Prior to its 2007 amendment, the federal regulation governing is provision public participation read in part as follows:

Public involvement processes shall be proactive and provide complete information, timely public notice, full public access to key decisions, and opportunities for early and continuing involvement. The processes shall provide for:

(1) Early and continuing public involvement opportunities throughout the transportation planning and programming process . . .

understand the MPO's organizational objectives, practices, and responsibilities, and the consequences of, and alternatives to, proposed decisions. The specific nature of the knowledge that is needed to facilitate meaningful participation will vary from one region to another, depending on what the public needs to understand the local issues and alternatives, and it will vary depending upon the type of planning activity and role the public plays in the decision making process. This report highlights efforts to incorporate the public more explicitly in formulating long term plans and proposals by presenting information and analytic tools in the context of a transportation planning game that provides participants with regional constraints, opportunities and tradeoffs in formulating transportation decisions. Hence knowledge shared with the public can take a variety of forms, ranging from public meeting minutes to detailed technical analyses, to historical accounts of planning, and information regarding the resource, demographic and political constraints and opportunities of the region.

Effective public participation also requires integrating and sharing the knowledge gathered from individual public participation processes across the region with member organizations and with the public. Potential impacts from changes to one part of the transit network can then be considered for their possible corresponding network-wide implications. Integrating and incorporating the knowledge gathered from public participation across the region is vital for forging an enterprise-wide perspective and a long-term dialogue with the public built in part upon connecting planning and transportation results with participation.

> ***What is Knowledge?*** *In this study, "knowledge" refers to the experiences, analysis, and insights that individual members of the public, representatives of groups and organizations bring to the table that is then applied to public transit planning. It also refers to the information and analysis the MPO shares with the public for informed participation.*

While MPOs are not required to provide each individual participant with a tailor-made package of information and analysis, they are required to pay special attention to the requests for information and analysis that EJ communities make. As we detail later in this report, MPOs share a vast range of information and analysis with the public made available through a variety of sources in order to facilitate the participation process. The challenge as we also detail in this report, is to consider the ways in which knowledge is gathered, shared and incorporated in order to facilitate long term dialogue and engagement with a regional, network-wide focus.

Continuity

ISTEA and TEA-21 require MPOs to increase the role of public participation in their transportation planning and decision-making processes, expressly requiring "early and <u>continuing</u>" public involvement. (23 CFR 450.212(a) (emphasis added).) Continuous, rather than intermittent, engagement is required because it is expected to yield more effective participation in the decision-making process. Lapses in communication and engagement between planning organizations and stakeholders inevitably lead to substantive gaps in knowledge. Continuity is particularly important when the decisions at stake are long-term decisions that span years (for instance, three years for the

---

(6) A process for seeking out and considering the needs of those traditionally underserved by existing transportation systems, such as low-income and minority households which may face challenges accessing employment and other amenities . . .

23 CFR 450.212 (rev. as of April 1, 2005). Following the adoption of the most recent federal authorizing statute, known as SAFETEA-LU, in 2005, DOT's public participation regulations were revised, and may now be found in section 210.

Transportation Improvement Plan (TIP) and 20 to 25 years for the long-range plan (or RTP or sometimes referred to as the LRP by project interviewees).

Discontinuities run the risk of disrupting the participation of citizen groups in these long-term decision-making processes. Community participants can lose track of the information they have been provided by the MPO, and the MPO can lose track of the input and requests for information made by the community. The predictable effect is to discourage the public's ongoing engagement in the process, and to cause the MPO to lose sight of issues and concerns that have been raised in the past. Having to initiate or revive participation is not only difficult and time-consuming, but can deprive community participants of the institutional knowledge previously built up in the community. In addition, valuable resources are used to build relationships that can otherwise be lost if not nurtured. The requirement for "continuing" public participation expressed in federal legislation is tailored to address these realities.

Continuity also suggests the need for effective public involvement throughout the planning process. As a recent FHWA report found, this remains a challenge (cite?). An FHWA report evaluating statewide long-range transportation plans examined the public involvement efforts described in 48 statewide plans. The report indicated that states varied widely in the points at which public participation was sought. Some states only sought input prior to the planning process and others sought input at multiple stages. Also, the methods employed by states to gain public input varied dramatically, with public meetings the most relied-upon means (44%) for obtaining public input. According to the report, New Mexico officials felt that public meetings only attract those already familiar with the transportation planning process, and thus that state relied on focus groups of randomly selected citizens to help inform its planning process. The report did not indicate any specific efforts states made to ensure that they were obtaining input from minority or low-income households.

While the FHWA report details public participation efforts at the state level, the challenge is relevant for MPOs—the need to devise techniques and processes to sustain these relationships in the context of day to day pressures and expectations for planning, coordination, and public involvement and often limited resources.

Transparency

For MPOs, transparency refers to an open, understandable, and timely public participation process (Wolf, Sanchez and Farquhar 2007). Trust and accountability is built with a continuous and accessible flow of information made available by public planning organizations, but it requires a conscientious effort on the part of an organization because of the additional energy required to document and convey management and staff activities that produce planning outcomes. Transparency is diminished in the absence of accurate and continuous information, and where the information that is provided does not include the information that has been requested.

Transparency can also be lost in the sheer quantity of information, as a needle can be lost in a haystack. This is a particular danger in the context of MPOs that produce reams of paper every month. Transparency, therefore, requires that information be presented in a manner that is at the same time both concise and complete.

Integrity

Public participation also depends upon the integrity of the information and analysis that MPOs make available to the public. Integrity in this context means, among other things, that MPOs not suppress relevant and material facts, assumptions, concerns or alternatives; that MPOs undertake analyses in a manner calculated to reveal new conclusions, rather than to justify pre-determined conclusions; that MPOs not offer rationalizations and explanations in one context that they contradict or ignore in another; and that MPOs genuinely listen to the recommendations of advisory committees they convene to advise them on particular matters.

The success of public participation processes hinge on the public's ability to trust that the MPO and its experts are providing the most current data and technically sound methods in a genuine effort to involve the public in meaningful decision-making process. The integrity of the process also rests on the openness of the participation process to public input, and the effective and evident incorporation of public knowledge into the planning process.

When an MPO provides information or analysis that an EJ community has requested in the course of making an effort to participate in an MPO's decision-making process, the MPO should not only provide the information or analysis requested, but should ensure that the highest standards of integrity are brought to bear in the collection of data and the preparation of any analysis. This is necessary to ensure not only that the product is accurate and complete, but also that it fully and honestly answers the questions that have been raised by the public. In the event that the public has asked for data or analysis that, for technical reasons, cannot feasibly be provided in the manner requested, the MPO should explain in a transparent manner why the data or analysis cannot be provided, take the necessary steps to ensure it can be provided at the earliest time possible in the future, and provide in its place the most complete possible substitute that will shed light on the questions being raised by the public. It goes without saying that an MPO's failure to inform the public about important facts, analysis, assumptions or alternatives can result in denying the public any meaningful voice in the decision-making process.

1.3: Report Organization

The following chapter (Chapter 2) presents the methodology used for gathering data for this study, and outlines the knowledge management exercise and incentives-based diagnostic presented in Chapter 4. These two exercises were derived from the findings in the report, and are intended to help MPOs develop a network-wide approach to knowledge management of contributions from the public. Findings from the survey and the case studies are presented in Chapter 3, while an analysis of public participation practices (focused on knowledge sharing and incentives) is presented in Chapter 4. The knowledge management exercise and incentives-based model are presented in Chapter 5, and conclusions and recommendations are presented in Chapter 6. The appendices contain the complete results of the survey, the survey instrument, and other documents and information relevant to the conduct of the study.

1.4: The Research Team

Anne Khademian, Ph.D., is a professor in Virginia Tech's Center for Public Administration and Policy. With co-author Martha Feldman, she has worked to develop the concept of inclusive management by studying the practices of managers interested in utilizing public participation as a resource for addressing complex public challenges and to enhance democratic capacities. They have written numerous journal articles, chapters and reports on the topic. Dr. Khademian's other work

has focused on the governance of public organizations with a particular interest in accountability, organizational culture, and organizational learning. She has a particular interest in homeland security as a policy area, has written on the state and local capacities for homeland security and the political dimensions of the policy arena, and is currently developing a study of the Coast Guard as a learning organization. She has experience conducting interviews in the field for her various research projects since 1989. Her published books include, *Working with Culture: The Way the Job Gets Done in Public Programs* (CQ Press, 2002), *Checking on Banks: Autonomy and Accountability in Three Federal Agencies* (Brookings, 1996), and *The SEC and Capital Market Regulation: The Politics of Expertise* (Pittsburgh, 1992).

Shinya Kikuchi, Ph.D., is the Charles E. Via Jr. Professor in Virginia Tech's Department of Civil and Environmental Engineering. Dr. Kikuchi came to VT in August 2005 from the University of Delaware, where he was a professor of transportation engineering and planning for 23 years. Dr. Kikuchi has authored or co-authored more than 70 refereed journal publications and engaged in a number of research projects. Dr. Kikuchi's research interests and professional experiences include urban transportation planning, urban public transportation systems, highway geometric design and operations, transportation data handling, logistics, uncertainty analysis, and measuring the strength of the reasoning process. He teaches Urban Mass Transit. He has conducted research projects with Southeast Pennsylvania Transportation Authority, Delaware Transportation Authority, National Science Foundation, Federal Transit Administration, Nissan Motor Company, and various private research organizations. He is chair of the Transportation Research Board's Artificial Intelligence and Advanced Computation Committee.

Beth Offenbacker, M.A., is a public involvement consultant to local and state government agencies and to the private sector. Working closely with clients, she prepares and implements processes that meaningfully involve the public in decisions that affect them. Research methodology, both quantitative and qualitative, are important components of her work. Beth has specialized in the public participation since 1998, and has more than 20 years' experience working with local, state and federal agencies, nonprofit organizations and publicly held corporations in a variety of communications positions. She is a life member and former director of the International Association for Public Participation (IAP2) and a founding co-chair of IAP2's Research Committee. She is also chair of the International Division of the American Planning Association (APA) and a founding working group member of APA's new Public Engagement Network. A leader and an educator, Beth was an adjunct professor in the School of Communication at American University from 1998 and 2005. She earned a bachelor's degree in communications at SUNY College at Brockport and a master's degree in public communications at American University. She has presented at regional and international conferences on topics related to public participation and her work has been published internationally by the Wessex Institute of Technology (U.K.). Beth is a Ph.D. candidate in public administration at Virginia Polytechnic Institute and State University. Her dissertation work focuses on public participation practices in 12 countries (the United States, Canada, the United Kingdom, Sweden, Ivory Coast, South Africa, China, Cambodia, Australia, New Zealand, Mexico and Brazil).

Thomas Sanchez, Ph.D., is an associate professor and Chair of the Department of City & Metropolitan Planning at the University of Utah. Upon completing his Ph.D. at Georgia Tech he taught at Iowa State University and has since been on the planning faculties of Portland State University and Virginia Tech before coming to the University of Utah. Dr. Sanchez conducts research in the areas of transportation, land use, environmental justice, and the social aspects of planning and policy. His research has been published in leading urban affairs and planning journals including the Journal of the American Planning Association, Housing Policy Debate, Urban Studies, Journal of Planning Education and Research, and the Journal of Urban Affairs. His article,

The Connection between Public Transit and Employment, was selected for the best article of the year in 2000 by the Journal of the American Planning Association. In 2007, he co-authored two books, The Right to Transportation: Moving to Equity (with Marc Brenman) and The Social Impacts of Urban Containment (with Chris Nelson and Casey Dawkins). Dr. Sanchez is a nonresident senior fellow of the Brookings Institution, review editor for the Journal of the American Planning Association, an editorial advisory board member for Housing Policy Debate, and chair of the Transportation Research Board Social and Economics Factors Committee.

Paul Coelus, J.D., is vice president of **Waterford, Inc.** a Virginia-based MBE/DBE consulting firm that provides public involvement services for land use, transit, transportation and environmental projects. Founded in 1996, Waterford's services support the strategic goals of transparency and public accountability that are essential to public and private organizations today. It creates and implements structured processes that gather and consider input from diverse stakeholders for the purpose of informed decision making. The firm uses research-based social science techniques in its work, and it participates in practically oriented research projects to further enhance our base of specialized knowledge. Waterford stays abreast of cutting-edge public participation practices and trends through involvement in various professional associations in the region, across the US and abroad, including the International Association for Public Participation, American Planning Association and the Transportation Research Board. The firm's client list reflects a diverse mix of government agencies, private companies, and nonprofit organizations. It includes city and county governments, state agencies, regional bodies, private property owners, publicly traded corporations, and research/educational organizations.

CHAPTER 2

RESEARCH METHODOLOGY AND DEVELOPMENT OF KNOWLEDGE MANAGEMENT EXERCISE AND INCENTIVES BASED DIAGNOSTIC

To investigate ways in which MPOs are addressing diversity, working to improve knowledge management practices with the public and across the region, and improving their understanding of participatory incentives in the public transportation planning process, the research team conducted a nationwide survey of the 384 MPOs and three case studies: the Community Planning Organization of Southwest Idaho, known as COMPASS (representing the greater Boise area), the Delaware Valley Regional Planning Commission or DVPRC (which covers the greater Philadelphia region and portions of New Jersey), and the Miami Dade Metropolitan Planning Organization (covering Miami-Dade County, Florida).

Results of the survey and of the case studies provided the basis for developing a knowledge management exercise and an incentives-based model. These exercises are aimed at assisting MPOs in mapping the knowledge gathering, utilization and sharing challenges associated with different types of public participation efforts, and to assess the different types of incentives participants face to engage the planning process. This chapter presents the methodology used by the research team to collect the data, followed by an overview of the network-wide knowledge management exercise and incentives based model—both illustrated later in the report in Chapter 4.

2.1: 2007 Survey MPO Public Participation Practices

A survey was conducted of all 384 MPOs in the United States (*see Appendix 1 for the survey instrument and a list of the 384 MPOs*). Using a combination of closed and open-ended questions, the survey instrument collected both qualitative and quantitative descriptions of local practices related to enhancing public participation, diversity and knowledge sharing across the region. The response rate for the survey was 18%. Responding MPOs are listed in **Table 2.1.**

Survey Design. The research team developed three versions of the survey. The first version includes questions focused on diversity as well as knowledge sharing in the work of an MPO (F) which took approximately 90 minutes to complete. The second version consists only of the questions on diversity (D), and the third consists only of the questions on knowledge sharing (K). The latter two versions took approximately 60 minutes to complete. The team agreed that by shortening two-thirds of the surveys to 60 minutes, we would increase our response rate.

Survey Questions. Section I of the survey consisted of four questions focused on the population, square miles, and member organizations of the individual MPO. Section II consisted of 19 questions focused on MPO P2 processes and regional transportation planning. Section III consisted of 20 questions focused on diversity of participation. Section IV consisted of three questions focused on quality measures of public participation, and Section V provided an opportunity for final comments on public participation practices. The questions were a mix of open ended and multiple choice options. The full survey can be found in Appendix 1.

Survey Implementation. The research team compiled a list of contact information for all 384 MPOs using data available from the U.S. Department of Transportation, which are public organizations. A hard copy letter and an e-mail were sent to the director of each MPO explaining the survey and encouraging completion of the survey. (S*ee the "Recruitment e-mail" document and the "Background Survey and Purpose" document in Appendix 2.*) The e-mail included a link to complete the survey on line. MPO executive directors were also sent a follow-up letter to encourage participation.

Table 2.1: Names of Responding MPOs	
Anchorage Metropolitan Area Transportation Solutions, AK	Kentuckiana Regional Planning & Development Agency, KY
Association of Central Oklahoma Governments, OK	Knoxville Regional Transportation Planning Organization, TN
Atlanta Regional Commission, GA	KYOVA Interstate Planning Commission, WV
Bend MPO, OR	La Crosse Area Planning Committee, WI
Bismarck-Mandan MPO, ND	Lansing Michigan, MI
Blacksburg, Christiansburg, Montgomery Area MPO, VA	Licking County Area Transportation Study, OH
Boston Region MPO, MA	Lee County, FL
Bryan/College Station MPO, TX	Lima-Allen County Regional Planning Commission, OH
Capital Area MPO, MO	Longview MPO, TX
Capital District Transportation Committee, NY	Madison Athens-Clarke Oconee Regional Transportation Study, GA
Central Lane MPO, OR	Memphis Urban Area MPO, TN
Cheyenne MPO, WY	Miami-Dade MPO, FL
Communities Planning Association of Southwest Idaho, ID	Mid-America Regional Council, MO
Corpus Christi MPO, TX	North Central Texas Council of Governments, TX
Corvallis Area MPO, OR	North Jersey Transportation Planning Authority, NJ
Delaware Valley Regional Planning Commission, PA	Northwest Louisiana COG, LA
Delaware-Muncie Metropolitan Plan Commission, IN	Oahu Metropolitan Planning Organization, HI
Dixie Metropolitan Planning Organization, UT	Owensboro - Daviess County MPO, KY
Elmira-Chemung Transportation Council, NY	Ozarks Transportation Organization, MO
Erie County MPO, OH	Pikes Peak Area Council of Governments, CO
Evansville MPO, IN	Pima Association of Governments, AZ
Farmington MPO, NM	Puget Sound Regional Council, WA
First Coast MPO, FL	Radcliff/Elizabethtown MPO, KY
French Broad River MPO, NC	Regional Transportation Commission of Southern Nevada, NV
Gainesville-Hall MPO, GA	Roanoke Valley Area MPO, VA
Grand Strand Area Transportation Study, SC	San Antonio - Bexar County MPO, TX
Hampton Roads MPO, VA	Shoals Area MPO, AL
Houston-Galveston Area Council, TX	Southeast Michigan COG, MI
Indian River MPO, FL	St. Cloud Area Planning Organization, MN
Jackson Area MPO, TN	Tri-Cities Area MPO, VA
Jacksonville Urban Area MPO, NC	Wasatch Front Regional Council, UT
Johnson County COG, IA	Wichita Area MPO, KS
Jonesboro MPO, AR	Wichita Falls MPO, TX
	Yakima Valley Conference of Governments, WA

2.2: Case Studies of Three MPOs

Upon completion and analysis of the survey, as well as a broader review of MPO public participation activities, the research team identified three MPOs that have engaged in innovative efforts to enhance public participation and diversity, and facilitated knowledge sharing in their respective regions.

Case Study Research Design. The research team initially identified a list of eight candidates for the case studies drawing upon the information provided in the survey that indicated innovative, long standing, and/or effective methods to enhance the diversity of public participation. MPOs that did not respond to the survey were also considered in a broad research effort to identify public participation practices that were innovative, long standing, and/or recognized by other MPOs, public officials, or scholars as effective.

The research team initiated conversations by e-mail and telephone with the eight candidates, contacting the individuals responsible for public participation efforts. The research team discussed the eight candidates based upon the survey findings, research, and conversations, and ultimately selected three MPOs for the case studies: the Community Planning Organization of Southwest Idaho, known as COMPASS (representing the greater Boise area), the Delaware Valley Regional Planning Commission or DVPRC (which covers the greater Philadelphia region and portions of New Jersey), and the Miami Dade Metropolitan Planning Organization (covering Miami-Dade County, Florida).

Each MPO selected provided distinct examples of participatory practices that sought to address the challenges of diversity enhancement, incentives-based participation and knowledge-sharing to varying degrees. The project team also sought to ensure representativeness in terms of urban/rural characteristics, diversity and the stage of growth each region chosen was experiencing.

Conduct of the Case Studies. Emails were sent to MPO representatives to inform them of the selection of the MPO for the case study and to request their participation in the study. The research team identified a liaison official at each MPO to organize a site visit and the coordinate the interview process.

Site visits included observation of the citizen advisory committees and interviews with staff and board members and in some instances interviews with advisory committee members. Following the site visits, additional interviews were conducted with officials in the MPO, elected officials in the region, staff members from transportation agencies in the region and members of the public. Each individual was approached with a phone call or e-mail, and was informed of the "Ethical Protections and Study Limitations." All interviews were recorded under IRB approval and transcripts were provided by a transcription service. Interviewees were given the option of having their interview remain confidential if they wished.

2.3: Methodology "Lessons Learned"

In the course of this study, the research team identified several lessons related to the methodology and approach of the study.

- Good or comprehensive email lists (or list serves) do not exist for MPO staff members. The Association of Metropolitan Planning Organizations (AMPO) has an email list for MPO executive directors, but it is unclear from our experience whether a message sent to that list reaches the right persons in all MPOs. (We created our own list using data available from the U.S. Department of Transportation.) This challenge likely limited our survey response rate to some degree.

- Identifying and working with a primary public involvement staff member as a point of contact in the individual MPOs selected for case studies facilitates the site visit and provides useful insight to the broader public participation practices of the MPO.

