

# PLANS AND PLAN MAKING

Plan Making  
Types of Plans  
Participation

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*Part 1*



# PLAN MAKING

## PLAN MAKING

A plan is an adopted statement of policy, in the form of text, maps, and graphics, used to guide public and private actions that affect the future. A plan provides decision makers with the information they need to make informed decisions affecting the long-range social, economic, and physical growth of a community. This section provides an overview of plan making as applied to a wide variety of plan types.

### PURPOSES AND APPLICATIONS OF PLANS

Plans are used when making decisions concerning the future of an area or of a specific topic under consideration. For example, a plan may be used to identify:

- Housing needs—and recommend a program to meet them
- Transportation needs—and propose alternative systems and modes to meet them
- Open-space preservation areas—and present mechanisms to protect these areas permanently
- Priority investment areas—and recommend programs to stimulate growth
- Strategies for a specific area, such as a downtown, corridor, or neighborhood

Some specific applications of plans include:

- Providing residents, local officials, and others with an interest in the area with an overview and projection of development and conservation in the planning area, along with a summary of trends and forecasts.
- Serving as the basis for the local government enacting and administering regulatory measures, such as zoning and subdivision laws, and establishing urban growth boundaries.
- Serving as the basis for making budget allocations for capital improvements, such as parks, utility systems, and streets.
- Serving as the basis for many other public programs, such as those relating to growth management, historic preservation, economic development, transportation systems, and open-space preservation, for example.

### PLAN AUTHORITY

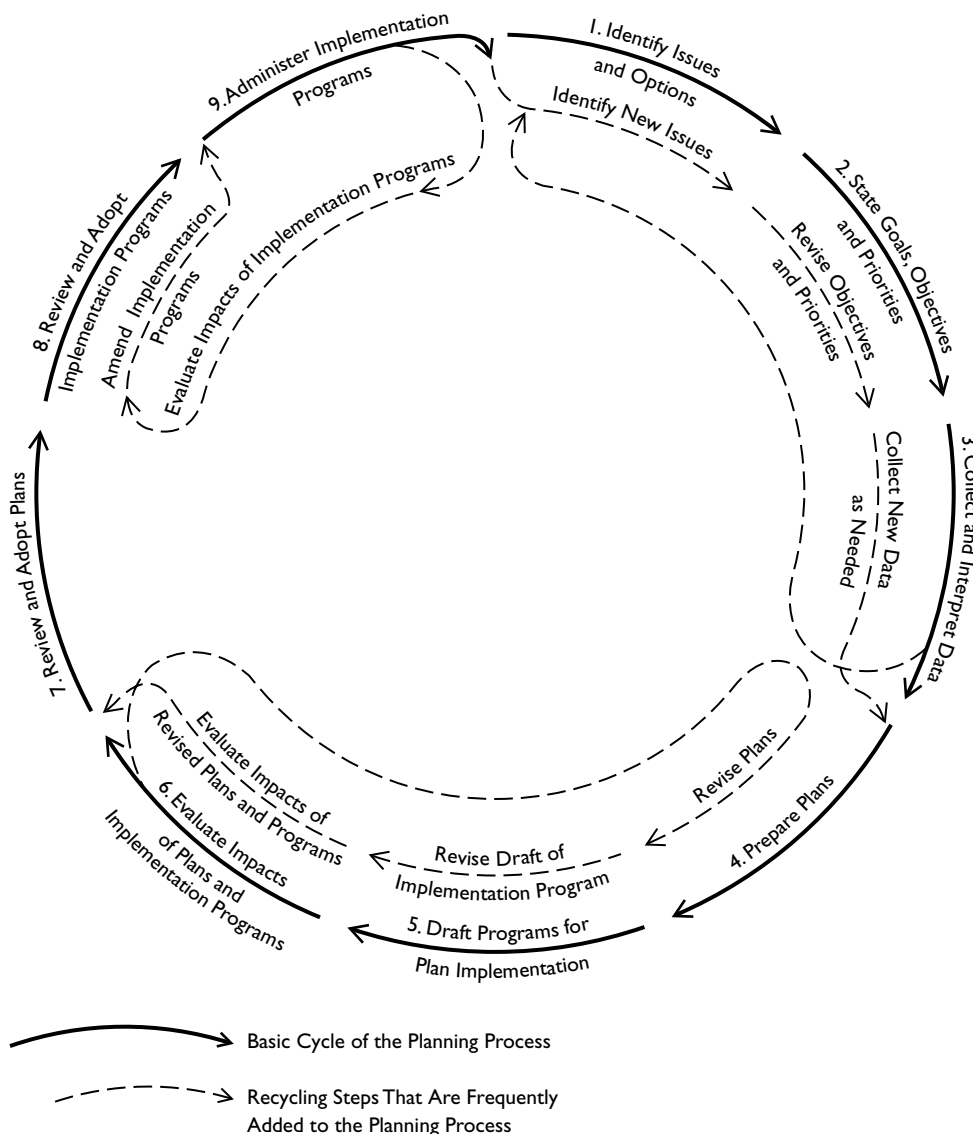
Plans may be expressly authorized or required by statute or administrative rule, depending on the type of plan and the state in which the community is located. For example, every state has its own planning statutes, one part of which authorizes or requires communities to prepare a comprehensive plan, referred to in some states as general or master plans. The statute specifies which elements are included in the plan and the process required for developing and adopting it. States also often use their administrative rule-making powers to further specify, refine, and interpret the statute.

In addition to state planning statutes, federal and state programs established by law sometimes require

### EXAMPLES OF PLANS AUTHORIZED OR REQUIRED BY STATE OR FEDERAL STATUTE

PLAN TYPE	STATUTE	JURISDICTION
Conservation Element	Florida Statutes Sec. 163.3177(6)(d)	Florida
Economic Development Element	R.I. Gen. Laws Sec. 45-22.2-6(4)	Rhode Island
Hazard Mitigation Plan	42 U.S. Code Sec. 5133	Federal Emergency Management Agency (FEMA)
Housing Assistance Plan	Cal. Gov't. Code Secs. 65580 to 65589.8	California
Housing Element	N.J. Statutes Annotated Sec. 52:27D-310	New Jersey
Land Use Element	Kentucky Rev. Statutes Sec. 100.187(3)	Kentucky
Transit-Oriented Development Plan	Cal. Gov't Code Secs. 65460 to 65460.10	California
Transportation Improvement Program	49 U.S. Code Sec. 5304	U.S. Department of Transportation

Source: American Planning Association, 2004.



The process of plan making should be viewed as a continuous cycle. There are interrelationships among the phases of the planning process. Information gained at a later phase can inform the outcome of an earlier phase. It is important to recognize the iterative nature of planning and to allow for continuous cycling to occur.

### THE PLANNING PROCESS

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that plans of a certain kind be prepared as a condition for participation in the program. The table here includes examples of plans authorized or required by state or federal statute.

For the most part, however, many types of plans are not expressly authorized or required in state or federal statutes. Examples include many types of area plans, such as neighborhood plans, corridor plans, and downtown plans, and some types of functional plans, such as parks and open-space plans, bike route plans, and urban forest plans. The content and format of these plans, and many others like them, are guided primarily by professional planning practice. They also represent the kinds of plans for which there is a great deal of variation in form and content.

## PLAN INNOVATION

Although state planning statutes and federal and state regulations provide general guidance about plan content and process for some plans, plans can vary greatly from the prescribed themes. In recent years, planners have begun to break away from tradition by reinventing what plans look like and do, shaping the form of plans to fit the unique content and process requirements of the community.

Moreover, some of the most exciting and effective plans in recent years take advantage of new ways of thinking about what a plan should contain and how it can be presented. Interactive electronic participation, benchmarking, Web-based plans, scenario analysis and modeling, and visualization techniques are a few of the new components and techniques found in plans today. Many of these innovations are featured in the plans described in the first part of this book.

An essential first step of any planning effort is to determine the plan's content, format, and process. The degree to which a planner crafts a plan to meet the unique needs of a situation, time, and place will determine whether a plan results in positive outcomes in the real world. An appendix to this book provides a list of award-winning plans to illustrate the breadth and scope of innovative plan making today.

## SCOPING CONSIDERATIONS

The subsections to follow comprise a general checklist of some of the most basic considerations to keep in mind when determining the scope of any plan.

### Time Frame

What is the time period covered by the plan? Plans almost always cover a time span of longer than a year, and usually address a period between 5 years and 20 years. The time period may be determined by statute or by the subject matter and process.

## COMPREHENSIVE VERSUS STRATEGIC

Are all topics covered or just those important to the chosen strategy? Plans that employ a comprehensive approach consider a broad range of topics related to the area or function of the plan, even if some topics are only relevant in a minor way. Plans with a comprehensive orientation are sometimes more general in their treatment of a wide variety of subjects, providing depth only when needed. Alternatively, plans with a strategic approach consider only the topics

and relationships that appear to have a direct relevancy to the subject of the plan, hence to the strategy. Consequently, these plans are more focused and can usually be completed more quickly and with fewer resources.

## Community Involvement

The issues, findings, and recommendations of a plan should take into account the knowledge and concerns of existing residents, businesses, and other interests in the planning area, and the anticipated concerns of those interests in the future. Issues to consider are those with a connection to local, regional, statewide, and even global matters. Consequently, an important scoping task is the creation of a legitimate and effective process for involving a wide variety of interests in the preparation of a plan. Successful public involvement processes are designed to fit the unique context of the plan.

## In-House versus Outsourcing

Who should prepare a plan? Choices typically include in-house staff, outside consultants, community-based nongovernmental organizations (NGOs) or volunteers, or a combination. The best mix results from a realistic assessment of in-house staff capacity in terms of hours and expertise available, funds available for outside consultant services, and the capacity to train and lead an NGO or volunteer effort.

## Binding

Plans are officially adopted or endorsed by a governmental body and thereby become a statement of its policies. Depending on the state and type of local or regional governance structure, the governmental body may be the local legislative body, the planning board or commission, a council of governments, or regional planning agency. Occasionally, plans are adopted by nonprofit regional planning organizations for the benefit of the public they serve, such as the regional plans prepared by the Regional Plan Association for the New York metropolitan area or Chicago Metropolis 2020 for the Chicago region.

## BASIC PLAN STRUCTURE

The structure of a plan usually consists of two basic components: a core, followed by a number of elements. The specific contents of a plan depend upon numerous factors, such as the type of plan being prepared, the purpose of the plan, and the scope being addressed. Consult the chapter on types of plans for information on plan contents for specific types of plans.

## The Plan Core

The core includes the following:

- A statement of authority to prepare and adopt plan
- Background data, including area history, existing conditions and trends, and data projections
- Documentation of stakeholder interests and stakeholder involvement process
- A vision statement or statement of goals and objectives for future conditions
- An evaluation of plan and design alternatives
- A program of implementation

## The Plan Elements

The elements of a plan consider, specifically, the plan's various topics. The elements that must be included depend upon the plan's purpose. For a comprehensive plan, the land use, transportation, housing, and community facilities elements are considered essential—they form the foundation of the comprehensive plan. Other elements are added as considered to be appropriate, based on the plan's scope and as required by state law.

Elements frequently included in a comprehensive plan or often prepared as separate functional plans include the following:

- Economic development
- Historic preservation
- Natural hazards
- Farmland preservation
- Parks, recreation, and open space
- Urban design

## GOALS, OBJECTIVES, AND ASSUMPTIONS

Universal to all plans is an identification of the goals, objectives, and assumptions of the plan. Reaching consensus on these three components is often quite difficult, if not impossible. Sometimes, agreement can be reached only in the broadest of terms; often, participants reach "incremental" agreement using negotiation and compromise. Intensive communication between those preparing the plan and the stakeholders is required here.

### Goals

A goal is a statement that describes, usually in general terms, a desired future condition.

### Objectives

A set of measurable objectives should accompany the goals established for the plan. An objective is a statement that describes a specific future condition to be attained within a stated period of time. Typically, these objectives are more numerous than the goals, and they are organized according to the topics in the goals statement.

Several questions can be asked at the outset of the planning process to determine the objectives of the community. Examples of such questions include:

- What type of development pattern do the stakeholders want?
- What type of transportation system and network does the community want?
- What forms of housing do stakeholders want in the community?
- What program of uses do stakeholders want for the downtown area?

The effort to create and evaluate objectives for each of the broader goals can be instructive for communities and planners, helping all to understand the implications of goal setting as applied in a planning and implementation process.

### Assumptions

An assumption is a statement of present or future conditions describing the physical, social, or eco-

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conomic setting within which the plan is to be used. At the outset of the process, it is necessary to identify the basic assumptions concerning the planning area.

On the local level, these can include the accepted boundaries of urban growth, the probable rate of growth, and the desired general character of the community, for example. At a larger scale, it is also usually desirable to state assumptions concerning national and regional economic trends. Where current research data are not available, it can be essential to state and obtain agreement on a set of working assumptions for the particular planning effort.

### GOALS AND OBJECTIVES FOR BALANCED GROWTH: NANTUCKET, MASSACHUSETTS

#### Goal A: Open Space Acquisition

To establish and manage a communitywide network of publicly and privately held open spaces intended to protect critical land and water resources, habitat, and scenic vistas, while affording reasonable access consistent with a policy of wise stewardship.

#### Goal B: Protection of Water Resources

To protect the quality and quantity of the community's groundwater and surface water resources.

#### Goal C: Growth Management

To better manage the design, location, and rate of new residential and commercial development in a manner that: protects important natural and cultural resources; encourages development in or near village centers; promotes and preserves the vitality of the downtown; is compatible with the community's historic character; minimizes dependence on the automobile; and creates opportunities for affordable housing.

#### Goal D: Transportation

To provide a transportation system that will move people and goods to, from, and through the community in a way that is safe, convenient, economical, and consistent with the community's historic, scenic, and natural resources.

#### Goal E: Affordable Housing

To promote the development and retention of affordable housing for families, individuals, and the elderly.

#### Goal F: The Economy

To strengthen and diversify the local economy.

#### Goal G: Energy and Utilities

To provide energy and utility services to the community in a manner that is affordable, efficient, effective, and environmentally safe.

#### Goal H: Human Services

To facilitate, sustain, and improve the health, education, and well-being of all persons in the community by providing those public and private human services that will improve the quality of life for all age groups.

*Source: Nantucket Planning and Economic Development Commission, 1990.*

## TYPICAL DATA NEEDS FOR PLAN PREPARATION

### MAPS AND IMAGES

Base maps  
Aerial photographs  
GIS map layers

### NATURAL ENVIRONMENT

Climate  
Topography  
Soils  
Vegetation  
Water features  
Habitat areas  
Natural hazards

### EXISTING LAND USES

Residential  
Commercial  
Industrial  
Institutional  
Open-space lands  
Vacant urban lands  
Farmlands

### HOUSING

Inventory of housing  
Housing condition  
Vacancy rate  
Affordability

### TRANSPORTATION

Street network  
Street capacity  
Traffic flow volumes  
Parking supply and demand  
Transit facilities by mode  
Bicycle networks  
Pedestrian networks

### PUBLIC UTILITIES

Water supply  
Wastewater disposal  
Stormwater management  
Solid waste management  
Telecommunication services

### COMMUNITY SERVICES

Administrative centers  
Education facilities  
Parks and recreation facilities  
Health services  
Public safety facilities

### POPULATION AND EMPLOYMENT

Population size  
Population characteristics  
Vital statistics  
Labor force characteristics

### LOCAL ECONOMY

Employment  
Retail sales  
Cost of living

### SPECIAL TOPICS

Historic sites and buildings  
Archaeological sites  
Urban design features  
Existing zoning

## DOCUMENT STRUCTURE

Whether published on paper, as a series of posters, or on the Web, it is important to create a clear, usable plan document. When creating a plan document, consider the reader's needs. The document should clearly reflect the planning process and serve as a useful tool for future users.

### Name of the Plan

Identify a name for the plan that is simple, sensible, and incorporates the planning area or topic name.

### Table of Contents

Provide a table of contents so that readers find the plan easy to use and can go directly to a topic of particular interest. Include tables and figures in the table of contents.

### Time Frame

Provide the dates of all pertinent planning milestones, such as initiation of the planning process, completion of the first draft, and when certain benchmarks might be achieved. This information gives readers a sense of the plan's progression, shows investment in the planning process, and provides the plan's full time span. Include the plan adoption date on the front cover or title page.

### Acknowledgments

Include an acknowledgments page that lists the names, titles, and affiliations of individuals who contributed to the production of the plan.

### Glossary/Terminology Key

A glossary can explain technical or local jargon and acronyms, and describe unfamiliar places.

### See also:

Analysis Techniques  
Implementation Techniques  
Participation  
Types of Plans

# TYPES OF PLANS

## COMPREHENSIVE PLANS

The comprehensive plan is the adopted official statement of a local government's legislative body for future development and conservation. It sets forth goals; analyzes existing conditions and trends; describes and illustrates a vision for the physical, social, and economic characteristics of the community in the years ahead; and outlines policies and guidelines intended to implement that vision.

Comprehensive plans address a broad range of interrelated topics in a unified way. A comprehensive plan identifies and analyzes the important relationships among the economy, transportation, community facilities and services, housing, the environment, land use, human services, and other community components. It does so on a community-wide basis and in the context of a wider region. A comprehensive plan addresses the long-range future of a community, using a time horizon up to 20 years or more. The most important function of a comprehensive plan is to provide valuable guidance to those in the public and private sector as decisions are made affecting the future quality of life of existing and future residents and the natural and built environments in which they live, work, and play.

All states have enabling legislation that either allow, or require, local governments to adopt comprehensive plans. In some states, the enabling legislation refers to them as general plans (California, Maryland, and Arizona, for example), or master plans (Colorado). Most state-enabling legislation describes generally what should be included in a comprehensive plan. However, several states, including Oregon and Florida, detail the content of plans through administrative rules promulgated by a state agency.

### REASONS TO PREPARE A COMPREHENSIVE PLAN

Local governments prepare comprehensive plans for a number of reasons, which are described in the following subsections.

#### View the “Big Picture”

The local comprehensive planning process provides a chance to look broadly at programs on housing, economic development, public infrastructure and services, environmental protection, and natural and human-made hazards, and how they relate to one another. A local comprehensive plan represents a “big picture” of the community related to trends and interests in the broader region and in the state in which the local government is located.

#### Coordinate Local Decision Making

Local comprehensive planning results in the adoption of a series of goals and policies that should guide the local government in its daily decisions. For instance, the plan should be referred to for decisions about locating, financing, and sequencing public improvements, devising and administering regulations such as

zoning and subdivision controls, and redevelopment. In so doing, the plan provides a way to coordinate the actions of many different agencies within local government.

#### Give Guidance to Landowners and Developers

In making its decisions, the private sector can turn to a well-prepared comprehensive plan to get some sense of where the community is headed in terms of the physical, social, economic, and transportation future. Because comprehensive planning results in a statement of how local government intends to use public investment and land development controls, the plan can affect the decisions of private landowners.

#### Establish a Sound Basis in Fact for Decisions

A plan, through required information gathering and analysis, improves the factual basis for land-use decisions. Using the physical plan as a tool to inform and guide these decisions establishes a baseline for public policies. The plan thus provides a measure of consistency to governmental action, limiting the potential for arbitrariness.

#### Involve a Broad Array of Interests in a Discussion about the Long-Range Future

Local comprehensive planning involves the active participation of local elected and appointed officials, line departments of local government, citizens, the business community, nongovernmental organizations, and faith-based groups in a discussion about the community's major physical, environmental, social, or economic development problems and opportunities. The plan gives these varied interests an opportunity to clarify their ideas, better envisioning the community they are trying to create.

#### Build an Informed Constituency

The plan preparation process, with its related workshops, surveys, meetings, and public hearings, permits two-way communication between citizens and planners and officials regarding a vision of the community and how that vision is to be achieved. In this respect, the plan is a blueprint reflecting shared community values at specific points in time. This process creates an informed constituency that can be involved in planning initiatives, review of proposals for plan consistency, and collaborative implementation of the plan.

## PLAN ELEMENTS

The scope and content of state planning legislation varies widely from state to state with respect to its treatment of the comprehensive plan. The American Planning Association has developed model state planning legislation in its *Growing Smart<sup>SM</sup> Legislative Guidebook* (2002).

### Required and Optional Elements

The guidebook suggests a series of required elements and optional elements. Required elements include:

- Land use
- Transportation
- Community facilities (includes utilities and parks and open space)
- Housing
- Economic development
- Critical and sensitive areas
- Natural hazards
- Agricultural lands

Optional elements addressing urban design, public safety, and cultural resources, for instance, may also be included. Moreover, the suggested functional elements are not intended to be rigid and inflexible. Participants in the plan process should tailor the format and content of the comprehensive plan to the specific needs and characteristics of their community.

According to the guidebook, comprehensive plans should include two “bookend” items: an issues and opportunities element at the beginning in order to set the stage for the preparation of other elements, and an implementation program at the end that proposes measures, assigns estimated costs (if feasible), and assigns responsibility for carrying out proposed measures of the plan. The level of detail in the implementation program will vary depending on whether such actions will be addressed in specific functional plans.

#### Issues and Opportunities Element

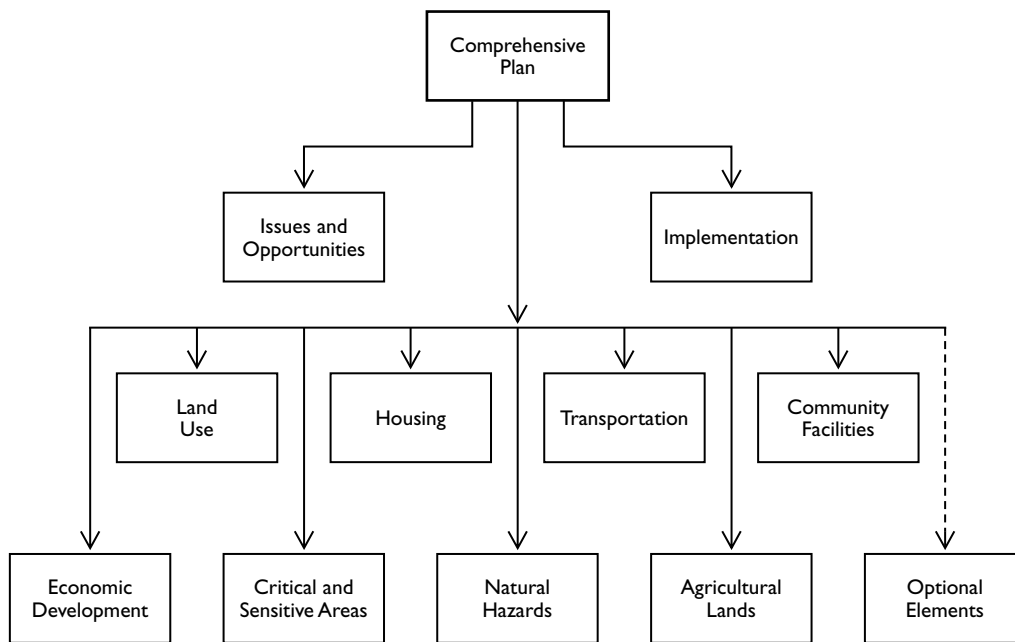
The issues and opportunities element articulates the values and needs of citizens and other affected interests about what the community should become. The local government then interprets and uses those values and needs as a basis and foundation for its planning efforts.

An issues and opportunities element should contain seven items:

- A vision or goals and objectives statement
- A description of existing conditions and characteristics
- Analyses of internal and external trends and forces
- A description of opportunities, problems, advantages, and disadvantages
- A narrative describing the public participation process
- The legal authority or mandate for the plan
- A narrative describing the connection to all the other plan elements

#### Vision or Goals and Objectives Statement

This statement is a formal description of what the community wants to become. It may consist solely of broad communitywide goals, may be enhanced by the addition of measurable objectives for each of the goals, or may be accompanied by a narrative or illus-



**COMPREHENSIVE PLAN ELEMENTS**

Source: American Planning Association.

tration that sets a vision of the community at the end of the plan period.

**Existing Conditions and Characteristics Description**

This description creates a profile of the community, including relevant demographic data, pertinent historical information, existing plans, regulatory framework, and other information that broadly informs the plan. Existing conditions information specific to a plan element may be included in that element's within the plan.

**Trends and Forces Description**

This description of major trends and forces is what the local government considered when creating the vision statement and considers the effect of changes forecast for the surrounding region during the planning period.

**Opportunities, Problems, Advantages, and Disadvantages**

The plan should include a statement of the major opportunities, problems, advantages, and disadvantages for growth and decline affecting the local government, including specific areas within its jurisdiction. This is often referred to as a *SWOT analysis*—a description of strengths, weaknesses, opportunities, and threats.

**Public Participation**

This summary of the public participation procedures describes how the public was involved in developing the comprehensive plan.

**Legal Authority or Mandate**

This brief statement describes the local government's legal authority for preparing the plan. It may include a reference to applicable state legislation or a munic-

ipal charter. Summaries of past planning activities may be included here (if not included in existing conditions discussion).

**Connection to Other Elements**

The implications of the local government's vision on other required and/or optional elements of the local

**SAMPLE VISION STATEMENT: OAKLAND, CALIFORNIA**

**The Vision for Oakland**

In the year 2015, Oakland will be a safe, healthy, and vital city offering a high quality of life through:

- a dynamic economy that taps into Oakland's great economic potential and capitalizes on its physical and cultural assets;
- clean and attractive neighborhoods rich in character and diversity, each with its own distinctive identity, yet well integrated into a cohesive urban fabric;
- a diverse and vibrant downtown with around-the-clock activity;
- an active and accessible waterfront that is linked to downtown and the neighborhoods, and that promotes Oakland's position as a leading United States port and a primary regional and international airport;
- an efficient transportation system that serves the needs of all its citizens and that promotes Oakland's primacy as a transportation hub connecting the Bay Area with the Pacific Rim and the rest of the United States; and
- awareness and enjoyment of Oakland's magnificent physical setting—hills, views, water, estuary—in every district and neighborhood.

comprehensive plan, including the potential changes in implementation measures, should be described in this concluding section.

**The Land-Use Element**

The land-use element shows the general distribution, location, and characteristics of current and future land uses and urban form. In the past, comprehensive plans included color-coded maps showing exclusive land-use categories, such as residential, commercial, industrial, institutional, community facilities, open space, recreational, and agricultural uses.

Many communities today use sophisticated land-use and land-cover inventories and mapping techniques, employing Geographic Information Systems (GIS) and new land-use and land-cover classification systems. These new systems are better able to accommodate the multidimensional realities of urban form, such as mixed-use and time-of-day/seasonal-use changes. Form and character are increasingly being used as important components of land-use planning, integrating the many separate components into an integrated land-use form.

One example of a process that can be used to create such multidimensional mapping is the system of Land-Based Classification Standards (LBSC), developed by the American Planning Association (APA). This system creates a current land-use map using a number of data sources, including orbital and sub-orbital remotely sensed data, tax assessor records, U.S. Geological Survey quadrangle maps, soils maps, and other county or state mapping data, which are field-checked on the ground.

**Future Land-Use Map**

Future land uses and their intensity and density are shown on a future land-use map. The land-use allocations shown on the map must be supported by land-use projections linked to population and economic forecasts for the surrounding region and tied to the assumptions in a regional plan, if one exists. Such coordination ensures that the plan is realistic. The assumptions used in the land-use forecasts, typically in terms of net density, intensity, other standards or ratios, or other spatial requirements or physical determinants, are a fundamental part of the land-use element. This element must also show lands that have development constraints, such as natural hazards.

