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FEDERAL TRANSIT ADMINISTRATION

Planning for Transit-Supportive Development: A Practitioner's Guide

Section 3: Regional Vision Planning and Transit-Supportive Development

JUNE 2014

FTA Report No. 0055
Federal Transit Administration

PREPARED BY

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Director, Strategic Initiatives
New Jersey Institute of Technology

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Federal Transit Administration
Office of Systems Planning
U.S. Department of Transportation
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Washington, DC 20590

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Metric Conversion Table

SYMBOL	WHEN YOU KNOW	MULTIPLY BY	TO FIND	SYMBOL
LENGTH				
in	inches	25.4	millimeters	mm
ft	feet	0.305	meters	m
yd	yards	0.914	meters	m
mi	miles	1.61	kilometers	km
VOLUME				
fl oz	fluid ounces	29.57	milliliters	mL
gal	gallons	3.785	liter	L
ft^3	cubic feet	0.028	cubic meters	m^3
yd^3	cubic yards	0.765	cubic meters	m^3
NOTE: volumes greater than 1000 L shall be shown in m^3				
MASS				
oz	ounces	28.35	grams	g
lb	pounds	0.454	kilograms	kg
T	short tons (2000 lb)	0.907	megagrams (or "metric ton")	Mg (or "t")
TEMPERATURE (exact degrees)				
°F	Fahrenheit	5 (F-32)/9 or (F-32)/1.8	Celsius	°C

REPORT DOCUMENTATION PAGE	*Form Approved* *OMB No. 0704-0188*

1. AGENCY USE ONLY	2. REPORT DATE June 2014	3. REPORT TYPE AND DATES COVERED July 2008 - June 2014

4. TITLE AND SUBTITLE Planning for Transit-Supportive Development: A Practitioner's Guide—Section 3: Regional Vision Planning and Transit-Supportive Development	5. FUNDING NUMBERS NJ-26-1018

6. AUTHOR(S)

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESSE(ES) Colette L. Santasieri, Ph.D., Sean C. Vroom, Robert Hughey, NJIT; AECOM Planning + Design; Paul Bay, Transportation Consultant; Citiventure Associates, LLC; Robert Dunphy, Transportation Consultant; E. D. Hovee and Company, LLC; PlaceMatters, Inc.; Van Meter, Williams, Pollack, LLP	8. PERFORMING ORGANIZATION REPORT NUMBER FTA Report No. 0055

9. SPONSORING/MONITORING AGENCY NAME(S) AND ADDRESS(ES) U.S. Department of Transportation Federal Transit Administration Office of Systems Planning East Building 1200 New Jersey Avenue, SE Washington, DC 20590	10. SPONSORING/MONITORING AGENCY REPORT NUMBER FTA Report No. 0055

11. SUPPLEMENTARY NOTES [http://www.fta.dot.gov/research]

12A. DISTRIBUTION/AVAILABILITY STATEMENT Available from: National Technical Information Service (NTIS), Springfield, VA 22161. Phone 703.605.6000, Fax 703.605.6900, email [orders@ntis.gov]	12B. DISTRIBUTION CODE TRI-20

13. ABSTRACT

"Planning for Transit-Supportive Development: A Practitioner's Guide" is a toolkit of practical and innovative measures to help Metropolitan Planning Organizations (MPO's), regional planners, transit agencies, and local government elected officials, staff, land use planners, and transit planners integrate transit planning with local land use planning. This guide includes best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned, aimed at providing planners at the regional, corridor, and local levels with ideas on how to integrate, accommodate, and assess transit-supportive development and transit investment. Included are numerous success stories for integrating transit planning and land use planning. This guide seeks to go beyond just highlighting case studies by providing a link between the regional, corridor, and local planning processes for integrating land use and transit and examining regions that have successfully developed and integrated plans. The guide is meant to be a resource for planners to assist them in the development and implementation of strategies to integrate transit and land use planning in an effort to encourage transit-supportive development. "Section 3: Regional Vision Planning and Transit-Supportive Development" presents key ingredients for developing regional vision plans and methods for forecasting regional markets.

14. SUBJECT TERMS Transit-supportive development, transit-oriented development, best practices, integrating land use and transit, regional planning, corridor planning, local planning, real estate developers	15. NUMBER OF PAGES 31

16. PRICE CODE

17. SECURITY CLASSIFICATION OF REPORT Unclassified	18. SECURITY CLASSIFICATION OF THIS PAGE Unclassified	19. SECURITY CLASSIFICATION OF ABSTRACT Unclassified	20. LIMITATION OF ABSTRACT

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FOREWORD

Public Law 109-59: Safe, Accountable, Flexible, Efficient Transportation Equity Act: A Legacy for Users (SAFETEA-LU) of 2005 identified funding for TELUS for Transit. With that funding, the New Jersey Institute of Technology conducted national research on transit-supportive development which culminated in "Planning for Transit-Supportive Development, A Practitioner's Guide." This guide is a toolkit of best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned designed to assist Metropolitan Planning Organizations (MPOs), regional planners, transit agencies, local planners, and local governments with integrating transit planning with local land use planning. It provides a link between the regional, corridor, and local planning processes for integrating land use and transit. This guide is a resource document.