- SurveyMonkey.com is a convenient and cost-effective tool for conducting online surveys, but the URL it creates as a survey link is too long and complex for anyone to manually type. In the case of this project, it may have limited participation by those who received our reminder letter but not the email with the clickable link. This means the URL can be used (a) as a clickable hyperlink in an email or (b) in a button placed on a website, but not (c) in a printed letter that requires the recipient to type it into a web browser. Another option is to use a service like "tinyurl" which creates a proxy (and very short) URL to substitute for long and complicated URLs.

- The response rate for a survey is inversely proportional to the time it takes to complete. We base this conclusion on comments we received from some MPOs and on the response rate we achieved (just over 20% in the aggregate, with a lower response rate for the "full" version than the two shorter versions). To achieve a better response rate, we recommend keeping the response time to 30 minutes or less.

These lessons highlight limitations of the study that might be addressed in future research, as well as insights that can benefit the design of future research.

2.4: Developing a knowledge management exercise and an incentives-based diagnostic for MPOs

In section 4 of this report we present a framework for conducting a network wide knowledge management exercise and for applying an incentives based model for developing public participation techniques. These two exercises are developed from the findings in the report. Here, we present an explanation of the two techniques, and the benefits of both for MPOs.

Knowledge mapping for managing public participation information

Public participation activities produce diverse information for the planning process, bringing direct experience, community constraints and expectations, varied public transportation concerns and needs, and a broader public interest to the table. MPOs gather this information within different offices and functions within individual MPOs—from bicycle, pedestrian and transit offices, from offices dedicated to broad public participation within the MPO, from citizen's advisory councils, and so on—and member agencies across the region collect public information, as well. MPOs must figure out how to gather, share and utilize these multiple sources of public information for short and long term planning. Ideally, the process of gathering, sharing and utilizing information drawn from public participation processes across the region will build long term and ongoing dialogue with the public, and sustain a regional, enterprise level planning perspective for public transportation.

A key goal of this research has been to develop a technique for managing knowledge gained from public participation efforts for the benefit of regional public transit planning. We have named this technique "knowledge mapping." The aim of the exercise presented in Chapter 4 is to aggregate information gathered through participatory processes in an accessible, comprehensive form that can be incorporated, in whole or in part to applications in public transportation planning efforts. The mapping process is in part a conceptual exercise, guided by a few key parameters, and aimed at organizing information into a format that is accessible for staff across the MPO; can be applied directly to ongoing planning efforts; shared with the public and member agencies across the region;

and managed with a regional perspective. Rather than 'stovepiping' information within one function of the MPO, or one member agency, knowledge mapping can bring disparate participatory input together so that all involved can understand its larger implications and benefit from what was learned. Mapping, in short, converts information into applicable planning knowledge.

The map can take a variety of forms, such as the Miami Dade Public Involvement Data Base, presented in the next section. The Miami Dade MPO has developed an electronic data base that tracks correspondence with the public that flows through the MPO and facilitates connections with member agencies, as well as information that is drawn from community fairs, forums, and surveys, and an elaborate compilation of geographic, demographic and economic information about the individual communities across the Miami Dade Metro region. The database is accessible to staff in the MPO, and provides a great resource to build a regional understanding of public priorities and concerns across the region; to highlight the varied concerns and needs of communities across the region; and to connect with member agencies.

A knowledge map can also serve to highlight limitations of public information or areas where more information is needed. For example, in this study we focus on public participation activities 1) aimed at educating the public and involving the public in the governance of the MPO, 2) at long term planning activities, and 3) at program specific planning efforts. As presented in **Table 2.2,** each of these activities can generate particular types of public information, and each has limitations in terms of generating a regional perspective and a long-term interactive public participation effort. Organizing the results of these various exercises into accessible tables, data bases, and graphics can help to identify additional information needs, as well as help to consider the techniques in place for gathering the information in these various efforts, in the first place. Consider the Delaware Valley Regional Planning Commission's (DVRPC) web site presentation of "choice priorities" generated by the Dots and Dashes exercise. The tables bring together information generated by individual group iterations of the game into a comprehensive regional perspective related to improvements in the transit network as well as expansion projects. As presented in the case study below, this participatory technique developed out of an effort to enhance the contributions of public participation in long term planning; the presentation or mapping of the findings has generated internal consideration of future adjustments to continue to improve the long term planning process, and has facilitated MPO thinking on transit and land use issues.

Table 2.2: Public Participation Practices		
Purpose	**Information gathered**	**Limitations of the Information**
Project-based plans	- Specific responses to a plan or proposal - Uses knowledge that stakeholders readily know or have experienced	Stakeholders may not be able to connect the project to the larger, longer-term regional context
Visioning/ long-range plans	- Specific responses to desired overall end-state or outcomes - Uses knowledge that stakeholders may or may not already know or have experienced	Greater emphasis on visioning may mean stakeholder comments are 'wishful' or not pragmatic
Education/ governance	May provide a baseline of knowledge about regional / transit planning for future potential participation	Important for governance purposes but may not contribute meaningfully to public transit planning efforts

Maps can also represent community groups, businesses and individuals participating in particular issues, as well as the concerns and priorities of the groups, businesses and individuals related to a key plan or project.

Key benefits of the mapping effort

Overall, efforts to map information gathered through public participation processes generate several benefits for improvement of the planning process.

- **A map provides a global view.** The knowledge map offers an opportunity to see disparate pieces of information (that often are not compiled as part of a more complete picture.) For example, a knowledge map can reflect issues – specifically stakeholder goals, values and concerns expressed by participants in P2 processes across the region.

- **A map provides an overview of social patterns.** Given the goal of enhancing diversity in public transit planning, a knowledge map can identify existing patterns for who is and is not engaged.

- **Maps create opportunities for comparison.** The knowledge map offers a means for staff members to compare notes about what they know at a point in time about the **process** of public participation as well as its impact on the **plan** itself.

- **Maps can provide direction.** Using a knowledge map, MPOs/member agencies can gain a view towards where public sentiments exist at a certain point in time or for a particular purpose. This information can be valuable for deciding what steps need to be taken next, for desired process as well as plan outcomes.

- **Maps can generate information-sharing and collaboration.** Knowledge maps provide opportunities for further collaboration among MPOs and member agencies. For example, the MPO may conduct joint outreach with a local transit agency as a result of identifying a need to more actively engage with persons with disabilities, based on a review of stakeholder data reflected in a knowledge map. There is a need among MPOs and their member agencies to continuously enhance what they know and how it relates to decisions about public transit.[4] Knowledge maps can facilitate this knowledge sharing and collaboration.

In Chapter 4 of this report, we present a knowledge mapping exercise for MPOs and illustrate the mapping process to highlight these potential benefits.

Incentives for Public Participation

Public participation efforts often proceed on the assumption that if the opportunity is available, people will engage in the planning activities or process. This approach, however, overlooks the varied incentives people have for participating, or not participating, and how different the motivation for public participation can be from the motivation of MPO staff and public participation consultants, as well as organized interests.

On the one hand, MPO staff and consultants are motivated to achieve the organizational mission that underpins P2 efforts. They want to gather information that facilitates decision making in the public's best interests, comply with the law, and fulfill other institutional goals. Further, for staff and

---

[4] We assume there are benefits to sharing knowledge across functions; however, are there any studies or evaluations that show what types or the extent of benefits? One example is that people who share knowledge begin to be seen as experts on particular topics (see: http://www.tfhrc.gov/pubrds/novdec99/km.htm). While this certainly says nothing about the quality of the information being shared, we have to assume that consumers of knowledge or information will consider the reliability of the source.

for consultants especially, the P2 process is part of their job, so they are financially compensated to be involved and have professional commitments to the process. For members of the public, the motivations for participating in the planning process—from registering complaints and concerns, to participating on citizen councils or helping to craft a long range plan—are more complex.

Organizations and groups that advocate for improved transit, for transit riders, or for environmental, social justice, community and land use concerns across the region can represent public interests, needs, or concerns. Members of the public may identify with these groups as active participants or leaders, as members, or individuals may benefit from the advocacy through improvements in transit services. In other instances, members of the public may participate directly in the planning process for reasons of personal benefit or cost, such as the potential location of a transit hub near an individual's home or neighborhood. In this case, participation may be motivated by the desire to prevent construction of a station near home property with the concern that home values may drop, or may be motivated to support system expansion as a more convenient and cost effective means of transportation.

In other instances, motivation for participation may arise from a desire to address or solve an immediate problem. As described in the Miami Dade MPO case study, individual members of the public often contact the MPO with an individual complaint, comment or question motivated by personal experience. A bus stop that does not have lighting in the evening, a traffic light that is timed on a very short cycle causing traffic to build up, potholes, inconvenient bus routes, or problems coordinating travel using different transit systems, are typical concerns or complaints that a member of the public may register with the MPO. While these complaints typically require a response from an MPO member agency, in the case of Miami Dade, the MPO often serves as a conduit to transit providers or other member agencies for the public.

Other sources of motivation for public participation include nomination of an individual by an elected official or outreach efforts by an MPO staff member to a member of the public. As we discuss in the DVRPC case study, outreach efforts to a member of the public to serve on a committee or in some governing capacity is an important component of the public participation strategy. The invitation to serve can be met with anticipation of enhancing professional credentials through service, or simply the opportunity and perhaps obligation to play a role in regional public policy efforts. Others may choose to participate in public processes to further a professional or expert view of the transportation system, to further political ambitions, to apply experience and insights during retirement or in between careers when time is more plentiful, or to exercise a commitment to public service and accountability. Conversely, a lack of time, disappointment with the government process, lack of information about the way in which the process works, or frustration with the time frame of planning—results of the planning process come to fruition slowly—can be disincentives for participation. Individually, or in combination, multiple motivations drive or discourage participation in the planning process.

Acknowledging the difference in how MPO officials and members of the public approach public participation in transit planning is a first step for enhancing public participation. Our interviews suggest that by developing participatory programs that 'make room' for a range of diverse motivations, there is greater potential for more diverse engagement in public transit planning.

In Philadelphia, the DVRPC Regional Citizens Committee has an open membership structure that encourages engagement and long-term commitment through its three meeting attendance rule. After the third meeting, the individual is considered a member of the RCC. This effort not only socializes the potential member to what is expected, but it also provides a means for incentivizing interested persons at the same time to learn about the RCC mission, its practices and its role. With time, interviews with select RCC members revealed that some have cultivated their own niche on the

committee, representing specific interests or constituents. In this way, MPO's needs, member's self-interests and the public interest are served.

Survey responses indicated that few MPOs use financial incentives for public participation, such as paying for transit costs for meeting attendees. We surmise that concerns about equity in application of the incentives as well as the limited finances of MPOs make these kinds of incentives unappealing. We also note, however, that financial incentives are only one type of incentive to encourage public participation in public transportation planning. In Chapter 4, we present an exercise aimed at diagnosing the incentives facing potential public participants, and draw upon the case studies to illustrate ways in which public participation practices can be structured to overcome disincentives and motivate participation. Efforts to establish long term methods for ongoing dialogue that incorporates and builds upon initial efforts are one important method for motivating members of the public to participate in planning efforts over time.

CHAPTER 3

SURVEY FINDINGS AND CASE STUDIES

The survey and case studies provided important information about the state of public participation efforts of MPOs. In this chapter, we present the findings of the survey and the case studies. Complete results of the survey and the survey itself can be found in Appendices 1 and 2.

3.1: Survey Findings

Survey questions were organized into two primary sections to address diversity in public participation and knowledge sharing. Several questions also address the understanding and use of incentives to enhance public participation, and broad assessments of public participation processes. Efforts to enhance the diversity of public participation and to improve knowledge sharing are vital for the broader objectives of establishing long term, ongoing relationships with the public for public transportation planning, and forging a regional, or enterprise wide approach to the planning process. The survey provides information on the state of public participation efforts among the MPOs responding to the survey.

First, several questions address MPO impressions of the overall public participation effort and purpose. Responding MPOs indicate aspirations for building strong ongoing relationships with the public to enhance planning, and fostering a regional, or enterprise wide perspective. For example, a majority of MPOs reported the following three external goals for public participation:

- To ensure that regional transportation planning considers potential impacts on all stakeholders.

- To improve the quality of MPO decisions by collecting important information from stakeholders.

- To demonstrate transparency in the MPO's planning process.

Similarly, a majority of responding MPOs reported the following three internal goals for public participation efforts:

- To ensure collection of all information that can improve the quality of MPO decisions.

- To educate officials and MPO staff about stakeholder needs and concerns.

- To ensure that regional transportation planning considers potential impact on all stakeholders.

Together, the responses provide support for establishing ongoing relationships with the public, where information is shared and received between the MPO and the public, and efforts to build a regionally inclusive planning process are indicated. Similarly, when asked to describe the intent of typical public participation processes designed and conducted over the past 5 years, responding MPOs selected the following descriptions with nearly equal weights:

- *Public participation processes designed to inform.* The MPO provides the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities, and/or solutions. The MPO promises to keep the public informed.

- *Public participation processes designed to consult.* The MPO obtains public feedback on analysis, alternatives, and/or decisions. The MPO promises to keep the public informed, listen to and acknowledge public concerns and aspirations, and provide feedback on how public input influenced the decision.

- *Public participation processes designed to involve the public.* The MPO works directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood, considered, and directly reflected in the alternatives developed. The MPO also provides feedback on how public input influenced the decision.

- *Public participation processes designed to facilitate collaboration.* The MPO partners with the public in each aspect of the decision, including the development of alternatives and the identification of the preferred solution. The MPO looks to the public for direct advice and innovation in formulating solutions, and incorporates the public's advice and recommendations into the decisions to the maximum extent possible.

A fifth description focused on public participation processes designed to empower the public to make decisions to be implemented by the MPO was not selected by any of the responding MPOs. The descriptions that were selected, however, again suggest a commitment to ongoing, interactive relationships between the public and the MPO for purposes of sharing information, forging decisions, and gaining consensus.

The challenges of developing and implementing an ongoing interactive relationship with the public with an enterprise wide focus, however, are evident in the responses to questions focused on knowledge sharing and diversity. Regarding knowledge sharing, respondents were asked to identify tasks conducted to improve knowledge sharing with the public. The following three tasks were most prominent in the responses:

- To organize and prepare for events in which the public is invited to participate.

- To research and contact members of organizations and the general public to ensure participation.

- To educate the public by gathering, synthesizing and presenting shared information.These actions are vital components of gathering information from the public

and making information available to the public. They are primarily focused, however, on facilitating attendance in meetings. Efforts to synthesize the material gathered in public participation forums and share that information with the public, however, begins to establish the two-way dialogue required for an ongoing relationship with the public.

Respondents reported similar early efforts to build a regional approach to public participation through knowledge sharing within the MPO and among member agencies in the region. In 54% of cases, MPO respondents shared public input within the MPO by written report or informal discussion; 48% reported sharing P2 processes at a regional level with member agencies; and 54% reported sharing P2 techniques. While the case studies provide some additional detail on ways in which this knowledge sharing at a regional level can take place, it is not clear from the survey responses the degree to which the reported efforts are informal (random or occasional) or formal (shared at specific points in time or following key public participation activities).

With respect to MPO efforts to enhance diversity, respondents were asked if the MPO incorporated a written definition of diversity as a basis for their public participation efforts, and the factors considered in determining diversity. With respect to a written definition:

- A total of 70% of MPOs (23 out of 33 who replied this question) do not have a written definition of "diversity."

- Six MPOs said that they have written definition of diversity, although no definition was found in their planning documents.

- Some of the MPOs follow Title VI of the Civil Rights Act of 1964 to define diversity.

With respect to the factors relevant for diversity, race, age and ethnicity were most frequently cited. The majority of responding MPOs consider seven or eight different factors in defining or addressing diversity. The top ten factors considered in the definition of diversity and the percentage of responding MPOs identifying each factor are:

- Race (84%)
- Age (84%)
- Ethnicity (81%)
- Income level (75%)
- Primary language (69%)
- Physical ability (69%)
- Geographic location of residence (56%)
- Means of transportation (56%)
- Gender (47%)
- National origin (38%)

In addition, MPOs were asked to report the most effective and non-effective means to communicate with the public to promote diversity. Among the most effective means of communication reported were phone calls or meetings with community leaders (reported by about 47%), personalized letters or e-mails to community leaders, organizations, and selected individuals (about 47%), and phone calls or meetings with selected individuals (nearly 41%). What is not evident from the responses in the survey is the extent to which these efforts are a new start with each public participation activity, or whether these efforts reflect ongoing connections with community members, leaders and organizations that grow over time. Interestingly, these more personal approaches to enhancing the diversity of participants in public planning efforts, while time intensive, were reported to be more effective than posted public notices, paid print advertising, and press releases—identified by 56%, 50% and 34% of respondents as the least effective means, respectively—to communicate with the public to promote diverse participation.

In addition to communication efforts to get the word out about public participation activities, MPOs were asked to report the most effective participatory techniques for promoting diversity. The following three measures were reported most frequently as useful in promoting diversity:

- Meetings held at locations throughout community served
- Use of small group discussions to facilitate communication among participants
- Translation of informational materials MPOs generally use for public meetings, outreach, and information dissemination to encourage diverse participation.

These efforts address concerns of convenience by reducing travel time, and comfort levels in attending meetings organized by a government agency by holding small group discussions and providing information in additional languages. Such considerations are an indirect assessment by the MPO of the incentives members of the public may have for participating or deciding not to participate. When asked to consider the use of incentives explicitly, only a quarter (8 out of 32 MPOs) reported offering incentives to individuals to participate, while one third (9 out of 30) reported offering incentives to organizations to encourage participation. Some formal incentive

programs are effective for a few MPOs while not so effective for others. Respondents also reported on the effectiveness of the incentives that were offered. At the individual level, these included:

- Selection to serve on a committee, task force, etc. (4 MPOs).

- A stipend for participation (3 MPOs).

- Education and training opportunities (3 MPOs).

At the organizational level, these incentives included:

- Establishment or strengthening of a relationship with the MPO (6 MPOs).Recognition of the organization in reports or documents (3 MPOs).Selection to serve on a committee, task force, etc. (3 MPOs).The least effective incentive programs identified for accomplishing

individual participation were education and training opportunities (2 MPOs), provision of childcare (1 MPOs), and direct provision of transportation (1 MPO).

Responding MPOs noted that broad, diverse, public input and involvement are important outcomes of the planning process, just as ridership, level of service, and project visibility in the planning process are important outcomes. Effective communication and information exchange was considered the most important indicators of quality. Respondents identified the following forms of communication and information exchange as representative of quality planning outcomes:

- The use of email lists, hard copy mailings, web sites, public forums, focus groups, surveys, and advertising.

- Making information and planning materials more accessible by providing non-English versions.

- Re-writing plans to include less technical language, and using visualization techniques to present planning data,Using game playing simulation methods as part of scenario building.Remote viewing of MPO meetings and informational sessions through webcasts and other recorded media.

Finally, most of the MPOs measure planning effectiveness both quantitatively and qualitatively. Others assess the quality based on the ability of planning efforts or the ability of the final plan. The following Figure 3.1 displays the reported methods:

Figure 3.1: Methods for Measuring Planning Quality
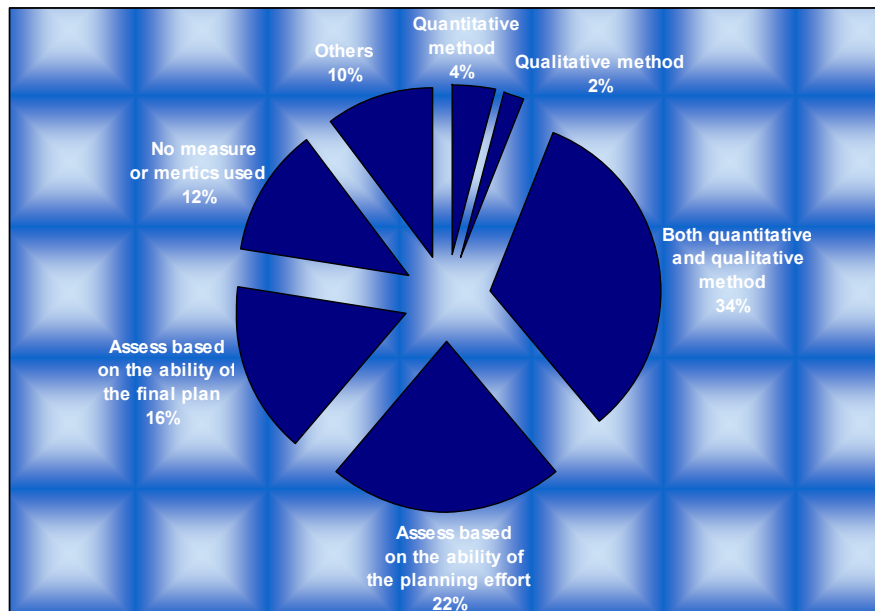
Figure 3.1 text version: Using a pie chart, this figure compares the various methods MPOs use to assess planning quality.

Summary of Survey Results

The survey results demonstrate sophistication on the part of responding MPOs to reach out to the public for purposes of educating the public about the work of the MPO and the planning process, and in their efforts to foster public participation in the governance activities of the MPO—such as serving on committees. MPOs report the use of personal communications to individuals and groups to promote diverse attendance at meetings, and the use of small forums, materials translated into languages other than English, and meetings held within communities to facilitate diverse participation in meetings, as well.