**Land-Use Projections**

The land-use element should envision all land-use needs for a 20-year period (or the chosen time frame for the plan), and all these needs should be designated on the future land-use plan map. If this is not done, the local government may have problems carrying out the plan. For example, if the local government receives applications for zoning changes to accommodate uses the plan recognizes as needed, the locations where these changes are requested are consistent with what is shown on the land-use plan map.

**The Transportation Element**

The modern transportation element commonly addresses traffic circulation, transit, bicycle routes, ports, airports, railways, recreation routes, pedestrian movement, and parking. The exact content of a transportation element differs from community to community depending on the transportation context

of the community and region. Proposals for transportation facilities occur against a backdrop of federally required transportation planning at the state and regional levels.

The transportation element considers existing and committed facilities, and evaluates them against a set of service levels or performance standards to determine whether they will adequately serve future needs. Of the various transportation facilities, the traffic circulation component is the most common, and a major thoroughfare plan is an essential part of this. It contains the general locations and extent of existing and proposed streets and highways by type, function, and character of improvement.

### Street Performance

In determining street performance and adequacy, planners are employing other approaches in addition to or instead of level-of-service standards that more fairly measure a street's performance in moving pedestrians, bikes, buses, trolleys, and light rail, and for driving retail trade, in addition to moving cars. This is especially true for urban centers, where several modes of travel share the public realm across the entire right-of-way, including adjacent privately owned "public" spaces. Urban design plans for the entire streetscape of key thoroughfares can augment the transportation element. In addition, it is becoming increasingly common for the traffic circulation component of a comprehensive plan to include a street connectivity analysis. The degree to which streets connect with each other affects pedestrian movement and traffic dispersal.

### Thoroughfare Plan

The thoroughfare plan, which includes a plan map, is used as a framework for roadway rehabilitation, improvement, and signalization. It is a way of identifying general alignments for future circulation facilities, either as part of new private development or as new projects undertaken by local government. Other transportation modes should receive comparable review and analysis, with an emphasis on needs and systems of the particular jurisdiction and on meeting environmental standards and objectives for the community and region. Typically, surface and structured parking, bikeways, and pedestrian ways should also be covered in the transportation element.

### Transit

A transit component takes into consideration bus and light rail facilities, water-based transit (if applicable), and intermodal facilities that allow transportation users to transfer from one mode to another. The types and capacities of future transit service should be linked to work commute and nonwork commute demands as well as to the applicable policies and regulations of the jurisdiction and its region.

### The Transportation/Land-Use Relationship

The relationship between transportation and land use is better understood today and has become a dominant theme in the transportation element. For instance, where transit exists or is proposed, opportunities for transit-oriented development should be included; where increased densities are essential, transit services might need to be improved or introduced. This would also be covered in the land-use element.

## The Community Facilities Element

The term "community facilities" includes the physical manifestations of governmental or quasi-governmental services on behalf of the public. These include buildings, equipment, land, interests in land, such as easements, and whole systems of activities. The community facilities element requires the local government to inventory and assess the condition and adequacy of existing facilities, and to propose a range of facilities that will support the land-use element's development pattern.

The element may include facilities operated by public agencies and those owned and operated by for-profit and not-for-profit private enterprises for the benefit of the community, such as privately owned water and gas facilities, or museums. Some community facilities have a direct impact on where development will occur and at what scale—water and sewer lines, water supply, and wastewater treatment facilities, for example. Other community facilities may address immediate consequences of development. For example, a stormwater management system handles changes in the runoff characteristics of land as a consequence of development.

Still other facilities are necessary for the public health, safety, and welfare, but are more supportive in nature. Examples in this category would include police and fire facilities, general governmental buildings, and elementary and secondary schools. A final group includes those facilities that contribute to the cultural life or physical and mental health and personal growth of a local government's residents. These include hospitals, clinics, libraries, and arts centers.

### Operation by Other Public Agencies

Some community facilities may be operated by public agencies other than the local government. Such agencies may serve areas not coterminous with the local government's boundaries. Independent school districts, library districts, and water utilities are good examples. In some large communities, these agencies may have their own internal planning capabilities. In others, the local planning agency will need to assist or coordinate with the agency or even directly serve as its planner.

### Parks, Open Space, and Cultural Resources

A community facilities element may include a parks and open-space component. Alternatively, parks and open space may be addressed in a separate element. The community facilities element will inventory existing parks by type of facility and may evaluate the condition of parks in terms of the population they are expected to serve and the functions they are intended to carry out. To determine whether additional parkland should be purchased, population forecasts are often used in connection with population-based needs criteria (such as a requirement of so many acres of a certain type of park within a certain distance from residents). Other criteria used to determine parkland need may include parkland as a percentage of land cover or a resident's proximity to a park.

Open-space preservation may sometimes be addressed alone or in connection with critical and sensitive areas protection and agricultural and forest preservation. Here the emphasis is on the ecological, scenic, and economic functions that open space provides. The element may also identify tracts of open

land with historic or cultural significance, such as a battlefield. The element will distinguish between publicly held land, land held in private ownership subject to conservation easements or other restrictions, and privately owned parcels subject to development.

## The Housing Element

The housing element assesses local housing conditions and projects future housing needs by housing type and price to ensure that a wide variety of housing structure types, occupancy types, and prices (for rent or purchase) are available for a community's existing and future residents. There may currently be a need for rental units for large families or the disabled, or a disproportionate amount of income may be paid for rental properties, for example. Because demand for housing does not necessarily correspond with jurisdictional boundaries and the location of employment, a housing element provides for housing needs in the context of the region in which the local government is located. In some states, such as California, New Hampshire, and New Jersey, there may be state-level or regional housing plans that identify regional needs for affordable housing, and the local housing element must take these needs into account as part of a "fair-share" requirement.

### Jobs/Housing Balance

The housing element can examine the relationship between where jobs are or will be located and where housing is or will be available. The jobs/housing balance is the ratio between the expected creation of jobs in a region or local government and the need for housing expressed as the number of housing units. The higher the jobs/housing ratio, the more jobs the region or local government is generating relative to housing. A high ratio may indicate to a community that it is not meeting the housing needs (in terms of either affordability or actual physical units) of people working in the community.

### Housing Stock

The housing element typically identifies measures used to maintain a good inventory of quality housing stock, such as rehabilitation efforts, code enforcement, technical assistance to homeowners, and loan and grant programs. It will also identify barriers to producing and rehabilitating housing, including affordable housing. These barriers may include lack of adequate sites zoned for housing, complicated approval processes for building and other development permits, high permit fees, and excessive exactions or public improvement requirements.

## The Economic Development Element

An economic development element describes the local government's role in the region's economy; identifies categories or particular types of commercial, industrial, and institutional uses desired by the local government; and specifies suitable sites with supporting facilities for business and industry. It has one or more of the following purposes:

- Job creation and retention
- Increases in real wages (e.g., economic prosperity)
- Stabilization or increase of the local tax base
- Job diversification (making the community less dependent on a few employers)



A number of factors typically prompt a local economic development program. They include loss or attraction of a major employer, competition from surrounding communities or nearby states, the belief that economic development yields a higher quality of life, the desire to provide employment for existing residents who would otherwise leave the area, economic stagnation or decline in a community or part of it, or the need for new tax revenues.

An economic development element typically begins with an analysis of job composition and growth or decline by industry sector on a national, statewide, or regional basis, including an identification of categories of commercial, industrial, and institutional activities that could reasonably be expected to locate within the jurisdiction. It will also examine existing labor force characteristics and future labor force requirements of existing and potential commercial and industrial enterprises and institutions in the state and the region in which the local government is located. It will include assessments of the jurisdiction's and the region's access to transportation to markets for its goods and services, and its natural, technological, educational, and human resources. Often, an economic development element will have targets for growth, which may be defined as number of jobs or wages, or in terms of targeted industries and their land use, transportation, and labor force requirements.

The local government may also survey owners or operators of commercial and industrial enterprises, and inventory commercial, industrial, and institutional lands within the jurisdiction that are vacant or significantly underused. An economic development element may also address organizational issues, including the creation of entities, such as nonprofit organizations, that could carry out economic development activities.

### The Critical and Sensitive Areas Element

Some comprehensive plans address the protection of critical and sensitive areas. These areas include land and water bodies that provide habitat for plants and wildlife, such as wetlands, riparian corridors, and floodplains; serve as groundwater recharge areas for aquifers; and areas with steep slopes that are easily eroded or unstable, for example. They also can include visually, culturally, and historically sensitive

areas. By identifying such areas, the local government can safeguard them through regulation, incentives, purchase of land or interests in land, modification of public and private development projects, or other measures.

### The Natural Hazards Element

Natural hazards elements document the physical characteristics, magnitude, severity, frequency, causative factors, and geographic extent of all natural hazards. Hazards include flooding; seismic activity; wildfires; wind-related hazards such as tornadoes, coastal storms, winter storms, and hurricanes; and landslides or subsidence resulting from the instability of geological features.

A natural hazards element characterizes the hazard; maps its extent, if possible; assesses the community's vulnerability; and develops an appropriate set of mitigation measures, which may include land-use policies and building code requirements. The natural hazards element may also determine the adequacy of existing transportation facilities and public buildings to accommodate disaster response and early recovery needs such as evacuation and emergency shelter. Since most communities have more than one type of hazard, planners should consider addressing them jointly through a multihazards approach.

### The Agriculture Element

Some comprehensive plans contain agriculture and forest preservation elements. This element focuses on the value of agriculture and forestlands to the local economy, although it can also include open space, habitat, and scenic preservation. For such an element, the local government typically inventories agriculture and forestland, and ranks the land using a variety of approaches, such as the U.S. Department of Agriculture's Land Evaluation and Site Assessment (LESA) system. It then identifies conflicts between the use of such lands and other proposed uses as contained in other comprehensive plan elements.

For example, if an area were to be preserved for agricultural purposes, but the community facilities element proposed a sewer trunk line to the area, that would be a conflict, which if not corrected would result in development pressure to the future agricultural area. Implementation measures might include agricultural use valuation coupled with extremely

large lot requirements (40 acres or more), transfer of development rights, purchase of development rights, conservation easements, marketing programs to promote the viability of local agricultural land, and programs for agricultural-based tourism.

## IMPLEMENTATION

A local comprehensive plan must contain an implementation program to ensure that the proposals advanced in the plan are realized. Sometimes referred to as an "action plan," the implementation program includes a list of specific public or private actions organized by their scheduled execution date—short-term (1 to 3 years), medium-term (4 to 10 years), and long-term (11 to 20 years) actions. Typical actions include capital projects, changes to land development regulations and incentives, new programs or procedures, financing initiatives, and similar measures. Each listed action should assign responsibility for the task and include an estimate of cost and a source of funding.

Some communities produce comprehensive plans that are more broadly based and policy-driven. These plans will require a less detailed implementation program. The individual functional plans produced as a result of the comprehensive plan address the assignment of costs or specific tasks.

## REFERENCE

Meck, Stuart (gen. ed.). 2002. *Growing Smart<sup>SM</sup> Legislative Guidebook: Model Statutes for Planning and Management of Change*, 2 vols. Chicago: American Planning Association.

### See also:

*Critical and Sensitive Areas Plans*  
*Economic Development Plans*  
*Housing Plans*  
 Mapping  
*Parks and Open-Space Plans*  
 Participation  
 Plan Making  
 Projections and Demand Analysis  
*Regional Plans*  
*Transportation Plans*  
*Urban Design Plans*

## URBAN DESIGN PLANS

Urban design is the discipline between planning and architecture. It gives three-dimensional physical form to policies described in a comprehensive plan. It focuses on design of the public realm, which is created by both public spaces and the buildings that define them. Urban design views these spaces holistically and is concerned with bringing together the different disciplines responsible for the components of cities into a unified vision. Compared to comprehensive plans, urban design plans generally have a short time horizon and are typically area or project specific.

Key elements of an urban design plan include the plan itself, the preparation of design guidelines for buildings, the design of the public realm—the open space, streets, sidewalks, and plazas between and around buildings—and the “public interest” issues of buildings. These include massing, placement, and sun, shadow, and wind issues.

Urban design plans are prepared for various areas, including downtowns, waterfronts, campuses, corridors, neighborhoods, mixed-use developments, and special districts. Issues to be considered include existing development, proposed development, utility infrastructure, streets framework, open space framework, environmental framework, and sustainable development principles. Urban design plans require interdisciplinary collaboration among urban designers, architects, landscape architects, planners, civil and environmental engineers, and market analysts. The central role of the urban designer is to serve as the one who can often integrate the work of a diverse range of specialists.

### REASONS TO PREPARE AN URBAN DESIGN PLAN

An urban design plan must respond to the circumstances under which the project will be conducted, including the goals of the sponsors of the plan, the political or social climate in the community, and financial and marketing realities. Below are a few examples of reasons to prepare an urban design plan.

#### Forging Visions

Urban designers are often asked to provide a vision for communities to attract investment and coordinate many disparate and even discordant interests. By providing such a vision, urban designers can bring individual efforts together to create a whole that is greater than the sum of its parts. Creating such a vision needs to be a public process, to cultivate widespread enthusiasm for the vision and build a “bandwagon” of support.

#### Devising Strategies

In addition to an overall vision, an urban design plan must also include a strategic implementation plan, with both short- and long-range initiatives. To keep the momentum going, it is also important to assign specific tasks or projects to groups conducting implementation.

#### Creating Good Locations

Many projects begin with sites that are compromised or deteriorated. An urban design plan illustrates how a site is linked to surrounding strengths, and it can show how the site can become a great location.

#### Marketing Sites or Areas

Urban design plans often work to transform an area, creating a new image for an area once overlooked or blighted. Urban design documents, illustrations, and publicity around the process all become part of the overall marketing effort to attract development and residents.

#### Forming “Treaties”

Urban design plans are sometimes born as a result of a conflict; for example, a proposed redevelopment project may result in displacing existing businesses or residents. An urban design document can serve as a “treaty,” to bring about a truce among warring parties. By focusing on the issues, presenting thoughtful analysis, and urging parties to come forward with their concerns and ideas, urban designers can use an urban design plan to help resolve problems in a non-confrontational way.

### THE URBAN DESIGN PLANNING PROCESS

An urban design planning process has much in common with a comprehensive planning process; both include basic elements such as data collection and

analysis, public participation, and involvement of other disciplines. However, urban design differs in the use of three-dimensional design tools to explore alternatives and communicate ideas. Below are the essential attributes of an urban design planning process.

#### Public Outreach

Because urban design plans usually involve multiple stakeholders, public participation in the planning process is essential. A representative steering committee is one mechanism to ensure involvement of a cross section of interests. Among the various public outreach techniques used are focus groups and public meetings. Input from the public informs the urban design team about assets, liabilities, and visions for the project area.

#### Involvement of Major Stakeholders

In addition to the public outreach process, one-on-one meetings with key representatives of the major stakeholders, such as elected officials, community leaders, and major institutions, are important for both sides—the urban design team gains insight into the stakeholders’ concerns and goals, and the major stakeholders develop confidence in the team and the planning process.



Features such as waterways and adjacent land features influence street grid orientation.

### EXISTING STREET PATTERNS

Source: Urban Design Associates.

### Multi-Disciplinary Team

Urban design is a collaborative process involving urban designers, architects, planners, and landscape architects. However, other disciplines are usually required, such as transportation planners and engineers, civil and environmental engineers, residential and commercial market analysts, construction cost consultants, and public/private finance consultants. When such a team has been assembled, the individual consultants should be coordinated so that their expertise permeates the planning process from beginning to end.

### Focus on Implementation

Urban design projects are often complicated plans with multiple projects and participants. Implementation can be difficult, even when all the forces are aligned properly. The process should begin with implementation in mind. Develop a plan that is tied to the realities of receiving funding, obtaining approval, and getting the project built.

### Design as a Tool for Decision-Making

By exploring alternatives—the “what ifs” of a site or district—the design process allows for speculation, brainstorming, and innovative thinking. Alternatives can be tested against various factors, including physical constraints, regulatory controls, the market, overall costs and benefits, economic feasibility, property valuation, phasing, public input, and experience elsewhere. The consensus vision will then reflect those realities.

## COMPONENTS OF AN URBAN DESIGN PLAN REPORT

As a general rule, an urban design report should be light on text and heavy on graphics. Diagrams, charts, rendered plans and sections, and perspective drawings are often the most effective communicators of the plan's elements. Below are brief descriptions of the typical sections of an urban design plan report.

### Executive Summary

Key images from the body of the report and summary text can convey the “big ideas” of the plan in just a few pages.

### Existing Conditions

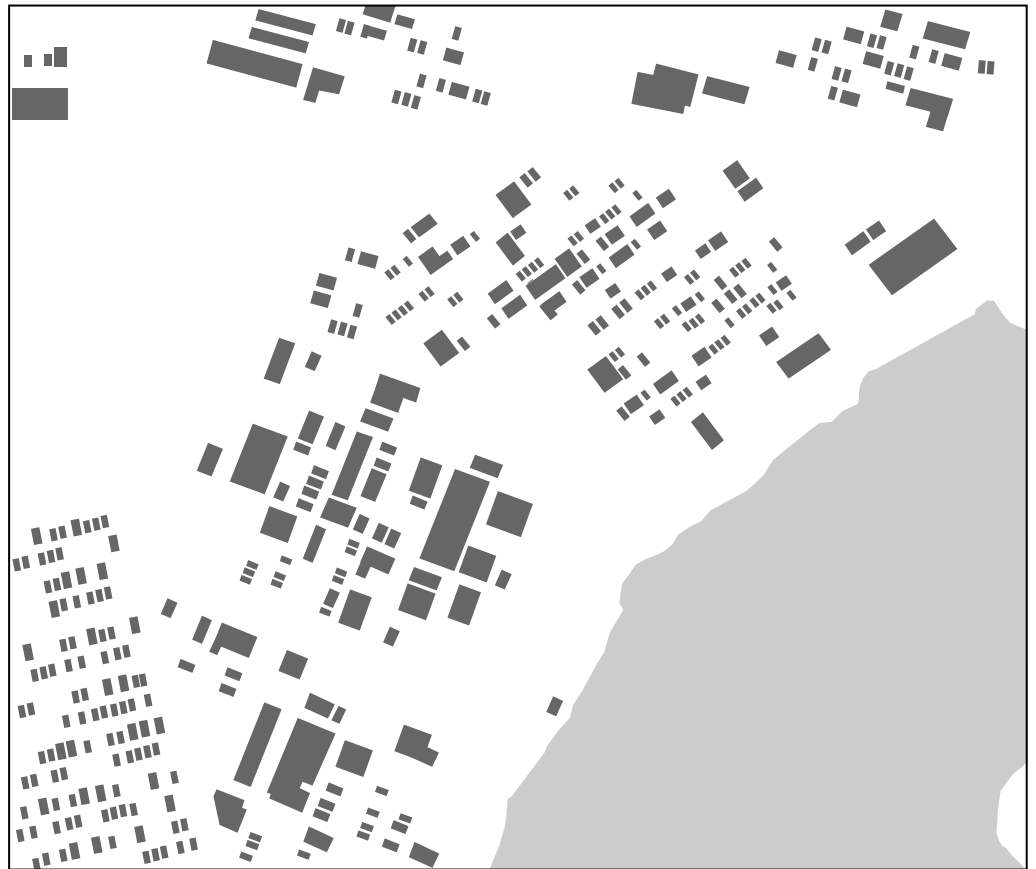
Assemble all existing conditions data related to the project area, including streets, building coverage, land use, topography, vacant buildings and land, and environmental constraints. This information is documented in the report as the existing conditions “portrait” of the area.

### Analysis Drawings

Analysis drawings can be some of the most influential materials of an urban design initiative. Creating these drawings involves professional review of existing conditions data and mapping, to translate this information into findings that will influence the plan. More information on analysis drawings can be found in *The Urban Design Handbook* (2003).

### Summary of Issues

During the planning process, involve citizens and stakeholders in focus groups and public meetings to



Block patterns of an area, presented here as a figure ground map, show the building coverage of a site.

### BUILDING COVERAGE

Source: *Urban Design Associates*.

learn about the strengths and weaknesses of the project area and the community's vision for the future. The issues and opportunities that arise from these meetings are summarized in the report, in both narrative and diagrams.

### Development Program

Market studies, forecasting demand for residential and commercial development, are frequently done concurrently with the urban design planning process. These studies are summarized in the urban design plan. If such studies were not commissioned, the client's development program is described in the development program.

### Urban Design Plan

The urban design plan is a color rendered plan showing existing and new buildings, parking, streets, trails, and landscape planting. The urban design plan presents a two-dimensional vision of the final project build-out.

### Streets Framework Plan and Street Sections

The streets framework plan identifies existing and new streets. It includes cross sections of streets indicating sidewalks, parking, travel lanes, and medians.

### Open Space Framework Plan

The open space framework plan illustrates parks; trails; “green streets,” which are streets designated for enhanced landscape planting and pedestrian amenities; plazas; public space; and the connections between them.

### Perspective Drawings

Three-dimensional perspective drawings are essential in conveying the sense of place of an urban design plan. Often the general public cannot easily interpret plan drawings; however, eye level and bird's eye view perspectives are often more readily understandable.

### Design Guidelines

Urban design plan reports often contain a section on design guidelines, including massing, height, building setbacks, architectural style, parking, streetscapes, signage, materials, and sustainable design.

### Implementation and Phasing Plan

The implementation section details the mechanisms to make the plan a reality. Among the tools typically included are public and private partnerships, funding sources, regulatory issues, conceptual budgets, and a phasing plan with early action and long-range projects described.



The street framework is upgraded to follow the patterns that the existing street patterns, building coverage, and open space framework define for the place.

## STREET FRAMEWORK

Source: Urban Design Associates.

## THE ROLE OF URBAN DESIGN IN IMPLEMENTATION

By translating general planning policies into three-dimensional form, urban design makes the connection between planning and architecture, this makes it possible to test the feasibility of projects through a variety of mechanisms, described below.

### Public Support

If the community perceives the various images and three-dimensional form of a development to be consistent with its goals and policies, then gaining support for the various public approvals needed for the development will be strengthened. Developing the urban design for a project in an open public forum helps to facilitate this outcome.

### Zoning Enforcement and Regulatory Approvals

Use vivid and explicit representations of the proposed development to assist the various agencies responsible for zoning enforcement and regulatory approvals to support implementation. In many communities there are a number of agencies, with different mindsets, involved in administering the approval and implementation process. The urban design plan, especially if

developed in a process that engaged the approval agencies as a group, can provide a common framework within which governmental decisions can be made.

### Investment and Finance

Urban designs are often developed to a level of detail sufficient to determine the amount of space being built and to develop conceptual cost estimates for buildings and public improvements. Therefore, the economic feasibility and fiscal impact of developments can be effectively evaluated.

### Marketing

A project's feasibility is directly related to the effectiveness of its marketing program. The character and quality of its address is one factor in how successfully a development can capture the market potential of an area. The products of an urban design project are often used in marketing programs to communicate the new image of the place and to promote the development.

### Framework for Implementing Agencies

An urban design project often serves as a "road map" for the implementing agencies. It becomes a standard reference for developing budgets, setting priorities, funding projects, and granting regulatory approvals.

## EXAMPLES OF URBAN DESIGN PLANS

Described below are three of the most commonly produced urban design plans: neighborhoods, downtowns, and mixed-use developments.

### Neighborhood Plans

On the neighborhood scale, urban design plans often address the location and design of infill housing, new parks, and community institutions; main street revitalization; housing rehabilitation guidelines; and street reconfiguration. Sponsors of neighborhood plans include cities, community development organizations, foundations, and private developers.

### Downtown Plans

Downtown urban design plans are usually part of a larger economic development strategy focused on attracting jobs, residents, and visitors to a downtown. The development scale is relatively dense and multi-story, which requires sensitive treatment of the public realm for pedestrians. Topics covered in downtown urban design plans include mixed-use buildings, historic preservation, adaptive reuse, height and density, setbacks, views, parking strategies, transit corridors and nodes, streetscapes, waterfronts, street networks, highway access, redevelopment policies, zoning overlays, incentive districts, new stadiums and convention centers, and entertainment and cultural districts.

Cities, downtown organizations, business improvement districts, and regional agencies all may sponsor downtown urban design plans.

### Mixed-Use Developments

Mixed-use developments are typically one-owner, site-specific projects. Among the various types are infill projects in downtowns, brownfield reclamation projects, lifestyle centers (also called specialty retail centers), and office/technology developments. Office, retail, and housing are among the typical uses in mixed-use developments. Project sizes can range widely, from a few acres to hundreds of acres. A central goal is to develop a pedestrian-friendly place to live, work, and play. Sponsors of mixed-use developments are often private developers, redevelopment agencies, and large institutions, such as universities and medical centers.

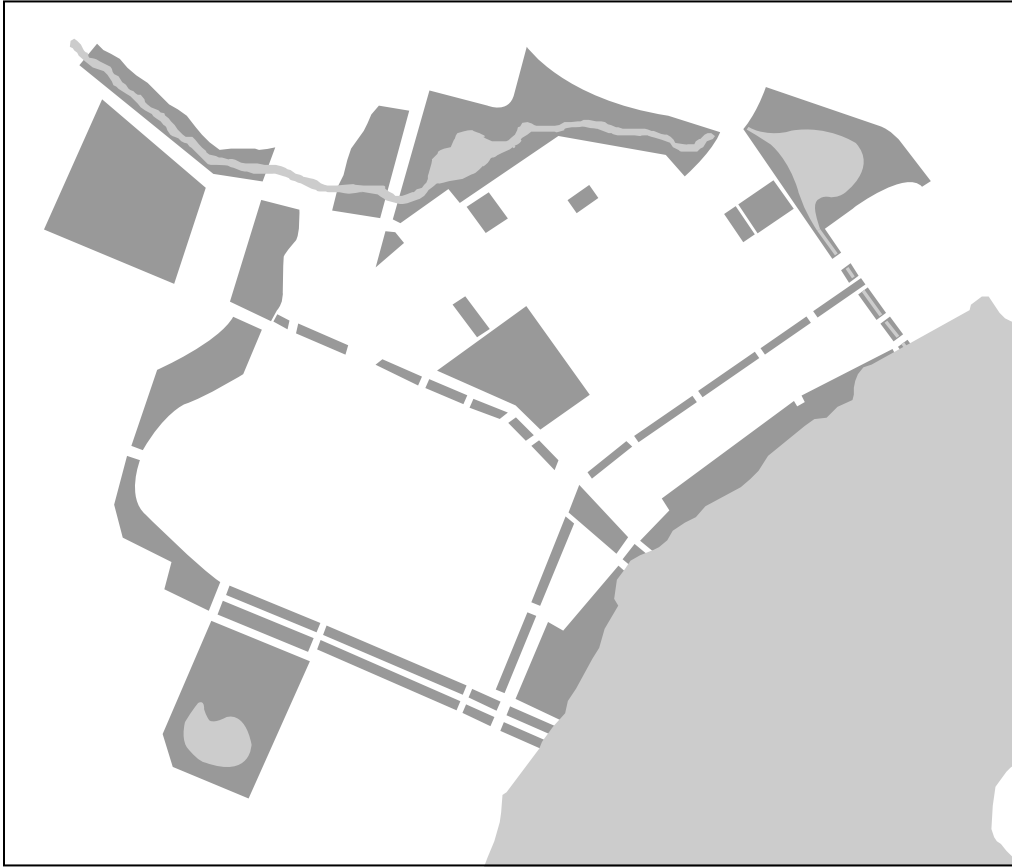
## KEY AND EMERGING ISSUES

### Housing Density

As the smart growth movement and rising housing costs have become determining forces in residential planning and development, density has emerged as a major issue. While there is still the great American desire for the single family home and the cul-de-sac subdivision, regulatory controls and environmental restrictions have begun to limit available land for such development. Smaller lot sizes, attached housing, and multi-family housing have become contentious issues in many communities. Urban design planning processes can help test different residential densities in the context of a holistic solution that includes housing, amenities, and place making.