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ABSTRACT

"Planning for Transit-Supportive Development: A Practitioner's Guide" is a toolkit of practical and innovative measures to help Metropolitan Planning Organizations (MPO's), regional planners, transit agencies, and local government elected officials, staff, land use planners, and transit planners integrate transit planning with local land use planning. This guide includes best practices, guidance, success stories, useful techniques, transferable examples, and lessons learned, aimed at providing planners at the regional, corridor, and local levels with ideas on how to integrate, accommodate, and assess transit-supportive development and transit investment. Included are numerous success stories for integrating transit planning and land use planning. This guide seeks to go beyond just highlighting case studies by providing a link between the regional, corridor, and local planning processes for integrating land use and transit and examining regions that have successfully developed and integrated plans. The guide is meant to be a resource for planners to assist them in the development and implementation of strategies to integrate transit and land use planning in an effort to encourage transit-supportive development.

"Section 3: Regional Vision Planning and Transit-Supportive Development" presents key ingredients for developing regional vision plans and methods for forecasting regional markets.

SECTION
3

Planning for Transit-Supportive Development: A Practitioner's Guide

Section 3: Regional Vision Planning and Transit-Supportive Development

A. Regional Vision Planning—Key Ingredients for Success

Prepared by:
New Jersey Institute of Technology
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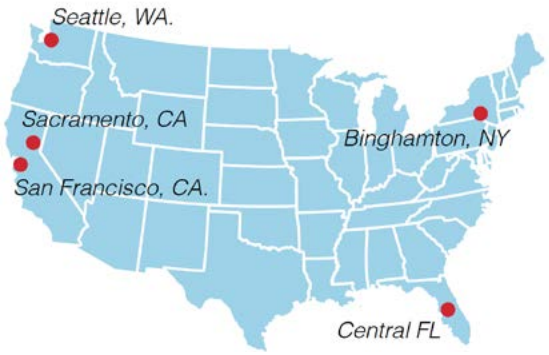


As the name suggests, regional vision planning is a process intended to provide a glimpse at the future, factoring in a wide range of issues and goals. Rather than considering individual issues of regional significance (e.g., transportation in isolation), visioning involves looking into the future in a comprehensive and coordinated way. Vision planning often employs scenario planning, a decision-making tool, that provides an understanding of how future projected growth would impact many issues, including transportation, land use, and environmental conditions. The goal of a regional vision is to prepare and develop consensus around a plan for future outcomes such as a regional blueprint for growth.

The concept of visioning is not new—in fact, it has been used for years at many levels of government. At the local level, communities have relied on master plans to serve as guides for future growth or redevelopment. States have attempted to achieve smart growth goals also by adopting multidimensional planning guides. Vision planning at the regional level is a recent addition to the planning field and has consistently gained popularity since the groundbreaking successful efforts of Portland's LUTRAK and Utah's Envision Utah, which were both created in the 1990s. The Portland and Utah visioning exercises were at the forefront of attempts to link transportation and land use planning for future growth, a method now accepted as a key principle for developing effective regional vision plans (Bartholomew 2005).

There are many reasons for the growing popularity of the vision planning process, including public concerns regarding sprawl, congestion, and erosion of open space. There is a growing national emphasis on coordinating transit and land use planning efforts at all levels. As regional planners look forward, it is likely that multifaceted regional plans will become a prerequisite for major infrastructure funding. This trend will encourage greater use of vision and scenario planning at the regional level.

The need for comprehensive and coordinated regional planning is clear. For U.S. regions that have successfully navigated the planning process linking transportation and land use planning, the first step has been development of a regional vision.

Regional Vision Plan—the Logical First Step for Comprehensive and Coordinated Planning

Perhaps the best feature of the vision planning process is that it allows a region to consider cross cutting issues associated with future growth in a collaborative way, by considering many scenarios. Shared visions, by necessity, involve considering different scenarios and comparing them to a base case that projects continued growth without change.

> Scenario planning provides a framework for developing a shared vision for the future by analyzing various forces that affect growth. It actively involves the public, the business community, and elected officials on a broad scale, educating them about growth trends and trade-offs, and incorporating their values and feedback into future plans (FHWA 2010).

Vision or scenario planning provides stakeholders with the ability to participate in an open, inclusive, and far-reaching process that is essentially nonbinding. Agencies and organizations that tend to be protective of their territory and their budgets are encouraged to think differently during the visioning process.

A regional vision plan is a guide or blueprint; it is not an instrument for implementation. For that reason, the regional vision planning process encourages a free exchange of ideas. The purpose of the regional visioning process is to

develop a shared perspective, and a successful vision plan invites a wider cross section of interests to the table than with a one-dimensional planning effort. As a result, the tendency toward self-interest tends to be reduced.

Key Ingredients for Developing Successful Regional Vision Plans

Since the process of developing regional vision is not prescriptive or common among MPOs and other regional planning organizations, research was conducted to determine the key elements to a successful regional vision planning process. A national scan of relevant literature and a survey of eight national experts were conducted. Five vision planning processes were selected for further study, drawn from regions that have successfully navigated the technical and political challenges of this emerging trend. While the cases differ in size (population of more than 6M to less than ½M), commitment to transit and transit type (light rail to bus-only), and growth prospects, all embraced the vision planning process as a way to build and sustain cooperative multidimensional planning. Table 3A-1 lists the case studies.

In theory, coordinating regional transit and land use planning to improve sustainability sounds simple, however, in practice, it has proven to be difficult. A 2009 Transit Cooperative Research Program (TCRP) study of transit agency roles in regional planning calls the task of coordinating regional land use plans and transit planning a "major challenge," mainly because transit plans are prepared on a regional level, and land use planning and zoning are implemented on a local level (Bay 2009).

