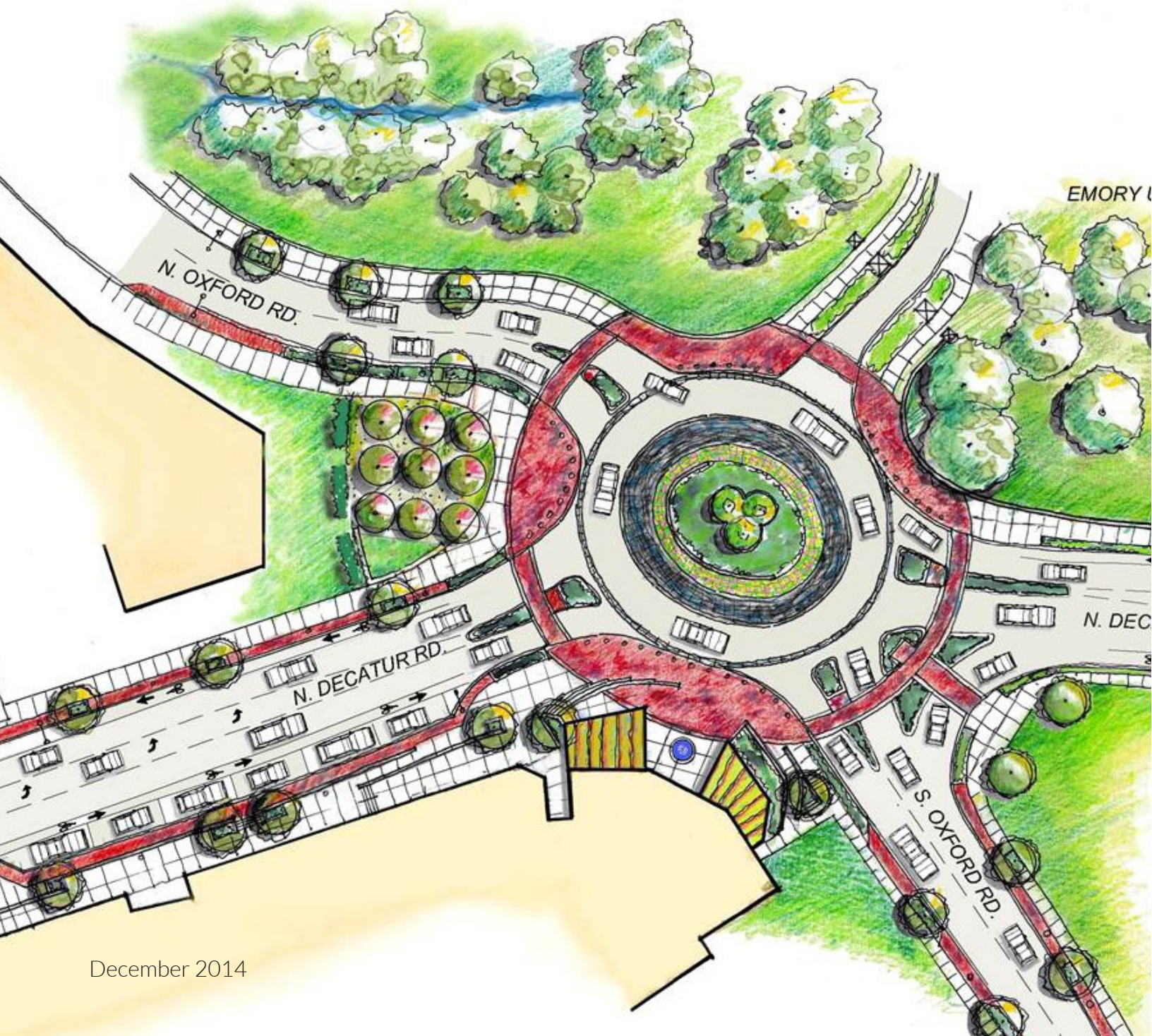
THE **INNOVATIVE MPO**

SMART PLANNING, STRONG COMMUNITIES

A GUIDEBOOK FOR METROPOLITAN TRANSPORTATION PLANNING

Transportation for America



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FOREWORD

Everywhere across this country, local leaders are working hard to provide what our residents want: a place where they can live, work, spend time with family and friends and be proud to call home. In Indianapolis as elsewhere, people's lives are changing, as new technologies allow for innovations, not only in how people interact with each other, but in how they get from place to place. Many younger people are choosing smart phones over cars and favor walking, biking and taking public transportation. Baby Boomers are looking for walkable communities with convenient access to social and cultural opportunities. Businesses no longer hold large quantities of inventory on their shelves, but rely on just-in-time delivery services — managed by the latest logistics technology — to provide consumers what they want, when they want it. Places that can capture these market shifts and provide the systems and infrastructure to make it all work will thrive in the 21st century.

But let's face it, many communities are still being built under growth and development policies adopted in the 1950s. Transforming a region from a post-war model to a 21st century place is not easy. I know I have had to work hard with other leaders in my own region to shift the mindset from "This is the way it's always been done" to "We can do something new." Political differences, financial constraints and out-dated tools can be challenging to overcome. And with many regions fractured into dozens or even hundreds of individual jurisdictions, how can they possibly reach consensus on a common vision for the future? By reading this guidebook, you are taking the first step toward answering that question.

Metropolitan planning organizations have the geographic scope and the power — yes, power — to help regions meet these demands by planning for the transportation needs of the future rather than the past. Cities like mine can't do what we need to do on our own; we need MPOs to step up. In my own region, the Indianapolis MPO (Indy MPO) has partnered with our transit providers to develop Indy Connect, the most comprehensive transportation plan — created with the most public input — our region has ever seen. While I think the Indy MPO presents a fine example, there is no one right answer for achieving regional goals. Success requires determined leadership willing to think outside the box and back up vision with action.

Why, then, do we need this guidebook? Because now, more than ever, communities are looking to their MPOs to address cross-jurisdictional challenges and use their authority and expertise to spur smarter investment and greater innovation. Even the MPOs using innovative practices today will benefit from this guidebook's examples of exciting new opportunities undertaken by their colleagues around the country. The guidebook provides a wealth of practical examples of actions that MPOs of all sizes can take to become innovative leaders. Whether you are an elected official sitting on an MPO board, an MPO staff member passionate about your work, or a neighborhood leader looking for ways to improve your community, this guidebook has ideas for you. I look forward to joining you in the important work of helping our regions succeed into the future.

The Honorable Gregory A. Ballard
Mayor of Indianapolis, IN
Transportation for America Advisory Board Member

INTRODUCTION

America today is a metropolitan nation: More than 85 percent of us live in metro areas large and small.[1] That makes planning for how people and goods move within and through these metropolitan areas more critical than ever. Fortunately, the last several years have seen a surge in innovative thinking and practice among many of the entities whose job it is to provide that guidance: **metropolitan planning organizations (MPOs)**. Their work has inspired this guidebook.

> MPOs play a critical role in people's daily lives and the regional economy through the planning and programming decisions they make.

Metropolitan planning issues are by nature complex and interconnected, crossing multiple jurisdictions with differing political cultures, demographic makeup and economic or ecological needs. Regional transportation planning occurs in this context. Roads, bridges, transit systems, bike lanes and sidewalks connect people of all income levels to jobs and other opportunities. Rail lines, highways and ports connect regional goods to larger national and global markets. Traffic congestion, development patterns, air quality, public health and quality of life are all influenced by federal policy and the decisions made by individual jurisdictions and state departments of transportation. At the intersection of this complexity is the MPO.

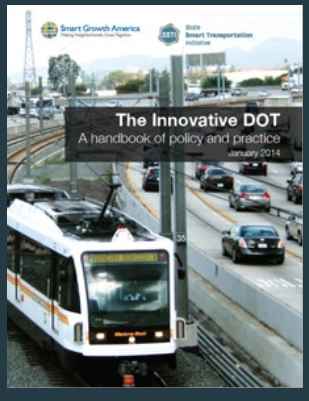
Billions of dollars from federal, state and local sources are spent each year in metropolitan areas to improve transportation systems. Historically, state departments of transportation controlled the substantial federal share. However, in 1962 Congress established a metropolitan planning process to ensure that metropolitan areas have a voice and required states to create MPOs for larger urban areas. Congress tasked MPOs with coordinating transportation needs across the multiple jurisdictions and stakeholders as they identify projects that will be eligible for federal dollars.

1 2010 U.S. Census

Better together: The Innovative MPO and The Innovative DOT

The Innovative MPO is intended as a companion to **The Innovative DOT** handbook. Produced in 2012 (and updated in 2014) by partner organizations Smart Growth America and the State Smart Transportation Institute, it is intended to provide innovative best practices to leaders and staff of state departments of transportation.

www.smartgrowthamerica.org/the-innovative-dot



The governing bodies of MPOs comprise local elected officials and other regional and state representatives, who in turn develop and guide policies and investment priorities. An MPO's effectiveness often depends upon the extent to which this leadership sees its role as serving parochial interests at a regional table, or advancing shared priorities that benefit both local communities and the region as a whole.

MPOs play a critical role in people's daily lives and the regional economy through the planning and programming decisions they make. For public officials and other members of an MPO board, it can be a daunting task to understand the scope of work that MPOs undertake and their relationship to state departments of transportation (DOTs) or other regional agencies. Even trickier is uncovering what an MPO could do to push the envelope and innovate — whether to stretch public resources, achieve multiple benefits with a transportation dollar or simultaneously advance regional and local transportation priorities. Innovation requires both strong political and executive leadership and a capable staff with the resources and policy support to develop new approaches that yield more cost-effective and beneficial results.

This guidebook is designed to help MPOs — their staff, policy-setting bodies, technical and advisory committees and other interested stakeholders — find innovative ways to achieve goals on behalf of their communities. It offers a range of recommended actions in planning, programming, technical analysis and community partnership, from those that cost little in staff time or dollars to more complex and expensive undertakings. Each of the seven chapters focuses on a key aspect of metropolitan planning and provides a set of actions that MPOs — regardless of their size, structure or authority — can tailor for their region or pursue in tandem with other policies and practices. Each recommendation is bolstered with real-world examples showing how the strategies have worked in practice.

Although all the topic areas strengthen and reinforce one another, each chapter also works as a stand-alone resource. Those less familiar with metropolitan planning may want to start with the **MPO 101** section in the appendix for a brief history of relevant federal statutes and regulations and an overview of the various ways MPOs are structured, funded and administered.

The seven areas of focus in this guidebooke are:

1. CREATE AN EFFECTIVE AND VISIONARY LONG-RANGE TRANSPORTATION PLAN
2. ENGAGE COMMUNITIES IN REGIONAL DECISION MAKING
3. FULLY UTILIZE ALL AVAILABLE FUNDING TOOLS
4. USE DATA TO MAKE SMART INVESTMENTS
5. PROVIDE TECHNICAL ASSISTANCE AND COLLABORATE WITH LOCAL COMMUNITIES
6. MAKE FREIGHT WORK FOR REGIONS
7. GOING BEYOND TRANSPORTATION

This detailed matrix on the following two pages shows the seven focus areas and the MPOs spotlighted under each focus area within this report. Those listed in bold are the subject of more detailed case studies found in the **Innovation in Action** section of each chapter. Each case study includes a quick snapshot of the MPO's structure, authority, staff size and budget to help MPOs of all sizes find strategies appropriate to their capacity. We encourage you to look at the work being done by your peers for inspiration, without necessarily limiting yourself to only those who are of similar size or structure. All of these examples have elements that could be adopted and tailored by other MPOs. Additionally, every chapter includes footnotes and recommended resources for additional information on topics covered. MPOs in **bold** are featured in a more detailed case study in the second half of that focus area.

FOCUS AREA 1
CREATE AN EFFECTIVE AND VISIONARY LONG-RANGE TRANSPORTATION PLAN

FULLY LEVERAGE FEDERAL PLANNING FACTORS	MAKE SCENARIO PLANNING A STANDARD PRACTICE	PRIORITIZE REGIONAL CENTERS	MAKE USE OF INNOVATIVE MODELING TOOLS	PLAN FOR ECONOMIC COMPETITIVENESS
Nashville (Nashville Area MPO), San Diego (SANDAG), Portland (Metro), Seattle-Tacoma (PSRC), Chicago (CMAP),Minneapolis-St. Paul (Met Council)	**San Luis Obispo (SLOCOG)**, Sacramento (SACOG), San Diego (SANDAG), Salt Lake City (WFRC)	Wilmington (WILMAPCO), Austin (CAMPO), Broward County (Broward MPO), Boise (COMPASS), San Diego (SANDAG)	Dallas-Ft. Worth (NCTCOG), Phoenix (MAG), Seattle-Tacoma (PSRC), San Francisco-Oakland-San Jose (MTC)	**Phoenix (MAG)**, Kansas City (MARC), Denver (DRCOG)

FOCUS AREA 2
ENGAGE COMMUNITIES IN REGIONAL DECISION-MAKING

MAKE INVOLVEMENT ENGAGING	REACH OUT PHYSICALLY AND VIRTUALLY	BE INNOVATIVE WITH HIGH-TECH TOOLS	SUPPORT COMMUNITY ENGAGEMENT & ORGANIZING
Missoula (Missoula MPO), Washington, DC (TPB), Chattanooga (Chattanooga TPO)	**Tulsa (INCOG)**, Nashville (Nashville Area MPO), Orlando (Metroplan)	Chicago (CMAP), Miami-Dade (Miami-Dade MPO)	**Omaha-Council Bluffs (MAPA)**, Houma-Thibodaux (HTMPO), Minneapolis-St. Paul (Met Council)

FOCUS AREA 3
FULLY UTILIZE ALL AVAILABLE FUNDING TOOLS

MATCH FUNDING CRITERIA WITH LONG-RANGE GOALS	ESTABLISH FUNDING SET-ASIDES	BLEND FUNDING PROGRAMS TO MAXIMIZE ELIGIBILITY	TAKE ADVANTAGE OF FEDERAL FLEXIBLE FUNDING PROVISIONS	ALIGN MPO PROCESSES TO ENABLE P3S
Kansas City (MARC), Atlanta (ARC), Portland (Metro)	**Seattle-Tacoma (PSRC)**, St. Louis (E-W COG), Portland (Metro)	Denver (DRCOG), Dallas-Fort Worth (NCTCOG)	**Flagstaff MPO**, Stockton (SJCOG), Seattle-Tacoma (PSRC)	**Denver Regional Council of Governments (DRCOG)**, Dallas-Fort Worth (NCTCOG), San Diego (SANDAG), Houston-Galveston (H-GAC)

FOCUS AREA 4
USE DATA TO MAKE SMART INVESTMENTS

ESTABLISH COMPREHENSIVE PERFORMANCE MEASURES	PRIORITIZE MAINTENANCE & SAFETY TO MAXIMIZE ROI	ANALYZE COMBINED HOUSING + TRANSPORTATION COSTS	PERFORM HEALTH IMPACT ASSESSMENTS	ADDRESS REGIONAL DISPARITIES
San Francisco-Oakland-San Jose (MTC), Kansas City (MARC), Sacramento (SACOG), Savannah (CORE)	San Francisco-Oakland-San Jose (MTC), St. Louis (E-W COG), Newark-Jersey City (NJTPA), Chattanooga (Chattanooga TPO)	**Charlottesville (TJPDC)**, Nashville (Nashville Area MPO), Champaign-Urbana (CUAATS), St. Louis (E-W COG), Knoxville (KRTPO)	Springfield (PVPC), Nashville (Nashville Area MPO)	**Houston (H-GAC)**, Seattle-Tacoma (PSRC), Austin (CAPCOG)

FOCUS AREA 5
PROVIDE TECHNICAL ASSISTANCE AND COLLABORATE WITH LOCAL COMMUNITIES

ASSIST LOCALITIES IN DEPLOYING NEW TOOLS & POLICIES	ADOPT & IMPLEMENT COMPLETE STREETS REGIONALLY	ESTABLISH A LIVABLE COMMUNITIES PROGRAM
Washington, DC (TPB), Tampa (Hillsborough MPO), Portland (Metro)	**Kansas City (MARC)**, Indianapolis (Indy MPO), Columbus (MORPC), Chattanooga (Chattanooga TPO), Nashville (Nashville Area MPO)	**Atlanta (ARC)**, Akron (AMATS), Albany (CDTC)

FOCUS AREA 6
MAKE FREIGHT WORK FOR YOUR REGION

INTEGRATE FREIGHT INTO LONG-RANGE PLANS AND MEASURES	MITIGATE LAND-USE AND FREIGHT CONFLICTS	DEVELOP FREIGHT PROFILES AND PERFORMANCE MEASURES	ADDRESS FREIGHT-RELATED ENVIRONMENTAL JUSTICE IMPACTS
Huntington, Ashland, Ironton (KYOVA), Chicago (CMAP), Toledo (TMACOG)	Memphis (Memphis MPO), Pittsburgh (SPC)	**Duluth-Superior (MIC)**, Seattle (PSRC), Washington, DC (TPB)	**Philadelphia (DVRPC)**, Los Angeles (SCAG), Houston-Galveston (H-GAC)

FOCUS AREA 7
GOING BEYOND TRANSPORTATION

PLAN FOR DISASTERS, PREPARE TO RESPOND	ALIGN INFRASTRUCTURE WITH ENVIRONMENTAL GOALS	ADAPT TO CLIMATE CHANGE AND SEVERE WEATHER EVENTS	ACT AS A PARTNER ON WORKFORCE DEVELOPMENT
San Diego (SANDAG), Cincinnati (OKI), Fargo-Moorhead (Metro COG)	**Salt Lake City (WFRC)**, Richmond (RRPDC & CPDC), Asheville (LOSRC), Exeter (RPC)	**Sacramento, CA (SACOG)**, Atlanta (ARC), Broward County (Broward MPO)	**Chicago (CMAP)**, Atlanta (ARC), Seattle (PSRC)

MPO Index — case studies noted in bold

FOCUS AREA 1

CREATE AN EFFECTIVE AND VISIONARY LONG-RANGE TRANSPORTATION PLAN

As their name suggests, planning is what metropolitan planning organizations (MPOs) are all about. Their formal plans direct millions of dollars in spending that helps determine how the regional transportation system works. These plans are the result of collaboration among local, state and regional partners, including public and private stakeholders. To effectively serve the needs of a region, planning cannot merely be an exercise in stapling together local project lists, without considering how they work together as a whole. Truly effective plans require comprehensive and integrated strategies to address challenges that cross local jurisdictional boundaries and that are influenced by transportation, such as regional economic competitiveness, public health, community development and climate resiliency.

MPOs are required to adopt Long-Range Metropolitan Transportation Plans (abbreviated in federal statute as MTP)[1] that set the policy and investment framework for the goals and priorities that a region wants to achieve over a 20-year horizon given projected available funding. The MTP directs which projects are then eligible for inclusion in the Transportation Improvement Program (TIP), in which an MPO matches available funding to specific projects for the next several years. The regional TIPs are then included in statewide plans developed by the state department of transportation. The MTP also informs the MPO's annual Unified Planning Work Program, a statement of work identifying the planning priorities and activities scheduled for that year within a metropolitan planning area, showing time frames, cost for completing the work and the source of funds.

Innovative MPOs go beyond merely meeting requirements — they use their regional position and authority to develop effective and visionary long-range plans creating safe, cost-effective and reliable transportation options that support their community, economy and environment.

Federal statutes and guidance set a baseline for metropolitan planning, but innovative MPOs go beyond merely meeting requirements. They use their regional position and authority to develop effective and visionary long-range plans creating safe, cost-effective and reliable transportation options that support their community, economy and environment.

This chapter describes several key actions that an innovative MPO can take to create such plans:

- **Fully leverage federal planning factors**
- **Make scenario planning a standard practice**
- **Prioritize regional centers for investment**
- **Make use of innovative modeling tools**
- **Plan for economic competitiveness**

Detail on the specifics of the federally required planning process and different MPO structures can be found in the MPO 101 Appendix.

1 The MTP goes by different names depending on the region. Among the more common alternatives are the Long-Range Transportation Plan or LRTP, the Regional Transportation Plan or RTP, the Transportation Policy Plan or TPP, or the Long-Range Plan or LRP.

FULLY LEVERAGE FEDERAL PLANNING FACTORS

Long-range plans developed by MPOs traditionally focus on a limited set of transportation elements: congestion, roadway conditions for major and minor arterials, safety and some discussion of transit and other multimodal investments. Many fail to discuss how transportation investments relate to economic competitiveness, public health, quality of life, environmental protection, energy security or accessibility to job and housing centers. However, federal statutes and regulations do make reference to these factors and provide multiple leverage points for MPOs to create long-range plans that achieve these broader regional goals.

The opportunity

Long-range transportation plans need to be informed by many factors, reflecting public input and an analysis of current and future population, employment, mobility and land-use trends. MPOs whose plans focus almost exclusively on reducing traffic congestion fall short of the goals laid out in the federal planning framework.

Federal planning statutes and regulations include a set of eight planning factors that MPOs must consider in developing their plans (see box at right). While few MPOs take full advantage of this broader directive, it offers the opportunity to bring MPO technical resources — such as data collection, trend analysis and forecasting — to identify links among broader issues, inform more cost-effective strategies to improve transportation performance and achieve multiple related goals.

Metropolitan transportation planning must consider these eight federally required factors:[1]

1. Support the economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency;
2. Increase the safety of the transportation system for motorized and non-motorized users;
3. Increase the security of the transportation system for motorized and non-motorized users;
4. Increase the accessibility and mobility of people and freight;
5. Protect and enhance the environment, promote energy conservation, improve the quality of life and promote consistency between transportation improvements and state and local planned growth and economic development patterns;
6. Enhance the integration and connectivity of the transportation system, across and between modes, for people and freight;
7. Promote efficient system management and operation; and
8. Emphasize the preservation of the existing system.

1 Source: 23 Code of Federal Regulations Section 450.306

Putting it into practice

Fully considering the eight federal planning factors requires a big-picture view that goes well beyond investments that attempt to manage congestion or repair roads and bridges. Here are some examples of innovative ways some MPOs have addressed the planning factors:

Connecting public health to the transportation plan. The **San Diego 2050 Regional Transportation Plan** addresses the planning factors related to safety and quality of life through a focus on active transportation. The RTP lays the groundwork for an "active transportation network" that prioritizes projects

in the Regional Bicycle Plan along with those that provide safe walking and biking routes to transit and the Safe Routes to School program.[1]

Portland Metro views safety and active transportation as two sides of the same coin. The MPO created a regional Safety Plan in 2012 in response to concern over traffic-related crashes and fatalities. Metro set a goal to reduce the number of pedestrians, bicyclists and vehicle occupants killed or seriously injured on the region's roadways by 50 percent by 2035, compared to 2005.[2] This goal translates to an annual savings of $479 million in economic costs to the region. The plan recommendations and performance goals are reflected within Metro's overall long-range transportation plan and other work plans.

Connecting with air quality and climate issues. The federal planning factor to "protect and enhance the environment, promote energy conservation and improve the quality of life…" is being used by MPOs such as the **Puget Sound Regional Council (PSRC)** to consider transportation-related greenhouse gas (GHG) emissions, water and air quality issues, community access to parks and open space and affordable housing and transit-oriented development. The PSRC incorporates these issues into regional performance measures, its process for prioritizing projects for transportation funding and through ongoing planning and outreach by its advisory committees such as the "Planning for Whole Communities Work Group."[3]

Consistent with its efforts to incorporate more of the federal planning factors, as discussed above, **Portland Metro** is among a growing list of MPOs attempting to evaluate the climate impacts of various investment scenarios. The agency's *Climate Smart Communities* initiative developed a methodology to consider the costs and trade-offs associated with each potential strategy to limit GHG emissions while meeting community visions.[4] Planners were able to quantify the benefits from transit investments that better serve suburban neighborhoods; improve commuter information programs using real-time data and consumer apps; manage parking; and expanding regional trails, bike lanes and sidewalks.[5]

Planning for freight movements and their impacts. The **Chicago Metropolitan Agency for Planning (CMAP)** viewed the directive to "support economic vitality of the metropolitan area, especially by enabling global competitiveness, productivity and efficiency" as the impetus to take on freight planning and related land-use issues. The resulting plan called for an increase in rail and trucking-related investments "(1) to improve the economic competitiveness of industry in metropolitan Chicago and (2) to reduce the impacts of freight operations on local communities, addressing travel delay, pollution and safety."[6] CMAP also considers human capital factors including workforce development, education and economic innovation. See Focus Areas 5 and 7 for discussion of how MPOs are tackling these issues.

Taking a holistic approach to "livability." Many MTPs now include an emphasis on "livability," a term used to convey a holistic approach to land-use and transportation decisions that addresses all eight planning factors. According to the US Department of Transportation (USDOT), "livability in transportation is about integrating

1 SANDAG 2050 RTP: www.sandag.org/index.asp?projectid=349&fuseaction=projects.detail
2 www.oregonmetro.gov/sites/default/files/051112_regional_trans_safety_plan.pdf
3 Examples of the performance measures developed by PSRC and how they are being used in regional planning and decision-making can be found at www.psrc.org/data/trends and www.fhwa.dot.gov/planning/congestion_management_process/case_studies/psrc.pdf.
4 http://ops.fhwa.dot.gov/publications/fhwahop10055/index.htm
5 Portland Metro Climate Smart Communities Project: www.oregonmetro.gov/public-projects/climate-smart-communities-scenarios
6 www.cmap.illinois.gov/about/2040

the quality, location and type of transportation facilities and services available with other more comprehensive community plans and programs to help achieve broader community goals."[1]

In Minnesota, the **Metropolitan Council's Thrive MSP 2040** regional growth plan is built to produce livability and sustainability outcomes, based on principles of advancing regional prosperity, equity and stewardship.[2] Policies and investments intended to advance these goals include expanding walking and biking opportunities, expanding transit service and developing walkable neighborhoods near transit stations, often referred to as transit-oriented development.[3]

The **Innovation in Action** section of this focus area includes a case study of the **Nashville Area MPO**, spotlighting the region's efforts to advance public health, economic development and environmental and social equity goals through its regional transportation plan and funding allocations. A medium-sized MPO, Nashville has elevated the importance of public health and safety outcomes resulting from transportation investments in response to growing local concerns over rising obesity rates and the region's high rate of chronic and respiratory diseases.

MAKE SCENARIO PLANNING A STANDARD PRACTICE

For many years, MPOs developed their plans based on straight-line projections of existing trends in travel and development patterns. More recently, local decision-makers in many regions realize their choices can bend those trends in one direction or another. Shrinking public resources are also changing the process so that instead of asking, "What kind of transportation investments do we need to support rising levels of traffic and an expanding metro footprint?" the new question is, "What investment strategy will allow us to make the most of each dollar we invest to get the outcomes our region wants?"

The opportunity

Today, innovative MPOs are developing multiple planning scenarios and testing them for their performance across a number of metrics and involving the public in evaluating which set of projects and policies is most likely to meet the region's aspirations for economic success and quality of life. To help in those evaluations, planners are using cutting-edge modeling programs and visualization technologies that show the trade-offs associated with different land-use and transportation scenarios.

The federal transportation law, "Moving Ahead for Progress in the 21st Century" or MAP-21, encourages the use of scenario planning. Federal guidance recommends testing the performance of different transportation strategies such as adding new capacity, improving how the system is managed and maintained and alternative land-use scenarios against a set of transportation performance and other locally developed factors. Through this approach it becomes apparent that transportation outcomes depend as much on development patterns

1 The Role of FHWA Programs in Livability: State of the Practice Summary. (Updated January 2014). www.fhwa.dot.gov/livability/state_of_the_practice_summary/research00.cfm
2 Thrive MSP 2040: http://metrocouncil.org/Planning/Projects/Thrive-2040.aspx
3 http://metrocouncil.org/News-Events/Transportation/Newsletters/Draft-Transportation-Policy-Plan-aims-to-boost-tra.aspx

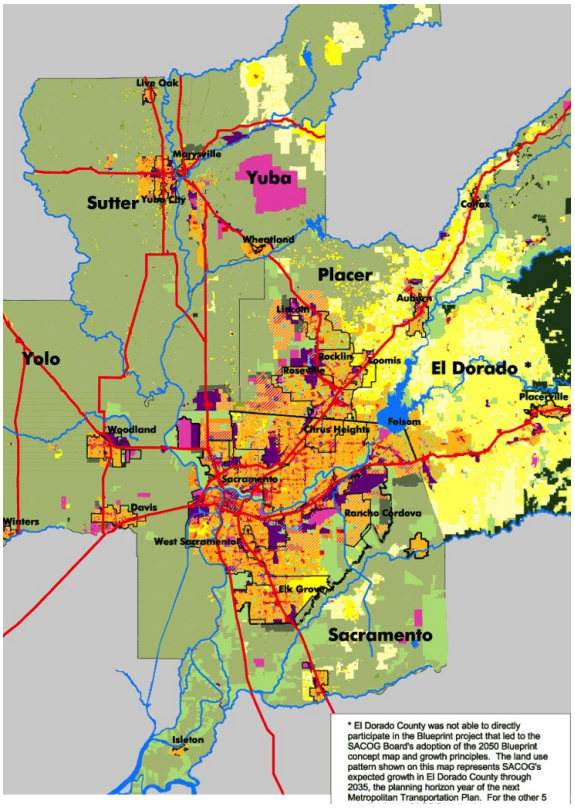
as they do on transportation system improvements.[1] MPOs do not typically control land-use decisions that influence development patterns, but scenario planning is a powerful tool to show the collective impacts of these local decisions.

Successful scenario planning involves perspectives across the region — urban, suburban and rural —and solicits feedback from private and non-profit sectors, elected officials and community members. Doing this type of more extensive and thoughtful planning and outreach does cost money. Many regions have been fortunate to partner with universities, non-profits, community foundations and local governments. Federal planning funds are also available to support scenario planning. MAP-21 lists guidelines for conducting scenario planning and the Federal Highway Administration (FHWA) provides technical assistance to DOTs and MPOs on best practices.[2]

Putting it into practice

Creating a regional blueprint. Scenario planning shows the trade-offs between different investment patterns — those where growth is concentrated around existing infrastructure or left to more sprawling patterns. California MPOs broke new territory a decade ago with the development of Regional Blueprint Scenarios to demonstrate alternative approaches to addressing regional transportation needs.[3]

The Sacramento Blueprint process in particular has earned national acclaim as a "best practice." The three-year public involvement effort culminated in the **Sacramento Area Council of Government's (SACOG) Metropolitan Transportation Plan**, adopted in 2008,[4] which guides land use and transportation choices over the next 50 years as the region's population grows from 2 million to more than 3.8 million residents.



The 2050 Sacramento Blueprint Concept Map Source: www.sacregionblueprint.org/adopted/

The 2008 MTP differed starkly from past plans as a result of scenario planning. For one, it included a goal to reverse the trend of vehicle miles traveled (VMT) outpacing population growth while tripling the use of transit, with similar growth in non-motorized travel. The preferred Blueprint scenario forecast VMT declining per household by 6 percent or more.[5]

1 A good discussion of how multiple MPOs are using scenario planning in their transportation planning processes can be found in the forthcoming publication: *"Best Practices in Metropolitan Transportation Planning"* by Reid Ewing and Keith Bartholomew with Allison Spain and Alex White of the Metropolitan Research Center at the University of Utah.

2 FHWA Scenario Planning Guidebook: www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/

3 FHWA case study of SCAG's scenario planning work is featured here: www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/publications/new_trends/sec10.cfm

4 www.sacregionblueprint.org/adopted/

5 Ewing, Reid and Bartholomew, Keith with Spain, Allison and White, Alex. Smart Growth America and Metropolitan Research Center at the University of Utah. (Forthcoming). *"Best Practices in Metropolitan Transportation Planning."*

Testing the effect of investing in existing areas. The **San Diego Association of Governments (SANDAG)** used scenario planning to inform its 2030 MTP. The approved scenario emphasized investments in existing communities, preserving environmentally sensitive lands and increasing transit, walking and bicycling. Alternate scenarios that further concentrated growth in existing communities, areas served by high-frequency transit and major employment centers were found to have even greater congestion impacts. As a result, the plan gives added priority to projects in designated "smart growth" areas for funding in the TIP. More recently, as part of the update to the Regional Comprehensive Plan the agency has modeled strategies to connect housing and jobs near existing transportation systems to estimate the GHG impacts. The agency then modeled the impacts of different transportation investments and technologies to further reduce GHG levels between 2035 and 2040.[1]

The **Wasatch Front Regional Council (WFRC)** serving Salt Lake City and surrounding cities and counties is a national leader in scenario planning. Beginning in 1997 under the leadership of the non-profit Envision Utah,[2] residents participated in 200 workshops to develop a common set of goals for the future of their region.[3] While that process itself was ground-breaking at the time, the WFRC and the other MPO in the region, the Mountainland Association of Governments, joined with Utah DOT and the Utah Transit Authority to take the regional planning process to the next level. Extensive citizen input was used to build four potential growth scenarios, with regional leaders eventually selecting a preferred future vision, "Wasatch Choice for 2040." The vision intends to inform future investments and asset management of the transportation system including commuter rail, light rail, highways and streetcars.[4] Due to the extensive citizen engagement process and effective communications techniques — including a "vision map" showing how the region might look in the future — the plan received widespread support.

Still in the forefront, the WFRC is now deploying another new tool, known as "Envision Tomorrow +," which enables local communities to more easily conduct a rigorous scenario planning process for smaller areas, such as their city or the neighborhoods around a transit station, using a process based on the successful regional experience.

The scenario planning was also applied at a statewide scale, as WFRC's long-range regional transportation plan was developed in conjunction with other such plans around the state and integrated into Utah's Unified Transportation Plan.[5]

The **Innovation in Action** section of this chapter includes a case study of scenario planning work undertaken by the **San Luis Obispo Council of Governments**. With an urbanized area population of more than 50,000, it provides a good example of innovation by a smaller MPO using emerging technologies and data to engage diverse stakeholders in considering the trade-offs between different transportation and land-use decisions.

1 San Diego Forward, The Regional Plan: Alternative Land-Use and Transportation Scenarios: www.sdforward.com/sites/sandag/files/BOD_09132013_Item3.pdf

2 Envision Utah is a national scenario planning non-profit who has worked closely with Utah MPOs and others across the country to deploy innovative models. For more information on their work: http://envisionutah.org/

3 For a detailed case study on the Envision Utah process, see http://sustainablecommunitiesleadershipacademy.org/resource_files/documents/envision-utah-planning-future-wasatch-front.pdf.

4 Wasatch Choice for 2040: http://envisionutah.org/index.php?option=com_k2&view=item&layout=item&id=64&Itemid=291

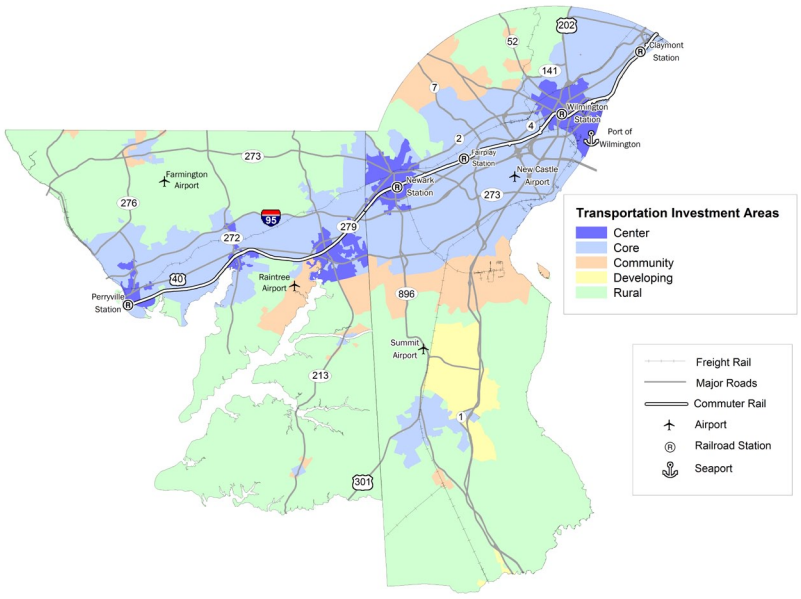
5 http://wfrc.org/new_wfrc/index.php/plans/utah-s-unified-transportation-plan

PRIORITIZE REGIONAL CENTERS FOR INVESTMENT

Federal infrastructure funding has become less predictable over the past decade even as the needs to maintain and grow transportation networks have increased. Some MPOs are doing more with less by prioritizing certain areas of the region where jobs, social services, housing or significant educational or cultural centers are concentrated.

The opportunity

Over the past decade, the Great Recession decimated public funding and left a large backlog of unmet needs, while gas tax revenues have also fallen off. Many MPOs have concluded it no longer makes sense, if it ever did, to spread money around political jurisdictions like peanut butter. Instead they are looking for ways to target investments to where they will allow the greatest access to jobs and where growth can be accommodated while making the most efficient use of infrastructure. This approach prioritizes projects serving key, regional centers and attempts to coordinate housing and other development so more residents can live closer to work or find homes or jobs in walkable neighborhoods with access to public transportation.



Transportation Investment Areas in Wilmington, DE Region. Source: WILMAPCO

Among the regions pursuing some variation on this approach are Albany, NY; Atlanta, GA; Austin, TX; Denver, CO; Philadelphia, PA; Portland, OR; Louisville, KY; Salt Lake City, UT; and Seattle, WA.

A variety of terms have arisen to denote regional centers. The San Francisco Bay Area, for example, uses the term "Priority Development Areas," while South Florida refers to "Mobility Hubs" and Wilmington, DE, "Transportation Investment Areas." Regardless of the names used, regional leaders work to develop criteria for selecting priority areas with local input. In some instances, local communities are invited to identify themselves as key centers for prioritized funding.[1]

Putting it into practice

Expanding connections to key centers. In **Austin, TX,** the **Capital Area Metropolitan Planning Organization (CAMPO)** concluded that the region could no longer afford to invest in major regional infrastructure as it had

1 FHWA Office of Planning and Environment Land-Use Tools: www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/page03.cfm#toc380582789

historically. Its CAMPO 2035 Plan identifies a regional network of mixed-use activity centers[1] and dedicates 50 percent of surface transportation program funding for transportation investments in these designated centers.

The **Broward County, FL MPO** designates "Mobility Hubs" as a central component of its 2009 MTP, representing a major shift from previous plans that emphasized travel by single-occupant vehicles. Mobility Hubs are areas deemed critical to the transportation network and therefore are targeted for investments that expand the range of modes and increase connections to key destinations. The MPO gives priority to centers with frequent transit service, high development potential and that are major trip generators or transfer points within the transit system. Since the plan's adoption, the Broward County MPO has assisted local communities with planning and prioritizing investment within these Mobility Hubs.[2]

Using a centers approach in smaller metros. In the **Boise, ID** area, the **Community Planning Association of Southwest Idaho (COMPASS)** prioritizes investments along transit corridors and in major activity centers in its long-range plan, dubbed "Communities in Motion 2040." Extensive scenario planning produced a vision for concentrating more development in existing communities to preserve prime farmland and improve the transportation system while also supporting high-quality transit for key arterials and improving existing critical roadway corridors.[3]

Using incentives to target growth and development. Other MPOs have become even more proactive and set aside a portion of funds for local governments that will accept and encourage higher density. For instance, under **San Diego's 2005 Smart Growth Incentive pilot program**, the MPO doled out $22.5 million in grants for local pedestrian improvements and streetscape projects serving key areas.[4] Funding came from the former federal Transportation Enhancements program. The success of the pilot program led to the creation of a $206 million Smart Growth Incentive Program funded by a half-cent local sales tax.[5] To be eligible for these funds and receive priority for other funding, local governments designated almost 200 existing, planned or potential "smart growth areas" to which compact, mixed-use development is being directed.

Every single jurisdiction in the San Diego region was able to identify at least one smart growth area on the map, demonstrating region-wide support for the smart growth principles included in the regional comprehensive plan. The region has established targets for density of development and transportation service for each of the place types. Infrastructure grants can cover streetscape or sidewalk enhancements, transit station improvements, traffic-calming measures or other amenities that support smart growth in that area. Planning grants can be used to amend general plans, prepare specific area plans or update zoning ordinances to support more compact and mixed-use developments that allow people to get around by walking, biking and taking transit as well as driving.

1 CAMPO 2035 Plan: www.campotexas.org/plans-programs/campo-plan-2035/

2 One example of Broward County's Mobility Hub implementation is the 2012 "Midtown Plantation and Southwest Station Livability Plan: www.browardmpo.org/userfiles/files/20120830%20Pltn%20Sunrise%20Report.pdf.

3 www.compassidaho.org/documents/prodserv/CIM2040/final/CIM2040_July_FinalwithResolution.pdf

4 San Diego's Smart Growth Incentive Pilot Program: www.sandag.org/index.asp?projectid=264&fuseaction=projects.detail

5 San Diego's Transnet Smart Growth Incentive Program: www.sandag.org/index.asp?projectid=340&fuseaction=projects.detail

MAKE USE OF INNOVATIVE MODELING TOOLS

Every MPO relies upon models and forecasting to evaluate the performance of the transportation network and plan for future needs and investments. Larger MPOs designated as Transportation Management Areas are required to use models to address air quality and traffic congestion. When MPOs fail to update these tools to capture the dynamic interplay among transportation, land use, changing demographics and new technologies they can make costly mistakes that may take generations to correct.

The opportunity

Models are simplified descriptions of a complex system used to predict and evaluate the results of system changes. Computer modeling lies at the heart of transportation planning and is often dominated by engineers who bring deep technical knowledge of data inputs, travel forecasts and complex methodologies. Historically, travel models have focused primarily on single occupant vehicles and work trips. Over the past decade, however, this has been slowly changing as MPOs and DOTs are revising models to better consider land-use effects, trip purposes and transit usage.

Models that evaluate travel patterns and project economic and land-use impacts typically use current trends to forecast future needs. However, this approach tends to favor the status quo and may be wildly off the mark when demographic and market forces change, as they have in recent years. It also misses the potential of transportation investments to influence development patterns and vice versa. Poorly planned land-use decisions contribute to more or longer trips and greater traffic congestion for people and freight. On the other hand, if local land-use plans call for increased density but the MTP only addresses automobile needs, neither plan will succeed. Models that can anticipate changes in future development and travel patterns can help communities avoid such costly mismatches.

While it may be tempting to leave transportation modeling to the small circle of travel forecasting experts and engineers, decisions about what to model, what outcomes to analyze and what assumptions underlie travel and land-use analysis are issues for the entire MPO Policy Board and planning staff to discuss. Technical advisory committees drawn from local government staff, informed citizens, academia and elsewhere also can provide important input from others who may understand engineering and modeling concepts, or equally important, know what their community needs from the transportation system.

Several regions have developed their own models to better capture the travel and land-use patterns of their individual regions. Small MPOs with limited staff capacity may elect to collaborate with the state DOT to supplement or provide this kind of detailed analysis.

New mobile technologies and open-source data now provide an affordable method for capturing much richer data on travel behavior. For instance, certain mobile phone applications allow tracking of real-time travel information, which modelers can use to see where and how people actually travel.[1] Web-based surveys and other tools also allow for more accurate information on travel and housing preferences. MPOs can examine

1 Mobile Telephone Location Tracking: http://senseable.mit.edu

whether these kinds of data inputs can be applied to updated models that create more accurate forecasts that may, in the long run, avoid unnecessary costs.