### Recognizing the Value of Urban Design

Urban design is a strong strategic planning tool. However, many cities and developers approach



The open space of a site shows the green network that helps define a place.

## OPEN SPACE FRAMEWORK

Source: *Urban Design Associates*

development on a project-by-project basis, often in isolation from adjacent uses and without a comprehensive view of all the forces impacting or impacted by the project. While urban design plans are not always regarded as essential pre-development projects, experience in the field has demonstrated that the new ideas and approaches that emerge from an urban design planning process can add significant value to a development and appreciably ease and shorten the public approval process.

### Urban Design Education

Because of the three-dimensional building design and the physical transformation of the public realm aspect of urban design practice, an urban designer should have an architecture degree. Ideally, an urban designer has either received a master of architecture degree in urban design or has completed an internship in an urban design firm.

### RESOURCE

Urban Design Associates. 2003. *The Urban Design Handbook: Techniques and Working Methods*. New York: W.W. Norton and Co.

### See also:

Places and Placemaking  
*Viewsbed Protection*

## REGIONAL PLANS

Regional plans cover geographic areas transcending the boundaries of individual governmental units but sharing common characteristics that may be social, economic, political, cultural, natural-resource-based, or defined by transportation. They often serve as the skeleton or framework for local government plans and special district plans, supplying unifying assumptions, forecasts, and strategies. The information that follows is adapted from the American Planning Association's *Growing Smart<sup>SM</sup> Legislative Guidebook* (2002).

### DEFINING THE REGION

The following factors may define a region:

- Geographic and topographic features, especially watersheds
- Political boundaries, especially county boundaries
- Transportation patterns, especially those related to the journey to work
- Region-serving facilities, such as hospitals, airports, trail terminals, and wastewater treatment plants
- Interrelated social, economic, and environmental problems
- Population distribution
- Existing intergovernmental relationships, usually expressed in the form of written agreements
- Metropolitan area or urbanized area boundaries as identified by the U.S. Census Bureau
- Boundaries of existing regional or multijurisdictional planning or service provision organizations, such as regional sewer districts

### REGIONAL FUNCTIONAL PLANS

Regional planning agencies may prepare regional functional plans to cover specific topics such as parks and open space, bikeways, water, sanitary sewerage and sewage treatment, water supply and distribution, solid waste management, airports, libraries, communications, and others. For example, a regional sewer plan is a device used to ensure that disputes can be resolved over which jurisdiction will provide sewers and sewage treatment facilities to developing areas. The most typical regional functional plan is a regional transportation plan; see Transportation Plans in this chapter for more information.

#### The Regional Housing Plan

A number of states, including California and New Hampshire, require the preparation of regional housing plans. In general, regional planning agencies prepare these plans to assess present and prospective need for housing at the regional level, particularly affordable housing. Typically, they establish numerical housing goals to be included in local government plans.

In New Jersey, regional housing planning is the responsibility of a state agency, the Council on Affordable Housing, which prepares "fair-share" housing allocations for affordable housing for each local government. Under New Jersey law, local governments then have an obligation to identify sites for affordable housing and take necessary steps to remove barriers in order to provide a realistic opportunity that such housing can be built or rehabilitated.

### THE REGIONAL COMPREHENSIVE PLAN

The regional comprehensive plan is intended to address facilities or resources that affect more than one jurisdiction and to provide economic, population, and land-use forecasts to guide local planning, so that local plans and planning decisions are made with a set of common assumptions. Consequently, a regional comprehensive plan will propose a more schematic pattern of development than provided in a local comprehensive plan.

For example, in a regional comprehensive plan, the land-use pattern is generally simple, demarcating land into urban and rural, with a general indication of a hierarchy of activity centers. Such centers may be targets for more intensive residential, office, commercial, and industrial developments, supported by transit, that are intended to serve a substantial portion of the region. Here, the intent is to use the regional plan as an device to direct both public and private investment to ensure that such development occurs.

Both public agencies and private organizations may prepare regional plans. Indeed, private groups prepared the first true regional plans, one in 1909 for the Chicago area and a second in 1929 for the New York City area. The Chicago plan was the work of planners Daniel Burnham and Edward Bennett, with funding by the Commercial Club. The Committee for the Regional Plan of New York and Its Environs, a private group whose efforts were funded by the Russell Sage Foundation, produced a multivolume regional plan for the New York metropolitan area, beginning in 1929.

#### Regional Comprehensive Plan Elements

##### Typical Plan Elements

State statutes usually define which elements are required in a regional comprehensive plan. The following list is for guidance only; to determine which elements are required, consult state legislation.

- A narrative of planning assumptions, and their relationship to state and local plans
- Population trends and projections
- Regional economy
- Existing land use
- A transportation system overview
- Regional housing trends and needs
- Community facilities and services
- Natural features and cultural assets
- Agricultural lands
- Natural hazards
- Regional density study
- Public involvement
- Urban growth areas
- Regional growth policy statements
- Implementation recommendations

#### Urban Growth Areas

Some regional plans delineate urban growth areas, which are land areas sufficient to accommodate population and economic growth for a certain period, typically 20 years, and which will be supported by urban-level services. The purpose of an urban growth area is to ensure a compact and contiguous develop-

#### SAMPLE TABLE OF CONTENTS: THE METROPOLIS PLAN: CHOICES FOR THE CHICAGO REGION

Introduction: The Metropolis Plan
Purpose of The Metropolis Plan
Building The Metropolis Plan
The Metropolis Plan: Key Themes
Opportunities Close to Home: Housing Choices for All
Regional Cities and Centers
A Robust Transportation System
Great Streets
Nature's Metropolis
Implementing the Metropolis Plan
How We Got Here
Getting from Here to There

Source: *Chicago Metropolis 2020, 2003*

ment pattern that can be efficiently served by public services while preserving open space, agricultural land, and environmentally sensitive areas not suitable for intensive development.

#### Special Resource Areas

A regional comprehensive plan also identifies special resources areas, such as farmland, aquifers, and major wetlands. It may propose strategies for a particular watershed or basin to ensure that groundwater and watercourses are protected as supplies of potable water. The plan can also include actions to protect areas of biodiversity. Depending on the nature of the region, it may also identify the general location of natural hazard areas, such as earthquake zones or areas prone to wildfires.

#### Regional Facilities

The plan may contain proposals for new or upgraded regional facilities, such as multimodal transportation centers, new highways, transit, airports, hospitals, and regional parks or open space systems that link together. Functional plan elements may examine details of such proposals, such as road widening, highway safety improvements, and operational changes to mass transit systems, or the exact locations of regional wastewater facilities and major trunk lines.

#### Descriptive and Analytical Studies

In order to prepare a regional comprehensive plan, the regional planning authority or other suitable authority must undertake a series of descriptive and analytical studies. Such studies may cover the following topics:

- The economy of the region, which may include amount, type, general location, and distribution of commerce and industry within the region; the location of regional employment centers; and trends and projection of economic activity, both in terms of income growth and changes in the number and composition of jobs
- Population and population distribution within the

region, as well as its local governments, including projections and analyses by age, education level, income, employment, or similar characteristics

- Natural resources, including air, water, forests and other vegetation, and minerals
- Amount, type, quality, affordability, and geographic distribution of housing among local governments in the region correlated with projected job and population change
- Identification of features of significant statewide or regional architectural, scenic, cultural, historic, or architectural interest, as well as scenic corridors and viewsheds
- Amount, type, location, and quality of agricultural lands
- Amount, type, intensity or density, general location of industrial, commercial, residential, and other land uses, and projections of changes in land use, correlated with projected job and population change

## MAP COMPONENTS

The regional comprehensive plan provides a visual representation of the plan's objectives. The components of the map may include the following:

- Location of urban growth area boundaries
- Existing and proposed transportation facilities
- Other public facilities and utilities of extrajurisdictional or regionwide significance
- Potential areas of critical state concern (such as areas of significant biodiversity, scenic beauty, historic significance, or archaeological value, or areas around major facilities, such as military bases, airports, or national or state parks)
- Natural hazard areas
- Urban and rural growth centers

- Any other matters of regional significance that can be graphically represented.

## THE IMPLEMENTATION PROGRAM

A long-range implementation program for the regional comprehensive plan may include the following components.

### An Implementation Schedule

The implementation program may include a schedule of development for proposed transportation and other public facilities and utilities of extrajurisdictional or regionwide significance. The schedule may include a description of the proposed public facility or utility, an identification of the governmental unit to be responsible for the facility or utility, the year(s) the facility or utility is proposed for construction or installation, an estimate of costs, and sources of public and private revenue for covering such costs.

### Development Criteria

The program may include development criteria for use in local government and special district plans. Performance benchmarks may be defined to measure the achievement of the regional comprehensive plan by local governments and special districts.

### Monitoring and Evaluation

A statement may be included to describe the criteria and procedures the agency creating the plan will use in monitoring and evaluating the plan's implementation by local governments, special districts, and the state.

### Coordination

There may also be a statement of measures describing the ways in which state and/or local programs

may best be coordinated to promote the goals and policies of the regional comprehensive plan

## Legislative Changes

The program may also include proposals for changes in state laws to achieve regional objectives, such as regional tax-base sharing or procedures to review large-scale developments with multijurisdictional impacts or to consolidate existing planning organizations to improve services and coordination. Regional planning agencies may also propose interjurisdictional agreements to clarify responsibility for the provision of urban services.

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### See also:

*Housing Plans*  
*Population Projections*  
*Regions*  
*Transportation Plans*  
*Watersheds*

## NEIGHBORHOOD PLANS

A neighborhood plan focuses on a specific geographic area of a local jurisdiction that typically includes substantial residential development, associated commercial uses, and institutional services such as recreation and education. Many of the same topics covered in a local comprehensive plan are covered in a neighborhood plan.

### REASONS TO PREPARE A NEIGHBORHOOD PLAN

The neighborhood plan is intended to provide more detailed goals, policies, and guidelines than those in the local comprehensive plan. Neighborhood plans often emphasize potential partnerships among government agencies, community groups, school boards, and the private sector—partnerships that can act to achieve neighborhood goals. These plans are often developed through highly collaborative processes involving citizens, business, nongovernmental organizations (NGOs), and the local government of the neighborhood.

Neighborhood plans describe land-use patterns in more detail than do comprehensive plans. They may even approach the specificity required for amendments to a zoning district map or street classification system. These descriptions and maps can be used for greenfield or developing areas in a manner similar to that used in sector or specific plans, an approach used in Florida and California.

These plans also often propose a program of implementation shorter in duration than is proposed in a comprehensive plan. For an established neighborhood, the plan may emphasize issues that can be addressed in one to two years. They may include actions to be taken by the local government, other governmental agencies, school boards, nonprofit organizations, or for-profit groups. In many respects, this reflects the nature of the neighborhood planning process itself, which often focuses on visible and politicized problems that can be resolved quickly, such as trash cleanup, park improvements, or specific code enforcement issues. For newer neighborhoods, the plan's content may be more far-reaching and functional.

Neighborhood planning succeeds when the process is cyclical, small successes are emphasized, and the issue of identifying neighborhood leaders and legitimacy is addressed at the onset.

### PLAN ELEMENTS

The American Planning Association conducted research in the mid-1990s that identified more than 36 elements in neighborhood plans. This group of elements, which appeared in various combinations, suggests a realm of possibilities for a particular neighborhood plan. While no definitive recommendation can be made about which specific elements a neighborhood plan should contain, the plan's content should result from a process that assesses the neighborhood's specific needs, resources, and ideals.

While there is no definitive list of required elements for neighborhood plans, certain elements appear to be common and essential. They can be grouped into five categories, based on their relative

purpose and sequence in the planning process:

- *General housekeeping:* Organizational items that make the plan readable and usable, and serve to encourage further involvement in the planning process
- *Planning process validation:* Elements that demonstrate the legitimacy of the research and consensus-building processes that led to the development of the plan
- *Neighborhood establishment:* Elements that serve to create a community image or identity distinct from the jurisdiction as a whole
- *Functional elements:* Substantive items that may vary widely from plan to plan (e.g., safety element, housing element)
- *Implementation Framework:* The goals, programs, actions, or schedules used to implement the plan

### General Housekeeping

The elements in this category are used to create a clear, usable plan document. Because neighborhood residents may not be familiar with planning, this element is particularly important to include. More information on this element is covered in the Plan Making section of this book.

### Planning Process Validation

Stakeholder participation is critical at the neighborhood planning level. Planning information must be accessible and comprehensible to all involved parties. Certain information should be made public throughout the planning process. In addition, placing some of that information directly in the plan allows other citizens to participate in the planning process more intelligently at a later time. This makes the plan a working reference document and validates the process that culminated in the plan.

### The Neighborhood Organizational Structure and Planning Process

An important part of plan validation is how the planning process is initiated and carried out. Flow charts are often used to illustrate the sequence of events. This section may also reference the ordinance that adopts the plan, the community feedback that supported it, or the background information about why the process was initiated. Many jurisdictions require a formal neighborhood organization to be in place as a condition for planning assistance or plan adoption. Neighborhood leadership should be made clear in a plan or at least emerge out of the planning process. A legitimate, publicly accessible power structure gives the neighborhood-city relationship credibility, encourages neighbors to act responsibly with public resources, and facilitates a leadership development mechanism within the community.

### The Mission/Purpose Statement

The mission/purpose statement establishes the importance of the neighborhood planning process. It should convey that the process is all-inclusive and in accordance with policies set forth in the jurisdiction's comprehensive plan, if one exists. The statement can also be linked to the municipal code or city charter.

### The Participation Proclamation

This section documents the participation process as it actually happened for the plan. It should be located at the beginning of the plan, setting the stage for the policies and recommendations that follow. Local ownership of the planning process must be evident. Both positive and negative feedback is important to include. Meeting minutes, survey results, or local newspaper articles can document feedback.

### Needs Assessment

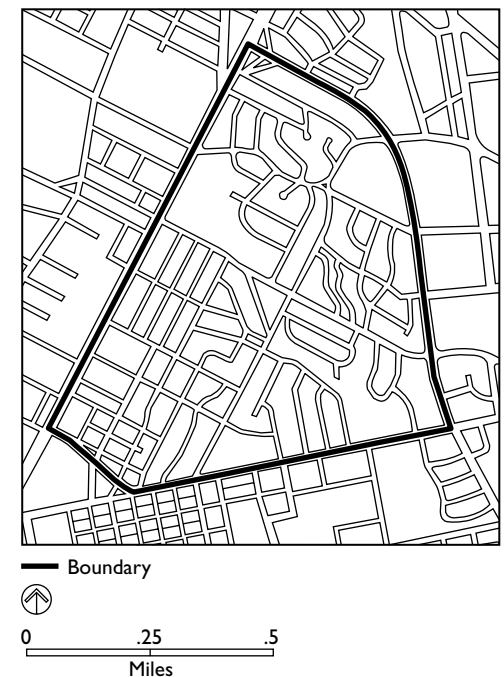
A needs assessment for services and facilities is a fundamental component of neighborhood planning, especially when it identifies underserved neighborhood groups. Needs assessments can measure social services, physical conditions, commercial resources, and cultural amenities. When assessing needs, it is important to take stock of existing community resources. Evaluating the positive aspects of a neighborhood can reveal unexpected opportunities for dealing with the negatives.

### Defining the Neighborhood

In addition to securing the future, neighborhood plans fortify the present by defining the neighborhood.

### Boundary Delineation

The neighborhood and the city departments should agree to, or at least accommodate, each party's perception of neighborhood boundaries. Boundary identification should involve representatives from the community, pertinent city departments, and, if possi-



### NEIGHBORHOOD BOUNDARY DELINEATION

Source: Adapted from *Upper Boggy Creek Neighborhood Plan*, City of Austin, TX, 2002.



ble, social service providers. One method of determining boundaries is to have participants draw lines on maps to define their own boundaries. Combining the maps can reveal the most common perception of the area that constitutes the neighborhood. The walkable distances to key community services, such as elementary schools, public transportation, local grocers, and health care resources, often define neighborhood boundaries. Neighborhood definition is also sometimes related to historic district designation.

**The Functional Elements**

Most neighborhood plans address functional elements, such as housing, safety, land use, and recreation as separate topics. Plans may treat these topics from start to finish, beginning with a description of existing conditions and concluding with recommendations, or they may simply list policy recommendations and the implementation strategies for those recommendations. Some neighborhood plans have required that elements be consistent with those in the community’s comprehensive plan or, sometimes, with the regional plan. These might include density targets or impact and mitigation requirements for new development.

**Residential**

Residential development policies can include promoting owner-occupied housing or rental housing, code enforcement, and amending zoning and other land-use controls to encourage more housing development and vacant property rehabilitation. Issues pertaining to private property maintenance, housing stock, affordability and demand, building conditions, safety, property values, infill, abandonment, and design standards can also be included.

**Transportation/Circulation/Pedestrian Access**

Transportation elements in neighborhood plans often identify specific circulation problems at intersections and street corners. Plans can include recommendations for improving sidewalks, reducing vehicles or vehicle speed, creating bicycle lanes, and improving access to transit. Transportation elements and policies should promote the connection and flow of all transportation forms to serve people of all ages and abilities.

**Land Use/Zoning**

Current land-use patterns and zoning classifications are frequently presented in neighborhood plans, often as part of a needs assessment. To help residents understand the information, land-use and zoning data should be provided simply and clearly. Growth projections and areas where growth is expected to happen should be identified.

**Infrastructure/Utilities**

Infrastructure quality is important to neighborhood residents and businesses. It is also perhaps the least

controllable aspect of neighborhood development, particularly where city officials have not been involved in the neighborhood planning process. Public works departments and private utility companies are not always directly responsive to neighborhoods because their agendas are usually tied to citywide capital improvement programs rather than to each neighborhood’s planning process. Plans may include actions such as petitioning public works departments and the city council as a method of obtaining needed infrastructure improvements.

**Implementation Framework**

Once a neighborhood plan has evaluated the existing conditions, the needs assessment, and the community’s desires for the future, generally the plan frames a set of goals and objectives. An implementation program sometimes follows the goals and objectives.

**Goals, Objectives, and Other Resolutions**

The goals and objectives of the neighborhood plan represent the community’s vision and values. They may be presented as vision statements or policy recommendations.

**Implementation Program**

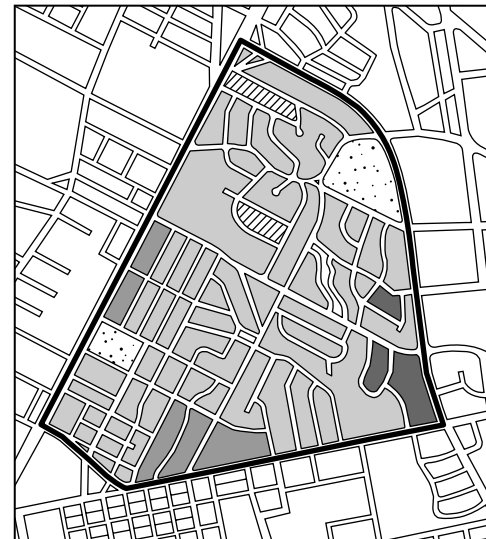
The schedule for achieving goals and objectives must be set, commitments must be made, and responsibility for actually accomplishing them has to be assigned. Neighborhood plans should include an implementation element, either woven into the functional plan elements or at the end of the document, shown as a chart or matrix.

**Funding**

City capital improvements funds, special assessments, transportation funds, tax increment funds, community development block grant (CDBG) funds, special state or federal program grants (such as historic preservation or urban forestry), donations, fund-raisers, private investors, and community development loans are viable funding sources to use in the implementation of neighborhood plans.

**See also:**

- Neighborhoods*
- Participation
- Plan Making



**GENERALIZED NEIGHBORHOOD LAND-USE MAP**

Source: Adapted from *Upper Boggy Creek Neighborhood Plan*, City of Austin, TX, 2002.

## TRANSPORTATION PLANS

Effective transportation systems are central to maintaining the productivity, health, and safety of communities and regions. A transportation plan guides the investment in, and timing of, improvements to the transportation network to meet community mobility, accessibility, safety, economic, and quality-of-life needs.

### REASONS TO PREPARE A TRANSPORTATION PLAN

Transportation plans are typically prepared to address the following items in a systematic, coordinated, and comprehensive manner:

- Management of existing systems
- Maintenance of previous investment
- Realignment of existing services
- Introduction of new services
- Construction of new facilities
- Identification of ways to finance system maintenance and improvements

The process of preparing various transportation plans gives government agencies, elected officials, and the public the opportunity to assess the adequacy of the existing system and to plan to meet future needs while maintaining local and regional transportation systems in good condition. The outcome of the process should be a transportation plan that defines existing problems and issues, predicts future deficiencies and problems, defines solutions, and identifies where to find the resources needed to manage and implement plan recommendations.

The goals of a particular transportation plan are usually determined by comparing existing transportation system performance to projected future demands and by considering the particular social, economic, and environmental circumstances of the community. Given the importance of effective transportation systems to the health and vitality of a community, transportation plans often provide a “blueprint” for future development and redevelopment in support of regional and comprehensive land-use plans.

### TRANSPORTATION PLANNING ROLES AND RESPONSIBILITIES

The development of a successful transportation plan requires the insights of those entities responsible for various components of the transportation system, working in concert with those who will use and be affected by the transportation service and improvements, to develop solutions responsive to diverse considerations. Those responsible for plan development must create an effective forum for evaluating system deficiencies, assessing alternatives, and selecting the most effective course of action. Development of some plans is a highly structured process, complete with formal committees. Others are less structured and rely more heavily on existing committees or informal communication networks to solicit participation.

Whether structured or informal, because transportation plans affect so many interests and a wide range of people, broad and meaningful participation

in plan development is essential. The development stage of transportation planning should include representatives from the following constituencies:

- U.S. Department of Transportation
- State departments of transportation
- Metropolitan planning organizations
- Local governments
- Public transit providers
- Resource and regulatory agencies
- Citizens and communities

#### U.S. Department of Transportation

The modal administrations of the U.S. Department of Transportation, including the Federal Highway Administration, the Federal Transit Administration, and the Federal Railroad Administration, administer, grant, and oversee funds for the planning, development, implementation, and operation of transportation services and infrastructure. In transportation planning efforts funded by the federal government, such as corridor plans, direct involvement of the federal agency is advisable during key decision points, at a minimum. In the development of a local transportation plan where there is no clear federal interest, there may be no involvement of the federal government, or the involvement might be limited to consultation regarding the availability and applicability of federal programs and funding.

#### State Departments of Transportation

Through their departments of transportation, states are responsible for the construction, maintenance, and operation of designated state highways. As part of this responsibility, state departments of transportation (DOTs) are responsible for provision and administration of funds for construction, maintenance, and operation of transportation facilities and services. State DOTs are also responsible for leading the preparation of statewide plans. Like metropolitan planning organizations (MPOs), they may have responsibility in the development and maintenance of regional travel demand forecasting models. State DOTs provide technical assistance and support to a wide range of transportation plans. They are the repositories for much of the data required to assess existing transportation systems.

#### Metropolitan Planning Organizations

The federal government charges MPOs to prepare metropolitan area long-range plans for urbanized areas. In some instances, MPOs will also lead the preparation of corridor plans. In addition, MPOs are often in charge of developing and maintaining the regional travel demand forecasting models used as a basis to support many transportation planning functions, including the development of employment and population forecasts and administration and disbursement of transportation funds. Consequently, in addition to their leadership role in preparing metropolitan regional long-range transportation plans, MPOs also provide technical assistance in support of other transportation planning efforts.

#### Local Governments

Local governments play a major role in constructing, operating, and maintaining surface transportation net-

works, often including transit service and roadways. Consequently, their involvement in the development of transportation plans is essential. In some cases, such as for a local transportation plan, the city, county, or town public works departments or transportation divisions might take the lead in preparing the transportation plan or the transportation element of a comprehensive plan. For other plan types, such as metropolitan area long-range transportation plans, local governments might provide technical support and knowledge specific to their jurisdictions. In either case, the insights of those engaged in the day-to-day operations of the system are an invaluable asset to any plan. In addition, since local government might be charged with implementing particular recommendations of the plans, it is essential that there be consensus for action and an understanding of the basic needs and technical analysis supporting the action.

#### Public Transit Providers

With respect to public transportation services, the role and responsibilities of public transit providers is similar to that described for local governments. However, because transit providers may not have a dedicated funding source for operations and may be dependent upon local governments for funding, early consultation regarding the availability of resources is even more critical.

#### Resource and Regulatory Agencies

Transportation plan recommendations can affect a broad range of natural and social resources. Consequently, early involvement of resource and regulatory agencies in transportation plan development can help identify constraints that could potentially prohibit implementation of future projects because of regulatory requirements, schedule impacts, or financial requirements.

#### Citizens and Communities

Citizens and communities are an important resource in the development of transportation plans, as both the “customers” of the system and those who might be affected by proposed changes. Statewide plans, metropolitan area long-range transportation plans, and corridor plans specifically require public involvement to inform plan development. Involvement should range from the average resident to neighborhood or civic associations, community leaders, and business community representation, such as chambers of commerce. For larger transportation plans, it is advisable to establish a formal citizens advisory group.

### TYPES OF TRANSPORTATION PLANS

Transportation plans vary widely in approach, content, and scope as determined by geographic coverage, scale, and time frame. There are four basic types of transportation plans:

- Statewide transportation plans
- Metropolitan area long-range transportation plans
- Local transportation plans
- Corridor plans

**Statewide Transportation Plans**

Statewide transportation plans, which are prepared by state DOTs, provide the basis for coordinating data collection and analyses to support planning, programming, and project development decisions. A basic requirement of plan development is coordination with the public and other entities with jurisdiction. The extent of coordination required with other transportation planning entities in developing the plan is based on the scale and complexity of many issues, including transportation problems; safety concerns; and land use, employment, economic, environmental, and housing and community development objectives within the state. The plans typically reference, summarize, or contain information about the availability of financial and other resources needed to implement the plan, although state plans, unlike metropolitan area long-range transportation plans, are not required to determine the likely availability of funding and the sources of funding to carry out the plan. State plans are evaluated on a regular basis and updated periodically to reflect changing statewide priorities and needs.

Statewide plans are intermodal in nature. They address passenger, goods, and freight movement for a minimum 20-year planning horizon. These plans are federally mandated to consider the following issues:

- Economic vitality
- Safety and security
- Accessibility and mobility
- Environmental quality
- Quality of life
- System connectivity
- System efficiency
- System preservation

In addition, state DOTs are all obligated to consider the opinions of elected officials representing local governments and the concerns of Native American tribal governments and federal land management agencies that have jurisdiction over land within the boundaries of the state. The plan is coordinated with adjacent states and counties and, where appropriate, international borders. It is conducted in a manner consistent with the metropolitan area planning process conducted by MPOs. By federal mandate, statewide plans are coordinated with air quality planning, and provide for appropriate conformity analyses as required by the Clean Air Act.

**Metropolitan Area Long-Range Transportation Plans**

Metropolitan area long-range transportation plans focus on evaluating alternative transportation and land-use scenarios to identify major travel corridors, assess potential problems, and provide a basis for planning and programming major improvements. These plans cover multiple jurisdictions and are therefore “regional” in emphasis. Prepared under the direction of a federally designated MPO, they typically cover a 20-year planning horizon. Under federal requirements, the adopted plans must be “fiscally constrained.” In other words, the plan must demonstrate the likely availability of funding sources needed to implement proposed programs and projects.

