

**REGIONAL TRANSPORTATION AND LAND USE DECISION MAKING IN
METROPOLITAN REGIONS
FINDINGS FROM FOUR CASE STUDIES**

Main Report

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Executive Summary

Background: Throughout the United States, metropolitan regions face increasingly complex issues related to transportation and land use. The diffuse nature of decision making creates a need to better coordinate land use and transportation to address issues such as: congestion, infrastructure costs, and greenhouse gas emissions. Key players in this decision making are regional metropolitan planning organizations (MPOs) with transportation planning authority, regional planning responsibilities, and in some cases regional land use planning authority.

Study goal: The goal of this study was to describe and assess efforts by regional agencies to coordinate land use and transportation. We examined policies and processes in four key topic areas:

- Governance: formal and informal decision making approaches
- Coordination: strategies used to coordinate land use and transportation
- Growth Centers: policies to encourage development in higher density centers
- Transportation Improvement Program (TIP): policies to incorporate smart growth criteria in TIP funding decisions

Study methods: For this project we researched four case studies in metropolitan areas that are undertaking innovative efforts to coordinate land use and transportation on a regional scale:

- PSRC: Puget Sound Regional Council (Washington)
- Metro: Portland (Oregon)
- DRCOG: Denver Regional Council of Governments (Colorado)
- SANDAG: San Diego Association of Governments (California)

We reviewed the literature and published reports, conducted approximately 40 interviews, and conducted an online survey of over 450 individuals in the four regions (with an overall response rate of 44%).

Findings and transferable practices: This report describes our findings and transferable practices from the four case studies, grouped into four topic areas. Some of the findings include:

Governance

- Most of the critical players are involved in all four regions
- Smaller municipalities, nongovernmental stakeholders, and the public have more limited involvement
- The institutional complexity (e.g., number of jurisdictions, cross-boundary issues) has a significant effect on governance approaches
- Land use authority is a key tool for the cases with regional land use powers (Metro and PSRC), while regional sales tax funding is a key tool for the cases without regional land use powers (SANDAG and DRCOG)
- Elected official engagement is important to the success of regional governance
- Coordinating with state transportation agencies is challenging in some regions
- All four regions face cross-boundary issues, with Portland Metro facing the most difficult issues due to its small size, commuter patterns, and cross-state issues
- Some of the transferable practices include:
 - Payment to elected officials for attendance at Metropolitan Planning Organizations (MPO) meetings
 - Suburban leadership in regional planning efforts
 - Board manuals and local elected official training materials
 - Cross-boundary representation and committees

- Visualization materials to support outreach

Transportation – Land Use Coordination

- Transportation and transit funding are critical tools in coordinating with land use decision making
- Transportation – land use coordination efforts received positive evaluations in all four case study sites, and respondents indicated that these efforts were improving
- The relative influence of plans varies by region: regional land use plans were assessed as more influential in the cases with regional land use powers (Metro and PSRC) while transportation plans and funding were assessed as more influential in the cases without regional land use powers (SANDAG and DRCOG)
- Each region faces unique factors that affect transportation and land use coordination, including:
 - the small size of Portland Metro relative to its commutershed
 - the geographic constraints on transportation and land use in the Puget Sound region
 - the large area and more limited number of geographic constraints in the Denver region
 - the geographic and jurisdictional constraints that limit urban expansion in the San Diego region
- Some of the transferable practices include:
 - Transportation – land use concurrency requirements
 - Joint meetings of transportation and land use policy boards
 - Cross-representation or committees involving adjoining MPOs and counties
 - Close coordination with transit districts
 - Integration of other regional topics (e.g., housing, open space, water)

Growth Center Policies and Grant Programs

- Grants need to compliment other policies that support centers
- Funding flexibility is important to local governments
- Funding is small relative to regional need
- All four regions face debate about giving fewer centers more funding or spreading funding out to maintain broad support for the program
- Growth center grants have had limited impact thus far on private investment due to high costs, market concerns, and local opposition to density
- Growth center policies can be improved with more technical assistance, more funding, more investment in alternative transportation, and performance measures that reward municipalities for supporting center development
- Some of the transferable practices include:
 - Regional sales tax funding to support growth center grant program
 - Funding for light rail expansion to support development of centers
 - Development guidelines and design concepts for centers
 - Regional plans designating centers to coordinate investment across region

Transportation Improvement Program (TIP) Incentives

- TIP funding criteria (by itself) has a limited influence on land use decisions

- TIP funding in Portland Metro and Puget Sound has less influence, because the MPOs provide a relatively small share of regional funding
- TIP funding criteria are still important when combined with complimentary policies (transit investment, growth center grants, etc.)
- Some of the transferable practices include:
 - TIP criteria award points for projects that support regional land use goals
 - TIP criteria award points for projects that increase density or support a regional center
 - TIP criteria award points for municipalities that sign regional compacts
 - MPOs produce reports detailing criteria and how growth management criteria are scored

Implications and further research: This study concluded with a forum in which the team presented the research results and obtained feedback on the findings implications, and needs for future research.

Selected implications:

- Elected official leadership is critical, and more work could be done to educate and inform elected officials on regional issues
- Direct Federal funding or pass through of funding directly to the regional level could improve coordination or regional policies and bring into balance statewide mobility with regional livability
- Strengthening of performance measures could encourage more MPOs to invest more into smart growth efforts
- The Partnership for Sustainable Communities should consider more agency partners and review regulations and programs to support smart growth
- MPOs need information clearinghouses to provide better technical assistance, governance information, and timely responses to specific questions
- More regions may need to explore regional sources of funding (e.g., sales tax) to support transportation and transit needs
- State and Federal agencies and funding should encourage cross-MPO and cross-jurisdiction efforts

Selected future research:

- More research focused on governance and coordination
- Need for research to be translated into results for state and regional agencies
- Need for research on topics related to equity
- More work on visualization strategies and tools
- More research on performance measures for metropolitan regions
- Additional research on policy tools and their effectiveness

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1 Introduction & Background

Across the United States, metropolitan areas face a range of increasingly challenging issues related to transportation and land use. These issues include congestion, infrastructure costs, air quality, loss of open space, and greenhouse gas emissions.

These issues are closely interrelated with the form and patterns of land use, but as Cervero¹ notes, the separation of land use and transportation decisions makes coordination efforts difficult. Decisions about land use, transportation, and transit are spread across a range of entities, particularly because of the large number of municipal governments in these regions.

This complex context creates procedural coordination issues when decisions don't take into account spillover effects, cross-jurisdictional issues, or the timing of land use change, transit investment and infrastructure investment. In these cases, procedures or mechanisms are needed that bring decision makers together to better align their efforts.²

However, coordination efforts are also underpinned by different or competing objectives of policies and policy making bodies. In these circumstances, there is a need to reconcile these substantive differences or conflicts through joint planning, policy change, or negotiation on program implementation.³

The issue of coordination is not unique to metropolitan transportation and land use. In areas such as natural resources management and social services, government and nongovernment organizations confront similar concerns. To address these issues, many organizations have developed coordinated or collaborative governance approaches. These approaches assume that existing formal governance systems will continue, and examine the range of approaches to aligning activities.⁴

Coordinated and collaborative governance also assumes that it is difficult to create new organizations with the authority to encompass these problems—an assumption based on the many interrelated and large scale issues that make a structural approach infeasible. For example, the Portland area's Metro has substantial regional powers, but many of its land use and transportation issues relate to interstate transportation corridors and cross-state and cross-metropolitan commuting patterns. In these situations, an increasing use of collaborative planning efforts allows participating entities to retain their autonomy, but agree to work towards commonly identified objectives.⁵ This approach also requires ongoing coordination strategies that help link decision making approaches of different entities.

The issue of coordination in relation to transportation and land use decision making has been addressed in a range of studies, but much less attention has been paid to *assessing* different structures and mechanisms. For example, several states have supported studies that identified strategies for coordinating

¹ Cervero, Robert. "Growing Smart by Linking Transportation and Land Use: Perspectives from California." *Built Environment* 29, no. 1 (2003): 66-78.

² Alexander, Ernest R. "Interorganizational Coordination: Theory and Practice." *Journal of Planning Literature* 7, no. 4 (1993): 328-43. Rogers, David L., and David A. Whetten. *Interorganizational Coordination: Theory, Research and Implementation*. Ames: Iowa State University Press, 1982.