Putting it into practice

Federal resources. The USDOT devotes considerable resources to building the capacity of MPO staff in relation to transportation modeling.[1] FHWA's Travel Model Improvement Program (TMIP) is an important source of information, research and training in best practices.[2] The Federal Transit Administration recently launched a new transit model, STOPS, to provide sponsors of major transit projects a simplified method for forecasting ridership and system impacts of proposed investment in a particular corridor.[3]

As part of its Sustainable Highways Initiative, FHWA has developed a tool for assessing the economic, social and environmental impacts throughout the life cycle of a given project, similar to the LEED ratings for buildings. The self-evaluation tool, INVEST, includes bonus points for areas that take a comprehensive approach to planning.[4] The **North Central Texas Council of Governments (NCTCOG)** used INVEST's System Planning module to assess its long-range transportation plan, Mobility 2035. The region was rapidly growing and faced a funding shortfall, so the MPO used INVEST to help validate its assumptions and identify priority improvements. In Portland, OR, the public transportation provider Tri-Met piloted the use of INVEST to analyze a transit project, developing a customized project development scorecard applicable to its light rail project.

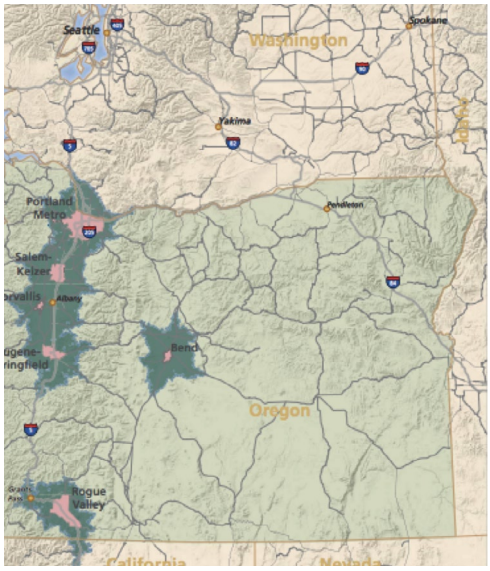
Refining models to reflect regional goals. The **Puget Sound Regional Council (PSRC)** invested in a number of innovative tools to model the impact of local land-use decisions on regional transportation systems. The PSRC has developed or refined models to quantify the economic costs of travel delays, as well models that forecast potential increases to transportation revenues, the rate of return from public transportation investments and how best to serve an aging population.

The **Metropolitan Transportation Commission (MTC)**, the MPO for the San Francisco Bay Area, fully transitioned from a trip-based model (where people are going) to an activity-based travel model (why people are traveling) in 2010 to better capture the complex dynamics of where, how and when people travel.[5] The region benefits from very capable local governments who provide detailed data that can inform regional planning by the two MPO modeling staff. The region is also home to 25 different transit agencies, creating both challenges and opportunities for collecting and analyzing regional transit data. The new "Model One" was designed with an eye towards informing programs to charge varying tolls based on congestion as well as strategies to improve roadway and transit efficiency and reduce GHG emissions.

Sharing modeling data with the public. The MTC also manages a Regional Transit Database, designed in an open architecture for use by partner agencies, that supplies data to trip-planning applications that generate transit itineraries for transit call center operators and the general public.[6]

1 FHWA Planning and Analysis Tools: www.fhwa.dot.gov/livability/state_of_the_practice_summary/research03.cfm#tools
2 FHWA Travel Model Improvement Program and TMIP Travel Analysis Toolbox: www.fhwa.dot.gov/planning/tmip/
3 Federal Transit Administration's STOPS model: www.fta.dot.gov/grants/15682.html
4 INVEST is being piloted by MPOs in Southern California and Cleveland: https://www.sustainablehighways.org/.
5 http://tmiponline.org/Clearinghouse/Items/20130606_-_Travel_Modeling_at_MTC.aspx
6 http://dataportal.mtc.ca.gov/development.aspx

The Phoenix area's **Maricopa Association of Governments (MAG)** is a leader in sharing data and transportation modeling information with the public. The MAG Travel Survey Web Portal provides public access to data and online analysis tools to evaluate the transportation and socio-economic characteristics of the Greater Phoenix Metropolitan Area.[1] MAG is also notable for its work to refine models to better capture the transit ridership impacts associated with college and university riders and with special sporting and entertainment events. *(MAG deployed a brand new interactive mapping and analysis site just weeks before publication of this guidebook.[2])*



Oregon MPO consortium members. Source: www.ompoc.org/PDF/regions/N_Willamette_Pamphlet_0409.pdf

Fostering learning among peer MPOs. In 2005, **Oregon formed an MPO consortium** to provide a forum for working together on matters of statewide significance and mutual interest. With two representatives from each of the state's MPOs, the consortium addresses shared challenges arising from the complexity of transportation planning in rapidly growing metropolitan regions, the changing state role in transportation funding and modeling the land-use and transportation relationships.

The consortium led to formation of the **Greater Regions Project**, which is working to define metropolitan regions based on travel-sheds rather than political boundaries. This approach is being pursued to better understand and project the economic and travel relationships that define the regions used as the basis for modeling and decision-making. The Greater Regions project involves work in four major subareas: North Willamette Valley, Southern Willamette Valley, Rogue Valley and Central Oregon.[3]

PLAN FOR ECONOMIC COMPETITIVENESS

Many MPOs shy away from economic development discussions as issues beyond their authority. However, innovative MPOs can help the region plan for economic competitiveness in many ways, from involving business stakeholders in developing visionary plans to choosing funding criteria that prioritize investments on behalf of the regional economy.

The opportunity

One of the most important issues facing metropolitan areas today is how to ensure their economic competitiveness in a global economy. More employers are recognizing that recruiting and retaining employees from across a region requires safe, convenient and affordable transportation options. Metropolitan regions compete with each other for talented young workers, many of whom want to live in walkable neighborhoods with good transit access and safe streets for bicycle travel.

1 MAG traffic data forecast and modeling homepage: www.azmag.gov/Projects/Project.asp?CMSID2=1137&MID=Transportation
2 http://ims.azmag.gov
3 Oregon MPO Consortium and the Greater Regions Project: www.ompoc.org/about.html

Regional planning agencies are often at the center of these discussions, with some having direct authority for developing comprehensive economic development strategies (CEDS).[1] But even for those without that explicit authority, two of the federally required planning factors speak to economic competitiveness: "supporting economic vitality of the metropolitan area…by enabling global competitiveness, productivity and efficiency;" and "increasing the accessibility and mobility of people and freight."

MPOs don't need to take dramatic actions to have an impact. They can start by elevating consideration of economic competitiveness within scenario planning and other visioning exercises, for instance. Most MPOs use Citizen Advisory Committees or Technical Advisory Committees to help inform staff and Policy Board members on key issues. Including specific key private sector interests such as major employers; colleges and training providers; anchor institutions such as health care centers, small business owners and those representing chambers of commerce; organized labor; shippers; and ports provides this first-hand knowledge of economic priorities to be reflected in regional performance measures, funding criteria and the MTP.

Putting it into practice

Acting as a partner in economic development. In the Kansas City metropolitan area, the **Mid-America Regional Council (MARC)** plays a nominal role in traditional economic and business development. It does recognize, though, that long-range transportation decisions influence how workers get to jobs and goods move across the region. MARC serves as an on-call partner for the region's formal economic development agencies and area chambers of commerce, providing data to track a number of economic measures.[2]

MARC has led regional visioning and planning efforts integrating the region's comprehensive economic development strategy with the MTP.[3] The agency created a shared regional economic vision and established a coordinating committee of local governments, private and non-profit leaders, area educational institutions and non-profit organizations to help inform its priorities. Through a 2010 HUD Sustainable Communities Regional Planning grant, MARC is an active leader in connecting infrastructure investments, workforce development and economic development planning with a priority on investments in key activity corridors.[4]

Rewarding local governments for economic planning. The **Denver Regional Council of Governments (DRCOG)** developed a number of strategies to strengthen the links among transportation, quality of life and regional economic competitiveness. DRCOG confers annual awards on local governments who make "exceptional contributions to regional economic development through innovative municipal and county efforts to create vibrant and vital places where people live, work and play."[5]

1 CEDS is a federally required document for receiving funds from the Economic Development Administration. Several regions are working to closely align their MTP and CEDS plan to better leverage federal transportation and economic development funds: http://eda.gov/pdf/CEDS_Flyer_Wht_Backround.pdf

2 See MARC case study in the report by National Association of Regional Councils and MZ Strategies, LLC. (May 2013). "Planning for Regional Competitiveness." http://narc.org/wp-content/uploads/McKnight-Foundation-Final-Report-FINAL-052013.pdf.

3 www.marc2.org/cqp/

4 www.marc.org/Regional-Planning/Creating-Sustainable-Places

5 www3.drcog.org/AnnualAwards/Page/Awards

Promoting transit-oriented development as an economic catalyst. The Denver MPO also is a strong supporter of transit-oriented development (TOD) as a catalyst for economic development,[1] including TOD policies and goals in the long-range plan and dedicating funding to support local place making, station-area planning and TOD projects. The DRCOG also partners with an initiative called **Mile High Connects**, which describes itself as "a broad partnership of organizations from the private, public and non-profit sectors that are committed to increasing access to housing choices, good jobs, quality schools and essential services via public transit."[2] The DRCOG even created videos featuring developers and local business voices talking about the links among job growth, regional competitiveness and TOD.[3] More information on DRCOG's partnership with the private sector is provided in the Innovation in Action case study in Focus Area 7.

The resources listed below offer additional examples of MPOs integrating economic development in their planning. The **Innovation in Action** section offers a case study of the **Phoenix MPO's** active engagement of the business community on its Transportation Policy Committee and a new Economic Development Committee that will help create economic criteria for selecting projects and evaluating their performance.

Resources

- Federal Register (June 2, 2014). Federal Highway Administration 23 CFR Part 450 and Federal Transit Administration 49 CFR Part 613, Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning; Proposed Rule. Washington DC: USDOT. Volume 79, No. 105.
- USDOT, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center (March 2012). Best Planning Practices: Metropolitan Transportation Plans. USDOT, Office of Planning, Environment and Realty, FHWA.
- Transportation Planning Capacity Building Program of the Federal Highway Administration and Federal Transit Administration (Updated September 2007). The Transportation Planning Process Key Issues: A Briefing Book for Transportation Decision-Makers, Officials and Staff. Washington DC: Federal Highway Administration, USDOT, FHWA-HEP-07-039.
- USDOT Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center (February 2011). FHWA Scenario Planning Guidebook. Washington DC: USDOT, Office of Planning, Environment and Realty, FHWA-HEP-11-004.
- Victoria Policy Institute, "Transport Model Improvements" primer, www.vtpi.org/tdm/tdm125.htm
- USDOT, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center (August 2014). "A Multimodal Approach to Economic Development in the Metropolitan Area Transportation Planning Process: A White Paper." Washington DC: USDOT, Office of Planning, Environment and Realty, FHWA-HEP-14-047.

1 http://tod.drcog.org/
2 www.milehighconnects.org/
3 http://tod.drcog.org/economic-development

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 1)

FULLY LEVERAGE FEDERAL PLANNING FACTORS

Nashville Area Metropolitan Planning Organization — Nashville Area MPO (Nashville, TN)

The seven-county Nashville region has witnessed steady population and job growth over the past decade with roughly 1.5 million people calling the region home today and an estimated 3 million people projected by 2040. While this growth has helped fuel the regional economy, it also has led to long commutes, urban encroachment onto farmland and rural areas, increasing pedestrian and automobile fatalities and public health concerns including rising rates of obesity, asthma, cardiovascular disease and diabetes.

The **Nashville Area MPO** has stepped forward to use its regional role to bring together diverse stakeholders to address those issues in its long-range transportation planning[1] in ways that have gained national recognition.[2] Its 2035 Regional Transportation Plan outlines a strategy for investing nearly $6 billion in anticipated transportation funds. It includes a strong focus on public health in response to national data that shows Tennessee residents are often among the most physically inactive, overweight and obese.[3]

The 2035 Plan established three major policy initiatives as described on the MPO's website:

1. *Create a Bold, New Vision for Mass Transit* to help guide the expansion and modernization of the region's mass transit system in preparation for an increasingly competitive global economy and to proactively address growing concerns about the health of our environment, worsening congestion and sprawling land development patterns that encroach upon the area's cherished rural countryside.
2. *Support Active Transportation and the Development of Walkable Communities* to improve connectivity between people and places within the urbanizing area of the region, foster healthier activity for Middle Tennessee's citizens and serve as the backbone of investments in mass transit.
3. *Preserve and Enhance Strategic Roadway Corridors* with a focus on repairing aging roadways and bridges to ensure the safety of the traveling public and freight transport, improving operations through the integration of new technologies and completing streets to provide a balanced system that works for all users.

It also addresses environmental, land-use and urban design and freight elements that influence long-range planning. The MPO takes full advantage of the eight federally required planning factors to examine issues beyond transportation mobility or congestion. The 2040 Plan update, currently in progress, is framed by a combination of data on regional housing, commuting, transportation costs and demographic trends and aligns with the region's sustainability goals.

1 USDOT Research and Innovative Technology Administration, John A. Volpe Transportation Systems Center. (December 2012). *Metropolitan Area Transportation Planning for Healthy Communities*. Washington, DC: Federal Highway Administration, USDOT, FHWA-HEP-13-006.

2 www.nashvillempo.org/about_mpo/mpo_awards.aspx#awards1

3 www.nashvillempo.org/plans_programs/rtp/

The resulting four-year TIP provides the funding to implement these goals through the following allocations of federal Surface Transportation Program (STP) funding:[1]

- 15 percent of funds dedicated to projects for active transportation (bicycling and walking)
- 10 percent of funds dedicated to transit projects (in addition to other FTA funding)
- Five percent of funds dedicated to intelligent transportation systems and operations projects
- 70 percent of STP funds are dedicated to multimodal roadway safety and capacity projects and allocated using project election criteria.

During the 2035 Call for Projects, the MPO included a number of questions to guide sponsors in their submissions:[2]

- Does the project aid/ harm the advancement of social justice and equal opportunity to destinations throughout the region?
- How can the project be scoped to mitigate any negative impacts to predominantly low-income or minority communities or persons with a disability?
- How well does the facility connect people with opportunities to engage in economic activity?
- To what degree does the project aid in the region's economic competitiveness with other metro areas of the nation? Is the project supported by business leaders?
- Is the project consistent with local, state or other regional plans for growth? The MPO also developed about 50 indicators that were used in the project evaluation process. They are currently working to develop an online platform that will serve, in part, as a public database of projects proposed for the RTP.

1 USDOT Research and Innovative Technology Administration, John A. Volpe Transportation Systems Center. (December 2012). *Metropolitan Area Transportation Planning for Healthy Communities.* Washington, DC: Federal Highway Administration, USDOT. FHWA-HEP-13-006.

2 www.nashvillempo.org/plans_programs/rtp/2035_call.aspx

NASHVILLE AREA MPO	
Type	Designated transportation planning agency
Composition	Twenty-eight members comprise its governing structure. The MPO consists of executive board, Technical Coordinating Committee (TCC) and MPO staff. The executive board consists of elected officials from the seven-county planning area and from cities in those counties with a population of more than 5,000. In addition, the Governor of Tennessee and an elected official from the Greater Nashville Regional Council serve on the executive board. The representative of the Tennessee DOT and the head of the transit agency are nonvoting members. The TCC consists of planning directors, transportation engineers and administrators from local government and transportation agencies. The MPO's staff provide ongoing professional services and administration of long-range plan and the TIP.
Voting	Each voting member gets one vote. A weighted voting provision can be enacted by members.
MPOs within MSA	One MPO within MSA
Annual budget and staffing size	$2.5 million annual budget; 14 full-time staff
Responsibilities beyond transportation	Officially responsible for air quality; also involved in land use, economic development, climate change and environment, safety and security and health
Independent revenue authority	Does not collect revenues other than through membership dues

References: www.nashvillempo.org/docs/upwp/FY2014UPWP_ADOPTED_082113.pdf

MAKE SCENARIO PLANNING A STANDARD PRACTICE

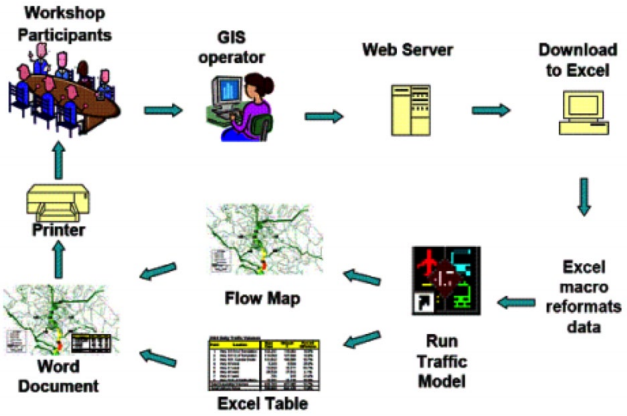
San Luis Obispo Council of Governments — SLOCOG (San Luis Obispo, CA)

In developing its Community 2050 regional blueprint plan, funded by a Blueprint grant from the California Department of Transportation, SLOCOG used a web-based, real-time scenario planning software tool called iPLACE3S to allow stakeholders to visualize the effects of land-use decisions on housing, jobs, traffic congestion and economic growth.[1] Testing scenarios in real time with the input from stakeholders helped to build trust in and ownership of, the process.[2]

1 iPLACE3S is no longer available and SLOCOG more recently has used CommunityViz which is another useful GIS-based visualization software program. www.planningtoolexchange.org/tool/communityviz

2 FHWA Scenario Planning Guidebook: www.fhwa.dot.gov/planning/scenario_and_visualization/scenario_planning/scenario_planning_guidebook/

In the early public sessions SLOCOG asked participants to place stickers on San Luis Obispo County maps to select areas of preferred housing and job growth for 2030–2050 projections and produced maps showing the effects on traffic congestion.[1] Within 15 minutes, participants saw the results of the scenario in map and spreadsheet form. Based on the results, they could alter their input to visualize alternate land-use scenarios.



SLOCOG's technology-based participant involvement process. Source: FHWA Scenario Planning Guidebook

This technology helped community members make a connection between low-density development and congestion. After selecting a "business as usual," low-density scenario and experiencing the results, many participants switched to higher-density solutions. Enabling the public to use the same planning tools as SLOCOG bolstered public buy-in and helped in educating participants about the link between housing, jobs, congestion and the natural environment.

In 2010 SLOCOG developed its Regional Transportation Plan based upon the Community 2050 Regional Blueprint. Due to the extensive coordination in the Community 2050 process the plan was unanimously approved without controversy. These inputs resulted in the creation of target development areas and the prioritization of funding for downtown enhancements, better bicycle and pedestrian connections and Complete Streets. In 2014 the scenarios were translated using a community visioning platform (called CommunityViz®) so they could be used in SLOCOG's newly developed Regional Land Use Model (RLUM) to analyze and model traffic and air quality emissions. Results from the RLUM were inputs to the Regional Traffic Model (RTM); results from the RTM were inputs to the Emissions Model. This in turn allowed planners to estimate the associated differences in future GHG emissions with each scenario.

1 www.slocog.org/programs/special-studies-services-projects/modeling

The CommunityViz user interface allows for hands-on sketching exercises. Using laptops, large video screens or other interactive methods, the software can be directly incorporated into a public meeting exercise. As one example, participants can gather around a light table displaying a live map of the region. Using marker-like infrared pens as cursors, they point, click or draw on the map to sketch alternative growth scenarios. As they sketch, charts and graphs track the likely implications of their plans in real time, calculating impacts on population, housing, economics, environment and water quality.

San Luis Obispo Council of Governments (SLOCOG)	
Type	Association of local governments, recognized as the MPO and Regional Transportation Planning Agency for the region
Composition	Voting Policy Board members: all five members of the San Luis Obispo County Board of Supervisors and one city council member appointed from each of the seven cities located in the county.
Voting	Same as above
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$5.2 million budget; 20.4 full-time equivalent staff; includes Regional Rideshare division with 4 staff members
Responsibilities beyond transportation	Scenario planning, sustainable communities strategy, housing allocation planning
Independent revenue authority	None
State enabling legislation	*The Sustainable Communities and Climate Protection Act* (SB 375) mandates each of California's MPOs to prepare a sustainable communities strategy (SCS), as a central part of its regional transportation plan (RTP). The SCS has land use, housing and transportation strategies that once implemented would allow the region to meet its GHG emissions reduction targets. Once the RTP/SCS is adopted by the MPO, it guides the transportation policies and investments in the region.

References: www.slocog.org/
http://slocog.org/sites/default/files/14-15%20combined%20OWP_1.pdf
www.ampo.org/wp-content/uploads/2014/02/2013-Salary-Survey-Results-final-draft-Jan-23-2.pdf

PLAN FOR ECONOMIC COMPETITIVENESS

Maricopa Association of Governments — MAG (Phoenix, AZ)

The Greater Phoenix metropolitan area is one of the fastest growing regions in the country and the region's local governments are advancing strategies to ensure that future growth better serves the region's economic and environmental needs. The launch of light-rail service in 2008 provided a spine for future growth and economic development. Rail now connects Phoenix, Tempe and Mesa neighborhoods to downtown Phoenix, Arizona State University and the airport. The three cities are developing plans to maximize development and improve walkability around stations, with the support of the Maricopa Association of Governments (MAG).[1]

1 www.smartgrowthamerica.org/2013/08/13/how-phoenix-az-is-using-transit-oriented-development-to-reinvent-downtown/

MAG was formed in 1967 and is the regional air quality planning agency and metropolitan transportation planning organization for the region's 27 incorporated cities and towns in Maricopa County, including the Phoenix urbanized area and the contiguous urbanized area in Pinal County. MAG was also designated by the governor to serve as the principal planning agency for the region in a number of other areas such as water quality and solid waste management.[1]

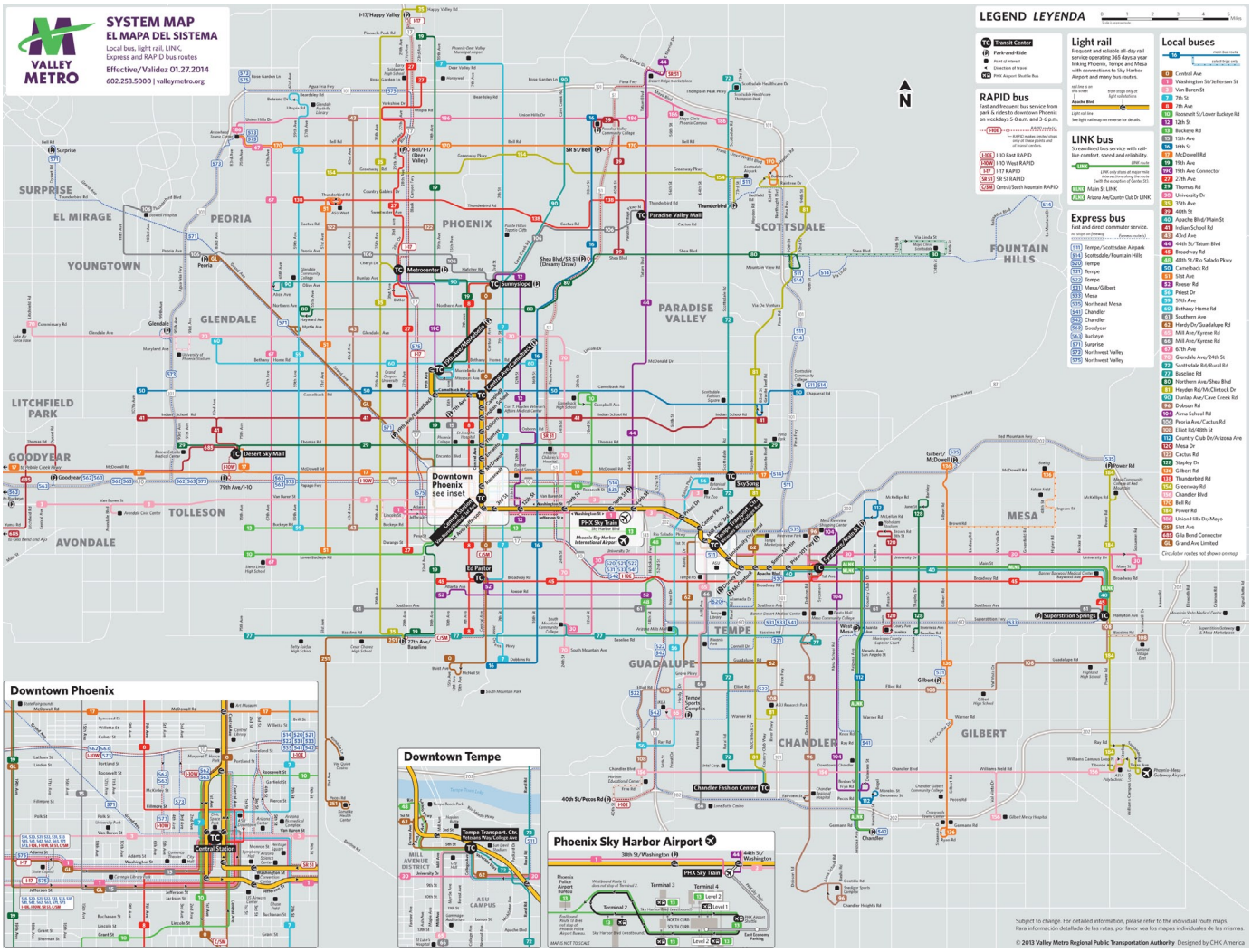
MAG established an Economic Development Committee (EDC) to "develop an opportunity-specific and action-oriented plan that fosters and advances infrastructure in the MAG Region, especially transportation infrastructure that would further economic development opportunities."[2] The EDC consists of 26 members including MAG members, elected officials, business representatives and one representative from the Arizona Department of Transportation.

Through an memorandum of understanding with regional universities and colleges, MAG is promoting research, innovation and business start-up grants to position the region as a nationally competitive center for entrepreneurship and innovation. This has included strong outreach to small- and minority-business owners.

> **"MAG elected officials, acting through the Regional Council, realized that one of the tenets of the federal transportation law was to foster economic development."**[1]
> *– Maricopa Association of Governments*
>
> 1 www.azmag.gov/Projects/Project.asp?CMSID=3888

The recent recession underscored the importance of linking regional economic policies with transportation investments. The Phoenix metropolitan area saw some of the largest numbers of home foreclosures in the country. According to MAG, pending and foreclosed homes peaked at approximately 64,000 in 2010. As a consequence, "sales tax for the region declined, resulting in $6 billion being cut from the MAG Regional Transportation Plan."[3] In response, MAG joined forces with the Brookings Institution, the Phoenix Economic Council and academic leaders to develop a Metropolitan Business Plan. The plan focuses on its urban form and connectedness — two of five market levers in it.

1 www.azmag.gov/
2 www.azmag.gov/Committees/Committee.asp?CMSID=3577
3 www.azmag.gov/Projects/Project.asp?CMSID=3888



Valley Metro system map. The new light rail line is the thicker orange line www.valleymetro.org/images/uploads/sysmap_011414.pdf

These themes are reinforced in MAG's recently approved 2035 update to its Regional Transportation Plan (RTP).[1] The RTP is developed under the direction of the Transportation Policy Committee (TPC). State law prescribes TPC membership and provides a unique opportunity for business to have a direct say in developing regional transportation policy. Six of 23 members must represent region-wide business, with one each representing transit, freight and construction interests.[2] Three of the business members are appointed by the President of the Senate and the other three by the Speaker of the House. Membership also includes representatives from the Citizens Transportation Oversight Committee and the Arizona DOT. The Committee makes its recommendations to the MAG Regional Council, which adopts the final RTP.

MAG was an early national leader in using performance-based planning and has developed a robust set of metrics and updated modeling to use in evaluating projects for transportation funding.[3] It has developed a "systems-based" approach to planning that accounts for interactions among modes. Through its Congestion

1 www.azmag.gov/Projects/Project.asp?CMSID2=1126&MID=Transportation
2 www.azmag.gov/Committees/Committee.asp?CMSID=1041
3 http://performance.azmag.gov/

Management Process (CMP), MAG evaluates the impact of transportation strategies on "activity areas,"[1] including central business districts; cultural centers; freight, warehousing and distribution centers; and other centers of economic activity that are important to the regional economy.[2] In addition to the freeway and highway network, the CMP includes the arterial street network, transit facilities and services and walking and bicycling facilities. MAG uses its congestion management process to identify projects for funding in the TIP using factors related to quality of life, mobility for freight and people and system accessibility across modes.

Maricopa Association of Governments	
Type	Non-profit voluntary association of local governments
Composition	The Regional Council is the governing and policy-making body of the organization. Thirty-five members comprise its governing structure. The MPO consists of elected officials from 27 incorporated cities and towns and usually consist of city and town mayors, elected supervisors from Maricopa County and Pinal County, the Chair of the Citizens Transportation Oversight Committee as well as the two AZ DOT representatives. The three Native American communities that are MAG members are usually represented by their governor or president.
Voting	Each voting member gets one vote
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$32.6 million budget; 99 full-time staff
Responsibilities beyond transportation	Air quality, water quality, solid waste management, human services and domestic violence
Independent revenue authority	None
State enabling legislation	Arizona Executive Order 95-2 requires MAG to prepare official sub-regional population updates and projections developed by the Arizona Department of Economic Security.

References: www.azmag.gov
https://www.azmag.gov/Documents/MAG_2012-02-08_MAG-Info-Book.pdf
www.azmag.gov/Documents/Fiscal_2014-06-13_FY2015_PIB-FINAL.pdf

1 Under Arizona Revised Statute 28-6354.B, MAG developed criteria to prioritize corridors, corridor segments and other transportation projects. As part of the RTP process, MAG has applied these kinds of criteria for the development and implementation of the RTP.

2 Maricopa Association of Governments. (October 2010). "Performance Measurement Framework and Congestion Management Study — Phase III, Baseline Congestion Management Process Report." www.azmag.gov/Documents/TRANS_2010-11-02_MAG-CMP-Final-Baseline-Report.pdf.

FOCUS AREA 2

ENGAGE COMMUNITIES IN REGIONAL DECISION-MAKING

Community engagement presents a complex challenge for metropolitan planning organizations (MPOs). Although it is a fundamental responsibility, the "softer side of planning" sometimes gets short shrift from agencies that are more technically focused. Transportation planning and decision-making processes involve many different bodies at many different levels of government, making it difficult to involve the public in a way that does not make them feel frustrated. There is no one-size-fits-all approach to community engagement, but there are some universal principles:

- Involve the public early and often in decision-making, not just to inform.
- Be honest about what the MPO does and does not do.
- Put transportation planning within the larger regional context.
- Make inclusive involvement a top priority and go beyond the "usual suspects."
- Use new technologies when appropriate, but don't underestimate the power of low-tech tools.

Regardless of the means through which the public is engaged, the fact that citizens are providing input is an expression of their desire to make their community a better place.

As described in the guidebook's appendix, MPO 101, federal regulations prescribe basic levels of public involvement. Historically, they were limited to the method and timing of public notice of meetings, approval of planning milestones and defining subsets of the public that must be offered avenues for involvement. The 2005 federal transportation bill, SAFETEA-LU and the ensuing 2007 regulations imposed new requirements, such as the development of an MPO Public Participation Plan and offered guidance on techniques for engagement. It is still possible, though, for an MPO to fully adhere to federal requirements without going much beyond the traditional public notice or public hearing and without reaching significant portions of the public.

This chapter describes the comprehensive actions that an innovative MPO can take to create an effective two-way street of communication with the public. This feedback loop requires clear demonstration of how public input is integrated into the regional planning process. Regardless of the means through which the public is engaged, the fact that citizens are providing input is an expression of their desire to make their community a better place. Among the actions an MPO can take to give that energy a productive outlet are:

- **Make involvement engaging**
- **Reach out physically and virtually**
- **Be innovative with high-tech engagement tools**
- **Support community engagement and organizing**

MAKE INVOLVEMENT ENGAGING

Engaging the public on regional planning is especially tricky because it encompasses a large territory over long time horizons, when most people are primarily concerned with what happens in their own communities in the near term. The task is made doubly difficult when planning documents are dense and filled with jargon and meetings are conducted as a one-way conversation that spout information. MPO's challenge, then, is to make the discussion interesting, accessible, meaningful — and even fun.

The opportunity

Many planners and officials see public engagement as a necessary evil. They understand why it must be done but view it as a perfunctory task without much benefit other than allowing a few people to vent frustrations, after which the same decisions are made. While it is easy to make this a self-fulfilling prophecy, with a little energy and creativity you can bring a diverse range of voices to bear on making your plans significantly better and with the kind of public support that will ensure they are implemented.

Interactive community engagement allows participants to learn experientially alongside staff and officials and is much more useful and fun than conventional public meetings. Good public engagement breaks down barriers, demystifies the process, decodes the acronyms and reflects the values and needs of constituencies ranging from freight carriers to bus riders, business owners, health care providers and beyond.

Putting it into practice

Several MPOs use scenario planning as a primary venue for public involvement, whether for specific corridor planning or long-range visioning (see Focus Area 1 for more information on Scenario Planning). Educational programs, interactive meetings and other low-cost and low-tech techniques exist to "open the curtain" on the regional transportation planning process. This section covers several specific techniques, including mapping activities, role-playing games, fiscal decision-making simulations, planning workshops and participatory exercises in prioritizing projects.

Cultivating an ongoing cadre of informed citizen "leaders." **The National Capital Region Transportation Planning Board of the Metropolitan Washington Council of Governments (TPB)** combines many of these elements into one ongoing initiative, the Community Leadership Institute (CLI), started in 2006. The MPO's Public Participation Plan explains the framework for the CLI as a pyramid of three constituencies:

- *The Interested* — defined as nearly everyone, since as a transportation user, everyone has at least some kind of "interest" in transportation;
- *The Informed* — those who have some knowledge of how transportation investments are made but choose not to provide input; and
- *The Involved* — those few who actually participate in some way via a public meeting, public comment or other venue.[1]

1 www.mwcog.org/clrp/public/plan.asp; www.mwcog.org/clrp/resources/ParticipationPlan_FinalDraft_Dec2007.pdf

The CLI aims to move people and stakeholder groups up the pyramid through education on how the transportation planning process works and motivate them to get more involved by highlighting the importance of transportation's relationship to regional quality of life.[1]

For each day-and-a-half CLI workshop, roughly two dozen individuals are invited who already are somewhat active in their communities, though not necessarily in the transportation arena. Attendees learn about transportation and land-use issues facing the region through presentations and exercises, such as placing stickers representing housing and job growth on a map, or drawing needed transportation infrastructure with colored markers.

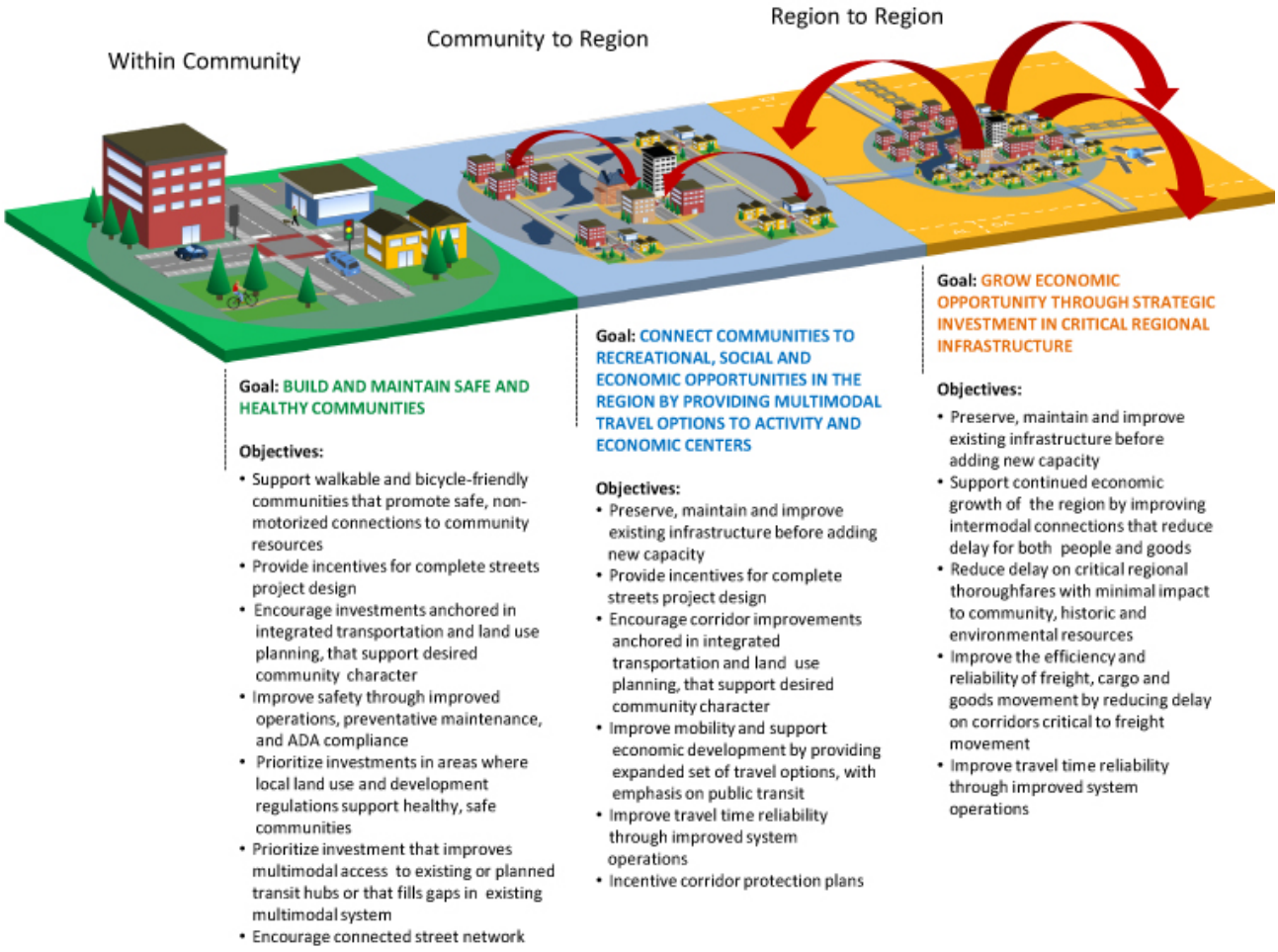
Source: www.mwcog.org/transportation/activities/cli/

In a fiscal simulator, participants use poker chips to allocate available funding among transportation priorities as a way to learn about constraints and trade-offs. Role-playing exercises have participants posing as public officials or various stakeholders working to solve a specific transportation challenge. More than 200 residents have participated over the last eight years. The MPO conducts special, themed workshops for older adults in concert with AARP and for MPO board members who are new and/or from smaller jurisdictions. MPO staff regularly communicate with and solicit input from program alumni and the program's reach is broadened when participants in turn communicate with their own networks and interest groups.[2]

The **Chattanooga–Hamilton County/North Georgia Transportation Planning Organization (Chattanooga TPO)** developed its latest Regional Transportation Plan (2040 RTP) update using a public outreach and participation plan that provided multiple avenues for generating feedback from the general public and key transportation stakeholder groups and task forces. The 2040 RTP includes a "Community to Region" performance framework, which looks at three geographic scales: (1) "Within Community," emphasizing safe, multimodal connections to community assets, which advance livability and quality of life; (2) "Community to Region" to support strategic multimodal connections between individual communities and regional economic centers; and (3) "Region to Region" to emphasize intermodal improvements and mobility across the state and the nation. This enables different project evaluations at each scale to mitigate conflict among stakeholders who advocate for local, community-oriented investment approaches and other stakeholders who advocate for "big-ticket" regional projects.[3]

The public engagement outreach in producing the 2040 RTP, in all, included questionnaires, leadership symposiums, stakeholder focus groups, public meetings, topic-based workshops, public hearings and social

1 www.mwcog.org/transportation/activities/cli/default.asp
2 www.mwcog.org/transportation/activities/cli/alumni.asp
3 www.ampo.org/ampo-webinar-to-highlight-2013-award-winners-monday-december-16-2013/ and www.chcrpa.org/2040RTP/CHCRPA_2040RTP_Vol-1.pdf.



Source: Chattanooga TPO 2040 RTP, page 43

media. All told, there were more than 1,000 public interactions resulting from these outreach efforts. There were four general public meetings (each held in different geographic locations), five topic-based workshops (on calls for projects, climate change adaptation, transit aspirations, bicycle and pedestrian design and performance measures) and two detailed survey questionnaires to gain broad-based input on transportation issues that received 510 responses.

The Chattanooga TPO highlighted public meetings through social media and in newspapers, with specific outreach to Spanish-language newspapers. These public meetings were held in an area with a mainline transit route and the TPO made personal visits to the representatives of people with disabilities, minority leadership organizations and specific neighborhood associations to discuss the transportation process with representatives of each of these groups identified and appointed to the plan's Core Technical Team and Community Advisory Committee. These individuals helped with disseminating information, including the two surveys, which resulted in much greater success in obtaining representation in all areas of the TPO than with the 2035 Long-Range Transportation Plan outreach.[1]

Learn how the **Missoula MPO** in **Montana** used innovative public involvement techniques to create an informative and ultimately productive, planning process in the full case study at the end of this chapter in the **Innovation in Action** section.

1 www.chcrpa.org/2040RTP/CHCRPA_2040RTP_Vol-1.pdf.

REACH OUT PHYSICALLY AND VIRTUALLY

MPOs can be creative, engaging and innovative with public involvement, but still not reach many of the people who are most affected by transportation decisions and investments. Thankfully, there are more and more ways to get a message out and get feedback in and many of them come at low or no cost to an MPO. New technologies present ample opportunities for the innovative MPO to engage more people and get better results.

The opportunity

Social media is an emerging tool for public involvement in transportation and demonstrates a shift in how people discover, read and share news, information and content. To a certain extent, social media such as Facebook, Twitter, LinkedIn and other platforms allow MPOs to let others inform and engage the public for them. This benefit derives from the very essence of social media: the ease in sharing information across existing networks of people and the ease with which people can then engage in follow-up discussion about a particular piece of information. Both of these qualities of social media can be a blessing and a curse to an MPO that is trying to achieve ambitious regional goals.

Community outreach in Eden Prairie, MN was especially targeted at reaching recent immigrant families. Photo courtesy of Twin Cities LISC.

Even if board members and staff are very familiar with using social media in their personal lives, the prospect of beginning or expanding the use of social media as a work function may be scary. Part of this is because MPOs fundamentally are bureaucracies and bureaucracies and social media are not natural fits. Bureaucracies by nature involve technical information, complex and often slow decision-making processes and hierarchies of message approval. Social media, on the other hand, thrives on speed and brevity and requires no credentials to engage in discussion. The result can thus be a profusion of information and dialogue that is at best incomplete and at worst inaccurate. It is easy for a public organization to appear embarrassingly archaic, or to suddenly have a public relations nightmare on its hands with consequences for both it and its member jurisdictions and agencies. The challenge, then, is to access the many benefits of social media while guarding against the pitfalls.

That may involve significant staff time, but the payoff in terms of greater reach and broader engagement is worth the effort, if carried out wisely. This section will present examples of how to do just that.

MPOs use social media in a range of ways, from simply establishing content sections or online forums on Web pages for planning documents and other news, to maintaining a robust presence on various social media platforms with active profiles that push out original content, share information from others, facilitate or engage in discussions and gather input via surveys and other tools. MPOs must be careful not to become overly reliant on social media, as many demographic and stakeholder groups are not as active as others on these platforms and may therefore be neglected. At the same time, online and social media can encourage and allow engagement with audiences who are less likely to be reachable by public notices, such as younger residents, or whose work schedule won't allow for public meetings.

Putting it into practice

Using Facebook and Twitter as a forum for discussion of regional issues. The **Nashville Area Metropolitan Planning Organization** uses Facebook and Twitter as discussion forums for transportation planning and development issues, in the context of its long-range plan update. The MPO's social media coordinator makes decisions about social media content, relating all posts and online conversations to the major policy provisions, goals and objectives of the 2035 Regional Transportation Plan as well as relevant current event topics related to the MPO's work.

