DVRPC WHITE PAPER

Best Practices in Long-Range Plan Development and Implementation Activities

dvrpc

DELAWARE VALLEY
REGIONAL
PLANNING COMMISSION

Best Practices in
Long-Range Plan Development
and Implementation Activities

Table of Contents

Tables and Figures

Acknowledgements

I. Executive Summary

The Delaware Valley Regional Planning Commission is developing an update of the Greater Philadelphia region's long-range plan (LRP), *Connections – The Regional Plan for a Sustainable Future*. The updated plan, *Connections 2040 Plan for Greater Philadelphia*, is due to be completed and adopted by July 2013. As a prelude to developing the *Connections 2040 Plan*, DVRPC undertook a survey of peer Metropolitan Planning Organizations (MPOs) from around the country. The intent was to identify best practices for long-range planning as well as programs and projects that help implement the policies and strategies of regional long-range plans. MPOs with a similar size and mandate were selected to allow for optimum transferability of best practices. Initial research included a review of the websites of twenty large MPOs. Based on that effort, a smaller group of eleven MPOs was selected to conduct in-depth telephone interviews.

The eleven MPOs chosen for this effort were Atlanta Regional Commission (ARC); Chicago Metropolitan Agency for Planning (CMAP); Denver Regional Council of Governments (DRCOG); Maricopa Association of Governments (MAG); Metropolitan Transportation Commission (MTC); Metropolitan Washington Council of Governments (MWCOG); North Jersey Transportation Planning Authority (NJTPA); North Central Texas Council of Governments (NCTCOG); Puget Sound Regional Council (PSRC); Southeast Michigan Council of Governments (SEMCOG); and the Southwestern Pennsylvania Commission (SPC).

Two separate surveys were developed with the first survey focusing on different aspects of developing long-range plans. Topics covered included employment forecasts, identifying transportation needs, evaluating projects, performance measurement, and public outreach. The second survey, on implementation activities, covered both grant programs and technical assistance (non-funding) programs. The surveys were developed to address many of the issues that DVRPC staff has identified as requiring additional attention or resources for the upcoming *Connections Plan* update.

The interviews revealed that DVRPC is on the cutting edge of many of these issues, particularly in the use of performance measures and identifying transportation needs. The interviews also revealed additional strategies and approaches that will be beneficial to the planning process at DVRPC. Several of the interviewed MPOs are using unique public outreach approaches and project evaluation and prioritization methodologies that could be utilized in this region. Several MPOs also have livable communities grant programs similar to DVRPC's Transportation and Community Development Initiative (TCDI) and Efficient Growth for Growing Suburbs (EGGS) programs. However, there were not many additional types of plan implementation programs that were identified during this research exercise. Collaborating more closely with municipalities and other stakeholders is a key desire of all the MPOs that were interviewed, but one that remains a challenge to accomplish.

II. Introduction & Background Information

A. Goal

Connections – The Regional Plan for a Sustainable Future was adopted in 2009 and serves as the long-range plan for the Greater Philadelphia region. The *Connections Plan* seeks to integrate land use, environmental, economic, and transportation factors in order to create a more sustainable future based on smart growth strategies, transportation choices, energy efficiency, and environmental justice. A concerted effort was made during the development of the Plan to reach out to a broad constituency, through numerous outreach activities, to ensure that the regional vision contained in the plan was developed through a consensus approach.

DVRPC has sought out a range of stakeholders, including the business community, advocacy groups, and other governmental agencies, to implement the policies and strategies of the long-range plan. Given the fact that land use is controlled by municipalities in the DVRPC region, implementation activities for the *Connections Plan* have focused on reaching out to each of the 352 municipalities in the region in order to promote regional policy objectives, particularly to reduce the demand for increasing transportation capacity through better land use development patterns that incorporate smart growth and transit-oriented development components.

DVRPC has started to develop *Connections 2040,* an update of the *Connections Plan*, and this research aims to identify strategies, best practices, and tools that peer MPOs are using in order to promote livability in municipalities. The research also attempts to identify the best practices in regional long-range plans, specifically in terms of identifying transportation needs, allocating funding to project categories, evaluating transportation projects, and undertaking public outreach which can help guide the development of the *Connections 2040 Plan*.

B. Importance of Implementation Activities

One of the most difficult barriers in implementing a regional plan in many areas is the fact that land use is controlled by many varied municipalities. Some municipalities have large, professional planning staffs at their disposal, while others are served by part-time or volunteer staff. DVRPC has attempted to provide municipalities with various tools to help implement the regional plan's vision for future development and redevelopment. The *Municipal Implementation Tools* brochure series and Implementing *Connections: A Guide for Municipalities* (Publication Number 10047) are just two examples of planning reports, in addition to numerous corridor and area studies, that have been produced by DVRPC as tools to assist local governments in forwarding the goals of the long-range plan.

DVRPC has also partnered with the region's counties and their local municipalities by providing grant funding through programs such as the Transportation and Community Development Initiative (TCDI), the Efficient Growth for Growing Suburbs (EGGS) program, and the Classic Towns program. The two former programs provide grant money for planning work to help invest in the region's communities, while the latter markets and promotes selected communities as great places to live, work, and play. These programs have introduced many municipalities in the region to DVRPC and the regional planning process.

III. Research Methodology

A. Preliminary Web Research

The research process began with web research on over 20 MPOs, looking for general information such as mandates, budget, membership, and population, as well as approaches to long-range planning and innovative implementation programs. The objective was to identify peer MPOs with both unique initiatives and similar characteristics in terms of planning process, requirements, and institutional capacity. Several MPOs with innovative programs were not included in this effort because they were not similar enough to DVRPC, in terms of mandate or authority, in order to successfully transfer any of their best practices. From that initial broad list of MPOs, 11 were selected for a more thorough analysis. A second, more in-depth web search was then performed in order to inform semi-structured interviews and identify specific implementation programs and long-range plan development activities.

The 11 MPOs selected were: Atlanta Regional Commission (ARC); Chicago Metropolitan Agency for Planning (CMAP); Denver Regional Council of Governments (DRCOG); Maricopa Association of Governments (MAG), serving the Phoenix metropolitan area; Metropolitan Transportation Commission (MTC), serving the San Francisco Bay region; Metropolitan Washington Council of Governments (MWCOG); North Jersey Transportation Planning Authority (NJTPA); North Central Texas Council of Governments (NCTCOG), serving the Dallas-Fort Worth metro area; Puget Sound Regional Council (PSRC), serving the greater Seattle area; Southeast Michigan Council of Governments (SEMCOG), serving the Detroit region; and the Southwestern Pennsylvania Commission (SPC), serving the greater Pittsburgh region. Table 1 identifies the current long-range plan for each of the surveyed MPOs as well as the year it was adopted.

MWCOG updates their long-range plan every year, and the remaining MPOs update every four years, since they are all located in air quality non-attainment areas. Several MPOs have separate long-range plan documents that cover other issues, such as land use and environmental issues. This table reflects the long-range transportation plans, as required by the Federal Highway Administration (FHWA), for each of the regions.

Table 1: MPO Long-Range Plans

MPO	Long-Range Plan (Horizon Year)	Year Adopted
Atlanta Regional Commission (ARC)	*Plan 2040*	2011
Chicago Metropolitan Agency for Planning (CMAP)	*Go To 2040*	2011
Delaware Valley Regional Planning Commission (DVRPC)	*Connections – The Regional Plan for a Sustainable Future (2035)*	2009
Denver Regional Council of Governments (DRCOG)	*2035 Metro Vision*	2011
Maricopa Association of Governments (MAG)	*Regional Transportation Plan (2031)*	2010
Metropolitan Transportation Commission (MTC)	*Transportation 2035*	2009
Metropolitan Washington Council of Governments (MWCOG)	*Constrained Long Range Transportation Plan (2040)*	2011
North Central Texas Council of Governments (NCTCOG)	*Mobility 2030*	2009
North Jersey Transportation Planning Authority (NJTPA)	*Plan 2035*	2009
Puget Sound Regional Council (PSRC)	*Vision 2040/Transportation 2040*	2010
Southeast Michigan Council of Governments (SEMCOG)	*Direction 2035*	2009
Southwestern Pennsylvania Commission (SPC)	*2035 Transportation and Development Plan*	2009

The information found on the peer MPO web sites was supplemented by the results of two FHWA Transportation Planning Capacity Building Peer Exchanges. Atlanta Regional Commission hosted a peer exchange in August 2010 that focused on Best Practices in Livability Planning at MPOs, and Puget Sound Regional Council hosted a peer exchange on November 1, 2010 that looked at approaches to prioritizing transportation investments for long-range plans. DVRPC participated in both peer exchanges.

B. Questionnaire Development & Interview Process

A Survey Monkey questionnaire to be administered to long-range plan staff at each MPO was developed. However, it was decided that a phone interview was more appropriate and would garner a higher response rate. The Survey Monkey questionnaire was revised and became the basis for semi-structured interviews, ranging from an hour and a half to two hours, with each MPO's staff. Due to the broad nature of the inquiry and the collaborative nature of developing long-range plans, there were anywhere from one to four respondents for each interview. Respondents included managers, transportation planners and analysts, modelers, and public affairs staff involved in the long-range plan development process. Interviews were conducted between March and May 2011 by Michael Boyer, Manager of the Office of Long-Range Planning & Economic Coordination at DVRPC, assisted by Fanny Tremblay-Racicot, DVRPC Intern and Ph.D. candidate in Urban Studies at Temple University. Respondents were sent the set of questions prior to the interview. Some respondents

participated in the interview and also filled out the questionnaire electronically, and one MPO was not interviewed but did complete the questionnaire.

The final version of the questionnaire is available in the appendix. The first set of questions is dedicated to the selection of transportation projects for regional long-range plans, and the second set of questions focuses on planning assistance and grant programs to implement regional long-range plans. The plan implementation section was largely inspired by a questionnaire used in the FHWA Peer Exchange on Livable Communities that was held in Atlanta. Because of time-related issues, not every question was addressed in each interview. Instead, the interviews focused on areas that were of particular interest to DVRPC staff, based on initial research.

Interview notes were written up after each interview and supplemented with web search notes, as well as FHWA Peer Exchanges results. A summary for all interviews was then developed, and from that master document, best practices and salient elements were identified. The following two sections summarize the identified best practices in developing long-range plans and conducting implementation activities, respectively.

IV. Best Practices in Developing Long-Range Plans

This section on best practices in developing long-range plans includes six subsections. The first section is dedicated to developing employment forecasts. The second focuses on financial plans, notably how peer MPOs identify transportation needs, including maintenance and operations, and how they allocate funding to project categories, such as reconstruction, enhancements, and expansion. The third subsection is dedicated to the question of evaluating and prioritizing transportation investments, and the fourth subsection is concerned with illustrative or aspirational projects that are unable to be funded at the present time. The fifth section looks at the utilization of performance measures, and the last subsection focuses on best practices in conducting public outreach.

A. Developing Employment Forecasts

DVRPC currently calculates the ratio of employment to population for each county and the region as a whole, and based on historic trends in these ratios, develops future employment forecasts for the horizon year of the long-range plan. Five-year interim forecasts are then developed using a curve reflecting decreasing rates of growth or decline. County feedback applying local knowledge of employment conditions and trends is incorporated. DVRPC is considering alternative means to forecast employment as it embarks on the long-range plan update. Respondents were asked what methodology they use to develop employment forecasts for their long-range plan. The responses varied, with some MPOs purchasing employment data from a consultant or the private sector, some administering a modeling process in-house, while others rely on a combination of in-house modeling and external data.

In Atlanta, **ARC** uses REMI's Policy Insight Module to develop population and employment forecasts at a cost of about $40,000 per year. Policy Insight generates year-by-year estimates of the total regional effects of any specific policy initiative. A range of policy variables allows the user to represent the policy to be evaluated, while the explicit structure in the model helps the user to interpret the predicted economic and demographic effects. Model simulations assess economic impact analysis; policies and programs for economic development, infrastructure, energy, and natural resources; and state and local tax changes and estimate the economic and demographic effects. ARC has also leased TRANSIGHT, a subset of REMI, which evaluates the economic impact of transportation infrastructure. They develop a regional control total using REMI and then suballocate to the traffic analysis zone (TAZ) level.

At **DRCOG** in Denver, employment forecasts are carried out in-house by a regional economist and other staff from the modeling unit. In Seattle, **PSRC** forecasts regional employment levels with a custom-developed model consisting primarily of an exogenous national forecast, an autoregressive moving average model, and a set of simultaneous macroeconomic equations. To forecast the spatial distribution of these jobs, they use a micro-simulation land-use model that utilizes parcel-level development constraints and an estimated value to forecast non-residential space, and discrete choice models (stratified by industry sector) to forecast utilization of that space. PSRC does not purchase employment data from a private company. Inputs to the macroeconomic model come primarily from Bureau of Economic Analysis regional data. They obtain geographically precise employment inputs to the land-use model by contract with their state employment security department, enhanced by annual agency data gathering and verification from local jurisdictions.