Efforts to build a solid foundation for sharing information with the public, and receiving information are also reported. Similarly, some MPOs have experimented with direct incentives to encourage participation, while the consideration of alternative forums and small group discussions, for example, are creative incentives for encouraging participation.

In general, the respondents indicate broad support for robust participation processes that generate ongoing interaction with the public, and a regional enterprise wide perspective, particularly in the responses regarding the overall public participation process. The responses to the diversity and knowledge sharing questions, however, emphasize the early stages of development. It is not clear from the responses if the knowledge sharing about public participation processes at a regional level is informal or sporadic in its dissemination, or regularized and consistent. This agency to agency sharing of information is time intensive, and often requires additional effort beyond the day to day work of MPO staff. Identifying ways to build in, or facilitate this information exchange at a regional level could be beneficial.

3.2: Case Studies

This section presents the three case studies featuring three MPOs:

- The Community Planning Organization of Southwest Idaho, known as COMPASS (representing the greater Boise area),

- The Delaware Valley Regional Planning Commission or DVPRC (which covers the greater Philadelphia region and portions of New Jersey), and

- The Mami Dade Metropolitan Planning Organization (covering Miami-Dade County, Florida).

These MPOs were selected for their efforts to enhance diversity and knowledge sharing in public participation processes as a means to forge on going, long term relationships with the public and a public participation approach that is regional, or enterprise wide. In some instances these efforts are at the beginning stages, and in others more advanced. We first present summary findings across the three case studies, followed by the individual cases.

3.3: Summary Findings

Summary findings in the three case studies are illustrated by the following:

- MPO staff members involved in public participation in the three locations are engaged in early to more advanced efforts to build information and support networks among public participation staff—both with other MPOs and among MPO member agencies—for the purpose of facilitating knowledge sharing about public participation efforts and to enhance the overall processes of public participation. The relationships and communications networks linking MPO committees, staff, citizen groups, advocacy organizations, public and private sector organizations as well as the decision-making hierarchy are varied and complex in each MPO. The challenge for MPOs is to maintain consistent contact with these entities to ensure ongoing participation, and to continuously evaluate the patterns of communication to ensure diversity and quality knowledge sharing for effective regional transportation planning. The Public Involvement Management Group highlighted in the Miami Dade case study is an example of an advanced effort to share information at a regional level.

- The three featured MPOs engage the public through a variety of activities that present different challenges for generating diverse participation and fostering and applying knowledge shared in the planning process. Ongoing efforts to educate the public about the planning process, and to involve the public in the regular governance of the MPO, for example, present participation and knowledge sharing challenges that differ from processes to engage the public in long range planning, or around specific transit projects. This finding is examined more thoroughly in Chapter 4.

- Two MPOs in our case studies have a citizen advisory committee appointed by MPO board members or staff, while the other determines membership on a volunteer basis. These distinctions can have implications for the representativeness of the citizen advisory committee, as well as the priorities and agendas pursued by these committees. The role of citizen advisory committees in MPO board-level decision making appears to vary depending on the planning issues at hand, *e.g.*, short term or long term. Often the role is responding to actions or initiatives by the Board, and putting forth proposals to reconsider TIP actions or issues related to the long-range plan, but this can shift to a more proactive role presenting suggestions for future initiatives and board actions.

- Engaging the public in some aspects of transit planning and transit-oriented development presents particular challenges to MPOs in our study. The challenges are complex. One key factor is the tangible nature of project-focused or corridor-focused transit planning, land use concerns, and consequently the potential NIMBY (Not In My Back-Yard) orientation of the public response that can arise. Another key factor is the extent to which a transit system is built out or developing. A region such as Miami Dade that is continuing to develop and expand its transit system can face opposition to new projects, versus a region such as the Delaware Valley which is largely built out, and hence is not necessarily the predominant solution to congestion, but rather a piece of many approaches. Identifying techniques in both circumstances for encouraging public participation that furthers a regional perspective is the challenge.

- The three MPOs actively use technology to inform and engage the public. Each have a developed and accessible web site that provide extensive information for the public about the work of the MPO, dates and times of meetings, a wide variety of plans and documents related to the planning process, the results of public participation planning efforts, and information about the ways in which the public can become involved. In addition, Miami Dade broadcasts the citizen advisory committee meetings on a cable station, as well as the MPO Board meetings.

3.4: COMPASS: Engaging the Public through Educational Innovation

The COMPASS case illustrates innovation in the wide variety of techniques implemented by the MPO to foster knowledge sharing across the region, and to enhance diversity. The variety of techniques is instructive in demonstrating the varied incentives incorporated to support public participation.

The Community Planning Association of Southwest Idaho (COMPASS) is an agency of local governments working together to plan for the future of the greater Boise region. COMPASS has served as the MPO for Canyon County since early 2003 and for northern Ada County since 1977. **Figure 3.2** illustrates the jurisdictional boundaries of COMPASS.
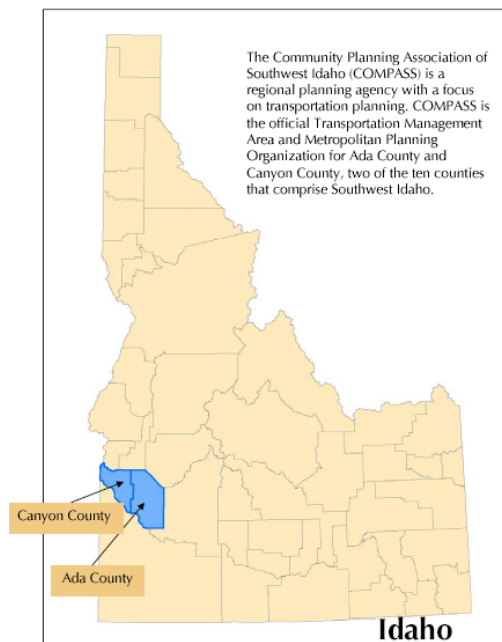
Figure 3.2: Map of COMPASS Jurisdictional Boundaries
Source: COMPASS Strategic Plan FY07

Figure 3.2 text version: Using an outline map of Idaho, this figure shows the location of Ada and Canyon Counties in the southwestern portion of the state.

Overview of Key Public Transportation Planning Issues

Several key public transit planning issues confront southwestern Idaho today. These include the challenges of growth, finance, and inclusiveness.

The Challenge of Growth. According to COMPASS, the Treasure Valley population has increased 44 percent since 1990 and it is estimated that by 2030, the area's population will grow another 60 percent, from slightly over 500,000 people to more than 800,000 people.[5] The U.S. Census Bureau in 2000 ranked the Boise MSA as the fourth fastest growing metropolitan area out of 276

---

[5] COMPASS Brochure. Accessed October 27, 2008.
http://www.compassidaho.org/documents/about/COMPASSbrochure.pdf

metropolitan areas nationwide.[6] This means that as the region grows in population, housing and jobs, there is a complementary need for a more advanced transportation system that includes both roadway and transit elements.

The Challenge of Finance. Not surprisingly, compounding discussions of the need for these upgrades to the existing transportation network is the issue of how to pay for them. Idaho's state constitution does not allow local jurisdictions to adopt taxes, and local jurisdictions in the COMPASS region are unable to substantially finance needed transportation improvements out of local budgets. Efforts have been made in recent years to advocate for a local option sales tax that would fund transportation improvements (including public transit), led by localities, community and business leaders. An initial effort to pass such legislation at the state level stalled but is still ongoing. Reports from interviewees indicate that Idaho's strong independent, self-reliant culture that prefers small government with minimal taxes presents a challenge to advancing and approving such legislative authority.

The Challenge of Inclusion. With population growth comes growing diversity. Finding ways to include growing numbers of residents who may be low-income, older than age 65, have a disability or other special needs, as well as ethnic, racial and social diversity will be a long term planning challenge. Table 3.1 presents population statistics for the COMPASS region.

Table 3.1: 2006 Ada and Canyon County Population by Category Source: U.S. Census Bureau[7,8]		
	Ada County	**Canyon County**
Population (2006, Estimated)	359,035	173,302
White persons, 2006	94.2%	95.6%
Black persons, 2006	1.1%	0.9%
American Indian and Alaska Native persons, 2006	0.8%	1.0%
Asian persons, 2006	2.0%	0.8%
Native Hawaiian and Other Pacific Islander, 2006	0.2%	0.2%
Persons reporting two or more races, 2006	1.7%	1.6%
Persons of Hispanic or Latino origin, 2006	6.0%	20.5%
White persons not Hispanic, 2006	88.8%	76.1%
Persons 65 years old and over, 2006	9.6%	10.1%
Person with a disability, ages 5+ (2000)	40,872	21,529

---

[6] Boise City: Description of the Boise City Community. Accessed October 27, 2008.
http://www.cityofboise.org/financial_management/BudgetOffice/FY02FY03/BudgetExcerpt/boisedescription.pdf

[7] State & County QuickFacts, Canyon County, Idaho. Accessed October 27, 2008.
http://quickfacts.census.gov/qfd/states/16/16027.html

[8] State & County QuickFacts, Canyon County, Idaho. Accessed October 27, 2008.
http://quickfacts.census.gov/qfd/states/16/16027.html.

MPO Governing Structure: Board, Staff and Committees

The 18-member COMPASS Board of Directors consists of elected officials from local jurisdictions who are COMPASS member agencies and non-elected members representing organizations with a special interest in transportation issues. There are also three ex-officio members of the board, including the Governor's Office. (*See **Table 3.2** for a complete list of board members, and Appendix 4 for additional details about the committee's purpose and functions.*)

COMPASS has 19 staff members in all.   The COMPASS communications coordinator is responsible for coordinating the planning and implementation of the agency's public participation efforts, working in concert with senior members of the COMPASS staff, the COMPASS Board and the Public Participation Committee. The Communications Coordinator reports directly to the agency Executive Director.

COMPASS has eight committees that work to carry out the agency's mission.   The Public Participation Committee (PPC) is comprised of individuals who reside in Ada and Canyon counties. Members may represent themselves, an area of interest and/or groups, according to the PPC bylaws, and also should represent a range of interests.   Some PPC members also serve on COMPASS technical committees. The responsibilities of members include:

a. "Solicit and consider input from groups concerned with, interested in, or affected by transportation plans or programs, including the traditionally underserved;

b. Disseminate information about plans or decisions to the community;

c. Attend and/or assist with public meetings and outreach opportunities (active participant);

d. Act as an ambassador to the community for COMPASS;

e. Ensure that the public is involved in planning process;

f. Provide recommendations to COMPASS for updates to the "Public Involvement Policy" and working public involvement plans;

g. Develop associations with other organizations interested in transportation issues, serve as a liaison between the PPC and other organizations to which the member belongs, and . . . keep the PPC informed about concerns from other organizations."[9]

Table 3.2: COMPASS Board of Directors		
Source: COMPASS		
General Members		**Special Members**
Ada County	City of Middleton	Boise State University
Ada County Highway	City of Nampa	Capital City Development Corporation
District	City of Notus	Idaho Department of Environmental Quality
City of Boise	City of Parma	Independent School District of Boise City
Canyon County	City of Star	Idaho Transportation Department
Canyon Highway	Golden Gate Highway	Joint School District #2 (Meridian)
District #4	District #3	Valley Regional Transit
City of Caldwell	Nampa-Highway	
City of Eagle	District #1	**Ex-Officio**
City of Garden City	Notus-Parma Highway	Central District Health Department
City of Kuna	District #2	Office of the Governor
City of Meridian		Greater Boise Auditorium District

[9] Public Participation Committee By-laws (Approved as Amended January 23, 2006). Accessed October 27, 2008. http://www.compassidaho.org/documents/people/ppc/Bylaws.pdf

MPO Activities that Engage the Public

COMPASS has used a variety of methods for engaging the public in planning efforts, although not all have included a public transit element. Nonetheless, they are noteworthy because they demonstrate the full range of practices that this MPO has deployed in support of its larger mission as the regional body responsible for system-level and project-level transportation planning, which includes both roadway and transit components.

These methods can be examined in terms of efforts to enhance knowledge sharing and diversity. They also illustrate a range of incentives employed by COMPASS to foster public participation at the regional level. *See **Table 3.3** for a list of methods and incentives employed by COMPASS.*

Knowledge Sharing. Development of the COMPASS long range plan, Communities in Motion, was built using a variety of techniques to gather knowledge from the public to assess concerns, needs, and aspirations for transportation in the region. Other techniques aimed at educating the public are also discussed here. The techniques can be understood in the context of three types of knowledge sharing practices: techniques aimed at gathering public input on transportation issues; techniques aimed at sharing information with the public about the planning process; techniques that demonstrate the incorporation of public knowledge shared in different forums.

Community cafes. The café forum allows members of the public to express their concerns and needs in a less structured format. In the cafes, people sit at roundtables with a moderator and a scribe. There may be several rounds of discussions, and with each new topic, participants move to other tables so that each time, there is a new and unique group at each table. The moderator and scribe are the only individuals who do not switch tables, which allow continuity for reporting purposes. According to an MPO official, the cafes were particularly valuable because obtaining this baseline information allowed the MPO staff to build on it with workshops and other activities that contributed to the creation of its long-range Communities in Motion plan.

Hosted meetings/"meeting in a bag". This creative technique provided a means by which people who don't or can't attend public meetings also could participate in the Communities in Motion planning process. The key was having a host who would be willing to invite colleagues, friend or neighbors together at their home or office to discuss the plan concepts, ask questions and provide input. The term "meeting in a bag" was used because each host received a bag of materials, complete with meeting agendas, a short video introducing the plan, maps, feedback forms and other associated meeting materials. An MPO planner was on-call during the time period the meetings were held to answer any questions or clarify what was expected.

Although the concept was originally developed by COMPASS to respond to the interests of the business community, it is one that could be used to broadly engage community members. As two of our interviewees noted, stratified public participation efforts such as the meeting in a bag concept (where different approaches are used based on varying levels of individual involvement) can be effective for involving individuals who traditionally are less active in MPO activities.

> "We had—oh, gosh, probably 120 or 130 people ended up participating throughout the Treasure Valley in those hosted meetings at the business level … because the business community had never really been engaged in this before. And there might have been 40 meetings that we ran over the course of the summer, that summer of 2002 and maybe part of '03.And [we] transcribed all that, all the feedback, what their needs were, did a report," said an MPO official. Following the hosted meetings, COMPASS met with the regional business group that spurred the idea at least twice, for a follow-up presentation or "report out" and also a breakfast meeting in order to communicate with participants "where we were with the planning process, where some of their needs were heard, [and to] identify where they would fit in."

Exit polling. COMPASS has conducted exit polling after its community events, in order to gauge participant's feedback on the topic and format of the gathering. Staff members or consultants conduct a short in-person poll with members of the public to gather feedback that ordinarily might not be captured in meeting feedback forms. For example, reports from two exit polls at COMPASS events revealed a "desire from the public to not speak to necessarily staff and a consultant, but to speak to their elected officials, whether it be the mayor or a commissioner or to actually speak with them directly," said Rosemary Curtin, a public involvement consultant to COMPASS.

"Engaging" Open Houses. COMPASS staff and their consultant Rosemary Curtin make a special effort to make each COMPASS event that involves the public as distinctive as possible. "A meeting is a meeting but do we have a creative twist, do we do it outside, can we serve them lunch, can we do any kind of a creative twist to it to just say, 'Oh, I don't want to miss this meeting,'" said Rosemary Curtin. "And I think COMPASS works at, or allows, as a consultant, they're more willing to allow me to do non-traditional activities. In fact, they encourage it."

For example, a recent COMPASS Open House event in downtown Boise was held in a vacant retail space over a nine-hour period. The location was specifically chosen because of its proximity to the area for a proposed multimodal center. The event consisted of a series of stations that described the potential elements of such a facility, along with samples of various designs for multimodal centers. Each station had its own immediate response form so that participants could write down the likes and dislikes.

Attendees also ranked or determine what they liked, "what was the most important or what was not important to them." Comments were deposited in the comment box for each respective station, according to COMPASS staff. Participants then "went to the next station with the maps of the proposed sites and then at that point we just had sticky notes, certain colors what they like or do not like about each site," said an MPO official. Once attendees wrote out the sticky note, they posted it on the map or wall. Said this official, "There was this huge wall of these big maps and then stickies all over. And then all of those were transcribed so you could get a sense of what people liked or did not like about each site."

According to Curtin, the intent of the meeting was to specifically focus attendees on "what do you like about this location and what do you dislike about this location. And that's as specific as our comment sheet gets so that we can go back to the leaders and the staff and say, 'Here's all the things that people dislike. Can you address these? Here are all the things that they liked, which means they really value these, please keep them.'" Special effort is made "to really be as specific to the project as possible. And, yes, we have the other comments and there's some regional questions that we always ask" but at this event it was important to "get right to the purpose of the public input of it."

Educational forums. In addition to techniques that gather information from the public around a variety of topics, knowledge sharing techniques are also aimed at providing the public with information about the planning process. Starting with the Communities in Motion long-range plan, COMPASS sought to provide the public with greater context for the complex topics that often are discussed as part of such efforts. "I tried to get speakers and education pieces that fit with what we were hearing out of Communities in Motion because a lot of people say, 'We do not really get this. I do not know what all this means,'" said an MPO official.

The programs, held in the evening, often are cosponsored with other area planning or transportation agencies. The forums also include a social component that precedes the evening's educational program, where members of the public can mingle and talk with one another as well as with MPO board members and staff. The sessions are recorded and transcribed and posted on the COMPASS website for access by those who were not able to attend the event in person.

Occasionally, these educational opportunities are coupled with other COMPASS events, such as an open house. The intent is to make each event the MPO hosts appealing by being somewhat different, rather than the same standard events that people are accustomed to being invited to attend. Frequently, the following day has featured a staff-only training session, where regional planners can engage with well-known experts on the nuts and bolts of the topic at hand.

	Table 3.3: *COMPASS Public Participation Methods/Practices*		
Goal	*Knowledge Sharing*	*Enhancing Diversity*	*Participatory Incentives*
Techniques/ Practices	▪ Community cafes ▪ Hosted meetings/ "meeting in a bag" ▪ Exit polling after public meetings ▪ "Engaging" open houses ▪ Educational forums ▪ Reports reflecting input received at each event ▪ Implementation planning fair	▪ Outreach at Hispanic Cultural Center, senior centers and low-income individuals ▪ Materials translated into Spanish ▪ Attend/have booth at religious fairs	▪ Location/site for meetings ▪ Language accessibility ▪ Building long term relationships through follow up information ▪ Decision maker opportunities

COMPASS staff reports consistently good participation at the forums. "I think there is a segment of the population that really—they are interested; they are concerned; they are involved, and they want to learn," said an MPO official. "And that knowledge sharing has been really rich because now they have been able to engage in that conversation and show up and they talk to other people about it."

Reports reflecting input received at each event. Effective knowledge sharing also entails reporting back to the public to demonstrate the incorporation of public input into long range plans and project specific plans.

COMPASS compiles and posts reports of the input gathered through its public participation events. This provides transparency to the agency's public processes and ensures that what was heard is accurately reflected in what is considered by the COMPASS board and staff as plans and projects are developed and decisions are made. "And so in our newsletters or whatever we do to follow up from the public meeting," said Curtin, "we really identify what we heard and how it was used or how it influenced some decision. And maybe they didn't or, you know, they considered it but it didn't change the decision but at least, they heard it and considered it."

The ability to know what input has been received is made easier by a database of comments submitted that COMPASS maintains. The database allows staff to search it to see "how many comments on what subject," according to Pat Johnson, chair of the MPO's Public Participation Committee. "So people can go into [the database and] see 'how many people attended?' 'What were the overall themes of these meetings?' 'What were the comments, individual comments that people had?'"

As a result, members of the public can confirm "that—'yes, it's in there,'" said Johnson. "They know that; I know they've got my comment. And then what they have been doing is informing people, 'You know, this is what we heard, this is what the majority of you said.'" COMPASS then uses the information to inform planning efforts as well as to invite those who have commented to meetings or events related to their topic of interest.

Further, according to Johnson, COMPASS does "a really, really good job of trying to map back to the event comments and then giving people . . . [access so they can] see whether or not their

comments were listened to or if their comments weren't something that could be used as a contribution to the process."

Implementation Planning Fair. COMPASS held this event, formally titled "Putting Communities in Motion into Action," as a follow up to the Communities in Motion long-range planning effort. Held on a Saturday, the goal was to inform and "thank the people that had participated, give them a chance to get a copy of the plan." The document provided to the public at the fair served a public information purpose, where members of the public could "come in, to talk to planners at all the agencies," said an MPO official. "They could hear from ITD [Idaho Transportation Department] and ACHD [Ada County Highway District] and the transit agencies, the city planning staff, what is going on in their regions and what they are doing."

A secondary, important benefit to the fair was that staff said the event "was the first time that they had a really informal place to talk with colleagues at other agencies throughout the day," said the MPO official. The event was a great success, attracting a couple hundred attendees over the course of the day. "We just had great, great feedback from it. It turned out really well."