³ Bührs, Ton. "Strategies for Environmental Policy Co-Ordination: The New Zealand Experience." *Political Science* 43, no. 2 (1991): 1-29.

⁴ Agranoff, Robert, and Michael McGuire. *Collaborative Public Management*. Washington D.C.: Georgetown University Press, 2003. Ansell, Chris, and Allison Gash. "Collaborative Governance in Theory and Practice." *Journal of Public Administration Research and Theory* 18, no. 4 (2007): 543-71. Margerum, Richard D. "Evaluating Collaborative Planning - Implications from an Empirical Analysis of Growth Management." *Journal of the American Planning Association* 68, no. 2 (2002): 179-93.

⁵ Gray, Barbara. *Collaborating: Finding Common Ground for Multiparty Problems*. San Francisco, CA: Jossey-Bass, Inc., 1989.

transportation and land use, including North Carolina, Virginia, and Florida.⁶ However, this research focused primarily on topics such as travel demand tools, forecasting, and legislative options. As the North Carolina researchers highlighted, there is a need to identify institutional mechanisms that allow state and regional transportation planners “to reach out to local land use planners to increase collaboration among parties and improve planning outcomes.”⁷

In many urban areas, Metropolitan Planning Organizations (MPOs) are working to improve coordination between transportation and land use decision making. MPOs are federally established organizations serving metropolitan regions with a population in excess of 50,000. They were created to ensure that existing and future expenditures for transportation projects and programs are based on a continuing, cooperative, and comprehensive planning program. The MPOs are required by law and regulation to carry out certain transportation planning and coordination responsibilities. Part of this process is the programming of investments through a regional transportation improvement program (TIP), which MPOs must update regularly. MPO authority over land use varies by state, and most do not have any direct authority.

1.1 Goals and Objectives of Research Project

This research project starts with the assumption that institutional arrangements in metropolitan regions are complex, and regardless of efforts to change formal structures, coordinated decision making will be essential.

In discussing institutional arrangements, we refer to the range of formal and information structures and processes.⁸ This includes structures created through legislation (e.g., MPOs), administrative action (e.g., regional transportation organizations), and less formal coordination mechanisms such as coordinating committees, cross-approval processes, and funding incentives.

Our goal in this study is to document and assess the efforts to coordinate land use and transportation in metropolitan regions by focusing on two key dimensions:

- Regional governance: the structures, authority, and informal arrangements developed to address regional issues in multicity metropolitan areas.
- Coordination mechanisms: specific tools or policies for encouraging coordination between land use and transportation decision making; in particular, the financial incentives for local governments.

The specific objectives of the study are to: (1) document and describe innovative case studies; (2) evaluate the case studies through interviews, an online survey, and document review; (3) compare and contrast the findings; (4) analyze the findings to determine the lessons for practice and potential policy implications.

⁶ Hendricks, Sara J., and Karen Seggerman. "Incorporating Transportation Demand Management into the Land Development Process." Tampa, Florida: Center for Urban Transportation Research, University of South Florida, 2005. Miller, John S., Roger W. Howe, Ryan P. Hartman, and Arkopal K. Goswami. "Options for Improving the Coordination of Transportation and Land Use Planning in Virginia." Charlottesville, Virginia: Virginia Transportation Research Council, 2004. Rodríguez, Daniel A, and David R Godschalk. "The Connection between Land Use and Transportation in Land Use Plans." Raleigh, North Carolina: North Carolina Department of Transportation, 2003.

⁷ Rodríguez and Godschalk, 2003, 40.

⁸ Ostrom, Elinor. *Governing the Commons: The Evolution of Institutions for Collective Action*. New York, N.Y.: Cambridge University Press, 1990.

1.2 Methods

The project was led by a multidisciplinary team from the University of Oregon and Portland State University. The project also involved a team of graduate students working over two terms for the University of Oregon's Community Planning Workshop.

CASE SELECTION

The research team conducted a review of published literature, research reports, state agency documents, and Web sites to identify potential cases for investigation. We used three criteria for selecting the case study regions:

- Land use and transportation is being addressed on a regional scale
- Region encompasses multiple municipalities and jurisdictions
- Region is using grant programs and Transportation Improvement Program (TIP) funding to promote regional growth centers

Based on this review, we selected four cases and obtained commitments from regional organizations to participate in the study:

- **PSRC** Puget Sound Regional Council (Central Puget Sound, Washington)
- **Metro** Portland (Portland, Oregon)
- **DRCOG** Denver Regional Council of Governments (Denver, Colorado)
- **SANDAG** San Diego Association of Governments (San Diego, California)

BACKGROUND RESEARCH

For each case study, the research team reviewed documents, research reports, and published research. The team conducted interviews with approximately ten key individuals in each region addressing topics such as: approaches to regional coordination and governance, incentive programs to coordinate transportation and land use, the role of regional plans, relevant policies, and cross-boundary issues.

The **stakeholder interviews** included a comparable cross-section of individuals in each region, including: (1) MPO staff, (2) MPO elected officials, (3) state agency officials, and (4) staff with transit agencies, regional agencies, or Federal agencies.

The team also conducted two group interviews with the Regional Project Evaluation Committee (RPEC) in Puget Sound and the Transportation Policy Advisory Committee (TPAC) in the Portland Metro region using a similar interview format.

ON-LINE SURVEY

For each case study we conducted an online survey of people involved in regional transportation and land use decision making, including local government staff and elected officials, state agency staff, and regional agency staff. The survey asked respondents to evaluate several issues in their region, including:

- Regional governance and coordination of decision making
- Effectiveness of specific policies and programs in supporting coordination
- Regional trends related to transportation and land use planning

Individuals were notified of the survey by e-mail and asked to complete it online. After the initial e-mail, two follow-up reminders were also sent. The survey was sent to a total of 450 individuals in the four regions, and a total of 199 responded (response rate = 44%). A more detailed breakdown of the responses is provided in Table 1 below.

Table 1: Survey Respondent Information

Respondent information	PSRC	DRCOG	Metro	SANDAG
Survey sample size	101	117	163	69
Survey responses	61	59	44	35
Survey response rate	60%	59%	44%	35%
Organizational Affiliation				
Federal Government	0%	2%	0%	0%
State Government	11%	9%	9%	3%
County Government	15%	22%	2%	6%
City Government	39%	49%	39%	71%
Tribal Government	0%	0%	0%	0%
Port	7%	0%	2%	0%
Transit District	10%	4%	5%	3%
Private Sector	7%	3%	11%	0%
MPO	2%	3%	9%	3%
Interest Group	3%	3%	5%	0%
Community Representative	2%	0%	16%	0%
Other	5%	5%	2%	14%

RESEARCH FORUM

On September 8-9, 2010, the findings from this research were presented at a forum in Portland, Oregon. The invitation-only forum involved at least two participants from each of the four case studies, invited researchers, and officials from state and Federal agencies.

The schedule of the forum included:

- Federal transportation context
- Context and background on cases by MPO staff from each case study area.
- Presentation of findings by research team
- Federal legislative context by Congressman Oberstar (MN) and Congressman DeFazio (OR)
- Research panels on findings and future research needs
- Facilitated breakout sessions covering: (1) funding, (2) governance, (3) coordination mechanisms, and (4) policy.