**Local Transportation Plans**

Local transportation plans are prepared either as stand-alone documents or as an element of a com-

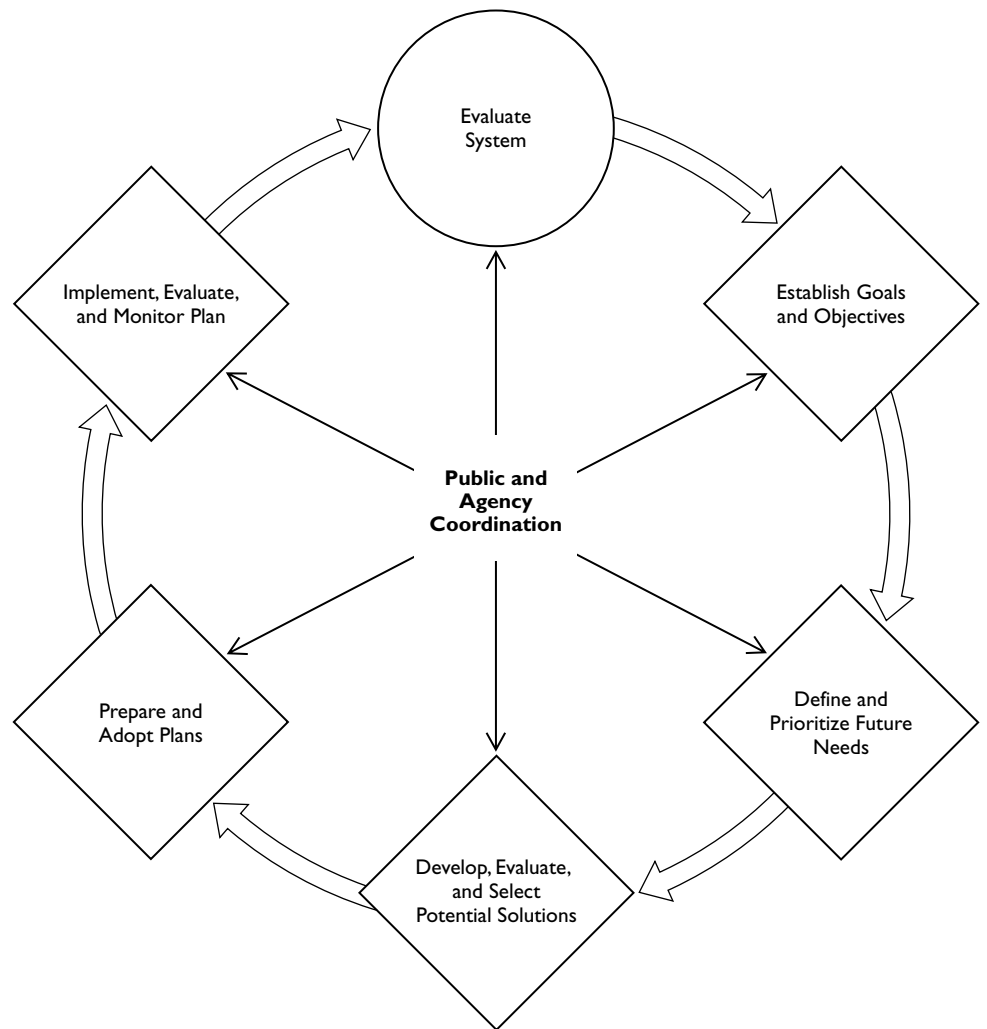
prehensive plan. Local governments or regional transit providers typically prepare these plans, but they are coordinated closely with MPOs and state DOTs. The plans provide the basis for the programming and implementation of local transportation actions. They address small-scale improvements and projects requiring major capital investments. The typical plan consists of an inventory of existing facilities and a description of existing conditions, an assessment of system deficiencies, a projection of future needs, a description of the proposed plan, discussion of cost implications, and a summary of actions required for plan implementation. These plans usually address some short-range early action items (1 to 5 years), some midrange actions (5 to 10 years), and longer-term activities in a 20-year time horizon. In addition, the land-use implications of the plan are addressed. As with the other plans discussed, public and agency coordination during plan development is essential to successful plan implementation.

**Corridor Plans**

Corridor plans that focus on transportation are prepared for high-priority areas showing signs of congestion or predicted for significant future travel vol-

ume, or for transportation facilities of historical or natural significance. The entity responsible for implementing the improvements most frequently prepares these plans; therefore, state DOTs and transit providers often undertake them, although MPOs, local governments, and resource agencies such as the National Park Service also conduct such studies. Coordination of corridor plans with the general public is required, as well as with federal, state, and local agencies with an interest in the plan’s outcome. Corridor plans usually have a 20-year planning horizon. The degree of federal or state DOT participation is often governed by the proposed funding for the plan’s implementation.

Corridor plans involve the definition of the corridor to be studied, along with a clear presentation of the problem to be solved, both of which form the basis of the purpose and need for action. Consideration of a wide range of alternative means to solve the identified transportation problem or resource management objectives should be at the core of plan development. These alternatives can involve different levels of investment or different types of corridor improvements. They are systematically evaluated using a set of stakeholder-developed evaluation crite-



**TRANSPORTATION PLAN DEVELOPMENT CYCLE**

Source: Diana C. Mendes, AICP.

ria. These criteria typically include land use, environmental effects, community concerns, cost, capacity, and effectiveness. The analysis results are shared and discussed publicly prior to making a decision on a preferred course of action. The final plan document summarizes both the planning process and the results, explaining how the decision was made, and the actions necessary to implement the plan and recommended improvements.

**PLAN COMPONENTS**

Transportation plans should include the following elements:

- An overview of the planning process
- A description of existing conditions (transportation network and land use)
- A forecast of future conditions (transportation network and land use)
- A summary of transportation needs
- Goals and objectives
- An assessment of transportation system capacity
- A series of alternative scenarios for future and proposed improvements
- A description of cost implications and funding sources
- Guidelines for implementation and performance monitoring
- A program for ensuring public involvement

**TRANSPORTATION PLAN DEVELOPMENT**

There are six basic steps in the development of a transportation plan:

1. Evaluate system capacity, deficiencies, and needs.
2. Establish goals and objectives.
3. Define and prioritize future needs.
4. Develop, evaluate, and select potential solutions.
5. Prepare and adopt the plan, including public review and comment.
6. Implement, monitor, and evaluate plan performance.

The development of responsive and effective plans is predicated on the active involvement of the public and appropriate federal, state, and local agencies in transportation decision making at each step of transportation plan development.

**Evaluate System Capacity, Deficiencies, and Need**

Evaluation of the current system begins with an inventory of the existing facilities and services and their capacity, including the roadway network, transit systems, freight systems, as well as the interrelationships to air and waterborne transportation. This evaluation should establish where the transportation network is performing well and where deficiencies currently exist or are predicted to exist in terms of accessibility, mobility, and efficiency relative to community aspirations. Both quantitative and qualitative measures, including evaluation of population and employment characteristics, land-use trends, travel markets and patterns, and user surveys, are often used in the plans to describe the trans-

portation problems to be solved and to establish a need for action.

**Establish Goals and Objectives**

The goals and objectives, which are developed in response to the analysis of system capacity, deficiencies, and needs, form the foundation upon which different alternative transportation scenarios and investments are evaluated during plan development. The goals and objectives vary and are dependent upon context (rural, suburban, and urban), trends in population and employment, and planning horizon (short term or long term). Transportation plans are increasingly becoming more context-sensitive, incorporating more goals related to land-use compatibility, economic considerations, energy, environmental management, and community quality. Criteria by which the performance of different potential actions can be measured against these goals and objectives should be clearly articulated to facilitate public understanding of the decision-making process.

**Define and Rank Future Needs**

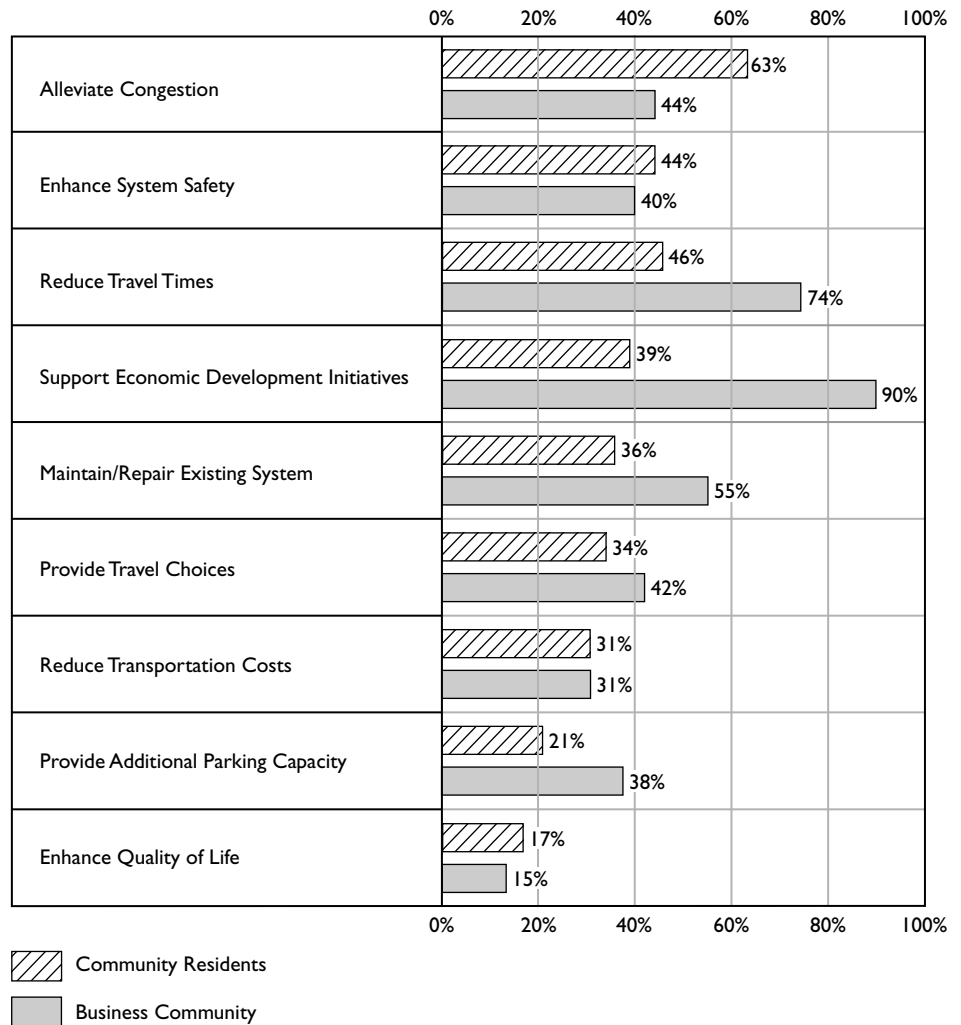
Once planners have established the plan’s goals and objectives, the next step involves defining and

ranking future needs. This analysis uses the information gained during the initial system evaluation in combination with population and employment projections, regional and local land-use plans, and the results of public and agency coordination.

**Transportation Models**

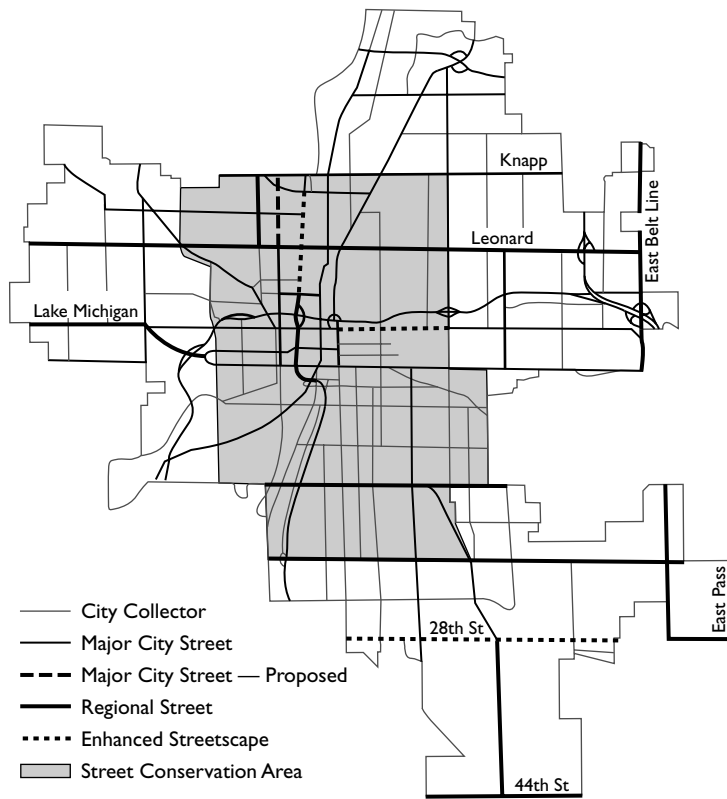
Planners employ transportation models to conduct regional travel demand forecasting and to simulate traffic impacts to assess and evaluate the capacity of existing and future transportation networks to accommodate projected demand. Regional models are focused on the large-scale “macro” travel movements in aggregate, while traffic simulation is focused on the smaller-scale, or “micro,” travel movements on an individual basis.

The regional travel demand forecasting models are developed, maintained, and operated by MPOs and state DOTs, and can vary in size and scope dependent upon the area they are designed to serve. These regional models characterize the transportation system networks, as well as the demand for the system in terms of its users, travel patterns, and how changes to the system might affect demand. These regional models provide insights



**TRANSPORTATION GOALS BY PARTICIPANT PREFERENCE**

Source: Diana C. Mendes, AICP.



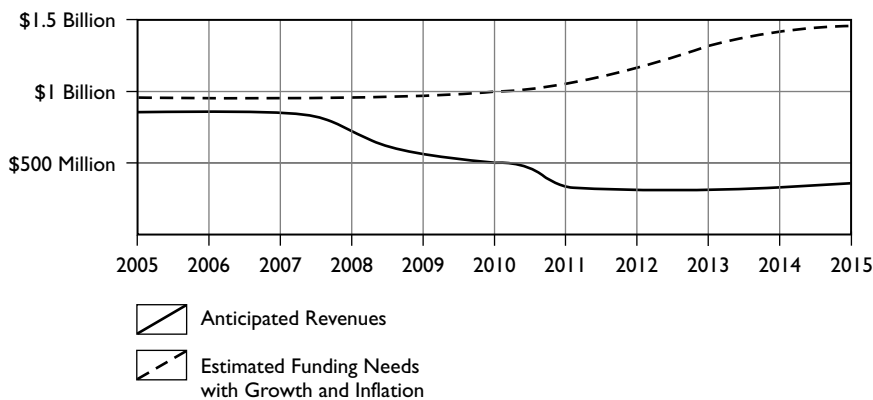
**TRANSPORTATION FRAMEWORK PLAN: STREETS**

Source: Adapted from City of Grand Rapids, Michigan, 2002, Plan for Grand Rapids.

about where trips are generated and attracted, how trips are distributed, the likely choice of modes, and the routes to be traveled in order to predict the future volume of use.

In cases when regional models either are not available or may not be appropriate, such as when small changes in the transportation network need to be analyzed for a specific site, traffic simulation models are used. Traffic simulation models can be valuable not only in determining future conditions and level of service, but also in identifying appropriate mitigation

measures such as changes in signal timing or additional street improvements to address degradation of capacity. A number of software packages are commercially available, and the models are typically developed and applied by the project sponsor on a case-by-case basis to address specific project needs. Irrespective of the type of modeling tools and processes applied, priorities should be based upon the results of the technical analysis, overlaid with the opinions of the public and agencies participating in plan development.



**NEEDS VERSUS FUNDING FOR TRANSPORTATION INFRASTRUCTURE**

Source: Diana C. Mendes, AICP.

**Develop, Evaluate, and Select Potential Solutions**

Following a clear understanding of and agreement on priorities, alternative scenarios or solutions can be defined and developed. These scenarios consist of adjustments to the transportation system based on changes to services or investments in new programs or infrastructure. While planners may evaluate each of the transportation modes (e.g., rail, air, auto) addressed in the plan independently, the results of this initial assessment can be used ultimately to develop and to test potential combinations of investment among different modes to best meet needs.

It is during this iterative process that alternative solutions can be evaluated and compared based upon their performance and effectiveness in achieving stated goals and objectives and meeting needs. To assist elected officials, community leaders, and the public in making decisions among alternatives, planners need to explain and document the potential benefits and impacts, and the trade-offs of each alternative. They need to pay special attention to which populations benefit from a particular set of actions versus which may experience adverse impacts to anticipate support for and resistance to the plan.

**Prepare and Adopt the Plan**

The plan should document the public decision-making process and provide the technical rationale for its conclusions. It should also describe future implementation of proposed programs and improvements, including a clear delineation of action to be taken, the sequencing of improvements, responsibility for implementation, and cost.

A brief executive summary of the plan should be prepared for the public. Because transportation plans can be quite technical, the summary should be written for the lay reader. Adoption of the plan should follow a public review process that includes a number of public outreach activities, including formal hearings. During the project review process, it may be necessary to revise the plan. Particular attention should be paid to the financial element of the plan in terms of cost, revenues, shortfalls, and options for using current and potential new sources.

**Implement, Monitor, and Evaluate Plan Performance**

Plan implementation requires clear direction on responsibilities, schedule, and funding. Successful plan implementation also depends on ongoing monitoring and performance evaluation. This systematic, regular assessment of the effectiveness of implemented actions should provide the foundation for the evaluation phase of the next planning cycle. The performance measures should be the same as or a subset of the evaluation criteria used to assess and select the adopted plan.

**See also:**

- Air Quality*
- Comprehensive Plans*
- Environmental Impact Assessment*
- Federal Legislation*
- Participation
- Transportation

## HOUSING PLANS

More than 70 years ago planning pioneer Patrick Abercrombie (1933) wrote, “The subject of housing enters into planning continuously, whether under the heading of density, of the living conditions of the population, of slum clearance or suburban growth.” Those same issues remain central to the planning process today. To address them, jurisdictions with the authority to prepare and implement housing plans are increasingly likely to prepare and adopt housing plans or housing strategies, either as a part of their comprehensive plan, or as a separate freestanding document.

### REASONS TO PREPARE A HOUSING PLAN

Municipalities have many different reasons for preparing housing plans.

#### To Address Legal Requirements

Some states require a housing plan as part of the municipal comprehensive plan or master plan. Washington State, for example, mandates a housing element, which must “make adequate provision for existing and projected needs of all economic segments of the community” (Laws of State of Washington, RCW 36.70A.070(2)). Other states, including California and New Jersey, require that the municipality address its fair share of regional housing need, as defined by a state or regional agency. Municipalities that receive HUD Community Development Block Grant or HOME funds must prepare a Consolidated Plan, which delineates the municipality’s overall housing needs and strategy and shows how their federal funds will be used.

#### To Address Affordable Housing Needs

Even with no formal legal requirement, many municipalities undertake housing plans when they recognize that rising housing costs or loss of existing housing units is making the community unaffordable to many of its present and prospective residents. As described in the Cary, North Carolina, affordable housing plan, when the town realized that the “escalating price of housing was excluding many people from living within the city limits...including Town staff, policemen, teachers, retail clerks, and service people,” it adopted an affordable housing plan, which included a detailed action-oriented “affordable housing tool kit.”

#### To Encourage Economic and Social Integration, and to Build Stronger Neighborhoods

Affluent suburbs may develop affordable housing plans to ensure that less affluent people can continue to live in, or move into, the community. At the same time, many older urban centers—for example, Baltimore and Norfolk—have begun to develop housing strategies designed to expand their economic diversity by attracting middle- and upper-income residents into their neighborhoods and downtowns. Such strategies can be citywide or can focus on creating economic diversity in a specific neighborhood, such as Fall Creek Place in Indianapolis. HUD’s HOPE VI and Homeownership Zone programs have funded effective neighborhood-oriented housing strategies.

### FORMS OF MUNICIPAL HOUSING PLANS

The form that a municipal housing plan takes flows from the reason it is being prepared. Where a housing element is part of a comprehensive plan, its features will usually be spelled out in the state planning statute. These typically include inventories, need assessments, and goal statements, as well as action plans. The New Jersey Fair Housing Act describes the contents of a fair-share plan, including “a consideration of the lands that are most appropriate for construction of low and moderate income housing and of the existing structures most appropriate for conversion to, or rehabilitation for, low and moderate income housing...” (New Jersey Statutes 52:27D-310(f)). Washington State requires each city or county to identify “sufficient land for housing, including but not limited to government-assisted housing, housing for low-income families, manufactured housing, multifamily housing, and group homes and foster care facilities.”

A municipality is driven to prepare a plan for internal reasons, such as the need for more affordable housing, but the scope of the plan may vary widely. Recognizing that housing needs far exceeded the community’s ability to address them, the Stamford, Connecticut, Affordable Housing Strategy concentrated on a detailed strategy to assemble land and financial resources for affordable housing.

Housing strategies in communities seeking to attract middle- and upper-income residents tend to focus much more on the real estate *market*, rather than on housing *needs*. These plans may include identifying potential target markets, such as empty-nesters or young professionals, focusing on how to attract them into the city’s housing market, whether by developing new housing oriented to their preferences or by highlighting particular features of the city’s existing housing stock.

A housing plan is fundamentally a *strategic action* plan, which emphasizes those parts of the housing market unlikely to be adequately reached by the private market unaided by public intervention. The

assessment of conditions and analysis of trends is not an end in itself but should be designed to lead to specific strategies and programs designed to achieve the community’s housing goals.

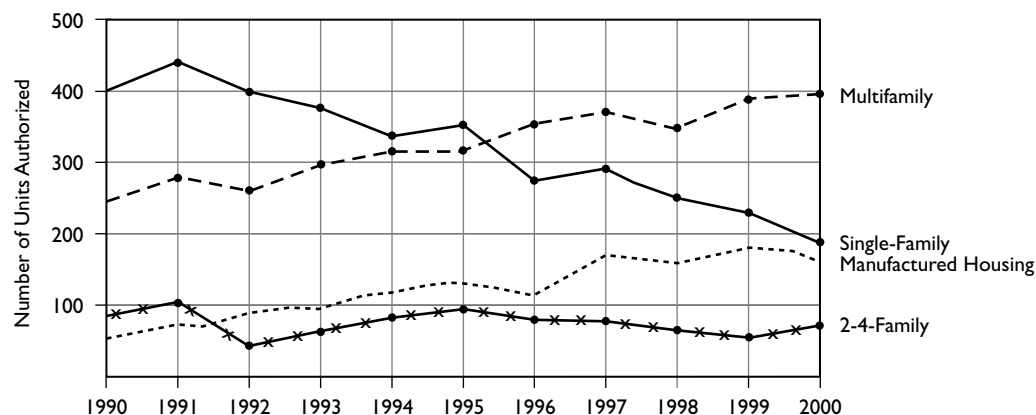
### MUNICIPAL HOUSING PLAN ELEMENTS

Although housing plans vary widely, a series of elements are common to most plans. As noted, in some cases, state law will mandate that certain elements be included, while in others local officials and community stakeholders must determine which are most relevant to local concerns.

#### An Inventory of Existing Conditions and Trends

In order to understand existing housing conditions in the municipality, most plans begin with an inventory, including the distribution of housing in the community by cost and by type (for example, single-family, two-family, or multifamily housing), for both owner-occupied and rental housing. It should also identify specialized housing types, such as manufactured housing or single-room occupancy (SRO) housing. It should both provide a profile of current housing conditions and analyze trends to determine how those conditions are changing—increases in house prices, for example, or movement from ownership or rental, or vice versa, in the housing stock.

Regional conditions and trends should also be presented, to show how the municipality relates to the larger regional context. Job growth trends, important as an indicator of potential housing needs, should also be measured. Information on substandard or abandoned housing should be included where sound data is available. Census data should be used as a starting point, but, particularly as the end of each decade approaches, it must be supplemented by other data sources. A property information system, as has been developed in many cities (e.g., Los Angeles or Minneapolis), can be used to identify buildings at risk of abandonment by tracking code violations, tax arrearages, and crime complaints.



HOUSING PRODUCTION TRENDS BY TYPE, 1990–2000

Source: Alan Mallach.

### Housing Need Analysis

Most housing plans are designed to focus primarily on affordable housing. Affordable housing is defined differently in different jurisdictions. In New Jersey, it refers to households earning no more than 80 percent of the regional median income, while elsewhere it may include households earning as much as 120 percent of regional median or as little as 50 percent. At present, households earning less than 50 percent of regional median income are most likely to have deficient housing conditions and are least likely to see their housing needs addressed by the private market.

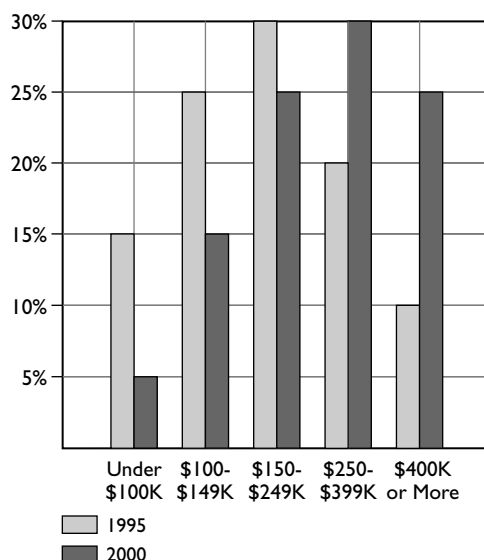
The housing plan should attempt to quantify housing needs wherever possible, using census data to identify the number of households living in overcrowded housing or suffering undue cost burdens in the community. Where feasible, a community survey should be used to identify households living in substandard housing. The sum of these needs is often referred to as the community's present, or indigenous, housing need.

Prospective affordable housing needs are those of low- and moderate-income households who should have the opportunity to move into the community in the future. This is where the fair-share principle becomes most relevant since, by definition, a substantial percentage of all new households are low and moderate income. Since "low and moderate income" is defined relative to regional median income rather than as a set dollar amount, it will represent a consistent share of all households over time, with the share depending on where the cutoff is placed. Where low and moderate income is defined as 80 percent of regional median, roughly 40 percent of all households will fall below that line. Where it is defined as 50 percent of regional median, it will include roughly 25 percent of all households. (See table.) A fair-share plan, or regional fair-share allocation, identifies the share of the region's household growth that should appropriately be accommodated within the municipality and defines how housing for those households will be provided.

See *Housing Needs Assessment* elsewhere in this book for more detail on conducting such a study.

### Market Analysis

Understanding the workings of the housing market, at the regional level and within the municipality—and in large municipalities, within individual neighborhoods—is a critical step toward framing effective, achievable goals and strategies, and determining realistic targets. Enacting a successful inclusionary program, for example, requires an understanding of



**DISTRIBUTION OF HOUSE SALE PRICES, 1995 AND 2000**

Source: Alan Mallach.

how the market will respond to incentives, such as density bonuses, or the extent to which market prices will support internal subsidies. In an older city, the market analysis may be used to identify those households that may be attracted to redeveloping neighborhoods or downtown loft districts.

### Goals and Targets

A strategic plan must be grounded in a body of clear goals and, to the extent feasible, realizable targets. Goals should be well focused, such as those in Denver's 1999 housing plan, listed here:

- Reduce the regulatory costs of housing.
- Expand the resources available for housing programs and services.
- Preserve the existing housing stock.
- Address the needs of low-income and special-needs populations.
- Attract and retain middle-income families.
- Undertake housing efforts to support economic development strategies.

Each of these goals is expressed in a way that can easily be translated into specific strategies and action programs.