This official described the day's agenda: "We had 12 sessions throughout the day, some dual track sessions on key findings and strategies coming out of Communities in Motion; everything from land use to air quality to open space and the last session of the day was politics and reality. We brought in the politicians and said 'We want to know what you say and what is real.' And they just did this great session and that was a really packed house." COMPASS also showed a movie it had produced a few years back related to the planning effort. Refreshments consisted of cookies "that matched each square of Communities in Motion" logo when viewed collectively.

Enhancing Diversity. Another important category of participatory methods or practices are aimed at enhancing diversity in the planning process. Because MPO activities are funded with public dollars, long-range and project-level plans necessitate that the agency make efforts to be as inclusive as possible in including all aspects of the public in its planning activities. Particularly since public transit serves those in society who are the most vulnerable or at-risk, MPOs under federal and state legislation and regulations must make concerted efforts to include those who may be most adversely affected by potential decisions. Transit planning has special force in regard to members of Environmental Justice (EJ) communities, defined as "those persons traditionally underserved by existing transportation systems, such as low-income or minority households."[10]

Outreach at Hispanic Cultural Center, Senior Centers and Low-Income Individuals. COMPASS has made a concerted effort to conduct presentations or workshops at Canyon County's Hispanic Cultural Center, according to several interviewees. (As noted previously in this case study, about 21 percent of Canyon County's population includes individuals who are Latino or Hispanic, which represents the highest concentration of non-Caucasian individuals in the COMPASS region.) Staff have also presented at area senior centers in order to create awareness and garner feedback about planning efforts.

Other efforts include outreach to community service organizations that serve low-income individuals. For example, a Public Participation Committee member who volunteers with the area Catholic relief organizations facilitated COMPASS' attendance at a community dinner, where agency representatives spoke with attendees, shared materials and gathered feedback about needs and concerns.

---

[10] Transportation Planning Capacity Building Program, FHWA/FTA at:
http://www.planning.dot.gov/documents/BriefingBook/BBook.htm#11BB

Materials translated into Spanish. Several COMPASS documents have also been translated into Spanish in recent years, in order to better facilitate the involvement of the area's Latino and Hispanic residents.

Attend/have booth at religious fairs. COMPASS staff members have actively participated in area religious events, including hosting a booth that provides information about COMPASS' purpose, mission and events and opportunities for involvement. COMPASS staff also report hosting a booth at the county fair as a means for creating awareness of the agency and its activities among the broader public.

In the recent past, a formal structure was established for knowledge-sharing among agency staff across the MPO membership who are responsible for public participation activities, but the group met sporadically and has since dissolved. Such information now is shared on a more informal basis.

Incentives

Participation in a public event may be limited by the most basic disincentives. People don't often have time to attend a meeting given work and family demands, they may not have transportation to an event or child care, they may lack information about the process and the role of the public, or they may be disillusioned with government. Similarly, individuals may be motivated to attend a public event or participate in some way because of a variety of incentives: professional, political, economic, social or problem-based.

COMPASS' participatory efforts demonstrate several examples of how the organization has effectively created different kinds of activities that support different incentives for participation, with particular emphasis on fostering diverse regional participation. Meetings held in a variety of settings provide opportunities for participation close to home, or in a setting that is familiar; translated materials provide information about the planning process to a broader audience; meetings that feature elected officials provide members of the public an opportunity to meet their representatives and participate in the planning process; and forums that build on earlier participatory activities begin to foster long term relationships with the public.

The MPO may benefit from varied approaches to participation, by encouraging ideas and feedback that can enhance the quality of planning. The benefit of a robust public involvement process means that "occasionally, you get ideas that you would not have thought of on your own," said one MPO staff member. These ideas may in turn add value to the quality of planning, this official said, if people can "see the sense of it; they might not totally agree with it but they can see how we got there." Similarly, an understanding of the trade-offs involved is considered a value-added by this official, as well as a corresponding willingness to pay for it.

Public Participation Challenges

Despite the success of COMPASS in promoting a number of successful approaches to public participation, COMPASS interviews identified seven overall ongoing challenges to engaging the public. These include:

1. *Encouraging participation in long-range planning.* As one MPO staff member stated, "it is easy to get people to get involved if that road is going through their backyard. It is easy if something is immediate but this long range piece is bigger and more ethereal."

2. *Resource constraints.* The constraints of limited funding were a common theme in at least interviews with public participation practitioners, particularly as it related to effort to create

broader awareness of MPO participatory opportunities and to further enhance outreach to traditionally underserved populations in the area.

3. *Actively engaging a diverse cross-section of the community.* As noted in #2 above, resource constraints of staff time and funds have affected the degree to which the MPO has been able to more broadly engage diverse residents of the Treasure Valley. However, MPO activities that have been pursued have reported mixed success, perhaps in part because of the limited time and attention available with public participation staff of one person and occasional consulting support. Several volunteers on the MPO's Public Participation Committee have supported outreach efforts to those traditionally underserved. The MPO's desire and need to engage a diverse cross-section of the community is outweighed by the available resources.

4. *More lead time to promote public involvement opportunities.* Interviewees indicated some frustration with not having enough lead time to prepare and promote events, in order to engage a broader and larger number of residents in MPO processes.

5. *Matching expectations with resource realities.* A related challenge to #4 is the challenge of matching MPO expectations with resource realities. Budgets often fund large amounts for engineering services and a significantly much, much smaller proportion of dollars to public participation efforts. As one interviewee said, "ideally, again, it would be to have those kinds of resources that we could put in that process and then systematically build it out in a way that we get different ways people learn and different ways people want to give input."

Another interviewee expressed the importance of overcoming this challenge in this way:

> "I have really learned that the level of effort you put in to getting public input is proportional to what you get out of it. So if you have a high level and you put a lot of effort into it, what you get out of it is proportional.... If you make it a priority for a project, then you staff it and you fund it, and you go out and do a process that is a high level of effort, the input you get back for your elected officials is much greater than—it's proportional; level of effort is proportional to what the input you get at the tail-end of it. You know, you can't just throw up a public meeting and expect people to come and expect valuable input. But if you really conduct a well-thought out, planned, administered process, at the end of the day, your input from your public is of much more value."

6. *Balancing between different interests and needs.* Balancing between different interests and needs is a difficult challenge for MPOs in general, which also was reflected in several Boise area interviews. As one MPO staff member said, "it's a challenge to be congruent with many different publics that the MPO interacts with." This alignment concept that this staff member alludes to underscores the importance of education, information, responsiveness and inclusion in the MPO's participatory processes.

7. *Creating understanding of the purpose and role of the MPO.* At least two interviewees expressed the ongoing challenge of creating public understanding of the MPO's purpose and role. Further, there is also a gap in understanding of the MPO's purpose and role as a planning body and the role of member agencies who implement that plan.

As one MPO staff member said,

> "...there is quite a gap between the planning of something and the actual execution. And there is a difference between the agency that may do a plan that calls for something to be done in the year 1990 and in 2000, it actually occurs under the auspices of a totally separate organization. And a lot of times people do not get that connection." The MPO does not get the "credit" for completing the plan it

authored, although those improvements or plan elements may have been built or implemented. Further, in some instances MPO member agencies or the community itself may or may not have the resources or the political will to carry out a plan authored by the MPO. Interviewees in the Boise area, for example, expressed concern that projects that have been voted on by the MPO board, comprised of elected officials, are not being prioritized or implemented by those officials in their respective localities, given that the MPO does not possess the resources necessary for carrying out an approved plan.

Summary Findings: COMPASS

COMPASS has a history of innovative public participation activities that seek to actively engage a range of stakeholders in the Treasure Valley. The sophistication of their approach is based on activities that support a range of incentives to participate, enabling stakeholders to make social connections in the spirit of building community while at the same time adding value as a result of those connections to the MPO's public transit planning efforts.

Through unique educational programs and outreach efforts, COMPASS has demonstrated the importance of keeping the process of engagement fresh and new for stakeholders. Reports from the agency identify what was heard as a result of engagement and how the information has been incorporated or considered in the planning process. Finally, the MPO staff has relied on the expertise and experience of the Public Participation Committee to guide its efforts and ensure that strategies for participation are responsive, inclusive and effective for the MPO's planning processes.

3.5: Delaware Valley Regional Planning Commission*: Strengthening Public Participation through Regional Networks, Regional Educational Strategies, and Innovation in Transit and Long Term Planning*

The Delaware Valley Regional Planning Commission (DVRPC) was selected as a case study for this report because of its innovative efforts to engage the public in transportation planning in general, and public transit, in particular. A robust and engaged Regional Citizens' Committee (RCC), and a highly professional, supportive staff that works to continuously enhance public involvement provide the foundation for public participation. Recent development and implementation of the "Dots and Dots and Dashes game," featured in this report, provided an innovative method for drawing in public participation and soliciting input that was effectively applied to transit and transportation planning efforts. The mature transit systems of the region present planning challenges that are addressed in the evolving vision for the region.

Since 1965, the Delaware Valley Regional Planning Commission has served as the MPO for a 3833 square mile planning area that encompasses nine counties across a two state region. *Figure 3.3* illustrates the jurisdictional boundaries of DVRPC.
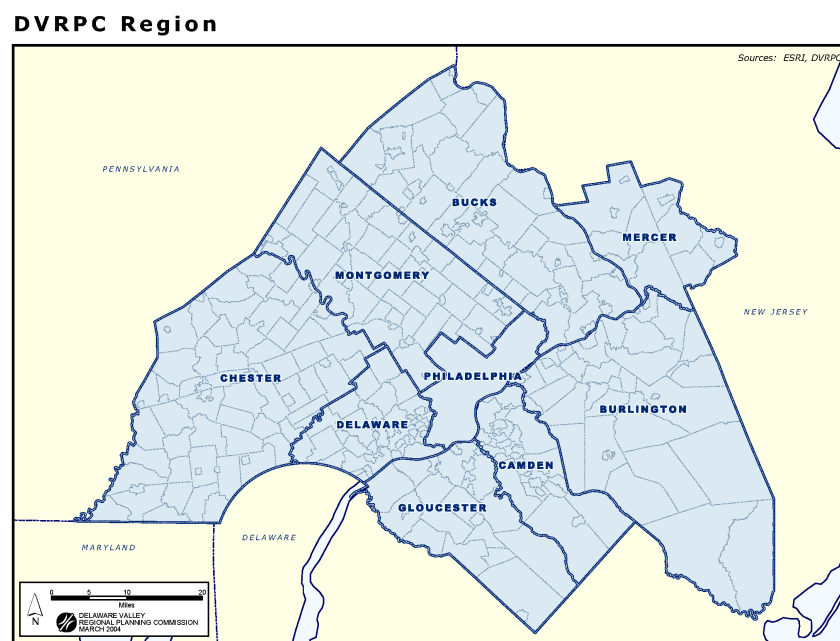
DVRPC Region

Figure 3.3. Map of DVRPC Jurisdictional Boundaries

Figure 3.3 text version: This is an outline map showing the jurisdictional boundaries of the Delaware Valley Regional Planning Commission, which covers the city of Philadelphia and eight surrounding counties.

The DVRPC "is an interstate, intercounty and intercity agency that provides continuing, comprehensive and coordinated planning to shape a vision for the future growth of the Delaware Valley region."[11] Its mission statement captures the breadth of representation among its member governments and the challenges of planning for the region:

---

[11] DVRPC 2007 Annual Report, pg 3. http://www.dvrpc.org/asp/pubs/reports/AR2007.pdf

The Delaware Valley Regional Planning Commission is dedicated to uniting the region's elected officials, planning professionals and the public with a common vision of making a great region even greater. Shaping the way we live, work and play, DVRPC builds consensus on improving transportation, promoting smart growth, protecting the environment and enhancing the economy. We serve a diverse region of nine counties: Bucks, Chester, Delaware, Montgomery and Philadelphia in Pennsylvania; and Burlington, Camden, Gloucester and Mercer in New Jersey. DVRPC is the federally designated Metropolitan Planning Organization for the Greater Philadelphia Region—leading the way to a better future.[12]

Overview of Key Transportation Planning Issues

Several key public transit planning issues confront the Delaware Valley today. These include redistribution of population and jobs, an aging transit and highway system, the need for multimodal transportation systems, and continuing to advance public outreach and public participation.

Continued redistribution of population and jobs. The potential for sprawl is significant in this region. Population statistics for Philadelphia, the largest city in the Delaware Valley, and Camden, across the Delaware River in New Jersey demonstrate the shift of people and jobs from the major urban centers and established suburbs to surrounding counties. The population of Philadelphia declined between 2000 and 2006 by 4.6% to 1,448,394, and the population of Camden declined by 0.7% during the same period to 79,904. The nine surrounding Delaware Valley counties, however, grew during the same period. Glouster County grew the most among New Jersey counties in the region, increasing by just over 10%, while Chester County grew the most among regional counties in Pennsylvania with an 11% increase.

Since 1970, an additional 279,528 acres in the region have been developed while the population of the entire region has only increased by 265,525 people during the same time period. The growth patterns challenge the viability of existing transit and highway systems serving the urban centers and places demands for transit around the edges of the region.

Mature transit and highway systems in *need of extensive repair and rebuilding*. Transit and highway systems across the region are built out but aging in the core urban areas of the region, while the transportation infrastructure in rapidly growing outer suburbs requires enhancement and development. These concerns are represented in the FY 2009 *Transportation Improvement Plan* for the region where the included projects are described as addressing "the redevelopment and renewal of core cities, stabilization and revitalization that support older developed communities, supporting growing areas, and preservation and limited development in our rural areas."[13]

Meeting the need for multimodal transportation systems. In the long range plan released for public comment in May of 2009, "Connections: The Regional Plan for a Sustainable Future," DVRPC states the commitment to a "safe, convenient, and seamless" multimodal transportation system for the Delaware Valley "that includes road, rail, bus, bicyclist, and pedestrian."[14] It is a commitment to the regional enterprise wide perspective, and as the next planning challenge highlights, one that requires the ongoing development of public participation efforts.

---

[12] DVRPC 2008 Public Involvement Plan, pg 2. http://www.dvrpc.org/asp/pubs/reports/07047.pdf

[13] DVRPC, 2008. FY Transportation Improvement Plan pg 15.
http://www.dvrpc.org/transportation/capital/tip/njfinal/2009/volume1-web.pdf

[14] DVRPC, 2009. Connections: The Regional Plan for a Sustainable Future (May 2009, draft).
http://www.dvrpc.org/Connections/DRAFT/Connections_Public_Comment.pdf

Continuing to advance public outreach and enhance public participation in the planning process.[15] The challenges posed by population shifts, mature transit systems, and efforts to enhance the network on a region wide basis will require continued efforts to engage the public in increasingly sophisticated ways to share information and shape solutions, and to sustain the engagement in the long term.

MPO Governing Structure: Board, staff and committees

DVRPC's 18 member board of directors includes elected and appointed officials or planning experts from the 9 counties in the region, and the cities of Philadelphia, Camden and Trenton, representatives from the New Jersey and Pennsylvania Departments of Transportation, representatives of the Pennsylvania Governor's Policy Office and the New Jersey Office of Community Affairs, and representatives appointed by the Governors of New Jersey and Pennsylvania. The Board also includes 15 nonvoting members with an interest in transportation planning issues. **Table 3.4** provides a complete list of member organizations and nonvoting members.

Table 3.4: DVRPC Board of Directors Source: www.DVRPC.org	
General Members	*Participating Non-voting Members*
Pennsylvania Department of Transportation	US DOT Federal Highway Administration (PA Division)
New Jersey Department of Transportation	US DOT Federal Highway Administration (NJ Division)
PA Governor's Policy Office	U.S. Department of Housing and Urban Development Region III
NJ Department of Community Affairs	
PA Governor's Appointee	Southeastern Pennsylvania Transit Authority
NJ Governor's Office	New Jersey Transit Corporation
Buck's County, PA	Delaware River Port Authority
Chester County, PA	Port Authority Transit Corporation
Delaware County, PA	Federal Transit Administration, Region III
Montgomery County, PA	US Environmental Protection Agency, Region III
Burlington County, NJ	US Environmental Protection Agency, Region II
Camden County, NJ	
Gloucester County, NJ	Pennsylvania Department of Environmental Protection
Mercer County, NJ	New Jersey Department of Environmental Protection
City of Philadelphia	
City of Camden	New Jersey Office of Smart Growth
City of Trenton	Pennsylvania Department of Community and Economic Development
	Regional Citizen's Committee

---

[15] DVRPC. Long Range Plan. http://www.dvrpc.org/LongRangePlan/2030/Web2030Vision.pdf

Barry Seymour, the Executive Director of the DVRPC reports to the Board of Directors, and oversees a staff of over 100 individuals leading and supporting the Divisions of the DVRPC including the Office of the Executive Director, Planning, Technical Services, and Administration. Donald Shanis is the Deputy Executive Director. Candace Snyder, Director of the Office of Communications and Public Affairs takes the lead role in developing and implementing public involvement in the work of the DVRPC, and Jane Meconi is the Public Outreach Manager. For a complete staff list see: http://www.dvrpc.org/asp/StaffList.

Numerous committees and support groups that provide expertise, public input, or create a forum for the exchange of planning related information support the work of the Board. For the purpose of this case study, particular emphasis will be placed on the role of the Regional Citizen's Committee (RCC).

The RCC is comprised of individuals who reside in the 9-county region of the Delaware Valley. Membership is open to anyone interested in participating. Some members represent themselves, and others represent an area, group or organization with an interest in transportation planning in the region. The committee meets once a month to review DVRPC plans and policies and to offer comments to the Board of Directors. DVRPC staff facilitates the work of the Committee from the scheduling and support of monthly meetings to the preparation of reports and presentations to the RCC on key topics requested by the Citizens Committee. As described in the DVRPC Public Involvement Plan, "This advisory arm of DVRPC has been established to provide direct, ongoing access to the regional planning and decision-making process."[16] The chair of the RCC is one of the nonvoting members of the Board of Directors and as such presents recommendations to the Board on proposals reviewed by the RCC.

The DVRPC's history is characterized by significant public involvement in the planning process and is reflected in the active role of the RCC. Reflecting on her support of the RCC over the past 23 years, one DVRPC staff member described the citizens' committee as "very engaged, and very intelligent . . . ask[ing] really very carefully considered questions." Central to the level of engagement is the development of the committee over the years, progressing in sophistication in its understanding and use of process, and the relationship of the committee to the Board. Membership on the committee has varied over the years from as few as 10 members in the early days of the Committee to approximately 50 members in the early 1990s. Today, a steady membership of approximately 25 to 30 active members attends the monthly meetings held on Tuesdays at 12:00. DVRPC staff recognizes the committee as Philadelphia centric, with fewer representatives from New Jersey, and there are a significant number of senior members on the committee. However, what is lost in broader representativeness is gained in an understanding of the process that limits the continuous "orientation sessions" required when new members continuously cycle on and then off the committee.

The sophisticated public outreach and involvement processes that are detailed below represent not only the ongoing professional efforts of DVRPC staff to develop public involvement, but active, committed members of the Delaware Valley communities who have long taken the initiative to learn more, participate, and develop a regional perspective to planning.

Public Engagement and the DVRPC

DVRPC has used a variety of activities for engaging the public in planning efforts, although not all have included a public transit element. Nonetheless, they are noteworthy because they demonstrate

---

[16] DVRPC. Public Involvement Plan, pg 5. http://www.dvrpc.org/asp/pubs/reports/07047.pdf

the full range of practices that this MPO has deployed in support of its larger objective to approach planning at the regional, enterprise-wide level and to establish an ongoing long term relationship with the public in that effort.

In this section we present the outlines of a public participation strategy developed by the DVRPC, the efforts of the DVRPC to enhance the diversity of public participation in the transportation planning effort, and the innovative Dots and Dashes project to enhance knowledge sharing between the public and planning professionals, as well as between elected officials and the public in forging transit and other transportation priorities for the Delaware Valley region.

A Public Participation Strategy

Every MPO develops a Public Involvement Plan (PIP) to guide public involvement mandated by a number of Federal statutes including SAFETEA-LU, ISTEA, the Transportation Equity Act for the 21st Century (TEA 21), Title VI of the 1964 Civil Rights Act, and Executive Order 12898 regarding Environmental Justice. Bringing public involvement to fruition, however, is an ongoing evolving challenge for MPOs, and one the DVRPC staff engages daily.

To accomplish effective public involvement, the DVRPC PIP identifies processes related to public involvement—information dissemination, consultation, and stakeholder participation—and specifies a number of tools to implement these processes of public participation. The DVRPC website, publications, resource center, newsletters and speakers bureau, for example, facilitate information dissemination to the public, while public meetings, visioning exercises, and other public forums provide an opportunity for public consultation and participation.

Central to this effort, however, is the recognition that public participation and the processes utilized to accomplish public participation are fluid. As described by one staff member significantly involved in public involvement, "It is almost like a constant juggling act to try to perfect it a little more and see if this works." And another staff member noted "nothing works the same way twice. You have to have kind of a toolbox of things and see if one thing works and if another thing you've kind of mixed in something else and it isn't evolving."