The Nashville Area MPO's website features a "Stay Involved" page with links to social media channels, a quick list of public involvement documents (including the Public Participation Plan), a calendar of upcoming events, a communications sign-up form, request forms for MPO staff to speak during events and additional links to helpful resources. The MPO is also working on another web-based tool to allow the public to crowdsource issues with the transportation system that will be used as input into the RTP update. The MPO's Twitter feed is followed by partners and advocates, media and trade publications, industry experts, bloggers, arts and culture feeds and politicians, among others.[1] In a short period of time, the MPO's social media presence grew to more than 3,300.

The MPO staff works hard to manage its reputation through both traditional and social media, recognizing that a failure to engage on social platforms would cede the conversation about regional transportation to others, explains the MPO's social media coordinator, Mary Beth Ikard. "Institutions used to control their own reputation — now the stakeholders do. It's not what you say about yourself that matters as much as what your constituencies say about you."[2]

Making use of the full suite of media platforms. MetroPlan Orlando, the MPO for the Orlando region, developed in 2011 a detailed social media plan (updated in 2012).[3] It's notable not just for its guidelines for using social media, but in describing how they are to be integrated into overall public involvement efforts. The plan sets clear objectives and strategies for frequency of communication, number of followers and potential partners. As part of its long-range plan update, MetroPlan Orlando also used platforms such as Flickr, Veoh and YouTube to disseminate information using video, photographs, charts, graphs, renderings and animation.[4]

1 http://nashvillempo.org/stay_involved/
2 www.cfte.org/uploads/cke_documents/Mary-Beth-Ikard-PPT-5-15-12-3-.ppt
3 www.metroplanorlando.com/files/view/public-involvement-plan-adopted-5-9-2012.pdf
4 http://metroplanorlando.com/files/view/2040-lrtp-public-involvement-report.pdf

A social media presence is just one element of the innovations made by the **Indian Nations Council of Governments (INCOG)** in the **Tulsa, Oklahoma** area. Learn about the innovative approach INCOG used with an old bus by reading the full case study at the end of this chapter in the **Innovation in Action** section.

BE INNOVATIVE WITH HIGH-TECH ENGAGEMENT TOOLS

Innovative MPOs are taking advantage of new technologies and software programs to educate and engage the public. While some carry a high price tag, others use lower-cost and publicly available resources.

The opportunity

High-tech participatory tools can show real-time results and create an effective two-way connection between decision-makers and residents. Instant electronic polling, visualization and other graphic renderings allow the public to imagine what projects look like when completed, the effects of policies to increase density or target investments to particular corridors, or the impact of poor street design on the safety of pedestrians, drivers and others who use the road. The biggest impact of new visualization techniques has been at the project level, where project alternatives can be realistically displayed and impacts on safety, congestion and quality of life clearly simulated. This is why the most recent federal guidance for MPOs specifically called out "visualization" as a recommended practice. MPOs can benefit from the research that others have done on visualization options, including the resources listed at the end of this chapter.[1]

MPOs are also finding themselves at the locus of the new trend of "benevolent hacking" — the phenomenon of third-parties, often technologically savvy and civic-minded companies, organizations or even individuals, developing ways to combine public data and new technologies to develop work-arounds to frustrating public processes. This includes crowdsourcing ideas for civic improvements or redevelopment,[2] enhancing government transparency, improving the usability of public data for citizen watchdogs[3] and helping residents use or improve public services (like transportation systems).[4] The innovative MPO should find ways to assist in these efforts without compromising data security or playing favorites among private enterprises.

Source: www.qrcodepress.com/qr-code-allows-smartphone-users-to-adopt-a-tree-in-d-c/857733/

Regardless of how an MPO chooses to use technology, staff and officials should keep in mind that technology is simply a means to an end and not an end in itself. High-tech engagement techniques do not replace in-person engagement and don't add much value if not presented in a way that informs, compels useful action or invites a two-way conversation. A common criticism of public

1 http://onlinepubs.trb.org/onlinepubs/archive/conferences/2008/statewide/pdf/davis.pdf; www.fhwa.dot.gov/planning/congestion_management_process/cmp_visualization_tools/visualizationtools.pdf
2 http://greatergreaterwashington.org/post/16389/new-websites-crowdsource-development-ideas/
3 http://opencityapps.org/
4 https://www.waze.com/; http://developer.wmata.com/Application_Gallery

engagement initiatives is that they increase knowledge of an issue and the desire of the public to see change, but then provide no tools or structures through which the public can take action. MPOs must be wary of creating such a dynamic.

Putting it into practice

Using online tools to visualize the effects of policies and investment priorities. The **Chicago Metropolitan Agency for Planning (CMAP)** is one of the largest and most comprehensive regional planning entities in the country, dealing with transportation, environment, natural resources, watershed planning, housing, economic development and health and human services. In 2009 the agency began a multi-year process to develop its comprehensive regional plan, called GO TO 2040,[1] that would see sustained public engagement from start to finish.[2]

During the initial phase, which lasted four months and was dubbed Invent the Future, CMAP sought public input on the scenarios that would be developed and tested. The showcase element was MetroQuest, an interactive tool that allows users to experiment with different combinations of variables such as development patterns and transportation options and immediately see predicted outcomes. CMAP used the online tool at public meetings, on its website and at kiosks in high-traffic locations throughout the metropolitan area. In the course of this phase, an estimated 1,500 people attended workshops; 14,000 people completed a kiosk session; and 2,800 people filled out surveys at fairs or festivals. The MetroQuest GO TO 2040 website had approximately 10,000 unique visitors.[3] This level of public involvement was unprecedented for the agency and resulted in an incredibly comprehensive and innovative long-range plan. For more discussion of the plan, see the CMAP case study featured in Focus Area 7.

Shaping proposals on the fly with instant polling. Other MPOs such as the **Miami-Dade Metropolitan Planning Organization (Miami-Dade MPO**) have made use of new technologies for instant polling at public meetings or over the Internet. Participants are presented with a ballot or list of items to consider and are asked to record their preference either with a hand-held device, a telephone or through the Internet.[4] The results are anonymous and can be displayed instantaneously at the event or on a website. Options include keypad polling (using specialized keypads normally provided by a third-party consultant), cell-phone polling and Web-based polling.

Such technology helps to ensure that all participants have an opportunity to express their sentiments without the need to speak in public, while providing immediate results to catalyze further discussion. The Miami-Dade MPO used instant polling at public meetings during the development of its 2035 long-range transportation plan and the 2040 plan update. The devices enabled the agency to obtain valuable public feedback during the public involvement process on preferences for different proposed projects, prioritization and support of proposed policies and support for specific plan elements.[5]

1 https://www.planning.org/research/arts/briefingpapers/engagement.htm
2 www.dot.state.mn.us/publicinvolvement/pdf/casestudies/HEV-chicagogoto2040-final.pdf
3 www.cmap.illinois.gov/about/2040/supporting-materials/process-archive/scenario-evaluation/invent; www.dot.state.mn.us/publicinvolvement/pdf/casestudies/HEV-chicagogoto2040-final.pdf
4 Photos showing the MDMPO's outreach are available at https://www.facebook.com/miamidadempo/photos_stream.
5 http://mpotransportationoutreachplanner.org/strategies/age/youth/129/instant-polling-technology

SUPPORT OTHER ORGANIZATIONS IN ENGAGING THEIR CONSTITUENCIES

Most MPOs control their own public engagement and outreach efforts, but in recent years several innovative MPOs made grants to local community organizations to lead or coordinate public engagement. This strategy can engender more authentic ownership of the process and build the capacity of local groups to understand and influence transportation issues rather than just being involved once decisions have already been made.

The opportunity

All MPOs have some kind of citizen advisory group that provides regular input to staff activities and board decisions. Several MPOs have moved beyond the general citizen advisory group to create community engagement teams that are chartered to focus on specific issues or interests of importance and empowered to have meaningful involvement in MPO programs and decisions.

MPO transportation plans are made up primarily of projects that originate at the local level. A lack of public involvement in shaping those projects at the local level can lead to blow-ups when they are included in the regional plan, causing headaches for the MPO and frustration among citizens who feel excluded from the process until it is too late to provide meaningful input. Some MPOs try to ensure good citizen engagement for potentially controversial local projects by providing grants and expertise to local jurisdictions in developing project concepts. This can be especially important for constituencies that are traditionally under-represented or disadvantaged.

Putting it into practice

Creating your own "watchdog" to support implementation. To create its award-winning safety plan and a bicycle/pedestrian plan, the **Houma-Thibodaux Metropolitan Planning Organization (HTMPO)** in southern Louisiana formed the South Central Safety Community Partnership. The coalition includes representatives from across the region bringing together law enforcement and safety officials, business leaders, transportation engineers, emergency responders, local non-profits and school representatives. The HTMPO is one of the smaller MPOs in Louisiana and unique among MPOs of any size in having a stand-alone safety plan. It incorporates both infrastructure and behavioral safety strategies such as funding a regional DWI testing mobile unit and holding road safety workshops and audits.[1] Since the safety plan was adopted in 2011, more than 45 percent of the transportation safety priorities are being funded and implemented.

A subset of the Partnership meets quarterly to track implementation and results of the safety plan, with an additional subcommittee specifically coordinating implementation of the bicycle/pedestrian plan. If a program or project has not been started or is underachieving, the group discusses why and what changes need to occur to make the effort successful, a process that keeps stakeholders engaged.[2]

1 www.scpdc.org/wp-content/uploads/SCRTSP-FINAL-PLAN-2012-04-18.pdf
2 www.scpdc.org/wp-content/uploads/2013-HTMPO-AMPO-Awards-Nomination.pdf

Empowering local organizations to speak for affected communities. In the **Twin Cities region of Minnesota**, the **Met Council** is demonstrating how to make the benefits of transit-oriented development accessible to all and effective community engagement is their most crucial tool. In 2010, as the region was developing its Central Corridor light rail line, the Met Council received grants from the U.S. Department of Housing and Urban Development and Living Cities to create a partnership focused on ensuring that transit investments connected people of all incomes and backgrounds to jobs, housing choices, recreation and services. The resulting program, dubbed Corridors of Opportunity,[1] works to reach traditionally under-represented populations such as low-income people, people with disabilities, people of color and new immigrants. The program is led by a team of three area non-profit organizations with diverse community engagement experience — Nexus Community Partners, the Minnesota Center for Neighborhood Organizing and the Alliance for Metropolitan Stability — which manage $720,000 in grants to local community organizing and engagement campaigns along seven transit corridors.

A Community Engagement Steering Committee (CESC) made up of representatives of 21 community organizations drafted grant criteria and recommended applicants. The Corridors of Opportunity Policy Board reviewed and approved these grant recommendations.[2] The program also provided technical assistance to the community organizations and worked with local government entities to build their capacity to better engage with communities.[3] In 2014 the CESC assisted the Met Council in drafting a new Public Engagement Plan that will cover all Met Council activity areas.

Photo by Twin Cities LISC

See the full case study on the **Metropolitan Area Planning Agency (MAPA)** in Omaha, NE, and Council Bluffs, IA, in **Innovation in Action** to learn about their distributed model of engagement in their regional visioning.

Resources

- FHWA resources page: http://planning.dot.gov/focus_publicEngage.asp
- Alliance for Metropolitan Stability, "Organizer Roundtable: Sustainable Communities and the Community Engagement Team:" www.metrostability.org/efiles/CETarticle.pdf
- Race and Social Justice Initiative, "Inclusive Outreach and Public Engagement Guide:" www.seattle.gov/Documents/Departments/RSJI/GRE/IOPEguide01-11-12.pdf
- Association of Metropolitan Planning Organizations (AMPO), Public Involvement Best Practices: www.ampo.org/resources-publications/best-practices/public-involvement/

1 www.metrocouncil.org/About-Us/Facts/PlannningF/FACTS-Corridors-of-Opportunity.aspx
2 www.corridorsofopportunity.org/activities/engagement
3 http://metrostability.org/efiles/CET_story_2b_-_about_us.pdf

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 2)

MAKING INVOLVEMENT ENGAGING

Missoula MPO (Missoula, MT)

Envision Missoula, a scenario planning process that took place in 2007–08, is a great example of scenario planning directly feeding into the long-range transportation plan update and a powerful illustration of MPO-led public engagement that was both innovative and effective.

The Missoula MPO, the City of Missoula, Missoula County and other involved agencies laid out a clear overview for the process in the following straightforward terms:[1]

1. Missoula is preparing a long-range plan for transportation.
2. The transportation plan will serve a long-term land-use vision.
3. The vision will grow out of the broader community.
4. Scenarios will explore competing ideas for our future.
5. The vision is a map and a set of principles.
6. The transportation plan will be based on the vision, will identify projects out to the year 2035 and will be calculated using anticipated financial resources available for transportation.
7. Future land-use and transportation plans may be based on this vision, depending on progress made toward implementation of the vision.

The Envision Missoula process represented a stark departure from previous planning processes in its comprehensiveness and most significantly, its engagement of the public. Importantly, the process took a neutral approach to the desirability of growth, but simply asserted that the area should be prepared for different growth outcomes. Through visioning workshops using creative mapping techniques, electronic polling and a telephone survey, this process enabled citizens with varying needs and preferences to reach consensus. More than 500 citizens participated in workshops, where small groups were asked to build their vision on maps that incorporated transportation routes and considered various modes, open space, nodes of focused development, commercial and office areas and residential areas in the community.[2]

The outcome of the workshops was a preferred scenario and a set of transportation and development principles. A subsequent telephone survey confirmed consensus for the preferred scenario by demonstrating it to be representative of the greater community.[3] This input in turn provided the foundation for the long-range transportation plan. This process demonstrated a new approach to infrastructure investment that was proactive rather than reactive to perceived growth patterns.

The Envision Missoula Transportation Plan won the Association of Metropolitan Planning Organizations (AMPO) National Award for Outstanding Achievement in Metropolitan Transportation Planning for its linkage

1 http://web.archive.org/web/20130424071410/www.co.missoula.mt.us/transportation/lrtpu1.htm
2 www.mdt.mt.gov/research/toolkit/m1/ccbtools/cvis/ws.shtml
3 www.fhwa.dot.gov/livability/case_studies/missoula/

of land-use and transportation planning and its inclusive process.[1]

In a recent update to its plan the MPO found that having a lasting community consensus around the preferred scenario and guiding principles from the 2008 process enabled the region to continue along a path toward sustainability. In the meantime, Missoula developed and adopted an Active Transportation Plan based on the bicycle and pedestrian elements of Envision Missoula and made several improvements to transit service that had been identified as priorities. Progress on that aspect has been slow to date because one large, expensive project — the Russell Street reconstruction project — consumed most available funds. The MPO hopes to be able to include more in the coming years. An annual yearbook process tracks regional metrics over time to help both planners and the public measure progress toward Envision Missoula goals.[2]

The Missoula model points to a few general principles for public involvement in long-range transportation planning, regardless of the level of technology used. For scenario planning, the approach should include multiple opportunities for authentic give and take between planners and the community. The scale of the public engagement effort depends somewhat on the size of the metropolitan area and planning process. In the case of Missoula, multiple rounds of public workshops were supplemented with a telephone survey to further verify findings. Early in the process, Envision Missoula presented the community with new data that clearly showed existing trends in development and their impacts on the environment and other quality of life indicators. This example also shows the importance of describing in advance the scenario planning process, the actual policy decisions (in this case, the long-range transportation plan update, among others) that will result from the process and the potential benefits to the community.

1 www.ampo.org/resources-publications/best-practices/long-range-planning/

2 Phone interview with Roger Millar, former Director of the Missoula City–County Office of Planning and Grants (an office that at the time housed the Missoula MPO); conducted 8/13/14.

Missoula, Montana MPO	
Type	Housed within county government
Composition	The board has seven members: the Mayor and city councilmember of the City of Missoula, two of the three county commissioners in the MPO, a district administrator of the Montana DOT, a member of the Mountain Line board and a member of the city/county planning board.
Voting	Each voting member gets one vote.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$860,000; 4 full-time staff
Responsibilities beyond transportation	Land use, land conservation, air quality
Independent revenue authority	Does not collect revenues

References: http://ci.missoula.mt.us/DocumentCenter/View/23415
www.mposurvey.com/Staffing_and_Administrative_Capacity_of_MPOs.pdf
www.cutr.usf.edu/wp-content/uploads/2012/08/2010-05-Staffing_and_Administrative_Capacity_of_MPOs.pdf

REACHING OUT PHYSICALLY AND VIRTUALLY

Indian Nations Council of Governments — INCOG (Tulsa, OK)

The Indian Nations Council of Governments (INCOG), which serves the Tulsa, Oklahoma, metropolitan area, has demonstrated multiple innovative techniques for outreach and engagement, without turning to complicated, high-cost technology. Just in the past three years, INCOG has carried out a truly mobile approach to outreach for citizen involvement in a transit master plan and used other techniques in the development of a new regional bicycle and pedestrian master plan.

When INCOG needed to gather citizen input to identify priority corridors for long-term transit development, the agency took an ordinary, 40-foot bus and transformed it into a mobile transit lab. The bus, which traveled to 117 stops in 12 different jurisdictions over a four-month period in 2011, featured video screens, interactive displays and other educational tools. It went to community events, schools, libraries and shopping malls, welcoming more than 2,000 visitors, 88 percent of whom reported that they had never participated in a transportation planning event.[1] Many had little sense for what a high-quality transit system looked like.

INCOG engaged the community where they were located with its mobile transit lab. Source: INCOG

1 http://fastforwardplan.org/Portals/0/Documents/102011RTSP/Handout_10-13-2011.pdf

Upon entering the bus, citizens could discuss transit possibilities face-to-face with planners, watch a five-minute video and take a short survey, allowing them to air specific transit hopes and frustrations.[1]

INCOG kicked off the tour with an event drawing 400 attendees and held a stakeholder retreat with interactive team discussions.[2] When regulatory and liability hurdles thwarted the attempt to use a standard transit bus INCOG leased a "party bus" for a 12-week period, at a cost of about $30,000. INCOG staff installed the indoor features themselves over a handful of weekends. "Staffing the events required some weekend time as well, but we were willing to put in those hours to really reach out to the public in a new and effective way," said James Wagner, INCOG's Principal Transportation Planner.[3]

Tulsa's Mayor Bartlett was part of INCOG's outreach effort. Source: INCOG

The resulting Regional Transit System Plan identifies both near-term and long-term bus improvement strategies. It outlines a 30-year public transportation plan that covers 16 corridors where transit investment would be most beneficial based on land-use patterns, demographics and future population and employment projections.[4] The plan supplements INCOG's Regional Transportation Plan 2032 (adopted earlier in 2011) as a financially unconstrained vision for what could be done with more funding and will inform the next update of the regional transportation plan. In the interim, one of the identified transit priorities — the Peoria/Riverside Corridor bus service — was funded through a City of Tulsa sales tax initiative.[5]

Another way that INCOG is looking to supplement the region's constrained long-range transportation plan is through its current year-long process to prepare a Bicycle/Pedestrian Master Plan, called the "GO Plan." In Spring 2014, through a series of "WalkShops," citizens interacted with planners by walking the communities and giving feedback on what improvements are most needed.[6]

http://instagram.com/tulsagoplan

The hub of the related outreach effort is the Tulsa Transportation Resource Center (TRC), a website managed by INCOG that provides information and assistance to residents on transit, bicycling, walking and ridesharing.[7] This site already has a significant constituency of people interested in bicycle and pedestrian infrastructure so it is a natural fit for reaching those communities. In addition, the GO Plan has a presence

1 https://www.planning.org/awards/2012/
2 http://fastforwardplan.org/Portals/0/Documents/102011RTSP/Exec_Summ_FINAL_10-13-2011.pdf
3 Wagner phone interview, conducted 8/12/2014
4 http://fastforwardplan.org/TransitSystemPlan.aspx
5 Wagner phone interview, conducted 8/12/2014
6 http://tulsatrc.org/go-plan-walkshops/
7 http://tulsatrc.org/goplan/

on social media including Twitter, Facebook and Instagram.[1] Wagner reports that the Instagram feature has especially taken off, as participants have posted photos of infrastructure features and other bicycle/pedestrian-related elements that they like or dislike. INCOG held another regional stakeholder retreat in October 2014 and hopes to adopt the new plan in Spring 2015, at which point the region's localities will be encouraged to adopt plan elements as part of their own comprehensive plans.[2]

Through these efforts, INCOG never once purchased advertising in the region's media or other coverage. But the initiatives have been creative and popular enough to earn media attention, which is then maximized by the ability of interested parties to share the news over social media. INCOG has thus succeeded in creating a "virtuous cycle" of positive attention and public engagement around planning efforts that are also having a real impact on transportation outcomes.

Indian National Council of Governments (INCOG)	
Type	Voluntary association of local and tribal governments
Composition	INCOG is governed by a Board of Directors and a General Assembly. The Board of Directors is composed of 4 officers and 55 members. It sets policy for the conduct of day-to-day activities of the council. Membership on the Board is based on population size of member governments and includes both elected officials and appointed citizens. The Board of Directors meets on a monthly basis. The General Assembly, composed of one elected official from each member government, reviews and adopts plans, programs and budgets recommended by the Board of Directors. The General Assembly meets on an annual basis.
Voting	Each voting member gets one vote.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$1.7 million; 14 full-time equivalent staff
Responsibilities beyond transportation	Land use, community and economic development, environmental quality, aging services, GIS and mapping
Independent revenue authority	None

References: www.incog.org/ ; www.incog.org/About_Us/structure.html ; www.incog.org/Transportation/Documents/FY2013UPWP.pdf

1 http://tulsatrc.org/go-plan-social-media/
2 Wagner phone interview, conducted 8/12/14.

SUPPORT COMMUNITY ENGAGEMENT AND ORGANIZING

Metropolitan Area Planning Agency — MAPA (Omaha, NE and Council Bluffs, IA)

Distributing roles and responsibilities for involvement of stakeholders and the general public has many advantages. It can save an agency resources, as well as facilitate the input of all interested parties through a representative model of participation. In the Omaha–Council Bluffs metro area, the Heartland 2050 visioning process coordinated by MAPA is making effective use of this representative approach through a structure of multiple committees, each one of which is charged with making sure that all voices are heard.[1] The Heartland 2050 process is supported by local foundations and a federal Sustainable Communities grant to help fund the involvement of a diverse group of citizens and stakeholders in the development of scenarios for future growth. The committees provide insight into specific areas of interest and serve as links between the organizations they represent and Heartland 2050 throughout the duration of the project.[2]

1 www.mapacog.org/heartland-2050
2 http://heartland2050.org/what-is-heartland-2050/teams/

One committee is the Equity and Engagement Committee, which is broadly responsible for public outreach activities, with a particular focus on ensuring that voices of traditionally under-represented groups are heard throughout the process.

Source: http://heartland2050.org/what-is-heartland-2050/teams

The Equity & Engagement Committee has an open membership process. Throughout the project, many organizations suggest and invite other community groups and non-profits to attend and contribute to ensure equity is at the forefront of the visioning process. Through Heartland 2050's outreach efforts, relationships have been forged with members of a variety of marginalized groups including the refugee community. Omaha has the largest population of Sudanese refugees in the United States.

One such example is a scenario-planning workshop that was well-attended at the Yates Community Center in Omaha, a facility that provides a variety of social services to the refugee community. During the workshop participants created nine maps depicting how the Heartland region should grow through the lens of the refugee experience. This workshop had more than 60 participants speaking 11 different languages. These maps continue to be used at Yates Community Center to help refugees learn how to navigate through the region. Three stakeholder committees (represented by the green, blue and red sections in the diagram above) are designed to serve as forums for discussion and inform the creation of scenarios and ultimately the preferred vision for growth, to focus on:

- **People (Human Capital)** develops proposals related to the region's human resources and the systems that support human growth and development.
- **Places (Built Capital)** focuses on the region's built environment and assets.
- **Resources (Natural Capital)** focuses on the region's natural resources and systems.

As the plan developed, the original stakeholder committees were combined into a single Vision Committee focused on six topic areas: Resources, Infrastructure (transportation, utilities, etc.), Housing and Development, Economic Development, Education and Health and Safety. The committee developed recommendations on outcomes, strategies and actions that were then reviewed by the Steering Committee (represented by the yellow section in the diagram on the previous page), made up of 40 public- and private-sector leaders. The Steering Committee spent a year in a data-driven process learning about the issues affecting the metro area. Throughout the committee was updated on the public input process from Equity and Engagement Committee members.

Tying together these committees is what MAPA calls its "golden rule" for public outreach in the Heartland 2050 effort: "[P]eople who make up the region have to be able to see themselves in the Heartland 2050 plan, to see how their lives will be prosperous as implementation of this plan begins to happen."[1]

MAPA also included two polls in the outreach effort. The firm Heart and Mind Strategies sought to get a handle on residents' shared values around the future of the region, reinforcing and adding nuance to the results of the public outreach efforts. A second set of polling will be conducted near the end of Heartland 2050 to confirm that the recommendations enjoy public support.

MAPA estimates that they have heard from more than 3,000 citizens in a 12-month period spanning 2013–2014.[2] Representatives of various interest groups serving on the stakeholder committees have made many more collective voices heard as part of the process. The key to making all of this a lasting innovation in MPO public engagement, however, will be to ensure that "the committees evolve into a platform for continued discussion and collaboration beyond the term of the project."[3] Such sustained involvement by stakeholders would represent a significant step beyond the typical MPO citizen advisory committee.

1 http://heartland2050.org/info-center/
2 *Ibid.*
3 http://heartland2050.org/what-is-heartland-2050/teams/

Metropolitan Area Planning Agency (MAPA)	
Type	Voluntary association of local and tribal governments
Composition	MAPA is governed by a 64-member council of officials, representing each of the 63 governmental units that comprise MAPA, that set policy and structure Agency programs. The nine-member Board of Directors sees that the policy is carried out. The Board of Directors members represent nine specific Council of Officials member entities, seven members from the largest cities and counties and two members representing small communities and counties in Nebraska and Iowa. The Board of Directors receives recommendations from the Transportation Technical Advisory Committee.
Voting	One member each has one vote.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$4.6 million; 18 full-time staff
Responsibilities beyond transportation	Community and economic development, waste management, ozone and air quality, emergency management
Independent revenue authority	None

References: www.mapacog.org/boards-a-committees
www.mapacog.org/images/stories/Trans_General/FY2015%20Budget.pdf
www.mapacog.org/images/stories/Trans_General/UPWP_FY15_Am01_2014_06_27.pdf
www.mapacog.org/staff

FOCUS AREA 3

FULLY UTILIZE ALL AVAILABLE FUNDING TOOLS

Fundamentally, metropolitan planning organizations (MPOs) exist to play a role in allocating billions in transportation spending. Making the most of that role, however, requires navigating a thicket of programs, rules and relationships. The most important of those relationships, arguably, is that with the state Department of Transportation, through which federal dollars flow. MPOs also must coordinate with other recipients of federal funds, such as regional transit authorities, to ensure that the projects receiving funds are consistent with the region's vision and plans.

Most federal funds are authorized for different categories, such as public transit, national highways and transportation alternatives. These pots of funding are then distributed to states or transit agencies through Congressionally mandated formulas. A portion of each state's funds is targeted directly to metropolitan areas through a process called "sub-allocation." Although the share of dollars exclusively within an MPO's purview is small, there are two key avenues for shaping how money gets spent in your region: 1) by making the most of the flexibility available in federal dollars, and 2) by using MPO authority to set criteria for prioritizing projects.

The federal surface transportation program has two primary funding programs: 1) the "highway program" (Title 23), and 2) the "transit program" (Title 49). The 2012 update to the federal program, known as MAP-21, allows MPOs and DOTs to transfer formula funds from the highway program to the transit program. Under Title 23, the largest pots of formula funds that MPOs can use to fund projects are the Surface Transportation Program (STP), the Congestion Mitigation and Air Quality Program (CMAQ) and the Transportation Alternatives Program (TAP). Under Title 49, they are the Urbanized Area Transit Formula Funds, Elderly and Disabled Funds and the Bus and Bus Facilities Program.[1] The table on the following page provides additional information on the eligibility of these programs.

Other programs provide state DOTs with money to invest in the National Highway System and safety improvements. Eligibility for each program is governed by federal statutes and regulations. Federal funds generally can be used on a broader set of transportation projects than is often possible with state funding, but they also bring requirements that can add time and cost to a project.

Projects begin the journey toward funding eligibility when MPOs include them in the long-range Metropolitan Transportation Plans (MTP) that create the 20-year framework of policies, goals and recommended investments. They move a step closer when included in the Transportation Improvement Programs (TIP), which list projects to be funded in the upcoming four or five years. MPOs lead the processes for shaping and approving both documents. The challenge is to make sure these are not just "stapling exercises" — merely compiling local and state wish lists with little attempt to shape the complete package to make the most efficient and beneficial use of resources for the region as a whole.

1 Transportation for America has developed a number of resources that describe these programs including currently authorized funding levels, eligibility and how they are allocated to states and MPOs: http://t4america.org/maps-tools/map-21/

Highway Programs	Eligibility	Percentage of Highway Funds
Surface Transportation Program (STP)	Highway, bridge, transit and safe streets projects on the National Highway System and other federal-aid highways; and repair work on off-system bridges	26.7%
National Highway Performance Program (NHPP)	Repair and new construction of highways and bridges on the National Highway System	58%
Congestion Mitigation and Air Quality Improvement (CMAQ)	Highway, transit and safe street projects that improve air quality, relieve congestion and help meet national ambient air quality standards.	5.9%
Transportation Alternatives (TA)	Safe streets projects, including bike, pedestrian and Complete Streets infrastructure	2.2%
Highway Safety Improvement Program (HSIP)	Projects consistent with the state strategic highway safety plan, including improvements to intersections, signage, grade separations, pavement and safe streets projects	6.4%
Metropolitan Planning (PL)	Activities to support metropolitan planning	0.83%
Transit Programs	**Eligibility**	**Percentage of Transit Funds**
New Starts (competitive)	Major new streetcar, light rail, bus-rapid transit and heavy rail transit projects, including extensions and capacity improvements to existing lines	18%
Urbanized Area Formula Grants (5307 - Formula)	New bus and rail capital projects and capital maintenance work on existing systems in urban areas with a population over 50,000; may be used to cover operating costs in urban areas with a population under 200,000	41.6%
Formula Grants for Enhanced Mobility of Seniors and Persons with Disabilities (5310 - Formula)	Capital and operating expenses that support transportation to meet the special needs of older adults and persons with disabilities	2.4%
Formula Grants for Rural Areas (5311 - Formula)	Capital, operating and planning expenses for public transportation projects that meet the needs of rural communities	5.7%
State of Good Repair Grants (5337 - Formula)	Maintenance projects for existing fixed-guideway rail and bus systems, including vehicles, track, structures, communications, etc.	20.2%
Bus and Bus Facilities (5339 - Formula)	Purchase, rehabilitation and repair of buses and bus facilities	4.0%
Additional Programs	**Eligibility**	**Funding**
Projects of National and Regional Significance (competitive)	Highway, bridge, transit and certain types of freight projects with a total cost of at least $500 million	FY13 $500 million FY14 $0
TIFIA Loan Program [first-come, first-serve]	Provides loans for highway, bridge, transit, intermodal, port access and freight transfer facility projects	FY13 $750 million FY14 $1 billion
TIGER Program [not an authorized program]	Highway, bridge, transit, freight, port, walking and biking and multimodal projects.	FYI13 $500 million FY14 $0

References: This information comes from page 19 of Transportation for America's Making the Most of MAP-21 Handbook, available at: http://t4america.org/maps-tools/map-21/.

STP funding is the largest available funding program and is part of the "Highway Title;" consequently, most MPOs and DOTs default to spending it on road projects. However, these flexible dollars can be invested in a wider range of project types or to make roads work better for cars, bikes, buses and pedestrians. The savvy MPO makes full use of this flexibility, but doing so requires you to be nimble and well-versed in the laws and regulations.

This chapter covers five specific innovative actions an MPO can take to make full use of available public resources and attract private capital to implement visionary transportation plans:

- **Set criteria to match funding with long-range policy goals**
- **Establish specific set-aside funding categories to advance specific regional priorities**
- **Blend funding programs to maximize eligibility**
- **Take advantage of federal flexible funding provisions to increase transportation options**
- **Support and oversee public-private partnerships**

SET CRITERIA TO MATCH FUNDING WITH LONG-RANGE POLICY GOALS

While MPOs spend considerable time and money to develop the long-range MTP, plans alone are not enough. The real opportunity for MPOs to shape the future is how they align criteria for the funding programs they control. This requires MPO staff and policy boards to examine processes they use to solicit proposed projects so that the competitive grants they administer can be made to serve the region's preferred policy goals, rather than devolve to the least common denominator.

The opportunity

As mentioned above, MPOs — working in coordination with state DOTs, local governments and transit agencies — have funding authority in two ways: 1) prioritizing projects in the MTP for programming in the four-year TIP and 2) selecting projects in the TIP for near-term implementation. That latter process typically is done through a regional solicitation or competitive grant process managed by the MPO.

Because the MPO Policy Board plays a critical role in this process, federal statutes require participation by local elected officials. Leadership is required to create criteria that support both local transportation needs while advancing important regional priorities. Matching criteria to policy goals gets projects implemented faster, demonstrates to the public the commitment by MPO leaders to the community's plans and priorities established in the MTP and can generate cost savings and system efficiencies.

Across all programs, projects prioritized for funding must be listed explicitly in the TIP and the State Transportation Improvement Program (STIP) and be consistent with the MPO-adopted MTP. For projects that meet these criteria, larger MPOs in Transportation Management Areas (TMA) also have authority to pick projects from the TIP for implementation that are funded with STP–Urban and Urbanized Transit Formula dollars, as well as under all other federal-aid highway and transit programs.

Exceptions are the National Highway System (NHS), Bridge, Interstate Maintenance and Federal Lands Highway programs, which fall under state DOTs purview.

Shaping the process for applying for discretionary funding. The STP, Congestion Mitigation and Air Quality (CMAQ) and Transportation Alternatives Programs (TAP) are allocated by regional discretion and thus local entities must apply for them. In shaping the application, the innovative MPO asks how the proposed project meets a number of specific goals taken from the MTP. For instance, does the proposed project advance motorized and non-motorized transportation needs, or how does the proposed project improve access to identified regional activity centers?

Establishing criteria for selecting projects. The innovative MPO awards extra points to projects that meet specific regional goals such as improving the condition of roadways and transit vehicles or increasing transit ridership through enhanced service and new routes to job centers that are currently underserved.[1]

Best practices for selecting projects for funding. The innovative MPO involves key stakeholders. This can be done through requiring letters of support from community groups, business leaders and other stakeholders; inviting public comment on the merits of proposed projects; and conducting open houses or other public forums to vet projects recommended for funding before finalizing the TIP.

Putting it into practice

Scoring projects based on performance goals. In the Kansas City region, the **Mid-America Regional Council (MARC)** allocates STP funds for bridges, bicycle/pedestrian projects, public transportation, roadway capacity, operations, management and safety. MARC includes explicit performance goals for roadways, transit and bicycle/pedestrian projects in the adopted MTP.[2] Projects requesting funding are scored and ranked based on their alignment with regional goals, performance, safety, environment and economic development. STP funds are awarded separately for Kansas and Missouri. MARC solicits projects from both states. Applications are scored and then submitted to each state's TIP selection committee and prioritized for funding. The score and rank, along with other factors, are used to select projects for recommendation to the "Total Transportation Policy Committee," which includes all the MPO Policy Board members and is then incorporated into the region's TIP.

Setting criteria for a special pot of air-quality mitigation funds. In Atlanta, **Atlanta Regional Commission (ARC)** works closely with Georgia DOT to shape the regional solicitation process and criteria for distributing CMAQ funds. ARC recently overhauled its regional solicitation process in response to a backlog of projects, cost over-run concerns and funding challenges.[3] The revised process includes a stronger focus on projects in existing urbanized areas, transit centers and along priority networks, including freight and rail corridors. ARC invites project sponsors to submit a Letter of Intent that articulates how the project aligns with regional goals and principles. Eligible projects that make a short list are then further developed collaboratively by ARC

1 Advocacy Advance, a partnership of the Alliance for Biking & Walking and the League of American Bicyclists, provides examples of regional applications developed to select projects for the Transportation Alternatives Program Competitive Grant Processes: www.advocacyadvance.org/site_images/content/MPO_TAP_(Final).pdf.

2 www.marc.org/transportation/lrtp.htm

3 ARC's CMAQ & TAP Call for Projects: www.atlantaregional.com/transportation/overview.

and the applicant. The goal is to ensure viable projects are selected to accelerate environmental approvals and construction. ARC also prioritizes projects that align with regional development and multimodal policies adopted in its 2011 "Plan 2040." ARC awards extra points to projects serving established "Equitable Target Areas" (ETAs)[1] with high concentrations of vulnerable and underserved populations and older adults. The process also takes the project's readiness into consideration, along with the sponsoring entity's past performance delivering projects on-time and on-budget.

Combining programs into a larger flexible fund. **Portland Metro** aligns transportation investments with regional development policies using guidance from the adopted MTP. Metro wraps CMAQ, STP and TAP federal transportation funds into an overall TIP process that it refers to as Regional Flexible Funding. Those dollars are allocated in a Metro-coordinated process aimed at reaching regional goals, such as advancing active transportation.[2] The application process uses targeted questions to identify projects in these areas. After identifying a project as eligible, the MPO selects which federal source is the most appropriate.

Metro provides policy guidance to Clackamas, Multnomah and Washington counties and their cities, which each nominate projects for funding in the TIP.[3] Public comment is sought for projects seeking funding. Projects are prioritized with state and transit agency input, as well as from sub-regional coordinating committees. Additionally, the funding application solicits details about how local agencies coordinate with other agencies.

In its most recent TIP, the **Denver Regional Council of Governments (DRCOG),** which serves the Denver region, blends CMAQ, STP and TAP funds.[4] Projects are balanced across modal types and investment levels but may be funded with a mix of different funding types depending on the project need and eligibility. Small communities receive special consideration with a lower minimum point score and are also evaluated through the committee selection process. State and transit agencies are an integral part of funding decisions. The Colorado Department of Transportation and the Regional Transportation District work with the MPO to review applications.

Source: Foster United

1 www.atlantaregional.com/transportation/community-engagement/social-equity

2 Metro Council resolution allocating funds for 2016-18 cycle available at http://rim.metro-region.org/webdrawer/webdrawer.dll/webdrawer/rec/264571/view/Metro%20Council%20-%20Metro%20Legislation%20-%20Reso~ble%20Funding%20for%20the%20Years%202016-18,%20Pending%20Air%20Quality%20Conformity%20Determination.PDF

3 www.oregonmetro.gov/tools-partners/grants-and-resources/regional-flexible-funding

4 DRCOG policy documents including scoring tables: www.drcog.org/documents/2012-2017 TIP - AdoptedMarch11.pdf

ESTABLISH SET-ASIDE FUNDING CATEGORIES TO ADVANCE SPECIFIC REGIONAL PRIORITIES

Growing numbers of MPOs are using the flexibility of federal programs to establish "set-asides" within STP and CMAQ that fund special regional priorities, such as fixing a backlog of bad bridges or overcoming a deficit in transit service.

The opportunity

MPOs can influence how federal transportation funds are spent through earmarking a portion of these funds to support specific regional priorities. Some MPOs use this process to ensure that larger-scale regionally significant projects receive a portion of federal funds. Other MPOs create set-asides specifically to fund projects in rural areas, or small local projects that may not be as competitive in a regional grant program. Set-asides can be used on a one-time basis to address a pressing need, or maintained across multiple TIP cycles. Establishing the solicitation and selection process involves technical input by planning staff to help work through the logistics, financing and policy implications.

Putting it into practice

Creating a set-aside for bridge safety. The **East-West Gateway Council in St. Louis,** like many regional agencies, has identified bridge maintenance and preservation as a critical issue. The Council, which serves as both the COG and MPO, is the only organization of local governments that spans the entire metro St. Louis region in Missouri and Illinois. The region is dependent on river crossings, which are vital to maintaining the flow of goods and people across the Mississippi. More than 20 percent of the region's bridges were classified as deficient in 2009.[1] Given the importance of bridges to the regional economy and safety, the Council places a high priority on their preservation.

The backlog became more daunting when MAP-21 eliminated the stand-alone highway bridge program. Transit faces similar funding constraints to improving its infrastructure and maintaining current service levels. As a result of set-asides, the current draft TIP maintains a strong focus on preservation projects and commits 39 percent of the total program to resurface and reconstruct roads, bridges and other aging transportation facilities.[2] Only six percent of the TIP is allocated for new highway capacity.[3] The Illinois Department of Transportation also uses set-asides to address state preservation and maintenance needs.

Creating a fund for projects related to build-out of a transit system. Set-asides can be a permanent tool used by MPOs to address regional priorities in the TIP, or can be used to address specific funding needs including leveraging private capital. In **Portland, Oregon the MPO** created a long-term set-aside of STP and CMAQ funds (totaling $144.8 million between 2012 and 2025) to fund large regional transit projects during light

1 www.ewgateway.org/pdffiles/Library/Trans/RTP2040/RTP-StateOfTheSystem-2011.pdf
2 www.ewgateway.org/pdffiles/Library/trans/tip/FY2015-2018/FY2015-2018TIP-Draft.pdf
3 *Ibid.*

rail construction.[1] This multi-year funding commitment was then used by the region in the commercial bond markets to secure additional financing, with the set-aside used for debt retirement.[2]

The **Innovation in Action** section at the end of this chapter includes a case study of the **Puget Sound Regional Council (PSRC)** in the Seattle-Tacoma metro area. The PSRC uses set-asides to advance a number of local and regional priorities, including identifying funds to support projects in rural towns and maintenance while increasing transportation options.

BLEND FUNDING PROGRAMS TO MAXIMIZE ELIGIBILITY

In an era of limited resources, simply funding traditional projects with traditional sources is unlikely to meet a region's needs. Innovative MPOs find creative ways to blend different federal, state and local funding sources together into a complete funding package to advance projects that will meet the region's goals.

The opportunity

MPOs receive funding from a variety of sources: federal programs, state appropriations and local dollars. It is easy to fall into the habit of using these funds the same way every year: Federal formula funds always go to certain types of projects, state funds are used for others, and so on. Innovative MPOs, however, look comprehensively at all available funding and blend multiple sources together to deliver priority projects faster and more efficiently.

Key questions to ask when determining how and when to blend funding:

1. What funds are available to your region? The first step is to scour for every unallocated dollar. There may be unallocated funds from programs in MAP-21's predecessor, SAFETEA-LU, such as Jobs Access and Reverse Commute, Highway Bridge Program and Transportation Enhancements, to name a few.[3] It is also possible that agencies may have unspent balances that could be used for other purposes, such as statewide planning dollars that can be transferred to metropolitan areas. Most federal transit funds flow directly to the local transit agencies, though additional funds may be available to support transit or vanpool services through federal Health and Human Services programs such as Medicare and Medicaid and the Administration on Aging.[4] MPOs that are part of a Council of Government (COG) or other regional agency may have access to additional revenues from tolling, sewer or water infrastructure. Are there local or regional funds available through sales tax or other measures such as bonding, tolling, airport or impact fees? What eligibilities or requirements do these funds entail? Can local partners contribute funding from capital improvement budgets?

1 MZ Strategies, LLC. (September 2013), "Regional Allocation of Federal Transportation Funds: A Comparative Analysis for the Metropolitan Council's Transportation Advisory Board."

2 Metro Resolution no. 10-4185 (adopted October 7, 2010).

3 SAFETEA-LU is shorthand for the federal surface transportation legislation authorized and funded through September 30, 2012. SAFETEA-LU provisions still apply to funds made available in FY2012 and prior fiscal years.