Based on this research, key elements of a successful regional vision planning process are:

Table 3A-1
Regional Vision Plan Case Studies

Location	Year	Planning Region	Vision
Seattle	2008	Puget Sound Regional Council (PSRC)	VISION 2040
San Francisco	2007	Metropolitan Transportation Commission (MTC)	FOCUS
Sacramento	2005	Sacramento Area Council of Governments (SACOG)	Preferred Blueprint Scenario
Central Florida	2007	Brevard, Lake Orange, Osceola, Polk, Seminole and Volusia counties	How Shall We Grow?
Binghamton (NY)	2005	Binghamton Metropolitan Transportation Study (BMTS)	Place-Making for Prosperity

- Motivation to change
- Leadership
- Broad-based stakeholder participation
- Simple and visual presentation of data and scenarios
- Implementation

A report prepared for the Association of MPOs, "Noteworthy MPO Practices in Transportation-Land Use Planning Integration," provided similar results.

Motivation to Change

One benefit of a vision planning process is recognizing future undesirable conditions (such as congestion) through a base-case scenario, and having the ability to alter the projection. The national emphasis on consolidated planning and targeted infrastructure funding is speeding the pace of the conversation but the real "drivers" are regional and local in nature. Congestion, energy costs, access to jobs, interest in livable and walkable communities, housing choices, and environmental concerns are conditions that have galvanized an interested public. There is a growing realization that these concerns are not being addressed, despite the multitude of agencies charged with finding solutions. The problem is not an absence of plans, but a lack of coordinated plans. Without broad based agreement on what is needed to change patterns, planners stay with the status quo.

What Does a Vision Plan Look Like?

In the absence of standards for the preparation of a vision plan, several regional planning entities have created their own formats. Although they may not look similar on the surface, they do share basic elements. A review of several successful vision plans reveal the following plan elements they share:

- What do we look like? An overview of existing conditions and future projection within the region.
- What is important to us? Regional goals developed through stakeholder input
- How can we grow? Potential growth scenarios and impacts.
- What do we want to look like? Selected scenarios developed through stakeholder input.
- How do we get where we want to go? Strategies to help meet regional goals and selected scenarios developed through stakeholder input.

The plans addressed many topics related to smart growth, sustainability, the environment (including ecosystem and wildlife preservation), housing affordability, historic preservation, employment, transportation, public health and safety, open space and recreation preservation, and agriculture preservation and function.

Seattle, Central Florida, and Binghamton's plans all include a regional historical perspective describing the key events that influenced the development of the region. Puget Sound Regional Council's "Vision 2040" has a sustainable environmental framework element, and a detailed multi-county planning policy element that is required by the state's Growth Management Act to create a common framework for planning at various government levels.

The regions that have navigated a successful vision planning process include a first visioning process step called the base case, the consequence of doing nothing, e.g., "this is what our future looks like." A glimpse at the future is usually enough to get people to seriously look for alternatives. Growth can drive regions to engage in a vision planning process, and lack of growth can lead regions to reevaluate existing patterns and plans to determine whether redevelopment would benefit from being guided in a new direction.

The case studies reviewed were motivated to change for several reasons:

- Sacramento's Blueprint project, initiated in 2004, was in response to a projected 58 percent increase in congestion by the year 2025, an additional 1.7M residents in 2050, and deteriorating air quality.
- San Francisco and Seattle responded to a projected increase in population, associated traffic congestion, and impacts to the environment.
- Central Florida leaders changed direction due to the consequences of sprawl, conversion of open space, loss of agricultural land, and increased population.
- Binghamton, now in a slow growth situation, decided it was time to step back from the conventional suburban orientation and refocus growth and resources on redeveloping existing areas.

Leadership

The key to the success of any program on any level is leadership. Its importance cannot be overstated, especially in successfully integrating transportation and land use. For this reason, an entire section of this Guide has been dedicated to leadership in "Guiding the Process: Leadership and Champions." While the type of leadership required may change over the course of developing and implementing integrated land use and transportation plans, the need for leadership remains consistent and begins in the regional vision planning process. It is widely believed that MPOs are the logical leaders to develop multifaceted regional planning efforts. However, MPOs may consider land use a controversial topic and avoid taking it on. MPOs can provide leadership or allow others to take the lead, while continuing to exert influence on the process and its direction.

In the case studies below, MPOs took leadership roles or provided major leadership contributions:

- In Binghamton and Sacramento, MPOs took the lead: defined the work, hired the consultants, stayed committed to the process, and engaged other organizations in support of the mission.
- In Central Florida, the vision exercise was led by the Central Florida Partnership, a collaborative of business and civic leaders, with support from the Florida Department of Community Affairs, FDOT, the Central Florida

MPO Alliance, the East Central Florida Regional Planning Council, myregion.org, and the Orlando Regional Chamber of Commerce.

- In San Francisco and Seattle, MPOs worked in collaboration with other organizations. For the Bay Vision forecasts, the Bay Area's Metropolitan Transportation Commission (MTC) partnered with four public organizations that have a strong environmental orientation. The Puget Sound Regional Council (PSRC) in Seattle worked with the region's elected officials, public agencies, interest groups, and individuals to update the region's vision for the future.

Regardless of who takes the leadership role—an MPO or a business consortium—a critical element of the vision planning process is strong collaboration, as opposed to directive leadership.

Broad-Based Stakeholder Participation

Planning, typically guided by professionals, tends to be weighted in favor of those developing the plans. Historically, it has been unusual to see public sector agencies and organizations produce merged plans, and even more unusual to see them share in final decisions on program or funding priorities.