Tools and methods that work in Pennsylvania, for example, to engage the public might not work in New Jersey, or might not work in Pennsylvania under different circumstances or in different neighborhoods. While the tools identified above are an essential part of the effort, the DVRPC staff members also utilize: 1) established regional networks to leverage public participation, and 2) rely upon what we refer to as a regional educational strategy to address the fluidity of public participation and the obstacles to public involvement more generally.

Leveraging Regional Networks. One technique that DVRPC staff utilize to continuously improve upon public participation processes is to tap into regional networks that are preexisting. One staff member involved in public outreach for DVRPC describes the effort in the context of developing citizen participation on the RCC:

> I'm kind of tapping into regional networks that are already preexisting . . . . Sometimes you really do . . . just go out to the train station and try to find Joe and Jane Citizen on the street. And we have done that type of outreach . . . . But I know, doing like RCC outreach which we've been embarking on, I have been kind of trying to pinpoint organizations that would be good starting points that have larger networks. Or maybe represent larger communities in the region and then starting from there and then trickling out further.

At some point, trying to reach out to every citizen in the Delaware Valley Region becomes unrealistic. As one senior staff member explained, partnering with other organizations provides a means to extend the public participation resources of the DVRPC to reach a broader audience.

> But it's more partnering with other organizations. Assuming, and following through to make sure that . . . the organizations we do partner with funnel the information out to more citizens and more organizations. And that seems to me a much more effective way to work; because there are only three of us in public affairs.

An example of this technique is the DVRPC's partnership with the Transportation Management Associations in the Delaware Valley. A senior transportation planner with DVRPC described a TMA as a "public/private partnership that's formed to address and resolve transportation issues of mutual concern." These organizations are supported by the state through a grant program and through membership fees, and overseen by the DVRPC.

The six TMAs in the Pennsylvania side of the Delaware Valley are funded in part by a grant of $192,000 from The Pennsylvania Department of Transportation (PennDot) that the TMA must match through membership fees and other fundraising efforts. This funding strategy has facilitated robust private and public partnerships in Pennsylvania, while in New Jersey a more top heavy state funded approach has tipped the membership balance to governments and has allowed for larger staff support within the NJ TMAs. Both sets of TMAs act as information conduits for the DVRPC, as educational resource for the public regarding transportation options, facilitators for transportation options including car pools and rideshare programs, organizers for community meetings in targeted areas, and networks for responding to traffic and other incidents. The partnerships between the TMAs and the DVRPC is an example of the networks that the DVRPC can leverage to reach a broader public for information dissemination, consultation and stakeholder participation.

A Regional Education Strategy for Long Term Participation. While the effort to leverage existing networks is a key strategy to engage a broader audience, the challenge of developing long-term public involvement through the RCC, or other long term planning issues requires different techniques. The public involvement staff of the DVRPC utilizes a regional education strategy to recruit and retain members of the RCC, in particular. The challenge is twofold.

On the one hand, as Candace Snyder presented the challenge, the issues engaged by the DVRPC are not "impacting the issues that are at the highest level of most people's lists. Their children's education, or their income, or job security, or safety, crime; the issues that really kind of make your everyday life go up or down aren't what we're dealing with." On the other, when people are drawn to the RCC or to planning efforts, there is often a single issue that is the key—a transit project, or a highway project that impacts land value, or a route used by large trucks that impacts the quality of life in a particular neighborhood. The staff must find ways to draw people to the work of the DVRPC, and focus volunteer attention on a regional level rather than a single-issue point of concern to build the foundation of the public involvement effort.

The staff takes on this challenge by focusing an issue "down to the local level." As Jane Meconi described the effort:

> It may be a land-use issue, but that affects every municipality. Or it may be an environmental issue but that again can affect any location in the region.

Referencing two staff presentations at the RCC on the day of our site visit, one on safety audits of roadways, and the other on global warming, Candace Snyder noted that the material was "news you can use."

> Even though those audits were not necessarily in you community, they offered you information about safety in general. And it was global warming in general. . . . And

I think a lot of our presentations are like that, where they really do have the regions scoped. And even if it's not particularly about your community, you can take the knowledge back and implement it.

The effort to facilitate long term participation, in short, incorporates a clear understanding of the incentives that can motivate members of the public to participate on the RCC in particular, but in broader public participation efforts, in general.

Enhancing Diversity

The challenges of drawing individuals to make a long term commitment to the RCC are similar for developing diversity in the governance of the MPO. Staff of the DVRPC consider diversity in terms of racial and ethnic representation, age, transportation needs, and geography. With respect to the RCC, members must be able to attend meetings at 12:00 noon one Tuesday per month. The time allows DVRPC staff to support the meetings and to present reports or findings requested by the committee, but limits the opportunity for people with full time jobs and limited flexibility to participate. The volunteer system encourages participation among people who represent a key group, such as bicyclists, pedestrians, transit riders, or specific neighborhoods, and who have the time to participate during the day. This has challenged the representativeness of the committee with respect to racial and ethnic diversity, as well as geographic diversity. As Candace Snyder frankly noted in reference to the RCC meeting that day:

> Diversity is pretty much is defined by those who are not here, who are not here today. And we have to find a more effective way to get them here. We deal with—I think the constant issue that everyone does, where everybody's got too much in their lives and not enough time. And unless something's going to impact your life directly, now, it's pretty hard to make time for it.

The committee is "Philadelphia-centric" given the location of the DVRPC in downtown Philadelphia. DVRPC staff continues to find ways to enhance diversity in the governance of the MPO, and have made some creative strides in the diversity of broader citizen participation through the implementation of Dots and Dashes, a long term planning exercise. ***See Table 3.5*** *for more details.*

Advancing Knowledge Generation and Knowledge Sharing for Long Range and Transit Planning

Members of the public, just as elected officials, government agencies, and transportation experts, have knowledge that can be vital for effective planning, and through their participation, members of the public can contribute to forging new knowledge about addressing transportation issues and building transportation systems in the future.

Earlier in this report we identified three streams of MPO activities that engage the public: ongoing activities including education and participation in MPO governance (represented by the efforts to build the long-term capacity of the RCC), activities aimed at long range planning for the region, and activities related to transit planning and specific projects. In the DVRPC, Dr. Joseph Hacker, Manager of the Office of Transit, Bicycle and Pedestrian Planning, worked with MPO staff to develop a planning exercise called Dots and Dashes (see text box, below) designed to help members of the public "express their preferences and priorities for public transit capital improvements through the year 2030."

The exercise, funded by a Public Transportation Participation Program Grant from the FTA in 2006,[17] facilitated long range planning in the Delaware Valley by creating incentives for public participation, and finding ways to foster and support deliberative public discussions about the future of transportation within a framework of constraints and opportunities in the Delaware Valley. The exercise also generated a list of transit and transportation projects that can guide planning, and the results of the exercise are posted on the website.[18]

In order to draw on the public knowledge that can facilitate a comprehensive understanding of the region regarding land use, transit, highways, bicycle use, etc., and that extends beyond the priorities of individual projects, MPOs must find ways to facilitate communication about the region that goes beyond reactions to a menu of choices, create deliberative opportunities for generating ideas, and manage public expectations with respect to resources and governing processes as a foundation to the deliberative process. DVRPC's Dots and Dashes exercise was effective in this regard.

First, the game was effective in drawing input for planning priorities from members of the public, elected officials, representatives of the transit agencies, and planning experts. Early in the process Dr. Hacker organized games among internal DVRPC committees with membership from the transit agencies, the TMAs, and so on. The opportunity to play the game was viewed with enthusiasm among representative organizations. As described by Dr. Hacker:

> They were completely psyched. They sent a—when we did it for them, all these groups sent many, many, many extra people to play and I thought that was really heartening. It wasn't just that we had the one of each that might typically make up a meeting but we had, really, a full house of all types of people. So, like say SEPTA I remember for example, they sent not just their capital guys but they sent some operations guys and people that have different perspectives on it because I think they want to know what was going on but they want different people to sort of get in there and be able to express their preferences.

Dr. Hacker also worked with existing groups and organizations to conduct versions of the game, building upon existing infrastructure and memberships to overcome initial public hesitation to participate.

Second, the Dots and Dots and Dashes game gave members of the public an opportunity to generate input for the transportation priorities of the region that went beyond asking citizens to respond to or rank an existing set of priorities. In order to bound the priorities of the players in meaningful ways, the game is constrained by budgets, existing transportation infrastructure needs, a regional perspective, and so on. Dr. Hacker described the role of the game in generating this input:

> So, essentially they were doing our job at a simplified level and they where forced to negotiate with each other in ways that—as opposed to enumeration where you just go and say, "This is what I wanted to do." Now when you do a Dots & Dashes simulation, I can do what I want to do if it's budgetarily constrained and if the other three to four people at my table agreed that that should be our priority. . . . And we thought that it educated them in a simple way, very, very rudimentary way but it also, you know, that was reflected in the choices they made because they realized that if they want to, sort of, take their crazy master plan, they couldn't afford it. And

---

[17] Grant Recipients for the FTA PTP Project 1 Program are listed on the FTA webpage at:
http://www.fta.dot.gov/planning/programs/planning_environment_7742.html

[18] For an overview of the Dots and Dashes game, see the DVRPC link:
http://www.dvrpc.org/transportation/multimodal/transit/dots&dashes/game.htm. For the results of the game click
http://www.dvrpc.org/transportation/multimodal/transit/dots&dashes/events/expanpriorities.htm

they realized that, "Oh, I can't do this and then have this". And that was something that, I don't think that in anything we'd seen before, had occurred.

Third, reflecting on the game results and the execution of the game, the DVRPC has begun to reconsider the way transit is presented in the game, and perhaps in the planning process more generally. Rather than focus explicitly on transit choices, the game could alter the emphasis to incorporate possible land use projects that could support transit. This slight shift in emphasis reflects some of the findings in the analysis of the games that revealed significant time spent examining "system enhancements." "Let's talk about what we can do to enhance the value of those of what's already there. What can we do? What can we reduce?" For example, one suggestion has been not to aim for a car-less development, but to aim for a single car family. Again, as described by Dr. Hacker:

> I think the notion that people chose, in many cases, system improvements over system expansions, speaks the notion that they didn't want to stretch the system, the network, the transit network, to the ends of the counties that they wanted just to improve things where they were. And I think that of itself is a critical land use decision. That's how we been treating it in house.

Finally, the game results have generated some initial sets of priorities that are viewed as preference measures by key agencies such as SEPTA and New Jersey Transit.

In summary, the Dots and Dashes game is a way to not only draw in significant information from the public that might not otherwise be expressed or shared but it's also a way to manage the expectations of the public by putting them in the same constraints that the decision makers of the MPO face. The game is educational as well as generative of long term planning options.

Summary

The history of public involvement in the transportation planning efforts of the Delaware Valley Region is long and strong. The DVRPC continues to find ways to engage the public not only to share information and educate the public about the planning process at a regional level, but to draw upon and incorporate public knowledge that is essential for a holistic approach to planning. As many MPOs have found, the actual incorporation of public input is the most challenging aspect of public participation. The Dots and Dashes game developed by the DVRPC provides one method to overcome the obstacles associated with deeper public involvement.

In the course of addressing broader public participation efforts, however, the DVRPC has found a useful way to engage the public on transit issues as well. The regional perspective generated by the game also facilitates a land use approach to thinking about transit, as well as the enhancement of a multi-modal system that includes transit. This emphasis diminishes the often-combative thrust from the public that can accompany transit development, and channels the participation efforts into a system-wide enhancement effort.

Table 3.5: DVRPC's Dots and Dashes

The following material is posted on the DVRPC web site at:
http://www.dvrpc.org/transportation/multimodal/transit/dots&dashes/index.htm

Dots & Dashes provides an opportunity for Delaware Valley residents and stakeholders to discuss and express their priorities for future investments in public transportation in a fun, hands-on game setting. Each group will end the game with a list and map of future agreed-upon investment priorities that, together with the results of other groups who play, will inform DVRPC's Connections 2035 Long Range Plan and other projects, including a new Regional Transit Vision plan.

How do I play Dots & Dashes?

Dots & Dashes is a unique communicative and consensus-building planning exercise. Participants are broken into groups of five or six. The task of each group is to agree on how to spend Dots & Dashes Dollars on transit projects in the Delaware Valley. Participants then affix game pieces ("dots" and "dashes") to identify preferred transit projects on a game board.

Throughout the game, participants must engage other members of their group in meaningful discussion to negotiate the group's transit priorities.

Why participate?

This is an opportunity to express your opinion on how to best spend available funding for public transit improvements in the Delaware Valley through the year 2030.

Where can I play Dots & Dashes?

Dots & Dashes is a significant component of public outreach related to DVRPC's long range planning efforts, and Commission staff is interested to get the game out to as many individuals as possible.

For a Power Point overview of the game please see:
http://www.dvrpc.org/transportation/multimodal/transit/dots&dashes/TheGame2.pdf

3.6: Miami Dade Metropolitan Planning Organization: Growing Public Participation through Data Base Technology and Collaborative Management

The Metropolitan Planning Organization for the Miami Urbanized Area, or the Miami Dade MPO was selected for this study because of its innovative efforts to utilize data base technology and collaborative management strategies to enhance public participation. The region faces challenges in building transit options for a rapidly growing area with severe congestion problems, and finding ways to enhance public participation in transit planning is a challenge for the MPO. The MPO governing board is made up primarily of members of the Board of County Commissioners, and individual members of the MPO Board appoint the Citizen's Transportation Advisory Committee (CTAC). This presents a distinctive governing structure of the MPO that will be examined in this report.
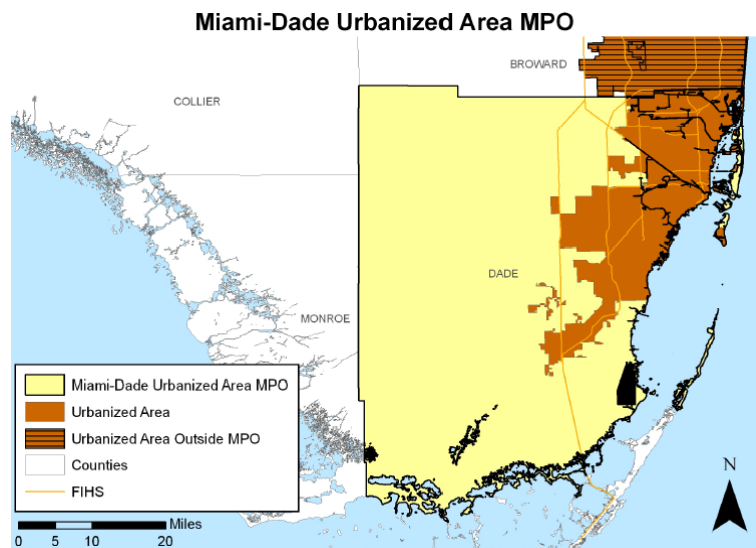

Figure 3.4: Map of Miami-Dade Jurisdictional Boundaries
Source: Florida Metropolitan Planning Organization Advisory Council

Figure 3.4 text version: This is an outline map of the jurisdictional boundaries of the Miami-Dade MPO, which covers all of Miami-Dade County, located at the southeast tip of Florida. The northeastern portion of the county includes the city of Miami and other urbanized areas. The great majority of the county, to the west and south of Miami, is sparsely populated.

Overview of Key Transportation Planning Issues

The Miami Dade area faces a number of key public transit planning issues.

Congestion and extensive commute times across the region. The Miami Dade metropolitan planning region includes the City of Miami, as well as 35 incorporated cities, several unincorporated areas, and a land area of 1,946 square miles and 485 square miles of water. Figure 3.6 illustrates the boundaries of the Miami Dade region. The Miami Dade MPO represents the 8th most populated county in the United States with over 2,300,000 residents (see ***Table 3.6***). Rapid growth has strained the capacity of roadways in Miami Dade County making gridlock a common rush-hour occurrence. A recent study found that by 2015, 41% of roadway segments of the arterial grid network are expected to operate at the lowest level of service (LOS F), meaning that actual volume of vehicles on

the roadways will exceed the capacity of those roadways.[19] Numerous efforts to ease current and future congestion are underway including the development of special toll lanes (HOT lanes), additional road capacity, and the development of transit corridors.

Balancing the long range planning priorities between funding new projects and increasing the efficiency of the existing infrastructure. A half-cent sales surtax approved in 2002 was established to support new transit projects, but budget pressures facing Miami Dade Transit and the complexities of planning for and building new corridors across multiple jurisdictions in the county have slowed the growth of the transit system (see more on this topic, below).

Pursuing intermodal improvement opportunities. Currently, Miami Dade Transit is the 12th largest transit system in the US, with four modes and more than 300,000 passengers daily. A 900 bus fleet makes up Metrobus, 22 miles of elevated track to support the Metrorail rapid transit, and Metromover serves downtown Miami. Paratransit averages over 6000 daily boardings.[20] Improving the integration of these systems is a future challenge.

Table 3.6: 2006 Miami Dade County Population by Category Source: US Census Bureau[21]	
Category	Miami Dade
Population (2006 estimate)	2,402,208
White persons, percent, 2006	77.0%
Black persons, percent, 2006	20.2%
American Indian and Alaska Native persons, percent, 2006	0.3%
Asian persons, percent, 2006	1.5%
Native Hawaiian and Other Pacific Islander, percent, 2006	0.1%
Persons reporting two or more races, percent, 2006	0.9%
Persons of Hispanic or Latino origin, percent, 2006 (b)	61.3%
White persons not Hispanic, percent, 2006	18.3%
Persons with a disability, age 5+, 2000	473,992
Mean travel time to work (minutes), workers age 16+, 2000	30.1

MPO Governance Structure: the Board, staff and committees

The Miami Dade MPO Governing Board has 23 voting members. The 13 members of the Miami Dade Board of County Commissioners (BCC) serve on the MPO board, while gubernatorial appointments fill the remaining seats. These appointments include a representative from the Miami-Dade Expressway Authority (MDX), a representative from the Miami-Dade School Board, representatives from the six municipalities with populations of 50,000 or more, a representative from

---

[19] Kimley-Horn and Associates, Inc. 2006. Arterial Grid Analysis Study. Prepared for Miami Dade Metropolitan Planning Organization: http://www.miamidade.gov/mpo/docs/MPO_arterial_grid_analysis_es_200703.pdf

[20] http://www.miamidade2035transportationplan.com/index.htm

[21] U.S. Census Bureau, *State and County Quick Facts, US Census,* http://quickfacts.census.gov/qfd/states/12/12086.html

an unincorporated municipality in Miami-Dade, and a non-elected public official. Two non-voting members represent the Florida Department of Transportation (FDOT).

Director Jose Lois Mesa, and Deputy Director Irma San Roman lead the Miami Dade MPO staff. Elizabeth Rockwell is the public involvement manager, supported by Paul Chance as the public involvement officer. Professional planners, transportation system managers, transit and bicycle experts round out the 16 member staff. A complete staff list can be found at http://www.miamidade.gov/MPO/m11-contactus.htm.

Eleven committees provide the Board advice, assistance, technical support, and facilitate interagency coordination. A list of these committee titles, functions, and membership can be found at http://www.miamidade.gov/MPO/m11-2home-committees.htm. The Citizens Transportation Advisory Committee (CTAC) is one of the eleven, with 28 private citizens appointed by members of the Board to reflect geographic representation, or a special interest a citizen may have in improving transportation in Miami-Dade County. CTAC duties include: "reviewing the program's technical work products prior to their submission to the MPO Board for approval; monitoring the public involvement process and recommending improvements to increase its effectiveness or overcome perceived deficiencies; and dealing with other transportation planning matters as necessary."[22] CTAC utilizes several subcommittees to address a range of transportation planning issues. A Chairperson leads the Committee and two vice chairs, and takes on the responsibility of ensuring "that proposed transportation projects are responsive to the community's perceived needs and goals." The schedule for MPO Board meetings and meetings of CTAC are posted on the web site, and the meetings are broadcast on local television in Miami Dade County.

Another key component of the transportation planning process is the Citizens Independent Transportation Trust (CITT). In 2002, a robust public involvement effort including 80 public meetings, transportation summits, participation by thousands of citizens as well as elected officials, on-line and in person resulted in support of the People's Transportation Plan funded by the passage of the half cent sales surtax. The 15 member CITT was established to oversee the People's Transportation Plan. In the plan, "Miami-Dade County commits to adding more buses and routes, improving service, expanding rapid transit and creating thousands of transportation and construction-related jobs over the next 25 years."

Innovation in Knowledge Sharing

The Miami Dade MPO strives to bring the public to the table to participate in the regional planning process. The most basic form of public participation involves citizens who share a complaint, suggestion, or concern about transportation in the region. Potholes, traffic lights, unsafe bus stations, slow bus routes, or the need for a pedestrian crossing light are some of these types of concerns. This type of personal, experience-based knowledge might also be shared in a broader context such as concerns over or support for a broader, more interconnected transit system, a planning emphasis on alternatives to motorized transportation, or concerns over land use. Recent efforts to plan for expansion of the rail transit system in the Miami Dade neighborhood of Kendall illustrates the sophistication of experience-based knowledge focused not only on broad mass transit and congestion issues, but bringing questions of design and budget directly to the MPO, as well.