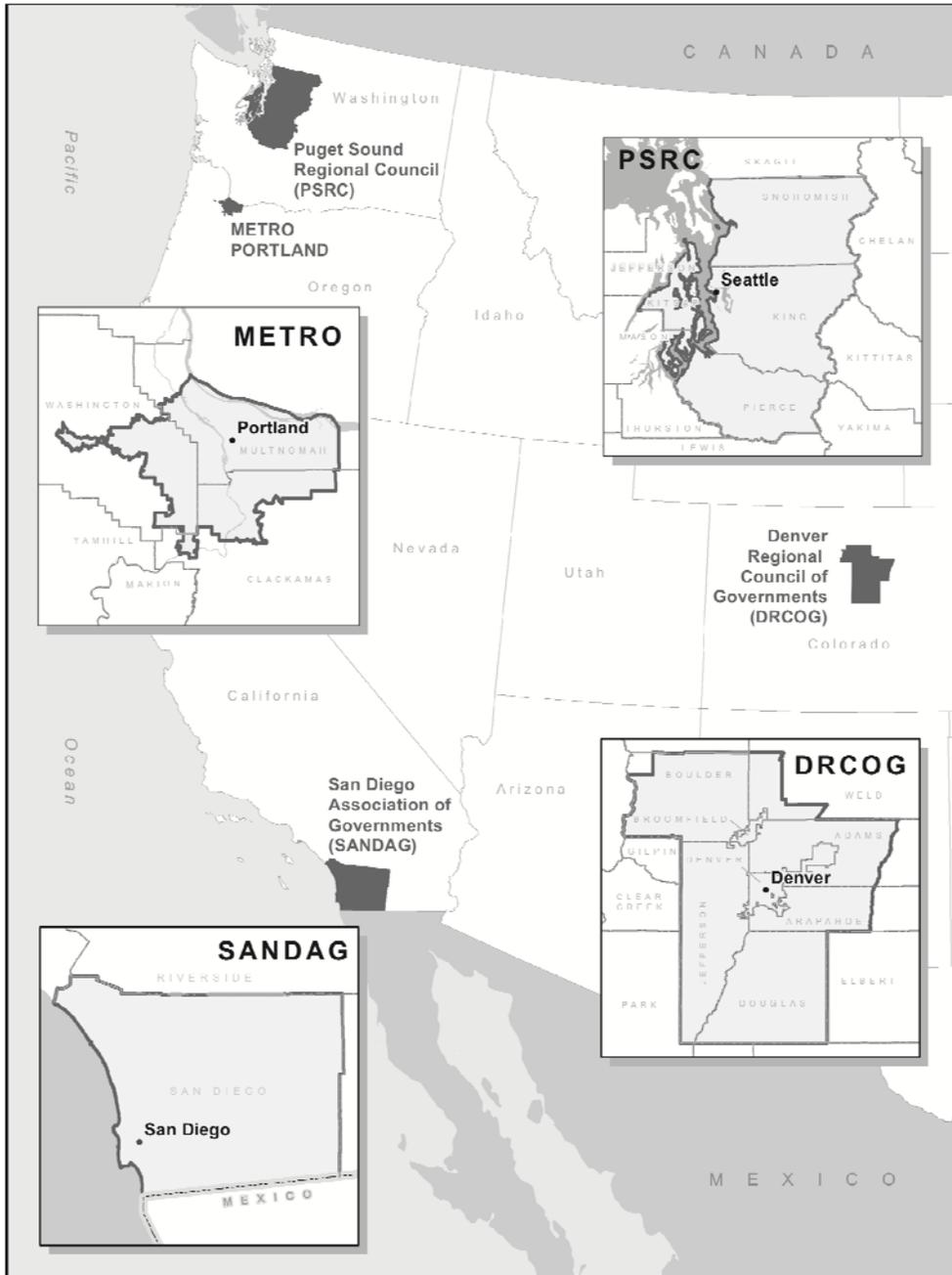
Information, notes, and discussion from this forum were gathered by the research team and summarized in the Appendix. The team used this information to refine the analysis and recommendations presented in this document.

Limitations and Caveats

Our methods have several limitations. Ideally, we could evaluate our cases using outcome data. However, the policies are relatively new, and many years of data are required to determine statistically valid trends. Our study provides an interim assessment of these policies using the opinions of regional stakeholders.

The interviews and surveys were designed to include a parallel set of participants for each case, but the committee composition and respondents varied. Also, respondents in different regions may have different expectations of performance. Finally, we rely on a relatively small set of respondents. For these reasons, we have been cautious in our cross-case comparisons and generalizations.

Figure 1: Report Case Studies



Source: InfoGraphics Lab, Geography Department, University of Oregon

2 Case Study Overviews

This section provides brief overviews of the four case study areas, and a summary of participant assessment of regional outcomes. A more detailed discussion of each case study is provided in Appendix 2.

As shown in Table 2, all four regions include medium-sized cities with varying geographic sizes and number of local jurisdictions. Washington and Oregon have state growth management legislation, while California and Colorado do not. Other state legislation affects land use and transportation decision making, such as California's affordable housing requirements.

Table 2: MPO Overview

Regional MPO	Metro Population	Area (sq miles)	Cities Counties	Agency Formation (Year)
Portland Metro (Metro)	1,400,000	463	25 Cities 3 Counties	1977
Puget Sound Regional Council (PSRC)	3,583,000	6,290	82 Cities 4 Counties	1959
San Diego Association of Governments (SANDAG)	3,200,000	4,526	18 Cities 1 County	1966
Denver Regional Council of Governments (DRCOG)	2,851,000	5,288	47 Cities 9 Counties	1955

2.1 Portland Metro (Metro)

Portland Metro encompasses 3 counties (Clackamas, Multnomah, and Washington) and 25 cities, including Portland, Beaverton, Tualatin, Oregon City, Milwaukie, Gresham, and Fairview. Approximately 1.4 million people live in the Metro region, with over 38 percent living in the City of Portland. Metro covers 463 square miles, but the greater metropolitan area extends to a larger area, including across the Washington-Oregon border to the north (see Map 1).⁹ The Metropolitan Service District (Metro for short) formed through merging with the Columbia Region Association of Governments (CRAG). The Oregon Legislature approved the creation of Metro in 1977 and it was approved by voters in 1978. It began operating in 1979, adopted its first urban growth boundary, and was designated by the Federal government as the region's metropolitan planning organization (MPO).

In 1995, Metro adopted the 2040 Growth Concept, which is the region's growth management policy that defines development in the metropolitan region through the year 2040. The 2040 Growth Concept directs most development to existing urban centers and along existing major transportation corridors, and promotes a balanced transportation system with a variety of transportation options.

⁹ Metro, Region, County, and City Areas. 2006. Document PDF available on Metro Web site: <http://www.oregonmetro.gov/index.cfm/go/by.web/id=24905> (accessed January 2010).

The Regional Framework Plan (RFP), adopted in 1996, unites all of Metro's adopted land use planning policies and requirements into one document. The RFP brings together the 2040 Growth Concept, the Regional Urban Growth Goals and Objectives (RUGGOs), the Metropolitan Greenspaces Master Plan, and the Regional Transportation Plan (RTP). Oregon state law requires that the RFP comply with Oregon's statewide planning goals. The RFP contains policies on key regional growth issues, including accommodation of projected growth and the coordination of transportation and land use planning.

The Regional Transportation Plan (RTP) serves as the Federal metropolitan transportation plan as well as the Transportation System Plan (TSP) required under the state's Transportation Planning Rule.¹⁰ The first RTP was approved in 1982. The last update, the 2035 Regional Transportation Plan, was adopted in June 2010.

2.2 Puget Sound Regional Council (PSRC)

The PSRC covers nearly 6,300 square miles and encompasses four counties (King, Snohomish, Pierce, and Kitsap) and 82 cities, including Seattle, Bellevue, Bremerton, Everett, and Tacoma. The region contains over 3.5 million residents with approximately 16 percent living in the City of Seattle. Puget Sound has many channels and waterways that make transportation systems challenging. Furthermore, populated areas tend to concentrate near the Sound, which creates land use challenges due to the sensitivity of natural areas.

The first regional planning organization was established in 1959 and designated as a Federal Metropolitan Planning Organization (MPO) in 1973. The Puget Sound Regional Council was formed in 1992. Under Washington State law the PSRC is also the designated regional transportation organization (RTPO). The PSRC prepares the Regional Transportation Plan (RTP), which satisfies both Federal and state transportation requirements. Every one to two years the PSRC is required to complete a federally approved Unified Planning Work Plan (UPWP). The Council also prepares the regional Transportation Improvement Program (TIP).

Under the Washington Growth Management Act,¹¹ the PSRC prepared a long-range, integrated strategy called *Vision 2040*, which addresses regional environment, growth management, economic development, and transportation. It was adopted in 2008 as a comprehensive update to previous plans, and presents a numeric Regional Growth Strategy, which allocates expected population and employment growth throughout the region. A key component of *Vision 2040* is the designation of regional growth centers and manufacturing and industrial centers. The Council is responsible for ensuring that the transportation-related provisions in local comprehensive plans are consistent with the regional plan. *Transportation 2040*, an update to the regional transportation plan, was adopted in May 2010, and serves as the functional transportation plan for Vision 2040. It provides for a transportation system consistent with the regional vision.