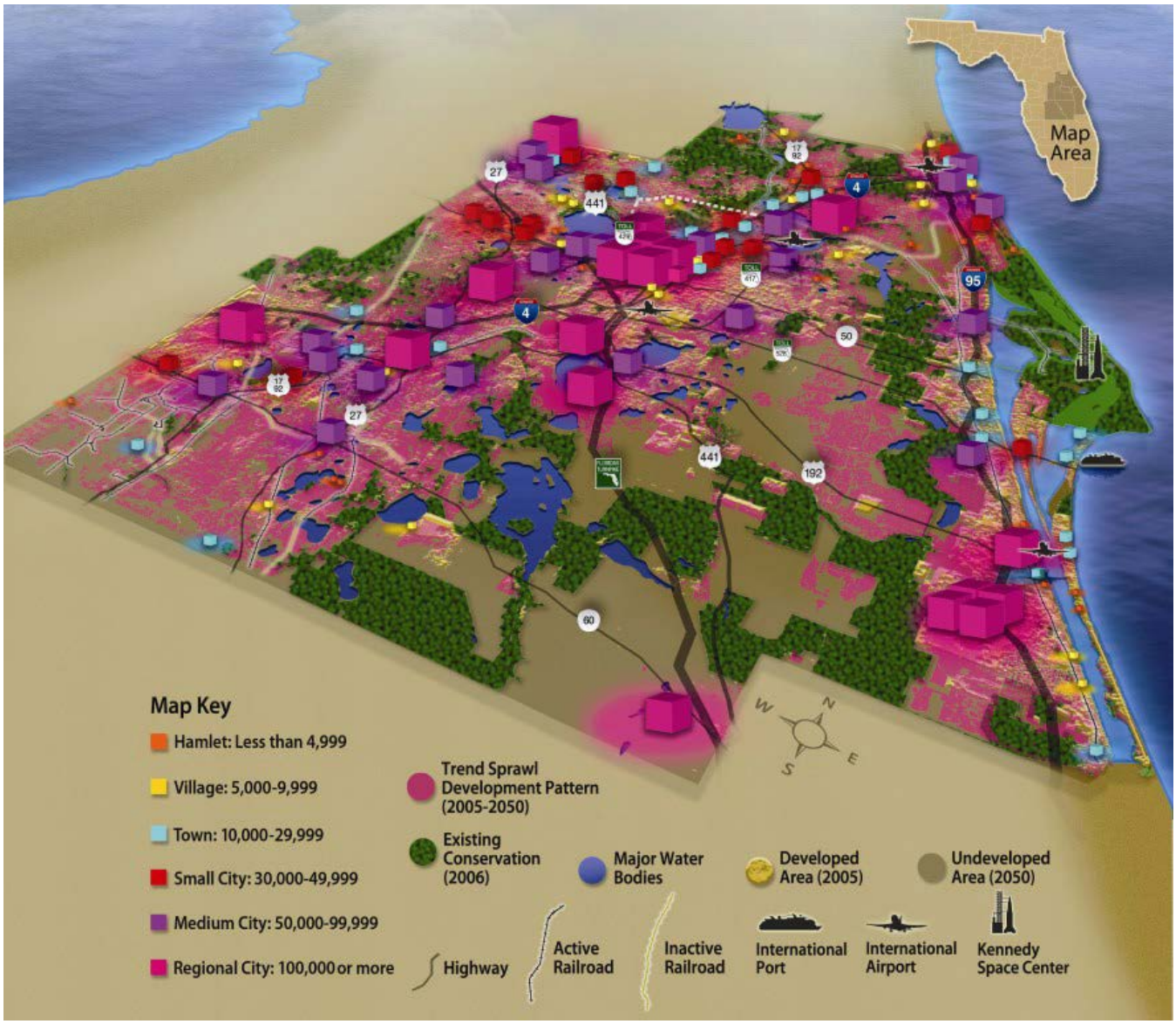
A successful vision planning process must include all of the relevant public sector agencies, and must expand the audience to include political leaders from the regional and local levels, and representatives from the business, civic, real estate, and environmental communities. The case studies show that although there were varied approaches in choosing and engaging stakeholders, the emphasis was on reaching a wider audience:

- Central Florida took the most aggressive approach in its 18-month vision planning process when it involved more than 20,000 citizens and more than 500 leaders, including elected officials from all 7 counties and many of the region's 86 cities.
- Sacramento's Blueprint began with a small number of local politicians, support from the nonprofit Metro Chamber, Valley Vision, and local members of ULI. Over the course of the workshop process, this group engaged approximately 80 public, civic, and business organizations. The base-case scenario was prepared with the assistance of the land use planning directors from the region's cities and counties, representing the first time that the group worked together.
- In Seattle, State-mandated growth management regulations have institutionalized regional planning and visioning that has been ongoing for 20 years. The process is responsive to environmental and government groups. The recent addition of the ULI Reality Check program brought the business community more actively into the process.

- Regional planning for transportation has been a standard practice in the San Francisco Bay Area, but engaging a broader range of viewpoints has proven difficult. As is the case in many areas, the situation is complicated by the fact that there are four different regional agencies involved with regional plans. To overcome this, the agencies worked together through a Joint Policy Committee to craft a regional strategy called FOCUS, which began with a stakeholder forum as part of a broader dialogue on where and how the region should grow.
- The Binghamton Metropolitan Transportation Study started its vision planning process by engaging the public and local officials in a community visioning exercise, followed by a series of interactive sessions called Place-making for Prosperity. A community vision team of business leaders, Binghamton University officials, and civic organization leaders hosted a series of community workshops to explain the concept and results.
- The lessons provided here and in other successful visioning exercises suggest that there is great benefit to broadening the base of participants, involving political and government leaders in the region, and using the expertise of local planning officials in the process. The more people involved in sharing a vision, the more likely the vision will move forward to become reality.