---

[22] http://www.miamidade.gov/MPO/m11-comm-ctac.htm, and
http://www.miamidade.gov/mpo/docs/MPO_newsletter_2007_annual.pdf

The contributions of three Kendall residents, in particular, prompted additional studies and possible alternatives for the Kendall Link project.[23]

Yet gathering and utilizing this experience-based knowledge from the public for purposes of regional planning poses a two-fold challenge for the MPO staff. First, members of the public are confronted by constraints of time, distance, expertise, language and perhaps the mistrust of government. In order to bring their knowledge to the table MPOs must consider when and why the public will share this local knowledge, and the incentives necessary to facilitate public participation through comments, concerns, or suggestions. At one level these are challenges of access. Do members of the public have a convenient or accessible means to share their input on line, in person, or on location in the community?

At another level these are challenges of specification. What information from the public does the MPO need or want? What is relevant for the MPO? Does the MPO need or want to know about potholes, bus route problems, and poorly maintained streets, or is the knowledge demand more sophisticated or distinct? And when the knowledge shared competes with consultants and MPO staff in terms of its sophistication, how should that knowledge be used?

Second, once members of the public share their experience-based knowledge, the challenge is to use the knowledge in a way that furthers the goals of regional transportation planning. Miami Dade's MPO has developed innovative methods to incentivize the public to participate in the knowledge sharing process, and to utilize the shared knowledge to enhance regional transportation planning. Miami Dade MPO Director Jose Mesa describes the importance of gathering and utilizing the local based knowledge of members of the public in the transportation planning process:

> Let us face it, if you drive, you have expertise on transportation. . . . Not necessarily a university degree, but you have the university of life, everyday telling you what is going on and what could be improved. We have to give credit because we get a lot of good ideas from citizens, groups, and committees.

Focusing on the most common form of participation, yet often underutilized, the Public Involvement Director of the Miami Dade MPO, Elizabeth Rockwell, has developed the Public Involvement Data Base, featured in this section, to facilitate public contributions in the form of complaints, comments and suggestions. The database provides a means to capture a broad base of this information, to connect and follow up with members of the public, and to facilitate communication between members of the public and the member agencies of the MPO.

The Public Involvement Data Base. The Public Involvement Data Base provides a means to connect broadly with individual members of the public, to facilitate communication between the public and member agencies, and to track media activities related to the work of the MPO and community outreach events across the region. It captures individual comments, complaints or suggestions sent to the MPO by members of the public, as well as elected officials, representatives of member agencies or representatives of service or nonprofit organizations in the county.

Comments, complaints and suggestions, however, result from careful efforts by Rockwell and her staff to make the process easily accessible, and to give members of the public some guidance on what they might comment on, complain about, or suggestions for improvement. For example, as required by law, each year the MPO develops an annual report of its activities. Rather than develop a report of the MPO activities for the year, however, Miami Dade has developed three seasonal and one annual newsletter, *Transportation Voice*, oriented around different transportation themes.

---

[23] http://www.communitynewspapers.com/html/index.php?option=com_content&task=view&id=2463&Itemid=45

The theme for Fall 2008 focuses on alternative transportation options,[24] while Summer 2008 serves as the annual newsletter and focuses on "Transportation for a New Century".[25] Rockwell describes the newsletters as focused not on "happenings" or events, "but on the topic. Just to get people thinking, to engage them" and to get away from the reports of MPO meetings and activities. It is noteworthy that the newsletters are available in English, Spanish and Haitian Creole, accessible to a broad and diverse population across Miami Dade County.

Beyond providing an accessible and focused newspaper style newsletter to the public, the newsletter includes a comment card that states, "Take our Survey! Give us your feedback!" The card provides an address or fax number for returning the comment card, as well as an e-mail address and the MPO web page. It also asks the reader to provide their name, address, phone and e-mail. Last year the newsletter was sent to over 700,000 members of the public.

Comment cards are also distributed and collected at transportation and community related events attended by public involvement staff of the MPO. Referencing her previous experience working for a commuter services program, Rockwell notes the philosophy she brought with her to the MPO position:

> We had to go out to the community, to the people. You don't ask the people to come to you. You go out to the communities. So I kind of brought that philosophy here where [we go] out to the community twice a month . . . [and] hook up with other agencies . . . to do general outreach.

MPO public involvement staff will work with Miami Dade Transit, commuter services, or any other member agency holding a public event to assist in the event and to ask questions and gather information with comment cards. The comment cards can produce the standard complaints and concerns about bus routes, potholes, traffic lights, and stop signs. But, as Rockwell notes, "these are . . . real concerns of people who are really upset about it." Public input is also gathered through direct e-mails to the public involvement staff, and to other members of the MPO who forward the questions and concerns to Rockwell.

What is key here is the type of information that Rockwell and the public involvement staff target and utilize with the comment cards. The MPO is not responsible for fixing potholes or fixing bus route problems. These are issues to be addressed by the respective member organizations, but Rockwell and her staff insure that such complaints, comments and concerns are logged into the database, along with contact information, and then forwarded to the appropriate member agency to address.

> So as you see we capture their name, their address, all their information up here. Then on the second page, contact type, how they contacted us, who they were referred by, what their request is, what the action was taken, by whom it was taken, what language, what's the category, the event name, request date. So we capture all of that. So you can see it's just a plethora of information that we try to capture as much as possible.

The database serves two vital roles in the knowledge sharing process. First, it is a mechanism for individual citizens to share local knowledge about the transportation system with the MPO, and to have their contribution connected with the appropriate agency. Second, the MPO is able to facilitate public learning about the transportation planning process by referring the comment or complaint to an operating agency that can respond, and has the ability to reach out again to a contributing

---

[24] http://www.miamidade.gov/MPO/docs/MPO_newsletter_2008_options.pdf

[25] http://www.miamidade.gov/MPO/docs/MPO_newsletter_ 2008_annual.pdf

member of the public with the contact information collected in the database. The database is a mechanism, in short, for facilitating individual contributions to the planning process, and building a relationship with members of the public more likely to take an interest in other MPO activities in the future. "I think our philosophy is just helping people with their transportation issues, Rockwell notes, "more so than educating them about what the MPO is."

Public Involvement Management Team. Rockwell also participates in a Public Involvement Management Team for the MPO region that facilitates a different type of vital knowledge sharing: "coordination and communication among agencies involved in transportation planning, programming and operations." The management team represents partner agencies in the MPO, including Tri-rail, 5-1-1, Miami-Dade Aviation, South Florida Commuter Services, Miami-Dade Expressway, the schools, DOT, Public Works, the Seaport, Turnpike, CITT, and Miami-Dade Transit.

The public involvement managers of each regional agency meet on a quarterly basis. As described by Rockwell, "We discuss issues that may be going on or major projects that are going on and we have the consultants for those projects come in and brief us all together so that you have all the public involvement managers right there in the same room so that we all get the same information; we all know what to say; we can all rely on each other and it also forms friendships, if you will, and camaraderie between the agencies and we meet on a quarterly basis. We love to meet; we have a lot of fun."

Rockwell organizes and runs the meetings as the MPO representative to support the work of the agencies working with the public to build and operate the transportation systems. Before each quarterly meeting, she asks for member agencies to talk about their primary projects that engage the public. The member agencies bring their consultants to brief the group followed by discussion and brainstorming about coordination and support possibilities. "We assist each other in any way, shape, form. If we need to help each other coordinate events, if we need to help each other go to events just to show up and be supportive for one another . . . ."

The public involvement effort of each member agency is diverse and complex. Consider the work of Harry Rackard of Miami Dade Transit, a transit planner responsible for the transportation disadvantaged program. While not directly responsible for public outreach, Mr. Rackard spends much of his time directly engaged with the public. His job entails numerous aspects of knowledge gathering and clarifying. He fields complaints, for example, about bus routes that he will check out directly with the bus route drivers, meetings with representatives of public agencies and nonprofit organizations participating in the transportation disadvantaged program that require verification of the knowledge provided to participate in the program, and he participates in MPO related activities such as the long range planning process to provide on the spot knowledge about key transit issues. Elaborating on these many forms of knowledge sharing and clarifying, Rackard noted:

> We have a website that's for those who have access and know how to use the internet, and we have different other boards, advisory committees that reach out to the public. Now the 200 agencies that I work with, they work directly with those off the streets. In fact, we act as a referral because some of the programs—we don't work with those that come off the street who needs services on a one-on-one basis. They have to go through and enroll in one of social service programs that we assist. That's what they have to do.

Successfully including the public in regional transportation planning requires coordination across the participating agencies, with multiple and complex public participation responsibilities like those of Rackard with Miami Dade Transit. The Pubic Involvement Management Team is a vehicle for that effort in Miami Dade. Like the database, it provides a place for the knowledge to reside—in this case, the collective experience based knowledge of the public involvement managers. And like the

database, the quarterly meetings facilitate the sharing of information across agencies. The face-to-face meetings and camaraderie that has developed provides an incentive for public involvement managers to participate in the effort. Just as the public is constrained by time and work demands, the public involvement managers have extensive responsibilities that can limit the opportunities for sharing knowledge across the region. Rockwell's efforts to support the group by planning the sessions, building an agenda, and running the meetings provides the infrastructure for the effort that can motivate, or at least remove obstacles to participation.

Summary

Miami Dade has harnessed technology (specifically its database) and fostered interagency collaboration in order to further enhance knowledge-sharing across the regional network. The daily, experience-based knowledge shared by members of the public is connected with appropriate member agencies and the communication with the MPO creates a link between individual members of the public and the MPO. The Public Involvement Management Team provides regular contact for managers across the region to share public involvement plans, challenges, and accomplishments, and to coordinate at a regional level. Together, these efforts provide a vital link for longer-term public transportation planning.

CHAPTER 4

MPO ACTIVITIES THAT ENGAGE THE PUBLIC: AN ANALYSIS

Drawing upon the data gathered in the MPO survey and the three case studies presented in this report, we identified a range of these activities that require public engagement. These activities can be distinguished based upon the incentives members of the public have for participation, the potential knowledge that can be gathered from these activities, and the challenges associated with gathering, disseminating and applying the knowledge. We have condensed these activities into three broad categories, each presented in Tables 4.1, 4.2 and 4.3. Briefly, these activities include:

Education and Governance

- MPO contact with communities, organizations, and groups for purposes of educating the public about the work of the MPO and opportunities to participate.

- MPO contact with the public in the course of formal MPO Governance, including public participation on MPO committees, attendance at committee and board meetings.

- Complaints, concerns and suggestions shared with the MPO by members of the public

Long Range planning: Visioning

- MPO contact with the public to develop the Long Range Transportation Plan on a five year schedule (3 years for non attainment areas).

Specific Projects

- MPO contact with the public to develop the Transportation Improvement Plan or TIP (4- to 5-year plans for transportation investment) and the Unified Planning Work Program or UPWP (1-2 years to identify MPO or member agency studies and tasks to be completed).

- MPO contact with the public to plan for transit projects or to engage in Transit Oriented Development.

The case studies highlight different activities engaged in by the individual MPOs in order to address the challenges of diversity, network-wide knowledge sharing and incentives to participate.

- COMPASS's meetings in a bag, for example, creates an opportunity to share information in a setting that is accessible (nearby) and familiar, and that generates local knowledge about public transportation use or concerns. The meeting is both educational and contributes to long range planning.

- DVRPC's Dots and Dashes facilitates long term visioning activities by creating local opportunities to play the planning game with familiar people, within a context that bounds expectations based upon resources and existing transportation systems, and creates opportunities for deliberation around a broad set of ideas.

- Miami Dade's Public Involvement Data Base facilitates information sharing at the individual level and connects the public with the broader regional network of member agencies.

This section reviews the ways in which each category of activity—education and governance, long range plans, and project specific activities—varies based upon public incentives, knowledge sharing potential, and the challenges faced by MPOs in gathering and utilizing the knowledge. This analysis complements the knowledge mapping exercise developed in Chapter 5.

Table 4.1: Education and Governance: Incentives, Knowledge Sharing Potential and Challenges

	Incentives: When and why the public participates	Knowledge Sharing Potential: what knowledge can be shared and for what purpose	Knowledge Sharing Challenges: what are the obstacles toward gathering and utilizing the knowledge	Examples
Individual members of the public have direct transportation related experiences, concerns and complaints	-Direct (often) negative experience with roads, potholes, bus schedule, bus stop shelters, toll roads, stop signs, etc. -Response to a newsletter, radio announcement, web page or flyer asking for input and feedback	-Local knowledge about transportation related issues that can facilitate short and long term planning. -Local knowledge about the interaction and coordination between transportation agencies and the consequences for the public	-Developing means to facilitate direct and accessible public input -Informing the public about the role of the MPO and the opportunity to share information or register a complaint -Sharing the information to the correct implementing agencies	-Miami Dade MPO Public Involvement Data Base: Requests, community outreach and media events -Input cards at community events
Education about the work of the MPO and the contributions that the public can make	-Information about the MPO, projects, and ways to participate provided at an established group or organizational meeting or community gathering attended by the public. -Information provided through the mail, newsletter or on the web	-What the MPO is, what it does, its location, how to contact the MPO, how to participate. -The member transportation organizations, roles, and connections between organizations -Misconceptions or misunderstandings that can be addressed -Feedback on the quality and utility of MPO activities	-Reaching a broad public beyond the established organizational or community events -Education as a two-way street -Educating, not overwhelming	-Miami Dade Transportation and Community Mapping project. Miami Dade newsletters -DVRPC and Miami build ons with community events, school activities, organizational activities -Web pages
MPO Governance	-Time and opportunity to participate -Representative of a group or community with transportation concerns -Nomination by a board member or invitation to participate by staff of the MPO	Exchanging and translating local knowledge from the public to the MPO board and committees	-Establishing procedures and defining roles that connect institutional processes of the Board to the input and concerns of citizens -Ensuring the receptivity of the Board to public participation	-Staff coordination and support efforts for committee work—briefings and reports -Individual invitations, conversations, visits -Innovative citizen board leaders -Miami Dade televised meetings

It is important to note that these categories of activity are not discrete. Long range transportation planning processes, for example, not only engage the public to produce a long term plan, but also educate the public about the planning process. Similarly, long range planning efforts or the process of developing the TIP are clearly connected to planning for specific transit projects, and the knowledge gathered through public participation in three of the four types of activity—long-range plans, TIPs and transit projects—would be relevant for all three categories.

We fully recognize the three different categories may generate similar types of knowledge or present similar challenges for using the knowledge. Instead, the categories presented here provides MPO staff involved in public participation a means to evaluate and consider MPO public participation practices based upon the *priority* for the activity—ongoing, visioning or project specific.

Knowledge Sharing Potential

Every time an MPO engages the public there is potential for knowledge to be generated and shared across the regional network. Different categories of public engagement activity present distinct opportunities for generating knowledge and disseminating it (see Tables 4.1, 4.2, and 4.3).

Knowledge generation. Comments or complaints from individual members of the public, such as in Miami, provide the MPO with direct local knowledge about specific transportation issues that impact members of the public each day, and that may reflect on broader planning needs in the region. This correspondence can also reveal problems of coordination and planning between regional member agencies. Safety concerns with the location of a bus stop and the speed of oncoming traffic, for example, may require coordination between the state DOT and a transit agency not only for that specific issue but for broader issues of safety, as well.

In addition, our data show the value of gathering specific rather than general feedback from the public. Boise, for example, views its educational seminars as a key point for guiding the public in providing the kind of input that is most valuable for use by MPO planners. Doing so also tends to diminish public frustration by demonstrating that the input the public has provided has been both heard and considered.

Knowledge sharing. Here we distinguish between knowledge shared *by* the MPO with the public and knowledge the public provides *to* the MPO. Both are vital for public participation purposes.

MPO educational efforts share knowledge with the public about the MPO and its activities, and inform the public about ways they can participate. The MPO and member agencies also may share knowledge about the process, and the organizational and resource constraints that frame planning.

In turn, the public provides specific and general knowledge about existing local needs that can contribute to long-term planning. When connected with other knowledge about regional needs, legal and regulatory constraints and the process itself, this knowledge contributes to a more comprehensive understanding of the region that extends beyond the priorities of individual projects. It also provides the MPO with knowledge about what the public understands and does not, and what the public sees as confusing, useful, or cumbersome. This can help to refine procedures to engage the public. Public engagement can also generate insights about the need for coordination across member agencies.

As noted earlier, knowledge about the need or support of a transit project is not as readily forthcoming at times as is knowledge about the problems or difficulties associated with a new project. As we discuss below, identifying ways to bring this knowledge to the table to generate a more comprehensive approach to transit planning is a significant MPO challenge. Public input on the development of the TIP and the UPWP is restricted in its breadth, and more reactionary to proposed plans and projects.

Finally, public participation in the MPO governing process can play a role in translating local knowledge and experience into material that can be used by committees and the board in formal decision-making. For example, the Miami-Dade MPO often reviews its database to gain a sense of the common issues or concerns raised by members of the public.

Table 4.2: Long Range Planning

	Incentives: When and why the public participates	Knowledge Sharing Potential: what knowledge can be shared and for what purpose	Knowledge Sharing Challenges: what are the obstacles toward gathering and utilizing the knowledge	Examples
Development of LRTP	-An opportunity to participate through a group or organization with which a member of the public is affiliated -Knowing others who have participated -Previous participation in MPO activities -Receipt of information by mail, radio, etc.	-Generating a comprehensive understanding of the region regarding land use, transit, highways, bicycle use, etc. that extends beyond the priorities of individual projects -Insight regarding the priorities of the region that might extend beyond transportation issues	-Facilitating communication about the region that goes beyond reactions to a menu of choices -Creating deliberative opportunities for generating ideas -Managing public expectations within realistic constraints -Creating a plan with a solid understanding of the community	-DVRPC Dots and Dashes -Miami Dade Transportation and Community Mapping project

Knowledge Sharing Challenges

While MPO activities that engage the public have the potential to generate and disseminate useful knowledge for regional transportation planning, realizing the full potential is a significant challenge. Several barriers exist that can make knowledge sharing efforts problematic.

Barriers that stakeholders experience include the lack of access, time, and comfort with the subject at hand. As noted in the previous section, when knowledge from the public is shared, it is not always readily apparent how it can be applied to a broader challenge of planning. At times it is a matter of translation of local knowledge to a more technical process.

At other times, it is a problem for the MPO to find a means for grounding or relating local knowledge within the context of resource and system constraints. For example, one MPO official said,

> I think people approach things from a very personal perspective. Again, if they see in that plan the things they wanted to see, they would feel it is a good plan. I guess it is a good plan if, again, if they can see the sense of it; they might not totally agree with it but they can see how we got there. And, yes, it does make sense. Or at least understand that, 'I may not like this personally but I can see how you got there,' and the trade-offs we face.
>
> Years ago, I was told by a guy...at a meeting; he had felt hot under the collar: 'You people do nothing but destroy neighborhoods. Why are you doing this? Why are you not turning that street up there into an expressway?' Well, that street up there is a quiet two-lane road through a number of neighborhoods. And he could not see the

disconnect between, 'Okay, you're proposing to take somebody else's neighborhood to save your neighborhood.' But that is, I mean, what you go through.

And so our job is always going out there to explain, 'Here are the trade-offs we face. Do you understand what we are trying to do and the issues we are trying to—if you do not want roadways done, we can do that kind of plan but then do not get mad that there will be more congestion.' As a matter of fact, it is sort of like [indiscernible] there is going to be more congestion because that is a given of a growing area.

And so I guess the measurements go back to you know, how would I know it, I guess, in the best possible world to be if we can have enough people read the plan and test it and then get that response. Does it make sense overall looking behind your individual 'I hate this,' but you see the overall logic to what we are trying to achieve? And I guess going back to the money question: Would you be willing to pay for it?

While transit is part of the public discussion for long term planning, there can be a disconnection between the vision for transit and the actual development of projects in terms of public input. As we found in the case of transit planning in Miami-Dade, the public often enters the process to react to a plan for a project both in opposition and in support. This gives priority to the reactions to particular transit projects, rather than the overall need for transit and can make it difficult to generate productive dialogue for transit planning. An MPO staff member leading several transit planning projects in Miami-Dade described the challenges of holding a public meeting for one particular corridor project known as Bay Link:[26]

> The majority of the people were opposed. They were the naysayers. There were people in favor of it, but they were overwhelmed. And it just would disintegrate. They wouldn't allow them to speak.

However, as we also found in the case of Miami Dade, a commitment to finding methods of improving the participatory process to foster more productive dialogue has led to longer term, ongoing dialogue with the public in the various corridors. As the Miami Dade planner noted, "it's an evolving process a week. We learn, we adapt, and we continue to move on." Building upon the participatory experience in the corridor project referenced above, the Miami-Dade MPO adopted a formal Citizens Advisory Committee (CAC) of a second corridor project known as the South Corridor. Again, described by the MPO staff member leading the effort:

> We had over 20 members of that CAC, and, I will tell you that was the smoothest alternative analysis that I've ever done. We had cities. We had community councils represented. We had our commissioners within the districts of the area putting in people, and they really did a good job in getting a cross-section.