In Phoenix, **MAG** also has its own modeling process in-house and relies on state and commercial data, but consultant assistance is used to develop the forecast control total, notably for regional employment projections. In the Dallas-Fort Worth area, **NCTCOG** also compares data from several different sources, and employment data by market segment with forecasts based on economic conditions is purchased from the Ray Periman Group, a local company. A population/employment ratio of 1.6 is used as a control process. Forecasts are suballocated to various zones at the district level (with approximately 125–150 districts), then submitted to a local review process down to the municipal level, and eventually the TAZ level.

In Detroit, **SEMCOG** also produces regional forecast totals using REMI, via a consultant contract with the University of Michigan. They also produce small area forecasts using their in-house UrbanSim model. Forecasts are then aggregated to the municipal level and traffic analysis zones for the travel demand model. They also use parcel level ES202 employment data from the state to complement their forecasts.

In Pittsburgh, **SPC** uses both REMI and an in-house model called MERLAM (Mature Economic Region Land Use Allocation Model). MERLAM, developed in 1992–1993, is a model to allocate regional forecasts of population, households and employment to the traffic analysis zone in the region. This allocation model uses simple algorithms that

include a number of policy-sensitive variables and an extensive database that includes land use and attractiveness measures.

B. Financial Plans

1. Identifying Transportation Needs

Since long-range plans and Transportation Improvement Programs (TIPs) are required to be fiscally constrained, and because needs considerably outstrip revenues, it is imperative to ascertain what investments are necessary in order to allocate anticipated revenues over the life of the long-range plan. For the *Connections Plan*, DVRPC undertook a comprehensive assessment to determine how much funding would be required to bring the transportation system up to a state of good repair (SOGR). FHWA requires that plans and TIPs not only look at the cost to construct highway and transit projects, but also consider their continuing maintenance and operation costs. Peer MPOs were first asked whether they are conducting any type of needs assessment to ascertain what is required to bring the transportation system to a state of good repair. We then asked them how they account for the maintenance and operations costs of a project. Finally, we were interested in how they decided to allocate their transportation funding over the life of the plan. Several MPOs noted the difficulty in obtaining accurate cost estimates for projects. The majority of MPOs rely on project sponsors to develop and update costs. However, a few have developed cost estimation tools to either develop or verify project costs.

For the *Connections Plan*, DVRPC's SOGR assessment focused on rebuilding the existing infrastructure and relied heavily on the bridge and pavement management systems that are compiled by the state departments of transportation. Data compiled by DVRPC's Office of Transportation Operations was also used to determine needs for the operational components of the transportation system, such as Intelligent Transportation System (ITS) and signal system components. Defining a state of good repair varies by facility and by state. For example, PennDOT has identified a state of good repair goal to reduce the number of deficient bridges to 10 percent of total deck area. NJ DOT defines a state of good repair as each bridge having a 10-year or greater remaining useful life. The acceptable percent of bridges with fewer than 10 years of useful life varies for each class of bridge based on how critical it is to the overall system. NJDOT desires to achieve a SOGR goal of 89 percent of major viaducts, 67 percent of movable bridges, 93 percent of standard bridges (>20 feet in length), and 95 percent of minor bridges (<20 feet in length, also known as culverts).

In terms of identifying transportation needs, some MPOs are conducting their needs assessment in-house, some are hiring consultants, while others rely on their state DOT to carry out this task. In developing their *Plan 2040 Long-Range Plan*, **ARC** proceeded with a regional assessment that highlighted global and regional trends, challenges, and opportunities, in order to set goals and objectives for the region as a whole. ARC then

conducted a high-level assessment based on asset management systems for bridges and road pavement. This was followed by a project-level assessment phase that occurred in the summer of 2010. In the mid-2000s, ARC retained a consultant to develop a cost estimation tool. The tool assists project sponsors in developing consistent project cost estimates. They also use the tool to check costs provided by the DOT and other project sponsors.

At **DRCOG**, a needs assessment for road preservation is developed by the state DOT, primarily based on management system data. As for rapid transit, DRCOG hires a consultant that conducts a rigorous financial review of the Regional Transportation District (Denver's regional transit agency) Annual Report to DRCOG on FasTracks, looking at costs and revenues for the entire rapid transit system. The *2035 Long-Range Plan* identifies long-range transportation needs and fiscally constrained elements for the Denver region. DRCOG's Multimodal Corridor Visions is a companion document to the *2035 Plan* that provides detailed maps and corridor vision plan sheets describing the growth, development, and transportation vision for 35 key multimodal corridors in the region. It lists implementation priorities for each corridor for the next ten years and long-range strategies to 2035.

At **MTC**, California's DOT data, programs, and projections are used to conduct state highways needs assessment. For local streets and roads, the 109 jurisdictions within the MPO use the same pavement management program that was developed by MTC and a consultant. The 109 jurisdictions receive a grant as an enticement to use the same pavement management program. Transit capital and operations needs assessments are conducted through a regional inventory. There are 26 transit operators in the region, and the asset management system is expected to simplify the transit needs assessment and make it more consistent. Geographic equity is a key component, and every funding cycle a transit vehicle capital priority assessment is conducted in order to determine which jurisdiction is "due" for funding. Spreadsheets are currently used, but a consultant is working on a station/track asset management inventory similar to the pavement management inventory.

At **MWCOG**, the needs assessments are carried out by the three DOTs (Maryland, Virginia, and the District of Columbia) and the transit operators. The last overall assessment was produced 10 years ago. That document, Time to Act, had a six-year horizon and identified a need for a 50 percent increase in transportation funding. There was a 40 percent revenue increase in the 2010 Long-Range Plan update over the 2006 LRP. The increase accounts for additional projects, greater cost of operating, inflation, and the new year-of-expenditure federal requirement. The 2010 Long-Range Plan update features a decrease in federal funding, and an increase in state and toll funding. They are anticipating new tolling facilities, two High Occupancy Toll (HOT) lane projects, and an increase in transit fares in their current long-range plan.

NJTPA's Strategy Evaluation process is conducted periodically to assess how well the region's transportation system meets residents' needs. The study also generates recommendations for specific strategies and programs to benefit particular areas. The

NJTPA long-range transportation plan, *Plan 2035*, reflects the results of the Strategy Evaluation process. The Strategy Evaluation process also addresses the federal requirements for NJTPA to maintain a Congestion Management Process. Strategy Refinement builds upon the work done in Strategy Evaluation. The Strategy Refinement process identifies about 30 project concepts that can be further developed by implementing agencies, and ultimately will create and fund projects to improve public transit, roadway, freight, and ridesharing in the region.

The Strategy Evaluation process takes a "place-based" approach, finding solutions that are appropriate for prevailing land uses and activities in particular places, ranging from the urban core to exurban and rural areas. The process first identifies transportation needs throughout the region based on a vision of future development. This vision considers preferred future growth patterns for areas and how transportation can serve them. Data and performance measures are used to gauge accessibility and aspects of mobility, congestion, and reliability on roads, public transit, and other modes of travel. This search for the most effective and affordable transportation investments considers land use, economic, environmental, and social impacts.

The NJTPA worked closely with its subregional and agency partners, stakeholder interest groups, and the general public to ensure that the identified needs and proposed strategies address real regional priorities. Beyond identifying transportation needs in the NJTPA region, Strategy Evaluation delineated areas where certain types of transportation improvements might be appropriate. The types of improvements (referred to as "strategies") were grouped into four general categories: Ridesharing and Transit Support; Public Transit Enhancement; Roadway Improvements; and Freight Movement. Within each of those strategy groups, more specific strategies were identified (e.g., highway operational improvements, local buses, rail freight projects, and park-and-ride lots).

PSRC does not currently undertake a formal assessment for the purpose of identifying maintenance and preservation needs. Long-range plan investment estimates are developed using a variety of models, including the extrapolation of historical expenditures by cities, counties, and local transit, as well as other investments provided by local, regional, and state agencies. Pavement preservation investment estimates are developed using a programmatic methodology based on Pavement Condition Index (PCI) data collected biennially by the Washington State Department of Transportation (WSDOT). There is currently no regional maintenance and preservation standard; rather, PSRC relies on local stakeholder definitions of what it means to be in a state of good repair for services and facilities. For pavement, PSRC worked with local jurisdictions to identify a scale of Pavement Condition Index scores and what scope of project would be necessary to bring that roadway segment up to a PCI of 100.

PSRC's current long-range plan, *Transportation 2040,* does not contain specific maintenance and preservation projects; rather, the investment need is included as a programmatic estimate. For pavement preservation, investment need is calculated using a variety of methods, including a cost per yard by project type as well a cost

per lane mile. These unit costs are used in an established methodology new to the long-range plan.

SEMCOG estimates that the region would need approximately $2.8 billion each year to address all identified transportation needs, including implementing the regional transit vision, having all pavement and bridges in good condition, reducing delay due to congestion, decreasing traffic crash fatalities, and having all people and jobs within a reasonable distance of a walking/biking facility. They anticipate having only $1.3 billion available each year for funding transportation projects, more than a 50 percent shortfall. They define a state of good repair qualitatively on a 1 to 10 index. They utilize management system databases to determine need and use National Bridge Inventory data maintained by the state DOT's Bridge Condition Forecasting System to determine bridge needs. They utilize PASER and the state DOT's Pavement Condition (PCI-based) Forecasting System to determine pavement needs.

SPC completed a needs assessment in November 2009 for presentation to the State Transportation Commission at statewide hearings on Pennsylvania's transportation funding crisis. The data, assumptions, and standard costs for this needs assessment of state-owned highways and bridges came from the three PennDOT Districts in the SPC region. An asset management database is currently under development. The foundation of the 2040 long-range plan project list, currently under development, is the "rollover" of projects from the previous plan. The agencies responsible for federal-aid highway and bridge facilities in this region represented by the three PennDOT Districts, Allegheny County, and the City of Pittsburgh, were asked to identify priority maintenance projects, including highway projects greater than $10 million and bridge projects greater than $15 million, for inclusion in the documented long-range plan project list for their portion of the federal-aid highway network.

SPC project sponsors interested in adding new capacity projects voluntarily agreed to withhold these requests pending completion of the PennDOT Linking Planning and NEPA screening process. All the new capacity projects on the preliminary long-range plan project list have been "in the system" for some time. SPC accepts the project cost estimates from responsible facility owners or project sponsors, reviewing them based on a standard of reasonableness and verifying responsiveness to federal year-of-expenditure requirements. When PennDOT was completing the November 2009 needs assessments, it became very clear that there was a large variation of standard costs used for needs measurement as well as for estimating project costs. The costs vary substantially by PennDOT District and even by project. District 11, for example, has expensive urban issues such as maintaining traffic and working around the clock to limit the period a facility is out-of-service. In a rural district, such as District 10, signing a detour is often sufficient for the duration of a project, which limits typical costs.

2. Maintenance and Operations

Historically, plans and TIPs have focused on capital projects and have not looked at the operations side, but recently FHWA has begun to require any capital project included in the plan and TIP to also include costs for the continued maintenance and operation of the investment. Maintenance and operation can refer to both the upkeep and periodic reconstruction of a transportation facility, as well as the cost of such items as pavement striping and signage. Most of the surveyed MPOs are accounting for the upkeep for existing facilities but are still struggling to identify the residual maintenance and operational costs for a project. Such costs are difficult to determine, and DVRPC is continuing to work with PennDOT and NJ DOT to better identify, track, and anticipate such costs. DVRPC conducted a life-cycle analysis to determine long-term infrastructure costs for the *Connections Plan* and has begun to look at various maintenance practices that will extend the life span of infrastructure.

At **ARC,** the ongoing maintenance cost of a facility is one of the variables considered in the cost-benefit analysis that they perform during their project selection process. **CMAP** considered the cost of operating and maintaining the facility as it developed its constrained financial plan. For highways, annual operations and maintenance costs were assumed to be one percent of the initial cost of construction of the new facility. For transit, this same amount was assumed for annual maintenance, but operations were handled separately. In some cases, annual transit operations costs were estimated by the project sponsor. In the remaining cases, an estimate of one percent of the initial construction cost was assumed. In all cases, half of the transit operating cost was assumed to be covered through farebox recovery and did not count against the plan's fiscal constraint.

PSRC takes a general accounting approach for the maintenance and preservation of facilities. The investment need associated with maintenance and preservation for pavement is based on the assumption that one round of a particular project type (e.g., roadway rehabilitation) will bring that segment of roadway up to a "good" pavement rating (PCI of 100), and that at some point after that another round of the same project type will be necessary within the horizon of the plan.

MTC, with consultant support, does analyze maintenance and operations costs for major transit expansions and operations and major roadway expansion projects. MTC relies on the project sponsors to provide them with annual maintenance and operations costs for their projects. At **NCTCOG,** the state DOT determines bridge and pavement projects. NCTCOG relies on the state's standard rate of unit costs to amend total project costs when estimating maintenance and operation costs.

At **MAG**, preservation and maintenance of freeway and expressway facilities are the responsibility of and carried out by the Arizona DOT. MAG does report these costs but does not manage them. The majority of their plan funding goes toward expansion projects, but they do allocate some funding for minor system maintenance/preservation projects, such as litter pick-up and landscaping.