### Strategy Analysis

A vast number of potential housing strategies are available. Before settling on the specific strategies to pursue, a valuable part of the planning process is to conduct a strategy analysis to evaluate the available options to determine which are most likely to respond effectively to the community's conditions. The strategy analysis should look at removing impediments and establishing affirmative steps to reach affordable or other housing goals. Systems—including barriers created by the town's own regulations and administrative procedures—that affect the affordability or availability of housing should be examined, as should the means and resources the town can use to affirmatively promote its housing goals. Each strategy should be assessed with respect to its potential impact if implemented and the relative ease or difficulty of implementing the strategy.

### Implementation Plan

The worth of a housing plan ultimately depends on its implementation. The implementation plan should begin with a description of the strategies and programs the town has selected to carry its goals forward. It should follow with specific information about how each strategy will be carried out, including:

- the financial resources that will be assembled;
- the sites, buildings, or target areas that will be the focus of the strategy;
- the design and planning standards to be followed;
- the key players or participants in implementing the strategy;
- identification of entities responsible for implementing each part of the strategy; and
- specific targets and timetables for each strategy or program.

The implementation plan should be *specific*. It should identify both specific areas to be rezoned and the specific standards that will ensure that the sites will be used as intended. It should include an assessment of the municipal, state, federal and private funds realistically available to carry out the plan.

Some productive implementation strategies municipalities use include:

- rezoning of areas for higher density;
- inclusionary zoning;
- creating infill opportunities;
- creating opportunities for specialized housing types, such as accessory apartments, SRO housing, or group homes;
- incentives for housing preservation and rehabilitation, including adaptive reuse projects;
- assembly strategies and land banking;
- removing regulatory barriers, including creating simpler and expedited approval procedures;
- financial assistance to developers of affordable housing; and
- housing trust funds.

Some housing strategies can be carried out within the existing structure of town or city government, but others will entail new responsibilities and may require new managerial entities or partnerships to carry them out. Partnerships with community development corporations, developers, employers, and others are critical. Few, if any, towns or cities are capable of implementing a housing strategy without strong private sector partners.

### DISTRIBUTION OF HOUSEHOLDS AND RENTAL UNITS BY INCOME AND AFFORDABILITY

CATEGORY	MAXIMUM INCOME	MAXIMUM AFFORDABLE RENT	PERCENT OF ALL HOUSEHOLDS IN COUNTY	PERCENT OF RENTAL UNITS AT/BELOW AFFORDABLE RENT
Low income (<50% of median)	\$25,000	\$625/month	25%	3%
Moderate income (<80% of median)	\$40,000	\$1,000/month	40%	32%
Middle income (<120% of median)	\$60,000	\$1,500/month	60%	74%
Countywide Median Income	\$50,000			
Countywide Median Rent		\$1,200/month		

Source: Alan Mallach.

## KEY AND EMERGING ISSUES

Housing is a complex, multidimensional subject, both in itself and in its relationship to other planning and development issues. Changes in economic conditions and housing needs, as well as new thinking about how best to plan towns and cities, have led to the emergence of a series of important issues, many arising from smart growth principles, that a community's housing plan should address.

### Integrating Housing with Other Planning Activities

As planning moves away from a history of separated uses and disconnected plans to a more holistic view of a community, the importance of linking housing with other uses and other planning processes has become apparent. The recognition of the advantages of mixed-use development, in which housing and nonresidential uses complement each other, as well as recognition of the links between housing and open-space or major community facilities, such as schools, are important considerations for building stronger, healthier communities. The creation of transit-oriented development, for example, which combines housing and other uses around transit hubs, is but one of many such available strategies.

### Housing and Jobs

The extent to which a community provides housing opportunities for a diverse workforce is not just a matter of creating a more balanced community; it is

essential for the community's economic vitality. Housing plans should not only evaluate the community's economic base and job growth as a basis for planning future housing, but should also actively explore opportunities for direct linkages between major employers and workforce housing strategies.

### Preservation

Housing plans are not only about what should be built in the future, but also about how to preserve what already exists. Housing strategies are a key element in preserving the fabric of existing neighborhoods and historic areas, particularly with respect to affordable housing. As the loss of the affordable housing stock, either through disinvestment or through price appreciation, becomes a critical issue in many communities, housing strategies must incorporate activities to preserve that stock as well as produce new affordable housing.

### Downtown and Neighborhood Revitalization

Housing development grounded in market-building strategies has turned out to be one of the most powerful tools available to urban centers to spur reinvestment and revitalization in their downtowns and older residential neighborhoods. Cities such as Cleveland and Baltimore have reinvented their downtowns by drawing upon the regional pool of young professionals and empty-nesters, while attracting a diverse body of homebuyers to buy and rehabilitate homes in the city's neighborhoods. Strategies designed

to maximize private sector reinvestment and revitalization activities are important parts of the housing plans of the many cities and towns seeking to rebuild.

### Resolving Conflicts over Affordable Housing

Certainly, any development is potentially controversial, but few areas are as likely to trigger conflict as affordable housing. Despite widespread public support for meeting housing needs in general, a specific affordable housing proposal will often become a lightning rod for a variety of community concerns. Indeed, even the term "affordable housing" can become a matter of contention, prompting some advocates to refer to their efforts as "workforce housing" or "affordable homeownership." The framers of an affordable housing plan must recognize the reality and depth of community concerns, and incorporate into the planning process a method for building support and, to the extent possible, consensus around the plan's specific strategies, beginning well before the plans are finalized.

## REFERENCE

Abercrombie, Patrick. 1933. *Town and Country Planning*. New York, NY: Henry Holt & Co.

### See also:

*Federal Legislation*  
*Housing Needs Assessment*  
*Neighborhoods*  
*Residential Types*



## ECONOMIC DEVELOPMENT PLANS

An economic development plan guides a local or regional effort to stimulate economic growth and to preserve existing jobs. Economic development may also be aimed at ensuring increases in real wages, stabilization or increase of the local tax base, and job diversification—making the community or region less dependent on a few employers and thus insulating it from economic downturns in specific industries.

In most places economic development has broadened from job creation and retention and provision of land and infrastructure for business to promotion of prosperity and quality of life—the idea that with economic growth should come broader societal well-being. Thus, economic development is increasingly linked with education, culture, affordable housing, and preservation of the environment.

### REASONS TO PREPARE AN ECONOMIC DEVELOPMENT PLAN

A number of factors typically prompt a local or regional economic planning effort. They include the following:

- Loss of a major employer or the attraction of a new employer
- Competition from surrounding communities or regions
- Belief that the community should take an active role in promoting itself
- A desire to provide employment for existing residents
- Economic stagnation or decline in a community, or part of it
- Need for new tax revenues, especially to finance the concurrent costs of residential growth

Economic development efforts may also simply reflect an innate entrepreneurial spirit, a desire to experiment and to grow.

### APPROACHES TO THE PLAN

All economic development plans should include a series of background studies intended to identify the strengths and weaknesses of the community or the region and make some assessments about the type and extent of desired economic growth. If the analysis is for a community, the larger frame of reference should be the region. If the analysis is for the region, the state or a substantial subregion of it should be the context. Trends that dominate the larger unit of analysis will in some way affect the subunit.

The planners preparing the plan should seek out or conduct background studies of a number of economic factors, especially the following:

- Economic base and shift-and-share analyses
- Job composition and growth or decline by industry sector on a national, statewide, or regional basis
- Tax structure of the community
- Existing labor force characteristics and future labor force requirements of existing and potential commercial and industrial enterprises in the state or region
- Locational characteristics of the community or

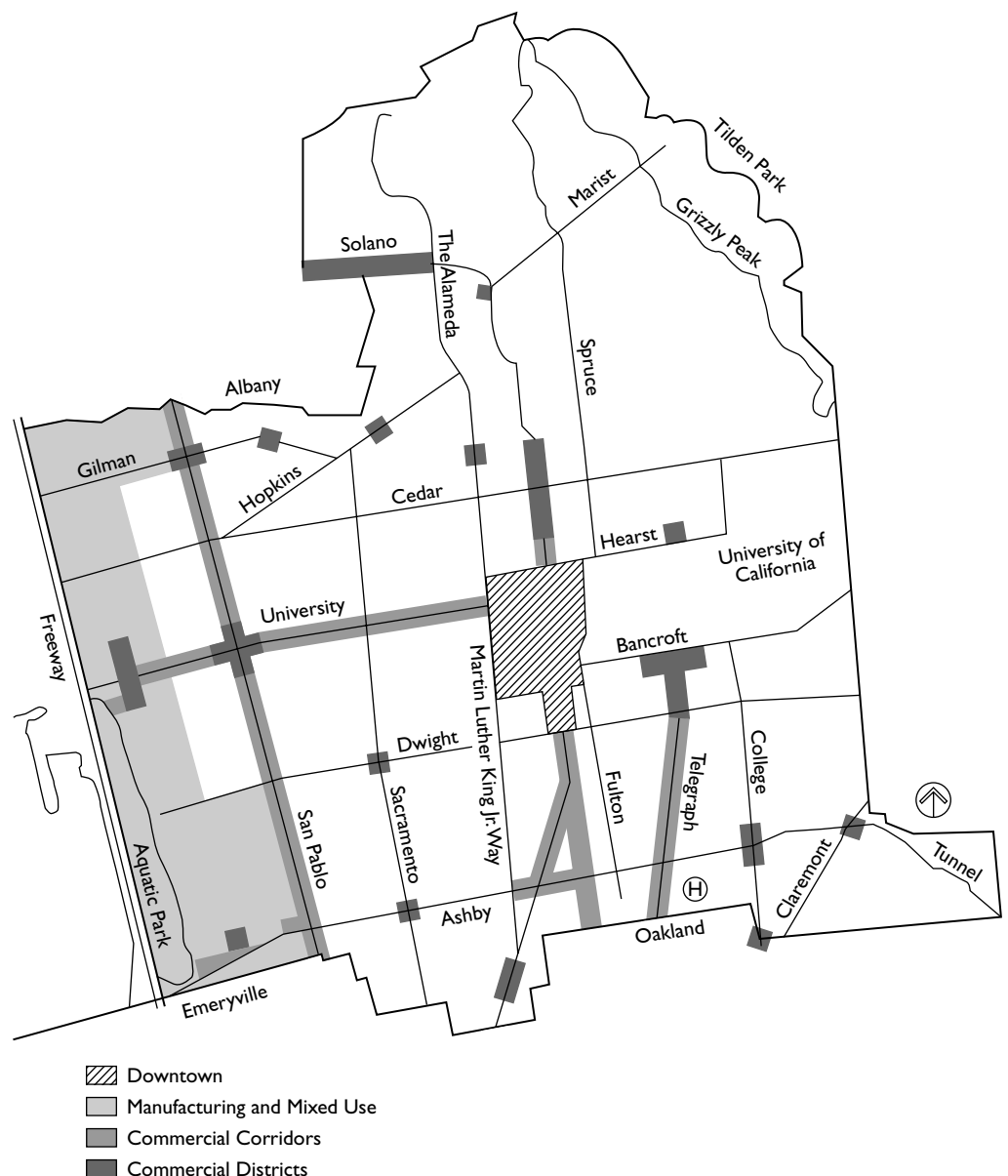
region from the standpoint of access to markets for its goods and services

- Patterns of private investment or disinvestments
- Commercial, industrial, and institutional lands within the community that are vacant, significantly unused, or environmentally contaminated
- Projected employment growth by industrial sector for the state or region
- Regulations and permitting procedures imposed by the local government on commercial and industrial enterprises and their effects on the costs of doing business
- Existing businesses
- Quality of life and lifestyle

### PLAN COMPONENTS

An economic development plan will use these background studies and data to draw inferences about the strengths and weaknesses of the regional economy of which the community is part. From that analysis the local government can begin to define goals, policies, and guidelines for economic development. This analysis should, at a minimum, reveal the following:

- The community's role and responsibilities in the region's economy
- Categories or particular types of commercial, industrial, and institutional uses desired by the community



### COMMERCIAL AND INDUSTRIAL EMPLOYMENT AREAS, BERKELEY, CALIFORNIA

Source: Berkeley, California, General Plan, 2003.

- The adequate number of sites of suitable sizes, types, and locations for such uses
- The community facilities that should be included in the community facilities element of the local comprehensive plan to support the economic development plan

The economic development plan may also include goals, policies, and guidelines to maintain existing

categories, types, or levels of commercial, industrial, and institutional uses.

**RELATED ACTIONS**

**Housing for Employees**

Providing housing to accommodate new employees is an important part of economic development. The economic development plan must be closely coordi-

nated with the housing plan and its implementation to provide reasonable opportunities for new employees to obtain housing. If that is not done, the local government will effectively export the need for housing and its associated costs to other nearby communities. The local government should take aggressive steps to ensure that sufficient housing is available for the expected or desired type of businesses and job growth.

**Public/Private Coordination**

In some cases, the economic development plan will involve the orchestration of a number of public and private actors to bring about economic change in a certain part of the local jurisdiction. For example, a community may decide to attract conventions. Thus, a convention and tourism authority may need to be established and funded, a convention center built, hotels and restaurants enticed to locate nearby, and transportation improvements of various types (some the responsibility of the state, others of the county) built.

**IMPLEMENTATION**

Implementation of the goals and objectives of an economic development plan can involve several actions:

- Setting aside or making available, through clearance and land assembly, land for business and industry through zoning, environmental remediation of contaminated sites, urban renewal, and other techniques for land assembly
- Underwriting risks through grants, loans, and tax abatement
- Providing amenities and infrastructure through a variety of capital investments
- Creating an ongoing economic development financing, attraction, and promotion entity
- Focusing attention on other quality-of-life factors such as colleges and universities, local schools, and environmental, recreational, and cultural amenities
- Attracting “creatives”—painters, writers, sculptors, musicians—to encourage a diverse cultural scene
- Establishing a joint economic development zone
- Instituting job training and placement
- Refining local, regional, or state permitting procedures and regulations to make them friendlier to business
- Establishing programs that monitor the needs of existing businesses and institutions, to ensure their retention
- Adopting design guidelines for commercial, industrial, and institutional areas

Implementing actions or strategies will be scheduled, with responsibility assigned to different actors or institutions, and costs estimated. An economic development plan should assume the private sector may need to take certain actions, either on its own or through formal public-private partnerships. Moreover, such a plan may contain measurable benchmarks in terms of job growth or retention, desired levels of private investment, and changes in real wages.

**See also:**  
*Housing Plans*

**ECONOMIC DEVELOPMENT STRATEGIES: DIRECT BUSINESS ASSISTANCE—PROJECTS**

PROJECTS	LOCATION FACTOR ADDRESSED	PROS	CONS
Land or building purchase and assembly	• Land availability and cost	• Puts ownership of key property in hands of public job-creating authority. • Overcomes fragmented ownership and scarcity of large developable sites.	• Risk of holding undesirable property • Expensive
Industrial park creation	• Land availability and cost • Access to markets	• Prepares land for development. • Designed for multiple users and many jobs.	• Land can remain vacant and underused while waiting for desired firms.
Business accelerator (incubator)	• Land availability and cost • Workforce • Business formation	• Focuses on job creation. • Nurtures companies of the future.	• High initial costs for space and program management. • Need to have management expertise to provide technical assistance. • Small businesses do not lead to employment and tax base growth immediately.

*Evaluation of the pros and cons of a discrete set of strategies and the locational factors they address as a way of sorting through actions for an economic development plan.*

*Source: ECONorthwest, Eugene, Oregon, 2003.*

**EXCERPT FROM WASHINGTON COUNTY, UTAH, STRATEGIC PLAN**

**I. RETAIN AND EXPAND BUSINESS**

Goals	Measure of Success	Critical Strategies	Implementation Agent
Retain and expand existing businesses with the County that are consistent with the core economic values.	Employment in existing County businesses will expand by 5% per year.	1.1 Facilitate incentive program for existing businesses equivalent to what is offered to new businesses. 1.2 Increase the education and training opportunities of the existing workforce to prepare employees to better meet customer needs. 1.3 Provide an outreach effort to directly contact and assist existing businesses. 1.4 Develop and provide financing packages to assist in financing growth of existing businesses. 1.5 Facilitate conflict resolution between businesses and government.	[Omitted]

*A series of goals and strategies that Washington County, Utah, has established for ensuring the retention and expansion of local businesses.*

*Source: Washington County, Utah, 2003.*

**SELECTED GOALS AND BENCHMARKS IN THE WASHINGTON COUNTY, UTAH, STRATEGIC ECONOMIC DEVELOPMENT PLAN**

GOALS	MEASURE OF SUCCESS
Diversify and strengthen our economy and increase our wage scale by attracting value-added business.	Locate 750 new value-added jobs within the next five years.  Increase the per capita wage of the county to the level of the Utah State average.
Develop improved industrial sites, which are affordable and attractive to new and expanding value-added businesses.	Monitor the industrial market to ensure that at least 100,000 square feet of industrial high cube inventory is available.
Encourage the construction of spec buildings for use by value-added companies.	Maintain sufficient fully developed land and available building space to service existing and new value-added business.
Expand existing infrastructure to maintain and improve service levels.	Increase private and public funding for key infrastructure and services by 25% over the next five years.
Increase the county's economic development capability such that it fully utilizes the strengths and resources of both the public and private sectors.	Fully fund economic development organization with sufficient cash reserves.
Increase the advanced degree, technical, and professional skills training provided within the county through Dixie State College of Utah and Dixie Applied Technology Center.	Annually increase the number of courses available for advanced technical skills training.

*Benchmarks that Washington County has set for monitoring success for the plan's goals.*

*Source: Washington County, Utah, 2003.*

## PARKS AND OPEN-SPACE PLANS

A parks and open-space plan outlines a systematic approach to providing parks and recreation services to a community. Parks and open-space resources within a community include environmental, recreational, scenic, cultural, historic, and urban design elements. Planning for parks and open space takes place at national, state, and local levels.

### REASONS TO PREPARE A PARKS AND OPEN-SPACE PLAN

Jan Gehl (1987), the Danish urbanist and architect, states, “The proper hierarchy of planning is life, space, and buildings, not buildings, space, life.” Therefore, communities need to plan for open spaces that provide a multitude of public functions before development occurs. These functions are numerous and may include:

- protection of natural resources and biodiversity;
- creation of places for recreation;
- support for economic development opportunities;
- development of neighborhood gathering places;
- promotion of public health benefits;
- creation of civic and cultural infrastructure; and
- shaping patterns of development through open spaces.

### APPROACHES TO THE PLAN

Many forms of park and open-space systems exist. Some communities have an interconnected system, linked by green corridors, while others have a disconnected system scattered throughout the neighborhoods of a community. Communities that are largely built out have new parks and open-space opportunities created primarily from redevelopment; communities with available land should concentrate on identifying and protecting park space in areas *before* development occurs.

Whatever the park system configuration, park and open-space plans are influenced by the following factors:

- Agency or departmental mandate and mission
- Parks and open-space definition
- Park classifications
- Parks standards
- Development and management policies

#### Agency or Departmental Mandate and Mission

The organization with authority over parks planning may need to meet the statutory requirements for the plan’s contents. The mission should be reaffirmed at the beginning of the planning process and explicitly stated in the beginning of the plan document.

#### Definition of Parks and Open Space

Communities often have different definitions of what constitutes a park. The definition may list specific resources, such as plazas, greenways, and even cemeteries. Some communities may use a broader approach, defining open space as “any land that is free of residential, institutional, commercial, or industrial use”; and others may restrict the defini-

tion to include only conservation areas protected by law. Planners should define terms at the outset because they will influence demand and supply inventories.

#### Park Classifications

A park classification system is a way of creating order to and providing a common language for the park and open-space system. Park types are often arranged by service area, size, population served, and typical facilities. Park classifications may also address functions, such as serving recreation, social gathering, and green infrastructure functions.

#### Parks Standards

To quantify their demand for park space and facilities, in addition to a variety of public participation activities, many communities use a set of national park standards developed in the 1970s and 1980s by the National Recreation and Park Association (NRPA). However, in 1996, NRPA replaced those standards with a locally determined set of facility guidelines, following its publication, *Park, Recreation, Open Space and Greenway Guidelines*. Communities should complete a level-of-service (LOS) study to quantify the number of necessary recreational facilities to meet specific community needs as well as the minimum acreage to support those facilities. The LOS study and the standards that it produces are important tools in projecting the effect of residential growth on necessary facilities and space. This study is critical for both sound park planning and for addressing the rational nexus test in mandatory dedication and impact fee programs should there be legal challenge to those programs.

That said, LOS and assessment studies results reflect only the recreational facility function of the park spaces. They do not include other functions, such as resource conservation, cultural enrichment, or urban design. And though no LOS formula currently exists for those functions, it is important that a plan address them.

#### Policies

Both development and management policies can shape the park and open-space plan. For instance, if the department normally pursues nongovernmental organization partnerships for service delivery, the plan inventories and implementation strategies should reflect that.

### PLAN COMPONENTS

The majority of parks and open-space plans include the following elements. Consult applicable statutes and agency mandates to determine required plan components.

#### Goals and Objectives

Typical expressions of parks and open space goals and objectives consider the following:

- *Quantity*: Targeting a total percentage of the jurisdiction’s acreage to be set aside for parks, or protecting a total percentage of the land in any new development as open space

- *Proximity*: Locating a park within a certain number of blocks of every resident, or providing a facility within a specific driving time of every resident
- *Accessibility*: Assuring that parks are located to be physically accessible by foot, bicycle, or public transit, and visually accessible for the greater public
- *Distribution*: Arranging park locations to ensure balanced service across geographic areas
- *Equity*: Providing facilities and programs evenly across socioeconomic populations
- *Environmental protection*: Assuring the protection of specific natural resources
- *Coordination*: Combining park objectives with other functional or jurisdictional plans
- *Balance*: Offering a mix of places and activities throughout the system
- *Shaping*: Identifying ways that the open space will promote or contain growth
- *Sustainability*: Determining physical and financial methods to support the park and open-space system
- *Urban design*: Addressing the way the park or space relates to the structures around it
- *Connections*: Identifying places and ways to link parklands and associated resources

#### Legal Requirements

The plan should include a review of laws that might be applicable to the lands or facilities included in the plan. These typically include:

- federal, state, and local environmental protection regulations;
- federal, state, and local parkland preservation regulations;
- historic buildings and landscapes regulations; and
- the Americans with Disabilities Act (ADA) regulations

#### Supply Inventory

A park and open-space plan contains a set of inventories related to the park plan elements and functions. This includes a list of park sites, their size, the facilities and equipment at each site, the function each site serves, site photos, and an assessment of the condition of the site. In addition to sites typically considered part of the parks inventory, the following may be included:

- Endangered species habitats
- School sites with playgrounds
- Public and private golf courses
- Waterways and floodplains
- Vacant lots
- Trails
- Private recreational facilities (e.g., ice rinks, tennis clubs)
- Bike lanes on highways
- Historical sites
- Cemeteries
- Gravel mines
- Private campgrounds
- Scenic viewsheds
- Country clubs
- Boulevards

- Parks in concurrent and adjacent jurisdictions (including county, state, and national)
- Industrial park open space

**Demand Assessment**

Most demand assessments are a combination of general data, such as demographic trends or physiographic resources, and specific community information gleaned from public participation mechanisms. The needs assessment for parks and open spaces can be initially organized by function:

- Recreation function
- Conservation function
- Community shaping function

- Additional functions, such as public health, economic development, and green infrastructure.

See Parks, Recreation, and Open-Space Needs Assessment elsewhere in this book for more detail.

**Surpluses and Deficiencies Analysis**

A comparison of the demand and supply data yields a surpluses and deficiencies analysis. The results may be expressed in terms of acreage, facilities, or other forms dictated by the various functions of the system.

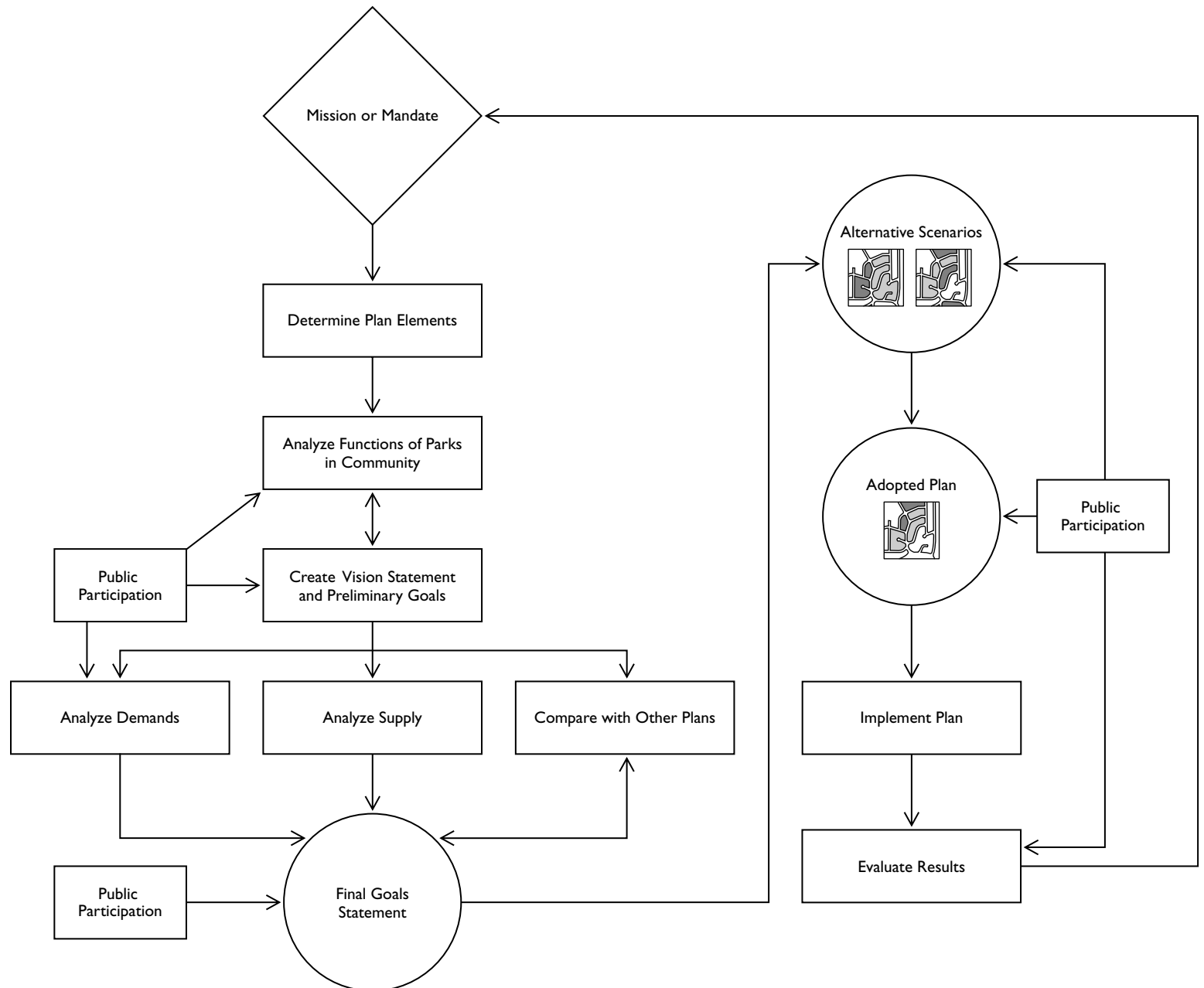
The analysis should also consider how other plans affect the park and open-space plan goals. Planners

should consult the comprehensive plan, other functional plans, neighborhood plans, and those of partner stakeholders to determine those effects.

**Alternatives and Draft Plan**

After completion of the surpluses and deficiencies analysis, planners should generate a number of plan alternatives to correct the deficiencies identified by the analysis. The scenarios should address the creation of new park areas, the renovation of existing park areas, the linking together of parks, and the required connections to other plans to achieve park and open-space goals.