2.3 San Diego Association of Governments (SANDAG)

SANDAG's boundaries coincide with San Diego County and encompass 18 cities, including San Diego, Carlsbad, Chula Vista, and Oceanside. The SANDAG region covers more than 4,000 square miles and the total population estimated for 2009 is close to 3.2 million, with over half of this population living in the

¹⁰ Oregon Administrative Rule Chapter 660, Division 12, available at http://arcweb.sos.state.or.us/rules/OARS_600/OAR_660/660_012.html

¹¹ Chapter 36.70a RCW (Revised Code of Washington), accessible at <http://apps.leg.wa.gov/rcw/default.aspx?cite=36.70a>

City of San Diego.¹² SANDAG is bounded by Mexico to the south, the Pacific Ocean to the west, mountains to the east, and a military base to the north.

Although SANDAG was not created until 1980, it was preceded by a comprehensive planning organization created in 1966. The CPO was designated as the Metropolitan Planning Organization in 1970. In 1971 it was designated the state Regional Transportation Planning Agency, and one year later it was reestablished as a separate joint powers authority, independent of county government.¹³

As a result of several proposals and reviews, the California Senate passed legislation in 2002 that strengthened SANDAG's authority in the region. The agency took over the regional transit planning and capital project development functions of the region's Metropolitan Transit System and the North County Transit District.

As the Federal MPO, SANDAG is responsible for preparing a regional transportation plan and regional transportation improvement program (RTIP). Under state law, SANDAG creates regional short-range transit plans and is responsible for coordinating the regional housing needs assessment.

In 2004, SANDAG completed a Regional Comprehensive Plan (RCP) designed to guide how the region should grow in terms of housing, transportation, environment, energy, and water. The RCP establishes a planning framework for integrating local land use with regional transportation decisions. The RCP does not supersede local government land use authority, but looks at these individual decisions as a whole, examines cumulative development trends, and creates incentives for smart growth planning.¹⁴

2.4 Denver Regional Council of Governments (DRCOG)

Situated along the Front Range of Colorado, the Denver Regional Council of Government's (DRCOG) planning area includes nine counties and 47 cities, including Denver, Boulder, Aurora, and Lakewood. The regional population is approximately 2.8 million people, with over 600,000 living in the City of Denver.¹⁵

The Denver Regional Council of Governments (DRCOG) was formed in 1968, but was preceded by an intercounty regional planning commission formed in 1955. Under state law it is authorized to make and adopt regional plans, but it does not have land use implementation authority such as zoning. With DRCOG's support, the Regional Transportation District (RTD) was formed in 1969 to manage the region's transit system. In 1971, DRCOG signed agreements with the RTD and state to manage transportation planning throughout the region.

As a Federal MPO, DRCOG is responsible for preparing a regional transportation plan and regional transportation improvement program (TIP). DRCOG also prepared a regional comprehensive, long-range strategy called Metro Vision. Metro Vision is an umbrella plan that addresses growth and development, transportation, and the environment. Metro Vision provides the high level policy context for more

¹² SANDAG, "Demographics and Other Data: Fast Facts." http://www.sandag.org/resources/demographics_and_other_data/demographics/fastfacts/regi.htm (accessed January – February 2010).

¹³ SANDAG, "About SANDAG: History." <http://www.sandag.org/index.asp?fuseaction=about.history> (accessed January – February 2010).

¹⁴ SANDAG. *Regional Comprehensive Plan for the San Diego Region*. July, 2004. Document PDF available on SANDAG Web site: <http://www.sandag.org/index.asp?classid=12&fuseaction=home.classhome> (accessed January – February 2010).

¹⁵ *With One Voice*, DRCOG, 2009, p.2, <http://www.drcog.org/documents/2009%20With%20One%20Voice%20Brochure%204%20web.pdf>

detailed plans, including the regional transportation plans and local government plans, but local compliance with the plan is voluntary.

2.5 Regional Outcomes

In our survey we presented participants with a range of outcome assessment questions to provide some assessment of regional trends. As shown in Table 3, a similar percentage of respondents agreed and disagreed that there was consistency between regional transportation decisions and local land use decisions. A similar split was found when they were asked about local land use decisions being consistent with regional transportation decisions. In contrast, a strong majority in all regions believed that transit investment and bicycle and pedestrian investment supported regional growth centers. In contrast, the views about roadway investment supporting growth centers was more mixed. In all four regions, a sizable majority of respondents agreed that the region was making more efficient use of land, was increasing transportation options, and was seeing more development within the region's growth centers.

Table 3 Metropolitan Outcome Assessment Questions

Question: Please rate your level of agreement or disagreement with the following statements:

	PSRC				DRCOG				Metro				SANDAG			
	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know	Agree	Neither agree nor disagree	Disagree	Don't know
Regional transportation decisions are consistent with local land use decisions	38%	21%	39%	2%	27%	45%	27%	2%	33%	27%	39%	0%	47%	32%	21%	0%
Local land use decisions are consistent with regional transportation decisions	30%	32%	36%	2%	27%	25%	46%	2%	32%	29%	38%	0%	36%	29%	33%	4%
Transit investment supports regional growth centers	65%	21%	13%	2%	77%	10%	10%	2%	66%	12%	21%	0%	64%	7%	22%	7%
Roadway investment supports regional growth centers	31%	34%	36%	0%	39%	33%	26%	2%	39%	21%	39%	0%	44%	26%	19%	11%
Bicycle and pedestrian investment supports regional growth centers	50%	32%	15%	4%	65%	12%	20%	2%	68%	12%	18%	3%	50%	36%	11%	4%
The region is making more efficient use of land as a result of regional efforts	48%	28%	23%	2%	47%	27%	26%	0%	66%	21%	12%	0%	68%	14%	15%	4%
The region is increasing transportation options as a result of regional efforts	60%	23%	17%	0%	77%	6%	16%	0%	69%	18%	12%	0%	64%	11%	18%	7%
There is an increasing trend of development within the region's growth centers	59%	30%	8%	4%	57%	29%	10%	4%	45%	33%	21%	0%	68%	14%	7%	11%
Sample size	53				48-49				33-34				27-28			

Note: Agree includes “agree” and “strongly agree” responses; Disagree include “disagree” and “strongly disagree” responses.

3 Regional Governance

We use the term governance to refer to the processes of governmental management, leadership, and decision making in regions. At the regional level, governance is particularly complex, because of the multitude of jurisdictions and organizations. Metropolitan Planning Authorities (MPOs) and Councils of Government (COGs) serve as a forum for helping to govern across these regions. In approaching our analysis of governance, we consider both the formal and informal leadership structures and the ways in which they operate.

3.1 Regional Governance Findings

In our interviews and surveys, we asked people in each region about participation in regional decision making. We also reviewed the structure of governing boards and their approaches to membership and decision making.

Critical government players are involved: In all of the regions, a majority of survey respondents and interviewees indicated that the critical players were involved in transportation and land use decision making; local elected officials were kept well informed; and there was a high level of engagement among elected officials. The most common dissatisfaction was expressed in relation to elected officials, with respondents noting elected officials' deficiencies in understanding about regional processes, misrepresentation of constituencies, and inconsistencies between local views and regional vision. One significant challenge was the large number of elected officials across several regions and the difficulty of communicating with them.

Limited involvement of nongovernmental stakeholders and the public: A consistent theme that emerged from open-ended comments about regional decision making was the lack of participation among smaller municipalities and nongovernmental stakeholders, particularly special districts and school boards. Many respondents also believed that there was a lack of public involvement in decision making.

Institutional complexity affects governance: One significant difference between the regions was the structure of their governing boards. As shown in Table 4 these differences begin with the number of jurisdictions encompassed in each region. The smaller number of local jurisdictions in the San Diego region allows all jurisdictions to regularly participate in regional governance. In contrast, Puget Sound and Denver rely more on executive committees. Portland Metro has directly elected regional councilors, who represent districts in the region. This structure does not provide as many opportunities to engage other elected officials, and therefore Metro relies on many advisory committees.