Simple and Visual Presentation of Data and Scenarios

It may sound simple, but vision planning exercises and their final plans must be easy to understand. The display of base case data, arrangement of scenarios, array of land uses, and demonstration of densities must be easily understandable to the stakeholders, and easily manipulated by the planners presenting the data. Fortunately, with today's GIS, local and regional planners can work from a common base, which is particularly useful in developing the base-case scenario. the starting point for vision planning. The ease of taking a present day "snapshot," and projecting it into the future showing different options for development (e.g., land use choices, environmental considerations, adjustments in infrastructure funding) places greater emphasis on transit improvements and encourages transit-supportive development (see Figure 3A-1).



Source: How Shall We Grow? – A Shared Vision for Central Florida, August 10, 2007

Figure 3A-1 *Scenario Visual from "How Shall We Grow?"*

Varied techniques are used to visually display vision plans. Each of the case studies used similar approaches in studying growth alternatives, but different tools for presenting data and scenarios (see Table 3A-2). Four of the areas used GIS-based evaluation tools, and one used an integrated land use model.

Table 3A-2

Visualization Techniques Used in Noted Case Studies

Region	Tool	Process
Seattle	INDEX, Paint the Region	Used computerized visual options created by local and regional planners to develop scenarios and select alternatives; computer-assisted techniques (graphic portraits of the options explored); narrowed scenarios from eight in initial screening to four for in-depth analysis in a comprehensive Environmental Impact Statement.
Sacramento	I-PLACE^{3}S	Used computerized visual options created by local and regional planners to review alternatives; considered four alternatives.
San Francisco	HENRY/POLIS	Used a land-use modeling system capable of making regional projections and considered options created by planning professionals for accommodation of growth; considered two scenarios based upon strong existing planning requirements that would be described as choosing between greater or lesser smart growth options.
Central Florida	ARCGIS9	Used computer-assisted tools to create maps showing consequences of different future scenarios; two scenarios explored in detail.
Binghamton (NY)	CorPlan	Used computerized visual options created by local and regional planners to review alternatives; considered four alternatives.

Regardless of the technique employed, the key is to visually show a range of options for accommodating projected growth and/or the potential for redevelopment. A consensus appears to emerge from the literature that four scenarios is an optimal number—enough options to allow for divergent thinking and coherent storytelling (Bartholomew 2005). The option ultimately selected best blends the features seen as important for the region's future. Regions that have gone through the vision planning process more than once find it possible to narrow the options in subsequent sessions, since they tend to reinforce their prior decisions.

The places, growth pressures, techniques and approaches vary, but in all of the case studies, the selected visions share common features. All opted for greater reliance on infill development and improved transit connections, which subsequently put greater emphasis on transit-supportive development.

A more detailed discussion of the tools and techniques to design, visualize, and communicate scenarios and alternatives may be found in the "Tools and Techniques for Visualizing and Communicating Scenarios and Alternatives" section of the Guide. The tools and techniques can provide decision makers

and the public with a clear idea of proposed policies, plans, and transportation improvements, as well as the impact on the human and natural environment.

Implementation

The vision planning process is considered successful when the results of the process are followed and implemented. The key factors to ensuring success—making visions into realities—include consistency and follow-through, financial incentives and assistance.

Consistency and Follow-Through

As complex, broad-based, and time-consuming as the vision planning exercise can be, the regions that have successfully completed one say that it is the easiest part of the process. While it is feasible to gather people and organizations for an exercise that facilitates putting aside individual goals and missions to reach agreement on principles for future development, the challenge is keeping the vision intact when participants disband.

MPOs are in the best position to spearhead the regional vision planning processes, but they have minimal authority to implement the results. The collaborative effort (with MPOs, state and local government, business communities, developers, and land owners) that begins the vision planning process needs to remain viable for implementation of plans to occur. The way to keep a vision moving forward is to keep the planning group active. The regions that achieved success in implementing parts of their vision plans maintained a working group—the organizations and agencies responsible for land use, transportation, and environmental planning—that continued to actively work together.

One sign that a vision plan is being taken seriously is when it is included in the regional transportation plan. An equally important indicator is when local communities that are impacted by the regional vision begin to adjust their master plans and development ordinances to accommodate the new vision. As noted in several sections of the Guide, real change can only occur when it is embraced and reinforced by all levels of government.

Long Range Transportation Plans

MPOs and states are required to prepare a long range transportation plan with a minimum horizon of 20 years. As part of a federally-designated air quality non-attainment area, MPOs are required to update the plan every four years. The plan must incorporate the eight planning factors summarized as:

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 nonmotorized users.
4. Increase the accessibility and mobility of people and for 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.
8. Emphasize the preservation of the existing transportation system.

Each case study demonstrates that their vision was incorporated into their region's transportation plans. Four of them work on a two-year offset update cycle to make the development of the vision plan and its incorporation into the long-range transportation plan easier (see Table 3A-3).

Table 3A-3

Incorporation of Vision Plan for Case Studies

Region	Vision Plan	Transportation Plan
Seattle	Vision 2040 adopted in 2008	Transportation 2040, adopted in 2010
San Francisco	Bay Area Vision adopted in 2007	Transportation 2035 Plan, adopted in 2009
Sacramento	Preferred Blueprint Scenario adopted in 2005	Metropolitan Transportation Plan 2035, adopted 2008
Orlando	How Shall We Grow? adopted in 2007	METROPLAN Orlando 2030 Transportation Plan, adopted in 2009
Binghamton (NY)	"Moving Inward" scenario adopted as part of Placemaking for Prosperity in 2005	Transportation Tomorrow 2030, adopted in 2005

Financial Incentives and Planning Assistance

Implementation of the vision plan at the local level requires financial incentives and planning assistance. The regions that have achieved success recognized that communities need financial support and planning assistance to evaluate and adopt alternative land use controls.