4 www.unitedweride.gov/NRC_FederalFundingUpdate_Appendix.pdf

2. What is eligible for funding? After assessing available resources the next step is to ensure that, where possible, flexible funds are preserved for those projects that might not be able to use other sources of funding. In general, federal funding programs such as STP, TAP and even transit formula funds have broader eligibility than state or local funds which are often dedicated to a specific mode. This is especially true if a state has constitutional restrictions on the use of gas tax revenues for non-highway purposes. On the other hand, some projects, such as parking garages, are harder to fund with federal resources but may be an eligible use of local or state funding. Multimodal projects may be especially well-suited for federal funding as they may combine highway, transit and bicycle or pedestrian elements and if located in air quality non-attainment or maintenance areas can also utilize CMAQ funds.

3. Can you avoid or reduce costs by using different funding sources or bundling projects together? Federal highway funds often involve complicated approval processes by both the state DOT and FHWA. Depending on the project's complexity or scope, other federal agencies may also be involved. Any project receiving federal funds must undergo an environmental review, steps that cost time and money.[1] For these reasons, MPOs may find it easier, cheaper and quicker to fund smaller-scale projects with local funds. Another strategy is to bundle smaller, similar projects within a single geographic area, such as local bicycle paths or Complete Street projects, to ensure that environmental review can be done in a coordinated fashion.

Putting it into practice

Blending CMAQ, STP and TAP. In its most recent TIP, **DRCOG**, which serves the Denver region, blends CMAQ, STP and TAP funds.[2] Projects are balanced across modes but may be funded with a mix of different funding sources depending on the project need and eligibility. Small communities receive special consideration by allowing a lower minimum point score and receive special consideration by the selection committee. The Colorado Department of Transportation and the Regional Transportation District work with the MPO to review applications.

Combining federal, state, local and tolling dollars for a Sustainable Development fund. In the Dallas–Fort Worth metro region, the **North Central Texas Council of Governments (NCTCOG**) uses all of its funding authority to pool tolling, state highway funds, local transportation revenues and available federal funds to match project type, need and efficacy. Representing 16 counties, two major metro areas and 230 member governments, the NCTCOG's service area is larger than 36 states in population and bigger in land area than the state of Massachusetts. It's no surprise that the MPO is thinking creatively about how to fund local and regional transportation needs. NCTCOG is responsible for services beyond its MPO role including workforce development and emergency preparedness and is a partner in the Regional Toll Revenue Program, which also allows it to tap into additional revenues.[3]

NCTCOG's Regional Transportation Council (RTC) is composed of local elected officials and transportation providers and serves as the region's policy board. The RTC has adopted an expansive policy of blending local,

1 Information on Federal Project Development and Environmental Review, including guidance on environmental streamlining under MAP-21, can be found at http://environment.fhwa.dot.gov/index.asp.

2 DRCOG policy documents including scoring tables: www.drcog.org/documents/2012-2017 TIP - AdoptedMarch11.pdf

3 www.nctcog.org/pa/WhatIsNCTCOG.pdf

state, regional and federal funds with a rigorous analysis of the most effective and best use of funds to meet regional priorities. In 2000 NCTCOG created a Sustainable Development Funding Program that uses blended funds "to encourage public/private partnerships that positively enhance existing transportation system capacity, provide increased rail access, address air quality concerns and result in mixed-use developments."[1] In 2007 the RTC established priorities, emphasis and set-asides to fund Sustainable Development initiatives funded by toll revenues.[2] Over $41 million has been allocated for projects that improve air quality by promoting mixed-use developments, support walkable communities or reinvest in existing communities.[3] Contributions by private developers are required and future toll revenues credited to local governments are pledged as local match, which allows the region to use federal obligation authority without the requirement of cash matches.[4]

Source: www.nctcog.org/trans/sustdev/fundingprogram.asp

The NCTCOG has encouraged the overmatch of local money to create the flexibility necessary to swap funds between a project funded with federal formula funds that require a 20 percent local match and other local projects. For illustration purposes, imagine a $100,000 local streetscape project comes forward that is eligible for 80% federal STP funding. At the same time a $1 million Complete Streets project is being pursued for STP dollars and local revenues are available to provide 30 percent of the project costs. Rather than "federalizing" the smaller project, the overmatch from the larger project could be applied to it so that the smaller project is 100% locally funded, while the larger project still meets the federal requirement for at least a 20 percent local match. This allows the 100 percent locally funded project to use the local RFP process and design standards rather than State Aid Standards administered by TxDOT or go through federal approvals and regulations.

TAKE ADVANTAGE OF FLEXIBLE FEDERAL FUNDS TO INCREASE TRANSPORTATION OPTIONS

Federal dollars in the highway account can be "flexed" to support transit, just as transit dollars can be used to support safe pedestrian and bicycle access to public transportation.

The opportunity

Over the past several federal transportation reauthorizations, Congress has maintained the flexibility for states and MPOs to fund a range of projects with federal-aid highway funds. This includes the ability to transfer dollars

1 www.nctcog.org/trans/sustdev/landuse/examples/
2 www.nctcog.org/trans/committees/rtc/Item3.5.pdf
3 www.nctcog.org/trans/rtr/
4 www.nctcog.org/trans/tip/tdcs.asp

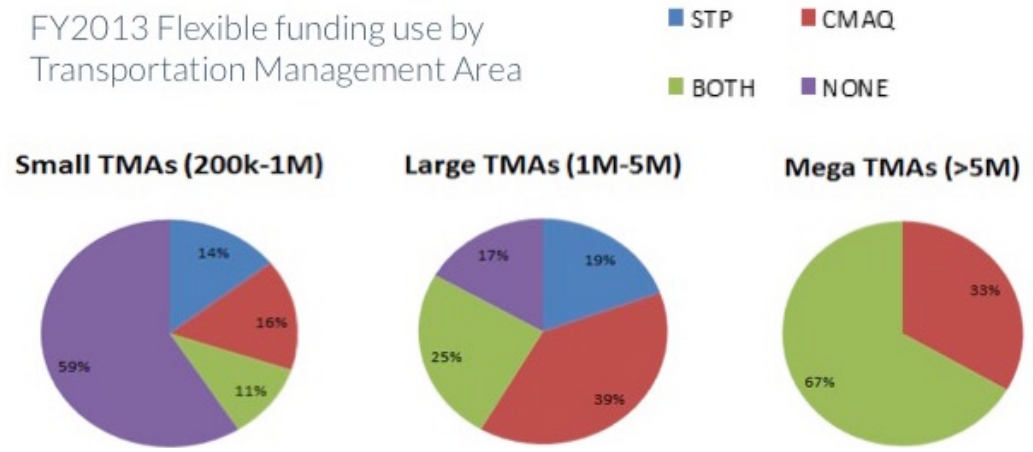
from the state's FHWA account to FTA to supplement transit funds for expanding and maintaining service. MPOs both large and small have used flexible funding for regional investments in maintenance facilities, fleet replacement or expansion, new light rail, bus rapid transit or streetcar routes. In some instances CMAQ funds have been used to support limited transit operations.

Funds transferred from the highway account to the transit account are treated as transit funds so that the eligible uses, reporting requirements and approvals also transfer to the Federal Transit Administration. Just like highway funds, federal transit dollars also can be used for eligible bicycle and pedestrian projects that support access to transit. Further, transit funds can support development at or adjacent to a transit stop, creating additional opportunities for MPOs to shape growth and development while increasing ridership and revenue to support the transit system.[1] Determining whether to flex funds, how much and for what purposes requires the active engagement and approval of the full MPO Policy Board, the state DOT, local transit agencies and the FHWA and FTA.[2]

Putting it into practice

While this flexibility is allowed to every state and MPO, not everyone has taken advantage of flexible funding provisions. Between 2007 and 2011, the Government Accountability Office found that FHWA apportioned about $53 billion in flexible funding to states, accounting for 29 percent of all highway dollars.[3] However, only about $5 billion was transferred, with just four states — California, New Jersey, New York and Virginia — accounting for most of this. In FY2013, $523 million in STP funds and $629 million in CMAQ funding were flexed to transit.[4]

In general, as shown in the chart below,[5] those MPOs that are larger Transportation Management Areas (TMA) take the greatest advantage of flex funding authority. In recent years, however, some smaller urbanized areas



1 www.fta.dot.gov/legislation_law/12349_16123.html

2 When flexible funding is used on transit projects, the MPO may decide to leave the funds in the state's FHWA account and be reimbursed by FHWA as costs are incurred. Alternately, the state and MPO or transit agency may request that funds be formally transferred to FTA to administer through one of several eligible FTA programs. FTA will reimburse the appropriate recipient (often the transit agency) once costs are incurred. States and localities are still required to provide non-federal matching funds. Some states do not allow state gas tax revenues to be spent on anything other than highway projects, which can create a barrier to using federal flexible fund provisions if other local match sources are not available.

3 United States Government Accountability Office. (November 15, 2012). Flexible Funding Continues to Play a Role in Supporting State and Local Transportation Priorities. Washington, DC: GAO-13-19R Flexible Funding.

4 Federal Transit Administration, June 2014 flexible funding assessment

5 Flexible funding trends in 2013. Federal Transit Administration, Office of Planning

have used this authority to support important transit projects that get workers to jobs, or provide an aging population with connections to doctors and the community. In 2013, **Eugene, OR; Rochester, NY; and Canton, OH,** were among the regions who flexed the most STP funds per capita to support transit service.

For some states that have unallocated highway funds about to expire, flexing these dollars to support transit can help accelerate important projects and avoid the loss of federal funding. For other regions trying to build new transit, flex funding may bring a much-needed, one-time cash infusion at a critical point in project construction. The **Stockton, CA,** region in 2012 flexed STP and CMAQ monies to fund Metro Express, a new Bus Rapid Transit system[1] and restore bus service at a point when local bus maintenance funds were critically low.

Several MPOs, including **Atlanta, Albany, San Francisco and Dallas-Fort Worth,** flex STP and/or CMAQ funds to support station-area planning to ensure that land-use plans are in place that will maximize the effectiveness of transit service and support broader community or neighborhood goals.[2] These programs are discussed in more detail in Focus Area 5: Provide technical assistance and collaborate with local communities.

In the Seattle region, the **PSRC** "blends" its STP and CMAQ funds into a pool for which transit projects are eligible and has flexed about 22 percent of federal highway funds to transit. In its regional solicitation of projects for federal funding, the PSRC requires consistency with VISION 2040, its long-range strategy to support regional centers and corridors. See PSRC Innovation in Action case study for overview of its use of set-asides. Project sponsors do not indicate which source of funding they are seeking, but in order to be eligible for CMAQ funds they must demonstrate an emissions reduction benefit.[3]

The **Innovation in Action** section of this chapter includes a case study of the use of flexible funding by a small MPO in **Flagstaff, AZ,** to support new bus rapid transit service. As other regions look to find ways to finance new transit service, this case study illustrates how flexible funding can provide an infusion of needed capital to make a project "pencil out," and serve as leverage to securing additional federal funds.

SUPPORT AND OVERSEE PUBLIC-PRIVATE PARTNERSHIPS

In recent years, transportation funding levels have failed to keep pace with the growing need to maintain existing systems, invest in new technologies to manage existing roads and transit networks or build new capacity. This funding crunch is pushing transit agencies, MPOs and state DOTs to develop new public-private partnerships (P3s), pilot new funding approaches such as peak-hour tolling and develop innovative new financing, design and construction models. The choice to pursue a public-private partnership involves carefully weighing multiple factors, including cost, risk transfer, technical capacity, efficiency and implementation timeline.

1 www.youtube.com/watch?v=BCHFJQ117no

2 MZ Strategies, LLC. (July 2013). "Unlocking MAP-21s Potential to Fund Equitable Transit Oriented Development." Published by Enterprise Community Partners, Inc. and Mile High Connects.

3 www.psrc.org/transportation/tip/selection/

The opportunity

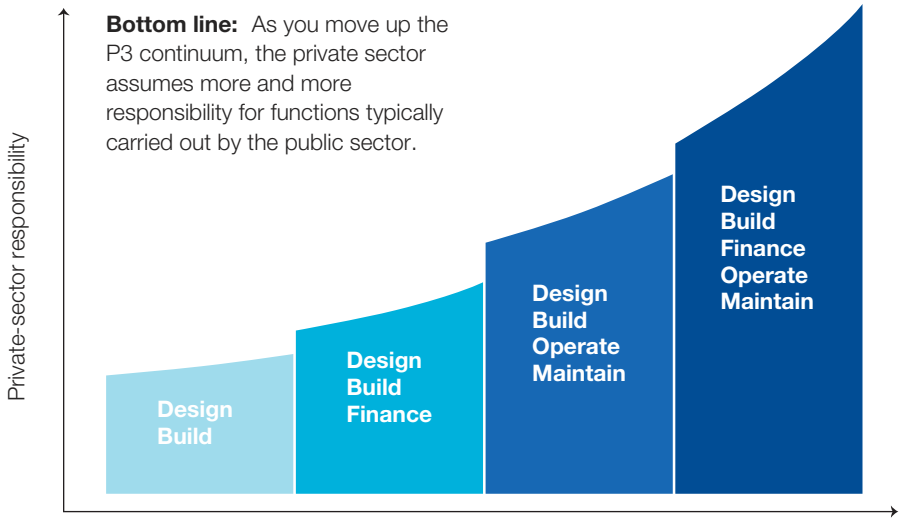
FHWA defines P3s as "contractual agreements formed between a public agency and a private sector entity that allow for greater private sector participation in the delivery and financing of transportation projects."[1] P3s can take many different forms, depending upon the degree to which the private sector assumes responsibility and financial risk.

Under the "design-build agreements" often used for transit or highway projects, a public agency contracts with a private firm both to engineer and design a project and carry out construction. Their appeal is the potential to save time, which translates into cost savings, by allowing the project design to be refined and finalized while construction is underway. In a bridge project, for example, while footings are being built, the bridge span structure can be designed.

In other cases, private entities lease a facility over a long term and collect tolling revenues to support some combination of construction, maintenance and operations. In these agreements, the private firm may take on some risk that toll revenues or fees will be insufficient to pay for the project over time. In that case, the firm benefits from profits if more revenue is raised and takes the loss if revenues are lower than the cost to build or operate.[2]

For MPOs, the P3 issue is a complex one. Since most MPOs do not bring substantial financial resources to the table, unlike a transit agency or state DOT, they are not typically in the driver's seat, but rather are a partner in helping to coordinate across funding sources through the MTP and TIP. They also help ensure that regional players are engaged in the planning and decision-making process that underlies any good P3. This involves helping to facilitate agreements between partners that ensure a net benefit to the public, while at the same time allowing for a reasonable return on the private investment. As the private sector assumes a greater role (as shown in the figure below), it becomes increasingly important for MPOs and other public sector partners to ensure that public interests such as safety, equitable access, reliable operations and maintenance needs are assured.

The federal requirement that MPO plans be "fiscally constrained" based on known, anticipated funding adds a wrinkle where P3s are concerned, because such projects offer the opportunity to bring additional, private capital under special arrangements. Innovative MPOs go beyond fiscally constrained plans to identify projects that could be advanced if funding was made available and to support work to develop



Source: T4America. "Thinking Outside the Farebox: Creative Approaches to Financing Transit Projects." Available at: http://t4america.org/maps-tools/transit-guidebook.

1 www.fhwa.dot.gov/ipd/p3/default.aspx
2 transportation.house.gov/uploadedfiles/p3_panel_report.pdf

the potential for P3s in their Unified Planning Work Programs.

When considering participation in a P3 project, MPOs can ask themselves the following questions:

- What regionally significant projects exist that would further the long-range plan but face funding challenges? Have we considered other options such as flexible funding of STP or CMAQ?
- What authority is specifically needed to leverage private resources and does it require legislative or administrative change to acquire?
- Does the MPO have P3 authority, or do we need to coordinate with those in the region who do, such as toll authorities, turnpikes, bridge authorities or others?
- What funding sources exist in the region that could be leveraged, such as regional sales tax for transportation, tolling revenues, etc. and who controls them?
- Do these other funds have the same standards for Title VI analysis, environmental review, environmental justice analysis and public involvement or other federal approvals and regulations?

Putting it into practice

Each partnership, like each MPO, is unique and a function of existing authority, the specifics of the project to be funded and the assets that partners bring to the table. MPOs that also have a broader governance, transit or tolling authority have the advantage of bringing financial resources, such as regional sales tax dollars, bonding authority or toll revenues, to leverage private funds.

MPOs in regions that also have toll authorities, such as those in Texas, Virginia and Florida, appear to be more comfortable with these kinds of public private partnerships to increase capacity and have incorporated new tolling projects into their MTPs. As councils of governments, **NCTCOG** and **SANDAG** both have access to toll revenues that enabled them to assist and lead P3 projects.

Some MPOs have developed innovative public-private partnerships by using CMAQ dollars to leverage private funding to improve air quality through projects such as converting vehicle fleets to alternative fuels or improving intermodal freight facilities.[1] To be eligible for CMAQ funds, a partnership project must demonstrate its ability to reduce transportation emissions in areas under federal air-quality strictures by reducing vehicle travel, traffic congestion levels or lowering vehicle emissions directly. The **Houston–Galveston Area Council of Governments** established an Alternative Fuel Vehicle Program with $2.5 million in CMAQ funds to assist government and private entities in purchasing and using alternative fuel vehicles.[2]

The **DRCOG** is promoting P3s to accelerate build-out of the regional FasTracks transit plan and Union Station redevelopment.[3] Their story is summarized in the **Innovation in Action** section of this chapter. It underscores the necessity of MPOs to serve as a regional coordinator with transit agencies, local governments and state agencies throughout the P3 process, starting with long-range planning, through TIP approval and construction.

1 www.fhwa.dot.gov/environment/air_quality/cmaq/reference/public-private_partnerships/index.cfm
2 *Ibid.*
3 www.t4america.org/maps-tools/local-successes/denver/

Resources

- Advocacy Advance, "First Mile, Last Mile: How Federal Transit funds can improve access to transit for people who walk and bike," www.advocacyadvance.org/docs/FirstMileLastMile_August2014_web.pdf.
- Advocacy Advance, "How Metropolitan Planning Organizations Plan for and Fund Bicycling and Walking Investments," www.advocacyadvance.org/docs/FirstMileLastMile_August2014_web.pdf.
- Federal Highway Administration, Federal Aid Essentials: www.fhwa.dot.gov/federal-aidessentials/
- Federal Highway Administration, Office of Innovative Program Delivery: www.fhwa.dot.gov/ipd/p3/
- Federal Transit Administration, MAP-21 Discretionary & Formula Grant Programs: www.fta.dot.gov/grants/15926.html
- Transportation for America, Making the Most of MAP-21: www.t4america.org/maps-tools/map-21/handbook
- Transportation for America, Thinking Outside the Farebox: Creative Approaches to Financing Transit Projects: http://t4america.org/maps-tools/transit-guidebook/
- U.S. House of Representatives, Transportation and Infrastructure Committee, Special Panel on Public-Private Partnerships, "Public Private Partnerships: Balancing the needs of the public and private sectors to finance the nation's infrastructure," http://transportation.house.gov/uploadedfiles/p3_panel_report.pdf.

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 3)

ESTABLISH FUNDING SET-ASIDES TO IMPLEMENT LONG-RANGE PLANS

Puget Sound Regional Council – PSRC (Seattle-Tacoma, WA)

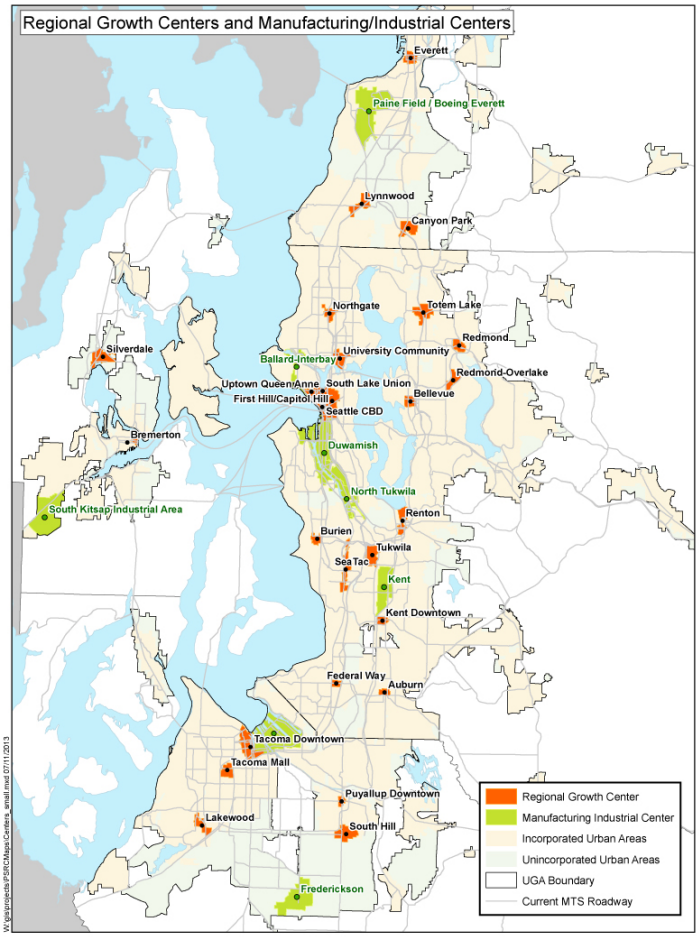
Central Puget Sound is a growing region of about 3.7 million people, four counties and 82 cities. Nine federally recognized Native American tribes also call the region home. The diverse economy centered on Seattle and Tacoma includes global companies like Microsoft, Amazon and Boeing as well as a burgeoning mix of small businesses and start-ups. Sustainability is an important theme for the region and strongly reflected in the recently adopted long-range transportation plan, Transportation 2040. Included within the sustainability framework is a strong emphasis on social equity and maintaining and preserving existing infrastructure and communities.

Coordinating transportation, growth management and economic development is the PSRC. The PSRC is responsible for both the long-range transportation plan and the comprehensive economic development strategy. These plans are developed by separate parts of the agency, but allow for important opportunities to ensure that transportation investments support the regional economy. The PSRC is governed by a General Assembly composed of elected officials of the member jurisdictions and state DOT officials and Transportation Commission members. The Executive Board consists of 32 voting members, primarily from local elected leadership. An Economic Development Board, Transportation Policy Board and a Growth Management Policy Board have jurisdiction over these specific issues.

The PSRC has an extensive history of using set-asides, most frequently of STP funds, to meet specific objectives identified in its adopted Policy Framework,[1] especially to support the development of centers and corridors that serve them. Roughly every two years, the PSRC establishes a "policy framework" for selecting projects, a process involving stakeholder input and alignment with any new federal or state requirements.

Since 1995 the region has combined federal STP and CMAQ funds and then split the funds equally between PSRC-led competitive grants for regionally significant projects and a countywide competitive process to fund locally significant projects,[2] in coordination with local and state transportation and transit agencies. The PSRC has the responsibility as the MPO for final project selection of all projects included in the TIP.[3] Specific set-asides available in the PSRC's 2015–17 regional transportation funding solicitation include:[4]

- **Special fund for safe walking and bicycling projects.** Since 1993, 10 percent of the combined estimated totals of STP and CMAQ are set aside and distributed by the countywide process mentioned above. This is on top of the funds available through TAP. Those TAP funds are allocated through a separate solicitation with criteria that also build on regional planning principles and goals.[5]



PSRC Map of regional centers. Source: www.psrc.org/assets/11195/Att5-RegionalCenterMap.pdf

PSRC guidance for project selection in the 2013 Transportation Alternatives Program: VISION 2040 calls for preserving and developing compact communities and directing employment and housing growth into centers that support walking, biking and transit use. In addition to regional growth and manufacturing/industrial centers, VISION 2040 also calls for the support of locally identified centers, including those in rural areas, as well as the protection and enhancement of the natural environment, open space and recreational opportunities and scenic and historic areas. Preference will be given to those projects that provide clear benefit to one of these designated centers and help to meet the development goals of the center(s).

1 www.psrc.org/assets/11211/2014-FullPolicyFramework.pdf
2 MZ Strategies, LLC. (September 2013). "Regional Allocation of Federal Transportation Funds: A Comparative Analysis for the Metropolitan Council's Transportation Advisory Board." http://mzstrategies.com/projects.
3 www.psrc.org/transportation/tip/selection/
4 www.psrc.org/assets/11211/2014-FullPolicyFramework.pdf
5 www.psrc.org/assets/9877/TAP-Workshop-Presentation-20130722.pdf

- **Special fund for projects supporting rural towns.** STP funds totaling $3 million are set aside for the Rural Town Centers and Corridors Program funded and managed by the PSRC. This is also beyond federal requirements for spending STP in rural areas.[1] Funds have been used to develop Complete Streets plans, street improvements to improve safety for pedestrians and bicyclists and traffic improvements in downtown areas.
- **Special fund for preserving the existing systems.** The Preservation Pilot Set-Aside was established in 2012 to address a growing backlog of maintenance and preservation needs and a severe state funding shortfall. The Transportation 2040 Plan includes a strong emphasis on repair needs for transit, highways and bridges. The current regional solicitation for STP funds continues to use 25 percent of the total estimated available funds for the Preservation Pilot.
- **Special fund to improve the PSRC's planning capacity.** The PSRC sets aside $500,000 annually to enhance long-range transportation planning, which has supported improved monitoring, freight planning, bicycle and pedestrian planning and station area planning, among other steps.

PSRC'S long-range plan emphasizes investments in transit, walking and bicycling. Photo source: PSRC

The PSRC implemented a project tracking program that requires project sponsors to meet adopted project tracking policies, which have improved the efficiency and accountability of funding. Information on those projects selected for funding is available to the public through an impressive and easy-to-use website and includes a regional map showing details about projects that have a physical location.[2]

1 www.psrc.org/funding/rural
2 www.psrc.org/transportation/tip/selection/

Puget Sound Regional Council (PSRC)	
Type	The MPO and Regional Transportation Planning Organization for the Central Puget Sound region
Composition	32 member Executive Board that makes decisions month to month and an overall General Assembly that includes elected leaders of King, Kitsap, Pierce and Snohomish counties, the region's 72 cities and towns, 4 port districts, Washington State DOT and Transportation Commission and 3 tribes.
Voting	Weighted vote of members: "Total votes of all city and county jurisdictions within each county will be proportional to each county's share of the regional population. County government will be entitled to fifty percent (50%) of their respective county's total vote. City and town votes will be based on their respective share of the total incorporated population of their county. The Tribal representatives' vote will be based on their respective share of the region's population. Representatives present shall cast the jurisdiction's total weighted votes and may split their vote as they choose." A two-thirds vote is required to pass the work budget and program, regional growth management strategy, regional transportation plan and amendments to the bylaws.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$8.25 million; 72 staff
Responsibilities beyond transportation	Economic development, growth management, land-use planning, air quality
Independent revenue authority	Does not collect revenues, except through local membership and transit dues

References: www.psrc.org/about/
www.psrc.org/assets/11219/BudgetFY2014-15Supplemental.pdf
www.ampo.org/wp-content/uploads/2014/02/2013-Salary-Survey-Results-final-draft-Jan-23-2.pdf
www.psrc.org/assets/562/bylaws.pdf

TAKE ADVANTAGE OF FEDERAL FLEXIBLE FUNDS TO INCREASE TRANSPORTATION OPTIONS

Flagstaff MPO (Flagstaff, AZ)

The Flagstaff Metropolitan Planning Organization (FMPO) was formed in 1996 after the mid-decade Census showed a population of 52,507, qualifying Flagstaff as an urbanized area. Since that time, population has steadily grown in the region.[1] The FMPO planning area consists of the City of Flagstaff and Coconino County. Both hold seats on the MPO's six-member executive board, with Flagstaff holding three and the county two. The Arizona Department of Transportation (ADOT) holds the sixth seat.[2]

1 www.planning.dot.gov/Documents/CaseStudy/Flagstaff3rmm/Flagstaff3rmm.htm
2 www.flagstaff.az.gov/index.aspx?nid=995

Despite its relatively small size, FMPO has received special recognition from the US Department of Transportation (USDOT) and the Association of MPOs[1] as an innovator in the use of flexible funding, coordination with the regional transit agency and state DOT and multimodal, long-range planning.

In recent years, FMPO elected to flex federal STP funds to the regional transit provider, Northern Arizona Intergovernmental Public Transportation Agency (NAIPTA), for the purchase of diesel buses, bus stop improvements, shelter upgrades, bus pad installation and passenger amenities. Flex funds also helped NAIPTA maintain a stable fleet, including backup vehicles and provide a modest service expansion. FMPO and NAIPTA also co-manage an innovative internship program with Northern Arizona University (NAU), the Montoya Fellowship in Transportation Planning.[2]

Flexible funding has been an important lifeline for a small system attempting to keep up with a growing regional population. In 2010-11, FMPO provided funding to NAIPTA that assisted with preliminary design work of Mountain Link, the new regional bus rapid transit system linking downtown Flagstaff, the NAU campus and Woodlands Village.[3] This funding supported early design and engineering work while NAIPTA worked to secure federal funding from the Very Small Starts program. This early support accelerated the project and made it more competitive in a bid for federal discretionary funding.

Photo from Metro Magazine

NAIPTA also has received an average of $65,000 each year in flexible funding from the state, primarily for its program of improving bus shelters and stops. The region anticipates future flexing of STP funds, if available, to support construction of a few key transit-only or transit, bicycle and pedestrian-only roadways. The Flagstaff case study is a great example of how active and ongoing coordination and multimodal planning among all key agencies — the MPO, transit agency, state DOT and

1 AMPO spotlight of the Flagstaff Pathways 2030 Regional Transportation Plan http://ampo.org/assets/943_flagstaff2030rtp.pdf
2 www.flagstaff.az.gov/index.aspx?NID=2873
3 www.mountainlink.az.gov/

local governments — can generate new resources and innovative ways to use available state and federal funds to achieve important local transportation needs, regardless of mode.

Flagstaff Metropolitan Planning Organization (FMPO)	
Type	Quasi-independent organization hosted by the City of Flagstaff and formed by an intergovernmental agreement between the city and county.
Composition	Voting Policy Board Members: Three elected or appointed officials from the City of Flagstaff (one being the Mayor), two elected or appointed officials from the County, Coconino (one of whom is the chair of the board of supervisors) and a member of the Arizona DOT (State Transportation Board).
Voting	One member one vote
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$648,000; 1 full-time staff, director is a city employee and administrative and legal support is provided as in-kind services
Responsibilities beyond transportation	Growth planning, resiliency planning, water and air quality, energy conservation
Independent revenue authority	None

References: www.flagstaff.az.gov/DocumentCenter/View/44081
www.flagstaff.az.gov/Directory.aspx?did=148
www.flagstaff.az.gov/DocumentCenter/View/43827

SUPPORT AND OVERSEE PUBLIC-PRIVATE PARTNERSHIPS

Denver Regional Council of Governments — DRCOG (Denver, CO)

Established in 1955, the Denver Regional Council of Governments (DRCOG) is one of the oldest councils of governments in the country.[1] In the early 2000's, the Area Chamber of Commerce, regional Mayors Caucus and the Denver Regional Transportation District (RTD) assembled an ambitious regional plan to invest in light rail, commuter rail, bus rapid transit, expanded bus service and highway improvements such as "managed lanes".[2] The resulting plan, dubbed "FasTracks", totaled $4.7 billion and would require increasing a regional sales tax from 0.6 cents to a full cent on each dollar of sales, along with federal grants, loans and private contributions.[3] The regional sales tax has in turn been used to leverage innovative financing and private sector participation. A detailed case study specific to the public-private partnership used by Denver's Regional Transit District for FasTracks and the Eagle P3 project is provided in Transportation for America's "Thinking Outside the Farebox: Creative Approaches to Financing Transit Projects."[4]

1 https://drcog.org/about-drcog/about-drcog
2 http://ops.fhwa.dot.gov/freewaymgmt/managed_lanes.htm
3 http://t4america.org/maps-tools/local-successes/denver/
4 http://t4america.org/wp-content/uploads/2012/08/T4-Financing-Transit-Guidebook.pdf

Through the MTP and TIP processes, DRCOG works with RTD, the Colorado DOT and the City and County of Denver to prioritize transit investments and policies to encourage development around transit stops. The recent redevelopment of Denver's Union Station exemplifies this approach. Union Station now serves as a major transit hub and catalyst for transit-oriented development. Beginning in May 2002, DRCOG and these other regional partners came together to develop a master plan and conduct an Environmental Impact Statement (EIS) for Union Station.[1] DRCOG's plans also allocated $10 million in regional CMAQ funding for the project. Union Station Transit Center opened in May 2014, with great fanfare and has been held up as a national model for its innovative design and construction standards, use of federally supported financing and leveraging private capital to augment traditional sources.[2]

In another ground-breaking move, DRCOG also has been instrumental in the work of Mile High Connects, a regional collaboration of philanthropy, non-profit and public sector organizations working to ensure that people of all wage levels can find a place in the emerging development around transit.[3] DRCOG and Mile High Connects in 2011 released an "Equity Atlas"[4] that allows online users to create maps showing economic and demographic data for areas around the growing transportation network and connections to job centers and other key destinations. As the Atlas website notes: "The future transit network will better connect people to jobs, health care providers, schools, grocery stores, parks and

The interior of Denver Union Station in November 2014. Source: Rochelle Carpenter, T4America

1 www.rtd-fastracks.com/dus_1
2 www.fhwa.dot.gov/ipd/project_profiles/co_union_station.aspx
3 http://milehighconnects.org/main.html
4 www.denverregionalequityatlas.org/

other essential destinations, but there are challenges in ensuring that the people who use and need access to public transportation the most have the opportunity to live, work, learn and play in transit-oriented communities."[1] A regional planning grant from the HUD Sustainable Communities program helped support station area planning as part of the solution.[2]

The platform canopy behind Denver Union Station in November 2014. Source: Rochelle Carpenter, T4America

The DRCOG also has partnered with Colorado AARP to create and fund its Boomer Bond initiative. The Boomer Bond helps local governments around the region create age-friendly physical and social environments allowing older adults to remain in their homes and communities for as long as they desire.

All of these efforts come together in the DRCOG's MTP and TIP to establish the funding and policy framework for a more sustainable future and strong regional economy. Despite its limited direct financing authority, the DRCOG has been an important partner in fostering collaboration and solving problems; supporting public-private partnerships; and supporting early investments in planning and environmental review to lay the groundwork for projects that attract private capital.

Denver Regional Council of Governments (DRCOG)	
Type	A non-profit, voluntary association of local governments. It is not a unit of government.
Composition	The DRCOG is comprised of 56 participating member governments and each has an elected official as its voting representative at the board table. The DRCOG board is the policy body for the MPO. The Memorandum of Agreement organizes the transportation planning process through the establishment of the Regional Transportation Committee and the Transportation Advisory Committee. Both the Regional Transportation Committee and DRCOG board must take favorable action before regional transportation planning policies and products are considered adopted. Additionally, the governor appoints 3 non-voting representatives to the board and RTD (Denver region's transit agency) appoints another non-voting member.
Voting	Each voting member gets one vote.
MPOs within MSA	MPO within 2 MSAs
Annual budget and staffing size	$24.2 million; 95 staff, 20 full-time staff work in the transportation planning division
Responsibilities beyond transportation	Growth and development (Regional Planning administers Sustainable Communities Initiative), aging and disability resources
Independent revenue authority	None. Note: participating members pay dues (based on populations and assessed valuation) that comprise 8 percent of the DRCOG's budget.

References: https://drcog.org/documents/2014%20Budget%20for%20print.pdf https://drcog.org/about-drcog/

1 www.denverregionalequityatlas.org/
2 https://drcog.org/planning-great-region/sustainable-communities-initiative

FOCUS AREA 4

USE DATA TO MAKE SMART INVESTMENTS

With funding sources flat or declining, rising costs and the federal contribution becoming less reliable, making more efficient use of resources must be the guiding principle for transportation planning and investment for the foreseeable future. Thanks to improved analytic tools and the availability of new data sources, we can now gain a better understanding of the return on investment strategies across a broad suite of indicators. Unlike a retirement account, where the only important indicator of return on investment is the amount of money that has accumulated, there are many factors to weigh and prioritize in the regional transportation system.

This section looks at a broad array of tools for analyzing the performance of existing transportation systems and assessing the comprehensive impact of transportation plans on everything from the life-cycle cost of maintenance and repair to affordability, public health and access to opportunity for disadvantaged populations. It highlights techniques for cost-benefit analysis and using data to guide planning, as well as how MPOs are using certain performance metrics to judge success.

Federal requirements call for metropolitan planning organizations (MPOs) to consider the eight planning factors discussed in Focus Area 1, but the regulations offer no specifics on how MPOs are to weigh these goals or measure their success in meeting them. Under MAP-21, USDOT is developing new guidelines for MPO performance measures. As of this writing it appears that innovative MPOs are likely to remain ahead of federal requirements.[1]

With funding sources flat or declining, rising costs and the federal contribution becoming less reliable, making more efficient use of resources must be the guiding principle for transportation planning and investment for the foreseeable future.

The innovative MPO develops and uses measures that comprehensively capture regional quality of life and economic vitality. Among the actions it can take to use data to make smart investments are:

- **Establish comprehensive performance measures**
- **Prioritize maintenance and safety to maximize return on investment**
- **Analyze combined housing and transportation costs**
- **Perform health impact assessments**
- **Address regional disparities through opportunity mapping**

1 USDOT has developed extensive resources on performance-based planning available through its Transportation Planning Capacity Building program: http://planning.dot.gov/focus_performance.asp.

ESTABLISH COMPREHENSIVE PERFORMANCE MEASURES

How do we know when our plans and investments yield the results we seek? How should we measure performance? The traditional approach is absurdly narrow: How many cars can we push through a given area in a given amount of time. This transportation measure is known as Level of Service and relying on it or other simple measures of automobile congestion and throughput leaves out key effects of the transportation system and fails to paint a complete picture of regional quality of life or the full range of costs and benefits. Innovative MPOs are developing a comprehensive set of performance measures that go beyond congestion and mobility.

The opportunity

At a basic level, using performance measures helps MPOs track outcomes and helps the public understand the rationale for how projects are prioritized. Many MPOs prepare plans and policy statements that include goals for improving air quality or reducing automobile congestion levels by certain amounts over the next 20 years. However, MPOs must see their charge as one that acknowledges the multi-faceted impact of transportation on all kinds of indicators of regional success. Transportation is inextricably tied to public health, economic growth, regional disparities and environmental outcomes far beyond air quality or congestion. MAP-21 includes a new requirement for performance-based planning that MPOs and state DOTs will need to meet.[1] However, national standards for performance should be seen as a floor, not a ceiling, for what metropolitan areas need to consider as desirable outcomes when evaluating plans, policies and projects.

There are two angles from which performance measures can be applied: post-facto analysis of a region's transportation system and forward-looking analysis of proposed plans to guide project selection based on predicted outcomes.

MPOs develop their performance measures either through public engagement to identify those most important for the region, or through an internal process of applying quantitative analysis to systems and plans. Some MPOs use a combination of both, developing analyses that are in turn presented to stakeholders, who offer input as part of a discussion of possible futures.

Putting it into practice

The gold standard in using comprehensive performance measures to guide planning and evaluate outcomes belongs to the **Metropolitan Transportation Commission (MTC)** in the San Francisco Bay Area. While it represents the upper realm of current practice, the MTC can provide inspiration to MPOs of all sizes. See full case study in the **Innovation in Action** section at the end of this chapter.

Screening projects and issuing progress reports. For the most recent long-range transportation plan for the Kansas City Metropolitan Area, the **Mid-America Regional Council (MARC)** designed a new system of goals and performance measures to guide the allocation of $18 billion. After an extensive process to identify

1 www.fhwa.dot.gov/tpm/

a set of nine plan goals,[1] MARC staff reviewed and scored all submitted projects on how well they met the goals, solicited additional public input on the projects and their relation to the goals and developed a list of recommended projects for the long-range plan. These recommendations were then considered by the MPO board for the final plan update. In the resulting plan, 90 percent of the plan's projects improve existing facilities rather than build new ones and 75 percent of the projects support higher-intensity land use in the region's identified activity centers.[2]

MARC has particularly excelled in making periodic progress reports since the plan's adoption in 2010. Annual reports track two or three factors under each of the nine regional goals, with one or more quantitative indicators for each factor.[3] The reports clearly show officials and stakeholders the trend lines for each indicator in relation to the desired outcomes. It remains to be seen how much this analysis will influence the next plan update, but the accessibility of the information could help to create an informed public better able to engage in development of the update. The Association of Metropolitan Planning Organizations (AMPO) recognized MARC's efforts with an award in 2013 for "Outstanding Overall Achievement for a TMA MPO."

Measuring "opportunity indicators" and climate impacts. The **Sacramento Area Council of Governments (SACOG)** has been particularly innovative in incorporating into its planning process performance measures relating to environmental justice and social equity. In addition, SACOG has been a leader in meeting the goals of California's SB 375, a 2008 law aimed at reducing climate impacts through better integration of land use in transportation planning.

For the former, SACOG developed "opportunity indicators" such as access to jobs and higher education for lower-income or minority communities. Additional indicators include those that reflect neighborhood business climate, affordable housing and access to park acreage.[4] SACOG has also pioneered the use of a performance measure that indicates the proportion of the population that suffers from traffic delay: congested vehicle miles traveled per capita. In contrast to traditional measures of congestion that look at the quantity of congestion in relation to the infrastructure, this measure relates congestion more to the experience of residents.[5] For more detail on SACOG's climate-related efforts, see the case study following Focus Area 7.

Measuring quality of life and freight access at a smaller MPO. An additional MPO that serves as a good model for performance-based planning is the **Coastal Region (CORE) Metropolitan Planning Organization in Savannah, Georgia.** CORE's performance measure categories include congestion, safety, livability, environment and economic factors and reflect the region's position as a key multimodal freight hub. The performance targets were set in coordination with state DOT targets and will be used to identify investment priorities in the next long-range plan.[6]

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1 The nine plan goals are accessibility, climate change and energy use, economic vitality, environment, place making, public health, safety and security, system condition and system performance:. www.to2040.org/Vision_and_Goals/Plan_Goals/index.aspx.

2 www.to2040.org/Projects/selectionprocess.aspx

3 www.to2040.org/Measuring_Progress/index.aspx

4 http://sacog.org/2035/files/Draft-mtpscs/appendices/G-6%20MTP-SCS%20Performance%20Measures.pdf;

5 www.transportationresearch.gov/dot/fhwa/pmc/Documents/AMPO%20Listening%20Session/SACOG%20Presentations.pdf

6 www.transportationresearch.gov/dot/fhwa/pmc/Documents/AMPO%20Listening%20Session/CORE%20Presentation.pdf

PRIORITIZE MAINTENANCE AND SAFETY TO MAXIMIZE RETURN ON INVESTMENT

Traditional goals of reducing congestion by increasing the speed and throughput of traffic make expanding roadways a priority. This creates an ever growing need for more funding, among other negative challenges. Innovative MPOs develop a more sophisticated calculus of return on investment and as a result tend to spend more on preserving and making more efficient use of highways while offering alternatives to congested commutes.

The opportunity

In developing a cost-benefit analysis for potential projects, it is important to remember that maintaining infrastructure in a good state of repair prevents the need for costly replacements and saves money in the long run while creating jobs for the region.[1] Saving lives, too, is a critical benefit that should be highly valued in assessing the potential return of infrastructure projects. Innovative MPOs that have considered the projected return on investment from transportation projects have found that projects which address these two key factors produce the highest returns.