3. Allocating Funding to Project Categories

For the *Connections Plan*, DVRPC worked with the Regional Transportation Committee to allocate anticipated revenues into different funding categories. The needs assessment was used to help prioritize spending needs, and over 70 percent of anticipated funding is being spent on reconstructing and replacing existing infrastructure, primarily based on the large funding gap between revenues and needs that was identified in the needs assessment. Two questions were related to the allocation of funding to project categories. The first question was about the process by which the MPOs decide how much funding to attribute to transportation project funding categories (e.g., roadway reconstruction and replacement, bridge rehabilitation and replacement, transit vehicles, etc.); whereas the second focused on the people, committees, and organizations involved in the decision-making process. The following paragraphs summarize answers to both questions.

At **ARC**, the original intent for *Plan 2040* was for the Board to set specific targets for funding various project categories based on the needs assessment. However, considering the high rate of population growth in the region, the Board was not comfortable with giving a numerical split that would not allow for additional funds dedicated to system expansion. The staff thus came up with an arrangement that included an increase in system preservation and operations, but will result in a significant decrease in the state of good repair for bridges and pavement conditions (from 90 percent in 2010 to 70 percent in 2040). Staff reported that this situation really highlighted for their Board the need for additional funding in the future.

The State of Georgia legislature passed a law called the Transportation Investment Act that gives voters in twelve regions around the state the opportunity to enact a one percent sales tax to fund regional transportation improvements. The Atlanta Region Transportation Roundtable was created by the law and includes ten counties and is composed of the county commission chair from each of those counties and one mayor from each county, plus the mayor of Atlanta. The Roundtable is responsible for developing a list of transportation projects to be funded by the sales tax on which the region will vote in a July 31, 2012 referendum. County and local representatives have a huge consideration for geographic equity in the process of choosing the projects. The dedication of 15 percent of the proposed regional sales tax to municipalities, based on lane miles and population, might ease this process.

CMAP's allocation to funding categories was an iterative process that began in the summer of 2007. They developed a series of staff reports for their transportation subcommittee that focused on different aspects of transportation funding. Revenues were forecast and then broken into categories. A baseline was then determined based on attaining a safe and adequate system, which is at a lower level than a state of good repair. Estimates for operations and maintenance to maintain this standard were provided by FHWA, Illinois DOT, Chicago DOT, and transit operators. Anything beyond maintaining a safe and adequate system was considered an enhancement.

The long-range plan development process also included the production of 47 strategy papers, which were a form of in-house white papers that provided background information on topics discussed in the plan. Five were developed by the Volpe Center; five, on economic innovation and green jobs, were authored by an economic development consultant; 10, on topics such as health, education, and workforce development, were written by outside nonprofit organizations; and the remainder was developed in-house by staff and interns.

The bulk of the CMAP region's transportation investments in the *Go To 2040 Long-Range Plan* will be to maintain, improve, and modernize the infrastructure. Pursuing new major capital projects, while deemed important, is a lower priority than rebuilding and improving the existing infrastructure. There are few new capacity projects, even though there are a number of "managed lanes" projects. These projects incorporate advanced tolling strategies such as congestion pricing, Bus Rapid Transit, or special accommodations for truck traffic. The investment strategy also places a priority on transit. These strategies are in line with the preferred regional scenario.

CMAP's financial plan relied heavily on additional sources of future revenue, such as tolls and increased gas tax. Once the case was made that there were no funds available beyond those required to maintain a safe and adequate system, the Board members and the local/state representatives did not raise objections to the suggested new funding sources. The gas tax increase was justified as reasonable since the gas tax has not been raised since 1991. It was agreed that tolls would only increase on the existing tollway system and that no roads built without toll revenues would be tolled. However, it was not identified on which specific facilities tolls would increase.

CMAP's Transportation Subcommittee met on a monthly basis for about a year and a half and categorized expenditures. The base scenario was operating at today's level and providing a safe and adequate system, but less than a state of good repair. Three types of improvements beyond this were identified: 1) move to a SOGR, 2) Strategic Improvements, and 3) Major Capital Projects. These scenarios were used to spur discussion on transportation investments. Major capital projects represent three percent of the total budget and are the only projects evaluated for the long-range plan. The remaining capital projects would be determined through the TIP process. Over 85 percent of the anticipated revenues will go toward system operation and maintenance (system preservation) and 11 percent toward systematic enhancements (operational improvements). Among the major capital projects, funding is split 55/45 between highway and transit.

The **DRCOG** *2035 Long-Range Plan* has identified $133 billion in regional transportation needs and anticipates $93 billion in revenues over the life of the plan, including aviation funding. DRCOG has developed its fiscally constrained *2035 Long-Range Plan* from reasonably expected identified revenues. Revenue forecasts include information for the DRCOG region derived from Colorado DOT's Amendment to 2035 Revenue Estimate & Resource Allocation document. The resource allocation identifies CDOT and DRCOG administered FHWA funds primarily to address regional roadway

improvement needs. Only six percent of bridges in the region are rated as deficient, but 36 percent of lane miles are in poor condition. The long-range plan identifies revenue sources for FasTracks and other transit service needs. Transit funding includes revenues from a dedicated regional sales tax, farebox revenues, and other funds. Locally identified revenues and private sources provide the largest source of funding for transportation in the DRCOG region. Currently, 40 percent of funds will be used for preservation and maintenance of the road and transit system. Just 13 percent will be going toward new capacity projects, with the remainder funds addressing operational improvements and other needs.

The anticipated process for DRCOG's 2040 long-range plan update, to be prepared in 2013–2014, is to first work with stakeholders on an overall reassessment of regional needs, and then to carry out a quantifiable needs assessment along with planning partners, including Colorado DOT, the regional transit agency, and local partners. This will include the solicitation of specific projects to be evaluated relative to regional goals and within the constraints of funding availability.

MAG's long-range plan was originally adopted in 2003, and was updated in 2007 and 2010. The financial plan includes five five-year funding periods and includes total anticipated revenues of $29.6 billion over the life of the plan. Funds come from four major sources: local government funds (from counties and cities), federal transportation funds, Arizona DOT, and a regional sales tax (half a cent, which is the largest source of funding). Allocation followed a "bottom-up" process of selecting individual projects, and local governments lead the way in allocating funds.

Scenarios were used as a rationale for the last major update of the plan in 2003 when an extension of the half-cent sales tax was approved by voters. The scenarios were used to determine targets and to illustrate system-level priorities (rather than individual projects) such as new corridors, freeways, light rail, High Occupancy Vehicle lanes, express bus routes, and expanded bus grid. System-level scenarios were evaluated by their Transportation Policy Committee, which is made up of elected and private representatives. The Transportation Policy Committee recommended the hybrid scenario, which served as a target for the sales tax renewal. A third of the sales tax revenue would go to transit (as opposed to just three percent under the 1985 law), 10 percent to arterials, and the remaining 55 percent to freeways. The vote was 57 percent in favor of the sales tax renewal.

MTC begins with a 25-year needs assessment for local street and road maintenance, state highway maintenance, transit capital replacement, and transit operations. MTC then assigns funds currently programmed or to be directed to those various investments, and then identifies the funding shortfall. They then consider these shortfalls, within the context of other competing investment priorities, and makes some trade-offs in terms of the levels of funding to direct to these needs versus other needs.

At **MWCOG**, the process of project prioritization in the constrained long-range plan is fairly simple. The COG Board determines overall goals, and the projects are selected

utilizing a bottom-up approach. There is no allocation threshold for different funding categories, and the three State DOTs and transit operators do their own planning and allocation for capacity-adding projects. MWCOG is developing a Priorities Plan to identify where additional projects are needed. This was done because they have had to recently drop some projects from the fiscally constrained set of projects. The Priorities Plan will be completed in time for the next major update in 2014 and will be used to influence regional priorities.

At **NCTCOG**, bridge maintenance and highway pavement projects are determined by the state DOT, which balances those needs and projects statewide. NCTCOG staff makes an initial effort at allocating funding for other types of projects and then work with their Technical and Policy committees to refine the distribution.

At **NJTPA**, the Regional Capital Investment Strategy is a Board-adopted policy statement of investment priorities. This document is the culmination of a wide-ranging visioning process that attracted over 1,000 participants. The difference between the goals outlined in the investment strategy and the actual allocation of funds falls within a four or five percentage point margin. Two-thirds of the investments are targeted toward "fix-it first" projects. Funding allocation is a policy decision. Goals are set cooperatively, and their management system is tied to the criteria. Decisions are made in collaboration with NJDOT, with an eye toward consistency with the state's capital strategy.

PSRC does not designate funding caps or allotments to transportation categories within their current long-range plan. They did use a scenario analysis of five investment levels to guide transportation investment and allocation decisions. This effort took three years, and they looked at various total investment levels, including alternative funding mechanisms, as well as varying levels of support for different modes. They selected a preferred constrained and a preferred unconstrained scenario that was included in their long-range plan.

For their 2035 long-range plan, **SEMCOG** identified over $70 billion in infrastructure needs but anticipated only $30 billion in revenues over the life of the plan. They adopted a technical investment prioritization process, developed by Cambridge Systematics, that relates various investment levels to performance for pavement, bridge, safety, transit, non-motorized, and congestion relief projects. Their policy board adopts a regional investment direction, and proposed projects are cumulatively compared to that adopted direction to determine if the projects selected are consistent with it. Staff provides various scenarios and evaluation results to be considered during the development of the investment direction, and the investment direction is considered a policy decision. They are in the process of refining that process to be used at the county level and for the shorter TIP timeframe. The process as applied to the TIP is expected to be conducted more at the staff level and will not necessarily lead to a policy action.

SPC's Highway and Bridge Program component of their long-range plan calculates funding for four general investment categories. The roadway

reconstruction/replacement and bridge rehabilitation/replacement program track the formula funding from the Pennsylvania Financial Guidance for the TIP. The other two general categories are New Capacity and Traffic Operations and Safety (TOS). For purposes other than the long-range plan, these general investment categories are further classified into a dozen more specific categories, such as Interchange Completion and Bridge Preservation, Freight, and Intermodal.

The long-range plan focuses exclusively on the general investment category level. However, the long-range plan recognizes the remaining programs from the Pennsylvania Financial Guidance—CMAQ, Rail Safety, and Transportation Enhancements (TE) Program—as stand-alone programs. There are no provisions for advance project selection as part of the SPC long-range plan project selection or evaluation processes since these are active only at the TIP level. New Capacity Highway projects draw down funds from the Highway Program, and New Capacity Bridge projects draw funding from the Bridge Program. The Traffic Operations and Safety Program is initially funded with Highway Safety Improvement Program (HSIP) funds as per PennDOT guidance. Additional projects draw funding from the Highway Program as the projects are identified.

Reserve TOS line items are identified for each of the three PennDOT Districts within the SPC region to attain an SPC long-range plan goal of an overall 22 percent level of TOS investment. The additional TOS funding may be drawn from either the highway or bridge programs, depending on the aggregate category totals of the identified projects and the remaining available funds in the highway or bridge program. The MPO Board makes the project and funding allocation decisions based on the work and recommendations of the SPC Transportation Technical Committee.

C. Evaluating and Prioritizing Transportation Investments

Every MPO surveyed has been forced to remove projects from their long-range plans and TIPs in order to maintain fiscal constraint. With transportation infrastructure funding becoming scarcer, many MPOs have begun utilizing evaluation criteria to help prioritize transportation projects for funding in their long-range plans and TIPs. Evaluating projects using performance measures helps ensure that transportation investments advance the goals of the long-range plan. This is one means to better integrate land use and transportation planning. We asked the respondents whether they were using an evaluation methodology or prioritization process to help select the transportation investments to be funded in their long-range plans.

At **ARC,** only major new capacity projects are evaluated with project-level criteria. They screen projects using filters to assess ability to meet regional strategic goals. ARC has adopted a Federal Funding Decisions Framework to prioritize highway and transit system expansion projects. Projects are prioritized using a four-step Key Decision Point (KDP) matrix. KDP1 establishes desired performance by topic area. KDP 2 is a policy filter for select project types. KDP 3 is a project-level evaluation wherein a quantitative

and qualitative performance evaluation is gauged against performance measures, and a composite score is assigned and weighted against cost-effectiveness measures. KDP 4 looks at additional factors. The end result includes lump-sum funding for "categories" or "silos" of projects, programmatic funding, and line-item funding for specific projects. They worked closely with their Technical Committee to develop and evaluate the criteria before adopting them.

This framework incorporates the Governor's Congestion Mitigation Task Force recommendation to implement a project selection process that weighs congestion mitigation at 70 percent. Proposed system capacity-adding projects were prioritized based on a technical analysis and ranked high to low. ARC does not fund capacity-adding projects in rural areas unless they meet certain criteria (e.g., a highway link connecting two centers). Selected projects were then placed into timeframes based on a cost-benefit analysis. ARC retained Cambridge Systematics to refine their criteria for the project-level assessment phase, particularly to determine the return for funding levels.