Funding MPO Livability Programs

MPOs have created livability programs to fund nontraditional activities that have positive long-term impacts on transportation and land use integration, such as providing incentives to construct transit-oriented development. The completion of a livability plan is a pre-requisite for communities to receive funds for capital projects that advance livability principles. Examples include:

- The Metropolitan Transportation Commission in Oakland, CA exchanges federal funds with a local jurisdiction's parking revenue to make needed sewer replacement and upgrades for transit-oriented development.
- The North Central Texas Council of Governments in Dallas-Fort Worth exchanges federal funds with regional transit agencies to provide funds for pedestrian amenities surrounding transit stations.
- The Portland Metro in Oregon exchanges federal funds with the regional transit agency and offers financial incentives to private and nonprofit developers to construct more intensive mixed-use developments along transit corridors.

Source: FHWA and FTA, 2010

- Sacramento (SACOG) offers support in both areas. It provides direct competitive grants to support project-specific efforts to cities and counties that implement Blueprint principles in four areas: air quality, bicycle/pedestrian, transportation demand management, and community design. SACOG also provides technical assistance. It continues to support I-PLACE^{3}S, enabling users to demonstrate how community planning and design choices have impacts on development patterns, modal choices, redevelopment potential, and livability. It offers training workshops for local planning staffs and officials; developed a Web-based 3D simulation program to help visualize possible development; prepared a handbook on form-based codes—including a step-by-step guide on how to create a form-based code; and maintains a library of photographic images for local governments, community groups, and businesses to use in illustrating examples of the types of land uses and alternative transportation modes desired.
- In San Francisco, the MTC has initiated activities to help encourage transit-supportive development. MTC's Transportation for Livable Communities (TLC) program has awarded more than $80M to more than 80 local

projects that support multimodal travel, more livable neighborhoods, and the development of jobs and housing in existing town centers. The program provides technical assistance and capital grants to help cities, neighborhoods, transit agencies, and nonprofit agencies develop transportation-related projects fitting the TLC profile. The program includes a Housing Incentive Program (HIP), which rewards local governments that build housing near transit hubs, by offering grants based on their city's project density, project size, and the number of affordable units.

The Bay Area's Focus program began a local initiative in 2007, in which local governments and open space groups could apply to designate areas as Primary Conservation Areas (PCAs)—areas protected from development, and as Primary Development Areas (PDAs)— areas where development is encouraged. In 2007, PDAs were adopted, and in 2008, PCAs were adopted. There are currently 99 designated PCAs and 121 designated PDAs.

The MTC adopted a TOD Policy, which establishes corridor density thresholds in order to qualify for discretionary funding for transit expansions or extensions (Resolution 3434).

- The PSRC in Seattle developed a Plan Review Manual, which addresses expectations for amendments and updates to countywide planning policies, local comprehensive plans, transit agency plans, and regional growth center subarea plans. It describes how these types of plans should address VISION 2040, Transportation 2040, specific requirements in the Growth Management Act, and provisions for designated regional centers.

What Did it Cost?

The cost range of regional vision planning:

- Binghamton Metropolitan Transportation Study: $65,000 in consultant expenses (not including BMTS staff support)
- Central Florida: $850,000
- ULI estimates that a visioning exercise like Reality Check costs $60,000–$80,000 for an event in a small area, and $200,000 in a large region like Seattle. (ULI suggests that more than one event may be necessary.)
- According to SACOG, between 2001 and 2005, spending on project Blueprint was about $4.3M.

Resources

San Francisco Bay Area Vision, www.bayareavision.org/.
Sacramento Blueprint, www.sacregionblueprint.org/.
Seattle, http://www.psrc.org/.
Central Florida Region, www.myregion.org.
Binghamton, http://www.bmtsonline.com/files/bmts/pdfs/TransportationTomorrow2030.pdf.

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B. Forecasting Regional Markets

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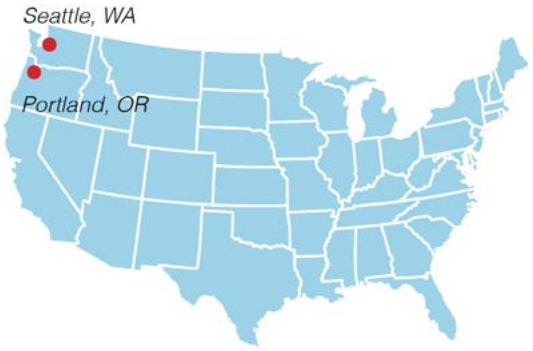

Regional planning agencies use a variety of techniques to project future growth and estimate travel demands. While precise techniques vary, the process usually involves

the use of trend analysis and mathematical travel forecasting models. A common goal of forecasting is providing a reasonable view of the future by making projections based on past experience.

To successfully integrate land use considerations into transit planning, it is essential to consider how forecasting is done. The location and nature of projected growth in regional markets can make the case for greater transit investment—or end it. "Transportation Planning Process Key Issues: A Briefing Book for Transportation Decision Makers, Officials, and Staff" (2007) points out the importance of getting this right:

> Land use and transportation are symbiotic: development density and location influence regional travel patterns, and in turn, the degree of access provided by the transportation system can influence land use and development trends. A connected system of streets with higher residential densities and a mix of land uses can facilitate travel by foot, bicycle, and public transportation. Conversely, dispersed land development patterns may facilitate vehicular travel and reduce the viability of other travel modes (p. 29).