Putting it into practice

Developing a system to track and prioritize road maintenance. The **MTC** was an early leader in prioritizing system maintenance in response to some very practical challenges the MPO faced. In the early 1980s, The MTC identified a policy and funding disconnect whereby member jurisdictions identified maintenance as a priority, but were spending less than 60 percent of available funds to maintain roads. To address this, the MTC developed a Pavement Condition Index that drove a program to prioritize and manage maintenance and repair. Decades later, MTC offers a sophisticated software program for pavement management known as StreetSaver, which stores and retrieves data on pavement condition, makes complex calculations much easier and produces easily understandable reports.[2] The software is available online in various forms (and with varying costs) at www.mtcpms.org/products/index.html.

Another region where "fix-it-first" applies in word and deed is the St. Louis Metropolitan Area, where the **East-West Gateway Council of Governments (E-W COG)** has established system preservation as the top regional priority and adopted a long-range plan with 70 percent of the region's highway budget going toward maintenance and operation.[3]

Tracking the impacts of degraded infrastructure to prioritize repairs. The **North Jersey Transportation Planning Authority (NJTPA)** developed a 2011 "Guidebook for Project Performance Measurement" to provide guidance in evaluating the return on investment of maintenance and preservation projects. It is designed as a "living document" to reflect lessons learned and best practices as the region and other MPOs across the country develop and implement performance-based planning.

1 Ewing, Reid and Bartholomew, Keith with Spain, Allison and White, Alex. Smart Growth America and Metropolitan Research Center at the University of Utah. (Forthcoming). *"Best Practices in Metropolitan Transportation Planning."*

2 www.mtcpms.org/FAQs/

3 www.smartgrowthamerica.org/2011/02/04/new-report-reveals-smart-transportation-spending-creates-jobs-grows-the-economy/

The guidebook provides step-by-step instructions to determine data needs and sources, identify the proper scale for analysis, apply the evaluation methods and properly interpret and apply the findings.[1] Among the specific performance measures used to evaluate a project's impact on repair, maintenance and safety are:

- Percentage of roadway, bridges or train track in good/fair/poor condition;
- Annual service disruption hours;
- "Resiliency" indicators showing how well the system operates after a major disruption; and
- Annual number of riders impacted by service disruptions.

The performance assessments directly feed in to the authority's Congestion Management Process (CMP), through which the MPO identifies suitable approaches for improving the transportation system's convenience and reliability.[2]

Assigning weight to performance measures to establish priorities. One hurdle in implementing performance measures is how to apply them appropriately in different contexts within a metropolitan area. Some measures may be appropriate when talking about inter-regional freeway connections but completely inappropriate at the neighborhood level. **The Chattanooga-Hamilton County/North Georgia Transportation Planning Organization (Chattanooga TPO)** developed an innovative approach to this challenge. Through a public process, the TPO defined indicators for evaluating specific projects as well as overall systems, resulting in a set of 12 performance measures within seven categories.3 The performance measures were then weighted across three scales, "Within Community," "Community to Region," and "Region to Region," with the weights varying by the level of significance for each scale. This allowed projects to be scored and ranked according to the unique needs of each context. Congestion reduction and economic growth measures, for example, are more heavily weighted in the inter-regional context, while environmental sustainability (which includes context-sensitive design and non-motorized access measures) is more heavily weighted at the community scale. The process led to a regional transportation plan that doubled funding of system preservation and for bicycle and pedestrian improvements in relation to the previous plan update.4

ANALYZE COMBINED HOUSING AND TRANSPORTATION COSTS

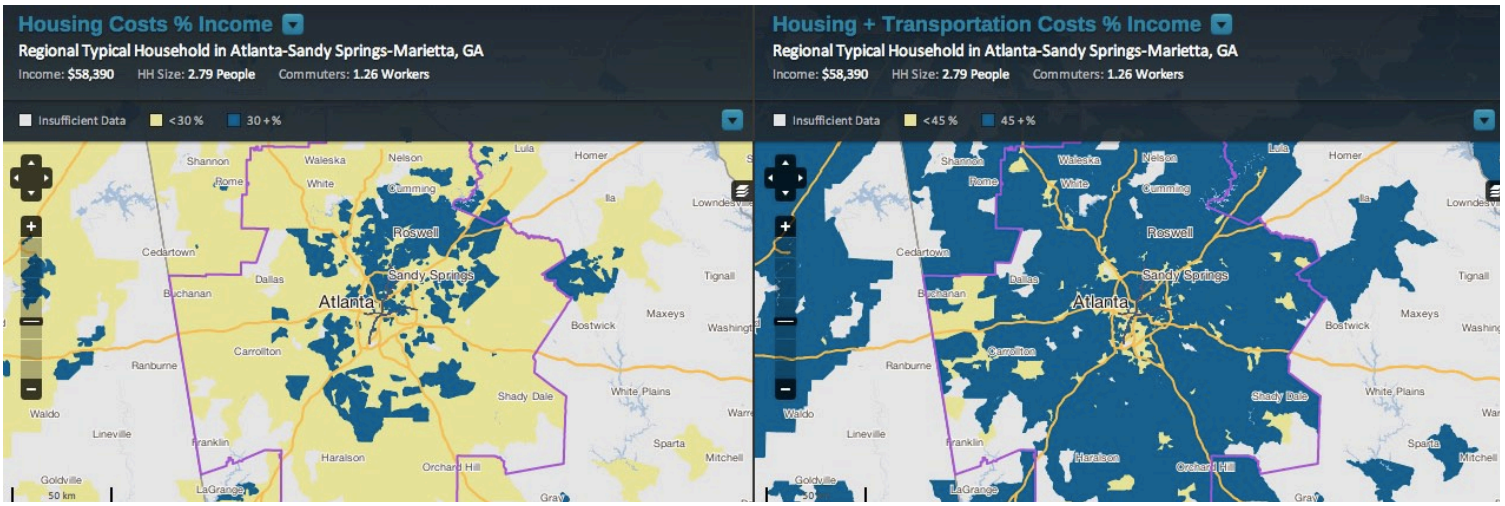
Homes far away from job opportunities may be more affordable, but the transportation costs often offset any savings. Some MPOs have begun to look at housing and transportation costs together to paint a more complete picture of regional affordability and how transportation investments and land-use strategies together improve opportunities across a region.

1 www.njtpa.org/Planning/Regional-Studies/Completed-Studies/Performance-Results-Assessing-the-Impacts-of-Imple/PerformanceResults.aspx

2 www.njtpa.org/Planning/Regional-Studies/Recently-Completed-Studies/Performance-Results-Assessing-the-Impacts-of-Imple/PerformanceResults/NJTPA_PerformanceResults_FinalGuidebook_COMPLETE_0.aspx

3 The seven categories used were system maintenance, congestion reduction, safety and security, economic growth/freight movement, environmental sustainability, system reliability and project delivery: www.ampo.org/wp-content/uploads/2013/12/Selin-Taylor_AMPO-2013-Chatt-Performance-Framework_V3.pdf.

4 www.ampo.org/wp-content/uploads/2013/12/Selin-Taylor_AMPO-2013-Chatt-Performance-Framework_V3.pdf



A sample map set from the H+T index of Atlanta shows the difference between housing costs as a percentage of income at left and housing + transportation costs at right. The yellow is considered affordable. From the Center for Neighborhood Technology's Housing + Transportation Index: http://htaindex.cnt.org/map/.

The opportunity

During the recent housing market downturn, many suburban and exurban areas saw a disproportionate number of residents experience financial difficulties and experience foreclosure, despite the relatively cheap housing available in these communities. This phenomenon was due at least in part to the higher transportation costs experienced by these residents, who were having to commute long distances by car to job centers and finding their finances squeezed by rising gas prices.

MPOs can incorporate analysis of combined housing and transportation costs into their public information and engagement as well as their planning process and can work with member jurisdictions to incorporate the findings into local planning as well. There are sources of data and analysis that obviate the need for MPOs to do the research themselves, though they may find that they have specialized datasets that can supplement or replace those used by outside sources.

The original source, the H+T Affordability Index, was generated by the Center for Neighborhood Technology (CNT) and remains a robust source of information for both the public and planners seeking to understand the overall affordability picture in their regions. In 2013, the U.S. Department of Housing and Urban Development (HUD), in collaboration with USDOT, introduced an online Location Affordability Portal.[1] The Portal contains a cost calculator for households and real-estate professionals, along with maps and data tools for planners, policymakers and developers. The latter are designed to help public agencies like MPOs communicate with stakeholders about different development scenarios.

Putting it into practice

Comparing transportation costs to competitor regions. Several MPOs have used combined housing and transportation data analysis as an input to their planning processes. The **Nashville Area Metropolitan Planning Organization** is using the CNT H+T Affordability Index data to identify affordability challenges

1 www.locationaffordability.info

as part of its current process for developing the 2040 Regional Transportation Plan. Preliminary analysis shows that more than 90 percent of the region's households spend at least 20 percent of their income on transportation. This is well above the national average and the MPO notes that the figure compares unfavorably to peer regions like Denver, where only 42 percent of households reach that level of transportation spending.[1] Incorporating this kind of external data as a foundation for long-range planning can help MPOs get a grasp on how their regions compare to others across the country — creating a powerful lever for engaging the public and catalyzing public officials to take action.

Reducing housing + transportation costs with expanded options. Nearly a decade ago, Illinois became the first state to require an analysis of combined housing and transportation costs when considering economic development incentives and funding allocations within MPO areas. The rule applies to the departments of Commerce and Economic Opportunity, Transportation and the Illinois Housing Development Authority.[2] The **Champaign County, IL, Regional Planning Commission (CCRPC)** allocates funding through an MPO dubbed the **Champaign Urbana Urbanized Area Transportation Study (CUUATS)**. In 2006, the CCRPC joined several regional partners, including the chamber of commerce, bike advocates, the local farm bureau, immigrant and refugee services, the school district and local governments to develop and implement a regional Mobility Implementation Plan, given the moniker "MiPlan".[3] Through a study of regional transportation trends including surveys, stakeholder interviews and neighborhood meetings, the group found that many of the region's residents — the majority of whom travel primarily by car — were financially strained by their transportation needs.

Through MiPlan, the area's transit agency expanded service and reduced fares and city governments as well as the University of Illinois took steps to improve conditions for bicyclists and pedestrians. The efforts significantly increased (to around 90 percent) the number of residents of the region living within a quarter-mile of a weekday bus route.[4] The September 2014 CUUATS' draft MTP entitled "Sustainable Choices 2040" emphasizes two new themes — accessibility and affordability — and for the first time the MPO provides information on transportation costs measured both in travel time and dollars.[5]

Laying the groundwork for a strategy to reduce H+T costs in future updates. In St. Louis, the **East-West Gateway Council of Governments (E-W COG)** performed detailed analysis of its region based on the H+T Affordability Index as a technical supplement to its latest Regional Transportation Plan. Using updated information available locally, including estimated transportation costs from the region's travel demand model, the agency sought to answer three questions:[6]

1. Which parts of the region are affordable to a median-income household?
2. Which parts of the region are affordable to the households that currently reside in those communities?
3. How are urbanized areas, rural areas and environmental justice areas affected by rising gasoline prices?

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1 www.nashvillempo.org/plans_programs/rtp/2040_rtp.aspx
2 www.cnu.org/cnu-salons/2010/04/illinois-signature-away-adopting-cnts-housing-transportation-affordability-index
3 www.ihavemiplan.com/index.htm
4 Transportation for America, "The Little Cities that Could: New visions bring new life to Illinois rail towns." 2013. www.t4america.org/wp-content/uploads/2014/12/Illinois-Rail-Report-T4America-Web.pdf
5 www.cuuats.org/lrtp/documents/lrtp-2040-draft/lrtp-2040-intro-index-draft/view
6 www.ewgateway.org/pdffiles/Library/Trans/RTP2040/RTP-StateOfTheSystem-2011.pdf (62)

The resulting analysis showed that long automobile commutes were a significant cost burden on many of the region's residents and pointed to the need to develop a "multi-faceted strategy that may include balancing commercial and residential development in growing areas, considering workforce housing in decisions about commercial development and increasing employment opportunities in the urban core."[1]

Finally, the **Knoxville Regional Transportation Planning Organization** used the H+T data to inform their thinking as they approached their regional visioning effort, called "PlanET" for Plan East Tennessee. The index was used to assess baseline conditions and a custom analysis was done to project the impact of the preferred regional growth scenario on household transportation costs.[2]

PERFORM HEALTH IMPACT ASSESSMENTS

Transportation has been linked to health in a variety of ways: the national rise in obesity rates resulting from sedentary lifestyles, automobile collisions as a leading cause of death for many age brackets and increased rates of asthma and other health conditions resulting from poor air quality and pollution. MPOs are realizing that health outcomes are as important to a region as any other indicator of success.

The opportunity

Health Impact Assessments (HIA) are an important analytic tool for MPOs to use in the long-range planning process and when evaluating particular projects. The Health Impact Project, a collaboration of the Robert Wood Johnson Foundation and Pew Charitable Trusts, describes HIAs as processes that allow health to be taken into account in a broad range of public decision-making sectors and in a variety of contexts, including urban, suburban and rural and at local, regional or state-wide scales.[3] In the MPO context, HIAs can help transportation planners, officials and the public think about the trade-offs involved with different transportation alternatives. These can include the localized impacts of emissions due to changes in vehicle traffic and whether a project encourages physically active, non-motorized use and provides for the safety of these users.

The Steps of HIA

1. **SCREENING**
   Determine whether an HIA is needed and likely to be useful.
2. **SCOPING**
   In consultation with stakeholders, develop a plan for the HIA, including the identification of potential health risks and benefits.
3. **ASSESSMENT**
   Describe the baseline health of affected communities and assess the potential impacts of the decision.
4. **RECOMMENDATIONS**
   Develop practical solutions that can be implemented within the political, economic or technical limitations of the project or policy being assessed.
5. **REPORTING**
   Disseminate the findings to decision makers, affected communities and other stakeholders.
6. **MONITORING AND EVALUATION**
   Monitor the changes in health or health risk factors and evaluate the efficacy of the measures that are implemented and the HIA process as a whole.

The HIA process encourages public input at each step.

Source: Pew Charitable Trusts. www.healthimpactproject.org/hia/process

1 www.ewgateway.org/pdffiles/Library/Trans/RTP2040/RTP-StateOfTheSystem-2011.pdf (71)
2 www.planeasttn.org/
3 www.healthimpactproject.org/hia/us

Putting it into practice

Responding to a state requirement to analyze health impacts. Some states have issued directives requiring health impact assessments to be a part of the transportation decision-making process, either state-wide or for specific projects.[1] Massachusetts, for instance, passed transportation legislation in 2009 that created an inter-agency Healthy Transportation Compact charged with, among other tasks, "[implementing] health impact assessments for use by planners, transportation administrators, public health administrators and developers."[2] The **Pioneer Valley Planning Commission (PVPC)** in the Springfield, MA area facilitates HIAs in transportation and other sectors, developing resources, toolkits and model regulations. The commission also analyzes municipal zoning to encourage physical activity and access to healthy food.[3] The PVPC is collaborating with the Massachusetts Department of Public Health and two local jurisdictions to conduct an HIA of select municipal recommendations from the Pioneer Valley Climate Action/Clean Energy Plan.[4] In addition, the PVPC participates with the Springfield Planning Department and several community organizations in a Built Environment Task Force to examine transportation barriers in Springfield neighborhoods.[5]

Voluntary use of HIAs to shape a long-range plan. Even when HIA's are not mandatory, MPOs have taken the initiative to use this planning tool. The **Nashville Area MPO** made public health a strong emphasis in its 2035 long-range transportation plan.[6] The MPO participated in a HIA pilot project in 2010 to evaluate how to improve health outcomes in the transit-oriented development sites included in a study of a proposed transit corridor. The first phase of the project resulted in various design changes to encourage safe, active transportation and incorporate senior housing, community gardens, walking paths, a community gathering space and public art. A second phase involved focus groups and surveys looking at public perception of the connection between health and the built environment.[7]

In crafting its long-range plan, the MPO recognized that lower income and other disadvantaged populations have been disproportionately affected by past transportation decisions and added a special screen for equity among population groups. Planners looked closely at "health impact areas," census tracts that have a higher than average rate of poverty, minority populations and zero-car households. They also looked at ways to provide safe access to schools and healthy food, and conducted a major regional household transportation and health survey.

1 www.governing.com/blogs/view/gov-health-impact-assessments-bringing-health-to-all-policies.html
2 www.massdot.state.ma.us/GreenDOT/HealthyTransportationCompact.aspx
3 www.pvpc.org/projects/public-health
4 www.pvpc.org/projects/health-impact-assessment-climate-plan-recommendations
5 www.pvpc.org/sites/default/files/draft%202015%20UPWP%20latest%20update.pdf
6 www.nashvillempo.org/docs/lrtp/2035rtp/Docs/2035_Doc/2035_Chapter9.pdf
7 www.nashvillempo.org/docs/lrtp/2035rtp/Docs/2035_Doc/2035_Chapter9.pdf

ADDRESSING REGIONAL DISPARITIES THROUGH OPPORTUNITY MAPPING

Traditional MPO data analysis reports on the number of low-income residents, racial characteristics and other basic demographic information with little discussion of where these residents live or work. Deeper analysis finds that these populations often have unequal access to safe, affordable and convenient transportation options that can connect them to jobs, schools, healthcare or regional destinations. This lack of access to opportunity severely limits their quality of life. Several innovative MPOs now analyze and map the nexus between transportation and opportunity to understand the interactions with other important public policy issues, including public education, economic mobility, public health, environment and neighborhood stability.

The opportunity

Our understanding of what makes a neighborhood healthy, vibrant, successful and economically viable has come a long way in recent years. One element of that new understanding is the recognition that regional infrastructure and transportation systems are crucial to connecting people to regional economic, educational, social and cultural or environmental amenities. Neighborhoods with a dearth of connectedness can be said to have "opportunity isolation" and are more vulnerable to economic challenges. Economic competitiveness suffers in regions with large or unaddressed opportunity isolation areas. "Opportunity mapping" is an analytical approach that combines robust data collection, evaluation and geographic mapping to identify neighborhoods that suffer opportunity isolation.[1]

Addressing neighborhood opportunity through transportation policy and investment is complex. It can include direct-assistance programs — often in collaboration with community non-profits and other public human service agencies — to enhance transportation options in low-income neighborhoods that are separated from job centers and other destinations by distance or other barriers, or poorly served by transit. The long-range planning process is an important means to consider neighborhood connectedness, as the unevenness of opportunity in a region's neighborhoods stems in large part from years of cumulative transportation and land-use decisions.

Through opportunity mapping MPOs provide powerful information to inform community engagement, planning and analysis around equity goals. Opportunity maps reveal where opportunity — in the form of jobs, services, social interaction and other aspects of a fulfilling life — is located within the region and captures the demographic characteristics of areas with low and high opportunity.

Putting it into practice

As part of HUD's Sustainable Communities Initiative (SCI) and the grant programs included within it, HUD required opportunity mapping within regional sustainability planning and provided data and guidance to grantees to facilitate the process. Two examples of opportunity mapping through the SCI were in Seattle - Tacoma, WA with the **Puget Sound Regional Council (PSRC)** and efforts by the **Capital Area Council of**

1 http://kirwaninstitute.osu.edu/wp-content/uploads/2013/09/FINAL_OM_9-5.pdf

Governments (CAPCOG) in Austin, TX. In the case of the PSRC, the opportunity maps were included in the VISION 2040 planning documents that laid out a regional plan for a more sustainable future. In particular, the opportunity maps included an examination of three light rail corridors and how they facilitate opportunity, along with looking at how future transit investments can enhance and even out the opportunity picture.[1] In Austin, the effort provided insight into the city's current and future housing affordability trends, allowing leaders to proactively address issues of gentrification and anticipate community needs.[2]

A region that has leveraged assistance through the SCI to get a thorough examination of regional demographics and opportunity and their relation to transportation, is Houston, TX. See the full case study at the end of this chapter in the **Innovation in Action** section to learn how the **Houston-Galveston Area Council (H-GAC)** is looking at the region's neighborhoods through the lens of opportunity.

Resources

- FHWA website on Performance Based Planning: www.fhwa.dot.gov/planning/performance_based_planning/resources/
- Transportation Research Board of the National Academies. (2011) *National Cooperative Highway Research Project Report 708: A Guidebook for Sustainability Performance Measurement for Transportation Agencies:* http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_708.pdf
- Kirwan Institute. (2013) Guide to Opportunity Mapping. http://kirwaninstitute.osu.edu/wp-content/uploads/2013/09/FINAL_OM_9-5.pdf.
- HUD. Location Affordability Portal: www.locationaffordability.info
- USDOT, Research and Innovative Technology Administration, John A. Volpe National Transportation Systems Center. (December 2012). *Metropolitan Area Transportation Planning for Healthy Communities*. FHWA, Office of Planning, Environment and Realty, FHWA-HEP-13-006. www.planning.dot.gov/documents/Volpe_FHWA_MPOHealth_12122012.pdf.

1 www.psrc.org/growth/growing-transit-communities/regional-equity/opportunity-mapping/
2 http://greendoors.org/programs/opportunity-mapping.php

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 4)

ESTABLISHING AND USING PERFORMANCE MEASURES

Metropolitan Transportation Commission — MTC (San Francisco, CA)

The Metropolitan Transportation Commission (MTC) is the transportation planning, coordinating and financing agency for the nine-county San Francisco Bay Area, home to more than 7 million people and 101 municipalities. Three of those municipalities are major population and employment centers in their own right: Oakland, San Jose and San Francisco. The MTC functions as the regional transportation planning agency, a state designation and the region's metropolitan planning organization (MPO), a federal designation. It has one of the larger MPO staffs in the country.[1]

1 www.ops.fhwa.dot.gov/publications/fhwahop09047/index.htm

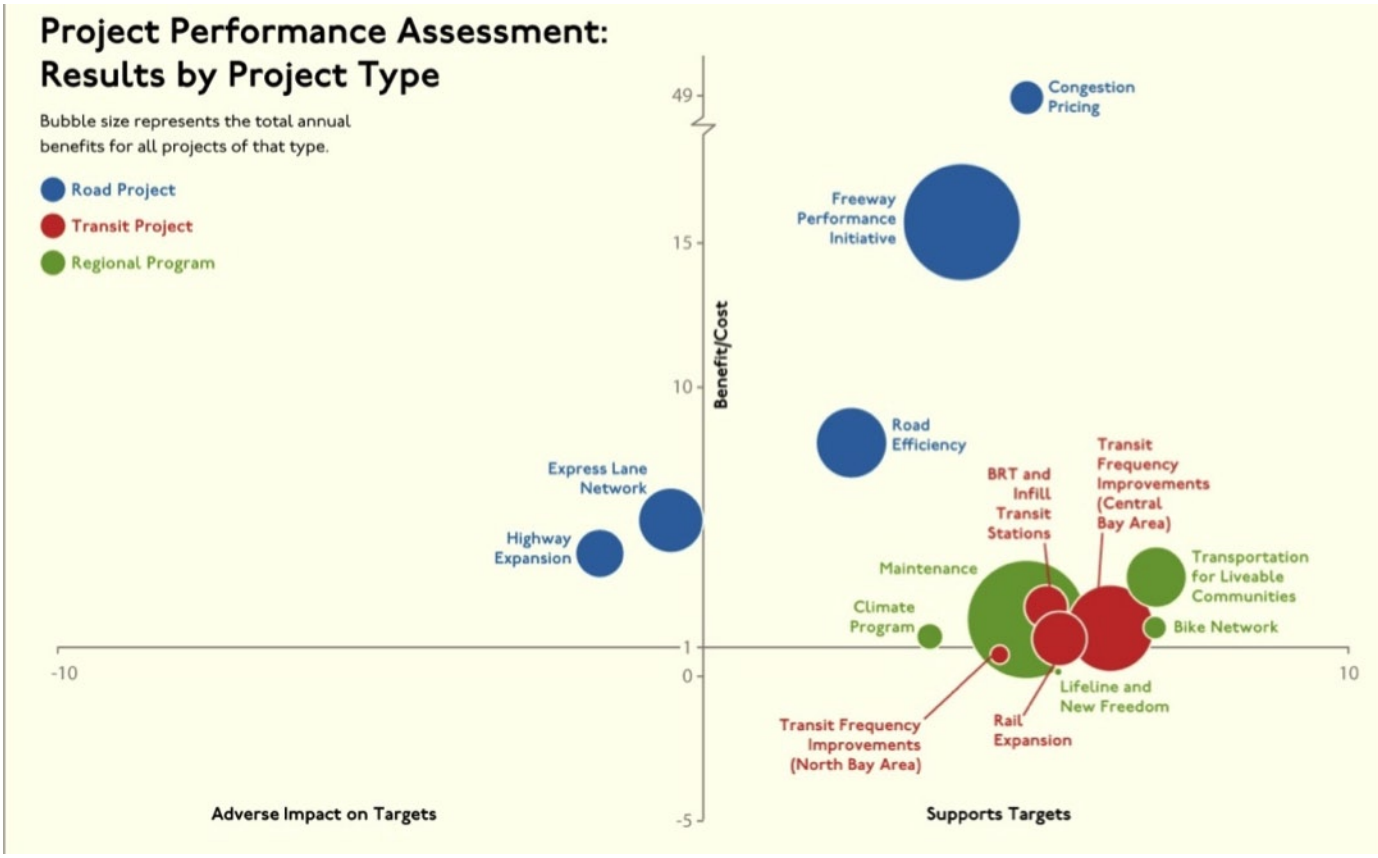
The San Francisco Bay Area has long realized the need for collaboration to address regional challenges. Given the size and complexity of the region, developing and using comprehensive regional data became important for navigating political tensions and ensuring more cost-effective outcomes. In 2001, MTC began using performance measures formally in preparing the Regional Transportation Plan (RTP).[1] In 2002 the state legislature adopted SB 1492, which requires MPOs to use performance criteria in evaluating and prioritizing RTP investments at the project and corridor level.[2]

In 2013, the MTC and the Association of Bay Area Governments (ABAG) jointly adopted Plan Bay Area, which serves as both the long-range transportation plan and a Sustainable Communities Strategy — a formal document required by the state's climate change legislation to meet targets for reducing greenhouse gas (GHG) emissions.[3] Plan Bay Area used a new type of performance assessment framework to integrate transportation and land-use scenarios. Through substantial public involvement the MTC developed 10 performance targets for economic vitality, climate protection, adequate housing, healthy and safe communities, open space and agricultural preservation, equitable access for vulnerable populations and transportation efficiency:[4]

1. Reduce per-capita carbon emissions from cars and light-duty trucks by 15 percent.
2. House 100 percent of the region's projected 25-year growth without displacing current low-income residents.
3. Reduce premature deaths from exposure to fine particulates by 10 percent and coarse particulates by 30 percent.
4. Reduce injuries and fatalities for all collisions by 50 percent.
5. Increase average daily walking or biking per person by 70 percent (average of 15 minutes per person per day).
6. Direct all non-agricultural development within the urban footprint.

1 www.fhwa.dot.gov/planning/performance_based_planning/case_studies/san_francisco/
2 http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/5-Performance.pdf
3 http://onebayarea.org/regional-initiatives/plan-bay-area.html
4 http://onebayarea.org/pdf/final_supplemental_reports/FINAL_PBA_Performance_Assessment_Report.pdf

7. Decrease share of low and lower-middle income residents' household transportation and housing expenditures by 10 percent.
8. Increase gross regional product by 110 percent (average annual rate of growth of 2 percent),
9. Decrease average trip travel time by 10% for non-auto modes; decrease car vehicle miles traveled per capita by 10 percent,
10. Maintain the transportation system in a state of good repair.



Source: MTC

Prioritizing funding for future projects in this way ensures that limited resources meet the performance targets that best address future regional goals. Through this new performance assessment framework each individual project is judged on its own merit with greater transparency and accountability. One of the true innovations in the MTC's process was to award flexible, federal transportation funding to the projects that performed the best as part of the evaluation process, while the ones that did not — even some of those with prior funding committed — were removed entirely from the plan.

This approach was supported by many stakeholders who were urging the MPO to use limited public funds to establish a level playing field to judge projects that best advanced economic, environmental and equity goals over the long term. Extensive public involvement through the process engendered broad political support from MPO board members and policymakers including the Association of Bay Area Governments, which has responsibility for broader regional planning. Through this approach, the MTC is prioritizing transportation investments that achieve multiple transportation, environmental, social and economic regional benefits.

Through Plan Bay Area and the changes made by the MTC to competitively allot funding for projects after all committed funding has been allocated, MTC is able to prioritize $57 billion dollars in discretionary funds over the next 28 years,[1] which will allow them to accomplish their 30-year strategy through aligning transportation investment with housing investment in existing Bay Area communities.[2]

1 www.onebayarea.org/about/faq.html
2 http://files.mtc.ca.gov/pdf/Plan_Bay_Area_FINAL/4-Investments.pdf

Metropolitan Transportation Commission (MTC)	
Type	Functions as the MPO for the San Francisco Bay Area as well as functioning as the Bay Area Tolling Authority (BATA) and Service Authority for Freeways and Expressways (SAFE)
Composition	The MTC is comprised of 21 members, which are part of the Policy Board. Eighteen of the commissioners are designated as voting members. Sixteen of the voting commissioners are appointed by local officials in each county. The two most populous counties, Alameda and Santa Clara, each have 3 voting representatives. The county board of supervisors selects one member; the mayors of the cities within the county collectively appoint another; and the mayors of the biggest cities in these two counties — Oakland in Alameda County and San Jose in Santa Clara County — each appoint a representative. The City and County of San Francisco is represented by two members, one appointed by the board of supervisors and the other by the mayor. In addition, two voting members represent regional agencies — the Association of Bay Area Governments (ABAG) and the Bay Conservation and Development Commission (BCDC). San Mateo and Contra Costa counties have another two members and the less populous counties of Marin, Napa, Solano and Sonoma each appoint one commissioner.
Voting	Additional votes to certain jurisdictions: Each voting member has one vote, but certain jurisdictions have more representatives than others.
MPOs within MSA	MPO is in 4 MSAs
Annual budget and staffing size	$88 million; 250 staff
Responsibilities beyond transportation	Land-use planning, sustainability planning (GHG emissions reduction initiatives)
Independent revenue authority	MTC finances and coordinates Bay Area transportation, such as BATA, but these functions are under the auspices of the MTC and no cross-subsidies exist.
State enabling legislation	The Sustainable Communities and Climate Protection Act, SB 375, mandates each of California's MPOs to prepare a Sustainable Communities Strategy (SCS), as a central part of its regional transportation plan (RTP). The SCS has land-use, housing and transportation strategies that once implemented would allow the region to meet its GHG emissions reduction targets. Once the RTP/SCS is adopted by the MPO, it guides the transportation policies and investments in the region.
References: www.mtc.ca.gov/about_mtc/about.htm www.mtc.ca.gov/library/abcs_of_mtc/who_we_are.pdf www.arb.ca.gov/cc/sb375/sb375.htm	

CONSIDERING COMBINED HOUSING AND TRANSPORTATION COSTS

Thomas Jefferson Planning District Commission — TJPDC (Charlottesville, VA)

The college town of Charlottesville, Virginia, nestled in the Appalachian foothills, has appeared in recent years on lists of the most desirable cities in which to live. It has experienced significant growth and with it an increase in traffic congestion, property values and housing costs. The MPO for the Charlottesville area is the Charlottesville-Albemarle MPO and is housed in and staffed by the Thomas Jefferson Planning District Commission (TJPDC). The TJPDC and MPO have proactively gained valuable insight into the region's affordability picture and incorporated affordability metrics into their regional planning activities.

Charlottesville was selected as one of three regions for "field study" by HUD as part of a project to refine its location affordability index. HUD and TJPDC used the existing H+T Affordability Index developed by the Center for Neighborhood Technology to examine six different neighborhoods in the TJPDC jurisdiction. A report compared the relative costs associated with buying or renting a home along with predicted travel costs for that location based on job accessibility and other factors.[1] MPO board members noted that the analysis "showed that living further from the urban core might not be as cost-effective as people think," and that foreclosure rates during the recent housing crisis were higher in suburban areas than in urban ones.[2]

In response, the TJPDC incorporated affordability location indicators as performance measures for regional transportation systems. A November 2013 Performance Measurement System Report identifies a framework for indicators of transportation system performance, including these five categories: community and neighborhoods, economy, housing and the built environment, natural resources and environment and transportation. At this point, the report simply provides a baseline analysis for regionally important indicators for livability, with the idea that performance in relation to these indicators will be considered in future transportation plans.[3]

4 | North Downtown

North Downtown is an historic neighborhood directly adjacent to downtown Charlottesville. The southern portion of the neighborhood is composed of a variety of civic uses, small parks, and multifamily housing. The northern part of the neighborhood is predominately single-family homes and churches. Park Street is the primary north-south route for the neighborhood.

Housing costs ...

31% of income

regional average 24%

Percent of regional typical household income expected to be spent on housing alone in the neighborhood.

Housing + Transport

55% of income

regional average 52%

Percent of regional typical household income expected to be spent on housing and transportation.

Snapshot from page 8 of www.tjpdc.org/pdf/housing/HT_EducationalPacket.pdf.

1 www.tjpdc.org/pdf/housing/HT_EducationalPacket.pdf
2 http://tjpdc.org/agendas_and_minutes/mpoPoli/12_03_28/Item_4.pdf
3 www.tjpdc.org/livablecommunities/PerformMeasuresReport.pdf

Charlottesville-Albemarle MPO	
Type	MPO is housed in the Thomas Jefferson Planning District Commission
Composition	The five-member Policy Board is the decision-making body for the MPO, which consists of two representatives from the County of Albemarle and two representatives from the City of Charlottesville. The fifth representative is from the Virginia Department of Transportation. Additionally, there are non-voting members on the Board from the Virginia Department of Rail and Public Transportation, Charlottesville Area Transit, JAUNT, the University of Virginia, the Federal Highway Administration, Federal Aviation Administration, the Federal Transit Administration and Citizens Transportation Advisory Committee (CTAC).
Voting	One member, one vote
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$225,450; 3 full-time equivalent staff
Responsibilities beyond transportation	None
Independent revenue authority	None

References: www.tjpdc.org/pdf/transportation/FINAL_UPWP%20FY15.pdf
www.tjpdc.org/transportation/mpo.asp
www.ampo.org/wp-content/uploads/2014/02/2013-Salary-Survey-Results-final-draft-Jan-23-2.pdf

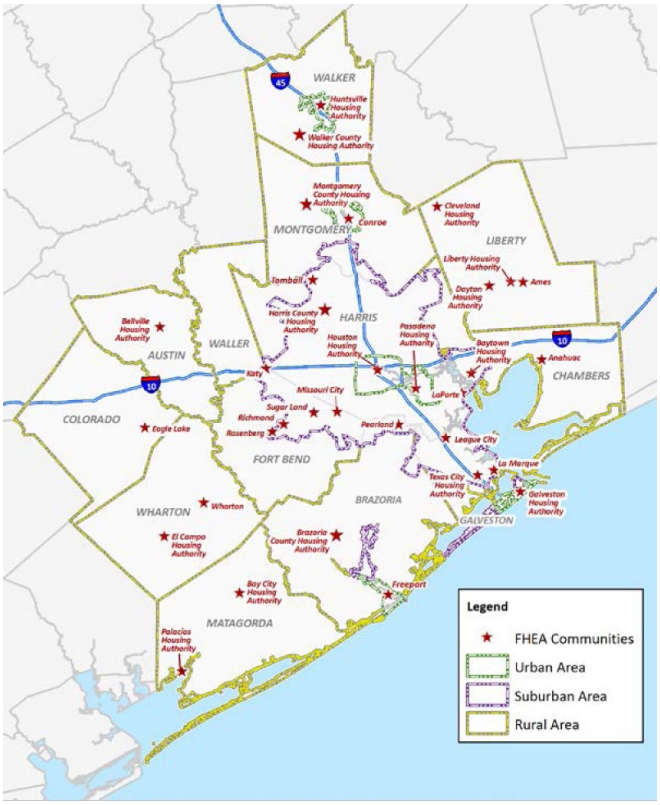
ADDRESSING REGIONAL DISPARITIES THROUGH OPPORTUNITY MAPPING

Houston-Galveston Area Council — H-GAC (Houston, TX)

Long stereotyped for its sprawling land development patterns and massive road network, the Houston metro area is beginning to turn heads when it comes to regional livability and equity. In recent years, Houston area leaders including the Houston-Galveston Area Council (H-GAC) have brought a multitude of resources to bear on addressing regional challenges. This has included a stronger emphasis on how regional economic and racial disparities are impacted by transportation and housing investment decisions. Opportunity mapping has become an important tool in this work. At 12,500 square miles, the H-GAC service area is larger than 9 other states' total areas and poses a challenge for opportunity mapping, both in scale and in geographic and economic diversity.

H-GAC and its consortium partners received a 2010 HUD Sustainable Communities regional planning grant which required the region to undertake a Fair Housing and Equity Assessment (FHEA). This assessment is a form of opportunity mapping which identifies baseline conditions for fair housing, social equity and areas of opportunity across the region. The FHEA analysis is being used to inform the Regional Plan for Sustainable Development.

H-GAC staff were involved from across the agency given the overlap that racial and economic equity issues have on the many different programs which the regional planning agency addresses. Staff led collaborative efforts with the local Fair Housing and Equity Workgroup created through the HUD grant process, comprised of several local governments with housing programs, area non-profits and fair housing and equity advocacy organizations. As these were complex and politically sensitive issues for the agency to address and data constraints existed, national consultants, BBC Research and the Kirwan Institute for the Study of Race and Ethnicity at Ohio State University were brought in to work closely with H-GAC staff and workgroup members.[1]



Base map of Houston region FHEA areas.
Source: www.ourregion.org/FHEA/FHEA-FINAL.pdf

The workgroup identified topics for best practices and recommendations, as well as helping to bring nuance to equity and fair housing issues that can be lost in a broad-level analysis.[2] The 2014 FHEA analysis includes an assessment of primary demographic concerns along with analysis of disparities in access to opportunity, fair housing activities and related infrastructure/systems and physical infrastructure and other economic investments.[3]

One hurdle in developing the FHEA was obtaining the data necessary to make it current, comprehensive and useful. To this end, H-GAC negotiated confidentiality agreements with 10 housing authorities to obtain location information on housing choice vouchers and also provided the Kirwan Institute with local data to enhance the opportunity maps and overlay analysis.[4] The biggest challenge to the team was in understanding what the data analysis showed, and arriving at parameters and guidance that would be meaningful for local leaders. Race and equity are complex, nuanced and sensitive issues. H-GAC innovatively tackled this challenge by leading an effort to create an Opportunity Comparison Radial model that shows at a glance the opportunity circumstances at the regional or community level. This model incorporates measures such as the percent of homes and rentals that are affordable, median household income, poverty rate, minority composition, job access and commute time.

Radial plots were prepared for individual jurisdictions, the region as a whole and urban/suburban/rural classifications. This robust yet accessible analysis allowed H-GAC and its partners to make some important observations about the region and develop priorities for future action. The two primary objectives identified were to diversify the region's housing stock and reduce and improve high-poverty areas.

1 The Kirwan Institute had previously done opportunity mapping for Galveston following Hurricane Ike and is a HUD Sustainable Communities Capacity Building provider to support regions specifically on their FHEA work: http://kirwaninstitute.osu.edu/my-product/fair-housing-and-equity-assessment-fhea-guide-series/

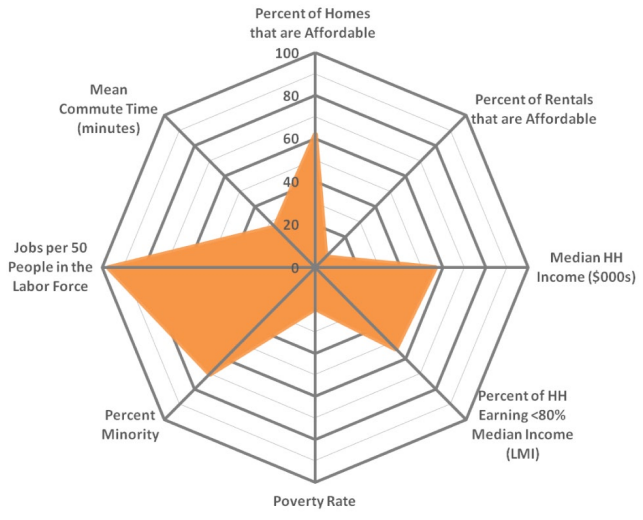
2 www.ourregion.org/FHEA/FHEA-FINAL.pdf

3 www.ourregion.org/FHEA/Fair%20Housing%20Equity%20Assessment%20Overview.pdf

4 www.ourregion.org/meetings/02-26-13_Handouts.pdf

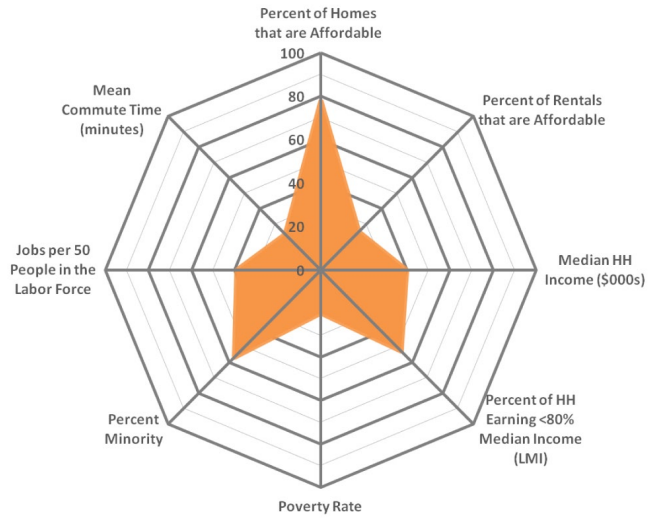
Opportunity Comparison Radial

What does the average Census tract in Houston look like?



Opportunity Comparison Radial

What does the average Census tract in Wharton County look like?



Opportunity Comparison Radials from Houston and rural Wharton County. Source: www.ourregion.org/FHEA/FHEA-FINAL.pdf

In 2012 H-GAC hosted a Livability Summit to showcase how regional organizations are providing analysis and recommendations to address equity in transportation planning. The Texas Transportation Institute at Texas A&M University presented information on transit and livability in rural areas on the metropolitan edge,[1] along with guidance on using performance measures for livability and sustainability projects.[2] H-GAC's work illustrates the potential for MPOs to play a critical role to address regional disparities through data, outreach and collaboration with regional and national partners. Going forward, the MPO will translate the conclusions from the FHEA process into the metropolitan transportation plan.

1 https://www.h-gac.com/community/qualityplaces/workshops/documents/pst-ws_08-22-2012_Connecting-Transit-and-Livability.pdf

2 https://www.h-gac.com/community/qualityplaces/workshops/documents/pst-ws_08-22-2012_Performance-Measures-for-Livability-and-Sustainability-Projects.pdf

Houston-Galveston Area Council (H-GAC)	
Type	Regional Planning Commission, voluntary association of local governments
Composition	H-GAC serves as the regional planning entity for the 13-county Gulf Coast region. H-GAC hosts the MPO and associated Transportation Policy Council (TPC), the regional Workforce Board, the EDA-recognized Economic Development District and the Area Agency on Aging. The TPC serves as the MPO's Policy Board and has 28 voting members and two ex-officio members. Membership consists of chief elected officials and their designated alternates from the five major cities and 8 of the 13 counties that make up the council of governments. The Texas DOT and the Metropolitan Transit Authority of Harris County both have a representative on the TPC. Two positions are for smaller cities in Brazoria and Harris Counties and one for other transportation interests. Counties and cities not on the TPC are represented by members of the H-GAC Board of Directors. H-GAC is governed by a 36-member Board of Directors comprised of elected officials from across the region, including city council members, mayors, county commissioners, county judges and independent school district trustees.
Voting	The majority of members have one vote with the exception of the region's largest city (Houston) and county (Harris), which have two each. In order to hold votes a quorum must be present. A quorum requires a majority of membership present.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$250 million; 246 staff
Responsibilities beyond transportation	9-1-1 services for outlying areas, area agency on aging, economic development, environmental planning, workforce development, cooperative purchasing, public safety training and planning, data services and air quality and land-use planning
Independent revenue authority	Does not have independent revenue authority, besides accepting local membership dues from local jurisdictions.
State enabling legislation	Under Ch. 391 of Texas Local Government Code, H-GAC shall function as a Regional Planning Commission and is able to exercise powers conferred on it by state law or by member local governments.