And in a third corridor project, known as Kendall Link, a commitment among residents of Kendall and the MPO to develop a variety of transit alternatives based upon ongoing studies and public participation has brought the relevant and expert knowledge of Kendall residents directly to the evolving planning process. A recent meeting in May 2009 between Kendall residents and the MPO focused on an emerging bus rapid transit option that has growing community support.[27]

---

[26] For a presentation to the MPO of the Miami-Miami Beach Transportation Corridor Study, July 29, 2004, see http://www.protransit.org/library/BayLink-MPO-presentation_20040729.pdf.

[27] The Kendall Corridor Transportation Alternatives Analysis, conducted for the Miami Dade MPO by the consulting firm Jacobs, Edwards and Kelcey in August 2007, can be found on the web at

The DVRPC, which plans for a built-out transit system, has moved to a perspective that does not view transit as the only solution to congestion, but rather a piece of many approaches. This recognition of the many ways in which congestion can be eased has also reduced the variation in public participation for transit planning, and has contributed to more productive public discussions around transit—more productive knowledge sharing. The Dots and Dashes game has also facilitated knowledge sharing and generation around transit by focusing members of the public, member agencies and the MPO on key projects that can take priority in the next few years.

Awareness is another barrier to knowledge sharing, in general. Individuals with a concern or complaint, for example, might not know what the MPO is or how they can file a complaint. Complaints or concerns that require follow up or coordination with other agencies can also be inhibited by poor communication or the lack of public response capacity of a member agency. As detailed in the case study, the Miami-Dade Public Involvement Database takes on these challenges by consolidating all correspondence that comes into the MPO into a program that registers the complaint or comment, forwards the question to the correct staff member or member agency, and follows up to be sure the public inquiry was addressed.

Other challenges of knowledge-sharing include avoiding material that is too technical or bureaucratic; reaching out to a broader public beyond the well-organized groups (sometimes generally referred to as "the usual suspects"); and insuring that educational opportunities are truly a two way street, where the MPO can gain knowledge from the public as well as provide the public with meaningful information.

Finally, the lack of a feedback loop to demonstrate what was heard and considered also is a frequent barrier to knowledge sharing activities within MPOs. COMPASS prepares meeting summaries of all comments gathered through its public processes and this data is considered as part of the plan development. DVRPC, for example, provides a report with formal recommendations and comments from its citizen's advisory committee that is heard at all MPO board meetings as new proposals and plans come forward. The resulting action is then reported back to the committee members, in writing and at its following meeting.

Logistical Factors. The convenience of participation is another type of barrier to participation. For example, MPOs often engage the public in conjunction with an organized event (outside of the MPO), a group meeting, or community gathering. Members of the public in attendance can easily gather and consider the material shared by the MPO, and learn about the MPO without attending a separate or more specific MPO-organized event. A booth or table at a community fair, or in the corridors of a busy shopping mall allows the MPO to reach the public without asking for the additional effort of attending a separate MPO organized event.

The public may be motivated to learn more about the MPO when material is mailed to their home, is conveniently posted at bus stops or train stations, can be heard on the radio, or is accessible through the web. Likewise, when members of the public can participate in planning as part of an existing group, an established activity or organized event, participation is more likely.

Conducting a planning exercise such as DVRPC's Dots and Dashes, for example, with students on a college campus or with members of a community organization reduces the complications for members of the public to attend a separate MPO event to conduct the exercise. Knowing others

---

http://criticalmiami.com/photos/2007/transit/KendallCorridorExecutiveSummary.pdf. For a report of the May 2009 meeting, see Xavier Martinez, "Metropolitan Planning Organization gives CSX Update: MPO officials updated Kendall-area residents on the CSX Corridor study. A high-speed bus route could be in store for commuters," Miami Herald, posted on May 23, 2009, on the web at: http://www.miamiherald.com/493/story/1062195.html.

who have participated in long range planning activities, or previous participation may also create an incentive to join the long range planning process. The DVRPC, in particular, was successful in drawing out large numbers of the public for the Dots and Dashes game, relying also on extensive advertising through radio, print, and e-mails. The "buzz" surrounding the game also generated broader public interest in participating. (See Section 5 for a further discussion of incentives to participate.)

Table 4.3: Specific Projects

	Incentives: When and why the public participates	Knowledge Sharing Potential: what knowledge can be shared and for what purpose	Knowledge Sharing Challenges: what are the obstacles toward gathering and utilizing the knowledge	Examples
Transit Projects and TOD	-Opposition to new project in a homeowner neighborhood- NIMBY -Opposition to transit -Development concerns/interests -an understanding of TOD and its potential	Local knowledge about transportation challenges and needs Local knowledge about land use and priorities Knowledge about development plans and possibilities	-Opposition to transit is often stronger than support for transit, and opponents are often more vocal. Therefore finding ways to here from other possible transit -Finding ways to get beyond the negative input aimed at shutting down a project. -Receiving and incorporating local knowledge before a project is designed and built -Coordinating the public participation processes with other transportation/transit agencies involved in the planning -Accepting negative input as valuable and relevant for improving a public transit project	Leadership Coalition in Boise
TIP and UPWP	-Response to a request for public comments -Knowledge of the MPO process and the role of the TIP and UPWP -A direct stake or relationship to plans or projects included in the documents	-Support or opposition to key projects and knowledge about those positions -Knowledge about the effectiveness of the processes used to develop the TIP and UPWP	-Knowledge of the TIP and UPWP processes and resulting documents requires significant investments in time and expertise -The documents reflect long term development and established organizational work plans that are not readily influenced by public comments.	TIP Hearings UPWP Hearings Proposed documents posted to the web site for public comment

Factors that encourage or support participation in the TIP and UPWP processes, on the other hand, or in formal MPO governance are more distinct. Both suggest a level of expertise about the planning process, the structure of the MPO, and the role of the MPO. Developing that expertise takes time, as well as a stake in the planning process as a representative of a group or community. Participants

in the MPO governing process are typically nominated by an MPO board member, or encouraged and educated by MPO staff that may view a member of the public as a potential long-term contributor to the governance process. A nomination by a board member (as in the case of Miami Dade), or direct contact and encouragement by the MPO (as in the case of DVRPC) provide strong incentives to participate in the governing process.

Finally, the incentives and factors that contribute to public participation in transit planning and transit oriented development are complex and varied. We found the strongest incentive for public participation in transit planning to be opposition to a planned project. Often called the NIMBY (Not In My Back Yard) syndrome, residents may oppose a planned transit project that will bring changes to public transit through the neighborhood, pose a threat to land values, or require homeowners to sell their land. Members of the public who may support new transit projects, on the other hand, often do not participate or do not articulate their point of view as loudly.

The incentives and factors supporting participation can vary among regions with built-out transit systems, versus those that are still developing. The incentive to oppose new transit projects is often strong in developing transit systems. We also found, however, that the incentive to plan and support transit is strong in areas such as Boise, Idaho, among members of the business community, political leaders across the region, and interested members of the general public with a long term perspective on growth and development. The challenge is finding a common point of focus to support transit among a large set of interests. In Boise, the support for a local option sales tax to support the development of transit has been the focus of a broad based leadership coalition providing focus for the effort.

Knowledge for Planning

MPOs engage the public for a variety of reasons. We have identified three types of activities that capture much of that effort: ongoing connections with the public, long term visioning, and project specific efforts. Each is defined by priorities such as educating the public and involving the public in day to day governance, developing a long term vision to guide planning for the region, and developing an efficient and effective transportation project for the region. As such, each type of activity involves different incentives for public participation, requires the collection of varied knowledge, and presents the MPO with distinct challenges for gathering and using what is learned.

The case studies presented in this report provide examples of the ways in which three different MPOs engage the public and use the knowledge that results to enhance regional planning. Rather than view public participation activities generically, the analysis in this report indicates that public participation can be enhanced—more insights, perspectives and experiences can be gathered and applied for transit planning purposes—by understanding the different kinds of activities and the challenges each poses. In the next section, we present a knowledge mapping exercise that builds on these insights to help MPOs consider and address these challenges.

CHAPTER 5

KNOWLEDGE MANAGEMENT EXERCISE: KNOWLEDGE MAPPING AND INCENTIVES DIAGNOSTIC

A key goal of this research has been to develop a technique for managing the knowledge gained from public participation efforts for the benefit of public transit planning. We have named this technique "knowledge mapping." The aim of the exercise presented here is to aggregate information gathered through participatory processes in an accessible, comprehensive form that can be incorporated, in whole or in part to applications in public transportation planning efforts.

There are many ways that applicable knowledge can be represented or mapped, through various kinds of charts, spreadsheets, and other visual representations. For example, Google Earth can be used to develop maps depicting geographic participation.

The four-step process presented here for creating a map is conducted internally among MPO staff and member agencies.[28] This section also describes a Public Workshop that engages stakeholders in a review and discussion of the completed knowledge map. Conducting this exercise requires that the MPO/member agencies have at their fingertips data compiled from past public participation efforts. If the MPO presently does not have information stored in a relatively easy-to-retrieve manner, developing a data system (even a spreadsheet program) is essential. The knowledge map is only as good as the information available to populate it.

The goal of the exercise is to develop a method for organizing and managing information gathered from the public, relate that information to the broader or more specific planning efforts, and use the "map" as a means to ask questions and continuously improve upon the public involvement process for transit planning.

Before beginning the exercise, the following key recommendations should be considered:

Involve P2 and planning staff, senior managers. The success of this effort relies on the active involvement of those responsible for public participation activities as well as those for whom planning is a primary duty. The participation of senior managers likewise can be valuable for arriving at conclusions about what the map may mean and its potential future implications.

Establish a working group. A working group, largely comprised of both public participation and planning staff, should be chartered for the purpose of creating the map itself. This will ensure that the map created is useful for both public participation and planning purposes. Create a project plan for the group's work, including responsibilities assigned and timelines.

Identify categories of data to include. An initial task for the working group will be to identify the categories of data they wish to include in the knowledge map (some are suggested in Table 5.3). However, a balance should be struck between too little and too much data as to be useful.

Decide the scope of data to be included. Is the knowledge map a representation of a project? Or a long-range planning effort for a particular fiscal year? Combining projects and long-range planning in a map is doable, however, given the different needs of these kinds of public participation/planning efforts, more benefit may be gained from developing separate maps and comparing 'lessons learned' and possible steps forward.

---

[28] Burke, Mike. 1999. See http://www.tfhrc.gov/pubrds/novdec99/km.htm. See also Apostolou and Mentzas (1998) and Nonaka and Takeuchi (1994).

Set definitions for categories. It is useful beforehand to develop a definition for what 'formal' vs. 'informal' means; for some organizations, 'formal' may mean meetings or such events whereas 'informal' may mean a booth at the county fair. For others, 'informal' may mean any feedback provided that is not actively solicited by the MPO.

Frame the period you want to cover in the map. Consider using a set period of time or a specific planning effort, to use as a focus in the map. Doing so will not only make the process less cumbersome, it will make the resulting observations and action steps more specific.

Consider developing a detailed knowledge map or charts that represent granular data first. A more granular chart will provide the data that create a strategic map or scorecard that responds to key goals for the project, visioning plan or MPO strategic plan.

Try it out first. Creating a sample map to think through the categories can make the final map created a more effective tool. Select a small sample of public participation and plan-based data—say, data for a one-month period—and walk through the exercise with fellow working group members. Doing so will also hone the questions and interpretations of the information once you compile a larger data set. Be sure to identify someone as a good note-taker during this process, and schedule a recap about the effort shortly after the 'practice run' is completed to identify what went well and areas for improvement.

Different versions of the map may be useful. Creating alternate versions of the same map might be useful for understanding the data. For example, one version may depict feedback by different stakeholder groups, whereas a second version may depict feedback by geography.

Consider how to represent the findings. Consider presenting a range of sentiments in the knowledge map. For example, the scope of the map might be for a certain project-based participation effort. In this case, code the information in emails, comment forms, phone records, etc., on a scale according to the type of input, where 1 represents "strongly supports" and 5 represents "strongly opposes." This will give a more nuanced map, rather than one that simply encapsulates what's heard in a few sentences.

Group meetings. The exercise includes three group meetings, at which working group members (and others from the MPO or its member agencies) gather to consider what has been learned and its potential implications. These meetings may be held on different days or may be collapsed together into a half- or full-day workshop session.

Designate a skilled facilitator. Designating a skilled facilitator—ideally, someone outside of the working group and someone who will not feel inclined to also act as a participant in the discussion—can be quite valuable for keeping the meeting attendees on track.

Be specific and realistic. When developing Next Steps, think both about the specifics of the ideas that are being considered. Be realistic. Consider incorporating in the meeting a means for prioritizing Next Steps.

5.1: Knowledge Mapping Exercise

The exercise below is illustrated with two "maps" created by the Miami Dade MPO public involvement staff: The Public Involvement Database (PID), discussed in the case study, and the Community Characteristics Project (CCP). Both of these Miami-Dade examples illustrate the creative potential of mapping. In the case of the PID, a vast amount of potentially disparate information is organized into strategic connections with member agencies and the public. In the case of the Community Characteristics Project, the characteristics of a community are mapped along side various techniques for public involvement for consideration and a thoughtful match. The

Community Characteristics Program is a database that profiles the communities within the region for purposes of adjusting public involvement techniques with community characteristics.

Step 1: Compile Information. Information may be disparate or 'stovepiped' can be compiled or integrated. Public participation and planning staff should work jointly to frame the map's contents. This may take place over several working group meetings.

Examples of compiled information

▪ Miami Dade's Public Involvement Database compiles extensive communication from individual members of the public regarding transit and transportation issues, with information related to upcoming community outreach events across the region (organized by the MPO and other member organizations), and media activity related to events and staff of the MPO. The compilation allows public concerns, complaints, and issues to be viewed at a regional level, provides regular connections across the MPO staff and member agencies, and coordinates MPO communication with the press on key transportation planning issues. The database is strategic in that it provides a logic and focus for the application and distribution of public input.

▪ Miami Dade's Community Characteristics Program compiles well researched and reviewed information about the 34 communities in the Miami Dade region with information related to different techniques for public involvement, and GIS technology and related information. Information is organized into community background reports available to public involvement staff and planners, information on public involvement techniques and recommendations for matching public involvement techniques with community characteristics, and GIS information for identifying neighborhoods and communities visually.

> TIP: A spreadsheet is valuable for this step. After compiling the spreadsheet, code the data based on the kind of map you are creating. For a visioning map, you might want to rank feedback by how the input supports the goals of the visioning plan (e.g., 1 is "feedback strongly supports Goal 1", 5 is "feedback strongly does not support Goal 1"). For a project, you might use a similar schema and for education/governance efforts, you might code the data with corresponding MPO strategic goals.

Example of how a map might be organized: Public Transit Planning for Long-Range Plan

> Y Axis
> Row A. Who was engaged
>
> X Axis
> Row B. How information was gathered (e.g., public meetings, phone call)
> Row D. Types of concerns (cost, location, etc.)
> Row E. Feedback provided

Step 2: Group Meeting, Potential Implications. Have a discussion to identify connections between the Process-based and Plan-based information (see ***Table 5.1***). *Flip chart the discussion.*

Examples of potential questions (add others you deem appropriate)

▪ Based on what you have compiled, are there certain groups in the community who were not included? (process-based)

▪ How does feedback vary by type of stakeholder? What problems, themes or larger issues emerge? (plan-based)

Table 5.1: Types of Information	
Type of Information	*Relevance*
Process–based Information (How)	Identify who interacts, patterns for how people interact and social networks that exist at the community level *Example*: Identifies who is engaged (e.g., community organizations, business etc.) and where they have participated in MPO events
Plan-based Information (What)	Demonstrate stakeholder goals, values and concerns expressed by stakeholders as they relate to the plan *Example*: Map that pictorially associates stakeholder concerns by categories, such as "congestion," "cost," "access," "pollution," "home values," etc.

Step 3: Group Meeting, Lessons Learned. What possible 'lessons learned' can be derived from the Process and Plan information in the knowledge map? *Flip chart the discussion.*

Examples of potential questions (add others as needed)

- What relationships are there between participation techniques used, who is included/who is not included and the feedback represented?

- How effective are public participation efforts for achieving goals of inclusiveness, responsiveness and achieving a quality public transit plan? What could be done differently and why?

- If data are included from multiple agencies, what similarities and differences are there across the process and plan information collected?

- What implications are there for present and future public participation processes based on this information? What implications are there for present and future public transit plans?

- What are the connections between public participation input and the process of building the plan? What roles do the MPO staff and leaders play in the process? What implications does this have for public transit planning and serving the needs of those who are traditionally disenfranchised?

Step 4: Group Meeting, Next Steps. Drawing on these lessons learned, what steps can the MPO staff and leadership (and its member agencies) take improve public transit planning at the regional level? *Flip chart the discussion.*

Identify goals for enhancing the Process (diverse participation, quality knowledge sharing) and for enhancing the planning outcome. How might changes to the *process* enhance the *plan*? What is needed to better represent and respond to stakeholder needs and concerns? What specific short- and long-term steps can the MPO take to achieve these goals?

Public Workshop

After the knowledge map is created, the second phase involves engaging MPO leaders and external stakeholders in a public workshop focused on the implications of the map and ways to improve the knowledge gathered and shared with the public for effective transit planning.

In organizing the workshop, the following recommendations are offered:

- **Create a Steering Committee.** The committee should consist of MPO/member agency staff, MPO board members or other leaders and a range of stakeholders. Seek to balance between different stakeholder groups or constituencies when selecting committee members. The steering committee will be responsible for the overall logistics of the event (selecting a date, location, etc.); outreach to prospective attendees and event promotion; and recruiting speakers and other volunteers for the day of the event.

- **Appoint a Chair.** Select a Chair or Co-Chairs who can shepherd the finer logistical issues from start to finish. Make sure this person has the time and abilities to lead the Steering Committee effectively in fulfillment of the event goals.

- **Provide opportunities for socializing.** Have breaks built in that provide time for this, or include a lunch or breakfast of sufficient duration that allow people to connect with one another. This can build interest in future participation for public transit planning on both formal and informal levels.

- **Distribute power across the agenda.** Give stakeholders opportunities on the agenda to express what they think at the workshop. Most people will offer thoughtful insights or reactions. These insights can be the key for improving the participatory process.

- **Diversity in table discussion groups is important.** Organize table discussions so that there are diverse interests at each table. Studies show that diversity within a group is shown to bring out a more distinct range of responses than those that are more homogenous.

- **Have a skilled facilitator lead the Open Forum.** This will keep the discussion on track and allow MPO/member agency staff and senior leaders to stay focused on what is said.

Table 5.2 provides a proposed agenda for the workshop.

Table 5.2: Public Workshop Suggested Agenda
1. *Welcome*
2. *Plenary: Public Transit Planning and Public Participation: How the MPO and Member Agencies Use Your Input (15 minutes)*
3. *Plenary: Presentation of Knowledge Map and Preliminary Conclusions (20 minutes suggested)*
4. *Roundtable Discussions about the Map's Implications (1 hour suggested, 20 minutes for each subject area)*
5. *Roundtables: Next Steps*
6. *Break (30 minutes) or lunch (1 hour) OR, begin the event with a dinner buffet if held during the evening (1 hour)*
7. *Reporting Out from Roundtables (45 minutes)*
8. *Open Forum: Where We Go From Here (45 minutes)*

The workshop begins with a plenary presentation of the knowledge map and preliminary conclusions drawn from it. (Care should be taken to ensure that stakeholder privacy-based information is not disclosed on the map provided publicly.) The two brief opening plenary sessions are followed by Roundtable Discussions of 8-10 participants. Participants are assigned in order to ensure there is diverse representation for each table discussion (e.g., mix of business, community interests, elected officials, representatives of groups).

A moderator leads a discussion of three different topics in the round table discussions—the diversity, or inclusiveness of public participation processes, the quality of knowledge gathering and sharing

efforts, and the incentives for participation in public participation efforts. The moderator begins the discussion with a focusing question, for example, "How does public transit affect you?" The question must be broad enough to allow everyone to respond to it and to shed some light on their motivation(s) for participating.