Table 4 Governance Summary

Governance Aspects	Metro	PSRC	DRCOG	SANDAG
Cities and Counties	25 cities 3 counties	72 cities 4 counties	47 cities 9 counties	18 cities 1 county
Size of executive committee	Council: 7 members	Executive board: 32 members	Board of Directors: 57 members	Board of Directors: 24 members
Meetings	Weekly (work session or meeting)	Monthly	Monthly	Twice per month
Voting rules	Simple majority	Weighted by population	Simple majority (for regional plans)	Simple majority with option for weighted voting
Noncity / noncounty members	None	None	3 non-voting members appt. by Governor	9 non-voting members
Selected Standing subcommittees	<ul style="list-style-type: none"> ▪ Metro Expo. and Recreation Commission ▪ Metro Policy Advisory Comm. ▪ Metro Technical Advisory Comm. ▪ Joint Policy Advisory Comm. on Trans. ▪ Metro Comm. for Citizen Involve. ▪ Natural Areas Program Perf. Oversight Comm. ▪ Metro Solid Waste Adv. Comm. ▪ Metro Bi-State Coordinating Comm. 	<ul style="list-style-type: none"> ▪ Operations Comm. ▪ Transportation Policy Board ▪ Growth Management Policy Board ▪ Economic Development District Board 	<ul style="list-style-type: none"> ▪ Regional Trans. Comm. ▪ Administrative Comm. ▪ Metro Vision Issues Comm ▪ Advisory Comm. on Aging ▪ Transportation Advisory Comm. ▪ Firefighter Advisory Comm. ▪ Water Quality Advisory Comm. 	<ul style="list-style-type: none"> ▪ Executive Comm. ▪ Regional Planning Comm. ▪ Transportation Comm. ▪ Borders Comm. ▪ Public Safety Comm.
Regional land use powers	Yes	Yes	No	No
Regional transportation planning powers	Yes	Yes	Yes	Yes
Regional transit planning authority	No—TriMet	No—Multiple transit agencies	No—RTD	Yes
Encompasses “commutershe	No	Mostly	Mostly	Mostly

Governance Aspects	Metro	PSRC	DRCOG	SANDAG
d''				
Other regional roles	<ul style="list-style-type: none"> ▪ Open space ▪ Solid waste ▪ Regional facilities 	<ul style="list-style-type: none"> ▪ Economic development ▪ Food planning 	<ul style="list-style-type: none"> ▪ Aging 	<ul style="list-style-type: none"> ▪ Open space ▪ Borders ▪ Public safety

Regional authority affects governance: As shown in Table 4 the authority of each regional agency differs considerably. All four are federally designated MPOs with direct control over regional allocation of Federal transportation dollars. However, the regions differ in their control over *total* regional transportation expenditures, particularly in Portland and Puget Sound. In both San Diego and Denver, regional sales taxes provide important additional sources of funding to support transit investment, transportation, and other activities. In Portland and Central Puget Sound, the regional agencies have land use authority.

These factors highlight some key differences in the way the four organizations approach regional governance:

- SANDAG: Relies more on its funding capacity for regional transportation, transit, and open space, and to a lesser extent on its role in implementing state housing policy. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.
- DRCOG: Relies more on its funding capacity for regional transportation and its close working relationship with the Regional Transportation District; it also relies on a voluntary political commitment to the regional vision strategy. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.
- Metro: Relies more on its land use authority and its close working relationship with TRIMET; it controls a relatively small proportion of regional transportation funding. It relies on voluntary coordination with neighboring jurisdictions particularly in relation to regional commutershed issues.
- PSRC: Relies more on its land use authority but has had more complications working with the six transit districts in the region. It controls a relatively small proportion of regional transportation funding. It encompasses most of its commutershed, but cross-boundary commuter issues are growing.

Elected official engagement is important: The majority of respondents in all four case studies felt there is a high level of engagement of elected officials; this view was expressed by more respondents in SANDAG, Metro, and DRCOG than in PSRC. Interviewees in all four regions noted that this engagement is critical for developing an atmosphere that supports regional roles in decision making, particularly in regions where regional land use is entirely voluntary.

Engagement at the regional level is most difficult in Denver and Puget Sound because of the large number of elected officials. This means that many elected officials are not participating in discussions and decisions on regional issues on a regular basis. It is particularly difficult in Denver, because DRCOG has no regional authority and because term limits result in regular turnover of elected officials.

Coordination difficulties with state transportation agencies: In three of the regions, some of the highest percentages of “ineffective” ratings for coordination with the MPO were given to state transportation agencies. In part, these tensions reflect the tensions between competing goals of improving statewide mobility (DOTs) and addressing a range of regional livability issues (COGs and MPOs). For example, respondents in both Washington and Oregon noted that the automobile focus of their DOTs

were in tension with regional integrated planning efforts. In California, this relationship is less of an issue because state law grants much more significant planning authority to MPOs over the state transportation agency.

Cross-boundary coordination issues: In all four regions, the efforts of other MPOs and neighboring counties and cities to coordinate with the MPO garnered mixed evaluations. In terms of MPO to MPO coordination, in three regions as many respondents rated it effective as ineffective. For the category of neighboring counties and cities, a majority of respondents in all four regions indicated coordination efforts were ineffective. Efforts to coordinate across these boundaries are difficult because of the scale of the cross-regional issues, the additional transaction costs of working across these boundaries, and the lack of a forum for joint planning.

Portland Metro is encountering the most significant barriers to coordination because of their small size relative to the regional commute patterns. These commute patterns extend into Washington state and neighboring metropolitan areas. Cross-boundary commuting is becoming more of an issue in the other three regions.

DRCOG has confronted challenges in coordinating long-range planning stemming from proposals for toll roads by public highway authorities. Also air quality issues have required DRCOG to work with the North Front Range MPO.

3.2 Transferable Practices

The effectiveness of regional governance is a significant and timely topic in all four regions. In Puget Sound, Portland Metro, and San Diego, state legislative changes over many years have led to increased governance powers for the regional agencies. In Denver, there has been little state level effort to augment the powers of DRCOG, leaving them to rely entirely on collaborative processes.

In each case, we identified several approaches, issues, or initiatives that provide some practices that may be transferred or translated to other regions.

- SANDAG pays elected officials for their attendance at regional meetings, and holds most committee and subcommittee meetings on the same day. This creates a convenient arrangement for elected officials and encourages an atmosphere of regional engagement on “SANDAG meeting days.”
- SANDAG uses a two-part voting system. Measures can pass with a simple majority based on representation. However, jurisdictions can call for a weighted vote based on population, and then the measure must pass both votes to be approved.
- In several regions, leadership from suburban elected officials has been important for gaining regional support and commitment. This leadership has helped offset concerns about the dominance of the central city.
- DRCOG has developed a board manual designed to quickly bring elected officials up to speed on regional authority, issues, and decision making. The manual was developed when Colorado passed term limits, resulting in higher turnover among elected officials.
- Local governments in the DRCOG region created a voluntary regional agreement called the Mile High Compact (adopted in 2000) which calls for the signatories to: (1) adopt a comprehensive plan that includes a common set of elements; (2) use growth management tools such as urban growth boundaries; (3) link their comprehensive plans to Metro Vision; and (4) work collaboratively to guide growth and ensure planning consistency. As of December 2010, 46 of the 56 jurisdictions had signed the Compact, representing approximately 90% of the region’s population.
- To improve communication and coordination, PSRC invites representatives from neighboring counties (outside the MPO boundary) to attend board and committee meetings, such as the Transportation Policy Board. The PSRC includes neighboring counties (outside the MPO boundary) as “associate members,” and elected officials from those counties sit on policy boards.

- PSRC has used facilitators in the past to work through difficult issues at the committee level.
- PSRC includes neighboring counties outside its boundaries as associate members, and provides them ex-officio seats on its advisory policy boards. Reciprocally, PSRC officials sit on neighboring MPO policy boards.
- PSRC conducts “new electeds” workshops following each major election cycle to educate newly elected legislators on regional issues, procedures, and decision making processes.
- Portland Metro has created a Bi-State Coordination Committee that encompasses regional transportation coordination committees in Oregon and Washington. Its role is to review transportation and land-use issues of bistate significance and to present recommended actions to both state committees.
- CALTRANS provides planning grants for cross-boundary issues, which encourages MPOs to work together.
- MPOs in Oregon have formed a consortium, which has helped them collectively discuss coordination issues and approaches with the Oregon DOT and other state agencies.
- Visualization techniques for communicating complicated information, such as travelshed maps created by Metro, have been very important in communicating to elected officials and the public.