The technical analysis includes four major components used to estimate how well each project meets regional goals and objectives, including an assessment of recurring delay (50 points), non-recurring (incident) delay (20 points), environmental impact (15 points), and support for the Regional Development Plan policies (15 points). Separate techniques were used to evaluate highway and transit projects. Approximately 200 system expansion projects in their current long-range plan went through the technical analysis.

As noted, selected projects then go through a cost-benefit analysis that includes variables such as person delay, truck delay, wasted fuel, and project cost. ARC used the cost-benefit methodology to help determine program years for projects selected for inclusion in the long-range plan. Once evaluated, projects are broken into Tiers 1 (highest-scoring) to 4 (lowest-scoring) based on available funding. ARC looks at the cost-benefit of projects in terms of congestion relief, GHG emissions, crash/safety factors, fuel consumption, and cost to operate.

CMAP evaluates major new highway and transit capacity-adding projects for its long-range plan. Projects are evaluated on a number of criteria, such as impact on regional employment and income, hours of congestion, speed, auto and transit travel time, number of trips, and emissions of air pollutants and greenhouse gases. Projects were prioritized based on their support for the preferred regional scenario, the results of the individual evaluations, and information from other project analyses. CMAP also conducted a cumulative analysis for all selected projects using the evaluation criteria.

DRCOG uses a quantitative scoring assessment to rank highway capacity projects according to a point system. As available funding beyond previous commitments is limited, DRCOG relies on this technical ranking to prioritize highway improvements submitted for regional funding. DRCOG does not evaluate bridge or safety projects, since they are selected by the state DOT, projects eligible for other funding sources

(e.g., Intelligent Transportation System, Transportation Demand Management), or surface treatments other than reconstruction. Evaluation criteria were used for the 2035 long-range plan update in 2007, developed jointly by DRCOG's staff and transportation committees. Projects are based on a 100-point scale using the following criteria: congestion severity, cost per person mile traveled, gap closure, proximity to parallel arterial roadways, system classification, total users, safety measures, services consistent with regional land use and the Urban Growth Boundary, and whether it is part of a multi-modal corridor. Congestion severity, based on the current congestion score from the DRCOG Congestion Management Process, counts for 35 percent of the total score. Projects with previous funding commitments in the TIP and STIP and improvements with 100 percent committed locally derived revenues are selected first.

The long-range plan was updated in 2011 to include the status of roadway improvements from 2012 to 2035. No projects were added, and no additional evaluation was undertaken. Newly adopted sustainability goals and strategies will be considered among the criteria for project prioritization in the 2040 long-range plan update.

At **MAG**, system-level quantitative performance measures, such as total travel time, accessibility to transit service, system costs, and emissions reduction, are used to evaluate system-level performance, which lead to the identification of projects. Decision-makers use performance measures as one input to the decision process.

At **MTC**, a project performance assessment is used to prioritize transportation infrastructure projects. They are currently developing a new approach to be undertaken in Summer 2011 as part of *Plan Bay Area*. *Plan Bay Area* is a collaborative long-range planning effort between MTC and its sister agency, the Association of Bay Area Governments. The assessment is designed to identify outliers—projects that perform very well or very poorly based on the established criteria—and support a trade-offs discussion with elected officials. The process is similar to the approach utilized in the previous long-range plan, Transportation 2035. All projects will be evaluated, although smaller projects are bundled by project type to facilitate project assessment. Large projects, with costs greater than $50 million, or with regional impacts, will undergo a more extensive quantitative analysis based on travel demand model results. Most of these projects will increase capacity. These results will be used to quantify benefits and establish project support toward performance targets. Project evaluation will be performed using two distinct analyses: a targets assessment and a cost-benefit assessment.

For the targets assessment, each project is evaluated based on its level of support for the adopted performance targets. There are two statutory performance targets:
- Reduce per-capita CO_2 emissions from cars and light-duty trucks by 15 percent; and
- House 100 percent of the region's projected 25-year growth by income level without displacing current low-income residents.

The other performance targets are:

- Reduce premature deaths from exposure to particulates
    a. Reduce premature deaths from exposure to fine particulates ($PM_{2.5}$) by 10 percent
    b. Reduce coarse particulate emissions (PM_{10}) by 20 percent
    c. Achieve greater reductions in highly impacted areas
- Reduce by 50 percent the number of injuries and fatalities from all collisions, including bike and pedestrian
- Increase the average daily time walking and biking per person for transportation by 60 percent
- Direct all non-agricultural development within the urban footprint (existing urban development and urban growth boundaries)
- Decrease by 10 percent the share of low-income and lower-middle-income residents' household income consumed by transportation and housing
- Increase gross regional product by 90 percent
- Improve transportation system effectiveness
    a. Decrease average per-trip travel time by 10 percent for non-auto modes
    b. Decrease auto vehicle miles traveled per capita by 10 percent
- Maintain the system in a state of good repair
    a. Increase local roadway pavement condition index (PCI) to 75 or better
    b. Decrease distressed lane-miles on the state highways to less than 10 percent of the system
    c. Reduce average transit asset age to 50 percent of useful life

For larger projects, the regional travel model is used to measure the quantitative impacts of projects toward achieving that particular target. For example, for the CO_2 reduction target, the tons of CO_2 reduction attributed to that project is used to gauge the project's level of support toward the target. Projects are ranked in tiers based on the results of these assessments (e.g., high, medium-high, moderate, low), and this influences which projects are included in the final plan. It also supports the development of each of the alternative scenarios. However, when presented to policy-makers, the projects are summarized by project type in order to simplify the results of the project performance assessment.

They will use a cost-benefit analysis as part of project assessment process. This analysis is only performed for larger regional projects, as the regional travel demand model can only accurately measure the impacts of larger-scale projects. In contrast to the targets analysis (which is based on adopted policy decisions about performance targets), benefits and costs go beyond the adopted targets and reflect current best practice in terms of benefits included in cost-benefit analysis. Project performance will be evaluated in the plan horizon year of 2040. Project benefits and operating costs are measured for that horizon year, while project capital costs are annualized based on the lifespan of the project assets.

The following benefits will be included in their analysis:
- Travel time
- Emissions (CO_2, $PM_{2.5}$, PM_{10}, ROG, NO_x)
- Health costs associated with changes in active transportation levels
- Collisions causing injuries, fatalities, or property damage only
- Direct user costs (vehicle operating/ownership)
- Noise

The following costs are included in their analysis:
- Capital expenditures
- Operating and maintenance expenditures

They have also done a simplified cost-benefit analysis for local roadway and transit capital maintenance. For this analysis, they included cost savings from on-time maintenance as a key benefit to be compared to the expenditures on maintenance projects.

MWCOG has defined Regional Activities Centers (RACs) in their plan and quantifiable data is gathered, focusing on employment and residential patterns. RACs are used in scenario development, but not in project selection. Historically, there has been a reluctance to use RAC as a criterion to fund projects due to political considerations, specifically regarding the issue of geographic equity between the more and less prosperous RACs.

NCTCOG staff describes project prioritization as "both an art and a science." For major new capacity or reconstruction highway projects, scoring criteria are used as one technical resource to start the discussion among legislators and municipalities. For transit projects, prioritization emerges from a strategic policy discussion with transit authorities and local governments. A call for projects is launched on a five- or six-year timeframe at the beginning of the federal transportation bill authorization cycle.

NJTPA's Board-adopted Regional Capital Investment Strategy sets the policy by which NJTPA will prioritize projects. They have also developed a set of project prioritization criteria for transit, local and state bridges, and highways. These criteria address a range of factors, including the environment, user responsiveness, economic factors, system coordination, system maintenance and safety, and land use/transportation planning. Potential projects are rated by each factor with a maximum possible score of 1,000 points. Those criteria were revised in 2007, and resulted in eliminating some duplicative criteria from the old version. Prioritization criteria are only one factor upon which decisions are made. Other decision factors include project timing, political considerations, and geographic equity. Because internal and external members were involved in criteria development, there was general agreement on the process, with no substantial resistance to the process.

At **PSRC**, the prioritization process is currently under development. They did not evaluate individual projects for their current long-range plan, but their Board has since requested that staff develop a set of more specific evaluation criteria that will be used to prioritize individual investments through the prioritization process currently being developed. One big component that they are trying to address is tying transportation investments to land use policies and focusing development around centers. PSRC has taken the more than 125 policy strategies contained in the plan and broken them down into five broad areas: environment, community character, mobility, economy, and equity. PSRC will next develop measures for each of these areas and will conduct a weighting exercise to determine the relative importance of each of the five areas. They hope to have their evaluation criteria adopted by their Board by early 2012.

The only projects **SEMCOG** currently scores are those applying for CMAQ and safety funds. The CMAQ evaluation considers reduced emissions based on estimates of changes in speed, and the safety assessment considers crash reduction potential. Geographic equity is also considered during the selection process for CMAQ and safety projects. Each county and the City of Detroit have an individual project prioritization/selection committee that proposes projects for inclusion in the plan. SEMCOG reviews all proposed projects in total for consistency with the regional investment direction, corridor priorities, goals and objectives, air quality, environmental sensitivity, environmental justice, and financial constraint. The MPO provides the following data to support the selection of projects: regional investment direction, needs analysis prioritized at the corridor level (e.g., a prioritized list of pavement needs), regional corridor priorities (based on factors such as number of deficient bridges, number of high-crash intersections, percentage congested, transit ridership, road volume, and number of activity centers), and revenue forecasts. SEMCOG has broken down the region's federal-aid eligible highways into a series of corridors that are classified as regional, subregional, higher local, or local priorities. Projects impacting regional or subregional corridors are given higher priority over projects in lower categories.

SPC uses an evaluation process as an input to many of its prioritization decisions. There is no formal cost-benefit analysis, but that is being discussed as it may be a potential future federal requirement in the next reauthorization. Based on criteria that are program-dependent, calculated project scores are used to identify project recommendations. Identified transportation infrastructure projects, once selected, are not further prioritized by rank. Cost- and benefit-related criteria are included within the specific program and project evaluation processes considered above.

D. Aspirational Projects

Most MPOs have an unconstrained, illustrative, or aspirational set of projects that they are not able to fund but that are included in their long-range plan. However, the selection or evaluation process for those projects varies greatly. DVRPC developed such a list of projects in previous long-range plans but did not include any in the

Connections Plan, primarily due to questions surrounding whether the aspirational projects were truly regional priorities or needs. Aspirational projects are beneficial for highlighting the additional transportation needs of a region that could be constructed if additional funding were available. They also help offer a more visionary future compared to the harsh realities imposed by a fiscally constrained plan, where elimination of many proposed projects and an emphasis on reconstructing existing facilities is the norm. Many MPOs investigate additional revenue sources in conjunction with their set of aspirational projects.

At **ARC,** the constrained plan has about $61 billion worth of projects, and they have an aspirations plan of an additional $65 billion. They have produced a report, *Bridging the Gap: 2010*, that investigated solutions for transportation funding alternatives in the Atlanta region that could fund their aspirational projects.

The **DRCOG** 2035 long-range plan identified an additional $40 billion in transportation project needs beyond fiscal constraint in their aspirations plan or 2035 "Vision" element. There is recognition at the Board level of the need for new sources of funding to address these needs, which will be explored in the 2040 long-range plan update process.

At **MAG**, there is a section in the plan dedicated to a number of illustrative projects generated by "framework studies" that are used to identify new areas and corridors where future growth may occur. The framework studies designate areas and illustrative transportation facility scenarios that serve as a basis for potential future plan adjustments.

In past long-range plans, **MTC** had a "Vision Element" that identified projects that the region might wish to pursue should future funding become available beyond what they forecast in their financially constrained plan. The Vision Element undertook the same process as projects for the financially constrained plan, wherein sponsors submit candidate projects for consideration in the plan.

At **MWCOG**, *Time to Act* was a 2004 publication that identified many unfunded but desired projects that could not be included in the financially constrained long-range plan. The *Report on Analysis of Resources for the 2010 Constrained Long-Range Transportation Plan*, produced by Cambridge Systematics, analyzed alternative funding mechanisms (e.g., indexing fuel tax to inflation, tolling, congestion pricing, asset leasing, etc.) and provided a blueprint for achieving additional funding. Their aspirations scenario was born out of the Regional Mobility and Access Study and envisions a large toll network, new road capacity, and good quality transit. It was based on a network developed in their Value Pricing Study. Their aspirational scenario features new road capacity, increased transit, and a land use component. There would be new toll capacity added in Maryland and Virginia, as well as new priced lanes on freeways, but not in the District of Columbia. The aspirational scenario is viewed as being quite optimistic, mainly because it is "very hypothetical."

At **NCTCOG**, the illustrative set is based on moving forward every project that was included in the previous transportation plan. Over $45 billion of highway projects were deferred in their current long-range plan, and most were included in the aspirational, unconstrained set of projects. Scenario planning was used for public outreach and generated a lot of discussion at the legislative level.

NJTPA's long-range plan includes a scenario exercise that assesses different funding levels for transportation investment, including a baseline (funding level is below the level needed to simply maintain the condition of the existing networks), a fiscally constrained scenario (transportation funding for the existing network in this scenario allows the region to maintain and slightly improve existing system performance), and an aspirational scenario (funding significantly increases, allowing the region to virtually eliminate the backlog of deficient highway pavement and bridges and make significant improvements to address highway congestion at critical locations such as bottlenecks, as well as improve transit service by increasing service frequency and expanding the transit system to serve new locations).