References: www.h-gac.com/taq/plans_programs/upwp/documents/Full2014-15UPWP-Apr2014Amendments.pdf; www.h-gac.com/about/advisory-committees/documents/RAQPAC_Bylaws.pdf

FOCUS AREA 5

PROVIDE TECHNICAL ASSISTANCE AND COLLABORATE WITH LOCAL COMMUNITIES

Metropolitan planning organizations (MPOs) stand at a complex and congested intersection: the junction between state government — where transportation funding and decision-making largely reside and local governments — where land-use decisions are generally made. At the same time, MPOs must comply with federal directives, even as they manage competing interests among member jurisdictions and stakeholders.

Land-use decisions and the resulting patterns of development they create are the largest external factor in determining transportation outcomes. For instance, zoning that leads to urban sprawl and the separation of jobs, housing and retail creates traffic congestion, makes it hard provide transit and reduces the accessibility of jobs. To achieve regional transportation goals, MPOs must work effectively with local governments, agencies and other local-level stakeholders to better coordinate transportation and land use. Additionally, local governments are often the primary builders or maintainers of local roads, and some operate their own transit systems. Even in areas where state governments control the majority of the road network, local governments play a role in funding and even constructing bicycle and pedestrian infrastructure.

A key role for the innovative MPO, then, is to bring technical and financial resources in support of local communities, providing relatively low-cost services such as educational outreach and data analysis. Some MPOs are funding new programs and incentives to help local communities with planning, zoning updates and small-scale capital projects. Through this strategy, MPOs create a pipeline of transportation projects for future TIPs and MTPs that have community support and are consistent with regional goals.

In this section:

ASSIST LOCALITIES IN DEPLOYING NEW TOOLS AND POLICIES

The most comprehensive and visionary long-range metropolitan transportation plan is nothing more than rhetoric if it fails to be implemented locally. MPOs are responsible for advancing the regional vision and can support local communities with technical and funding resources they may control. Innovative MPOs use a range of incentives to help local partners succeed or to advance actions that are harder to do as an individual jurisdiction but which benefit the region as a whole.

The opportunity

Many regional plans call for development to be focused along rail or high-frequency bus lines or in areas where multiple transportation modes converge. However, success in this regard requires local governments to zone for higher-density development in target areas — something they may find politically difficult. Residents often express concern about building height and neighborhood context, perceived impacts on congestion, property values and access to public services. For the sake of their tax base, localities may prefer to green-light commercial development and let neighboring jurisdictions worry about providing housing and services to those employees. Or they may allow low-density residential development and avoid the political challenges of promoting greater concentration. The result can be regional imbalances that exacerbate congestion, create infrastructure inefficiencies and diminish overall quality of life in the region.

MPOs can help or induce localities to "do the right thing" when it comes to development patterns and other decisions that, when aggregated with the other members of the metropolitan area, can make or break a region. In the case of development density, MPO actions can range from something as simple as conducting regional or localized public events that explain the benefits and dispel the myths about concentrated development. Or, with the MPO as a facilitator, member jurisdictions may agree to establish and follow criteria to use in prioritizing projects for funding.

A frequent source of conflict between MPOs and localities and a common hindrance to achieving regional goals, is a lack of integration between MPO plans and local planning documents. To more easily stitch together local policies, many MPOs provide guidance to localities in generating and updating land-use and transportation plans and strategies. In many instances, localities may be interested in trying something new but are frightened of going out on a limb with a new technique or initiative that might be seen as untested. Innovative MPOs propagate best practices and provide "regional cover" by making sure local governments have information about the latest planning innovations and practices. This can range from disseminating new approaches to street design to inviting outside experts or peer regions to share innovative practices and benefits they found. As another example, several MPOs in areas with expanding regional transit systems are working with member jurisdictions to conduct market assessments for mixed-use, walkable development.

Putting it into practice

Few MPOs have specific authority to coordinate or engage in local land-use policies. Nonetheless, a number have developed programs to support localities in developing local plans and policies that are consistent with regional long-range goals. These range from providing guidance and best practices documents to providing access to technical experts and consultants who can work with local planners and engineers on specific projects. Many larger MPOs maintain special accounts for each member jurisdiction to provide on-demand technical assistance, and others help by modeling travel demand for a specific neighborhood or proposed development.

Creating a planning guide for local staff. Hillsborough County, FL, is home to the city of Tampa as well as more than 900,000 residents who live in unincorporated areas, making local implementation of regional planning goals a challenge. The **Hillsborough County MPO and City-County Planning Commission** in 2012 sought to address this challenge by creating a guide for township and county staff, called "Creating and Updating

Community Plans in Unincorporated Hillsborough County." It outlines an "inclusive and deliberative planning process" designed to align local plans with the regional metropolitan transportation plan (MTP) goals. It explains the roles of various agencies and other stakeholders, provides a template for public participation and a process for creating or updating a community plan. In addition, the regional commission's website includes an easily navigable map of the unincorporated communities with information about their current plans and the status of any updates underway.[1]

FIGURE 2 OVERVIEW: COMMUNITY PLAN-MAKING

Source: www.planhillsborough.org/wp-content/uploads/2012/10/Community-Plan-Guide.pdf.

Educating local jurisdictions on place-making techniques. Innovative MPOs provide educational opportunities for local jurisdictions and across different sectors. Recently several MPOs have provided training on community place making. Place making integrates urban design with community-driven arts and cultural amenities to create neighborhoods and transportation infrastructure that are economically successful, physically attractive and safe. For transportation agencies like MPOs, place making can be an effective strategy to use in designing transit stations, transportation corridors or other public spaces.[2] The **Southeast Michigan COG (Detroit)** offered a 2014 "SEMCOG University" program for local elected officials, including a six-part place-making workshop for non-profit and private sector partners. Through foundation support, SEMCOG held workshops in low-income neighborhoods of Detroit.[3]

Some topics covered in the workshops included road safety and walkable/bikeable audits to improve key corridors; techniques for managing traffic flow; strategies for providing a well-rounded housing mix; creating eye-catching commercial areas; and using green infrastructure to preserve and restore water quality and the urban tree canopy.

1 www.planhillsborough.org/community-based-planning/
2 Project for Public Spaces: www.pps.org/reference/what_is_placemaking/
3 www.semcog.org/placemaking.aspx

Conducting special training for the real estate development community. In the Salt Lake City region, the **Wasatch Front Regional Council** and the regional transit agency in 2010 conducted sessions for real estate developers and local staff on "Placemaking with Transit". The event attracted more than 250 elected officials, city staff, consultants, real estate developers and others.[1] The agency also maintains a visual library on its website to provide place-making examples from across the region to show how these concepts are being implemented in the community.[2] The site captures examples of public art, plazas and pocket parks, pedestrian malls and outdoor dining — among many other place-making techniques — to show how these strategies create vibrant places where people want to shop, live and recreate. More recently, WFRC has developed and implemented a Local Planning Resource Program that provides technical placemaking assistance to local communities to utilize the Wasatch Choice for 2040 toolbox, including the "Envision Tomorrow +" scenario planning tool, model form based code, and green infrastructure planning resources.

Providing technical assistance to "right-size" transportation projects. In **Portland, OR, Metro** established technical assistance accounts for each member jurisdiction in its Unified Planning Work Program (UPWP). Cities may tap these accounts for their routine modeling needs. Metro also hired a transportation engineer with city experience to help take project concepts through the full design process. The engineer helps smaller jurisdictions with limited capacity overcome the tendency to overbuild projects using off-the-shelf highway design standards in contexts where more urban design is appropriate.

In the last decade, many MPOs created programs to provide technical assistance for public engagement activities, multimodal analyses and feasibility studies that would otherwise be a strain for localities for lack of staff expertise and/or funding. Creating such a program using MPO discretionary money may not be feasible for smaller MPOs, but some have used consultants on contract or tapped into other funding sources, such as non-profit foundations, who wish to support activities clearly linked to regional economic and livability goals. These programs may or may not be linked to capital improvements, but a technical assistance program can still have a great impact even if no capital funds are involved. When focused on a particular set of transportation needs, a technical assistance program can morph into a program that directs a substantial percentage of a region's transportation capital dollars. The section on Livable Communities programs later in this chapter will describe some examples of that evolution.

The **Metropolitan Washington Council of Governments (MWCOG)**, which houses the multi-state MPO for the Washington, D.C., metropolitan area, is in its eighth year of funding technical assistance projects through its Transportation/Land-Use Connections (TLC) Program and provides an instructive example of how a relatively small amount of money can have a big impact. The full case study can be found in the **Innovation in Action** section at the end of this chapter.

1 www.realestatenewsutah.com/events/placemaking-transit-form-based-code-approach-18399
2 http://wfrc.org/image_library/Pages/imagelibrary.html

ADOPT AND IMPLEMENT COMPLETE STREETS POLICIES REGIONALLY

Complete Streets are those designed and operated to enable safe access by all users. They are designed to make it easy to cross the street, walk to shops or transit stations and bicycle to work. Creating Complete Streets for most transportation agencies means changing their approach to designing roads. While a number of local communities and states have adopted Complete Streets policies, the MPO plays a critical role in encouraging transportation planners and engineers to design and operate the regional system so that it works for all users, regardless of age, ability or mode of transportation.

The opportunity

There is no uniform prescription for Complete Streets. Depending on the context, designers choose from a menu including sidewalks, bike lanes or wide paved shoulders, special bus lanes, comfortable and accessible public transportation stops, frequent and safe street crossing opportunities, accessible pedestrian signals, curb extensions, narrower travel lanes, roundabouts and more. A "complete" street in a rural area will look quite different from a "complete" street in a highly urban area, but both are designed to balance safety and convenience for everyone using the road.

MPOs can play a critical role by incorporating Complete Streets concepts into the long-range plan and the Transportation Improvement Plan (TIP). They can offer technical assistance to promote best practices and the use of related performance measures. Nearly 50 MPOs have adopted regional Complete Streets policies and thereby encourage adoption of local policies and plans.[1]

MPOs can also assist with the difficult tasks of implementation. A Complete Streets approach can actually lead to cost savings and improved safety for all users, but requires changes to transportation planning, design, maintenance and funding decisions. MPOs can provide model ordinances to local jurisdictions along with design manuals, other references and related training for local planners.

MPOs can use the framework of Complete Streets to promote expanded transportation options and improved safety — particularly for pedestrians and bicyclists. These are among the federally required planning factors for MPOs to consider in developing their long-range plans.

Putting it into practice

Hundreds of local jurisdictions nationwide, along with several state agencies, have formally adopted Complete Streets policies. At a minimum such policies should ensure that transportation projects are planned and designed to meet the needs of every community member regardless of their age, ability or how they travel.[2] MPOs, in turn, have also adopted policies and worked with their member jurisdictions to assist with implementation.

1 www.smartgrowthamerica.org/complete-streets/changing-policy/complete-streets-atlas
2 www.smartgrowthamerica.org/documents/cs/resources/cs-policyworkbook.pdf

In March 2014, for example, the **Indianapolis Metropolitan Planning Organization (Indy MPO)** adopted a policy requiring projects funded by the federal Surface Transportation Program and Transportation Alternatives Program to support Complete Streets principles. The policy includes minimum requirements for bicycle and pedestrian access, design guidance, a procedure for exceptions to the requirements and an evaluation process that establishes performance measures.[1]

Using a Complete Streets screen to prioritize projects. Even more constructive is for the MPO to prioritize Complete Streets projects in the development of regional long-range transportation plans and TIPs by developing standards for evaluating the conformity of transportation projects to the policy. Although this is a more ambitious undertaking, a few MPOs have risen to the challenge. The **Mid-Ohio Regional Planning Commission (MORPC)**, which serves the Columbus, OH region, developed a Regional Complete Streets policy for its member agencies, with a checklist to assist project sponsors in defining and designing their projects in adherence to the policy.[2] The checklist combines narrative and check-off items, with the applicant providing information on existing conditions and other factors.[3]

In Tennessee, the **Nashville Area MPO**[4] and the **Chattanooga-Hamilton County/North Georgia Transportation Planning Organization** both have demonstrated how to fully integrate Complete Streets into long-range transportation planning. The TPO adopted a policy in 2009-2010 as part of the 2035 Long-Range Transportation Plan and set aside a portion of MPO-controlled federal funds to support Complete Streets designs on various transportation corridors. As part of development of the 2040 plan, this approach evolved to integrate Complete Streets considerations more thoroughly into evaluating individual corridors and projects. In particular, the 2040 LRTP encouraged Complete Streets by using performance measures favoring projects that reduce vehicle miles travled (VMT) and "promote non-motorized access to community resources." The LRTP also incorporates Complete Streets into special area plans for transit corridors.[5]

The **Mid-America Regional Council (MARC)** in Kansas City has also incorporated Complete Streets considerations into its process for project selection and funding, to ensure that prioritized projects are those that do the most to meet a comprehensive set of regional goals that include safety, public health and equity. For more on the MARC Complete Streets strategy, see the detailed case study in the **Innovation in Action** section at the end of this chapter. MPOs can also help local jurisdictions see progress that has resulted from Complete Streets policies through reporting and monitoring.

1 www.indympo.org/Plans/MultiModalPlanning/Pages/Complete-Streets.aspx
2 www.smartgrowthamerica.org/documents/cs/impl/oh-morpc-checklist.pdf
3 http://morpc.org/transportation/complete-streets/index
4 www.nashvillempo.org/regional_plan/roadways/complete_streets.aspx
5 www.chcrpa.org/2040RTP/CHCRPA_2040RTP_Vol-1.pdf

ESTABLISH A LIVABLE COMMUNITIES PROGRAM TO FUND TARGETED ACTIVITIES AND PROJECTS

In many cases, local jurisdictions would be doing more to improve livability of their neighborhoods, town centers and streets but lack the technical expertise, resources or implementation network to be effective. Proactive MPOs, even small ones, can offer meaningful assistance to localities and incentives to make land-use and transportation decisions that are good for the region as a whole.

The opportunity

The Federal Highway Administration defines livability in transportation as the process of "integrating the quality, location and type of transportation facilities and services available with other more comprehensive community plans and programs to help achieve broader community goals."[1] A growing number of innovative MPOs are committing regional transportation dollars to capital projects and planning efforts that address community-scale livability challenges. In several instances, MPOs have established funding to help local governments undertake "livable communities" activities such as station area planning, Complete Streets, intersection improvements or other localized planning work. Focus Area 3 discusses the use of regional set-aside programs in more detail. These programs go beyond ad-hoc technical assistance to target resources for both planning and projects, with strategies that reflect regional goals.

Putting it into practice

Create programs to support local planning. The San Francisco Bay Area's **Metropolitan Transportation Commission** and the **Atlanta Regional Commission** both operate long-established livable communities programs that have won national recognition. The Atlanta program is spotlighted at the end of this chapter in the **Innovation in Action** section.

The **Akron (OH) Metropolitan Area Transportation Study (AMATS)** created its Connecting Communities Planning Grant program in 2010 to provide communities with up to $200,000 to develop plans that "enhance neighborhoods by improving transportation connections and promoting alternative modes of transportation like walking, biking and transit."[2] Grant funds can be used to hire a consultant to develop plans to improve the selected study area. Recent grants have helped identify needed street and transit improvements to address storm water problems, improve transit access to retail and job centers and to improve parking management and signage.[3] Recommended projects that arise from the funded plans receive greater consideration for inclusion in the MTP and TIP.

1 The Role of FHWA Programs in Livability: State of the Practice Summary. (Updated January 2014.) www.fhwa.dot.gov/livability/state_of_the_practice_summary/research00.cfm

2 www.amatsplanning.org/programs/amats-planning-grant/

3 www.amatsplanning.org/programs/amats-planning-grant/

Competitive planning grants for implementing regional goals at the local level. Since 2000, **the Capital District Transportation Committee in Albany, NY**, has operated a program of competitive planning grants and assistance called Community and Transportation Linkage Planning. Communities may use the assistance to plan for transportation and development strategies in corridors, neighborhoods or entire jurisdictions. Applications are evaluated on how well the proposed project addresses seven objectives:

1. Support urban revitalization and redevelopment of existing commercial/residential areas.
2. Improve street connectivity and reduce driveway conflicts through access management.
3. Enhance and develop activity centers and town centers.
4. Enhance and develop transit corridors and transit supportive built environments.
5. Encourage a greater mix and intensity of land uses.
6. Develop bicycle- and pedestrian-friendly design standards.
7. Create an integrated multimodal transportation network.

Over its first decade, the program sponsored 66 planning studies in 39 urban, suburban and rural municipalities and counties. The program is an important pipeline for identifying and doing the early planning work to shape capital projects. Since its creation, roughly $100 million in related capital projects has been included in the region's TIP for funding. The program has brought about significant changes in the region's planning culture as well, with local jurisdictions and developers reaching a better understanding of livability principles and working together to meet corresponding infrastructure needs.[1]

Resources

- FHWA-FTA Peer Exchange Report, "Effective Practices in Planning for Livable Communities at Metropolitan Planning Organizations" (2010): www.planning.dot.gov/Peer/Atlanta/atlanta_2010.pdf
- The Center for Transit-Oriented Development, "Transit-Oriented Development Tools for MPOs" (2010): http://reconnectingamerica.org/assets/Uploads/ctod_mpotod_final.pdf
- Strategic Economics (prepared for PSRC), "Incentivizing TOD: Case Studies of Regional Programs Throughout the United States" (2012): www.psrc.org/assets/10673/IncentivizingTOD_CaseStudies_of_Regional_Programs.pdf
- FHWA Guidebook & Best Practices on Linking Land Use & Transportation Planning: https://www.fhwa.dot.gov/planning/processes/land_use/land_use_tools/thetools.pdf
- National Complete Streets Coalition, "Taking Action on Complete Streets: A Toolkit for Implementation" (2013): www.smartgrowthamerica.org/documents/cs/impl/taking-action-on-cs.pdf
- Project for Public Spaces, Resources on Placemaking: www.pps.org/reference/reference-categories/placemaking-tools/

1 www.fhwa.dot.gov/planning/processes/land_use/case_studies/archive/albany_ny/

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 5)

ASSIST LOCALITIES IN DEPLOYING NEW TOOLS AND POLICIES

The National Capital Region Transportation Planning Board of the Metropolitan Washington Council of Governments — TPB (Washington DC/MD/VA)

Source: T4America photo by Stephen Lee Davis

The Transportation Planning Board (TPB) found a way to get more bang for its limited resources and make an impact at the local level with its Transportation/Land-Use Connections (TLC) Program. The TLC program offers technical assistance grants to support coordinated planning for transportation and land use and for development projects that make the most of transit networks. It is designed to help local communities meet goals of the regional plan: to integrate transportation and land-use planning to build locations with a mix of jobs, housing and civic uses; develop housing for all incomes around transit; improve access and safety for people on foot, bicycle and transit; and improve public health and the environment, among others.[1]

1 www.mwcog.org/transportation/activities/tlc/clearinghouse/strategies.asp

TLC awards eight to twelve grants each year for local planning projects that last no more than a year. Technical assistance supports local jurisdictions in hiring consultants from a pre-qualified list. Recent projects include research on parking demand, development of healthy design standards for affordable housing, a multimodal access plan, guidance on bikeway classification and a corridor "pavement removal strategy" among others.[1] Recipients are eligible to receive between $20,000 and $60,000 in technical assistance for project planning, payable to the technical consultant. Beginning in FY2013, the program began funding projects to 30 percent design in addition to planning studies. This new category is intended to fund work on conceptual design and preliminary engineering that will move projects toward implementation.

The new civic plaza and mixed-use buildings surrounding the Columbia Heights metro station. Source Stephen Lee Davis, T4America.

The program is designed to help localities address some of the stickier challenges of livable development, such as allaying public fears of increased density, tackling the intricacies of a multimodal streetscape (particularly for bicycles and pedestrians), ensuring affordable housing in activity centers and getting the timing of infrastructure improvements right to ensure successful mixed-use development that does not adversely impact existing

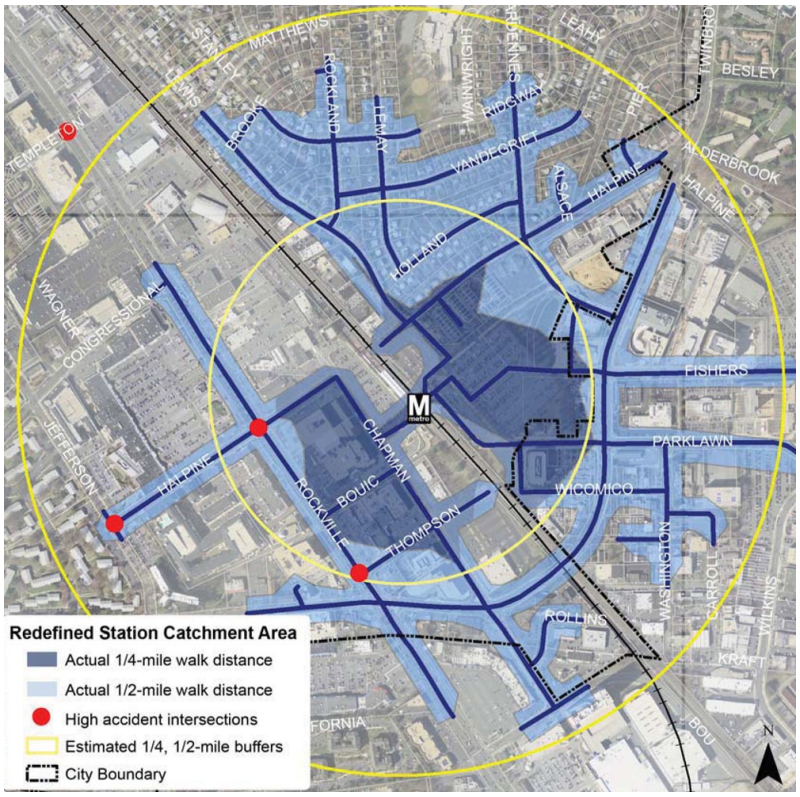
1 www.mwcog.org/transportation/activities/tlc/program/projects.asp

surrounding areas. Since its inception with a six-month pilot program in 2007, the TLC program has funded and managed 72 technical assistance projects, using a total of more than $2.3 million in its UPWP Planning funds. Local jurisdictions find the program's flexibility and streamlined application process very appealing in comparison with other potential sources of funding for such activities.[1]

At the time of the program's creation, the TPB looked into the ambitious livable communities programs operated by the **Atlanta Regional Commission** and the **Bay Area's Metropolitan Transportation Commission**, which could go beyond planning support to program capital funds for related projects. However, some MPO members, including state DOTs and local governments, were concerned about MPO involvement in land-use issues and project selection.

The program's success has spurred slow but steady progress and demonstrated the MPO's ability to catalyze action at the local level. As indication of its impact, the Maryland DOT twice contributed extra funds from its technical assistance account to support additional TPB technical assistance projects in Maryland.

Despite their small size, local communities see the TLC grants as a powerful tool to lend a sense of urgency to projects and bring stakeholders together to collaborate in unprecedented ways. The TPB created a TLC Regional Peer Exchange Network in 2011 so that practitioners and local planners could share lessons learned on TLC topics. The Network has hosted a half-dozen forums and webinars on various livability themes with presentations by recipients of TLC help.[2]



Accessibility and Rockville's TODs.
Source: www.mwcog.org/transportation/activities/tlc/program/bikeped.asp

1 www.mwcog.org/transportation/activities/tlc/program/application.asp
2 www.mwcog.org/transportation/activities/tlc/clearinghouse/rpen/

National Capital Region Transportation Planning Board of the Metropolitan Washington Council of Governments	
Type	The Transportation Planning Board (TPB) is housed within the COG. The MPO staff is provided by the COG's Department of Transportation Planning.
Composition	The COG's Transportation Planning Board is compromised of 36 members with an additional 6 ex-officio members. The TPB is housed within the COG and the COG has its own elected officials and Board of Directors with separate functions from the MPO.
Voting	Any voting member may require that the vote on any matter brought before the TPB be decided on a proportional voting basis. For this purpose, five votes each are assigned to Maryland, Virginia and the District of Columbia. If the total weighted vote of those present and voting within any one of the Maryland, Virginia or District of Columbia portions of the Metropolitan Area is less than five, the weighted vote for each of the representatives present and voting for that portion of the Metropolitan Area is increased proportionally to insure a total of five votes.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$26.5 million total for the COG, $12.5 million for the TPB; 58 full-time staff at the TPB from MWCOG's transportation planning department.
Responsibilities beyond transportation	Scenario planning, land use coordination, air quality, climate change, green building, green infrastructure, homeland security
Independent revenue authority	The TPB does not have independent revenue authority besides accepting membership dues from local jurisdictions

References: www.mwcog.org/about/
www.mwcog.org/uploads/pub-documents/o15cWF420140129133156.pdf
www.mwcog.org/uploads/committee-documents/sVIZVIY20060804153725.pdf
www.mwcog.org/clrp/elements/scenarios.asp

ADOPT AND IMPLEMENT COMPLETE STREET POLICIES REGIONALLY

Mid-America Regional Council (Kansas City KS/MO)

The Mid-America Regional Council (MARC) provides an excellent example of a comprehensive approach to Complete Streets, from adopting policies to assisting local jurisdictions with implementation and demonstration projects and incorporating the principles into regional planning and project selection.[1]

1 www.marc.org/Transportation/Special-Projects/Regional-Initiatives/Complete-Streets

The process began in 2008, when the MARC Board of Directors adopted a regional vision document that emphasized sustainability. This served as the foundation for the region's next long-range transportation plan update, Transportation Outlook 2040, approved in 2010. The plan recommended adoption of a regional Complete Streets policy and included strategies to support implementation throughout the region. Months after the adoption of Transportation Outlook 2040, the City Council of Kansas City, MO — the region's core jurisdiction — adopted a Livable Streets Resolution consistent with the regional guidance.[1]

1 http://mobikefed.org/2011/01/kansas-city-adopts-complete-streets-resolution

Before-and-after photos of a road diet and roundabout installation on Santa Fe Drive in Overland Park, Kan. Courtesy of city of Overland Park, Kan.

At least a dozen additional localities in the metropolitan area now have adopted similar policies, in part because of the next step taken by MARC: partnering with a national consultant in fall 2011 to develop a Complete Streets Policy Handbook as a resource for local jurisdictions. MARC also conducted two Complete Streets demonstration projects in the communities of Kansas City and Raytown, MO and helped the Kansas City chapter of the American Public Works Association update bicycle facility design guidelines. These activities were enabled by a grant from the Health Care Foundation of Greater Kansas City.[1] At the same time, MARC drafted its own formal Complete Streets policy, which the Board then adopted in March 2012.[2]

The MARC policy is emblematic in its reach and thoroughness. It **clearly states the region's interest** in creating a safe, balanced, multimodal and equitable transportation system and the crucial role of Complete Streets in achieving that goal. It **applies the policy broadly** to all MARC planning activities that involve public rights of way and any activities conducted by MARC to program federal funds for projects in the TIP. It **defines "Complete Streets,"** saying that, "Projects shall provide safe accommodations for all travelers who have legal access and who may reasonably be expected to use the facilities, while being sensitive to the current and future community context." It **provides for exceptions** and emphasizes that individual implementing agencies retain design authority over their projects, while making clear that exceptions should be rare. Finally, it describes **implementation** and the **performance measures** that will be used to evaluate the policy's effect.[3]

The MPO also integrates Complete Streets into its RTPs through a set of scoring criteria for project selection and by using that criteria to establish performance measures for the plan. Both the scoring criteria and performance measures include multimodal, bicycle and pedestrian accessibility factors.[4]

Key to MARC's motivation for implementing Complete Streets was a growing sense that other communities in the larger region — particularly the Missouri cities of Columbia and St. Louis — were ahead of Kansas City in creating progressive transportation policy. Businesses and residents were demanding more bicycle- and pedestrian-friendly streets and communities did not want to cede their competitive edge to other regions of the country.

1 www.marc.org/Transportation/Special-Projects/assets/CompleteStreetsReport.aspx
2 www.smartgrowthamerica.org/documents/cs/policy/cs-mo-marc-policy.pdf
3 www.marc.org/Transportation/Special-Projects/assets/CompleteStreetsPolicy.aspx
4 www.to2040.org/assets/plan/AppendixC_ProjectSolicitationEvaluation.pdf; www.to2040.org/Measuring_Progress/index.aspx

Mid-America Regional Council (MARC)	
Type	MARC is a non-profit association of city and county governments in the Greater Kansas City region.
Composition	Governed by a Board of Directors that consists of 33 local elected officials from the nine member counties and six largest cities in the region. The cities include Kansas City, MO; Kansas City, KS; Independence, MO; Lee's Summit, MO; Olathe, KS; and Overland Park, KS.
Voting	Each member has one vote.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$59.4 million; 132 full-time staff
Responsibilities beyond transportation	Aging services, early learning, health care, community development, homeland security, emergency services, air and water quality, solid waste management, energy conservation
Independent revenue authority	MARC has no taxation or regulatory authority

References: www.marc.org/Regional-Planning/MARC-s-Role
www.marc.org/What-is-MARC/General-Information/Board-of-Directors
www.marc.org/What-is-MARC/pdf/marcbylaws.aspx
www.marc.org/About-MARC/General-Information/Financial-Information

ESTABLISH A LIVABLE COMMUNITIES PROGRAM TO FUND TARGETED ACTIVITIES AND PROJECTS

Atlanta Regional Commission — ARC (Atlanta, GA)

When it comes to shepherding a region's varied communities into a new era of livability, the Atlanta Regional Commission (ARC) provides a stellar example. It is also evidence of how MPO-led livable communities programs can evolve over time from small-scale planning grants to robust programs that provide both technical assistance and capital funds.

ARC's Livable Centers Initiative (LCI) began in 1999 at a time when the region had failed to make a transportation plan that would keep emissions at levels acceptable under the federal Clean Air Act. With the prospect of future federal transportation funding hanging in the balance, the ARC moved to address the core underlying problem: a pattern of dispersed development that required excessive driving and a model for the future that anticipated more of the same. The ARC acted to take concrete steps to re-prioritize transportation spending and effect real change in land-use patterns in the region.

Source: ARC.

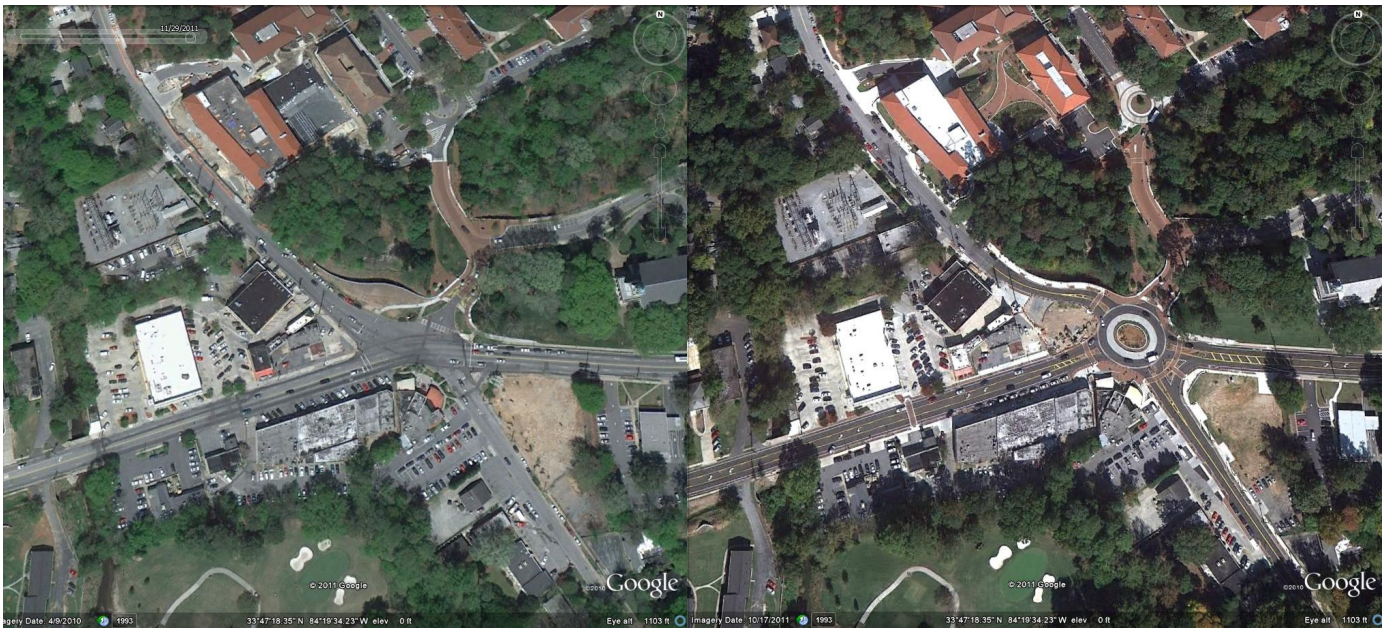
Over the past 15 years the LCI has demonstrated its value and regional popularity. Using federal Surface Transportation Program funds, the program provides roughly $1 million annually in grants for existing town centers, activity centers and corridors to develop plans that enhance livability and mobility. In addition, the long-range transportation plan

allocates about $20 million annually to implement capital projects derived from these community-level planning efforts. While relatively small in scale, these projects can make a big difference in conditions for pedestrians, transit riders and motorists in neighborhood centers. Since the LCI's inception, more than 100 projects and almost $200 million in LCI transportation funds have been programmed in the region's TIP.

LCI-funded plans must align with the program's goals for walkable, transit-accessible development by enhancing streetscapes and sidewalks, emphasizing pedestrian safety, improving transit access and expanding housing options. They also require extensive public participation and a local 20 percent match.

Eligible parties apply annually for LCI funding. LCI planning grant applications are screened by a panel representative of stakeholder groups such as the Georgia Conservancy, the Atlanta Neighborhood Development Partnership and the Livable Communities Coalition, among others. Once an LCI planning study is completed, recipients are eligible to apply for funds for follow-up studies, such as zoning code changes, design guidelines or market analyses. Perhaps most influential of all, LCI communities become eligible for earmarked transportation project funding. The ARC evaluates project proposals internally and only applicants who have demonstrated a commitment to implementing their LCI plans are awarded funding. Commitment is shown through such actions as adopting the LCI Plan into the local government's Comprehensive Development Plan, or creating a zoning overlay district for the LCI area. ARC conducts periodic follow-up with grantee communities to evaluate their implementation efforts and address any challenges.

In recent years, ARC also has integrated an element known as the Lifelong Communities initiative.[1] As the region prepares for the aging of the baby boomer generation, the Lifelong Communities initiative is helping communities focus on expanding housing and transportation options, and implementing community designs and programs that encourage healthy living and expanding access to services for older adults.[2] The LCI has



Aerial images from before and after the implementation of a roundabout at the entrance to Emory University. Google Earth images provided by ARC.

1 www.atlantaregional.com/aging-resources
2 http://newsmanager.atlantaregional.com/anmviewer.asp?a=40333&z=21

emphasized providing a range of housing options; more than half of LCI communities now have affordable and/or senior housing policies. Extensive tracking and reporting includes a peer exchange and regular studies of indicators and benefits.[1]

LCI planning projects represent about one percent of funding in the region's long-range transportation plan, but LCI capital projects comprise 25-30 percent of the region's "STP Urban" funds.[2] ARC also took steps to streamline the process for moving LCI capital projects forward in 2007 by introducing a scoping phase, designed to better prepare project sponsors in developing project concept reports.[3] ARC also provides model resolutions and policies, along with best practices in zoning and design codes.[4] LCI study grants have proven to be innovative ways to generate private investment to develop creative solutions in support of regional visioning that links land use and transportation.

Atlanta Regional Commission (ARC)	
Type	ARC is a regional planning and intergovernmental coordinating agency.
Composition	The Atlanta Regional Commission Board is made up of 39 members. This includes each County Commission Chairman in the region, one mayor from each county (selected by a caucus of mayors in that county — except for Fulton county, where 2 mayors are chosen, one from each northern and southern halves), a member of the Atlanta City Council chosen by the council, fifteen private citizens (one from each of the multi-jurisdictional districts elected by 23 public officials) and one member that is appointed by the Board of the Georgia Department of Community Affairs. There are 10 counties and 70 municipalities represented by ARC
Voting	Each member has one vote
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$63.6 million; 190 full-time staff
Responsibilities beyond transportation	Economic competitiveness strategies, green and livable communities initiatives, land-use planning, housing, air quality, regional water issues, historic preservation
Independent revenue authority	None
State enabling legislation	The 39-member ARC Board membership is defined in state code and is required to be a combination of elected public officials and citizens (Georgia Code 50-8-84).
References: www.atlantaregional.com/about-us/overview www.atlantaregional.com/transportation/resources http://law.justia.com/codes/georgia/2006/50/50-8-82.html	

1 www.atlantaregional.com/land-use/livable-centers-initiative/evaluation
2 http://partnershipforsouthernequity.org/index.php/issue-areas/economic-recovery/33-promising-practices-in-equitable-recovery
3 www.atlantaregional.com/land-use/livable-centers-initiative/lci-transportation-program
4 www.atlantaregional.com/land-use/livable-centers-initiative/resources

FOCUS AREA 6

MAKE FREIGHT WORK FOR YOUR REGION

Goods movement is critical to regional, national and global economies and is a growing area of importance for metropolitan planning organization (MPO) planning. Logistics is a unique challenge in that it brings together multiple public agencies like ports and airport authorities, and private firms — from small business owners and freight carriers to multinational firms —and involves complex data analytics. In the freight business, time truly is money.

As the Federal Highway Adminstration (FHWA) notes in a freight handbook, good planning can lead to "reduced congestion, improved air quality and safety, enhanced community livability, improved operational efficiency, reduced transportation costs and greater access to facilities and markets."[1] Nationally, freight volumes and their attendant impacts are anticipated to grow by over 60 percent in the next 25 years. It is imperative that MPOs plan appropriately to accommodate freight-generating industries while protecting the health, safety and quality of life of residents.[2]

Freight issues comprise more than just goods movement. Freight traffic and pollution are common public concerns, with disproportionate impacts often borne by populations living near freight facilities and heavily travelled freight corridors. As such, freight is an important environmental justice issue in many communities and also an area of focus of the US Department of Transportation (USDOT).

Planning for freight movement within a region must be integrated with local and regional transportation and land-use planning. MPOs are in a unique position in that they are able to articulate a regional vision that includes freight, which then can help inform actions by local governments and private freight operators. Innovative MPOs are incorporating freight considerations in their scenario planning and the performance metrics used to evaluate their plans. To ensure that freight works for the region both economically and socially, these MPOs take pains to involve freight industry stakeholders in the planning process while mitigating impacts.

Innovative actions for MPOs to make freight work better for their region include:

- **Integrate freight into long-range plans and measures**
- **Mitigate land-use and freight conflicts**
- **Develop freight profiles and performance measures**
- **Address freight-related environmental justice impacts**

1 Federal Highway Administration, "Freight and Land Use Handbook." (April 2012): www.ops.fhwa.dot.gov/publications/fhwahop12006/index.htm

2 *Ibid.*

INTEGRATE FREIGHT INTO LONG-RANGE PLANS AND MEASURES

One of the central responsibilities held by MPOs is developing the long-range metropolitan transportation plan (MTP) and setting regional transportation policies and investment programs. MPOs are well served by giving specific emphasis to freight needs and the impact of trucking, rail yards, port activities and related activities on surrounding communities. Two actions for MPOs to undertake include identifying regional freight needs and deficiencies and addressing them explicitly in long-range plans.

The opportunity

Freight planning is an area where many MPOs have established partnerships with private carriers to help inform the planning process and prioritize freight needs. One simple way to foster these partnerships is by establishing a Freight Advisory Committee that includes representatives from regional employers, labor, ports and freight carriers. Committee members can provide technical and first-hand knowledge to help the MPO generate and prioritize lists of short-term improvements, assist with large-scale corridor studies, identify important freight-related projects and collect data or assist in modeling efforts. Chambers of commerce and/or economic development agencies may also have a key role. MPO staff can identify additional stakeholders from the freight sector through industry directories or even the local Yellow Page listings. Because different types of shippers have different needs depending on what they ship and where in the region they are located, ensuring a sufficient diversity of freight shippers is useful.[1]

A first step and one that can be informed by a Freight Advisory Committee, is to undertake an assessment of freight needs and deficiencies to identify gaps between existing and future freight system conditions and capabilities. This type of analysis goes beyond simply profiling the existing freight system to include an analysis of how well the system performs against a set of metrics, such as anticipated future demand and strategies to effectively manage regional mobility, safety and security (an increasingly important issue for freight providers and governments).

Freight involves maritime, aviation, rail and other surface transportation shippers and transportation facilities. Source: Duluth-Superior Metropolitan Interstate Council.

With those preliminary actions taken, MPOs can develop freight-centered policies, programs and plans as elements of the MTP so that these needs are adequately considered in determining future investments and priorities for system management.[2] Through a robust public engagement process, MPOs can incorporate and balance community and freight needs while creating opportunities to articulate and educate stakeholders on the importance of freight to the regional economy. The same process can help address any incompatible land uses, adverse impacts or other concerns that may arise in discussing long-term growth and development.

1 www.fhwa.dot.gov/planning/freight_planning/archive/guidel2.cfm

2 NCHRP. (2007). "Guidebook for Freight Policy, Planning and Programming in Small- and Medium-Sized Metropolitan Areas." http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_570.pdf

Putting it into practice

Identifying improvements by mode in a tri-state plan. The **KYOVA Interstate Planning Commission (KYOVA)** is a regional organization responsible for overseeing coordination and planning of the Huntington, WV – Ashland, KY – Ironton, OH metropolitan area. (The acronym is formed from the state abbreviations.) KYOVA has developed a detailed freight-centered element to their KYOVA 2040 Metropolitan Transportation Plan[1] that incorporates local freight system studies, stakeholder input and existing conditions as well as future trends. The result is an overarching vision of what aspects of the regional freight systems are working and what aspects may need attention in the future. The freight chapter also uses data and stakeholder interviews to idenity "Issues and Constraints" by mode and recommends areas of future investment for each mode.[2]

Making use of freight leaders to optimize the regional plan. The **Chicago Metropolitan Agency for Planning (CMAP)** has also developed a freight-centered element as part of their comprehensive long-range plan for the City of Chicago and surrounding localities, entitled GO TO 2040. The freight chapter summarizes the benefits of an efficient freight system for regional livability and economic prosperity. It also offers a brief discussion of current freight conditions in regard to local land use and freight market dynamics. A set of regional recommendations and targets are provided to improve regional freight movement over the next 30 years, with specific actions that various local and regional partners should pursue.[3]

CMAP also published a report written in partnership with the Regional Freight Leadership Task Force, which is composed of freight experts from the public, private and non-profit sectors. The report describes a "preferred [regional] scenario" in which multimodal freight planning is incorporated into the long-range planning frameworks. It also calls for funding to be drawn from user fees to support the freight-related operations and activities identified in the long range plan (LRP).[4]

Planners at the **Toledo Metropolitan Area Council of Governments (TMACOG)** have recognized that the entire state of Ohio is a critically important center of freight activity. To better coordinate efforts in Ohio and the entire Great Lake region, TMACOG organized the Ohio Conference on Freight, held annually since 2007. The conference brings together MPOs, private industry, and transportation and logistics professionals from up to sixteen states, the Canadian province of Ontario, and Mexico. Attendees learn from experts in finance, government, industry, and labor. It is a rare venue where representatives of all modes — road, rail, water, air, and pipeline — can meet to work together on common issues.[5]

1 www.wvs.state.wv.us/kyova/default.htm
2 www.wvs.state.wv.us/kyova/2040MTP/documents/KYOVA2040_MTP_Final.pdf
3 www.cmap.illinois.gov/about/2040/download-the-full-plan
4 www.cmap.illinois.gov/about/involvement/committees/other-groups/regional-freight-leadership-task-force
5 www.ohiofreight.org/ocf.htm

MITIGATE LAND-USE AND FREIGHT CONFLICTS

MPOs in metropolitan regions with a strong economy and a growing population often face challenges in balancing or mitigating land-use and freight transportation needs when the two are in conflict. Local governments control land use, but freight logistics occur at a much larger scale, and decisions made by one jurisdiction can affect producers in another part of the country. The innovative MPO plays a critical role in helping to balance these interests.