Following further review and revision, the adopted plan should include:



**PARK PLANNING FLOWCHART**

Source: Mary Eysenbach.

- a prioritized list of land protection areas (future parks, green infrastructure);
- a prioritized list of improvements for existing park areas;
- a prioritized list of opportunities for linkages;
- a list of site selection and acquisition criteria;
- the identification of opportunities for integration with other plans and processes; and
- a map summarizing these items.

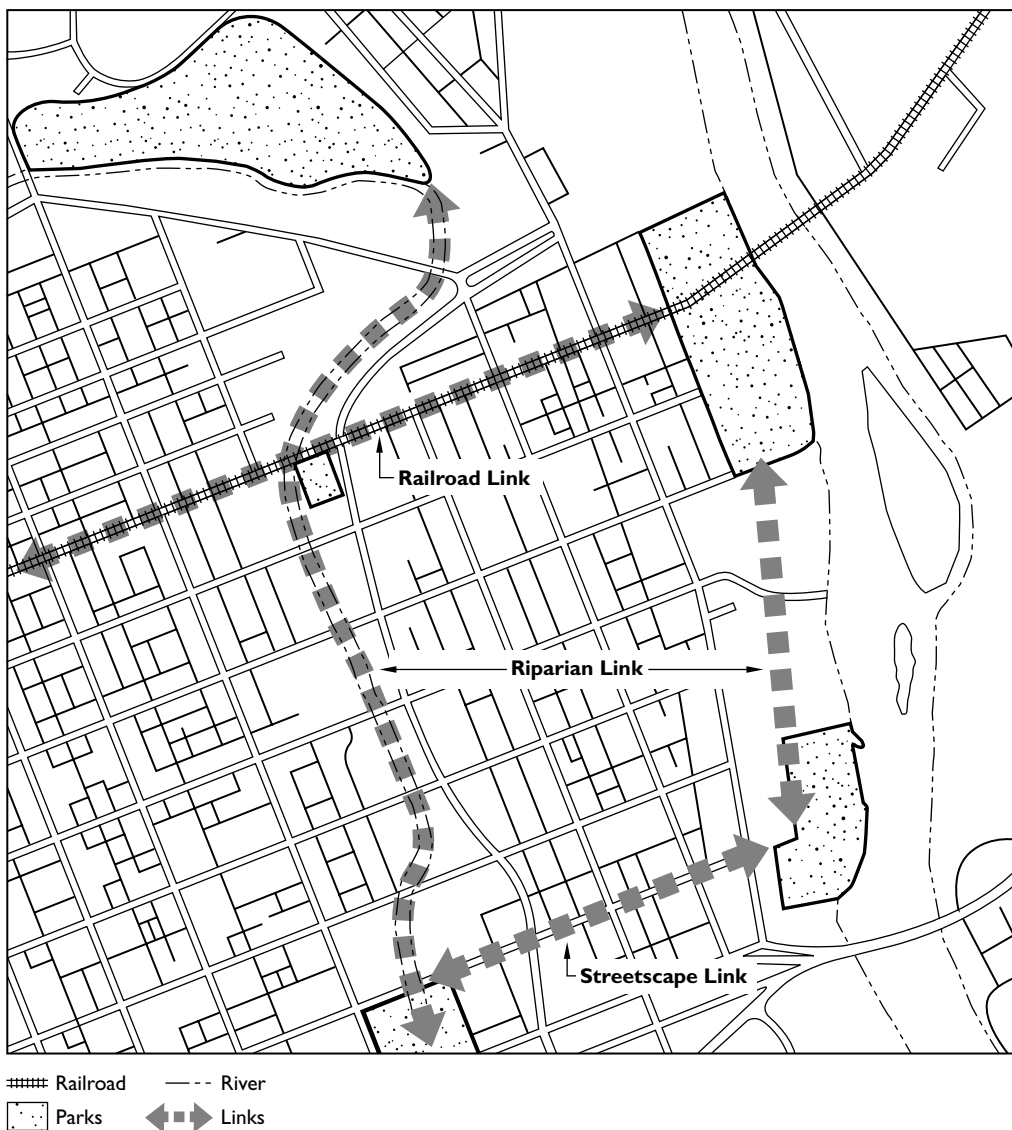
**IMPLEMENTATION**

For each objective in the plan, a park and open-space plan should have an implementation strategy that takes the following actions.

1. Identify what will be accomplished.

2. Identify the party responsible for accomplishing the goal.
3. Identify any partners involved in implementation.
4. Establish timing or phasing for achieving the goal.
5. Set cost estimates and identify funding sources for the goal.
6. Prepare maintenance and operational impact statements for new land or facilities.
7. Define methods for evaluating success and set a schedule for conducting the evaluation.

The parks and recreation plan should be updated at a regular time interval, preferably every five years. Although that frequency may outpace the schedule for the comprehensive plan, the need for identifying and preserving parks and open space is an urgent business, especially in rapidly urbanizing areas.



Open-space connections can be created with a variety of linear corridors.

**OPEN-SPACE CONNECTIONS**

Source: Mary Eysenbach.

**EMERGING ISSUES**

**Green Infrastructure**

Green infrastructure is a green space network of natural ecosystem functions. Instead of investing in man-made “gray” infrastructure, some communities are using their existing system or creating new parks as way to manage stormwater, reduce the urban heat island effect, and create wildlife habitat.

**Design Guidelines for Park Systems**

Some jurisdictions are producing design guidelines for parks. The guidelines help create an aesthetic and natural resource management standard for park development while visually connecting the park with its surroundings. They may address:

- park siting;
- pedestrian, vehicular, and transit access;
- utilities;
- site furnishings such as fencing, seating, and playground equipment;
- landscaping;
- building materials;
- signage; and
- environmental sustainability.

**Linkages**

Much like the park and parkway systems designed in the late nineteenth and early twentieth centuries, there is growing recognition that a good parks system is one where individual park nodes are connected by linear green corridors. Linkages may be achieved through riparian buffers, street design, transit paths, utility rights-of-way, or any other linear corridor.

**Special Use Parks**

A number of recent cultural and technological trends have created new demands on today’s park systems. These can include dog parks, skateboard parks, off-road vehicle (ORV) parks, mountain bike trails, water trails, parks designed to meet the needs of an aging population, and wireless technology availability in parks. Planners should conduct specific research to determine the planning needs of these types of parks and park functions.

**Partnerships**

An increasing number of communities are working with other governmental agencies, nonprofit agencies, and even private providers to create interconnected parks systems within their communities.

**REFERENCES**

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Mertes, James D., and James R. Hall. 1996. *Park, Recreation, Open Space and Greenway Guidelines*. Washington, DC: National Recreation and Park Association.

**See also:**

*Parks and Open-Space Plans*

*Parks, Recreation, and Open-Space Needs Assessment*

*Types of Parks*

## CRITICAL AND SENSITIVE AREAS PLANS

Critical and sensitive areas are generally defined as lands or water bodies that provide protection to or habitat for natural resources, living and nonliving, or are themselves natural resources that require identification and protection from inappropriate or excessive development. In some communities, critical and sensitive areas may also include historic structures or archaeological features. These latter elements are often protected by state and federal regulations.

### REASONS TO PREPARE A CRITICAL AND SENSITIVE AREAS PLAN

When acting to protect critical and sensitive areas, planners often have to make choices as to which resources should be protected and to what degree. These choices often include deeming some natural resources more or less “critical” and “sensitive” than others. The process of preparing a critical and sensitive areas plan or an element for a comprehensive plan provides a framework for identifying the resources, determining what will be protected, and identifying mechanisms for protecting them.

### PLAN COMPONENTS

The components of critical and sensitive areas plans typically include the following:

- Descriptions of the identified critical and sensitive resource areas
- GIS maps of critical and sensitive resource areas, based on field surveys
- An analysis of the carrying capacity of the resources identified or, if not known, mechanisms for determining the carrying capacity of each resource
- A description of the public involvement used to determine which resources are critical and sensitive and the level of degradation deemed acceptable for each
- Policies to protect the resources
- Implementation strategies

### APPROACHES TO THE PLAN

Whether you are preparing an element of a comprehensive plan or a separate plan, the same overall process applies, namely:

1. identify the resources;
2. evaluate their value;
3. determine their carrying capacity;
4. map the location of resources;
5. create policy to protect the resources; and
6. identify regulatory and nonregulatory tools to implement the plan and help ensure protection.

#### Identification of Resources

The first step in the analysis of critical and sensitive areas is the identification of these resources. APA's *Growing Smart<sup>SM</sup> Legislative Guidebook* identifies the following as resources that should be considered:

- Aquifers
- Watersheds
- Wellhead protection areas

- Inland and coastal wetlands
- Other wildlife habitats, including animals, birds, fish, and plants, along with habitats for federal- and state-listed endangered and threatened species
- Hillsides and steep slopes
- Any other areas considered to be critical or sensitive areas, including built resources such as historic structures, and, where relevant, the open spaces that accompany these built resources

Federal, state, and local government agencies, non-profit organizations, and the private sector preparing development applications for public review have also created sources that can be used to identify critical and sensitive areas.

For example, the U.S. Environmental Protection Agency (U.S. EPA) has mapped major aquifer systems throughout the nation. State agencies have mapped significant wildlife habitats and wellhead protection areas throughout their respective states. Local governments have often mapped wetlands, watersheds, and historic structures throughout their corporate boundaries. Developers seeking permits from federal, state, and local agencies often provide these agencies with details relating to critical and sensitive areas in pursuit of development permits.

#### Evaluation

After planners have identified these resources, they often evaluate the critical and sensitive areas according to the value they have to the community. There are three types of value:

- *Utility value.* How the resource is used by the community
- *Economic value.* How much dollar value the resource provides
- *Aesthetic value.* How the resource is valued for its qualitative importance, notwithstanding its economic value

For example, aquifers provide a utility value—drinking water for the community (if that is the drinking water source); an economic value—the price imposed by the water utility on water usage; and an aesthetic value—providing recharge to wetlands, surface water bodies, or coastal embayments (if a coastal community).

This placement of value on a resource, which may be difficult in some circumstances—how do you “value” a wildlife habitat?—nevertheless is an important step to undertake in determining what should be protected.

The protection of critical and sensitive areas has additional, obvious (albeit not always quantifiable) benefits. For instance, the regulations prohibiting construction within floodplains can benefit landowners by minimizing threats of flooding to real property; regulations limiting impervious coverage within watersheds can protect waters used for shellfishing; and regulations limiting the clear-cutting of forested lands can also protect abutting properties from erosion.

#### Carrying Capacity

Carrying capacity analysis determines the point at which a resource's function will be reduced to an

unacceptable level. (A resource's carrying capacity is often also referred to as its “assimilative capacity.”) Establishing the carrying capacity of a resource requires an objective analysis. The goal is to establish the point at which the resource ceases to function as nature “intended” or the point at which the resource be used as intended by the community (its utility value is undermined).

Carrying capacity analysis provides a factual basis for a community's comprehensive plan provisions that promote resource protection. In other words, through this analysis the community gives itself a rational and logical basis for the adoption of management controls designed to limit development to the assimilative capacity of a resource.

Federal and state environmental protection agencies (e.g., U.S. EPA and state counterparts), the U.S. Geological Survey, state and local universities, and nongovernmental environmental organizations are all reliable sources of information for completing a carrying capacity analysis.

#### Thresholds

Identifying carrying capacity first requires establishing thresholds for the resource (e.g., a coastal water body's assimilative capacity for nitrogen) and, second, the carrying capacity of the specific resource (e.g., the carrying capacity of the specific water body in California or Maine).

**General Resource Thresholds.** The federal government regulates many critical resources, and local governments can use these regulations as a basis for determining the resources' carrying capacity. For example, the federal Clean Air Act establishes maximum pollutant levels for air quality; the Safe Drinking Water Act establishes maximum contaminant levels for drinking water quality; and the Clean Water Act establishes maximum contaminant levels for coastal water quality. Similar thresholds are defined in state law.

**Specific Resource Thresholds.** Federal and state carrying capacity thresholds define the point at which the carrying capacity of the air, land, or water resources is threatened. They do not establish *if* the particular air, land, or water resource in the community will reach or exceed its assimilative capacity. A specific calculation for the specific resource at issue needs to be determined.

For example, while the quality of coastal water bodies begin to decline as nitrogen inputs increase—a result of the acceleration of the natural aging process (eutrophication)—the carrying capacity of such a water body in California can vary greatly compared to a coastal water body in Maine. This variation is a result of differences in water and air temperature, flushing cycles, depth of water, extent of the respective watersheds, and the presence of other contaminants in the water.

#### Maps

Planners should identify critical and sensitive areas on maps. Map makers should prepare these maps as overlays so that all resource areas can be identified individually (e.g., separate maps for watersheds, well-

**SAMPLE CARRYING CAPACITY THRESHOLD ASSESSMENT**

Nitrogen is a common water pollutant that can degrade water resources significantly. A carrying capacity threshold assessment can be used to determine the amount of nitrogen a water body can assimilate, thereby establishing a water quality standard. Data needed for this assessment include the surface area, volume, and flushing rate of the water body. A sample calculation follows:

where:

$$L = \text{Critical loading rate (lbs/yr)} = (TN \times V \times f) / 454,000 \text{ mg/lb}$$

A = Area  
d = Water depth (mean low water, or MLW)  
r = Average tidal range  
V = Bay volume at mean tide = (A)(d+r/2)  
f = Flushing rate (time per year)  
TN = Total nitrogen standard or threshold (mg/m<sup>3</sup>/R).

The equation can also be rearranged to calculate what the loading will be under a given development scenario:

$$TN \text{ (mg/m}^3\text{/yr)} = (L \times 454,000 \text{ mg/lb}) / (V \times f).$$

head protection areas, wetlands resources, and historic structures) and cumulatively (by overlaying the separate maps) as the aggregate critical and sensitive areas. Maps should be based on field surveys and prepared with a geographic information system (GIS). While there is no required scale for the maps, it is strongly recommended that the scale chosen be practical and useful. For example, a scale of 1 inch = 100 feet is far more useful than a scale of 1 inch = 2,000 feet, but will require a greater level of precision and cost more.

**Policies**

The plan should contain a statement of the local government's goals, policies, and guidelines with respect to the protection of critical and sensitive areas. This

portion of the plan may also include a map or maps showing the areas to be protected.

**IMPLEMENTATION****Regulatory Tools**

Zoning, subdivision controls, health regulations, and wetland regulations can all be used to protect critical and sensitive areas. Traditional regulatory tools include adopting overlay zoning districts for critical areas, requiring permits for uses that may negatively affect critical resource areas, adopting appropriate setbacks from resource areas, and employing related regulatory controls on private property. More innova-

tive regulatory tools include transfer of development rights, impact fees, development agreements, and mandates that development not exceed defined carrying capacity thresholds set for critical and sensitive resource areas.

**Nonregulatory Tools**

Nonregulatory tools include fee and less-than-fee acquisition of critical and sensitive resource areas; public education programs, to inform the general public about the importance of the resources; and related programs, such as citizen monitoring of water and air resources and consistent attendance at local municipal board meetings to act as "watch-dogs" and advocates for critical and sensitive resource areas. Nonregulatory tools have the advantage of avoiding the regulation of private property and the attendant potential negative political and legal consequences.

A community's capital improvement program provides an additional nonregulatory means to protect critical and sensitive resource areas. The outlay of local dollars to expand public water, sewer, and road access is a catalyst to new growth, and often conflicts with preserving these areas. Public improvements should not be built in critical and sensitive areas. The capital improvements plan and the comprehensive plan should both address such restrictions.

**REFERENCE**

Meck, Stuart ed. 2002. *Growing Smart<sup>SM</sup> Legislative Guidebook: Model Statutes for Planning and Management of Change*, 2 vols. Chicago: American Planning Association.

**See also:**

Environmental Planning and Management

# PARTICIPATION

## ROLE OF PARTICIPATION

Community participation is the involvement of people in the creation and management of their built and natural environments. Its strength is that it cuts across traditional professional boundaries and cultures. The activity of community participation is based on the principle that the built and natural environments work better if citizens are active and involved in its creation and management instead of being treated as passive consumers (Sanoff 2000).

The main purposes of participation are:

- to involve citizens in planning and design decision-making processes and, as a result, make it more likely they will work within established systems when seeking solutions to problems;
- to provide citizens with a voice in planning and decision making in order to improve plans, decisions, service delivery, and overall quality of the environment; and
- to promote a sense of community by bringing together people who share common goals.

Participation should be active and directed; those who become involved should experience a sense of achievement. Traditional planning procedures should be reexamined to ensure that participation achieves more than simply affirmation of the designer's or planner's intentions.

### CHARACTERISTICS OF PARTICIPATION

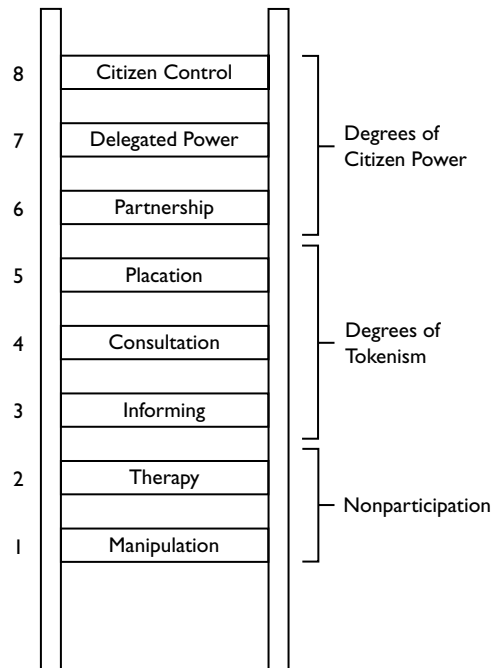
Although any given participation process does not automatically ensure success, it can be claimed that the process will minimize failure. Four essential characteristics of participation can be identified:

- Participation is inherently good.
- It is a source of wisdom and information about local conditions, needs, and attitudes, and thus improves the effectiveness of decision making.
- It is an inclusive and pluralistic approach by which fundamental human needs are fulfilled and user values reflected.
- It is a means of defending the interests of groups of people and of individuals, and a tool for satisfying their needs, which are often ignored and dominated by large organizations, institutions, and their bureaucracies.

Experiences in the participation process show that the main source of user satisfaction is not the degree to which a person's needs have been met, but the feeling of having influenced the decisions.

### CATEGORIES OF PARTICIPATION

Participation can be classified into four categories, or "experiences," with the goal of achieving agreement about what the future should bring (Burns 1979):



The ladder of citizen participation presents a typology of eight levels of participation. Each rung of the ladder corresponds to the degree to which stakeholders had power in determining the outcome. The gradations represented go from nonparticipation to token participation to various degrees of citizen power. While the ladder was conceived in the context of federal programs of the late 1960s, planners and urban designers today still should strive to ensure that they are working near the top of the ladder in their public participation activities.

### LADDER OF CITIZEN PARTICIPATION

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- **Awareness.** This experience involves discovering or rediscovering the realities of a given situation so that everyone who takes part in the process speaks the same language, which is based on their experiences in the field where change is proposed.
- **Perception.** This entails going from awareness of the situation to understanding it and its physical, social, cultural, and economic ramifications. It means sharing with each other so that the understanding, goals, and expectations of all participants become resources for planning and design.
- **Decision making.** This experience concentrates on working from awareness and perception to a plan for the situation under consideration. Here participants propose plans, based on their priorities, for professionals to use as resources to synthesize alternative and final plans.

- **Implementation.** Many community-based planning processes stop with awareness, perception, and decision making. This can have significant detrimental effects on a project because it ends people's responsibilities when the "how-to, where-to, when-to, and who-will-do-it" must be added to what people want and how it will look. People must stay involved throughout the processes and take responsibility with their professionals to see that there are results (Hurwitz 1975).

### DETERMINATION OF GOALS AND OBJECTIVES

The planning that accompanies the design of any participation program should first include a determination of participation goals and objectives. Participation goals will differ from time to time and from issue to issue. In addition, participation is likely to be perceived differently depending on the type of issue, people involved, and political setting in which it takes place. If differences in expectations and perception are not identified at the outset, and realistic goals are not made clear, the expectations of those involved in the participation program will likely not be met, and people will become disenchanted.

Related to this, to address participation effectively, the task should conceptualize what the objective is for involving citizens. For example, is the participation intended to:

- generate ideas?;
- identify attitudes?;
- disseminate information?;
- resolve some identified conflict?;
- measure opinions?;
- review a proposal?; or
- provide a forum to express general feelings?

### PLANNING FOR PARTICIPATION

Once planners have identified the overall goals and objectives for the participation process, planning for participation requires the following steps (Rosner 1978):

- Identify the individuals or groups that should be involved in the participation activity being planned.
- Decide where in the process the participants should be involved, from development to implementation to evaluation.
- Articulate the participation objectives in relation to all participants who will be involved.
- Identify and match alternative participation methods to objectives in terms of the resources available.
- Select an appropriate method to be used to achieve specific objectives.
- Implement chosen participation activities.
- Evaluate the implemented methods to see to what extent they achieved the desired goals and objectives.



**THEORY AND PRACTICE**

The theories and practices of participation can be synthesized into the following five statements:

*There is no "best" solution to design and planning problems.*

Each problem can have a number of solutions, based traditionally on two sets of criteria:

- **Facts.** The empirical data concerning material strengths, economics, building codes, and so forth
- **Attitudes.** Interpretation of the facts, the state of the art in any particular area, traditional and customary approaches, and value judgments.

*"Expert" decisions are not necessarily better than "lay" decisions.*

Given the facts with which to make decisions, citizens can examine the available alternatives and choose among them. In a participation process, planners and designers should work along with citizens to identify possible alternatives, discuss consequences of various alternatives, and state opinions about the alternatives (not decide among them).

*A planning task can be made transparent.*

Professionals often consider alternatives that are frameworks in their minds. They should be presented for users to discuss. After understanding the components of planning decisions and exploring alternatives, citizens in effect can generate their own plan rather

than react to one provided for them. The product is more likely to succeed because it is more responsive to the needs of the people who will use it.

*All individuals and interest groups should come together in an open forum.*

In this setting, people can openly express their opinions, make necessary compromises, and arrive at decisions acceptable to all concerned. By involving as many interests as possible, the product is strengthened by the wealth of input. In turn, learning more about itself strengthens the citizens' group.

*The process is continuous and ever changing.*

The product is not the end of the process. It must be managed, reevaluated, and adapted to changing needs. Those most directly involved with the product, the users, are best able to assume those tasks.

The professional's role is to facilitate the citizen group's ability to reach decisions through an easily understood process. Most often this will take the form of making people aware of alternatives. This role also includes helping people develop their resources in ways that will benefit themselves and others.

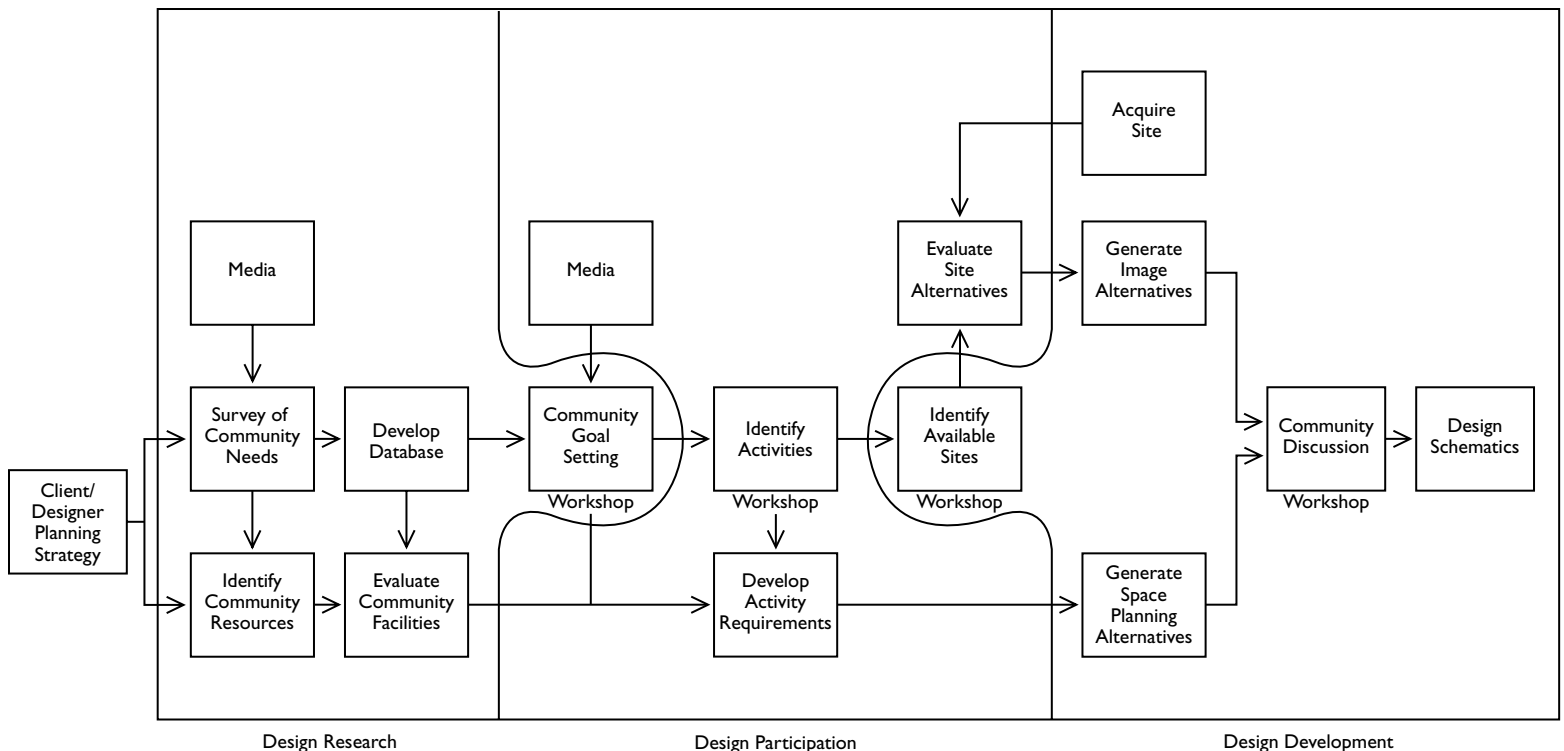
and learning, time commitments, and trust. To identify value and cost indicators of public involvement, they conducted interviews with people who had been involved in participatory projects. Combining the literature review, interviews, and expert judgment, they identified these key indicators of the value of participation:

- Opening the process to stakeholders
- Diversity of viewpoints
- Meaningful participation
- Integrating stakeholder concerns
- Information exchange
- Saving time
- Saving and avoiding costs
- Enhanced project acceptability
- Mutual learning
- Mutual respect

Lach and Hixson also developed direct and indirect cost indicators of the public involvement effort. Certain costs can be linked to traditional accounting practice, such as preparation and participation time, facilities, materials, and services. Other indirect costs, such as participants' time commitment, lack of opportunity to participate in other projects, and heavy emotional demands on participation, cannot be easily measured. The intent of their research was to develop prototype indicators to be tested in ongoing and completed public involvement programs. Results from project participants indicated that the positive aspects of their involvement were twofold: (1) a diversity of viewpoints in the participation process

**INDICATORS OF THE VALUE OF PARTICIPATION**

A review of the public involvement literature, conducted by Lach and Hixson (1998), revealed that participants valued such issues as public acceptability, accessibility, good decision making, education



**DESIGN RESEARCH, PARTICIPATION, AND DEVELOPMENT PROCESS**

Source: Henry Sanoff.

was valuable; (2) project savings occurred in the form of saving and of avoiding costs.