The methods used to forecast land use and travel demand numbers, and the way that the numbers are factored into infrastructure decisions is critical in order to accommodate changes in development patterns. In the past, regional planning agencies have not always made the case for transit based on regional forecast numbers. Many older urban areas that are well-served and dependent on transit have stagnant growth, while there are suburban areas that are growing quickly but are underserved with transit. These suburban areas have built-in barriers to transit in the way development has been permitted, and frequently lack the kinds of density clusters that support transit service.

Current Trends in Forecasting

Population and employment forecasts are the key inputs for the travel-demand models used by most MPOs as their primary travel forecasting tools. In turn, those travel forecasts are used as a part of the priority-setting process for highway and transit investments.

Typically, MPOs and other regional planning agencies begin their forecasting activities with regional-level population and employment forecasts provided by state planning offices. Those regional distributions are based on statewide demographic projections drawn from current trends in migration, birth rate, death rate, and household formation. State planning offices may also use economic trend analysis to make projections of the statewide distribution of employment.

The MPOs disaggregate the regional-level population and employment forecasts, made by the state planning offices, from the census tracts within the region. This is generally done in a joint exercise involving local, state, and MPO planners. In states with established growth management mandates, the regional planning agencies may use a state-suggested model for overall projections to ensure consistency among planning entities.

While this methodology satisfies several needs of MPOs, the problem is that forecasts often do not adequately factor in land use changes. The underlying assumption is that land use will continue to follow trends of the past. Land use changes are assumed to be a reflection of actual current land uses, current local government zoning regulations, and the population and employment forecasts. Changes in market demand (e.g., different kinds of housing) are generally not part of the equation. The models used by many regional planning agencies to project land use and housing at the census-tract level also rely on trend analysis. In other agencies, the focus is not on land use, but on the population and employment data needed for travel model inputs.

In contrast, in other regional agencies, planners have developed a good working relationship with local planners, and develop accurate "home-grown" land use forecasts because they factor in housing start and development-mix information from the local planners, and gain an understanding of the types of current development projects that are progressing through the approval process.

An increasing number of regional planning agencies are undertaking scenario planning, by developing alternative forecasts of population distribution and land use configurations to test the implications of a variety of growth possibilities. Unfortunately, the majority of regions continue to make a single forecast, which projects forward past growth patterns, possibly with moderated estimates for a few high growth areas.

Factoring Land Use into the Forecasting Equation

While land use may be considered in forecasting, it has not traditionally been a major component of the process. That remains true in many areas with future land use projections based primarily on past trends. Some MPOs do project housing units by type, and include income and family size, to help determine the need for housing unit size and type. A 2009 survey of MPOs found that about half of them used a mathematical model to project small-area land use data, but the other half used models only in travel forecasting (Lee 2009).

With strong efforts made in forecasting growth, and travel demands based primarily on trend analysis, most regional planning agencies (with some notable exceptions) spend less effort on planning for new growth patterns and land use changes that will best respond to market demands and promote sustainable

regional development. Currently, land use is not viewed as an important factor in the preparation of regional agency transportation plans. If the goal is to achieve a greater emphasis on clustered, compressed development and the creation of more livable, sustainable places, the current disconnect between consideration of future transportation needs and future land use choices must be addressed. In recent years, MPOs in many regions have begun to address the issue by looking at future land use possibilities in a different way.

Viewing land use as an important factor is both a land use planning issue and a land use market issue. Leinberger (2008) estimates, for example, that while one-third of current home owners would continue to opt for a suburban lifestyle, another one-third would prefer a more urban one that reflects changes in their own lifestyles—valuing convenience over a large home and yard. The final one-third, probably undecided, are potential candidates for an environment that features high quality transit service and pedestrian amenities (O'Connell 2009). Today, developments with the "walkable urbanity" Leinberger described probably account for 10 percent or less of all new development. In a similar observation, North Texas: 2050 reports that the Dallas region can expect to see "a very large increase in the demand for housing within one-half mile of transit stations … from 48,429 households in 2007 to 270,670 in 2030" (Vision North Texas, 14).

The questions remain, how can regional planners acknowledge this shifting market place in making projections for regional growth? How do regional planners look at the data in a way that recognizes the planning periods of different users? Scenario or vision plans may look into the future for 50 years; travel projections generally address a 20–30 year time horizon; and real estate markets focus on a shorter 5–10 year period. The answer to both questions, in part, is to involve more stakeholders in the forecasting and land use discussions. This topic is covered in more detail in the "Regional Vision Planning—Key Ingredients for Success."

The second part of the answer to both questions is one of timing. When do regional planners use the forecasts and when should land use be incorporated in a meaningful way? Certainly, the regions that have successfully used vision planning have solved a large part of the timing issue. Regions that embrace vision planning have decided to change the process. As these regions consider growth in different scenarios, they find land use changes necessary for compressing growth, saving open space, and choosing efficient and cost-effective infrastructure improvements. Thus, the new desired land use changes (the new regional vision), not past trends, need to be included in a new forecast model to effectively incorporate land use considerations in transportation planning. Of course, plan implementation requires extending that vision through corridor plans and actual implementation of new master plans and zoning regulations by local governments to reinforce the

commitment. A big part of achieving combined transportation and land use planning may be as simple as considering the data from alternative forecasts—and the implications of the data more than once—in a repeating cycle of increasingly fine detail.