The opportunity

Increased regional economic activity generally translates into pressure on the transportation system — more frequent and longer trains, increased semi-trailers on Interstates, more activity at ports and airports and a rise in delivery vehicles on city streets. Most MPOs recognize that these are concerns to address together with other state and local government partners during the planning process. Creating processes through which private sector stakeholders involved in shipping, manufacturing and logistics can contribute to the planning process is an effective means for ensuring that the complexity of freight needs are considered and woven into plans, policies and performance measures.

Less well understood, but equally important, are the decisions made by local governments regarding the land-use and development goals for parts of the city adjacent to freight and logistical centers or corridors. Many cities are pursuing plans to redevelop under-used industrial areas into new walkable, urban neighborhoods with a mix of housing, retail and jobs. Sometimes these efforts create conflicts with existing industrial uses, or push these industries and their good-paying, blue-collar jobs out to urban fringes, worsening traffic and making jobs harder to reach for many. The failure to coordinate between freight and community objectives creates situations in which freight infrastructure and land uses may be incompatible with one another.

Freight infrastructure may produce excess noise and nighttime lighting, increased traffic and air pollution or other negative impacts. Some are an inconvenience, but others pose a serious public health or safety concern. With these issues in mind, MPOs are increasingly recognizing the importance of linking freight transportation and land-use planning and facilitating dialogue between freight providers or facilities and local jurisdictions who control land-use decisions.

Freight impacts adjacent land uses and transportation networks. Source: MIC.

MPOs can begin to help mitigate land-use and freight conflicts by using scenario planning that helps show communities the trade-offs among freight, land-use and economic impacts, including associated jobs and tax relief programs. As noted in **Focus Area 1** of this Guidebook, Moving Ahead for Progress in

the 21st Century (MAP-21) includes a strong emphasis on scenario planning as a tool to shape transportation plans. FHWA provides guidance and best practices for using scenario planning to also analyze freight-related trends and alternative futures.[1]

Some MPOs have developed policy guidance documents to help communities understand freight system logistics, the importance of industrial areas and how to share and preserve critical freight corridors. Another strategy is for the MPO to provide technical support to local communities to plan for freight and industrial lands, or to work with private sector partners to develop mitigation strategies.[2] The MPO, in its regional data collection and analysis role, also provides information on important factors such as freight travel, air pollution and other environmental impacts and safety data to inform these local and regional discussions. MPOs can take this a step further and disseminate model zoning and land-use regulations or develop logistics-supportive design guidelines that work for freight but also work for the people living and working nearby.

Putting it into practice

A comprehensive plan to mitigate impacts and spread benefits of freight facilities. As a major connection to global supply chains, the Memphis metropolitan area is a region known for innovative approaches to freight and logistics. It is the home of the nation's second largest air cargo airport, fourth largest inland water port, several warehousing facilities and numerous interstate freeway connections. As such, the **Memphis Urban Area Metropolitan Planning Organization (Memphis MPO)** has made freight planning a regional and organizational priority.

Critical as freight may be, regional leaders were concerned that haphazard development in and around airports and port facilities were impinging on economic efficiency, local aesthetics and environmental quality and that some neighborhoods have been degraded by crime and blight. In order to integrate aviation and logistics-based freight needs, airport expansion and management and redevelopment of adjacent communities, the MPO adopted an innovative strategy dubbed **Memphis Aerotropolis.**[3] The plan includes strategies such as establishing redevelopment zones, improving local code enforcement, increasing transit service, reducing conflicts between commuters and freight truck traffic, workforce education for freight-related jobs and encouraging commercial redevelopment through land assembly, freight infrastructure improvement and financial incentives such as tax-increment financing.[4]

Going beyond MPO boundaries to plan for freight. In Pittsburgh, the **Southwest Pennsylvania Commission (SPC)** serves as the federally designated MPO. Freight plays a major role in the region's economy and influences land uses such as manufacturing, research and development, and fuel extraction. SPC hosts a regional freight forum each year to facilitate collaboration among the various freight modes serving the region. SPC uses information gained at these meetings to design freight-specific transportation improvements, as well as in the evaluation of applications for state and federal grant funding.[5]

1 Federal Highway Administration, (April 2012). "Freight and Land Use Handbook." www.ops.fhwa.dot.gov/publications/fhwahop12006/index.htm
2 *Ibid.*
3 http://memphisaeroplan.com/overview.php
4 http://memphisaeroplan.com/overview.php
5 www.spcregion.org/trans_freight.shtml

Because the region's freight connections extend beyond the MPO's service area, SPC also hosts an annual freight conference that brings together stakeholders from across state lines. SPC uses information from this event to more effectively address the freight transportation needs of the region and to strengthen partnerships with adjoining regions and State DOTs to facilitate more integrated freight planning across modes.

The third annual Regional Freight Conference, held in May 2014, brought together representatives from Pennsylvania, Ohio, Maryland, and West Virginia. Topics of discussion included multi-state issues such as the regional river network, mapping and marketing of freight facilities, and state-based freight planning efforts. PennDOT is a regular partner in these efforts, and the provision of local input into the Pennsylvania Statewide Comprehensive Freight Plan was a key feature in the 2013 Regional Freight Conference.

ESTABLISH FREIGHT PROFILES AND PERFORMANCE MEASURES

Freight involves both public and private providers representing a wide range of perspectives, from global shippers to small, independent carriers, and major regional employers to small-scale entrepreneurs. Reams of intricate data are required to move goods quickly, safely, reliably and cheaply. Innovative MPOs place a priority on establishing processes to engage this diversity of perspectives and develop evaluation tools to better understand freight needs and impacts.

The opportunity

With the increasing importance of freight systems to regional economies, innovative MPOs are working to better monitor local freight conditions through techniques such as regional "freight profiles", developing performance measures for freight and assessing the impact of freight projects on the surrounding community.

A regional freight profile serves as a regional overview summarizing the type and location of freight operations and associated transportation infrastructure. At a minimum, MPOs use regional travel data and GIS tools to develop a regional freight profile. More advanced approaches rely on participation and guidance from local stakeholders, as well as more comprehensive and fine-tuned data. This may require MPOs to program funds to support research, data and development of forecasting models or to acquire data from a third-party source. Developing this type of information is vital to creating regional performance measures that allow MPOs and regional stakeholders to better understand current freight conditions and future needs.

In establishing freight-related performance measures, many MPOs rely on technical committees or citizen advisory committees to develop metrics for progress on community goals and objectives, to identify available data and to conduct evaluation.[1] Freight performance measures should be designed to evaluate not only the impacts of freight investments, but also the effects of broader transportation investments and policies on the region's freight goals and objectives.[2] These measures provide early warning signs that MPOs, regional partners including ports, freight carriers and local governments and the state department of tranpsortation (DOT) will

1 NCHRP. (2007). "Guidebook for Freight Policy, Planning and Programming in Small- and Medium-Sized Metropolitan Areas." http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_570.pdf

2 *Ibid.*

need to address in future long-range plans or policies.[1]

Some MPOs use a "freight project impacts assessment", a decision tool that uses data and analysis to compare project alternatives and their impacts and to prioritize investments.[2] Basic approaches tend to examine more qualitative project impact factors while more advanced methods use quantitative measures and models in their evaluation. For instance, a freight project impacts assessment may use the region's existing travel models modified to give extra consideration to freight.

Putting it into practice

Letting economic development lead the way. In Seattle, the **Puget Sound Regional Council (PSRC)** worked with the Economic Development Council of King County (EDC) to form a Freight Mobility Roundtable to advise on data collection efforts, performance measures and corridor studies. In establishing the Roundtable, PSRC recognized that prospective freight sector members would respond more positively if the pro-business EDC was seen as spearheading the effort. Among the specific outcomes has been greater investment in clean diesel technologies to help mitigate environmental impacts of freight facilities and semi-trailers.

Clean Diesel Vehicles at the Port of Seattle. Photo source: PSRC

Creating a comprehensive regional freight profile. The **National Capital Region Transportation Planning Board at the Metropolitan Washington Council of Governments (TPB)** created a regional freight profile as part of a report entitled Enhancing Consideration of Freight in Regional Transportation Planning. The profile demonstrates the importance of freight to a region with a service-based economy and the negative effects that congestion of regional railways and highways has had on economic competitiveness and costs. Using publicly available data and observations, the profile presents a portfolio of performance indicators in order to describe current regional freight movement, trends, the needs of each mode, major trading partners, commodities moved, local freight generators and clusters and safety concerns.[3]

The **Innovation in Action** section of this chapter includes a case study of comprehensive freight planning efforts by the bi-state **Duluth-Superior Metropolitan Interstate Council**. The MPO's comprehensive strategy addresses port, rail and highway freight issues, offering many lessons for other MPOs in both large and small regions.

1 NCHRP. (2007). "Guidebook for Freight Policy, Planning and Programming in Small- and Medium-Sized Metropolitan Areas." http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_570.pdf

2 *Ibid.*

3 www.mwcog.org/clrp/elements/PDFs/Freight_Study_2007_Final.pdf

ADDRESS IMPACTS ON VULNERABLE COMMUNITIES

While freight movement plays a critical role in the regional economy, when poorly planned, it can increase environmental health hazards in adjacent communities, including exposure to dangerous chemicals and hazardous air quality levels. Low-income and minority neighborhoods are disproportionately burdened by these types of exposures. Under the banner of environmental justice, several innovative MPOs are developing new evaluation approaches and public outreach methods to address impacts resulting from regional freight facilities and traffic.

The opportunity

According to FHWA, "environmental justice refers to the geographically equitable distribution of the benefits and burdens of government policies, programs and investments and to ensure the full and fair participation by all potentially affected communities in the transportation decision-making process."[1]

MPOs stand as important actors in encouraging the region-wide adoption of freight practices that reflect the importance of balancing freight activity with their environmental and community impacts. Further, federal executive orders on environmental justice require MPOs to consider impacts from federally funded transportation investments.[2] In their review of MPOs during the certification process, FHWA and the Federal Transit Administration (FTA) assess the adequacy of Public Participation Plans in terms of outreach to traditionally underserved populations.

One way to restrict the encroachment of incompatible land uses on vulnerable neighborhoods is for MPOs to encourage local jurisdictions to establish specific zoning for industrial and manufacturing districts appropriate for freight activity. MPOs can bring together stakeholders representing freight interests with those from affected communities to identify concerns and work towards solutions. Important issues to consider include ensuring the safety of residents, as well as minimizing noise, light and air pollution and providing access to affordable goods.

Putting it into practice

Locating and quantifying the impacts. Southern California is the largest international trade gateway in the United States, and goods movement plays a significant role in the regional economy and transportation system. Historically, neighborhoods along major freight corridors and facilities have been disproportionately poor and non-white. Significant environmental health impacts in these communities have made environmental justice

1 Federal Highway Administration. (April 2012). "Freight and Land Use Handbook," Section 1, p. 4, www.ops.fhwa.dot.gov/publications/fhwahop12006/index.htm,

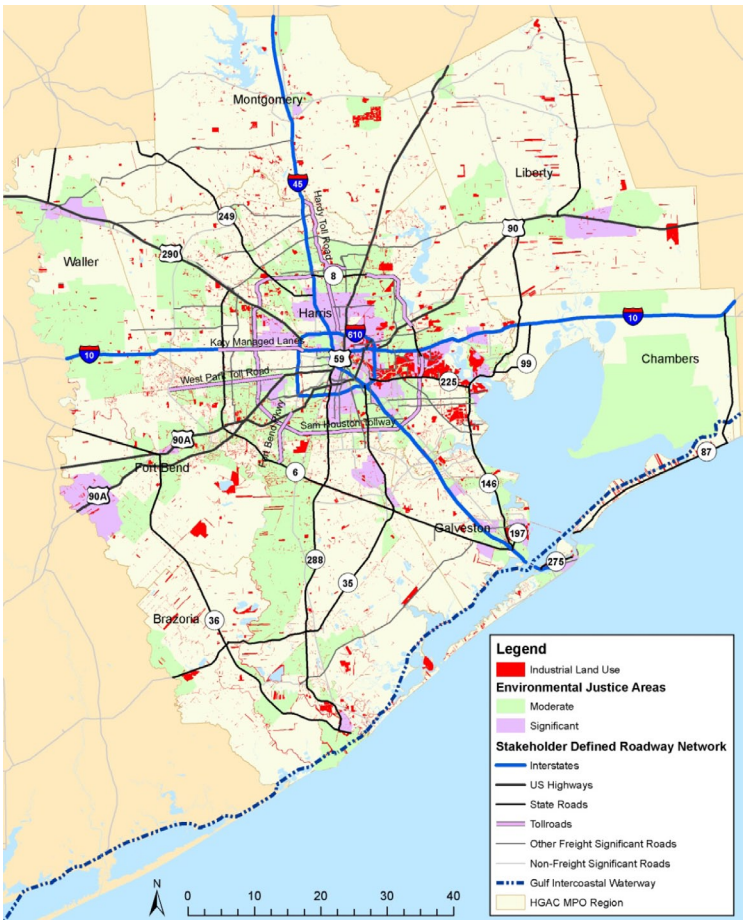
2 Title VI of the Civil Rights Act of 1964 states that "no person in the United States shall, on the ground of race, color or national origin, be excluded from participation in, be denied the benefits of, or be subjected to discrimination under any program or activity receiving Federal financial assistance." Under Executive Order 12898, Title VI was further amplified by providing that "each Federal agency shall make achieving environmental justice part of its mission by identifying and addressing, as appropriate, disproportionately high and adverse human health or environmental effects of its programs, policies and activities on minority populations and low-income populations." USDOT Orders on Environmental Justice in 1997 and 1998 were issued in support of Executive Order 12898. www.epa.gov/environmentaljustice/resources/policy/exec_order_12898.pdf

concerns a major focus of the **Southern California Association of Governments (SCAG)**.

The SCAG has a longstanding policy to actively ensure nondiscrimination in all of its activities and seeks public participation throughout the entire transportation-planning process. SCAG created an Environmental Justice in Transportation Committee to ensure that concerns were heard and reflected in the region's LRTP and freight policies. A 2012 analysis conducted for the committee found higher concentrations of lower-income and disadvantaged residents along major truck and rail corridors. Among other impacts, it found those zones had higher-than-average levels of PM2.5 in the air — tiny particles that produce haze and can affect lung function and worsen medical conditions such as asthma and heart disease.[1] The agency conducted targeted public outreach through several environmental justice workshops in 2011-12 as a means to hear concerns that need to be addressed in the MTP and other SCAG policies and plans.

Going the extra mile to reach out to affected communities. In Texas, the Houston-Galveston Area Council (H-GAC) works in a major international and domestic freight region with significant issues of environmental justice (EJ) facing certain populations in the region. A 2014 study of the area revealed that over a third of the 1,062 census tracts were classified as "EJ Zones".[2] H-GAC has analyzed the adverse and cumulative environmental justice impacts of existing and proposed toll roads, which are major freight corridors. It has also developed partnerships with area non-profits to better reach these communities.

In developing its 2035 long-range transportation plan, the MPO worked with United Way of Texas Gulf Coast and the Texas Citizen Fund to conduct additional outreach to gather input on mobility challenges from persons with disabilities, seniors, low-income residents and others through surveys available in English, Spanish, Vietnamese, online, in large print and over the telephone.[3] H-GAC monitors and evaluates environmental justice accessibility analysis data and through consultants has analyzed the impacts of its regional goods movement plans on specific target populations.[4]



Source: page 4-15 of www.h-gac.com/taq/Regional%20Goods%20Movement/Reports/Documents/HGAC_Regional%20Goods%20Movement_Complete.pdf

1 www.scag.ca.gov/Documents/attach17.pdf
2 www.ntis.gov/search/product.aspx?ABBR=PB2014107485
3 www.h-gac.com/taq/plan/documents/2035_final/Appendix%20C-Environmental%20Justice.pdf
4 www.h-gac.com/taq/Regional%20Goods%20Movement/Reports/Documents/HGAC_Regional%20Goods%20Movement_Complete.pdf

Resources

- Cambridge Systematics, Inc. (2007). "Guidebook for Freight Policy, Planning and Programming in Small- and Medium-Sized Metropolitan Areas." National Cooperative Highway Research Project Report 570. http://onlinepubs.trb.org/onlinepubs/nchrp/nchrp_rpt_570.pdf
- Cambridge Systematics, Inc. (April 2012). "Freight and Land Use Handbook." Federal Highway Administration. www.ops.fhwa.dot.gov/publications/fhwahop12006/index.htm
- FHWA Public-Private Freight Guidelines www.fhwa.dot.gov/planning/freight_planning/archive/guidel2.cfm
- FHWA Environmental Justice Resources www.fhwa.dot.gov/environment/environmental_justice/
- FTA Environmental Justice Resources www.fta.dot.gov/12347_14823.html

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 6)

DEVELOP FREIGHT PROFILES AND PERFORMANCE MEASURES

Duluth-Superior Metropolitan Interstate Council – MIC
(Duluth, MN – Superior, WI)

The Duluth-Superior Metropolitan Interstate Council (MIC) is the regional organization responsible for planning and coordinating between two major urbanized areas on Lake Superior in Minnesota and Wisconsin. The region is a crucial link in local and international freight movement because of its location at the confluence of highways, rail lines and a maritime port. Created in 1975 under an agreement between the Arrowhead Regional Development Commission in Duluth and the Northwest Regional Planning Commission in Spooner, WI, the MIC's Policy Board has 18 voting members, equally split between the two states.[1]

1 www.dsmic.org/Default.asp?PageID=309#976

Source: MIC

In crafting its Direction 2035: The Duluth – Superior Long-Range Plan, MIC used a "transportation asset management" strategy to summarize the major modes of freight and their current performance levels.[1] The strategy aims to maximize system performance, minimize cost and improve user satisfaction through ongoing monitoring and evaluation of all modes of travel identified as significant to the region.

MIC currently operates two advisory committees related to freight infrastructure and stakeholders. One is the Transportation Advisory Committee (TAC), which includes members that represent regional localities, the state DOT, local transit authorities and airport/port authorities. Additionally, the MPO hosts a Harbor Technical Advisory Committee (HTAC), a working group

1 www.dsmic.org/Default.asp?PageID=559

for addressing challenges, opportunities and regulatory requirements in the Duluth-Superior harbor, while promoting the port's economic and environmental importance to both communities. The MPO created the committee in recognition that none of these issues affects one group alone and that none can be addressed except through the coordinated action of diverse organizations and individuals.

Aerial view of Duluth Harbor. Photo source: MIC

While HTAC meets much less frequently than TAC, the group comprises a larger representation of regional stakeholders including government officials, local industry representatives, environmental groups and technical advisors as well. The HTAC advises the MIC Policy Board on intermodal transportation issues and is recognized throughout the U.S.-Canadian port community as a model for successful inter-agency planning, collaboration and information sharing.

Duluth – Superior Metropolitan Interstate Council (MIC)	
Type	MIC is the designated MPO for Duluth-Superior region.
Composition	Activities of the MIC are overseen by the policy board, comprised of 18 elected officials and citizens (nine each from Minnesota and Wisconsin). Board members are appointed by their jurisdictions and serve two-year terms, with no term limits. The City of Duluth and City of Superior each have four serving members and the other 10 members come from counties, smaller cities and towns.
Voting	Each member gets one vote.
MPOs within MSA	1 MPO within 2 MSAs
Annual budget and staffing size	$780,000; 7 full-time equivalent staff
Responsibilities beyond transportation	None
Independent revenue authority	None

References: www.dsmic.org/Default.asp?PageID=147
www.dsmic.org/documentstore/MIC%20Info/2012/2012-2013%20MIC%20Work%20Program-FINAL.pdf
www.ampo.org/wp-content/uploads/2014/02/2013-Salary-Survey-Results-final-draft-Jan-23-2.pdf

ADDRESS FREIGHT-RELATED ENVIRONMENTAL JUSTICE IMPACTS

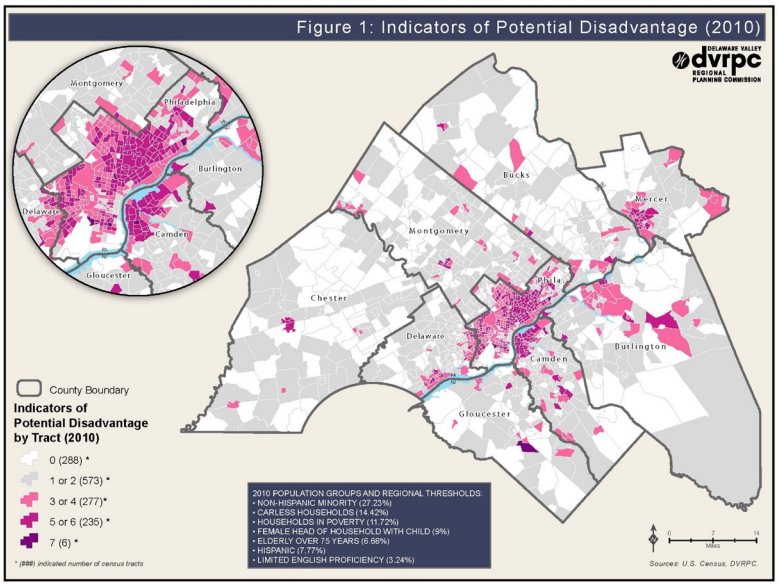
Delaware Valley Regional Planning Commission – DVRPC (Philadelphia, PA)

The Delaware Valley Regional Planning Commission (DVRPC) is the bi-state regional planning organization representing nine counties and their localities along the Delaware River in Pennsylvania and New Jersey. The organization has a long and impressive history of addressing regional environmental justice issues. In 2001, DVRPC published a groundbreaking report called … and Justice for All: DVRPC's Strategy for Fair Treatment and Meaningful Involvement of All People. *The report laid the foundation for DVRPC's environmental justice efforts, including establishing qualitative and quantitative methods to analyze environmental impacts of the LRTP and TIP.*[1] *The report is updated annually.*

1 www.dvrpc.org/reports/TM14006.pdf

Lacking federal guidance on how to evaluate impacts on vulnerable populations, DVRPC developed its own method for doing so, dubbed Indicators of Potential Disadvantage (IPD). The IPD "locates selected population groups in the region and determines how the regional transportation system and DVRPC's programs, policies and investments impact these groups," according to the 2013 update. In addition to minority and low-income populations, DVRPC expanded its list to include carless households, persons with physical disabilities, female heads of households with children and elderly persons over age 75. Online, interactive maps allow users to locate affected areas and find detailed information on each.[1]

In its 2035 Long-Range Vision for Freight report, DVRPC describes the importance of freight systems to the regional economy and offers a set of policies for the region and local jurisdictions to advance that fall under five overarching principles, including making freight more environmentally friendly and better integrated with local communities and land-use decisions.[2] Proposed strategies include creating quiet zone corridors for rail corridors that pass through local municipalities, assisting communities in developing landscaping plans to conceal freight facilities, identifying appropriate routes for truck traffic and encouraging local freight stakeholders to adopt more environmentally friendly technologies and operations.



DVRPC "Indicators of Potential Disadvantage." Source: www.dvrpc.org/reports/TM14006.pdf

DVRPC's environmental justice and freight planning efforts came together in 2012 for the Darby Borough Grade Crossing Study, an initiative to develop context-sensitive improvements for two existing, highly complex at-grade railroad crossings in a densely populated neighborhood. Darby Borough is located in Delaware County, just west

1 www.dvrpc.org/webmaps/EJ2010/
2 www.dvrpc.org/Freight/longrange/

of Philadelphia. The study area included multiple indicators of potential disadvantage.

Meaningful engagement of the Darby Borough community was seen as an important component of the study, as residents were certain to have valuable insights and informed opinions about potential grade crossing improvements. As a result, DVRPC organized an Open House and Transportation Expo with the help of borough officials and study steering committee members (see image below).

Participants were provided background information about the two grade crossings and then asked to prioritize and comment upon potential short-term, medium-term and long-term initiatives. Ongoing outreach to the community also included the distribution of Operation Lifesaver materials for school children and their parents and Safe Routes to School walkability studies for a nearby elementary school and junior high school. These measures and other safety programming were intended to further benefit the community and promote freight as a good neighbor strategies. In August 2014 DVRPC released a report recommending short-term improvements to the two grade crossings and exploring options for grade separation over the longterm.[1]

Source: DVRPC

Delaware Valley Regional Planning Commission (DVRPC)	
Type	DVRPC is a Regional Planning Commission.
Composition	The board is an 18-member body with the authority and responsibility to make decisions affecting the entire organization and the nine-county region. There is also a 10-member executive board that oversees the general operations, which includes adoption of the annual budget.
Voting	Each voting member has one vote. Eleven voting members constitute a quorum.
MPOs within MSA	1 MPO within MSA
Annual budget and staffing size	$18 million (operating); 111 full-time employees
Responsibilities beyond transportation	Land use, energy and climate change initiatives, smart growth, air quality, housing, water quality and supply
Independent revenue authority	None

References: www.dvrpc.org/asp/boardList/default.aspx
www.dvrpc.org/workprogram/pdf/FY2012_Final_Web.pdf

1 www.dvrpc.org/reports/12014.pdf

FOCUS AREA 7

GOING BEYOND TRANSPORTATION

The previous chapters offer actions that metropolitan plannin organizations (MPOs) can take to push innovations within traditional areas of responsibility: long-range planning, community engagement, data development and monitoring and supporting local partners in their transportation work. This chapter looks beyond these historic roles to explore ways MPOs can engage on emerging issues of regional importance. In many instances, regional planning agencies or councils of governments may already be involved in disaster planning, storm water management, climate change and workforce development. However, for most MPOs these are topics seen as less directly related to their federally required transportation responsibilities.

As noted in **Focus Area 1** of this guidebook, though, the eight federally required planning factors create a framework for MPOs to lead, or at the very least, engage in regional discussions about these topics — each of which is impacted by transportation. At the same time, investments and policies created by localities or other regional agencies in these areas can have a profound impact on transportation. The nation recently has witnessed devastation to roads, bridges and transit systems from natural disasters and the fallout of failure to have sufficient transportation options to evacuate the poor and carless in New Orleans during Hurricane Katrina. In a state like California, climate change legislation has transformed the long-range planning process and a new cap-and-trade regime for emissions will bring billions of new dollars to invest in transportation. On another front, a number of regions are establishing workforce development programs not only to provide transportation to jobs, but also to build career ladders linking low-skill workers to job training for transit and highway construction or manufacturing.

Each region can point to its own examples of where these connections matter in ways both profound and personal. Proactively strengthening the linkages between transportation and broader economic and environmental systems can be transformative for a region. It can also create significant cost and system efficiencies for transportation. New areas of opportunity bring the potential for new financial resources, new partnerships and increased public awareness, among them:

- **Plan for disasters and prepare to respond**
- **Align regional infrastructure systems, projects and policies with environmental goals**
- **Adapt to climate change and extreme weather events**
- **Act as a partner on workforce development**

PLAN FOR DISASTERS AND PREPARE TO RESPOND

In the face of natural or man-made disasters, transportation networks are particularly vulnerable, even as they play a critical role during times of response and recovery. As such, innovative MPOs recognize that long-range transportation plans must consider both ways to become more resilient from disasters and to be more effective in helping to respond and rebuild afterwards. This is work that requires strong local, state and even federal partnerships.

The opportunity

The past decade appears to have seen an increase in the frequency and ferocity of natural disasters or other threats to our cities. Each year, the news brings us stories of devastation wrought by hurricanes or flooding – two types of disasters that are particularly hard on transportation systems. Transportation is also a vulnerable target for terrorist attacks. MPOs can do little to influence the weather or political extremists, but there is much they can do to plan for transportation investments that are better able to withstand disasters or unexpected events and that can serve as lifelines for moving people and supplies during times of crisis. Deciding where to locate and how to design development and infrastructure are key decisions where MPOs can have a positive impact.

In most regions, local police, fire and other public safety and first responders play a lead role in disaster planning. The Federal Emergency Management Agency works closely with state and local agencies to help prepare comprehensive disaster plans.[1] To ensure coordination and communication among the many different operating agencies in a region, MPOs should be sure to have a seat at the table during disaster planning.

MPOs' involvement in security and disaster planning varies with their structure and roles. Those with broader mandates such as water infrastructure, tolling facilities or providing transit service play a critical role in operations strategies. The federal planning factors give all MPOs a responsibility to ensure that security and emergency management are considered in developing plans and prioritizing projects and in retrofitting or replacing critical infrastructure to withstand future events while meeting the current needs of motorized and non-motorized users.

Given the technical strengths of many MPOs, they are well-suited to participate in or lead on the following kinds of disaster planning activities:

1. Conducting vulnerability analyses on regional transportation facilities and services;
2. Analyzing the transportation network for redundancies in moving large numbers of people including at times when vehicle flows are reversed or removed through street closures;
3. Crafting strategies for dealing with choke points on bridges or tollbooths;
4. Determining how the public will get information during these times; and
5. Analyzing the network to see if there are gaps in emergency routes.[2]

1 www.fema.gov/plan/

2 Michael D. Mayer. "The Role of Metropolitan Planning Organizations (MPO) in Planning for Security Incidents and Transportation Systems Response." www.planning.dot.gov/documents/securitypaper.htm

MPOs can champion improved coordination on disaster and security planning by acting as a regional convener of the many different transportation providers and local governments. The MPO can be a forum where operations plans are discussed and coordinated with other plans in the region.[1] MPOs, through their transit representatives, can ensure that transit needs are a viable element of disaster and security planning. Regions need to consider the role of transit in moving people during times of crisis, as well as ways to protect transit assets during inclement weather, as witnessed during Hurricane Sandy. The US Department of Transportation (USDOT) has developed a number of resources to help state DOTs, transit agencies and MPOs better plan and respond to disaster.[2] The Association of Metropolitan Planning Organizations (AMPO) has also developed best practices on the range of roles for MPOs in disaster planning.[3]

Putting it into practice

Taking a role in homeland security and disaster preparedness. In the San Diego metropolitan area, security is a major issue due to proximity to the US-Mexico border, a significant US military presence and the potential for major earthquakes. As the MPO for the region, the **San Diego Association of Governments (SANDAG)** works with state and local partners to consider the needs of first responders and their ability to access and manage transportation systems during times of crisis. Beginning in 2007, the RTP and subsequent updates include a focus on ensuring that transit emergency operations, communications and coordination improvements are sufficiently prioritized in regional policies and investments.[4] The **Ohio, Kentucky, Indiana (OKI) Regional Council of Governments** serving the Cincinnati metropolitan area also takes emergency preparedness seriously. It established a Regional Homeland Security Coordinating Committee to analyze the region's emergency response systems and develop recommendations for the MPO and COG.[5] The OKI 2004 RTP introduced two specific security objectives. First, it established security requirements in transit and non-motorized modes for projects included in the TIP. Second, it mandates the protection of key infrastructure by implementing measures proposed by the Department of Homeland Security (DHS).[6]

Serving as coordinator and clearinghouse in a smaller region. The **Fargo-Moorhead Metropolitan Council of Governments (FM Metro COG)** is a small bi-state MPO serving 160,000 residents in and around Fargo, ND and Moorhead, MN. Responding to local officials who felt that emergency response and planning were important MPO activities, FM Metro COG undertook an analysis of the current needs and challenges facing the region. A set of recommendations on appropriate future roles for the MPO was developed for the Policy Board. As a result of that work, FM Metro COG now serves as the forum for regional assessment between state and local transportation departments, transit agencies and emergency response representatives. The MPO, in coordination with various agencies, has created and maintains a database to help inform regional decision-making and emergency response.[7]

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1 Michael D. Mayer. "The Role of Metropolitan Planning Organizations (MPO) in Planning for Security Incidents and Transportation Systems Response." www.planning.dot.gov/documents/securitypaper.htm

2 www.planning.dot.gov/documents/ConsideringSecurityAndEM.pdf

3 www.ampo.org/assets/library/172_securitywkshpjan08final.pdf

4 www.sandag.org/index.asp?classid=13&fuseaction=home.classhome

5 www.planning.dot.gov/Documents/SEPOKIRegional.pdf

6 Mark Lofgren. (July 2008). "Integrating Security into Small MPO Planning Activities: Case Study Analysis for NRMR MPOs." www.mountain-plains.org/pubs/pdf/MPC08-199.pdf

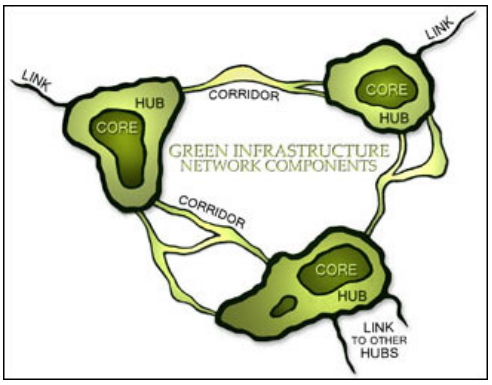
7 Excalibur Associates, Inc. (May 2012). "Considering Safety and Emergency Management in the Planning of Transportation Projects." Washington DC: FHWA HEP-12-040: http://planning.dot.gov/documents/ConsideringSecurityAndEM.pdf

ALIGN REGIONAL INFRASTRUCTURE SYSTEMS, PROJECTS AND POLICIES WITH ENVIRONMENTAL GOALS

Historically, MPOs and transportation agencies have focused almost exclusively on man-made solutions to move people and goods. Negative environmental impacts caused by transportation received growing attention starting in the 1970s and continued through the Clean Air Act of the 1990s. More recently though, innovative MPOs are finding that designing and planning with natural ecological systems can be a benefit to transportation, while reducing the need to mitigate against negative effects on air, water, farmland and open spaces.

The opportunity

Green infrastructure refers to the network of natural lands, productive farmland and other open spaces that are strategically planned and managed to conserve their ecological functions. Using natural systems to clean and move water and conserve plants, animals and soils can save money while creating more beautiful and healthy places. Green Infrastructure can be developed and maintained on a variety of scales, but regional work on green infrastructure is particularly influential because natural ecosystems pay no attention to jurisdictional borders.



Regional Green Infrastructure Network devleoped by the Land of Sky Regional Council. Source: www.linkinglands.org.

Metropolitan areas often have separate agencies for land, air and water, with separate plans and projects for each. MPOs can help to coordinate these efforts, bringing together regional transportation planning with planning for open space, trails, forestry, fish, water management and wastewater treatment.

MPOs should integrate green infrastructure planning into their long- and short-range planning by identifying key features of the region's green infrastructure and choosing conservation areas and tools for evaluating a potential transportation project's impact on the region's green infrastructure.[1] MPOs can directly advance green infrastructure through the adoption of sustainable design and construction practices for transportation projects.

Groups like the National Association of Regional Councils (NARC) and the American Society of Landscape Architects[2,3] have developed a number of great resources on green infrastructure for MPOs and other governmental partners.

1 "The Role of Regional Councils in Green Infrastructure" and "Green Infrastructure Legislative Brief." National Association of Regional Councils (NARC). http://narc.org/issueareas/environment/talking-points/green-infrastructure-legislative-brief/

2 http://narc.org/issueareas/environment/areas-of-interest/green-infrastructure-and-landcare/

3 www.asla.org/greeninfrastructure.aspx

Putting it into practice

MPOs can facilitate new partnerships and understanding among agencies and organizations working on issues such as conservation, restoration, development, public works, arts and culture and farming. Many MPOs also have the technical capabilities to develop detailed environmental data and mapping, which can serve as the basis for creating community- and government-driven projects to protect natural lands in the face of impending development and growth trends.[1]

Teaming up to map green infrastructure assets. In Virginia, the **Richmond Regional Planning District Commission (RRPDC)** and the **Crater Planning District Commission (CPDC)** have partnered to develop a regional green infrastructure map that identifies assets and opportunities to connect and expand them. This endeavor is part of a multi-year grant project focused on sustainable communities and funded by the Virginia Coastal Zone Management Program.[2] This assessment is now being used to identify and redevelop vacant parcels in Richmond.

In western North Carolina (Asheville), the **Land of Sky Regional Council** has made green infrastructure a priority in response to issues with water quality and sedimentation and the loss of forested lands — both of which had been impacting the region's economy and quality of life. Their effort "linking land and communities" involved extensive public outreach and data analysis to identify where the most valuable natural resources are located and how these resources are reflected in community values. More than 45 datasets were combined to identify important "landscape hubs" and "connecting corridors" across the five-county region. As a result, the MPO has developed a series of maps, tools and other online resources to help better inform land-use and transportation decisions.

Coordinating to manage stormwater runoff. In response to major flooding, erosion and runoff from recent severe storms in the Northeast, the **Rockingham Planning Commission (RPC)** worked with other regional partners in New Hampshire to launch a Green Infrastructure for Coastal Watershed Communities Initiative. The RPC region consists of 26 communities within Rockingham County. The Commission is the designated MPO for transportation planning in the RPC service area, but another commission has responsibility for reviewing and commenting on projects receiving federal money in the region.[3] The RPC uses its MPO role to provide technical assistance to local communities on a number of issues related to transportation. For exampke, the Green Infrastructure Project provides resources and support for communities to improve stormwater management. Six pilots were recently announced for work in New Hampshire towns, including workshops and staff training to develop better regulations and build stormwater treatment systems.[4]

The **Innovation in Action** section of this chapter includes a case study of the comprehensive planning, mapping and implementation work being led by the **Wasatch Front Regional Council (WFRC)** in Salt Lake City, UT on green infrastructure.

1 http://narc.org/issueareas/environment/areas-of-interest/green-infrastructure-and-landcare/the-role-of-regional-councils-in-green-infrastructure/
2 www.richmondregional.org/planning/Green_Infrastructure/green_infrastructure.htm
3 www.rpc-nh.org/mission.htm
4 http://southeastwatershedalliance.org/green-infrastructure/

ADAPT TO CLIMATE CHANGE AND SEVERE WEATHER EVENTS

Transportation is especially vulnerable to climate change and the expected increase in extreme weather events, rising sea levels and temperature swings. Innovative MPOs are taking steps to address climate change through adaptation and mitigation efforts focused on improved coordination of transportation, land-use and environmental investments and policies.

The opportunity

With the increasing frequency of severe weather incidents and rising sea water levels affecting many coastal communities, policy officials and transportation professionals are giving greater attention to the effects of climate change. In Florida, California, Oregon and Washington, MPOs are responding to state laws enacted to address climate change. Even in states where climate change is a politically charged issue, preserving infrastructure in the face of natural disasters is not only acceptable, but also necessary.

Some regions are working to mitigate the impact of climate change by reducing greenhouse gas (GHG) emissions from transportation, one of the largest contributing sectors. Mitigation strategies tend to be long-term focused and more challenging to measure. Increasing transit usage or using green infrastructure strategies, for instance, are two types of transportation-related mitigation strategies. While MPOs can measure the localized transportation and environmental benefits, assessing the broader impact on global climate is beyond the ability of most MPOs.

Adaptation planning focuses on reducing the vulnerability of transportation systems to extreme weather events and sea-level rise. The devastating impacts of recent hurricanes and super-storms provide frightening lessons on the financial and human cost of a failure to adapt to such threats.

An assessment of risk and vulnerability is an important first step in adaptation planning.[1] MPOs are well-situated to take part in or lead these efforts. Not all MPOs have the technical expertise to generate specific data regarding climate change forecasting, so they should rely on information endorsed by outside agencies such as the National Oceanic and Atmospheric Administration, Federal Highway Administration, the state DOT or state climatologist or other sources.

Adaptation objectives can be developed as part of the Long-Range Transportation Plan (LRTP) or as part of a separate document. There is some synergy with disaster and security planning mentioned earlier in this section. Climate planning elements for the LRTP may include emergency evacuation and engineering and design standards to prevent flooding or washouts of transportation facilities. Stronger integration of transportation, land-use and development planning can help residents drive less and thereby limit GHG emissions.

1 Kate Mance. (August 2012.) "Climate Change Adaption Strategies for Metropolitan Planning Organizations." http://nysmpos.org/wordpress/wp-content/uploads/2012/06/CCWG_Climate-Change-Adaptation_Web.pdf

Putting it into practice

There are a number of direct and indirect ways that MPOs are addressing climate change planning. **The Atlanta Regional Commission (ARC)**, for example, does not expressly plan for climate adaptation but has integrated elements of it into long-range transportation planning and other initiatives. ARC uses its ability to prioritize allocation of federal transportation funds and the offer of free technical assistance as incentives for member governments to work toward adopted goals. For example, ARC created a Certified Green Communities (CGC) program designed to reduce the region's environmental impact, through which ARC provides free technical assistance to Certified Green Communities to develop tailored actions on conservation, energy efficiency and emissions reduction.[1]

Sea level rise has overwhelmed drainage ditches, flooding local roads. Source: Broward County MPO

In places like Broward County, Florida, the effects of climate change are becoming visible and necessitating action and new partnerships to maintain infrastructure in low-lying areas.[2] In 2009, the **Broward MPO** and three other MPOs (Miami-Dade, Palm Beach and Monroe) representing approximately 30 percent of the state's population, formed the South Florida Regional Climate Change Compact.[3] The Compact has improved coordination among these counties and generated new performance metrics that are being incorporated into local and regional transportation plans. For example, the Broward 2035 LRTP and its update called "Commitment 2040" gives increased priority for transportation strategies that reduce emissions and improve energy efficiencies, such as public transit, new vehicle technologies and biofuels and better integration with land use and development.[4]

The **Innovation in Action** section of this chapter includes a case study of the **Sacramento Area Council of Governments (SACOG)** and its Climate Plan, which includes a strong emphasis on addressing land-use decisions that influence GHG emissions.

ACT AS A PARTNER ON WORKFORCE DEVELOPMENT

While most MPOs consider workforce development to be beyond their jurisdiction, some have discovered that they have a role in giving the region a competitive edge by ensuring workers have access to jobs and training opportunities through a variety of affordable and accessible transportation options. The transportation sector itself is a conduit to apprenticeships and career ladders that provide well-paying jobs in the construction, engineering, shipping, manufacturing and service sectors.