PSRC's *Transportation 2040* includes two formal categories of investments: Constrained and Unprogrammed, plus an informal category of Concepts. Projects on the constrained list are more well-defined and are included in the plan's financial strategy, thereby meeting federal financial requirements. Unprogrammed projects are included in the plan but are less well defined. These projects are not included in the financial strategy. Concepts are projects, programs, or investments that are long-range and aspirational in nature and are not considered to be a part of the plan (i.e., they are not covered by either the financial plan or the environmental documentation prepared for the plan). Projects in the unprogrammed category are selected using the same criteria as constrained projects. All three types of projects typically originated from project sponsors through the plan's call for projects process; were inherited from a previous regional plan; or were included in *Transportation 2040* because they have some level of status by being partially funded, included in the regional TIP, or having undergone some level of planning or environmental approval.

For *Transportation 2040*, both within the context of the Environmental Analysis and the evaluation of plan alternatives, they made no distinction between the level of analytical detail used to evaluate constrained projects versus unprogrammed projects. Both types of projects were included in every alternative and were evaluated as a group for each alternative. They are currently engaged in a process to prioritize the projects and programs contained in their long-range plan. This prioritization process may create a different level of evaluation for constrained projects as opposed to unprogrammed projects but this has yet to be determined.

At **SEMCOG**, each implementing agency has the option to include illustrative projects in the plan, but most do not do so. Each county and the City of Detroit have their own protocol for illustrative projects. **SPC**'s long-range plan includes an illustrative project list. Planning partners use this list as a catch-all for unfunded priority needs. These projects are not prioritized or evaluated.

E. Performance Measures

The use of performance measures or indicators in planning has increased significantly in recent years. The next federal transportation authorization will likely include additional requirements for tracking performance of transportation investments. At DVRPC, performance measures have been used to assist in developing the future vision for the region by tracking trends (*Rating the Region* and *Tracking Progress Toward 2030*), showing the benefit of a particular strategy or the planning process in general (*Making the Land Use Connection: Regional What-if Scenario Analysis* (Publication Number 08059) and *Implementing Connections – The Benefits for Greater Philadelphia* (Publication Number 11045)), and evaluating transportation projects for the fiscally constrained long-range plan.

At **ARC**, *Breaking Ground* tracks performance of project delivery. ARC has found it to be transformational in terms of changing the culture and developing a new business model. This effort was brought on by the unhappiness of their Board of the time it took to complete projects. This document is updated annually and has resulted in an improved project delivery process and more accountability at the state DOT. They are considering the use of specific targets to track project progress in terms of delivery dates and budget in the 2040 plan. They are also currently developing a health impact assessment for their transportation projects.

DRCOG measures transportation benefits and impacts from implementation of the fiscally constrained long-range plan, similar to *Implementing Connections*, as a component of their long-range plan. They also produce an annual *Measuring Progress* report, which tracks 23 indicators and includes action steps and progress toward achieving long-range plan goals. Among DRCOG's new sustainability goals is the reduction of greenhouse gases from the transportation sector by 60 percent by 2035. Recent state legislation, Senate Bill 09-108, or FASTER, provides an additional state funding source for transportation improvements directed at efforts to sustain existing system performance levels. DRCOG has recently instituted new rules for monitoring TIP project delivery. Project sponsors must appear before the DRCOG Board if a project is delayed. If a project is delayed more than a year, it may be dropped if there is no progress.

At **MAG**, the Arterial Life Cycle Program (ALCP) provides management and oversight for the arterial street projects contained in the long-range plan. This was a key aspect of Proposition 400, which was the legislation for the increase in the sales tax to be used for transportation projects. MAG provides information on each project funded through Proposition 400, including location, year and type of work, and status, and produces an annual report on the standing of each project funded with Prop 400 revenues.

As noted in the project evaluation section, **MTC** has adopted a set of performance targets for use in their *Plan Bay Area*. Targets are not just used to evaluate the transportation projects included in the long-range plan but also are used to compare various transportation and land use scenarios. Targets were selected through an

extensive process involving input from all levels of government, as well as public meetings.

To better understand the benefits produced by investments in the transportation system, the **NJTPA** has begun a Project Performance Results study. The study is examining about a dozen northern New Jersey transportation projects implemented in recent years, including various roadway, public transit, bicycle/pedestrian, freight, and other types of improvements. The study will help decision-makers learn more about how such projects can help the traveling public and serve the region's communities. Where possible, before-and-after data will be used to quantify project impacts. These impacts will be measured against performance indicators specifically related to NJTPA planning goals. This information will support future planning at the NJTPA and partner agencies.

PSRC is currently in the process of developing a program for both system performance and plan implementation monitoring. This program will include performance measures for monitoring *Vision 2040* and *Transportation 2040*.

F. Public Outreach Activities

DVRPC undertook an extensive public outreach effort in developing the *Connections Plan*, particularly in regard to articulating a vision for the future and goals for the long-range plan. An online survey; focus groups of municipal officials, real estate developers, and the general public; and workshops in each of the nine counties helped to gather input for the Plan. Recruiters were used to ensure participation by representatives from Environmental Justice communities in this process. DVRPC also developed a set of future land use scenarios to show the impacts of three different future development alternatives to spur discussion during the outreach campaign. This effort reached a new audience, but overall, participation remained low. Achieving a high level of public input remains a challenge for many of the MPOs that were interviewed, particularly in reaching out to Environmental Justice communities. We asked the respondents the broad question of how they were reaching out to stakeholders and the general public.

ARC reported that they had previously hosted a large number of public meetings that required a large effort by staff but had very low turnout. They now work more with the local Civic League, and that strategy is said to generate better results. They have developed a comprehensive Stakeholder Involvement Program and conducted an extensive forum-based, two-year visioning process called Atlanta Fifty Forward. They also have an ongoing online webinar series devoted to various topics and conduct a Community Planning Academy and Neighborhood Forums.

At **CMAP**, the 2009 MetroQuest effort was the biggest public involvement endeavor ever undertaken by CMAP or its predecessor agencies. MetroQuest is an online scenario visualization tool purchased by CMAP and utilized online, at kiosks throughout the region, and during public meetings. This process gave people planning options and

provided them with a real-time visual response to the scenario they had chosen. MetroQuest also contained a crowdsourcing element so users could see how their results matched up against other users. The combined results leaned toward more transit and a moderately denser development pattern focusing on infill development.

In terms of conducting visioning exercises, CMAP was inspired by an initiative from San Diego that was considered a big success. They allocated 10 grants of $5,000 each to community-based groups to host a series of meetings targeting low-income, disabled, and minority populations. In the spring of 2009, prior to the launch of MetroQuest, CMAP also allocated 10 to 15 grants ranging from $5,000 to $10,000 to architecture and design firms in the region in order to conduct community design workshops/public involvement meetings and design sketches for illustrating scenario concepts at the local level. Finally, staff held around 250 meetings in the summer of 2010 for plan review and outreach activities.

This was the first long-range plan undertaken by CMAP since the merger of the Northeastern Illinois Planning Commission (NIPC) and Chicago Area Transportation Study (CATS). GO TO 2040 is organized around four key themes: Livable Communities, Regional Mobility, Human Capital, and Efficient Governance. The Livable Communities and Regional Mobility themes parallel the *Connections Plan's* Creating Livable Communities and Modernizing the Transportation System principles. The Human Capital theme somewhat mirrors the *Connections Plan's* Building an Energy-efficient Economy principle by including actions to support economic innovation but also places an emphasis on improving the region's education and workforce development. However, it is the Efficient Governance theme that is distinctive. This theme includes three sections of recommended actions to reform state and local tax policy, improve access to information, and pursue coordinated investments. The Metropolitan Mayors Caucus, a civic organization based on consensus-driven model, helped the long-range plan development process by building trust among board members, particularly in regard to the Efficient Governance theme. A staff of 10 full-time planners was dedicated to the development of the plan over a period of three to four years. Many additional planners on staff were involved in different aspects of the development of the plan. It is anticipated that the next update will be somewhat minor and will focus on implementation activities.

DRCOG conducts the Metro Vision Idea Exchange, which consists of 10 workshops a year built around different topics and geared toward stakeholders, especially local planners. DRCOG also conducted Sustainability Café forums to help define sustainability goals, later incorporated into the 2035 long-range plan update. DRCOG also purchased a visioning tool, MetroQuest, to obtain input from the public on a preferred sustainable type of development and transportation pattern for the region. Different scenarios of densities, transportation modes, and land use choices at the regional level were presented to the public. For the 2040 update, traditional methods will be supplemented with a broad public outreach that will redefine long-range focus, strategy, and vision. Communities can also sign onto the Mile High Compact, pledging their support to further the goals of the plan and to work toward its implementation. To

date, the Mile High Compact has been signed by 46 communities, representing 90 percent of the region's population.

MAG uses traditional surveys and sets up an information booth at community events. This is typically carried out by their communications division, which has a bilingual associate. For the development of their long-range plan, MAG conducted fifteen individual focus groups to obtain input on the needs for the region's transportation system, and three separate attitude surveys to determine the issues and the concerns among the population. These efforts have helped decision-makers understand the public's desire for more transit in the region and promoted an increase in funding for transit projects.

Two plan cycles ago, **MTC** conducted stakeholder meetings with Environmental Justice communities, as well as the business community, who preferred "offline" conversations. However, MTC moved away from hosting general public meetings and workshops and now tend to go out to where people are. MTC keeps in close contact with fourteen community-based organizations. MTC provides guidelines and a toolkit that community leaders can use and adapt as they see fit. Community leaders lead the discussion and present the information, and MTC attends these meetings to answer questions. MTC also use media that represent underserved communities, such as high school youth radio in Oakland. They have also used a click voting tool and a card game in community fairs.

The MetroQuest tool (http://www.youchoosebayarea.org/) was used to enhance their presence on the web. The MetroQuest tool was acquired by Silicon Valley Community Foundation through a Knight's Foundation grant, and MTC provided some funding for this effort in return for integrating the tool into their public outreach efforts. MTC believes that it is a good, but expensive, educational tool to use at the beginning of the process—not at the end of it. They believe that the education component depends on the audience, and they have found that web press is useful to reach an audience that has not made up its mind yet. An UrbanSIM-type model, called UrbanVision, is currently being developed in collaboration with professors at UC Berkley and Purdue University. The model will serve as an educational tool to demystify the impacts of land-use changes. The 3D modeling software showing land-use scenarios is being funded through a National Science Foundation grant and CMAQ funds.

MWCOG conducted 40 meetings using different scenarios of density and jobs–housing balance during the development of their long-range plan. This mapping scenario was particularly useful in educating the public about plan concepts. They have a Community Leadership Institute, a two-day workshop offered twice a year for community leaders representing nonprofit, neighborhood-level organizations, which goes beyond transportation issues. The workshops, conducted by experienced professionals, consist of hypothetical coalitions, mapping exercises, and revenue allocation scenarios. They are particularly helpful in providing an overview of long-range plan principles to the community leaders. "Smart Growth Begins at the Local Level" is a multimedia video and

web site developed to inform and educate public officials, civic groups, and the development community.

At **NCTCOG**, separate workshops are held for elected officials, as well as the public. Workshops for the general public notably stress financial issues. NCTCOG also relies on interactive web surveys and booths at special events. NCTCOG benefits from a good relationship with the two major newspapers in the region, which have dedicated two reporters to transportation issues. NCTCOG has also utilized a Facebook page and a Twitter account since last year, which is viewed as timely information conveyors.

NJTPA has organized symposiums on various topics and conducted web-based surveys. There was also an English and Spanish "hotline" for comments for their most recent long-range plan; however, it may not be used in the future, as only two comments were received via the hotline. NJTPA plans on maximizing their use of social media, such as Twitter and Facebook, in the future. NJTPA also hosted 15 symposiums in each of their counties that focused on different topics (e.g., climate change, freight, housing, ITS, etc.) and local issues that were chosen by the local trustee/host. NJTPA developed their own interactive web-based visioning tool that had fifteen subregions in order to make it more pertinent to local issues or factors. This was also used extensively as part of the 15 symposiums held throughout the region.

PSRC uses a variety of methods to involve the general public, community, and stakeholder groups, as well as PSRC membership organizations in the long-range planning process. These methods include open houses, news media, newsletters, web sites, and advertising. PSRC uses the Washington State Environmental Policy Act as a guide for selecting opportune times to engage the public, which denotes holding a public comment period for "scoping" when purpose and need are defined, a public comment period for the alternatives analyzed in the Environmental Impact Statement, and a public comment period on the final draft plan. PSRC emphasizes outreach to stakeholder groups through their extensive board and advisory committee structure, and PSRC staff will attend chamber, council, or advocacy group meetings to present on the long-range plan.

V. Best Practices in Long-Range Plan Implementation Activities

This section on best practices in long-range plan implementation activities consists of two subsections. The first section is dedicated to grant programs, whereas the second part focuses on technical assistance services or programs that the MPO staff provide to municipalities in their region.