4 Transportation-Land Use Coordination

A second goal of this project was to examine and assess regional approaches to coordination. The need for coordination has long been a mantra in the literature and policy documents, but coordination is a complex issue on a regional scale.

4.1. Coordination Findings

In this section we discuss some of the general coordination trends. In later sections, we discuss the role that specific policies have played in helping to coordinate transportation and land use. The findings in this section are based on both our online survey and personal interviews about coordination efforts and trends.

Transportation and transit funding are critical tools: In all four regions, transportation and transit funding are critical tools in coordinating with land use decisions. In Denver and San Diego it is one of the few tools, but even in the growth management states of Washington and Oregon it was cited as highly important.

Transportation and land coordination is occurring: A majority of respondents in all four regions believed that transportation and land was “coordinated.” The percentages of respondents indicating it as coordinated or very coordinated were highest in Metro (78%) and SANDAG (73%). DRCOG generated a relatively high percentage of “uncoordinated” responses (35%), but no respondents in the four regions indicated that it was “very uncoordinated.”

Coordination is improving: In PSRC, Metro, and DRCOG, a narrow majority of respondents believed that coordination was improving or improving considerably. A high percentage of SANDAG respondents indicated that coordination was improving (69%) and no respondents responded that things were getting worse.

The influence of plans and policies varies by region: In our interviews and surveys, we were also interested in the relative influence of various plans and policies in each region. In all four regions, the regional land use vision, long range transportation plan, and transportation improvement program (TIP) were all listed by a high percentage of respondents as having an influence on land use-transportation coordination.

- In PSRC and Metro, the regional land use plan and transportation plan generated the highest percentage of respondents listing its influence as “moderate” or “strong.” In part this reflects the growth management powers of both states. In Oregon, the Transportation Planning Rule serves as a regulatory mechanism to coordinate transportation and land use. In Washington, there is a concurrency provision in the state Growth Management Act that influences coordination.
- In DRCOG and SANDAG the transportation improvement program (TIP) generated the highest percentage of respondents listing its influence as “moderate” or “strong.” Neither of these regional agencies has any land use authority or regulatory powers to link transportation and land use. Furthermore, both of these regions have passed a local option sales tax that fund transportation and transit investment (SANDAG’s TransNet, and FasTracks in the Denver region).

Each region has unique geographic and contextual factors that affect its ability to coordinate transportation and land use:

- While Metro has regional land use authority, its jurisdiction is relatively small compared to the larger commutershed, which extends across the Washington border into Clark County and south as far as Salem, Oregon.

- The numerous Puget Sound channels and waterways make transportation development challenging and limits land development options. Also, sensitive natural areas are located in close proximity to dense urbanized areas.
- DRCOG covers a large region that includes nine counties (plus a portion of a tenth county), which encompasses a significant portion of the commutershed but complicates efforts to promote voluntary and incentive-based coordination efforts.
- SANDAG boundaries coincide with San Diego County (over 4,500 square miles) and one regional state transportation district. The region is also geographically constrained by mountains, the ocean, the Mexican border and a military base. As a result, it has fewer cross-boundary coordination issues than the other regions, but the Mexican border adds a layer of complexity not present in the other regions.

4.2. Transferable Practices

- A key requirement in the Oregon Transportation Planning Rule (TPR) is that local governments evaluate proposed plan amendments and zone changes to consider whether they are consistent with adopted land use and transportation plans. This part of the TPR, referred to as Section 0060, is designed to assure that local governments consider transportation impacts of changes to land use plans, address how needed transportation improvements will be funded, and minimize traffic impacts of new development. The provision is controversial and continues to be the subject of debate.
- The Washington Growth Management Act contains a concurrency goal that must be addressed by local governments. The PSRC worked in consultation with the City of Bellevue and King County Metro to develop a template methodology for the incorporation of alternative modes into the Regulatory or Planning Concurrency process within regional growth centers.
- Under state law, PSRC is required to review the transportation provisions of local government comprehensive plans to ensure that they are consistent with Vision 2040's multicounty planning policies, which also serve as the RTPO's "regional guidelines and principles" for regional and local transportation planning. PSRC formally certifies the provisions in the local plans. The PSRC Executive Board has made a determination that only jurisdictions whose provisions have been certified are eligible to compete for regionally-managed transportation funding.
- At PSRC, the two primary land use and transportation policy boards (the Transportation Policy Board and Growth Management Board) meet periodically to discuss consistency between land use and transportation policies and programs.
- DRCOG works very closely with the Regional Transportation District (RTD) and local governments on long-range transit planning. The FasTracks funding for light rail corridors and stations is one of their key incentives for promoting development around growth centers. Moreover, DRCOG's plans identify 35 regional multimodal corridors and describes growth, development, and transportation visions for each corridor.
- As a result of legislative changes, SANDAG is responsible for transit planning in the San Diego region, while the two transit districts are operational agencies. This has created a close link between SANDAG's regional growth centers policy and its transit planning and investment.
- Both DRCOG and SANDAG have additional regional responsibilities that interrelate with regional land use activities, and are playing an increasingly important role. Until 2011, DRCOG had responsibilities relating to wastewater treatment infrastructure. They continue their duties as the Area Agency on Aging, which is having a growing influence on land use and transportation planning. SANDAG's Transnet tax provides significant funding for acquisition of open space and habitat areas that form a green belt along the eastern edge of the metropolitan area.

5 Growth Center Policies & Grant Programs

All four of the regions we studied have policies in place to encourage infill or development around centers. Each region has adopted a policy that provides grants to develop mixed use centers, particularly ones located along existing or potential transit corridors. By concentrating development around mixed-use centers, regions are attempting to improve the viability of transit corridors and create walkable environments with a mix of services and amenities. These centers are hypothesized to reduce vehicle miles traveled (VMT) by promoting transit use and reducing local trips for services. Mixed-use centers can also serve low and moderate income populations through more affordable housing and reduced transportation costs.

5.1 Growth Center Grant Program Findings

In each of the cases, we asked interview and survey respondents how well their growth center grant programs were working and how they could be improved. In all four cases, the growth centers grant programs are relatively new.

- **Funding needs to complement other policies:** A strong majority of respondents in all four regions indicated that the centers policy was encouraging local jurisdictions to focus more development in centers. For example, survey respondents in all four regions noted that these policies made living and working in these higher density centers more desirable. Interview and survey respondents also emphasized that grant programs needed to be complemented with a combination of policies to support centers.
- **Funding flexibility is important:** Local governments noted that the growth center grant programs were particularly helpful when they were flexible. These grants could fill in funding gaps from other sources that had more restrictions.
- **Grants are small relative to needs:** A common theme in interviews and open-ended comments was that the grant programs were relatively small in relation to overall need. For example, respondents in the SANDAG region cited the high cost of infrastructure investment to develop centers, and almost all of the respondents called for more funding in the grant program.
- **Debate about the number of designated centers:** In all four regions survey respondents made divergent comments about the number of centers designated across the regions, which ranged from 29 to 92 (see Table 5). Some believed there should be fewer centers focused exclusively around rapid transit. Others believed that higher density commercial and suburban centers would also aid regional transportation and land use goals.
- **Regional equity is an issue:** One of the challenges facing all four regions is the regional distribution of funding for growth centers. The goal of promoting higher density mixed use centers served by transit naturally favors some jurisdictions over others, including areas already served by transit and areas containing higher densities that would support future transit ridership. This disproportion can produce political concerns about funding. For example, almost all of SANDAG’s smart growth funding grants has been allocated to just four cities. Some of the different approaches reflect these tensions:
 - Since 2002, PSRC has concentrated on 27 regionally designated growth centers; it also has 8 centers focused on manufacturing. In addition, the rural Town Centers and corridors program was developed in 2004 to support more rural town Main Street development needs.
 - SANDAG has defined seven “smart growth place types” in its Regional Comprehensive Plan, which include: metropolitan centers, urban centers, town centers, community centers, rural villages, mixed use transit corridors, and special use centers. It has designated nearly 200 “smart growth opportunity areas” that conform to these place types.