Informing a large audience about proposals, generating interest, or securing approval can take the form of a community meeting, also referred to as a public hearing or a public forum. Public meetings allow community leaders to present project information at any time during the process. The tight structure of such meetings does not, however, permit ample time for discussion. Although referred to as community participation, only the most aggressive personalities tend to participate and often dominate the discussion (Creighton 1994). Public reactions in open meetings are often taken by a vote through a show of hands. The key to making community design work effectively is to incorporate a range of techniques for enabling professionals and citizens to creatively collaborate, where voting is replaced by consensus decision making.

A wide range of techniques is available to designers and planners. Some of these techniques have become standard for use in participatory processes,

such as interactive group decision-making techniques that take place in workshops. At the same time, designers and planners have effectively used field techniques, such as questionnaires, interviewing, focus groups, and group mapping, to acquire information. In general, many of the techniques facilitate citizens' awareness of environmental situations and help activate their creative thinking. The techniques can be classified as *awareness methods*, *group interaction methods*, and *indirect methods*.

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### See also:

Plan Making

## STAKEHOLDER IDENTIFICATION

Stakeholder is a term commonly used in planning and public policy. A stakeholder is defined as someone with a “stake,” or interest, in the issues being addressed. In practice, this means anyone could be a stakeholder because a resident, taxpayer, and concerned citizen could all have an interest. Because the distinction between the public and stakeholders can be confusing, it is important to consider why stakeholders should be involved, and how they should be selected. People who convene a collaborative planning effort—conveners—need to plan this step carefully.

### CATEGORIES OF STAKEHOLDERS

Stakeholders can be broadly classified into four categories. First, there are people who are representative of a certain sector of society. This sector may be a broad category, such as farmers or homeowners, or it may be a specific category, such as “Orchard Street residents” and park users. These stakeholders usually speak for themselves. Conveners choose them because their views may be “typical” of other people in their sector or because they have personal knowledge. However, because these people cannot be asked to speak on behalf of people they do not formally represent, the involvement of this category of stakeholder is not a substitute for public involvement.

Second, there are individuals who represent organized interests, which can range from an informally organized neighborhood coalition to a formally organized nonprofit interest group. Such an individual is expected to represent the views of the organization. However, this requires the person to confer with others in his or her organization. This is often referred to as the “two-table” problem because the individual may have to negotiate at the stakeholder table and the decision-making table within his or her organization.

Third, there are those who represent government organizations, such as city departments and state

agencies. They must also work with both the stakeholder process and their organization’s process, but they tend to operate under more specific administrative rules and policies. Individuals higher in the organization may have more discretion, but they also tend to have more demands on their schedule.

### LIST OF POTENTIAL STAKEHOLDERS

#### SECTORS OF SOCIETY

People living adjacent to a proposed activity  
 Neighborhood residents  
 Residents  
 Landowners  
 Renters  
 Minorities  
 Users (park users, boaters, etc.)  
 Neighborhood business owners

#### INTEREST GROUPS

Chamber of commerce  
 Environmental groups  
 Racial or ethnic groups  
 Industry organizations  
 Religious organizations  
 Civic groups  
 Social groups (Kiwanis, Optimists)  
 Neighborhood associations

#### AGENCIES

Special districts (water, sewer, park, etc.)  
 School districts  
 Planning commission members  
 Local government (city manager, department head, staff)  
 Council of government  
 State agencies  
 Federal agencies

#### ELECTED OFFICIALS

City and county councilors  
 Mayors  
 School board members  
 State representatives and senators

Finally, there are elected officials who are formally voted upon as representatives. Their elected position gives them a unique status because they are accountable to the public for their decisions. However, like staff in government organizations, they often have many demands on their time. Furthermore, members of local government councils and legislatures cannot speak for the entire legislative body.

### REASONS FOR SELECTING STAKEHOLDERS

Before starting a stakeholder selection process, a con- verner needs to consider the reasons for selecting stakeholders, to determine the potential pool of partic- ipants.

#### Jurisdiction over an Issue

One common reason is to include people or organi- zations that have jurisdiction over an issue. This includes organizations with the power to make deci- sions as well as individuals with the power to veto decisions. For example, an open-space plan that involves city land, county parks, and state forests should include a representative from each jurisdiction.

#### Particular Information or Knowledge Base

Another reason for selecting a stakeholder is because he or she has information or knowledge that will lead to a comprehensive understanding of a problem or issue. A group composed of people with different training, different data, and different perspectives can develop a much more complete picture of an issue than if they each considered the issue individually. For example, information about watershed health may be spread among a range of different state agen- cies, local governments, and landowners.

#### Party to an Actual or Potential Conflict

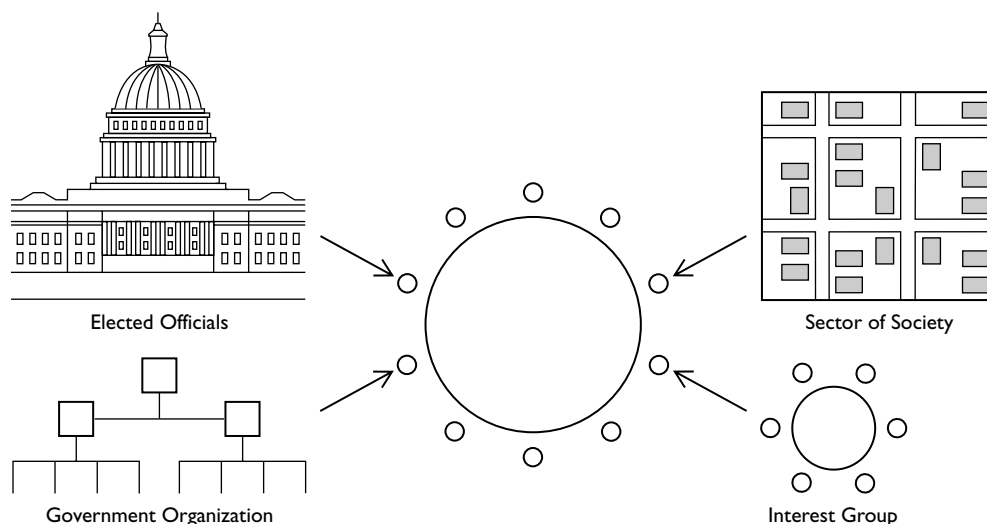
A stakeholder process offers an informal and flexible forum for bringing participants together to try to resolve their differences. For example, a city proposal to annex land could involve county officials, landowners, and local residents in an effort to come to a mutually agreeable solution.

#### Connected to Community Networks

A fourth reason for choosing a stakeholder is because he or she is connected to community networks. Such people are important because of their informal net- works of influence and the respect that they garner in the community. For example, an influential landowner who participates in an ecosystem man- agement process could help convince other landowners to help protect critical habitat.

### DETERMINING GROUP SIZE

Because a collaborative planning process may need stakeholders for many of the reasons listed above, the list of potential stakeholders could be lengthy. There are different views about the optimum size of a stake- holder group. Some facilitators argue that groups should not be larger than 10 to 12, but some multi- party collaboration processes have successfully involved 20 or 30 stakeholders.



### TYPES OF STAKEHOLDERS

Source: Richard Margerum.

**REASONS FOR STAKEHOLDER INVOLVEMENT**

REASON	DESCRIPTION	EXAMPLES OF STAKEHOLDERS
Jurisdiction	An organization or individual has jurisdiction over an issue.	Local government State and federal agencies Private landowner
Information	An organization or individual has information and knowledge.	Technical experts People with first-hand knowledge Agencies with data
Conflict	An organization or individual is party to an actual or potential conflict	People with legal standing Existing parties to a dispute Decision makers
Networks	An individual is connected in the community or has local influence.	People involved in community groups People in social groups and clubs Long-term residents

One way to reduce this number is to consider additional personal criteria in the selection process:

- Does the person work well in groups?
- Is the person interested in being involved?
- Does the person have the time to participate?
- Will the person help provide gender, racial, or ethnic balance?
- Does the person have additional skills that will help the group?

A process involving a large number of stakeholders may need to be broken into smaller groups. This increases the complexity of the process and increases the need for communication between groups, but it may be appropriate for large, complex, or controversial issues.

Some of the common categories include the following:

- Steering committee (to make the primary decisions)
- Technical advisory committee (to respond to technical questions)
- Citizens advisory committee (to provide broader public access)
- Geographic-based committees (to obtain input from different parts of a region)

**STAKEHOLDER SELECTION STRATEGIES**

STRATEGY	POSSIBLE ADVANTAGES	POSSIBLE DISADVANTAGES
Convener-picked	Compatible personalities Can meet expertise needs	Perception of bias Limited range of participants
Selection committee	Diverse committee can reduce bias Can choose for expertise and personalities	More time-consuming Requires additional participants
Self-nominating	Motivated participants Open process	Representation problems May only attract strongly opinionated
Snowball	Flexible Allows participants to expand with issues	Initial participants have more power Later participants may have concerns about earlier decisions

**Specific Selection Strategies**

With these background issues in mind, a convener will have a better idea of the types of stakeholders to involve in a collaborative process. The next step is to determine the specific strategy for choosing a group of stakeholders. The perception of how the stakeholders are chosen can be just as important as who is chosen.

Collaborative processes that involve organizations add an additional level of complexity to the selection process. Some organizations want to appoint their own representatives, rather than have an external party choose one. In this case, the convener may simply designate a seat at the stakeholder table to a specific organization. This strategy may also be used to ensure that certain types of organizations are represented. For example, a group may have stakeholder slots designated for an environmental interest group, an industry organization, and a landowner.

**Convener-Picked**

There is no one correct way to select stakeholders, but different strategies are better suited for certain situations than others. One approach is for the convener to handpick the participants. This approach tends to work well if the convener is viewed as being

neutral and if it is relatively clear who should be selected. It is an efficient strategy that also allows the convener to add other criteria for selection, such as group composition, group skills, and working relationships. That said, there will be some bias in this process because it will be defined by the knowledge of the convener.

**Selection Committee**

Another approach is to use a selection committee to choose the stakeholders. This approach tends to work well if the issues are politically charged or involve conflict. Each step of the collaboration process will be scrutinized. Any concerns about bias in stakeholder selection could lead people to question the decisions of the group. As with the handpicked approach, a committee can also incorporate additional criteria into the selection process. The primary disadvantages to this process relate to the additional time, resources, and participants required.

**Self-Nomination**

A third approach is to form a committee through self-nomination. This approach works well when the composition of the committee is not critical and when it is important to involve motivated stakeholders. Self-nomination is often linked to a public participation process. People are mailed newsletters, surveyed, or invited to public meetings; those who are interested are invited to participate in a stakeholder group. There is less opportunity or potential perception for bias with this process; however, the resulting group may lack diversity, may not include key stakeholders, or may overrepresent certain interests or organizations.

**Snowball**

A final strategy for stakeholder selection is the “snowball” strategy. This is an important strategy for all stakeholder selection efforts, regardless of how it is initially established. The strategy involves asking those involved, Who is not at the table that should be? As the list of people expands, the new people are asked the same question, until a full set of participants is involved. This can improve the breadth of participants and ensure that stakeholder membership is adjusted as new issues arise. The disadvantage of this process is that stakeholders coming late to the process may have less ability to influence outcomes and therefore may be less inclined to support the effort. Furthermore, if not done carefully, it could lead to an ever-expanding list of stakeholders.

**See also:**

- Plan Making
- Types of Plans

# SURVEYS

Planners looking to make good decisions need solid, reliable information. The survey is a widely accepted tool for gathering information from the people involved in any planning action. Good-quality surveys are doable even for the novice. The basic concepts and steps needed to plan and execute a survey are introduced here.

The particular advantages of the survey are that it allows planners to obtain quantitative results, to anticipate and address many of the sources of error before the data are collected, and ultimately to generalize findings from a relatively small number of respondents (the sample) to a larger group (the population). With increasing emphasis on *representative* citizen participation, surveys offer a useful method both to reach a broad public and to gather input from people who typically are not consulted on planning issues.

## REASONS TO USE A SURVEY

Consider a survey when the data needed are not available from secondary sources. The existing data may be outdated and no longer reflect current conditions or may describe a geography that does not coincide with your needs, such as state-level data that cannot be disaggregated into local units.

Surveys are conducted to find out the characteristics, behaviors, opinions, and knowledge of a particular population. Before embarking on a survey, clearly establish your objectives. Determine who is to be sampled and what you want to learn about the sample. Your questionnaire should flow directly from your information objectives.

## TYPES OF SURVEYS

At the core of all surveys is either a questionnaire or an interview—these are the instruments for gathering information.

### Questionnaires

Questionnaires are self-administered instruments. They generally enable respondents to complete the survey at their convenience and to proceed at their own pace. Respondents often have a greater sense of anonymity, which leads to greater honesty. Respondents can also verify their responses against other records and documents.

### Interviews

Interviews involve human interaction, even though it is scripted to some degree. In an interview, respondents can ask for clarification, thereby reducing the potential for error. The interviewer can control the sequence of questions by following a skip pattern according to previous responses—a feature now possible with self-administered, computerized questionnaires. Depending on the study objectives, a skilled interviewer can also pursue certain subjects by using probes and follow-up questions. In a face-to-face situation, interviewers have the advantage of being able to observe nonverbal cues. To a lesser degree, even telephone interviewers can detect and respond to changes in the respondent's tone of voice and speech.

	Interviewer-Administered		Self-Administered	
	Face-to-Face	Telephone	Mail	Web-Based
<b>Resource Constraints</b>				
Inadequate Sampling Frame (e.g., Incomplete Mailing List or Directory)	++	++	--	--
Quick Turnaround to Complete Survey	--	++	--	++
Limited Skilled Staff	--	--	++	++
Limited Budget	--	+	++	++
<b>Special Needs</b>				
Multiple Languages	-	-	+	++
Maps or Other Visual Materials	++	--	++	++
Complex Instructions or Need to Follow Precise Order	++	++	--	+
Need to Probe, Explain Unclear Questions	++	++	--	--
Some Items Require Additional Research	-	--	++	++
Anonymity Needed for Sensitive Responses	--	++	+	++
<b>Respondent Characteristics</b>				
Large Sample Size	--	-	++	++
Geographically Dispersed	--	+	++	++
Survey Must Be Conducted at Specific Location	++	--	--	--
Target Population Is Difficult to Contact	++	-	-	--

The matrix compares four major survey methods under varying conditions of resource constraints, survey needs, and respondent characteristics.

## SELECTING A SURVEY METHOD

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## MODES OF DISTRIBUTION

Surveys are further differentiated by their modes of distribution. They cover the entire range of communication technologies currently in use—face-to-face (both intercept/“street corner” interviews and in-depth interviews), posted mail, fax, telephone, email, and the Web—and combinations of these modes. The most appropriate survey method will depend on your resources, survey objectives, and characteristics of the sample. Increasingly, survey software is being used to gather data, reaching survey takers through email. The advantages of this approach include drawing upon an existing database of survey recipients and quickly creating reports, graphs, and tables from the data.

## POPULATION SELECTION AND SIZE

### Sampling

Sampling refers to a plan for randomly choosing a sample. Determining the correct sample size used to be one of the most daunting steps in survey preparation. Today this challenge is easily met by going online and typing “sample size calculator” or “random sample calculator” into a search engine. Several Web sites provide a utility that allows you to find out instantly how many people you need to survey. All require you to establish three parameters: population size, error level, and confidence level.

- *Population size* refers to the total number of people within the study area. For any given level of accuracy, the larger the population, the smaller the sample needed (percentage of people to be surveyed).

- *Error level* (or margin of error) is expressed as “plus or minus times percentage points” and refers to the difference between the estimated value (derived from the sample) and the true value (from the population).
- *Confidence level* is also expressed as a percentage and refers to the number of times similar results are expected if the study were replicated 100 times.

Error and confidence go hand in hand. Say a survey found that 59 percent of households in the city own one or more bicycles. If the survey were designed with an error level of  $\pm 3$  percentage points and a 95 percent confidence level, it would mean that household bicycle ownership rates could actually range from 56 percent to 62 percent, and this finding would occur 95 out of 100 times if the survey were conducted over and over. If your survey does not have an acceptable level of confidence, it will be difficult to know what to make of the results.

In a city with a population of 50,000, the following sample sizes are needed:

Confidence Level	Margin of Error $\pm 3\%$	Margin of Error $\pm 5\%$
90 percent	745	271
95 percent	1,045	381
99 percent	1,778	655

### Response Rate

Sample size refers to the number of completed surveys. Therefore, the actual number of surveys distributed must be adjusted to account for the response rate—a function of contact (reaching

respondents at viable addresses or working phone numbers) and cooperation (getting people to complete the survey). The formula to calculate the total number of surveys that must be distributed is:

Sample ÷ response rate = total surveys to be distributed

Therefore, if one estimates a 20 percent response rate for a mail survey with a sample size of 381, one would need to send out 1,905 questionnaires. However, if there are indications that a higher estimate of a 40 percent response rate is warranted, one could reduce the mailing to 953 questionnaires.

Some of the common techniques to improve cooperation include:

- sending out prenotification letters, then following the questionnaire with reminder cards;
- developing persuasive introductory language;
- ensuring that the questionnaire is attractive and easy to complete; and
- training interviewers for more effective “first contact.”

Response rates are an important and challenging component of surveys. That said, noncontact and noncooperation should not seriously affect data quality to the extent that they occur randomly (Langer 2003). Addressing sources of bias is still paramount.

## ALTERNATIVE SAMPLING DESIGNS

In addition to simple random sampling, planners should be familiar with two alternative sampling designs: stratified sample and clustered sample.

### Stratified Sample

In a stratified sample, the population is divided into subgroups (strata) before sampling. For example, if the survey is about a city’s bike paths and it is known that households with school-aged children are more likely to own bicycles, one might select separate samples for households with school-aged children and those without. Each subgroup is a separate sample, and the respective sample sizes would reflect the subgroup’s size relative to the overall population. Within subgroups, individuals are selected at random.

### Clustered Sample

In a clustered sample, the population is divided into smaller geographic units (clusters), such as neighborhoods within a city or blocks within a district. The sample consists of a random selection of clusters and all individuals within those clusters are surveyed.

## TIPS FOR SUCCESSFUL DATA COLLECTION

The survey is a way of creating an area-specific, customized database. Even a hurriedly put-together survey can fill a critical information gap. Designed properly, the survey can be a rigorous tool. The following tips can maximize your data-gathering efforts:

- Start with a brief, compelling introduction that clearly states the purpose of your study and its potential value to the respondent.
- Use plain language that is easy to understand; avoid jargon and acronyms.
- Organize questions in logical groups; provide transitions when shifting topics.
- Ask important questions first, profile questions last.
- Proofread to eliminate typographic and grammatical errors; make the layout crisp and legible.
- Include graphics (maps, plans, diagrams, renderings, and photos), as appropriate.
- Keep the survey short and simple.
- Pretest with a few people (ideally representing a cross section of the sample), then debrief and ask for candid feedback.

## DESIGNING A QUESTIONNAIRE

Researchers have several options in designing a questionnaire, primarily in constructing and sequencing items. Two basic categories of questions are the closed- versus open-ended inquiries.

### Close-Ended Questions

In close-ended questions, respondents are asked to select from a list provided by the researcher, with instructions either to select a single answer (one that “best fits”) or multiple answers (all that apply). A variation of the closed-ended question is one that asks respondents to evaluate on a scale or rank in order of preference, such as one of the following:

- *Rating scale* is an ordinal measurement of degree, which asks respondents to indicate a position between opposite word pairs (e.g., noisy-quiet or frequently-never, etc.).
- *Likert scale* asks respondents to indicate the extent to which they agree with a statement (e.g., strongly agree, agree, disagree, strongly disagree, don’t know).
- *Numerical scale* asks respondents to correlate their position to a numerical rating (e.g., satisfaction level rated on a scale of 1 to 5, with 1 being least satisfied and 5 being most satisfied).

In close-ended questions, the choices do not have to be words. Many planning-oriented issues are amenable to choices presented in drawings, plans, and photos. Another possibility is to ask respondents

to indicate their preferences by allocating a “theoretical budget”—\$1 and \$100 are easiest to work with.

### Open-Ended Questions

Open-ended questions give respondents an opportunity for self-expression and spontaneity that can lead researchers to new insights. Their disadvantage is that they can be difficult to summarize without postcoding. A compromise is to offer a list of what are expected to be the most popular choices, based on prior knowledge of the subject, then include an “Other” category that allows respondents to provide answers outside the predetermined categories.

The importance of sequencing questionnaire items in a clear, logical order should not be overlooked. Respondents are more likely to find an instrument credible if it is readily apparent that questions are relevant to the overall purpose of the study and are connected in a way that makes sense. The most basic patterns are the *funnel sequence*, which begins with the most general question and works down to detailed points, and the *inverted funnel sequence*, which begins with specific questions and then moves to more general issues. Transitional questions, brief explanations, or headings can be inserted to signal a change of topic or to show how the new topic relates to what had been asked previously.

## ADDITIONAL CONSIDERATIONS

Despite the tremendous usefulness of surveys for researchers, they are not met with the same level of enthusiasm among the survey-taking public. Many factors have contributed to the survey’s diminished reputation; however, it is possible to avoid further tarnish by observing a few common-sense practices. Foremost, respect the privacy of respondents. Do not release names and addresses of respondents. Codes are typically assigned to questionnaires, in which case, secure the name-to-code assignments. Results can be reported confidentially by tabulating data so that individual responses cannot be singled out. And, whenever possible, provide respondents with a copy of your findings—prompt feedback will demonstrate how the study has contributed to a better understanding of important community issues.

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- Langer, Gary. 2003. “About Response Rates: Some Unresolved Questions.” *Public Perspective*, May/June, 16-18. [www.ropercenter.uconn.edu/pubper/pdf/pp14\\_3c.pdf](http://www.ropercenter.uconn.edu/pubper/pdf/pp14_3c.pdf)

**See also:**  
Analysis Techniques  
Plan Making

## COMMUNITY VISIONING

Community visioning offers local communities new ways to think about and plan for the long-term future. The visioning process was inspired in part by the concept of “anticipatory democracy,” an approach to governance that blends futures research, grassroots public participation, and long-range strategic planning.

Visioning has caught on quickly around the country in communities undergoing rapid growth and development as well as those experiencing economic decline. As an adjunct to traditional community planning, visioning promotes greater awareness of societal change and deepened citizen involvement. It also gives communities a stronger sense of control over their destinies.

### WHAT IS VISIONING?

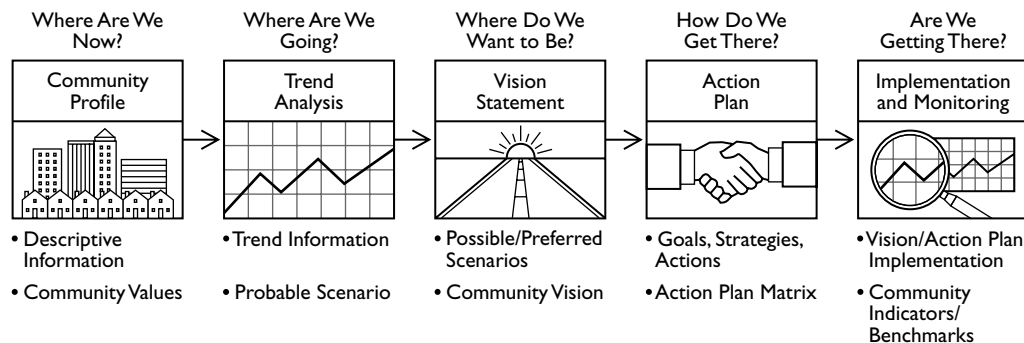
In the simplest terms, visioning is a planning process through which a community creates a shared vision for its future and begins to make it a reality. Such a vision provides an overlay for other community plans, policies, and decisions, as well as a guide to actions in the wider community. While a significant number of communities employing a wide range of approaches and techniques have undertaken community visioning, the most successful efforts seem to share these five key characteristics:

- *Understanding the whole community.* The visioning process promotes an understanding of the whole community and the full range of issues shaping its future. It also attempts to engage the participation of the entire community and its key stakeholder groups.
- *Reflecting core community values.* The visioning process seeks to identify the community’s core values—those deeply held community beliefs and ideals shared by its members. Such values inform the idealistic nature of the community’s vision.
- *Addressing emerging trends and issues.* The visioning process explores the emerging trends driving the community’s future and the strategic issues they portend. Addressing such trends promotes greater foresight, adding rigor and realism to the community’s vision.
- *Envisioning a preferred future.* The visioning process produces a statement articulating the community’s preferred future. The vision statement represents the community’s desired “destination”—a shared image of where it would like to be in the long-term future.
- *Promoting local action.* The visioning process also produces a strategic action plan. The action plan serves as the community’s “road map”: to move it in the direction of its vision in the near-term future.

### BENEFITS OF VISIONING

For communities that successfully engage in visioning, the process offers clear benefits. Visioning:

- brings community members together in a uniquely different context to consider their common future;
- encourages the community to explore new ideas and possibilities;



### THE NEW OREGON MODEL

Source: Steven Ames Planning.

- creates a shared sense of direction and a framework for future community decisions; and
- produces a process that results in concrete goals and strategies for action

Additionally, there can be second-order benefits that may not be immediately apparent in undertaking the process, such as:

- enriching public involvement by expanding the terms and scope of civic engagement;
- fostering new leadership in citizens who have not been previously active in public life;
- promoting active partnerships among government, business, civic, and nonprofit organizations; and
- strengthening community cohesion and “social capital.”

In other words, engaging in the *process* of visioning can be as rewarding as its *products*.

Finally, there can be significant visioning benefits for the function of planning itself. For example, strong consensus on community goals can provide an informed and supportive context for the development of other plans and policies. This, in turn, can facilitate and even streamline public involvement.

At the same time, visioning can place new demands on planning. It stretches the traditional role of planners, calling upon new skills and competencies. It demands increased levels of dialogue and trust with the public. Ultimately, to the degree that visioning extends beyond the traditional domain of planning, it requires more effective cross-sector communication and collaboration.

### THE OREGON MODEL

Oregon was one of the first places in the United States to experience the proliferation of community-based visioning. In a state widely recognized for its land-use planning and growth management policies, visioning was seen as an overlay for local land-use plans and a tool to help communities manage change.

Based on Oregon’s early community visioning successes and similar state-level efforts, the Oregon Model represents a comprehensive approach to visioning that has since gained widespread accept-

ance around the country. The model is framed by four simple questions, which collectively form the basis of the visioning process:

1. Where are we now?
2. Where are we going?
3. Where do we want to be?
4. How do we get there?

Answering each question implies a discrete step in the process, with different activities, outcomes, and products. Step one involves profiling the present community’s current conditions and core values. Step two involves analyzing emerging trends and their probable impact on the community’s future. Step three is geared to the creation of a vision, and step four involves developing an action plan.

Some communities have added a fifth step promoting action plan implementation:

5. Are we getting there?

This addition to the Oregon Model responds to criticism that the visioning process does not always produce real results. The fifth step may also incorporate the development of indicators or benchmarks to monitor and measure the community’s success in achieving its vision over time.

Visioning is designed to be iterative and ongoing. Benchmarking provides an important feedback loop for the eventual update of the community’s vision and action plan. The action plan, having a much shorter planning horizon than its companion vision, requires more frequent updates.

### Applying the Model

The Oregon Model is a flexible approach that can be adapted to a wide variety of settings and can be scaled up or down depending on the nature of the community, its needs, and its resources. The key to its success is to shape the process to fit the place.

Establishing a vision framework—timeframe, overall focus, and specific focus areas—provides a strategic starting point. Most communities set their vision timeframe at 20 to 25 years into the future. They also adopt a broad overall focus, encompassing the full spectrum of community concerns. Focus areas may range beyond traditional planning to

encompass such topics as education, arts and culture, health, and public safety. Building on this framework, the design of every visioning process will vary widely.