As a result, it is difficult for many regions to propose major land use changes in their demographic and travel forecasting models. Regional agencies cannot change the process alone. One challenge for regional planning agencies trying to incorporate land use considerations into forecasts has been the fear that local elected officials will perceive it as regional agencies trying to take control of local zoning and land use decisions. Local control over land use is important to local elected officials because land use decisions impact municipal tax revenues and budgets; and because the individual property owners and developers wishing to secure land use approvals are the political constituents of the elected officials. As a result, few regions have tried to systematically propose major land use changes in their demographic and travel forecasting methodology and models. A useful technique is to encourage initial regional forecasts to be reconsidered in order to reflect supportive land use changes (master plans and development ordinances) that have been adopted at the local level.

In the end, travel forecasting models and projections are one step in the process. Perhaps it is more challenging to get stakeholders to agree to use different methods for studying and projecting growth, or the absence of growth. The difficulty is not in agreeing on numbers but in agreeing on the implications of the numbers. The difficulties lay within each planning level—regional, corridor, and local. Growth takes the path of least resistance, so until there is consensus for change at each planning level, forecasts will continue to reflect extrapolation of current trends.

Examples of Incorporating Proposed Land Use Changes into the Forecasting Process

A handful of regional agencies with statutory powers over an urban growth boundary, or over other aspects of growth management—such as requirements for temporal "concurrency" between transportation and land use development—have made projections of proposed major land use changes and incorporated the changes into the travel forecasting process. Two examples are provided below.

Example 1 – Seattle: Puget Sound Regional Council

The Puget Sound Regional Council (PSRC) has the authority to review the local land use plans of the four-county region for consistency with the requirements of Washington's Growth Management Act (GMA). The GMA requires that the development of large parcels of vacant land must happen concurrently with the development of transportation facilities adequate to serve those new land uses.

PSRC uses a land use forecasting system called UrbanSim, which simulates the location decisions for each household and job in the region, and assigns the households and jobs to specific parcels. It uses current real estate markets as a central unifying focus, with consumer choices and supplier choices explicitly represented. It also uses an input (as interpreted by staff) of the number of housing units or square feet of building space that can be built under existing comprehensive plans and zoning, with adjustments for environmentally sensitive areas. The model allows manual adjustments for known development plans and large parcels, and for the implications of the GMA and concurrency requirements. The final UrbanSim outputs are converted into population and employment figures that provide input for the regional travel forecasting models. (Note: The cost of developing an UrbanSim model for a large MPO may range from $500,000 to $1M.) PSRC anticipates using both the land use model and the travel models in successive runs to evaluate the effects of land use on transportation needs, and vice versa.

Example 2 – Portland: Metro

Metro, in the Portland region, is a regional government with a directly elected board that has statutory powers over many regional functions, including land use planning. Metro has authority over the Urban Growth Boundary, which limits where new growth can take place. Like Seattle, Metro uses a market-based land use model, MetroScope, to develop forecasts of land use. Similar to the one in Seattle, this model is used interactively with the travel models to conduct scenario planning. It also informs policy makers regarding the implications of decisions, such as the resulting changes—to the urban growth boundary, to the regional growth plan, and to the regional transportation plan. Metro has the authority to review the comprehensive and land use plans of the local governments for conformance with the regional plans, and works with the local governments in a "conformance process" that makes their plans consistent with the regional plans. The inputs to the travel model used for the Regional Transportation Plan (last adopted in 2010) are made with MetroScope, with manual adjustments made by planners from Metro and local jurisdictions to reflect major, pending public and private investment decisions. As a result, the travel model reflects actual land use market demand and regional land use plans to an in-depth level not found in most regional agencies.

Other regions have used a more qualitative approach, with local planners who talk about the land use changes that are most likely or desirable, and agree on appropriate adjustments in regional forecast data. This approach is not universally followed, but is applied in many regions that do not have review authority over local land use plans, and wish to ensure that land use considerations are reflected in the forecast data used as input for travel models.

Changing the Way Regional Planners Project the Future

Based on discussions with knowledgeable planners at several regional agencies regarding their suggestions to improve forecasting methods, there are two major reasons why consideration of future land use changes are so seldom reflected in regional forecasting methods, as discussed in this document:

- Since trend analysis tends to dominate forecasting techniques, it is unlikely that future land use visions and changing land use market directions will be acknowledged in any significant way.
- Even the most progressive MPOs admit that getting involved in land use decisions is something they have historically avoided, primarily to avoid stoking local governments" fears of losing control over land use in their respective jurisdictions.

Forecasting Regional Markets

Regional planning agencies and MPOs may consider the following suggestions from knowledgeable planners when forecasting regional markets:

- There should be less reliance on trend analysis forecasts of population, employment, and land use as a primary tool for establishing transportation development priorities. Trend forecasts are too often made with optimistic and unrealistic projections and do not adequately reflect the real world of changing market demands.
- Increasingly, MPOs should consider the examples of the regional agencies that use new models that incorporate market demands and provide for manual adjustments to reflect real world conditions, drawing upon the knowledge of local government planners and officials. Improved forecasting techniques are increasingly available, accepted and used by planning agencies.
- Whenever possible, iterative multiple forecasts should be considered, with analysis of the effects of the alternative forecasts, so that local government officials may consider the effects and make the necessary adjustments to their local plans.
- Conscious effort should be made to incorporate land use considerations into forecasting models. Ideally, this should involve local government planners and elected officials in order to minimize fears of loss of control over land use decisions.
- To facilitate the use of improved methods, better communication should be encouraged among communities of practice, including regional planning agencies, university researchers, local government planners, developer organizations such as ULI, and consultants involved in the development and application of forecasting models.

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