- o Metro has designated ten urban design types in their 2040 Growth Concept, including Regional Centers, Town Centers, and Station Communities. The region contains 37 centers in addition to downtown Portland.

Table 5 Growth Center Programs

	Metro	PSRC	DRCOG	SANDAG
Number of Centers	37	35 27 regional centers; 8 manufacturing and industrial centers	92	196 85 existing and planned 111 potential
MPO Region	463 sq. mi.	6,290 sq. mi.	3,608 sq. mi. Full area 5,288 sq. mi	3,608 sq. mi.
Term used	Centers	Centers	Urban centers	Smart growth opportunity areas
MPO definitions of centers ¹⁶	"...the focus for redevelopment, multimodal transportation and concentrations of households and employment patterns."	"...relatively small areas of compact development where housing, employment, shopping, and other activities are in close proximity"	"... concentrated urban areas more dense and mixed in use than surrounding areas...[They] will be active, pedestrian- and bicycle-friendly places, with employment, housing and services nearby...[and] served by transit, either rapid transit or bus."	"...places that accommodate, or have the potential to accommodate, higher residential and/or employment densities. They are pedestrian-friendly activity centers that are connected to other activity centers by transit or could be in the future."
Types of Centers	Town Centers; Regional Centers	Regional Growth Centers, Manufacturing/ Industrial Centers	Mixed-use centers Activity centers, Regional corridors	Metropolitan Center, Urban Center Town Center Community Center Transit Corridor Special Use Center Rural Community

- **Targeted funding appears to have limited influence on private investment:** All four regions indicated that their growth centers policy was having limited influence on private investment, with 12% to 27% of survey respondents agreeing with this statement. Some of the challenges included:

¹⁶ Sources: Metro, "State of the center: Investing in our communities" January, 2009. PSRC, "Central Puget Sound regional growth centers" December, 2002. DRCOG, "Metro Vision 2035: Growth and development supplement" August 20, 2008. SANDAG, "Smart growth definition, principles, and designations" Spring 2003.

- Finding developers convinced that there is a market for higher density housing and supporting retail;
- The high cost of construction and development, reducing the affordability advantage of higher density housing;
- Local opposition to higher densities.
- **Improving centers policies.** When asked to list three things that could improve their region’s centers policies, the most commonly cited improvements cited by online respondents included:
 - Technical assistance (top item in 3 of 4 regions): sharing best practices, assisting with financial analysis, education and training, consultant assistance
 - More funding (among top 3 in all four regions): investment to enhance centers, planning grants, avoid spreading funding too thin, fund other transportation enhancements to support centers (bus, biking, walking)
 - Encourage active transportation and transit: increase investment in biking and walking infrastructure that would support growth centers.
 - Integrate performance measures and prioritize funding: identify local and regional performance measures that reward municipalities for supporting centers
 - Other commonly cited improvements include: land use policy changes to support mixed use centers (PSRC—11 respondents); better listening to local needs (Metro—11 respondents); more information and analysis on growth centers and best practices (PSRC—5 respondents); modification of TIP criteria to favor centers more (DRCOG—5 respondents); educate elected officials about land use policies (DRCOG—4 respondents).

5.2 Transferable Practices

- SANDAG has allocated \$280 million over 40 years from TransNet sales tax funding for its Smart Growth Incentive Program.
- SANDAG has developed model guidelines for planning and design for pedestrians, and smart growth centers, and has provided resources for local communities to work with the public in designing growth centers.
- In Denver, the Regional Transportation District and its plan for expanding the light rail system through the FasTracks program (funded by a regional sales tax) is a key incentive for developing around growth centers.
- DRCOG sets aside funding in the TIP for station area and urban center planning and its TOD program provides information, tools, and resources to help local governments plan for transit-oriented development.
- Metro has initiated a Community Planning and Development Grant program to support planning and development activities within the urban growth boundary that advance the region’s 2040 Growth Concept. The program is funded with construction excise tax revenue.
- Portland Metro has developed a number of toolkits and handbooks that provide specific tools to complement strategies and policies identified in the RTP and the 2040 Growth Concept. These include the award-winning “Creating livable streets: Street design guidelines for 2040” and “Community Investment Toolkit” that focuses on financial incentives, urban design and local building codes and economically and ecologically sustainable employment and industrial development.
- PSRC has developed guidelines for designated urban centers and high capacity transit station areas. It has published a Design Guidelines Manual.

- Since 2002, PSRC has concentrated on regionally designated growth centers; it also has regionally designated centers focused on manufacturing. In addition, the small but significant rural Town Centers and corridors program was developed in 2004 to support more rural town Main Street development needs.
- Communities in all four regions found that an approved centers map helped provide a clear policy intention and willingness to support and invest in development around these centers. While the designation of centers carries more weight in growth management states, it has also been an important starting point for local planning in San Diego and Denver.

6 TIP Funding Incentives

One criterion for choosing our four case studies was that all of them were incorporating criteria into their Transportation Improvement Program (TIP) funding allocation to create incentives for smart growth. Transportation funding in all four regions is provided through a complex set of Federal and state funding sources. Within certain constraints, funding rules allow regions to develop or weight their criteria to address regional needs. As a result, regions can add criteria such as “supports smart growth centers” to traditional funding criteria such as congestion relief or safety. In all four regions this funding is augmented by regional funds generated by other taxes.

6.1 TIP Funding Incentive Findings

In our interviews and survey, we asked participants to assess the use of TIP criteria to create incentives for coordinating with regional land use decisions.

- **TIP funding has limited influence on land use decisions:** In all four case study regions respondents assessed the effect of the TIP funding policy and criteria as being much greater on transportation decisions than on land use. In all four regions, approximately 80% of respondents assessed the TIP impact on transportation decision making as significant or very significant. In contrast, only 26% to 40% assessed the impact on land use as being significant or very significant.
- **TIP criteria emphasizing smart growth principles have limited influence:** In all four case study regions, interviewees and survey respondents indicated that the effect of utilizing smart growth criteria in TIP funding allocations was relatively minor because (1) the amount of TIP funding allocated using the smart growth criteria was a relatively minor portion of regional transportation investment, and/or (2) the smart growth criteria were a relatively small percentage of the funding criteria. For example:
 - In Portland Metro, only \$33 million of funding is allocated annually through the Metropolitan TIP, while a total of \$800 million is spent across the region from all sources¹⁷
 - In Puget Sound, only about 10% of the total TIP funds are allocated using growth center criteria¹⁸
- **Despite limited influence, TIP criteria are still important:** In all four regions, interviewees and survey respondents indicated that the TIP allocation criteria promoting smart growth were important when combined with a set of complimentary regional policies. For example, in several regions local officials noted that TIP funding was an attractive additional incentive to develop around centers when supported by the smart growth incentive grants and transit investment potential.

6.3. Transferable Practices

- SANDAG published a detailed report on its TIP policy, including explanations of how projects are scored through smart growth criteria.
- By California statute, 30% of state highway account funding is directed towards STIP projects. Of this amount, 75% of STIP funds are allocated to regional agencies by formula, with SANDAG receiving a 7.3% share of regional transportation improvement funds.

¹⁷ City Club of Portland. 2010. *Moving Forward: A Better Way to Govern Regional Transportation*. City Club of Portland Bulletin, 96(32), 1-67.

¹⁸ Regional Transportation Commission. *Final Report*. Olympia, WA: Regional Transportation Commission, 2006.