1 www.atlantaregional.com/environment/green-communities
2 www.browardmpo.org/userfiles/files/Broward%20County%20Energy%20and%20Sustainability%20Program%20Presentation%20May%202011.pdf
3 www.browardmpo.org/planning/adapting-to-climate-change
4 www.browardmpo.org/planning/long-range-transportation-plan

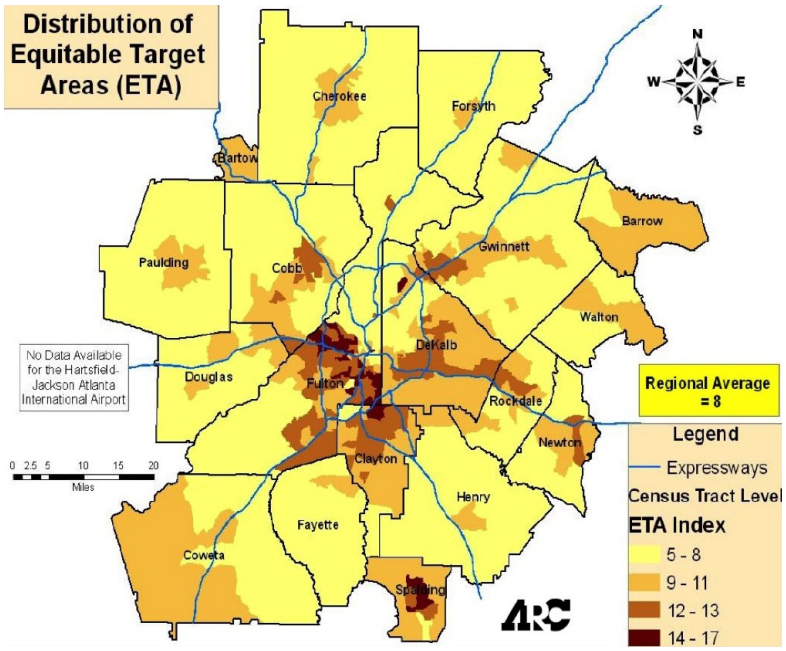
The opportunity

As regional economies work to find their footing after the Great Recession, a few larger MPOs with regional planning responsibility are leading discussions around workforce development and economic resiliency. They and others are developing and reporting on economic metrics and regional disparities, an activity available to any MPO, regardless of structure or authority. This can include mapping areas of concentrated poverty and "transit deserts" with high concentrations of jobs or car-less residents but poor transit service, as well as tracking accessibility to jobs by automobile, bicycle, walking and transit, or the number, types and average wage rates of jobs created by the planning, building and operating of transportation projects.

Putting it into practice

Among those emerging as leaders on workforce development is the **Puget Sound Regional Council (PSRC),** which has responsibility for both transportation planning and economic development. That makes the agency well suited to foster strong links among plans, programs and investments that advance regional economic resiliency. PSRC established a multi-sector Prosperity Partnership, co-chaired by public and private sector leaders, to develop its regional economic strategy. The Strategy is focused on workforce development in core industry clusters, several of which are directly tied to transportation such as aeronautics and logistics.[1] PSRC's process for selecting projects for the Transportation Improvement Program (TIP) prioritizes those that support the Transportation 2040 vision and one of the 10 key industry clusters identified in the regional economic strategy.[2]

Another regional agency leading on workforce development issues is the **Atlanta Regional Commission (ARC)**. ARC serves as the administrator for the Atlanta Regional Workforce Board through its Workforce Solutions Division, which helps dislocated workers and the unemployed who are seeking jobs.[3] This gives the agency a unique position to provide training and connect potential employers to qualified applicants.In that work, transportation represents both a challenge and an opportunity. It is a challenge for those who lack a car to jobs that are inaccessible without one. But transportation also represents a pathway to meaningful work, such as being trained as a tractor-trailer driver, or participating in the Mentoring A Girl In Construction program.[4]



Source: ARC.

1 www.psrc.org/assets/8558/RegionalEconomicStrategy.pdf
2 www.psrc.org/transportation/t2040/
3 www.atlantaregional.com/workforce-solutions/overview
4 www.atlantaregional.com/workforce-solutions/training-and-education-services/success-stories

ARC also has a strong focus on connecting those needing jobs, education and training through improved transportation access. The agency has established a Social Equity Advisory Committee and its LRTP includes an emphasis on improving transportation opportunities for low-income neighborhoods. The ARC has identified Equitable Target Areas with significant disadvantaged or senior populations, which receive extra consideration when allocating Surface Transportation Program, Congestion Mitigation and Air Quality and Livable Communities funds.[1] (See graphic on previous page.)

A case study of the **Chicago Metropolitan Agency for Planning (CMAP)** is provided in the **Innovation in Action** section as an example of an MPO addressing workforce development and regional economic resiliency outside of its strictly defined transportation role.

Resources

- National Association of Regional Councils. "A Survey of Regional Planning for Climate Adaptation." http://narc.org/wp-content/uploads/NOAA_White_Paper_102912.pdf
- Water Infrastructure Capacity Building Team. (June 2012.) "Promoting Green Infrastructure: Strategies, Case Studies and Resources. https://drcog.org/documents/promoting_green_infrastructure_-_strategies_case_studies_and_resources_2012.pdf
- Conservation Fund, Green Infrastructure Resources. www.conservationfund.org/our-conservation-strategy/focus-areas/green-infrastructure/
- AMPO Climate Change and Energy Planning Webinar Series. www.ampo.org/resources-publications/climate-change/
- ICF International. (December 2013.) "Assessment of the Body of Knowledge on Incorporating Climate Change Adaptation Measures into Transportation Projects." Federal Highway Administration, FHWA-HEP-14-016. www.fhwa.dot.gov/environment/climate_change/adaptation/publications_and_tools/transportation_projects/

1 www.atlantaregional.com/transportation/community-engagement/social-equity-advisory-committee

INNOVATION IN ACTION - CASE STUDIES (FOCUS AREA 7)

ALIGN REGIONAL INFRASTRUCTURE SYSTEMS, PROJECTS AND POLICIES WITH ENVIRONMENTAL GOALS

Wasatch Front Regional Council –WFRC (Salt Lake City, UT)

Building on its high quality of life and stunning natural beauty, the Salt Lake City-West Valley and Ogden-Layton metropolitan areas are experiencing significant population and economic growth. The Wasatch Front Regional Council (WFRC) was established under Utah law to help coordinate planning for the region.

WFRC is a national leader on many transportation and regional planning issues. As shown in the box on the following page, it is involved both through its MPO and Regional Council roles in issues beyond transportation, while also providing regional policy direction and technical support to local communities. As was discussed in Focus Area 1, WFRC was an early pioneer of scenario planning and community engagement.

Since 2008, WFRC has worked to develop and implement the groundbreaking (Re)Connect: The Wasatch Front Green Infrastructure Plan. Rick LeBrasseur, executive director of the Center for Green Infrastructure Design, that helped develop the plan, said the (Re) Connect plan was unique for its regional perspective. "We are building off of current plans and resources, which typically only look at one particular asset — say wildlife or water quality — and combining them into an overall analysis, plan and strategy."[1]

Photo source: WFRC

After a 2008 forum co-sponsored by The Conservation Fund, a national non-profit, WFRC spent two years identifying existing green infrastructure in the region and its economic advantages and developing multi-jurisdictional approaches to planning and strategies for implementation. The process involved dozens of stakeholders representing state and local governmental agencies, the US Forest Service and the Center for Green Infrastructure Design.[2]

The (Re)Connect plan is intended to inform land development and acquisition decisions, funding allocations including the TIP and local and regional planning processes. Green infrastructure principles and sustainable planning are to be incorporated into transportation projects and plans. The plan identifies tangible steps such as improving data collection, updating ordinances and codes and prioritizating lands or parcels in regional grant programs that strengthen the existing green infrastructure network.

1 http://wfrc.org/new_wfrc/Green_Infrastructure/%28Re%29Connect%20The%20Wasatch%20Front%20Green%20Infrastructure%20Plan.pdf
2 *Ibid.*

Asset Network Maps were created through extensive data analysis and GIS tools that identify and illustrate existing high-quality green infrastructure lands. The Asset Network Maps include community and cultural assets such as schools, libraries, transit hubs and historic districts; working land assets such as farmland, ranches and grazing lands; ecological assets such as wildlife habitat and riparian areas; hydrological assets including rivers, streams and lakes; and recreational assets such as trails and parklands. Each is accompanied by green infrastructure criteria related to cores, hubs and corridors.[1] Among other uses, the maps are intended as a tool to interpret how an individual transportation project may interact with the functionality of these other asset networks.

In addition to preparing the TIP and the LRTP, WFRC also:

1. Provides a forum for discussion and cooperation among elected representatives of local jurisdictions concerning region-wide problems, primarily transportation and growth planning and to provide professional services for these areas of concern.
2. Assists with the coordination of local programs, plans and projects with federal and state programs and provides a mechanism to more firmly represent the official and unified thinking of these local jurisdictions to both state and federal agencies.
3. Provides a more effective organizational structure for local governments to coordinate local transportation plans and programs that overlap county boundaries or are regional in nature.
4. Promotes regionally adopted growth principles among the member municipalities and counties to guide development. They represent strategies for cost effective, environmentally responsible development. Both the RTP and TIP are designed to implement the Wasatch Choice for 2040 Vision which is, in turn, based on the growth principles.
5. Sponsors and/or participates in other studies to establish transportation needs and solutions such as the State Street Livability Study, the North Legacy Corridor Study and many others.
6. Manages the Community Development Block Grant (CDBG) program for cities with populations less than 50,000 for Davis, Weber, Morgan and Tooele Counties.
7. Prepared the last two Natural Hazard Pre-Disaster Mitigation Plans for the Wasatch Front Region. The Plans are the standard set by the Federal Emergency Management Agency for area cities and counties to prepare for natural disasters by implementing mitigation measures that will lessen the impacts of such events.

– Wasatch Front Regional Council

1 www.wfrc.org/new_wfrc/index.php/wfrc-programs/green-infrastructure

Wasatch Front Regional Council (WFRC)	
Type	Association of Governments
Composition	The Council consists of 19 elected officials representing local governments from Salt Lake, Davis, Weber, Morgan, Tooele, and Box Elder counties. The council also includes seven members representing the Utah State Senate, the Utah House of Representatives, the Utah League of Cities and Towns, the Utah Association of Counties, the Utah Department of Transportation, the Utah Transit Authority and Envision Utah.
Voting	Each voting member has one vote.
MPOs within MSA	1 MPO that covers two MSAs
Annual budget and staffing size	$5.0 million; 25 staff
Responsibilities beyond transportation	Air quality, community development block grants, economic development, growth planning, green infrastructure
Independent revenue authority	None

References: www.wfrc.org/new_wfrc/index.php/committees/wasatch-front-regional-council
http://wfrc.org/committee/Bylaws%20-%20Wasatch%20Front%20Regional%20Council%20-%20Amended%20and%20Restated%201%2023%2014%20FINAL%20w%20Signature.pdf
http://wfrc.org/new_wfrc/index.php/wfrc-programs/unified-planning-work-program

ADAPTING TO CLIMATE CHANGE AND EXTREME WEATHER EVENTS

Sacramento Area Council of Governments – SACOG (Sacramento, CA)

In 2002, the Sacramento Area Council of Governments (SACOG) began its groundbreaking Blueprint Project, a regional visioning process to study the connections among transportation, land use and air quality. The SACOG Board of Directors adopted the Preferred Blueprint Scenario in 2004 — a bold vision for regional growth that promotes compact, mixed-use development and more transit and active transportation choices.[1]

1 www.sacregionblueprint.org/

SACOG has used the Blueprint as the foundation for strategies to reduce GHG emissions. A key driver for this has been the state's 2008 Sustainable Communities and Climate Protection Act (SB 375). The law requires regions to align transportation, housing and other land uses to achieve GHG emissions reduction targets established by the California Air Resources Board (CARB). SB 375 requires each region to develop a Sustainable Communities Strategy (SCS) to reduce per capita GHG emissions from passenger vehicles. The Sustainable Communities Strategy element of SB 375 is intended to encourage an integrated approach to land-use and transportation planning that not only reduces vehicle travel, but also accommodates an adequate supply of housing, reduces impacts on valuable habitat and productive farmland, increases resource use efficiency and promotes a prosperous regional economy.

During development and implementation of its Sustainable Communities Strategy, SACOG participated in several climate change and adaptation working groups between member agencies, local air districts and the CARB. SACOG also collaborated with local planning and public works departments as well as local transit agencies. To ensure an open and inclusive planning process SACOG used a range of engagement methods.[1]

Source: SACOG

In developing the MTP/SCS, SACOG created three scenarios that varied in land-use patterns and transportation investments while using the same overall growth projections and transportation budget. After measuring the performance differences and engaging participants in a discussion of trade-offs among the three scenarios, SACOG created a preferred scenario. The MTP/SCS was broadly supported because of its ability to demonstrate how the plan would meet ambitious GHG emissions reduction goals, while also offering more transportation and housing options. The plan also makes the most of transportation funds, despite funding cuts and regulatory restrictions that became apparent during a major, sustained national recession.

In addition, SACOG initiated several companion efforts to help shape the MTP/SCS and influence ongoing planning efforts. These include:

- Rural Urban Connections Strategy (RUCS), which as the rural component of SACOG's regional Blueprint, is focused on using smart growth principles to achieve economic and environmental sustainability goals with a focus on the regional food system, rural and urban infrastructure linkages and natural resource conservation. RUCS addresses climate change issues in the production, processing and distribution of the over 120 crops grown in the region. SACOG is currently working in conjunction with the University of California, Davis to further refine its inventory of agricultural-related GHG emissions. The RUCS project has been working towards using the agency's suite of technical tools to help forecast the long-range impacts of changes in the region's agricultural system, including cropping patterns, processing raw crops into various foods and delivering goods to markets.[2]
- Greenhouse Regional Inventory Protocol (GRIP) is an international inventory of the region's GHG emissions and a supplemental scenario-building tool to test different emissions scenarios. GRIP is currently being used to inventory GHG emissions in five continents, and the Sacramento region was selected to be a case study for implementing the GRIP tool in American cities. GRIP's scenario-building tool has been key for involving a range of political, industry and NGO stakeholders in GHG emissions and energy forecasting efforts. Beginning in 2009, SACOG began conducting workshops where participants could create their own

1 www.sacog.org/2035/
2 www.sacog.org/rucs/

scenarios about changes in energy supply/demands, agriculture, waste and industrial processes. GRIP's ability to immediately report back results helps a wide audience understand the need and urgency to change the region's travel behaviors, energy supply and land-use patterns to help curb climate change.[1]

- Plug-in Electric Vehicle (PEV) Project is a multi-year program with funding from federal, state and local utility sources. The project begins to plan for the infrastructure needed to support PEVs in the region that can serve as a long-term GHG emissions reduction strategy. Early actions have included developing a set of model policies and strategies to address the unique PEV challenges of the region.[2] Early work on the PEV project informed the MTP/SCS. Since that time, the region has developed a PEV Readiness and Implementation plan for the region that is anticipated to be incorporated into the next update of the region's MTP/SCS.

Together, these efforts illustrate how SACOG is working to address climate change through a number of different MPO and regional planning agency tools: policies, principles and performance measures within its LRTP; metrics and climate impacts in connection to other agency priority initiatives; and new pilot programs and technologies designed to reduce GHG emissions.

Sacramento Area Council of Governments (SACOG)	
Type	Association of local governments
Composition	SACOG is governed by a 32-member Board of Directors with 31 voting members. The one non-voting member is the Caltrans District 3 Director. The 31 voting members are appointed by member jurisdictions from their city councils or county board of supervisors and serve one-year terms.
Voting	Certain members carry more than one vote. Each director appointed by a city or county is given one vote except for the director, save for the Sacramento appointees. A total of three votes are given to a director in Sacramento County and a total of two votes are given to a director in the City of Sacramento.
MPOs within MSA	1 MSA within 2 MPOs
Annual budget and staffing size	$50.3 million; 52 full-time staff
Responsibilities beyond transportation	Comprehensive land-use planning, scenario planning, air quality, water quality, climate change
Independent revenue authority	None
State enabling legislation	The Sustainable Communities and Climate Protection Act, SB 375, mandates that each of California's MPOs prepare an SCS as a central part of its RTP. The SCS has land use, housing and transportation strategies that once implemented would allow the region to meet its GHG emission reduction targets. Once the RTP/SCS is adopted by the MPO, it guides the transportation policies and investments in the region.
References: www.sacog.org/about/committees/ www.sacog.org/owp/budget/FY%2012-13%20Budget.pdf www.sacog.org/about/jpa.pdf	

1 www.sacog.org/about/committees/lunr/grip.pdf
2 www.energy.ca.gov/releases/2012_releases/2012-02-08_sacramento_electric_vehicles_nr.html

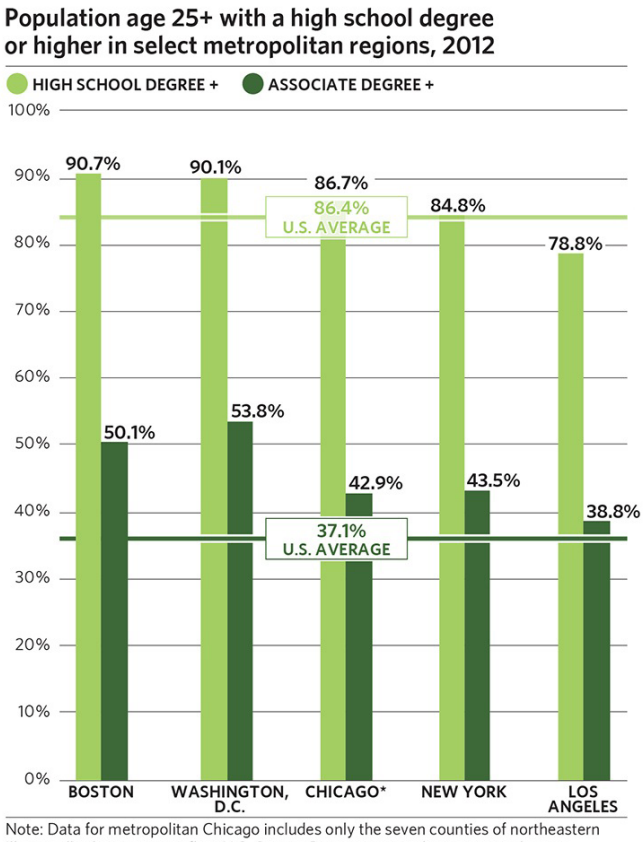
ACTING AS A PARTNER ON WORKFORCE DEVELOPMENT

Chicago Metropolitan Agency for Planning - CMAP (Chicago, IL)

The greater Chicago metropolitan area has long held an important place in America's economy and urban development. Located at a freight crossroads and home to major national and regional employers, the sprawling region consists of seven counties and is home to more than 8.6 million people. The Chicago Metropolitan Agency for Planning (CMAP) was created in 2005, after restructuring of different regional planning agencies. It is the official regional planning organization working to help the region's 284 communities address transportation, housing, economic development, open space, the environment and other quality of life issues. Through a 2007 memorandum of understanding with the MPO Policy Committee (which existed prior to CMAP) it now serves as the designated MPO. CMAP is the decision-making body for all regional transportation plans and programs for this area, while the MPO Policy Committee plans, develops and maintains the regional transportation system.

CMAP developed a nationally recognized comprehensive regional plan, GO TO 2040, to serve as a roadmap for coordinating strategies that cut across transportation, economic development, environmental and quality of life issues.[1] The plan was developed with unprecedented public involvement. Performance dashboards now help track progress towards important regional goals. While CMAP has direct control of transportation planning, it relies on partners to implement workforce development, food access and economic innovation.

GO TO 2040 lays out the argument for why workforce development issues and better worker training and educational attainment are critical to the region's long-term economic resiliency. The plan links traditional transportation performances measures, such as congestion, to workforce development and job opportunity needs. Explains the plan, "Congestion is expensive for residents, businesses and governments. By limiting our ability to get around, it restricts people's choices of where to live and work. It limits businesses' access to skilled labor and reduces the reliability of truck and train shipments..."[2] The plan prioritizes investments in transit and other mobility options and argues for prioritizing transportation projects based on their ability to stimulate the region's economy and reduce congestion.



Source: CMAP

1 www.cmap.illinois.gov/about/2040

2 www.cmap.illinois.gov/documents/10180/17842/GO-TO-2040-short-plan_10-7-2010_FINAL.pdf/2840498d-96fa-43fa-9784-9c8f364b4547

CMAP has focused strongly on developing new metrics and performance dashboards to track implementation of the plan. It has developed a regional economic indicators website that allows for comparison of performance by Chicagoland and its regional peers.[1]

The website was developed through public and philanthropic funding to be a resource to the broader regional economic players. CMAP cannot by itself control how the region performs, but it has stepped up to the plate to provide a forum to discuss and data to inform the actions of elected officials, economic development professionals, planners and others working to ensure Chicagoland's competitiveness in the global economy. Key indicators track the region's economic performance and recovery, including factors on workforce development such as educational attainment, workforce participation, skills gaps and numbers of STEM occupations.

> "The quality of our region's labor force is crucial for sustaining economic prosperity. Increasingly, job growth relies on the availability of well-educated, skilled workers for knowledge-based industries. We can gain a significant advantage by ensuring that businesses and residents here have the skills necessary to compete with other global economic centers."
>
> – GO TO 2040

Chicago Metropolitan Agency for Planning (CMAP)	
Type	The MPO is housed within CMAP and staffed by CMAP.
Composition	The 21-member Policy Committee is the decisionmaking body for the MPO, which consists of members from the Council of Mayors, Will County, Regional Transportation Authority (RTA), Kane County, Chicago Department of Transportation, Illinois Department of Transportation, Commuter Rail Division of the RTA, Federal Transit Administration (FTA), Illinois State Toll Highway Authority, Cook County, Chicago Transit Authority, Lake County, Federal Highway Administration (FHWA), DuPage County, Suburban Bus Division of the RTA, McHenry County, Private Providers, Railroad Companies (Class I), Kendall County and CMAP. The FHWA and FTA participate in an advisory, non-voting capacity.
Voting	Each member has one vote, except for the CMAP board member who has two votes. The chairman shall vote in the interest of IDOT. A quorum is 10 votes, but 13 votes are required to change by-laws or add new members.
MPOs within MSA	2 MPOs within MSA
Annual budget and staffing size	$16.6 million; 100.5 full-time equivalent staff
Responsibilities beyond transportation	Land use and zoning, long-range planning, economic development strategies, natural resources planning, health impact assessments, sustainability planning, economic analyses, housing strategies, water resource planning
Independent revenue authority	None

References: www.cmap.illinois.gov/about/
www.cmap.illinois.gov/documents/10180/289351/FY2015Budget-WorkPlan06-04-2014.pdf
www.cmap.illinois.gov/documents/10180/25124/final+bylaws0313082.pdf/d93641c1-c723-4887-bf93-8838d6158ce6

1 www.cmap.illinois.gov/economy/regional-economic-indicators

APPENDIX

MPO 101: HISTORY, CONTEXT AND EVOLUTION OF METROPOLITAN TRANSPORTATION PLANNING

In order to understand the ways that metropolitan planning organizations (MPOs) can be innovative, it is important to know the federal context and evolution of metropolitan planning. MPOs come in all shapes and sizes with a great variation in their structure, size, governance and authority. These factors influence their technical capacity as well as their ability to engage on a broader set of issues beyond transportation.

Largely creatures of federal law, MPOs exist to provide regional coordination of transportation investments, while ensuring that the public, especially those traditionally underserved by the transportation system, have opportunities to participate in the decision-making process.

Regional transportation networks may consist of one or more transit providers as well as local, county and state roads and trail networks and federal interstates. Added to this mix are intercity transit providers, passenger rail, private and public freight shippers, airports and maritime ports. Despite multiple operators, the system needs to operate seamlessly for the user.

The MPO sits at the crossroads of this fragmented network. It was created to coordinate the various elements into one cohesive regional transportation system. Since federal transportation funds can be spent on practically any part of this fragmented transportation system, it is in the federal government's interest that federal expenditures on one part of the system do not conflict with other federal expenditures on another part. Doing this requires coordination and partnership across jurisdictions and agencies, starting with a comprehensive planning process that looks at current and future needs and then prioritizes available resources to achieve these goals.

The true power of MPOs comes in their ability to create a collaborative process to address issues that no single jurisdiction can tackle alone. The most critical manifestation of this power is the MPO's plans, which dictate how transportation funds are spent in the region. A region's transportation system is the thread that connects other regional priorities, such as economic competitiveness, access to jobs, public health and safety, environmental quality and development patterns. MPOs can leverage their transportation functions, federal responsibilities and authority to address these broader issues.

FEDERAL CONTEXT FOR METROPOLITAN TRANSPORTATION PLANNING

The framework for metropolitan planning is set by the statutory provisions and federal regulations in federal transportation law, specifically through the "Statewide and Non-metropolitan Planning Program" and the "Metropolitan Transportation Planning Program".[1] The latter program governs MPOs and requires that they be established for urbanized areas with a population over 50,000. However, deciding how to organize the MPO, choosing its voting structure and establishing its broader authority are left to state and local officials.

However they are structured, MPOs must coordinate with other key transportation partners, whether state and local departments of transportation, transit agencies, port authorities, airports, freight carriers and even health and human services providers and first responders. In some regions, this coordination is highly formalized, whereas in others it is more fluid and has evolved over time.

Metropolitan planning was formalized in the 1962 Federal-Aid Highway Act and its Section 134 planning provisions.[2] This legislation introduced the federal requirement for a Continuing, Cooperative and Comprehensive (3-C) planning process in urbanized areas. Historically, highway engineers and land-use planners had failed to coordinate sufficiently, leading to interstates that devastated local communities or environmental habitats. MPOs were created to facilitate ongoing cooperation among federal, state and local governments and between governmental planning and engineering functions to help ensure that federal transportation dollars — most of which are controlled by states — are wisely spent and that local communities have a voice in the decision-making and planning in their regions. The 3C planning process involves four technical phases: collection of data, analysis of data across a common set of planning factors, forecasts of activity and travel and the evaluation of alternatives.

Over the years and numerous transportation reauthorizations, these basic federal requirements have remained largely intact. Though federal law generally prioritizes state DOTs over MPOs in the planning and programming of projects using federal transportation dollars, several important changes in federal transportation law have increased the role, responsibilities and funding support for MPOs.

The Highway Act of 1973 (P.L. 93-87) required the governor of each state to designate an MPO for each urbanized area over 50,000 in population as defined by the Census Bureau (23 U.S.C. Section 134; 49 U.S.C. Section 5303). MPOs were given a formal role in addressing regional air quality issues and state DOTs were restricted from making unilateral changes to the MPO-approved, "fiscally constrained" plan by the regulatory changes to implement the Clean Air Act in 1990 and the Intermodal Surface Transportation Efficiency Act (ISTEA) in 1991.

1 Sections 134 and 135 of Title 23 and Sections 5303 and 5304 of Title 49, United States Code.
2 Mallett, William J. (February 3, 2010). "Metropolitan Transportation Planning." Washington DC. Congressional Research Service, R41068.

The table below (continued on the following page) outlines the planning documents required of MPOs and DOTs.[1] These plans must be informed by public review and comment and regularly updated to reflect changing needs, opportunities and constraints.

FEDERAL REQUIREMENT	WHO DEVELOPS?	WHO APPROVES?	TIME HORIZON	CONTENT	UPDATE REQUIREMENTS
METROPOLITAN LEVEL					
Metropolitan Transportation Plan (MTP) or Long-Range Transportation Plan (LRTP)	MPO	MPO	20 years (minimum)	Future goals, strategies, projects and policy priorities; peformance measures; projected future demand; asset management, safety and system preservation; fiscally constrained	Four years for air quality non-attainment and maintenance areas; five years for others
Transportation Improvement Program (TIP)	MPO	MPO & governor	Four years	All transportation projects receiving federal funding; fiscally constrained and conform with SIP; demonstrate achievement of performance measures	Four years (can be amended at any time)
Congestion Management Process (CMP)	Transportation Management Area (TMA) for MPOs over 200,000	MPO	Four to five years	Alternative strategies to mitigate congestion; congestion and air quality data	Not specified. Federal Highway Administration (FHWA) and Federal Transit Administration (FTA) review during MPO certification
Unified Planning Work Program (UPWP)	MPO	MPO	One or two years	Planning studies; research; tasks budget	Annual
Public Participation Plan	MPO	MPO	not specified	MPO committees and subcommittees; engagement of people affected by transportation policy decisions	Not specified. FHWA and FTA review during MPO certification

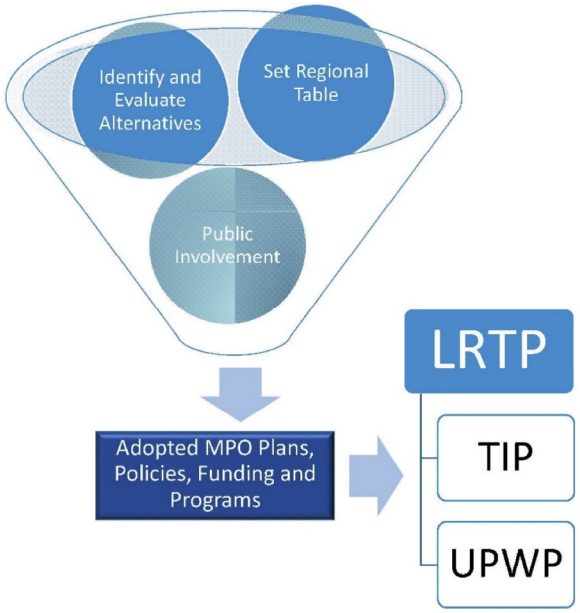
1 USDOT. The Metropolitan Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decision-Makers, Officials and Staff. Washington, DC. Transportation Planning Capacity Building Program, FHWA and FTA.

FEDERAL REQUIREMENT	WHO DEVELOPS?	WHO APPROVES?	TIME HORIZON	CONTENT	UPDATE REQUIREMENTS
STATE LEVEL					
Long-Range State Transportation Plan (LRSTP)	State DOT in cooperation with MPOs, local officials in non-metro areas and Regional Transportation Planning Organizations (RTPO), if applicable	State DOT	20 years (minimum)	Future goals, strategies, projects and policy priorities; projected future demand; performance measures; asset management, safety and preservation; fiscally constrained	Not specified. FHWA and FTA review during annual STIP approval and planning certification
State Transportation Improvement Program (STIP)	State DOT, in cooperation with MPOs, local officials in non-metro areas and RTPOs, if applicable	State then USDOT	Four years	MPO TIPs are incorporated directly without change into the STIP by the state DOT. Demonstrate achievement of performance measures; fiscally constrained	Every four years; can be amended at any time
State Implementation Plan (SIP)	State Environmental Agency via interagency coordination with MPO	US Environmental Protection Agency (EPA)	Ten years	SIP includes vehicle emission reduction targets. Developed within 3 years of being identified as non-attainment.	EPA provides updated guidance every 3 years

Federal legislation outlines five core functions that an MPO must perform:[1]

1. Establish a setting. MPOs must establish and manage a fair and impartial setting for effective regional decision-making in the metropolitan area. This is a critical role because MPOs often represent the only regional assembly for elected officials, stakeholders and professional experts to discuss issues of metro-wide importance.

2. Identify and evaluate alternative transportation improvements. MPOs bring technical expertise to transportation planning, using data and planning methods such as travel forecasting and scenario planning to generate and evaluate alternatives. Moving Ahead for Progress in the 21st Century (MAP-21) introduced a new requirement for performance-based planning to tie investments with outcomes. Planning studies and evaluations are included within the MPO's annual Unified Planning Work Program (UPWP).



MPO process informs planning and programming

3. Prepare and maintain a long-range transportation plan (LRTP). MPOs must develop a 20-year LRTP that supports improved mobility and access for people and goods (including operations and maintenance) and supports a good quality of life. The plan includes a list of priority investments, anticipated available funding and the regional goals and policies that will be pursued during that 20-year period. It must be formally adopted by the MPO and updated at least every 5 years. It must also be consistent with the state transportation plan. For MPOs in areas with poor air quality, the LRTP must conform to the State Implementation Plan required to bring areas into compliance with national air pollution standards.

4. Program transportation funds (TIP and UPWP). MPOs must develop a fiscally constrained, four-year Transportation Improvement Program (TIP) listing projects and strategies consistent with the LRTP. Projects must be included in the TIP to receive federal funding. The TIP includes new investments, maintenance and system operations and other finance or regulatory tools. Fiscal constraint requirements ensure that proposed projects can be reasonably completed with available funding. MPOs in Transportation Management Areas (TMA) also create and approve an annual UPWP detailing funding for specific data gathering, research or training, evaluation studies, budgeting for community engagement activities and other collaborative efforts. MPOs that are not TMAs prepare a similar, but more simplified statement of work for the year.

5. Involve the public. Community engagement is a central part of transportation planning for each of the above steps. MPOs are required to develop a Public Participation Plan. Further requirements for public notice and involvement are stipulated in other related federal laws including the National Environmental Policy Act (NEPA) that governs the use of all federal funds. Many MPOs have gone far beyond basic federal requirements for public involvement to reach a larger and more diverse set of regional stakeholders and involve them in MPO decision-making processes.

1 USDOT. The Metropolitan Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decision-Makers, Officials and Staff. Washington DC. Transportation Planning Capacity Building Program, FHWA and FTA

MAP-21 (Public Law 112-141), signed into law in July 2012, took metropolitan planning one step further by introducing performance-based planning and programming designed to provide more accountability for planning goals, investments and performance outcomes (23 CFR 450.206 and 49 CFR 450.306).

The federal framework for MPO planning and programming creates a baseline of required activity. Innovative MPOs see these requirements as a floor, not a ceiling. They become relevant regional leaders by using the full range of tools at their disposal. They engage decision-makers and the public in long-range planning and goal-setting, gather data and perform technical analysis and prioritize millions of transportation dollars to shape the region and address broader environmental, economic and social goals.

DIVERSITY OF SIZE AND FUNCTION

While federal legislation describes the general guidelines for creating MPOs and their areas of responsibility, it is up to the governor and local governments of each region to determine the organizational structure and voting representation. At a minimum, MPO boundaries must encompass the entire existing urbanized area, as defined by the US Census, plus the contiguous area expected to become urbanized over the next 20 years (23 CFR 450.312). To formalize coordination and clarify responsibilities, MPO members sign metropolitan planning agreements with the state, providers of public transportation operating within the area and other regional planning bodies.

Some states, such as Alaska, have designated MPOs through state statute, while others, such as Connecticut, use a State Administrative Code. In addition to meeting federal mandates, MPOs often have extra responsibilities under state law. In California, for example, the MPOs are responsible for allocating some non-federal transportation funds in their regions. In Oregon, the MPOs also have a role in growth management and land-use planning.

Federal guidance encourages having one MPO per urbanized area, but some regions have multiple MPOs. In Florida, for example, MPOs are designated at the county level. Metropolitan areas that cross state boundaries may be served by an MPO in each state. Today there are more than 400 MPOs nationwide. Roughly 12 percent represent areas with populations over 1 million. 36 percent serve regions with populations between 200,000 and 1 million. 52 percent represent areas between 50,000 and 200,000 in population.[1]

1 Mallett, William J. (February 3, 2010.) "Metropolitan Transportation Planning" Washington, DC. Congressional Research Service, R41068

RELATIONSHIP BETWEEN MPOS AND OTHER REGIONAL AGENCIES

Many MPOs are part of a Council of Governments (COG), a regional planning body guided by elected officials representing local governments throughout the metropolitan area. Among the many examples of this model are the **Metropolitan Washington Council of Governments (MWCOG),** which houses the **Transportation Planning Board (TPB)** serving the national capital region, and the **Denver Regional Council of Governments (DRCOG),** serving the greater Denver metro area. Often these COGs existed before the MPO and may have broader regional planning authorities.

In other instances the MPO may be part of a regional planning agency with functions beyond transportation. For instance, the **Metropolitan Council** in the greater Minneapolis-St. Paul region is the federally designated MPO but also has oversight of regional stormwater and park systems and is the regional transit authority. But in other places these are separate and distinct agencies. In Boston, for example, the **Metropolitan Area Planning Council** coordinates planning for a range of social, economic and environmental issues, while the Boston Region MPO is a separate agency responsible for the long-range transportation plan and programming of federal transportation funds. The MPO may be the only regional agency in other regions, especially those with populations below 200,000.

Regional Alphabet Soup: MPO, COG, RPA, TMA and RTPOs

MPO: Metropolitan Planning Organization is a federally mandated transportation policy-making organization, comprised of representatives from local government and state governmental transportation authorities, created to ensure that existing and future transportation projects and programs are based on a continuing, cooperative and comprehensive planning process.

COG: Council of Government is a regional body serving local governments and counties within a defined metropolitan area with responsibilities over issues such as economic and community development, natural disaster mitigation, emergency response planning, aging services, water management, pollution control and transportation planning. Council membership is drawn from the county, city and other governmental bodies within its area.

RPA: Regional Planning Association, Council, District or Commission is a quasi-governmental organization designated by state statute to address regional issues and plan multi-jurisdictional solutions and facilitate local input into state policy development.

TMA: Transportation Management Area is a metropolitan area with a population over 200,000 and federally designated by the U.S. Secretary of Transportation with responsibility for the regional congestion management process.

RTPO: Regional Transportation Planning Organization is a regional policy board formed through a voluntary association of local governments in non-metropolitan areas with a population under 50,000 and designated by the state to carry out the transportation planning process.

Large urban areas typically have some of the worst rates of traffic congestion and air quality in the country. Federal law treats these areas differently, too and designates those with at least 200,000 residents as Transportation Management Areas (TMAs).[1] MPOs in TMAs must consist of local elected officials and officials from state and local public agencies that operate major modes of transportation (23 CFR 134 (d)(2); 49 CFR 5303 (d)(20)). MPOs in TMAs establish a Congestion Management Process (CMP) that identifies actions and strategies to reduce traffic congestion and increase mobility. The CMP relies on technical tools to evaluate plans against a set of locally determined performance measures and prioritizes congestion management strategies that may include pricing, rideshare and other high-tech management tools known as intelligent transportation systems.

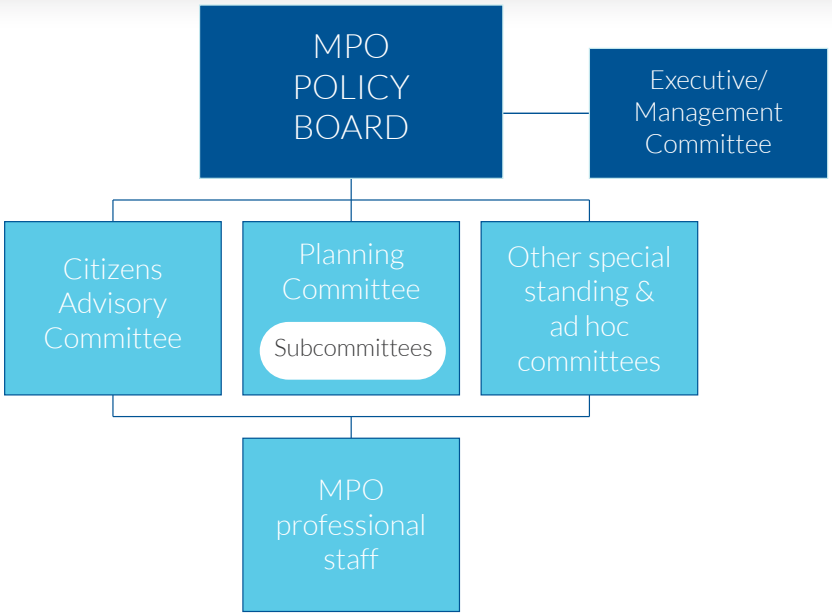
TMAs also have greater authority over federal Surface Transportation Program (STP) funds, the largest funding category sub-allocated to metro areas and which can be spent on a broad range of roadway, transit, bicycle and pedestrian uses.[2] In consultation with the state DOT, MPOs in TMAs have direct authority to choose projects from their region's approved TIP to fund with STP funds.[3] MPOs that are not located in a TMA are only authorized to "cooperate" with the state DOT to select projects from the TIP. This means that although the TIP identifies the region's desired transportation projects, the state DOT has the power ultimately to determine which are funded.

MAP-21 now allows states to establish and designate a Regional Transportation Planning Organization (RTPO) to represent non-metropolitan areas to the state DOT (23 CFR 450.210(d)). RTPOs can develop a long-range plan and TIP that the state will use to develop the statewide transportation plan and STIP. Federal legislation now requires state DOTs to cooperate with local elected officials responsible for long-range planning in non-metro areas of the state, or, if appropriate, the RTPO (23 CFR 450.208(a)(4)).[4] This change made in MAP-21 now provides a seat at the table for smaller metropolitan areas to select transportation projects from the State Transportation Improvement Program (STIP).

1 TMAs can also be designated in areas under 200,000 at the request of the State and MPO.
2 www.fhwa.dot.gov/map21/qandas/qasuballocation.cfm
3 USDOT. The Metropolitan Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decision-Makers, Officials and Staff. Washington DC. Transportation Planning Capacity Building Program, FHWA and FTA.
4 Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Proposed Rule. Federal Register Vol. 79, No. 105. (June 2, 2014.)

MPO STRUCTURE AND GOVERNANCE

Each MPO designates a policy board that is formally responsible for adopting regional transportation plans and policies. Policy boards determine their own representation and decision-making procedures. Typically, the members are designated by the governor or other authority and while many are elected officials, that is not a requirement. Portland Metro is notable as the only MPO whose members are directly elected by regional voters, though Metro still has a requirement that their actions be recommended by an advisory committee of local elected officials and transportation service providers.



Typical MPO structure. Source of information: Association of Metropolitan Planning Organizations

For TMAs, federal planning statutes and planning regulations identify a list of government or agency officials who must be on the TMA policy boards. These include partner organizations that should naturally be included in good planning efforts: ports, airports, the state DOT and public transit providers. Many MPOs also include representatives of private transit operators and health and human service providers who are involved with providing transportation options for people with disabilities or low-income households.

MPOs use planning or technical advisory committees (PAC or TAC) and subcommittees to provide technical analysis, recommendations and specialized knowledge to the board on specific planning strategies, projects or issues. The TAC is made up of local government technical staff with expertise in specific planning or engineering areas. Some MPOs also include transportation advocates who bring technical knowledge and a citizen's perspective that is extremely useful for balancing regional and modal needs. Other specialized standing committees are used to address emerging and priority planning issues, such as innovative finance, climate adaptation and specialized transportation services for people with disabilities. The TAC is typically responsible for reviewing and evaluating transportation-related plans and programs before these items are presented to the MPO board. The TAC ensures that the studies, plans and programs submitted to the MPO are technically sufficient, accurate and comprehensive.

Citizen advisory committees (CAC) are used by most MPOs to provide a citizen's view on transportation decision-making. Citizens are typically selected to represent a cross-section of the region in terms of geography and cultural values or transportation needs, such as freight shippers, bicyclists or transit riders. CAC members are appointed by the MPO policy board and may be selected from homeowner, business or other civic associations or other interest groups such as those representing people with disabilities, specific minority populations or age groups. A growing number of MPOs are also reaching out to involve representatives

of schools and anchor institutions such as universities, health care centers or other major transportation generators. The Public Participation Plan (23 CFR 450.316) describes the CAC process and broader public outreach strategies used by the MPO to gather citizen input, educate the public and hopefully involve them in the decision-making process.

There are no federal requirements for MPO staffing, but most are managed by an executive director who oversees a professional planning staff. For TMAs, especially those with responsibilities beyond transportation, agency size and budget may be quite large. Federal transportation authorization provides a base level of funding for MPOs to undertake their required planning roles, but many agencies are supplemented with local funds, especially regional planning agencies with broader functions. Staff members assist the policy board through technical work, facilitating public input and community engagement and managing the overall planning process. FHWA and FTA jointly administer a public certification review every four years to ensure that the MPO is carrying out the metropolitan transportation planning process in accordance with federal requirements.

Resources

- USDOT Transportation Planning Capacity Building Program. www.planning.dot.gov/metro.asp
- Statewide and Nonmetropolitan Transportation Planning; Metropolitan Transportation Planning Proposed Rule. Federal Register Vol. 79, No. 105. (June 2, 2014)
- USDOT. The Metropolitan Transportation Planning Process: Key Issues – A Briefing Book for Transportation Decision-Makers, Officials and Staff. Washington DC. Transportation Planning Capacity Building Program, FHWA and FTA.
- Association of Metropolitan Planning Organizations (AMPO). www.ampo.org
- National Association of Regional Councils (NARC). www.narc.org