A. Grant Programs

DVRPC has initiated several grant programs to help implement the goals and strategies of the *Connections Plan*. The Transportation and Community Development Initiative

(TCDI) begun in 2002, is one of the first proactive measures DVRPC took to fund projects to help further the goals of the long-range plan. This competitive program uses federal transportation funds to provide planning grants to local governments and select non-profit organizations to create more vital and livable neighborhoods in the region's core cities and older suburbs. To date, $12.4 million has been distributed by TCDI. The program spawned a similar effort for the region's growing suburbs, called Efficient Growth for Growing Suburbs (EGGS). EGGS funds projects that support planning, design, preliminary engineering, ordinance writing, and feasibility studies that promote smart growth principles, enhance community livability, and optimize the efficacy of transportation investments. An initial round of eight grants was awarded in 2009.

Recently, DVRPC has partnered with the William Penn Foundation to provide grants for targeted, priority trail design, construction, and planning projects that promote a connected regional network of multi-use trails. This program also provides technical assistance to trail developers, counties, municipalities, and non-profit organizations. The William Penn Foundation also provided funding for two additional grant programs: Take Me to the River, which supports the efforts of riverfront, community-based organizations or citywide groups to locate a project along the riverfront, and The Greater Philadelphia Food System Implementation Grants, which provides grants to groups that help implement the goals of the region's food system plan.

The major grant program at **ARC** is the Livable Centers Initiative (LCI). LCI was created in 1999 by the ARC Board, in concert with staff leadership, to address the need to better coordinate land use and transportation decisions and to develop strategies to create sustainable, livable communities. LCI serves as an implementation tool for the *Regional Transportation Plan* and *Regional Land Use Plan*. It was initially adopted as part of the 2025 long-range plan as a strategy to address conformity issues. The goals are to encourage a diversity of mixed-income residential neighborhoods, employment, shopping, and recreation choices at the center/corridor level; to provide access to a range of travel modes including transit, roadways, walking, and biking; and to develop an outreach process that promotes the involvement of all stakeholders. Specific performance measures include a biannual LCI Implementation Report, a semiannual Breaking Ground Report, 2009 LCI indicators and benefit study, and a required five-year LCI Plan update. Funding sources are 80 percent federal and 20 percent local cash match. No in-kind services are permitted to be applied to local match. The federal portion is 100 percent STP Urban/L230 funds (funds apportioned for urban areas with population over 200,000).

CMAP recently launched a call for TOD, corridor studies, or any other project with a targeted transportation component. Funding for these projects was set aside last year. There is no Livable Communities-type program, and such a program is very unlikely to be created by CMAP at this time because it would likely involve taking money from the TIP, and that is not viewed as palatable due to the high number of needs that are going unfunded. However, CMAP has changed its programming of CMAQ funds to focus on projects that are consistent with the *Go To 2040 Plan.*

DRCOG's Station Area and Urban Center Planning Funds program was created in support of the long-range plan's sustainability goal of locating 50 percent of all new housing units and 75 percent of all new jobs in urban centers between 2005 and 2035. The program initially began as the Station Area Master Plan program focusing primarily on developing areas around transit stations, but DRCOG has since expanded it to include all designated Urban Centers. Station Area/Urban Center Planning funds assist local governments in developing station areas and Urban Centers that further long-range plan goals while meeting the needs of local communities. It is a competitive program funded through the TIP at $3.5 million over four years.

DRCOG's Small Communities Technical Assistance Program was developed in partnership with the Colorado Department of Local Affairs. It is a technical assistance grant program for small communities within the DRCOG region to provide additional resources to help communities with populations less than 10,000 with a variety of planning related projects. These are small grants of $5,000–$10,000, matched by the recipient communities with an equal amount of cash, in-kind contribution of services, or combination of both. Grants and matching funds are usually used by communities to hire consultants. Alternatively, depending on the expertise required on the project, DRCOG staff may be available to provide the services at a lower cost. Possible uses include: GIS mapping; demographic research; comprehensive plan update; parks and open space plan; Town Center plan or Main Street revitalization plan; survey of community attitudes regarding public facilities and services; transportation study; parking study; land use inventory; zoning regulations; or wastewater planning.
There are several grant programs at **MTC**. The Transportation for Livable Communities (TLC) program supports community-based transportation projects that bring new vibrancy to downtown areas, commercial cores, neighborhoods, and transit corridors, enhancing their amenities and ambience and making them places where people want to live, work, and visit. The TLC program supports the region by investing in Priority Development Areas, designated areas in which there is local commitment to developing housing, along with amenities and services, to meet the day-to-day needs of residents in a pedestrian-friendly environment served by transit. TLC provides funding for a range of transportation choices and supports connectivity between transportation investments and land uses. Since the program was launched in 1998, MTC has awarded over $200 million in TLC funds. In 2007, MTC staff conducted an evaluation of the TLC program titled *Ten Years of TLC: An Evaluation of MTC's Transportation for Livable Communities*. The evaluation includes survey results from both project sponsors and community groups. Recommendations and next steps in the ongoing evolution of the program are outlined in the evaluation.

The Transportation Climate Action Campaign commits $400 million to reduce the region's carbon footprint and focuses on public outreach and education efforts aimed at helping individuals develop climate-friendly behaviors, reduce the Bay Area's carbon footprint, and lay the groundwork for future climate change initiatives. The campaign also encompasses a suite of complementary grants, incentives, and action-oriented programs complementing other grant opportunities. They have also directed $45 million to the Bay Area Air Quality Management District's Goods Movement Emission

Reduction Program to curb diesel particulate matter emissions that pose serious health threats to area residents—particularly children and adults with respiratory ailments, and those residing near the Port of Oakland and along major goods movement corridors.

The funding sources for these programs are a mix of STP and CMAQ funds, and none are funded out of the work program. MTC is trying to break the funding silos and to move away from a multiplicity of programs by providing flexible block grants that would be managed by municipalities. They are in the process of instituting a new program, called OneBayArea Grants. Their intent is to better integrate the region's federal transportation program with land use and housing policies by providing incentives for the production of housing with supportive transportation investments. This will shift a larger portion of discretionary federal funding to local jurisdictions for taking on a larger share of the region's housing production. The proposed distribution formula to the counties includes three components: 50 percent population, 25 percent Regional Housing Needs allocation, and 25 percent actual housing production. The administering agency for this grant program is the Congestion Management Agency. There are nine Congestion Management Agencies, one for each county in the MTC region.

MWCOG has instituted Transportation Land Use Connections (TLC), a small planning assistance program that provides up to $30,000 grants to small municipalities in order to conduct studies for projects with a mixed-use, TOD, transportation and land-use component. The grant is allocated to a consulting firm (chosen from a list by the municipal government), and the studies take three to five months to perform. All local jurisdictions are eligible. TLC is funded out of the work program. This work has been scaled back due to economic downturn and to return money to construction projects. Best practices are included in the TLC Clearinghouse publication.

NCTCOG has a Sustainable Development Grant Program that allocates transportation funds to land use projects that promote alternative transportation modes or reduce automobile use. Funds are provided by STP, CMAQ, and local funds, as well as some of the $3.2 billion in revenue from toll roads. NCTCOG's Brownfields Revolving Loan Fund program allocates funds for cleanup and redevelopment of brownfield sites that would potentially serve as future TODs or provide for other sustainable developments. The revolving loan program is administered by NCTCOG and funded by the U.S. Environmental Protection Agency. There are no federal requirements attached to the program, and no local matching funds are required. They also have an Air Quality Program that provides grants for the use of alternative fuel vehicles. **NJTPA** is currently exploring a TCDI-type program that would start out as a pilot program.

B. Technical Assistance

Only a few MPOs have some kind of technical assistance program, most of which focus on providing planning assistance to municipalities for tasks such as developing municipal comprehensive plans or updating zoning codes. DVRPC's technical

assistance efforts have focused on providing data and tools to municipalities in the region. The DVRPC Municipal Resource program better equips municipalities to implement the *Connections Plan* through Smart Growth plans and policies. A cornerstone of this program is the Municipal Implementation Tool brochure series which provides tools and implementation assistance on varied subjects, ranging from aging in place to road diets. Another example is Classic Towns of Greater Philadelphia, a regional marketing strategy that identifies individual community needs, develops effective messages, and creates strategies that help communities brand themselves. Staff time is funded through DVRPC's Work Program and marketing is financed by a $5,000 contribution from each of the 20 communities in the program.

CMAP is utilizing a HUD/EPA/DOT Sustainable Communities grant for a regional planning assistance program that provides technical assistance to lower income communities. Ten city planners have been hired through the grant and are working with communities on their comprehensive plan updates, zoning ordinance updates, and other local land use matters.

At **MAG**, there is a design assistance program offering consultant assistance for bicycle and pedestrian facilities.

NCTCOG has a Streamlined Project Delivery Team. The purpose of Streamlined Project Delivery is to assist transportation agencies and the Regional Transportation Council to advance critical regional projects through project development and move them to construction as soon as possible. Working in close partnership with the region's transportation agencies and their respective staff, this team helps reinforce regional efforts by providing additional resources to develop and support projects and procedures to get these high-priority transportation projects built sooner. They also have a TOD Implementation Group, as well as an Alternative Futures Policy program, which develops sustainable model ordinances for communities in the region. These three programs are funded out of the work program.

PSRC does not currently have any planning assistance or grant programs and does not anticipate any in the short term. However, they did receive a five-million dollar Sustainable Communities grant, which they have used to hire five to six planners to develop TOD projects and work to better link land use and transportation.

VI. Summary of Findings and Relevance for DVRPC

The nation's MPOs have a common mission to plan for the future transportation needs of their respective regions, but each MPO is unique in terms of their composition, authority, staffing, and revenue sources.   Despite these significant differences, which have a considerable impact on their long-range planning process, they share many common approaches to developing and implementing long-range plans.

A. Developing Employment Forecasts

Several of the MPOs that were interviewed for this effort are using models to develop future employment forecasts. Some have developed an in-house model, but most are using REMI. Many MPOs augment Census and Bureau of Economic Analysis data with more detailed local data purchased from a third party. Utilizing a model requires a large investment both in terms of cost and time to set up. Developing future employment forecasts will be a rather straightforward task for the *Connections 2040 Plan* since the 2010 Census data will serve as the baseline to develop forecasts, and there is no need to develop and reach consensus on an interim baseline. However, employment data from the 2010 Census will not be available until the spring of 2012. DVRPC staff will develop population forecasts for Board adoption during FY 2012 and will develop interim employment forecasts that extrapolate the existing 2035 forecasts to 2040 and link to the adopted 2040 population forecasts. This interim forecast will be used for developing scenario exercises and other plan development tasks. Once 2010 Census employment data is available, staff will produce new employment forecasts to be adopted by the Board. Staff will also investigate additional data needs and potential sources to develop employment forecasts for the *Connections 2040 Plan*.

B. Identifying Transportation Needs

Peer MPOs vary greatly in terms of assessing their transportation needs. In many regions, the state DOT identifies what is required to bring the system up to a state of good repair, particularly for bridges and roadway pavement, utilizing their federally required bridge and pavement management systems. Several MPOs conduct their own needs assessment, based on asset management systems, with most focusing on bringing their bridge and roadway infrastructure up to a state of good repair. Only a few MPOs also include an assessment of the transit system, but most that do rely on a consultant to conduct the transit assessment, and the assessment generally only considers transit vehicles. DVRPC will continue to utilize state DOT asset management systems to identify future needs, and both state DOTs have made improvements in reporting and sharing asset management system data since the last plan update. The National Transit Database contains a lot of useful transit system data, but identifying transit needs, specifically for rail infrastructure such as track, catenary, signals, and stations, continues to be difficult. DVRPC staff has already begun to work with the region's transit operators to develop a methodology to identify transit needs for the plan update.

Connections – The Regional Plan for a Sustainable Future identified and listed Major Regional Projects in the Plan. These projects were defined as new highway capacity, fixed guideway rail, or dedicated lane Bus Rapid Transit projects. System preservation and operational improvements projects were allocated funding in the plan but individual projects would be identified in the Transportation Improvement Program. *Connections 2040* seeks to expand the definition of Major Regional Project to also include major preservation and operational improvement projects. This will help ensure that

expensive transportation projects are accounted for in the financial plan, regardless of the type of project. The most straightforward approach would be to identify a cost threshold (e.g., any project over $35 million dollars) as a definition for Major Regional Projects.

The financial plan for *Connections* was organized into three time periods: short-term (2010-2015), mid-term (2016-2025), and long-term (2026-2035). Penn DOT has since released long-range plan development guidance which recommends breaking the financial plan down as follows: four one-year time periods corresponding to the current TIP, a two-year time period, a six-year period to account for the remaining portion of the state's 12-year program, and two outer-year time periods (2024-2030 and 2031-2040). The financial plan for the New Jersey side of the region would mirror this approach but would have slightly different analysis years than Pennsylvania due to the off-set nature of when each state updates their STIP and the fact that New Jersey DOT has a 10-year plan, as opposed to Penn DOT's 12-year plan. The multiple, off-set time periods may add some confusion to the financial plan but will offer the benefit of a more transparent alignment between the plan and the TIP.