Table 5.3: Small Group Questions: Public Participation and Planning Practices	
Components of Quality Public Participation for Public Transportation Planning	*Question*
Diversity	What practices are used to insure diversity in public participation processes? What are the benefits and drawbacks of these practices?
	What elements of diversity are considered in developing public participation activities for public transportation planning? What other elements might be considered?
	What specific steps could be taken in the short-term to improve the diversity in public participation for public transportation planning? What about the long-term?
Knowledge gathering and dissemination	How is public knowledge (experience, concerns, expertise) gathered for public transit planning? What are the benefits and drawbacks of these methods?
	How is public knowledge incorporated into the public transportation planning process? When is it incorporated in the process?
	What knowledge is shared with the public before and after public participation processes, and how is that knowledge shared?
	What knowledge is shared with member agencies regarding public participation processes? How is the knowledge shared? What knowledge should be shared, that is not?
	What specific steps could be taken in the short-term to improve the quality of knowledge gathered from the public, and the use of that knowledge for public transit planning?
Incentives	Why do people participate in public transportation planning events?
	How does participation vary among the different participants?
	How does participation vary between different public transportation planning events?
	What specific steps could be taken in the short-term to generate incentives for diverse participation and more robust participation? What about the long-term?

In the first part of the discussion, participants are asked to relate their impressions about the diversity of public participation in the public transportation planning process conducted by the MPO/member agencies, and how this experience compares with other participatory experiences they have had elsewhere. What has worked well and what could be improved?

The second part of the discussion focuses on the methods used for gathering and disseminating knowledge in public participation efforts for public transportation planning. And the third part of the discussion is oriented toward understanding the incentives members of the public have for participating in a public transportation planning event or process. What has worked well and what could be improved?

After the three-part discussion concludes, participants at each table develop a list of recommended next steps, led by the moderator. The next steps are organized into three categories: what individuals can do, what the community can do and what the MPO/member agencies can do to improve the quality of public participation in public transportation planning and its impact. This ensures that the responsibility for actions resulting from the workshop is shared across all those who benefit from the suggested changes or improvements. This information is scribed on a flip chart. After this part of the agenda concludes, flip charts tracking the comments offered in each group are hung on a 'gallery wall' where participants can view them on the break.

During the break/lunch, evaluation forms are distributed to participants. Following a break/lunch, each group appoints an individual to "report out" one key finding from each of the three questions asked during the group discussion. A large group facilitator calls on each table to contribute, with the caveat that nothing should be repeated. What is reported out is scribed on an overhead projector or a computer projection screen projected in the front of the room for all to see.

The day's exercise concludes with an Open Forum, led by the large group facilitator. The goal of this part of the workshop is to weave together the elements of the day into a coherent whole, using feedback from the participants.

The event concludes with a brief thank you from the MPO/member agencies and an expression of how the information gained through the workshop will be used by the organizations.

Table 5.4: Examples of Facilitator Questions for Open Forum—Enhancing Public Participation for Public Transportation Planning
1. *What surprised you today?*
2. *What can the MPO and its member agencies do better overall? What about the community or you individually?*
3. ***What short-term step is the most important to you, out of all the ones reported out today? How about long-term?***

Following the Public Workshop, it is suggested that the MPO reconvene the Working Group for a special meeting with MPO/member agency senior leaders and board members. At this meeting, the group compares the implications, lessons learned and next steps the Working Group identified prior to the workshop with those the public offered. What similarities or differences are there? How can the MPO/member agencies best use these findings? How can the public workshop serve as a launching point for more effective, responsive and inclusive planning processes in support of public transit in the future?

5.2: Incentives Based Model: A Diagnostic

Efforts to establish long-term methods for ongoing dialogue with the public that incorporates and builds upon initial public involvement efforts are one important method for motivating members of the public to participate in planning efforts over time.

The motivation for people to engage in regional transit planning was a repeated—and varied—theme throughout our case study interviews. For example, a range of citizen committee members interviewed reported that they sought to become engaged for diverse reasons, such as the lack of consideration for bicycle community needs by the MPO; a desire to represent the citizen's employer on an important issue as part of corporate outreach efforts; and a wish to serve the larger community in retirement.

As a result of these diverse responses across more than 60 project interviews with citizens, community leaders, MPO staff and board members and elected officials, we present an exercise aimed at diagnosing the incentives facing potential public participants. This diagnostic draws upon the case studies to illustrate ways in which public participation practices can be structured to overcome disincentives and motivate participation. [In fact, we recommend that this exercise may be useful for promoting participation in the knowledge-mapping exercise presented previously.] Here we present an exercise aimed at diagnosing the incentives facing potential public participants, and draw upon the case studies to illustrate ways in which public participation practices can be structured to overcome disincentives and motivate participation.

The goal is to identify methods of public involvement that can overcome barriers to participation.

This motivations/incentives diagnostic tool is built on the following assumptions:

- **Motivations are unique.** What motivates one stakeholder may not motivate another. Further, motivations should not be inferred from the stakeholder's social status, geographic location, etc.

- **Individual vs. group motivations**. Individual motivations may not translate to a common motivation of the group (e.g., all Chamber of Commerce members may not be motivated by networking opportunities).

- **Motivations change over time.** What motivates a stakeholder today may not work in the future. Needs and interests change as people grow and change themselves.

- **Timing can be a factor.** Stakeholders may be less motivated when the potential impact of an issue or project is relatively benign, whereas stakeholders may become really motivated when it turns into a hot button issue. The reverse may also be true.

- **Doing your homework is essential.** The MPO must seek to understand individual motivations. This is where relationship-building with diverse stakeholders and identifying what's important—and not important—to them is key.

Table 6.1: Barriers to Participation and Incentives for Participation	
Examples of Barriers to Participation	*Examples of Incentives for Participation (May be formal or informal)*
Technical barriers or too much information	- Presentations that provide only relevant information - Presentations in plain language that is easily understood by non-technical persons
Lack of Impact	- Planning processes that reflect the impact of stakeholder input (for example, DVRPC's advisory opinions forwarded to its board from the Regional Citizens Committee) - Opportunities to serve that further a cause or interest of the stakeholder (for example, serving the needs of homeless persons)
Time Limitations	- Opportunities for virtual participation (online meetings or conference calls)
Financial	- Child care at events - Public transit farecards
Lack of Social, Political Visibility	- Public recognition (*e.g.*, awards, other acknowledgements) internal and external to MPO - Opportunities to cultivate of relationships with elected officials, staff members, community leaders, other community members

The following diagnostic tool should be used as a sequential series of questions for stakeholders, in order to align motivations, barriers and potential incentives to diverse participation. The final step is to square potential incentives with the MPO's mission, with careful consideration of legal, ethical and financial dimensions.

It is important to avoid making assumptions about similar motivations or incentives for participation. For example, a civic association with a formal position on a proposed transit project may be motivated by a desire to advance that position, whereas individual members of the group may on their own have other reasons for advancing (or not advancing) that same position. It is important to differentiate between the two when working through the series of questions posed by the tool.

Figure 6.1: Diagnostic Tool for Motivations and Incentives						
Step 1	**Step 2**	**Step 3**	**Step 4**	**Step 5**	**Step 6**	**Step 7**
Identify stakeholder or stakeholder group	Briefly synopsize stakeholder's needs and interests (based on information available)	What motivates the stakeholder, based on what you know?	Are all motivations equal? Which seems to have more weight at this time, based on what you know?	What barriers to stakeholder participation exist for this individual or group, based on what you know?	What appropriate incentive(s) could the MPO use to overcome the barriers to the stakeholder's desired end goal? Consider formal and informal incentives.	How does the proposed incentive(s) square with the MPO's mission (legally, ethically and financially)?

Specific pointers for establishing incentives based on our case study interviews include:

- **Listen.** Listen to what stakeholders tell you; this will be your best source of information about barriers and potential incentives.

- **Match incentives to barriers.** Incentives must respond to a perceived barrier in order to be effective. Some incentives are formal, others are informal. Some apply at the group level, while others are oriented towards individual needs or interests.

- **Be creative.** There are several potential avenues leading to a good result. Use your best judgment for how you can appropriately incentivize stakeholders and also accomplish the MPO mission.

- **Sometimes incentives fail**. Just like trying to lose weight, stakeholders may be waylaid by good intentions. The MPO likewise may not be as effective with implementing the incentive as it had hoped. Tweaking may be necessary or even experimentation.

- **Hard work usually pays off.** There is no magic potion that will make your public participation process instantly as diverse as you want. However, our case studies show that structural reforms, (such as DVRPC's Regional Citizens Committee) and the creative use of participatory techniques (as with COMPASS's meeting-in-a-bag initiative) can pay dividends over the long-term.

CHAPTER 6

CONCLUSIONS AND RECOMMENDATIONS

MPOs are the designated organization that promotes public participation in transportation planning in a coordinated, continuing and cooperative fashion. Efforts to involve the public require understanding the diverse concerns and needs of the region, devising the incentives for participating in the process, and gathering, sharing and utilizing the knowledge to accomplish the goals of transportation planning. We found that these tasks vary in difficulty for MPOs depending upon the purpose for engaging the public, from education and the daily governance of the MPO, to regional visioning and planning, to public transportation planning, in particular. Public transportation planning takes place in the context of these broader P2 processes.

This study has examined the ways in which MPOs engage the public for purposes of public transportation planning through efforts to enhance diversity, gather and share knowledge, and understand and use incentives for participation. These efforts forge a regional, enterprise wide perspective for planning public transportation, and foster a long-term relationship with the public. The following summarizes findings and recommendations.

1: There are many different types of MPOs. The combination of governing structure and regional characteristics--political context, demographics, the culture, growth patterns, the development and condition of transit systems, roads and highways, dynamic regional demographics, and leadership—creates a unique set of characteristics and needs for MPOs to engage the public in transit planning. The tools for enhancing the diversity and knowledge sharing capacities of MPOs should be tailored to those unique characteristics, constraints, and resources. The Community Characteristics Program in Miami-Dade illustrates the importance of understanding local areas.

2: Difficulties of engaging the public varies depending on current public involvement activities, nature of planning (long range or short range), and project specific planning. The MPOs studied use sophisticated implementation strategies to engage the public, and to develop methods for encouraging the public. Project specific efforts are problematic given the size and scope of most transit projects, concerns about land use and property values, and the strong incentive for those who oppose projects to participate, versus the lack of participation by those in favor. MPOs should consider the type of knowledge being sought, the incentives for the public to participate or not to participate, and the use of the knowledge gathered, and identifying processes (such as the Dots and Dashes game, or meeting in a bag) that connect incentives with knowledge sharing demands.

3: Use of social networking and social media has exploded on the Internet. The application of these communication and information technologies to public involvement and public participation were virtually unknown even two years ago when the survey of MPOs for this research was undertaken. For instance, not one survey respondent mentioned the use of Facebook, Twitter, LinkedIn, etc., as innovative P2 practices. We suspect that if the survey was conducted today our results could look significantly different and include examples of these technologies being used by MPOs. We recommend that MPOs examine the potential of these new communications and information technologies for reaching out to the public to educate, to facilitate participation in the governance of the MPO, to engage members of the public in long term planning, and to foster dialogue and discussion around key projects and the broader transit network, more generally. These technologies can support communication across member agencies in the region, as well.

4: The greater the regional impact of an MPO in its planning efforts, the more diverse the base of participants and the representation of public interests need to be. We found that MPOs could enhance the diversity of planning efforts by working to connect member agencies and member agency constituencies in the planning process. The Public Management Involvement team and the database for public comments are two examples that help to grow the size of diversity.

5: Citizen advisory committees provide MPO governing boards with significant expertise that is both experience-based and professional, yet the role of the advisory committee is typically limited to responding to actions taken by the board. MPO governing boards can strengthen the participation of citizen advisory committees by providing staff support to respond to key advisory committee issues or concerns. For example, the staff support for the DVRPC RCC allows committee members to pursue projects such as road safety, and even global warming and transportation, which can be incorporated into broader MPO board agendas.

6: MPOs are not familiar with the public participation practices of other MPOs. The MPOs included in this study had informal, irregular contact with other MPOs at professional meetings and other gatherings. We recommend that the FTA develop a central resource that links MPOs and provides accessible information about public participation practices. The resource center should be equipped with the list of persons to contact and particular methods being employed for sample situations.

7: Measuring the impact of public participation practices on the quality of planning is a challenge for most MPOs. Most focus on the outputs that are quantifiable, such as number of meetings, number of participants, number of respondents, but not on quality. To enhance practices, MPOs should consider factors such as the capacity to communicate with the public, to reach a diverse public, and the overall quality of knowledge collected and used as part of the performance or outcomes associated with public involvement. The quality of public transportation planning will not improve unless the methods for educating, including, and learning from the public are improved.

The P2 process in transit planning is different from that in typical highway-based transportation planning. The issues of diversity and knowledge sharing are critical in creating an effective P2 process for the following reasons:

- Transit riders come from diverse backgrounds including low income, elderly, disabled, and underserved populations. Transit riders' interests are very specific. What is good for individual riders and what is good for overall transit needs can be in conflict.

- A trip by transit involves not only riding the bus and train, but also walking, crossing streets, looking up information, and waiting; often these aspects are ignored in most transit planning processes.

- Unlike highway planning, the fundamentals of transit operations planning involve how to utilize limited resources of vehicles and drivers, and complicated operational requirements; this is not well understood by the general public. In addition, the public seems to rely on the passive transfer of information and knowledge.

- Planning should consider the trade-offs in the service quality among different parts of the metropolitan area; in other words, improvement in one part of the network, can affect the service

quality of unrelated part of the network, but the citizens often do not understand the complicated operational requirements and limitations.

- Many transit users are eager to relate their preferences and concerns, but P2 meetings are often held at times and locations where transit service is not available and therefore not accessible to transit dependent persons.

- The quality of transit service depends on how much consideration is given to the details, such as, individual stop locations, weather protection needs, pedestrian street-crossing needs, schedule coordination for transfer, and clarity of information, but the transit agency often fails to take these aspects in planning and operations.

- These reasons reinforce the need to conduct the P2 process from the bottom up, including the captive and non-captive users, the community affected by the service, and the entire region. MPOs are the lead organization for bringing this process to fruition. Further, we learned that a stronger mechanism that can apply to all MPOs in terms of diversity, incentive, and knowledge sharing is needed. How to make effective diverse participation in the planning process and how to explain and share knowledge among them determine the quality of the planning process and consequently gaining trust in planning by the community. We hope that this report is helpful in formulating the design of the P2 process that enhances diversity, knowledge sharing, generating incentive to participate in transit planning process.

- What we also learned is that gathering information from various organizations is not easy. This is certainly not unique to MPOs; however, it is symptomatic of the limited opportunity for information gathering and sharing resources. MPO's planning processes (and the rules that guide them) are relatively similar among MPOs. It seems that a stronger mechanism could be implemented to facilitate the P2 process among all MPOs. In addition, knowledge sharing between planning organizations and the public appears to rely on passive information and communications technologies for the most part that reach those traditionally involved with regional planning activities.

Participation practices that enhance diversity, improve knowledge sharing, and generate incentives for participation are essential for developing ongoing, long term interaction with the public, and establishing an enterprise wide perspective for public transit planning. We hope that this report is useful in developing and implementing these practices.

REFERENCES

Ackerman, J. M. (2005). *Social Accountability in the Public Sector: A Conceptual Discussion* (No. Paper No. 82): The World Bank.

Aligica, P. D. (2006). Institutional and stakeholder mapping: Frameworks for policy analysis and institutional change. *Public Organization Review, 6*(1), 79.

Apostolou, D., & Mentzas, G. (1998). *Towards a holistic knowledge leveraging infrastructure: The KNOWNET approach*. Paper presented at the 2nd International Conference on Practical Knowledge Management (PAMK98).

Benabou, R., & Tirole, J. (2003). Intrinsic and extrinsic motivation. *The Review of Economic Studies, 70*(244), 489+.

Borner, K. (2008). *Mapping Science: Opportunities and Challenges.* Paper presented at the Expedition Workshop/Mapping Public Goods And Services Connecting To Science & Scholarly Knowledge, Arlington, Virginia.

Bresnen, M., & Marshall, N. (2000). Motivation, commitment and the use of incentives in partnerships and alliances. *Construction Management and Economics, 18*, 587–598.

Burk, M. (1999). Knowledge Management: Everyone Benefits by Sharing Information [Electronic Version]. *Public Roads*, 63 from http://www.tfhrc.gov/pubrds/novdec99/index.htm.

Carlsen, S., & Paulsen, T. (1999). *Categorisation of Knowledge Tools*.

Choi, C. J., Cheng, P., Hilton, B., & Russell, E. (2005). Knowledge governance. *Journal of Knowledge Management, 9*(6), 67+.

Executive Order 12898 of February 11, 1994, 12898 C.F.R. (1994).

Czarniawska, B. (2000). Awards as compensation? *European Management Review, 4*, 19-20.

Dreachslin, J. L. (2007). Diversity management and cultural competence: Research, practice, and the business case. *Journal of Healthcare Management, 52*(2), 79+.

Duguid, P. (2007). Awards as norms. *European Management Review, 4*(15-18).

Ermine, J.-L., Boughzala, I., & Tounkara, T. (2006). Critical knowledge map as a decision tool for knowledge transfer actions *The Electronic Journal of Knowledge Management, 4*(2), 129-140.

Fong, E. A., & Tosi, H. L., Jr. (2007). Effort, performance, and conscientiousness: An agency theory perspective. *Journal of Management, 33*(2), 161-179.

Foss, N. (2007). Awards as compensation. *European Management Review, 4*, 21-23.

Frey, B. S. (2007). Awards as compensation. *European Management Review, 4*, 6-14.

Fricke, C., & Faust, B. (2006). Knowledge transfer- acquiring implicit knowledge. *International Journal of Nuclear Knowledge Management, 2*(1), 46-56.

Gerken, H. K. (2005). Second-order diversity. *Harvard Law Review, 118*(4), 099-1196.

Grey, D. (1999). Knowledge Mapping: A Practical Overview [Electronic Version]. *360doc.com* from http://sxzx.360doc.com/content/060901/13/10199_196012.html.

Heath, C. (1999). On the social psychology of agency relationships: Lay theories of motivation overemphasize extrinsic incentives. *Organizational Behavior and Human Decision Processes, 78*(1), 25–62.

Hoch, C., Dalton, L. C., & So, F. S. (2000). *The Practice of Local Government Planning* (Third ed.). Washington, DC: International City/County Management Association (ICMA).

Horn, R. E. (2005). Visual Analytics for Public Policy. from http://www.stanford.edu/~rhorn/

Intermodal Surface Transportation Efficiency Act of 1991 - Summary, (1991).

Jackson, P. (2005). A reflective practitioner's confessional account of developing a knowledge inventory: A grounded methodology. *Journal of Knowledge Management Practice*.

Kaiser, E. J., Godschalk, D. R., & Chapin, F. S., Jr. (1995). *Urban Land Use Planning* (Fourth ed.). Urbana and Chicago: University of Illinois Press.

Keith, S., & Uday, D. (2001). Mapping local government-nongovernmental organization interactions: A conceptual framework. *Journal of Public Administration Research and Theory, 11*(2), 245.

Kuhn, O., & Abecker, A. (1997). Corporate memories for knowledge management in industrial practices: Prospects and challenges. *Journal of Universal Computer Science, 3*(8), 929-954.

Litman, T. (2006). *Community cohesion as a transport planning objective*. Paper presented at the Transportation Research Board 2007 Annual Meeting.

Murdock, K. (2002). Intrinsic motivation and optimal incentive contracts. *The Rand Journal of Economics, 33*(4), 650+.

Nonaka, I., & Takeuchi, H. (1994). *The knowledge-creating company*. New York, Oxford: Oxford University Press.

Petrucciano, P. (2006). Methodologies for identifying knowledge value measurement indicators in a company.

Pinto, E. D., Russell, A., Kaeufer, K., Pruitt, B., & Kahane, A. (n.d.). *Towards the Construction of A Dialogue Typology*: United Nations Development Programme, Regional Bureau for Latin America and the Caribbean.

Programme, U. N. D. (2003). *Mapping dialogue experiences in Latin America and the Caribbean: Research guidelines, matrix and proposed variables for study*.

Puffer, S. M., & Meindl, J. R. (1992). The congruence of motives and incentives in a voluntary organization. *Journal of Organizational Behavior 13*(4), 425+.

Putnam, R. D. (2006). E Pluribus Unum: Diversity and community in the twenty-first century: The 2006 Johan Skytte Prize Lecture. *Scandinavian Political Studies, 30*(2), 137+.

Riege, A., & Lindsay, N. (2006). Knowledge management in the public sector: stakeholder partnerships in the public policy development. *Journal of Knowledge Management, 10*(3), 24.

Safe Accountable Flexible Efficient Transporation Equity Act: A Legacy for Users, 134 (2005).

Sharp, P. (2006). MaKE: a knowledge management method. *Journal of Knowledge Management, 10*(6), 100-109.

Simmons, R., & Birchall, J. (2005). A joined-up approach to user participation in public services: Strengthening the "participation chain". *Social Policy and Administration, 39*(3), 260-283.

Title VI of the 1964 Civil Rights Act, (1964).

Transportation Equity Act for the 21st Century, (1998).

Ventriss, C., & Luke, J. (1988). Organizational learning and public policy: Towards a substantive perspective. *American Review of Public Administration, 18*(4), 337+.

Ward, M. (2007). *Preserving and Using Institutional Memory Through Knowledge Management Practices: A Synthesis of Highway Practice* (No. NCHRP Synthesis 365). Washington, DC: Transportation Research Board.