- Metro's MTIP funds are increasingly being linked to monitoring and outcomes in order to prioritize certain growth patterns. As a result, some rural and suburban areas feel that they are less competitive for MTIP funds.
- Metro's MTIP technical ranking system awards up to 40 points (out of 100 points) for projects that support Metro's Region 2040 Land Use Goals.
- DRCOG's TIP policy awards up to 6 points (out of 100 points) for projects that are within or support an urban center; it awards 3 points for projects within the adopted Urban Growth Boundary/Area.
- DRCOG's TIP policy awards one point (out of 100 points) for eight different factors, including: increasing population density, demonstrating progress towards developing an urban center, and signing the Mile High Compact.
- In PSRC, the approved policy for the region is that at least 10% of combined county and regional transportation funds from the Federal Surface Transportation Program (STP) and Congestion, Mitigation and Air Quality (CMAQ) programs are to be set aside for nonmotorized projects in the four counties.
- In PSRC, new rules for the transportation improvement program (TIP) must be tied to multicounty planning policies in Vision 2040. (Note: This study was conducted prior to these rules being placed in operation.)
- The PSRC uses a Regional Project Evaluation Committee (RPEC) to make recommendations on funding allocation criteria and specific projects. The RPEC is composed of representatives of municipal public works departments, transit agencies, the Governor's office, and Washington Department of Transportation district offices.

7 Implications and Further Research

On September 8-9, 2010, the research team held a forum in Portland, Oregon, involving invited researchers, case study participants, elected officials, and representatives from Federal, state, and local government. The purpose of the forum was to review the information collected in this study and discuss the findings and its implications.

Forum participants heard presentations from Congressmen Peter DeFazio (OR) and James Oberstar (MN) and an update on Federal activities from representatives of the Federal Highway Administration and the U.S. Department of Housing and Urban Development. In breakout sessions and panel discussions, participants were asked to consider the findings and discuss the implications for regional, state, and national policy. This section of the report summarizes some of the implications identified during this forum.

Study Implications

ELECTED OFFICIAL LEADERSHIP

In both our case study research and the research forum, elected official leadership came up repeatedly as a key issue in the coordination of regional land use and transportation decision making. In several regions, it was noted that the leadership of suburban mayors was particularly important. All four regions contain one dominant large city with significant resources and clout. Therefore, when regional leadership emerged from suburban elected officials there tended to be less concern about central city dominance and more ownership of decisions. For example, suburban leaders in SANDAG, DRCOG, and Metro have stepped forward to promote regionalism, while cities such as San Diego have appeared to step back to “allow nonurban champions.”

The challenge in all four regions is to educate and inform elected officials on the complex regional governance and funding arrangements, while their priorities are more focused on local issues. Some participants noted that metropolitan efforts could benefit from better outreach materials and visualization scenarios. Several participants noted that efforts to address greenhouse gas emissions would not emerge in many regions without state or national policy to push the issue.

DIRECT METROPOLITAN FUNDING

In discussions around both coordination and funding, participants emphasized the important role that comprehensive regional planning and a comprehensive regional planning organization plays. One of the options proposed at the forum was to provide more direct Federal funding of MPOs or to pass through more Federal transportation dollars directly to the regional level. This approach is used in California and reports in both Portland and Puget Sound recommended this option.¹⁹ At a national level, direct funding would most likely be relevant only for the largest MPOs that have adequate staff and capacity. A number of benefits were cited in the research forum:

- Transportation policies and projects would be more closely aligned with other regional policies and projects.
- It would allow regions to move away from more single objective criteria such as mobility towards more multiobjective criteria such as livability.
- Direct funding would increase the influence of smart growth criteria in transportation allocation decision making, because higher levels of funding would be affected.

¹⁹ See reports by City Club of Portland (2010) and Puget Sound Regional Transportation Commission (2006)

- Participants noted that coordination efforts could improve if funding was tied to specific performance measures.
- Greater MPO control of funding would likely increase elected official engagement in regional governance.
- Direct funding could provide greater balance between metropolitan livability goals and state DOT mobility goals.

PERFORMANCE MEASURE LINKS

MPOs are increasingly focusing on a wide range of performance measures for metropolitan regions, such as emission trends, VMT trends, and transit ridership. Some participants noted an opportunity to improve links between Federal and state transportation funding and performance measures. Strengthening these performance measures could help ensure strategic investment, whether they are integrated into existing funding programs or are linked to new initiatives.

PARTNERSHIP FOR SUSTAINABLE COMMUNITIES

The Partnership for Sustainable Communities initiative drew many positive comments from the U.S. Environmental Protection Agency (EPA), the U.S. Department of Housing and Urban Development (HUD), and the U. S. Department of Transportation (DOT). Some of the specific recommendations emerging from the research forum included:

- Including Health and Human Services as a fourth member of the Partnership;
- Creating a direct link between Federal transportation funding and Partnership efforts;
- Conducting a broad review of Federal legislation to identify regulations and programs that may promote sprawl.

INFORMATION CLEARINGHOUSE

In discussions about policy and research, participants noted a need for central sources of information to assist MPOs. The information included:

- Technical assistance to answer specific issues for MPOs in a timely manner;
- Summaries of research findings to support MPO policy discussions;
- Information on governance strategies, options and techniques;
- More work on tools to support regional efforts, such as performance measures, policy models, and visualization tools.

EXISTING RESOURCES

Existing resources identified at the forum included:

- FHWA Toolkit on integrating land use and transportation decision making:
<http://www.fhwa.dot.gov/planning/landuse>
- FHWA web site on context-sensitive design:
<http://www.fhwa.dot.gov/planning/csstp/csstransplan.htm>
- FTA publication on transit oriented development:
http://www.fta.dot.gov/publications/publications_11007.html
- FHWA information on scenario planning: <http://www.fhwa.dot.gov/planning/scenplan/index.htm>

REGIONAL FUNDING

One theme that emerged from the case studies and the research forum was the lack of sufficient state and Federal transportation funding to address regional needs. In both San Diego and Denver, voter-passed sales taxes have provided MPOs and transit agencies with significant new sources of revenue to support

transportation improvements, transit investment, and open space protection (in Denver the sales tax revenue is controlled by the Regional Transportation District). This revenue has significantly increased the role of the MPOs in the region, and provided funding for a more diverse set of regional objectives. As Federal and state sources are unlikely to address all regional needs, many metropolitan areas may need to explore these types of local funding options.

REGIONAL COLLABORATION

All four regions faced cross-jurisdictional issues related to transportation and land use. The most common issues related to coordination among departments of transportation, neighboring MPOs, and adjacent local governments outside MPO boundaries. The MPOs in our study have undertaken a range of strategies to improve coordination efforts, including joint committees and cross-representation on boards. Participants also emphasized the important state and Federal roles that could assist these efforts. Examples include: strategic funding that targets cross-MPO efforts and funding criteria that creates incentives for cross-jurisdictional work.

Future Research

The research project and forum also led to a number of questions and topics for future research. Several overarching themes came through about MPO-related research:

- The need for greater cooperation between federally funded transportation centers and MPOs with regard to research needs at the metropolitan level. Transportation generally has far less research on policy and planning topics.
- The need for more research focused on governance and coordination, including:
 - Before and after evaluation of local government plans to determine how regional plans, strategies, and processes have influenced local level planning;
 - Best practices in transportation collaboration for metropolitan planning organizations;
 - Lessons and findings from specific programs designed to promote coordinated planning efforts.
- The need for university research centers to provide more effective translation and synthesis of results for state and regional transportation agencies, including:
 - Information clearinghouses that allow MPOs to incorporate the best sources and data, including information that can be displayed to decision makers in Powerpoint formats;
 - Summaries of state of the art practices and methodologies, such as trip generation, engaging low income and minority communities, and partnership models;
 - Simple summaries that review and consolidate research and present evidence on both sides\ in a simple FAQ (frequently asked questions) format.
- The need for research on topics related to equity, including:
 - Equity performance measures in regional transportation planning;
 - Impact and effects of transportation investment on low-income and minority communities.
- More work on visualization strategies at the local and regional levels to assist the public and elected officials in decision making, including:
 - Sketch planning tools, such as those used in the Sacramento Blueprint planning process;
 - Visualization tools to help with infill development and development around mixed use centers.

Some additional specific research needs identified through the forum included:

- Research on performance measures at the metropolitan scale, including types and methods.
- Additional research on policy tools and their effectiveness in influencing decision making, which also requires more collaboration between state DOTs and university transportation centers to design policy-oriented studies.
- Need for new research around the assumptions, targets, scenarios and strategies related to greenhouse gas reduction efforts.
- Studies that would assist local governments in understanding how to undertake redevelopment efforts faster and more effectively, including case studies, best practice lessons, and studies gathering information from multiple perspectives.