Peer MPOs also struggle with developing more accurate cost estimates for projects in their long-range plans. Several have developed cost estimation tools, either in-house or by hiring a consultant. Most, however, rely on project sponsors to develop and submit cost estimates for proposed projects. Most MPOs are beginning to review cost estimates with an increased scrutiny and are comparing them to average cost estimates derived from previous plan and TIP cycles. DVRPC will continue to rely on project sponsors, departments of transportation, and transit operators to provide and update costs estimates but staff will continue to explore approaches to develop and/or verify cost estimates.

C. Maintenance and Operations

MPOs are required to consider the continued maintenance and operation of projects in their long-range plans, and most MPOs, including DVRPC, have employed a narrow definition of the term that primarily addresses the cost to rehabilitate or reconstruct existing facilities. Routine maintenance costs, such as litter removal and snowplowing, or any other cost that is not federally reimbursable, are generally not accounted for within the long-range plan at DVRPC or other peer MPOs. Many Intelligent Transportation System (ITS) projects (e.g., maintenance contracts on cameras or operations center personnel) also blur the line between capital and operating costs. In many instances, MPOs simply assume a percentage of the construction price when developing cost estimates for annual maintenance and operation. In developing a financial plan for *Connections 2040*, DVRPC will continue to work with the state DOTs and transit operators to develop a methodology to account for the ongoing maintenance and operation of transportation facilities. A likely outcome of this process will be the assignment of an appropriate percentage for such expenses to apply to various categories of projects in the long-range plan.

D. Allocating Funding to Project Categories

Several MPOs, including ARC, CMAP, NJTPA, and SEMCOG allocate funding to various funding categories through a Board-adopted policy directive. Many have described their allocation process as a policy decision. NJTPA's Regional Capital Investment Strategy (RCIS) was developed through an extensive public outreach process and sets specific targets. In practice, no more than four or five percentage points separate the goals articulated in the RCIS and the allocation of funding for projects contained in the final long-range plan. The policy directive, developed through an in-depth collaborative process, defines broad categories of investments for the long-range plan. The DVRPC Board is kept up-to-date on the allocation of funding to different categories of projects during the development of the long-range plan, even though they do not adopt a policy directive prior to the adoption of the completed long-range plan. The financial plan adopted as part of the final plan document is a defacto policy directive. If the transportation needs assessment reveals a need to drastically revise the allocation of funding between different types of projects, DVRPC staff will meet with the Board early on in the update process to discuss approaches to distribute revenue to different categories of transportation investments.

Perhaps the biggest difference among the MPOs interviewed is the source of transportation revenues and how that money is allocated to different projects. Many MPOs have revenues derived from local sources, such as a regional sales tax. Many MPOs also have toll revenues available to them, thereby increasing the overall amount of funding for transportation projects in their respective region. Of the top ten largest metropolitan regions in the country, DVRPC ranks lowest in terms of local contribution of funds for transportation investments. The *Connections Plan* highlighted this issue, and *Connections 2040* will continue to look for ways to extend current expenditures while also assessing additional revenue sources. *Connections 2040* will include a historical perspective on transportation funding and project expenditures. The plan will also investigate potential local funding options, focusing on options that are consistent with approaches espoused by the respective states.

Where money is allocated also varies greatly by MPO. Many of the MPOs in fast-growing regions are allocating the majority of their funding to system expansion with an emphasis on reducing congestion. MPOs in older, slower-growing regions are allocating the majority of their funding to rebuild their existing infrastructure. DVRPC falls into the latter category and has allocated just 10 percent of its anticipated highway funding to system expansion projects in the *Connections Plan*. Several mature regions across the country have allocated even less toward new or widened highways. CMAP, for example, has only allocated 3 percent of their total transportation funding for expansion projects. CMAP used a scenario planning exercise to show the impact of various forms and levels of investment during the funding allocation process. This helped highlight trade-offs involved with different types of projects to their technical committee and Board. MAG also used scenarios to determine funding targets for the regional sales tax initiative and to illustrate system-level priorities at the corridor level. DVRPC is currently undertaking a transportation investment scenario exercise to assess the impact of varying levels of transportation funding as well as different types of

transportation projects. This exercise is intended to help guide the discussion of what types of projects the region should invest in and at what level of funding as part of the funding allocation task.

E. Evaluating and Prioritizing Transportation Investments

Every MPO surveyed has had to remove projects that were included in their previous long-range plan in order to maintain fiscal constraint. This has made the competition for funding even fiercer, and there is a growing desire to identify the comparable benefits for transportation projects in order to ensure the most efficient and effective investment in the transportation system. Many MPOs have instituted a project evaluation process for their long-range plans. Some of the MPOs select projects based solely on the results of the technical evaluation, while others use the technical analysis as one component of their decision-making process. ARC, CMAP, and MTC, in particular, have developed very comprehensive evaluation processes, and PSRC is developing an extensive assessment at the behest of their Board. All four MPOs worked closely with their technical committees and Boards to develop their evaluation criteria and a methodology for prioritizing projects.

ARC and MTC have taken a further step and conduct a cost-benefit analysis. MTC's travel demand model-based analysis looks at capital expenditure and operating and maintenance costs while assessing benefits such as travel time, emissions, health costs, collisions, and noise. Projects are ranked in tiers based on the analysis, and this influences which projects are included in the fiscally constrained long-range plan. ARC conducts their cost-benefit analysis after proposed projects have been categorized into priority tiers for funding and uses the analysis to program transportation projects within specific time periods within the long-range plan.

The majority of MPOs surveyed only evaluate major projects that will have a transformative impact on the transportation system. Some classify these projects as costing more than a certain threshold, while others evaluate projects that will add capacity to the system. Many MPOs rely on asset management system data for evaluating other types of projects, specifically highway pavement and bridge projects, but this usually occurs at the time of TIP development, rather than the long-range plan. Many of the surveyed MPOs use a point system based on a range of criteria, including congestion, mobility, safety, environmental factors, and land use goals. Some MPOs, such as DRCOG, weigh the factors and emphasize different goals. In DRCOG's case, they weighted congestion as over 50 percent of the score due to the strong emphasis of reducing congestion as a goal in their long-range plan.

Most of the MPOs that utilize evaluation criteria in the selection of transportation projects revise the criteria on a regular basis. Many of them are looking at adding a criterion to measure sustainability for their next long-range plan update, but several admit that it is difficult to develop a comprehensive measure for sustainability. DVRPC will be reevaluating its current project selection process, particularly the project

selection criteria, and also look at how this process can also be expanded to the TIP project selection process. An expanded Regional Transportation Committee, that also includes representatives of smart growth and environmental advocacy groups, business organizations, and Environmental Justice representatives, will utilize Decision Lens to develop a project evaluation framework. Decision Lens is a collaborative decision-making software tool that allows the prioritization of options as well as allocates limited resources.

F. Aspirational Projects

Every MPO has additional projects that do not fit under the fiscal constraint of their long-range plans. Many of the MPOs have included a set of illustrative or aspirational projects that could be funded if additional funding were available. The approach to the aspirational set of projects varies by MPO but the emphasis is generally on major regional transportation projects that will have a transformative impact on travel within a region. Some simply include every project that was on a previous long-range plan or was considered but not able to be funded under the current plan. Other MPOs evaluate each of the projects proposed and include only high-scoring projects on their aspirational lists. In other cases, MPOs select only a few illustrative projects or types of projects that could be funded. This latter approach is desirable for DVRPC because it would ensure that unfunded projects that are showcased in the long-range plan meet plan goals, while not having to prioritize every possible aspiration. *Connections 2040* will include a thorough transportation needs assessment that will document the reconstruction and rehabilitation needs for the transportation system, but the intent is to also develop a list of system operational and expansion needs that are not able to be included in the fiscally constrained plan, but would be able to be afforded under the additional funding options outlined in the plan.

G. Performance Measures

Almost every MPO uses performance measures in developing and evaluating their long-range plans. The use of performance measures varies by MPO from use of scenario exercises to evaluating projects to monitoring implementation of long-range plans. Quite a few MPOs are tracking the delivery of transportation projects in their long-range plans and TIPs. The impetus for project delivery usually stems from the desire to reduce the time and cost it takes to move a project from conception through construction. Several MPOs provide an annual report on each of the projects in their plan and/or TIPs and have parameters in place for projects that are not meeting delivery targets. DVRPC has tracked a series of performance measures, called *Tracking Progress toward 2035,* that are tied to long-range plan goals. *Connections 2040* will prioritize those goals that are lagging, based on the indicators in *Tracking Progress.* NJTPA's study on assessing the impacts of implemented transportation projects provides a template for DVRPC to consider either as part of the development of *Connections 2040* or future long-range plan updates. Additionally, DVRPC's

Congestion Management Process has been selected as a case study to evaluate a benefit/cost analysis software tool of selected transportation systems management and operations strategies.

H. Public Outreach Activities

The MPOs surveyed all conduct extensive public outreach campaigns organized around traditional elements such as household surveys, focus groups, and public meetings. Many MPOs have begun to explore alternative outreach activities and mechanisms in response to the difficulty in drawing and maintaining interest and participation in the long-range planning process. All the MPOs conduct an extensive outreach campaign during the initial development of their long-range plans focused around creating a vision for the future. ARC had a separate two-year component, called Atlanta Fifty Forward, which brought together stakeholders and citizens from all over the region to identify and discuss key issues.

Many MPOs use scenario planning to showcase future alternatives. Three of the MPOs surveyed have purchased MetroQuest, an online interactive application that lets the user develop alternative future scenarios and see immediate feedback on the impacts of their choices. NJTPA developed their own web-based interactive application with fifteen subregions, which allowed it to be more pertinent to local issues or factors. DVRPC is currently developing an interactive web-based scenario application, called "Greater Philadelphia 2040", that will allow users to identify a preferred future development pattern and then decide on a level of transportation investments for the region. Based on these choices, they will be shown a variety of impacts ranging from number of deficient bridges to levels of congestion.

MTC is taking scenario planning a step further by developing an UrbanSIM model with professors at UC Berkeley. The intent is to use the model to demystify the impacts of land use changes; it is being funded through a National Science Foundation grant and CMAQ funding.

CMAP undertook an extensive outreach campaign to develop their *Go To 2040 Plan*. They provided grants ranging from $5,000 to $10,000 to architecture and design firms to hold community design workshops and provide sketches for illustrating scenario concepts such as smart growth and Transit-Oriented Development (TOD) strategies. CMAP also provided grants to community-based groups to host a series of meetings targeting low-income, disabled, and minority populations. MTC took a similar tack and provides guidelines for community groups to run their own meeting by presenting the information and leading the discussion. MTC staff attends to answer any specific questions that may arise. MTC also focuses on using media that represents underserved communities, such as high school youth radio in Oakland.

A few MPOs have ongoing activities that help bring the different stakeholders and citizenry into the planning process. DRCOG conducts monthly Metro Vision Idea

Exchanges geared toward area planners, which are conducted around different topics. Twice a year, MWCOG conducts a Community Leadership Institute, a two-day workshop for community leaders representing nonprofit, neighborhood-level organizations to discuss issues that go beyond transportation. This type of approach merits further investigation for *Connections 2040* as it has been successful in bringing groups and communities that had previously not participated into the regional planning process. *Connections 2040* public outreach will have a strong focus on transportation funding and seek to reach a consensus on setting priorities for transportation investments and additional transportation funding. Incorporating more visual mediums, such as videos and a more interactive web experience, will be key components for *Connections 2040* public participation efforts. Working with regional stakeholders (e.g., local governments, business organizations, and advocacy groups) to develop strategies to implement the long-range plan will also be a focal point for *Connections 2040*.

I. Innovative Policy Directions

While not an initial goal of this effort, a number of innovative policy issues being addressed by peer MPOs in their long-range planning processes were identified during the interview process. For some areas, such as housing or aging, the identified MPO was the officially designated agency responsible for the issue. For other issues, such as education, the MPO addressed the issue in their long-range plan because it was viewed as a priority policy area for the region. CMAP's elevation of efficient governance as a major theme of the *Go To 2040 Plan* was particularly noteworthy. Efficient, effective, and coordinated decision-making by governments is viewed as necessary to implement the other policy areas of the plan, and therefore critical to the success of the plan. Housing and aging are already addressed in the *Connections Plan*, but DVRPC will incorporate additional tasks into the plan update, including recent work on housing inventory and addressing the need for increasing affordable housing throughout the region. Inclusion of additional policy areas such as education and efficient governance into the long-range planning process will also help to encapsulate the intertwined factors that can better position the Greater Philadelphia region for a world-class future. In addition, *Connections 2040* will also include new policy directives like Linking Planning and NEPA.

J. Grant Programs

Many of the outreach activities noted previously help MPOs not only develop a long-range plan but to implement it by working with stakeholders. The second component of this paper was to identify activities that peer MPOs were undertaking to implement their long-range plans, specifically through grant programs or technical assistance. Several of the MPOs have programs similar to DVRPC's Transportation and Community Development Initiative and Efficient Growth for Growing Suburbs programs.

ARC started the Livable Centers Initiative in 1999 to better coordinate land use and transportation decisions and develop strategies to create livable communities. This effort was developed as a strategy in their 2025 long-range plan. MTC also has a very successful program called Transportation for Livable Communities. This program invests in Priority Development Areas identified in their long-range plan. Since 1998, the program has funded over $200 million in projects and programs to better link land use and transportation decisions made by the region's cities and transit operators. Both ARC and MTC have conducted an evaluation of their program's effectiveness based on a set of cost-benefit indicators and a survey, respectively.

MTC has also started a $400 million Transportation Climate Action Campaign to reduce the region's carbon footprint through public outreach and education efforts aimed at helping individuals develop climate-friendly behaviors. This program complements another MTC program, the $45 million Bay Area Air Quality Management District's Goods Movement Emission Reduction Program, to curb diesel particulate matter emissions. Both of these programs respond to state legislated regulations to reduce greenhouse gas emissions and improve air quality.

Transit-Oriented Development is a direct way to integrate land use and transportation planning, and some MPOs have targeted their plan implementation grant programs to TOD. DRCOG's Station Area and Urban Center Planning Funds program was created in support of the long-range plan's goal of locating 50 percent of all new housing units and 75 percent of all new jobs in urban centers. Funding will help local governments in developing station areas and urban centers. The $3.5 million competitive program is being funded through the four-year TIP. Similarly, the Sustainable Development Grant Program at NCTCOG allocates transportation funds to land use projects that promote alternative transportation modes or reduce the use of automobiles. In addition, they also provide funding for cleanup and redevelopment of brownfield sites that could potentially serve as future TODs through their Brownfield Revolving Loan Fund program.

Several MPOs, including CMAP and NJTPA, do not currently have a livable communities grant program but are actively exploring the creation of one. The biggest deterrent at this time is the lack of available TIP funding due to the backlog of capital projects.

K. Technical Assistance

Even fewer of the surveyed MPOs have a dedicated technical assistance program that provides staff assistance on particular projects or programs to help municipalities or other community stakeholders implement strategies contained in their long-range plan. Typically, such programs are funded through a MPO's work program. CMAP and PSRC have been awarded HUD/EPA/DOT Sustainable Communities grants and are using some of the grant to hire additional staff to provide technical assistance to municipalities.

Other MPO assistance programs are more specific, focusing on a single mode or issue. SEMCOG has received a HUD grant and is using it to supplement its own funding for its Complete Streets program and MAG has a design assistance program offering consultant assistance for bicycle and pedestrian facilities.

NCTCOG has a Streamlined Project Delivery Team to assist transportation agencies advance critical transportation projects to construction by providing additional resources. They also have a TOD Implementation Group and an Alternative Futures Policy Program, which develops sustainable model ordinances for communities in the region. All three programs are funded through their work program.

DVRPC has been able to keep the TCDI and Classic Towns programs active and viable, but the current economic climate makes it very difficult to start or expand grant programs aiming to implement goals of the long-range plan. Several MPOs have had to postpone plans to start livable community grant programs because of the economic downturn and other pressing transportation funding needs. Where possible, DVRPC should pursue activities that help municipalities implement the long-range plan. Such assistance should focus on local comprehensive planning and zoning matters, because smart growth strategies and compact land development are key strategies in the *Connections Plan* and DVRPC has the technical expertise to help municipalities with these issues.

VII. Appendix

A. List of Interviewees

Atlanta Regional Commission (ARC)
 March 30, 2011
 John Orr, Senior Principal Planner

Chicago Metropolitan Agency for Planning (CMAP)
 April 7, 2011
 Bob Dean, Local Planning

Denver Regional Council of Government (DRCOG)
 April 14, 2011
 Fred Sandal, Long Range Transportation Planning Coordinator

Maricopa Association of Governments (MAG)
 April 14, 2011
 Roger Herzog, Senior Project Manager

Metropolitan Transportation Commission (MTC)
 April 28, 2011
 Ashley Nguyen, Senior Transportation Planner/Analyst
 Lisa Klein, Project Performance Assessment Team
 David Vautin, Project Performance Assessment Team

Metropolitan Washington Council of Governments (MWCOG)
 April 14, 2011
 Wendy Klancher, Principal Transportation Planner
 Andrew Austin, Transportation Planner IV
 John Swanson, Senior Transportation Planner

North Central Texas Council of Government (NCTCOG)
 March 21, 2011
 Dan Lamers, Senior Program Manager
 Chad Edwards, Program Manager
 Tamara Cook, Senior Transportation Planner
 Elizabeth Beck-Johnson, Transportation Planner II

New Jersey Transportation Planning Authority (NJTPA)
 March 17, 2011
 Lois Goldman, Director of Regional Planning
 Brian Fineman, Director of System Planning, Modeling, and Data
 Ann Ludwig, Manager of TIP Development and Data
 Zhen Liu, Principal Planner, Database Development

Puget Sound Regional Council (PSRC)
 April 26, 2011
 Robin Mayhew, Program Coordinator

Southeast Michigan Council of Governments (SEMCOG)
 March 17, 2011
 Jennifer Evans, Coordinator, Plan Development and Implementation

Southwestern Pennsylvania Commission (SPC)
 Questionnaire was completed by Chuck Imbrogno, Manager, Models and Data

B. Questionnaires

1. Selection of Transportation Projects for Regional Long-Range Plans

In preparation of developing an update to its long-range plan, *Connections – The Regional Plan for a Sustainable Future*, DVRPC is interested in identifying best practices and tools that peer Metropolitan Planning Organizations are utilizing to select transportation projects for their regional transportation plans. The questionnaire covers three main areas: employment forecasts, the project selection process, and public outreach. The majority of the survey covers the project selection process, with specific focus on the allocation of funding to different categories of projects, defining investment need, evaluating and selecting individual transportation projects, public outreach, and any policy or analysis on bridging the funding gap.

1. What methodology do you use to forecast employment for your long-range plan? Do you purchase employment data from a consultant or private sector company?

2. How does your organization decide how much funding to attribute to various transportation project funding categories *(e.g., roadway reconstruction/replacement, bridge rehabilitation/replacement, transit vehicles, etc.)*?

3. Who makes the decisions and recommendations about funding allocation and project selection *(e.g., MPO Board, Technical Advisory Committee, staff, other)*?

4. Do you conduct any type of needs assessment to ascertain what is needed to bring the system up to a state-of-good-repair?
   a. How do you define state-of-good-repair?

   b. Who do you work with on the needs assessment *(e.g., state department of transportation, transit operators, member governments, universities, consultants)*?

   c. What type of asset management databases or models do you use?

   d. How do you solicit potential projects for funding in the plan (*e.g., rollover projects from previous plan, member governments, suggestions from citizens)*?

   e. How do you develop project cost estimates *(e.g., reconstruction cost per lane mile, bridge rehabilitation cost per square feet of deck area.)*?

5. Does your organization prioritize the *transportation infrastructure projects* that are going to be funded?
   a. Do you score all projects or just major or new capacity projects?

   b. What evaluation methods are used? *(List specific evaluation criteria)*

   c. Do you prioritize or rank projects based on the criteria?

   d. Do you use a cost-benefit analysis? If yes, what is included in your analysis?

6. How does your organization account for the *maintenance and operations* costs of a project?
   a. Are you able to identify infrastructure life span extensions as a result of better maintenance?

   b. Do you conduct life-cycle analysis to determine long-term infrastructure costs?

7. Do you follow a similar process for selecting, evaluating, and choosing projects for your TIP?

8. Do you have an unconstrained, unfunded, or aspirational set of projects in your plan?
   a. How did you select projects for this list?

   b. Did you evaluate these projects in the same manner you evaluated projects for the constrained list?

9. Do you use any performance measures to track plan goals or project benefits?

10. Has your organization adopted any policies or conducted any analysis to identify revenue sources to bridge the gap between needs and funding for infrastructure?

11. How does your organization use public and stakeholder outreach?
    a. How does your organization involve the general public in the long-range planning process?

    b. At what point(s) in the plan development process do you seek public input *(e.g., visioning, strategy development, project selection, document review)*?

    c. Do you make a concerted effort to include other governmental agencies or   private sector stakeholders in your outreach activities *(e.g., federal/ state housing or environmental agencies, chambers of commerce, environmental or transit advocacy groups)*?

    d. What mechanisms do you use *(e.g., surveys, workshops, public meetings, web-based tools, etc.)*?

12. How does the long-range plan incorporate/address non-traditional transportation facilities and needs such as freight and aviation?

2. Programs to Implement Regional Long-Range Plans

As part of the implementation of its long-range plan, *Connections – The Regional Plan for a Sustainable Future*, DVRPC is interested in identifying best practices of peer Metropolitan Planning Organizations in the area of implementing the vision and goals of regional long-range plans. We are particularly interested in two specific areas: providing planning assistance and grant programs. Planning assistance would typically fall under a MPO's work program, and one example would be providing assistance to municipalities to update zoning codes or comprehensive plans. Grant programs would typically be a separate funding program that would provide funding for programs that advance the goals of the long-range plan. An example would be a community investment program that provides non-construction funding for transportation projects (e.g., streetscape improvements) to enhance an older community's livability. Another example would be a marketing program that promotes older towns as livable communities.

A.   Planning Assistance Programs

1.   What is the program's name? (*include hyperlink, if available*)

2.   When was it created?

3.   Why was it created *(legislative mandate, internal decision, etc.)*?

4.   What are the program's goals and objectives (*if they exist*)?

5.   Are there any specific performance measures to evaluate the program?

6.   What is the budget for program administration, in terms of number of full time employees or other cost(s)?

   Has this changed significantly over time?

7.   Is this work funded through your Unified Planning Work Program? Do you utilize any other funding sources?

8.   Is there a local match requirement? If so, how much (%)?

9.   Was the program well received by the stakeholders or the community?

10. What are the main benefits associated with the program?

11. What were the main challenges that the program encountered?

12. Would you recommend the adoption of this particular program?

B.   Grant Programs

1.   What is the program's name? (*include hyperlink, if available*)

2.   When was it created?

3.   Why was it created *(legislative mandate, internal decision, etc.)*?

4.   What are the program's goals and objectives *(if they exist)*?

5.   Are there any specific performance measures to evaluate the program?

6.   What types of funding sources are used, if any *(federal, state, local – How much of each; amounts used from each; proportion (%))*? Is there a sponsor match required? If so, how much *(%)*?

7.   What is the total inception to date of funding committed to the program (*and years covered*)?

8. What is the total current funding to the program (*if any, and where is it committed – RTP vs. TIP)*?

    a. Total funding committed to the program in the current RTP/TIP

9. What is the size of the program relative to the total RTP/TIP?

10. What is the size of the program relative to the size of other programs your agency funds?

11. What are the current program administration costs, in terms of number of full time employees or other cost? Has this changed significantly over time?

12. Was the program well received by the stakeholders or the community?

13. What are the main benefits associated with the program?

14. What were the main challenges that the program encountered?

15. Would you recommend the adoption of this particular program?

ABSTRACT

Title: Best Practices in Long-Range Plan Development and Implementation Activities

Publication Number: WP12035

Date Published: February 2012

Geographic Area Covered:

The 9-county Delaware Valley Regional Planning Commission region, as well as the planning jurisdictions of the Atlanta Regional Commission, Chicago Metropolitan Agency for Planning, Denver Regional Council of Governments, Maricopa Association of Governments, Metropolitan Transportation Commission, Metropolitan Washington Council of Governments, North Central Texas Council of Governments, North Jersey Transportation Planning Authority, Puget Sound Regional Council, Southeast Michigan Council of Governments, and Southwestern Pennsylvania Commission.

Key Words:

Connections – The Regional Plan for a Sustainable Future, Connections 2040, Long-Range Plan, Metropolitan Planning Organizations (MPOs), Best Practices, Employment Forecasts, Financial Plans, Transportation Needs Assessment, Maintenance and Operations, Allocating Funding, Evaluating Transportation Investments, Selecting Transportation Projects, Aspirational Projects, Performance Measures, Public Outreach Activities, Grant Programs, Technical Assistance, Implementation Activities

Abstract:

A survey of peer Metropolitan Planning Organizations was conducted to identify best practices employed in long-range plans in preparation for updating the *Connections* long-range plan. This effort focused on employment forecasts, financial plans, identifying transportation needs, allocating funding to project categories, evaluating and prioritizing projects, identifying aspirational projects, use of performance measures, and public outreach activities. The survey also looked at grant programs and technical assistance activities that were used to implement the goals of long-range plans. This report summarizes the findings of the survey and identifies best practices from around the country. It also includes an assessment of how such practices are relevant to DVRPC as it develops the *Connections2040* long-range plan.

Staff Contact:

Michael Boyer
Manager of Long-Range Planning and Economic Coordination
Phone: 215.238.2848
Email: mboyer@dvrpc.org

190 N. Independence Mall West, 8th Floor
Philadelphia, PA 19106
Phone: 215.592.1800
Fax: 215.592.9125
Web: www.dvrpc.org