As a relatively new approach to planning, community visioning can have a steep learning curve; it may employ nontraditional planning techniques such as “environmental scanning” or alternative scenarios. Managing diverse stakeholder groups or alleviating public skepticism regarding the process can prove daunting. Midprocess course corrections are necessary.

Fortunately, none of these challenges are insurmountable. Moreover, the ability of visioning to provide strategic input for such perennial planning concerns as growth management, urban design, transportation, housing, community development, and sustainability justifies the up-front investment. Indeed, planners often use the outcomes of visioning to frame and legitimize other major planning initiatives.

### Involving the Public in Visioning

True to visioning’s roots in anticipatory democracy, public involvement is a critical element of the visioning process. Engaging the public is essential in creating a shared community vision and action plan, as well as in promoting their eventual achievement. This implies an inclusive, participatory process capable of forging broad public consensus on key community goals.

To some planners, such a dialogue may seem increasingly difficult in today’s society, given the numerous urgent issues on the public agenda, shrinking local government budgets, the busy lives of citizens, and the ever-present distractions of the media and pop culture. For these reasons, public out-

reach and strong “branding” of the visioning process are absolutely critical to successful public involvement.

Fortunately, for many people, there remains a fundamental appeal in talking about the future of their community. The reason is probably the abiding importance of “place.” People relate to and care about where they live; it’s one of the fundamental

### SUCCESSFUL COMMUNITY VISIONING

Visioning works when:

- The community is concerned about its future and is eager for dialogue.
- The process is well designed, managed, and adequately resourced.
- Key community institutions and opinion leaders are involved in the process.
- Elected officials and city managers are supportive of the process.
- The public is authentically engaged in the process.

Visioning doesn’t work when:

- The community is too polarized to engage in a civil dialogue.
- The process is poorly designed or managed or inadequately resourced.
- Key community institutions or opinion leaders are not involved in the process.
- Elected officials or city managers are unsupportive of the process.
- There is no follow-through in implementing the vision and action plan.

ways through which we continue to connect as human beings.

There is also an array of tools and techniques to stimulate and facilitate the visioning dialogue. These include participatory techniques, such as public workshops and open houses, as well as more representative techniques, such as citizen task forces, scientific surveys, and focus groups. The former help ensure broad public input, allow for open dialogue, and promote public awareness; the latter help capture diverse viewpoints, promote in-depth discussions, and facilitate the development of specific visioning products.

Additionally, computer-mediated communications are increasingly integral to the visioning process. While “electronic town meetings” have yet to realize their original promise, other tools have stepped in to fill the gap. Visioning today would be inconceivable without the Internet, search engines, and community Web sites, with their respective capacities for disseminating and gathering information. Graphical computer simulations have also increased our ability to actually *see* aspects of preferred—or not-so-preferred—futures.

Undoubtedly, evolving forms of electronic communication will continue to add new dimensions to community visioning, just as the process itself continues to evolve as an integral part of community planning.

### See also:

Places and Place Making  
*Public Meetings*  
*Surveys*  
 Visualization



## CHARRETTES

A charrette involves a multidisciplinary team of professionals developing all elements of a plan. The team works closely with stakeholders through a series of feedback loops, during which alternative concepts are developed, reviewed by stakeholders, and revised accordingly. The charrette is a sophisticated process that best serves controversial and complicated urban design and planning problems. Its capacity to bring all the decision makers together for a discrete amount of time to create a solution makes it one of the most powerful techniques in a planner's toolkit.

Charrettes are not a substitute for a standard planning process, which is executed over several months. They are conducted to address specific problematic situations and should complement the overall planning process. The charrette process works best for situations such as:

- high-stakes projects;
- volatile yet workable political environments;
- complex design problems; and
- projects that include imminent development.

The combination of the sophistication of the process with the complexity of the situations in which it is most often used means charrette practitioners *must* be well trained.

### DYNAMIC PLANNING

A charrette is the central event of a larger process that the National Charrette Institute calls *Dynamic Planning*, a multiday, collaborative planning and design effort with the goal of arriving at a comprehensive, feasible plan.

Dynamic Planning has three governing values:

- Anyone affected by the project has the right to provide input with potential impact on the outcome.
- Each participant has a unique contribution that is heard and respected.
- Many hands make the best plans.

### BENEFITS OF THE CHARRETTE PROCESS

The benefits of the charrette process are numerous. When done correctly, the charrette promotes trust between citizens and government through meaningful public involvement and education. It fosters a shared community vision by turning opposition into support. It continuously strives for the creation of a feasible plan, which increases the likelihood of the project getting built by gaining broad support from citizens, professionals, and staff. Identifying the stakeholders early and often, and encouraging public participation creates a better plan through diverse input and involvement. Finally, the charrette makes economic sense. Because all parties are collaborating from the start, no voice is overlooked, which allows the project to avoid costly rework. Also, the charrette allows for fewer and more highly productive work sessions, making it less time-consuming than traditional processes.

### THE NINE STRATEGIES OF THE CHARRETTE PROCESS

The term "charrette" is overused and often misused. Although "charrette" refers specifically to a holistic plan to bring transformative change to a neighborhood, some use the word to refer to an afternoon meeting or a marathon planning workshop. The following nine strategies are what differentiate a charrette from other planning processes.

1. *Work collaboratively.* All interested parties must be involved from the beginning. Having contributed to the planning, participants are in a position both to understand and to support a project's rationale.
2. *Design cross-functionally.* A multidisciplinary team method results in decisions that are realistic every step of the way. The cross-functional process eliminates the need for rework because the design work continually reflects the wisdom of each specialty.
3. *Compress work sessions.* The charrette itself, usually lasting two to seven days, is a series of meetings and design sessions that would traditionally take months to complete. This time compression facilitates creative problem solving by accelerating decision making and reducing unconstructive negotiation tactics. It also encourages people to abandon their usual working patterns and "think outside of the box."
4. *Communicate in short feedback loops.* During the charrette, design ideas are created based upon a public vision and presented within hours for further review, critique, and refinement. Regular stakeholder input and reviews quickly build trust in the process and foster true understanding and support of the product.
5. *Study the details and the whole.* Lasting agreement is based on a fully informed dialogue, which can be accomplished only by looking at the details and the big picture concurrently. Studies at these two scales also inform each other and reduce the likelihood that a fatal flaw will be overlooked in the plan.
6. *Produce a feasible plan.* The charrette differs from other workshops in its expressed goal to create a feasible plan. In other words, every decision point

must be fully informed, especially by the legal, financial, and engineering disciplines.

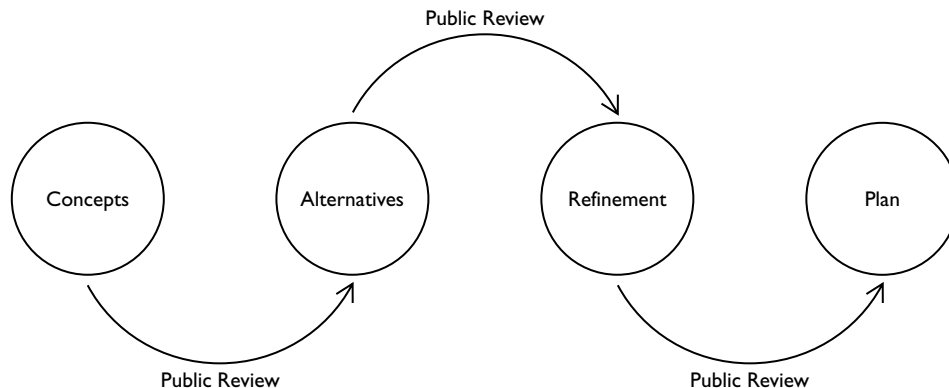
7. *Use design to achieve a shared vision and create holistic solutions.* Design is a powerful tool for establishing a shared vision. Drawings illustrate the complexity of the problem and can be used to resolve conflict by proposing previously unexplored solutions that represent win-win outcomes.
8. *Include a multiday charrette.* Most charrettes require between two and seven days, allowing for three feedback loops. The more difficult the problem is, the longer the charrette should be.
9. *Hold the charrette on site.* Working on site fosters the design team's understanding of local values and traditions, and provides the necessary easy access to stakeholders and information. Therefore, the studio should be located in a place where it is easily accessible to all stakeholders and where the designers have quick access to the project site.

### THE THREE PHASES OF DYNAMIC PLANNING

As discussed above, the charrette is the central element of a larger comprehensive process called Dynamic Planning. There are three phases in Dynamic Planning: *research, education, and charrette preparation; the charrette; and plan implementation.* The most common cause of project failure is not a poorly run charrette; rather, it is usually due to incomplete preparation and/or inadequate follow-through during the implementation phase.

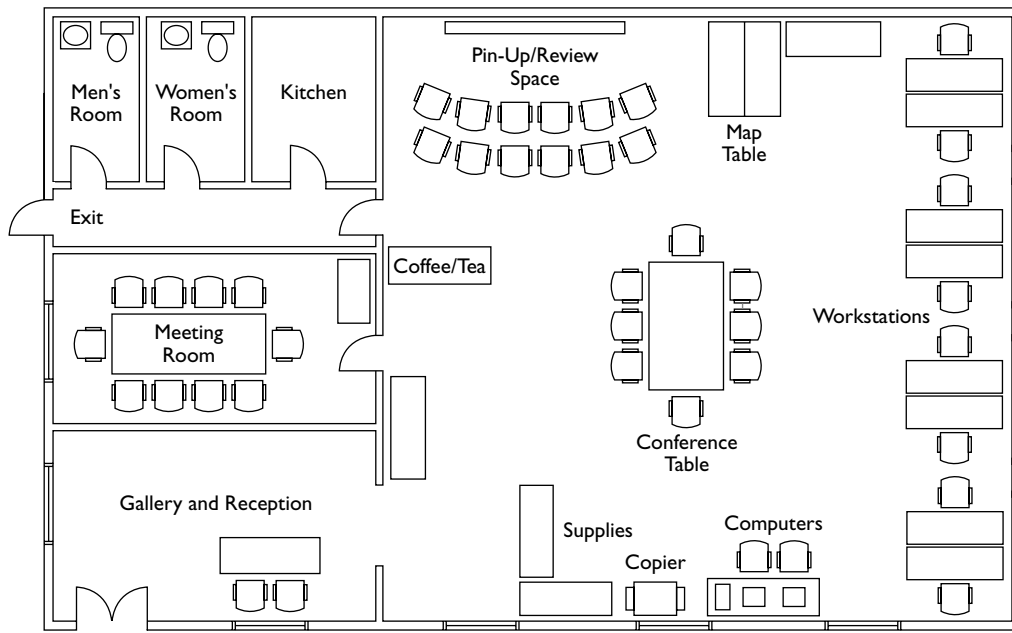
#### Research, Education, and Charrette Preparation

During this phase, all the necessary base information is gathered and all the necessary people are identified and engaged. A complexity analysis of the project is completed, so that the charrette manager can decide how much time is needed for the charrette. During this time initial stakeholder meetings are held and feasibility studies are completed. Finally, the charrette logistics are arranged. The studio setup is planned, the design team is formed, and the charrette is scheduled step by step. This step can typically take around four months.



### CHARRETTE FEEDBACK LOOPS

Source: National Charrette Institute, 2003.



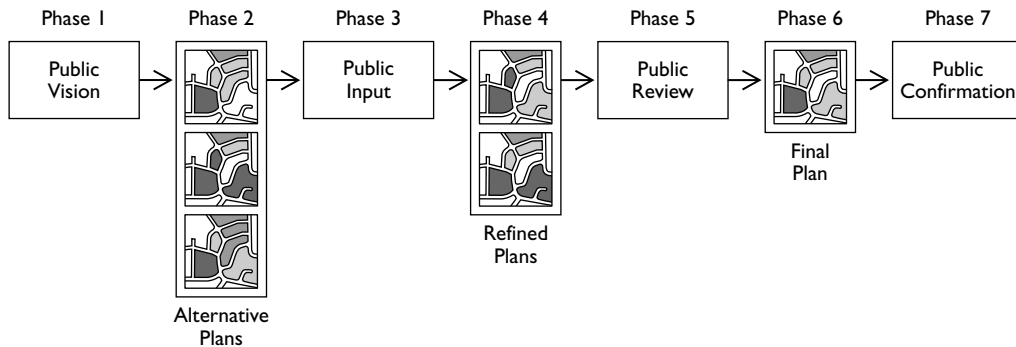
**CHARRETTE STUDIO LAYOUT**

Source: National Charrette Institute, 2003.

**The Charrette**

The charrette brings all the right people and all the right information to a series of highly focused and productive work sessions. Before the first public meeting is held, the design team takes a tour of the area and holds meetings with key stakeholder groups. The first public meeting is held to determine

the direction in which the public would like to take their community. Based on public input, gathered through a number of different participatory methods employed during the first public meeting, the design team begins to work on the development of alternative concepts. The next evening, another public meeting is held to display the alternative concepts



**CHARRETTE WORK CYCLE**

Source: National Charrette Institute, 2003.

and gather another round of public feedback. After this second public meeting, the design team meets to discuss the best way to synthesize the different concepts into one preferred plan. This new plan is then presented to the public in an open house. Following the open house, the preferred plan is developed further, and the design is refined. Additional stakeholder input is gathered. The preferred plan is then presented to the public again during the final charrette public meeting.

**Plan Implementation**

Dynamic Planning does not end with the charrette. It is critical that the preferred plan undergo further feasibility testing and public review. Each team member is in charge of his or her element of the charrette plan and performs feasibility tests and then refines the element as necessary. These revisions to the plan are then presented to the public again, usually about a month after the charrette. The final product of the Dynamic Planning process is a full set of documents that represent the complete record of the Dynamic Planning and charrette processes, including records of the meetings, who was involved, and the evolution of the plan.

**WHERE CHARRETTE SUCCEED**

The key to a successful charrette is in its preparation. Because a successful charrette requires all the right people and all the right information, most mistakes are made by not identifying and involving the right people early and throughout the process and/or not planning enough time to produce the documents necessary for implementation. The importance of stakeholder reviews and soliciting public feedback cannot be overemphasized.

**NEXT EVOLUTION OF CHARRETTE S**

Traditionally, charrettes have been "high-touch," relying on low-tech elements, such as hand drawings. High-tech modeling tools are increasingly being incorporated into traditionally high-touch charrettes. They include keypad polling, environmental impact analysis programs, and vision scenario development. These tools are helping to increase public involvement, execute design, and perform feasibility analysis. As high-tech tools are refined, they will provide the design team with an increased capability to give quick feedback during a charrette.

**See also:**

Visualization

## PUBLIC MEETINGS

Public meetings are among the most common forms of citizen participation for planners and urban designers. They can be used to ascertain public opinion generally or to reach consensus on a recommended action. When they are successful, it is due to careful planning and follow-through. Well-organized and executed public meetings can be valuable opportunities for planners to provide information on important issues to the citizenry and obtain meaningful input.

There are three primary purposes for holding a public meeting: share information, seek advice, or solve problems. Though any issue can be the subject of this form of public dialogue, planners most frequently deal with matters such as zoning, comprehensive planning, parks and open space, environmental protection, and transportation. The meetings themselves may take a variety of forms. They differ substantially from public hearings, which generally follow formal rules and procedures. In fact, it can be said that governmental bodies usually are required to hold public hearings, whereas they have a choice about whether and how to hold public meetings.

At an effective public meeting, planners can enlist citizens as partners or at the least give them important information. By listening and responding respectfully, they can help diffuse opposition and build trust and confidence. The most successful public meetings are designed and executed very carefully, with attention paid to myriad details and nothing left to chance.

### THE PURPOSE OF A PUBLIC MEETING

Before developing the agenda or any other part of the public meeting, the first matter to be agreed upon is its purpose: Is the meeting being convened primarily to share information, to seek advice, or to solve problems? Once that is decided, planners then should choose the appropriate structure and organization that best carries out this objective. To avoid misunderstandings, it is important that all notices indicate clearly the nature of the meeting and the expected outcomes. This also should be emphasized during introductory remarks. For example, citizens can be upset if they come to a public meeting ready to vote on options or alternatives, only to find that the purpose of the gathering is only to ask for their opinions.

#### Informational Meetings

Informational meetings are held to convey information or data to the public and to receive their comments. Public hearings are the most common, but not the only, form of informational meetings. At public hearings, staff presents information to the decision makers or hearing officers, followed by testimony from citizens, all within strict constraints. Other informational meetings are more informal, with planners making reports to neighborhood, civic, or other interested groups, and then answering questions. Although time for short presentations from the attendees may be permitted, prolonged dialogue and interaction are discouraged.

#### Advisory Meetings

While advisory public meetings also provide information, the public is given meaningful opportunities at these meetings to interact with staff or decision makers. Similar to the structure of informational meetings, advisory meetings begin with a presentation of basic information, possibly followed by a summary of the advantages and disadvantages of various alternatives. After the presentations at an advisory meeting, however, the public engages in an open but structured dialogue.

#### Workshops

The most common form of dialogue session is the workshop, where 8 to 10 participants discuss issues pertinent to the subject, led by a facilitator. Notes are taken, with the assurance that feedback from the attendees will be shared with the decision makers. No promises are made that the results from the workshop will be the final decision; the only assurances given are that decision makers will consider citizen concerns in their final deliberations.

#### Open House

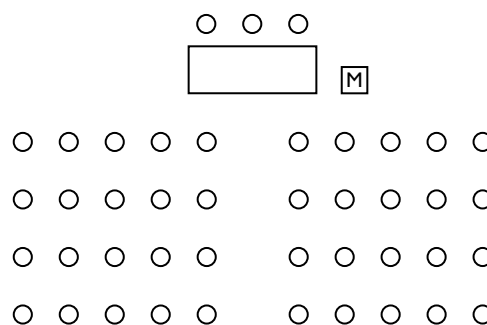
Another form of advisory meeting becoming popular among planners is the community open house. While informational or advisory meetings should be no more than three hours long, an open house is typically longer, from 3:00 to 8:00 P.M., for example. A busy public appreciates the flexible hours. For example, seniors or others may prefer not being out after dark, and working people can drop by on the way home or after supper.

To hold an open house requires a large room that can hold many people milling about, such as a school gymnasium or cafeteria, senior or community center, or church basement. As people enter, they are given information packets that include a small map or room layout, agenda, and background materials. Well-placed

signs mark the different areas of activity or stations. Planners and others who can answer questions and engage people in a dialogue about a particular segment of the issue staff each station. For example, if the open house is being held about a draft comprehensive plan, the people at the various stations can address elements of the plan, such as transportation, parks, and housing. Speakers may provide formal presentations in a screened-off part of the room at specific times. Citizens are encouraged to stay as long as they like, moving at their own pace between stations and other informational displays. Short written questionnaires give attendees additional opportunities to comment and express their opinions. This open format, with staff and decision makers committed to listening and actively engaging the public, can generate much community goodwill as well as provide valuable information.

#### Problem-Solving Meetings

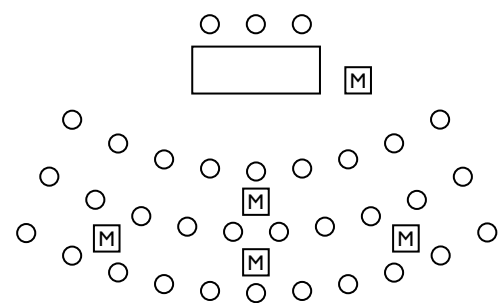
The purpose of the third, and least common, form of public meeting is to solve problems. In this case, the results of citizen input will directly influence the decision-making process. The workshop format discussed above, consisting of a presentation of technical material followed by facilitated discussion, is also a useful technique for problem-solving meetings. However, in this case, the public is asked to reach conclusions or make recommendations. If there are more than a dozen attendees, people should be divided into small discussion units. Group consensus or agreement is more likely to emerge if participants are randomly dispersed at small discussion tables. This will produce results more reflective of the group process than of any particular advocate or dissenter. The successful problem-solving meeting requires an informed citizenry, skilled discussion leaders following an agenda with specific questions and discussion topics, well-trained recorders, and decision makers who commit themselves to following the results.



With this arrangement, all eyes are on the speaker. There is minimal interaction with the audience, typically limited to questions and answers. To be heard, one must generally go to the front.

#### TYPICAL INFORMATIONAL SEATING ARRANGEMENT

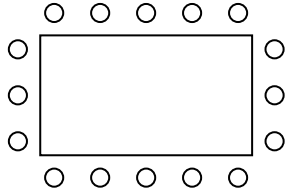
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The curved shape of the arrangement creates fewer perceived barriers between the speakers and the audience. It also allows the audience to have views of each other. The placement of microphones invites questions and comments.

#### IMPROVED INFORMATIONAL SEATING ARRANGEMENT

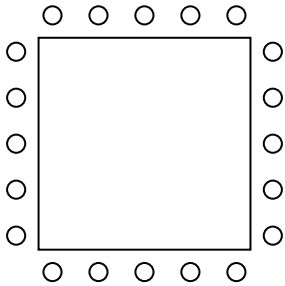
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The rectangular table is typical for conference room meetings. It encourages face-to-face interaction, but those on the ends may talk more and receive more attention. Substituting an oval or round table allows participants to see each other easily.

**BOARDROOM SEATING ARRANGEMENT**

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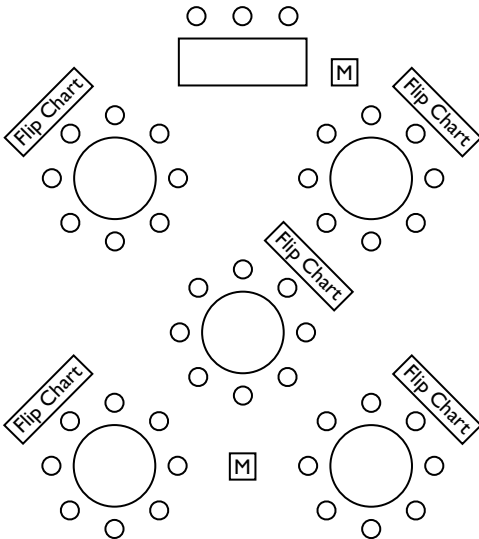


(with or without table)

This arrangement is similar to the boardroom seating arrangement. It makes the role of "leader" less obvious. Corners may be "dead" areas, however.

**CLOSED-SQUARE SEATING ARRANGEMENT**

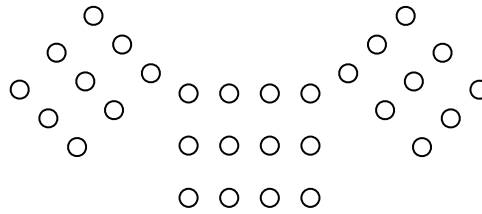
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Several smaller tables allow for small-group interaction. Flip charts and microphones allow for breakout exercises and reporting back to the group.

**WORKSHOP SEATING ARRANGEMENT**

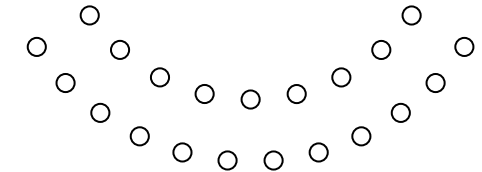
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This arrangement is similar to the improved informational seating arrangement. It allows for interaction when a circle arrangement is not possible. A main speaker may have to turn to view certain audience members.

**THEATER SEATING ARRANGEMENT**

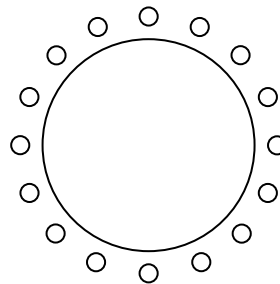
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When a circle is not possible, a semicircle gives most of the same advantages. Use an even number of rows, as the odd, middle row is often left vacant.

**SEMICIRCLE SEATING ARRANGEMENT**

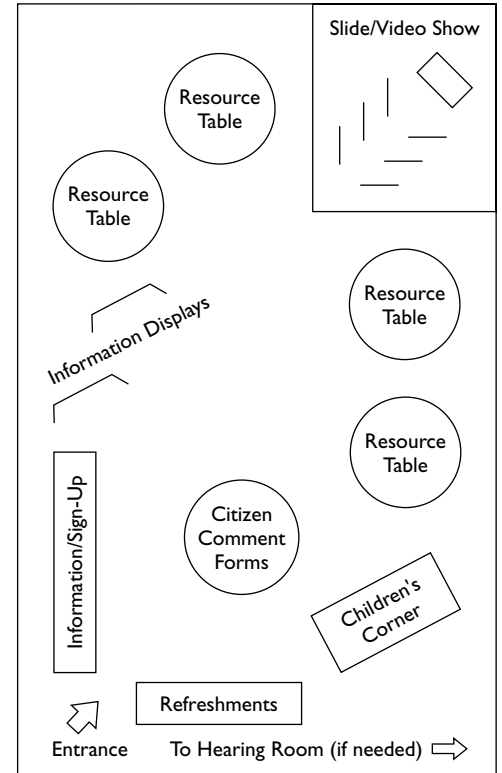
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A circle arrangement allows everyone to see everything and creates a more equal setting. Including a table allows participants to take notes.

**CIRCLE SEATING ARRANGEMENT**

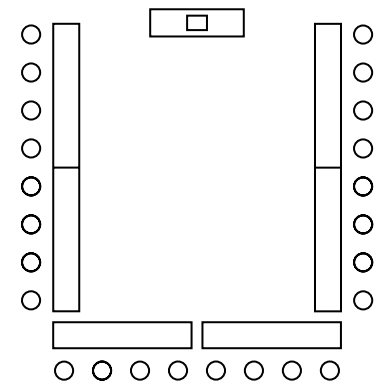
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The community fair arrangement allows for many informal opportunities to receive information, discuss issues, and give opinions.

**COMMUNITY FAIR ARRANGEMENT**

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This room arrangement is commonly used for group meetings. The "U" allows a speaker to move around within the group. However, it creates open space between participants. Moving the tables closer together encourages interaction across the "U."

**U-SHAPE SEATING ARRANGEMENT**

Source: © 1995 David Knox Productions, Inc.

## UNDERREPRESENTED POPULATIONS

In an increasingly diverse society, planners should be sensitive about how to involve people who may not generally come to public meetings. One successful technique is to contact representatives of minority, non-English speaking, or other underrepresented communities to ask them to help you reach their constituents, friends, and neighbors. Take their advice seriously. They may suggest several approaches, such as:

- advertising in local newspapers or radio stations;
- printing notices in languages other than English;
- using interpreters at meetings;
- providing child care; and
- meeting at unconventional times, such as weekends;

## PRESENTATION SKILLS

In deciding the amount and kind of information to provide at all public meetings, consider the needs of your audience. What do they need or want to know in order

to be conversant with the subject and provide useful feedback? By asking this question and answering it honestly, planners will avoid making the common mistake of writing technical papers instead of simple handouts or speaking in jargon or language well beyond citizens' understanding. Recognize also that not all good planners are good presenters. Some professionals relate well to people at informal neighborhood meetings but are not able to speak to a great number in a big hall. Others have just the opposite skills. Either obtain training to increase your abilities in different settings or recognize your limitations and deploy the people best able to handle specific situations.

Likewise, remember that one type of presentation does not fit all situations. While computer presentations are popular with planners and designers, they can backfire if done poorly, using too many words and confusing images. Computers also are prone to malfunction so it is important always to have a backup, such as a written handout. With some audiences, simple charts or drawings may be more effective than flashy graphics.

## KEYS TO SUCCESSFUL PUBLIC MEETINGS

Successful public meetings are characterized by a number of considerations:

- Set aside sufficient time and resources to plan each event, agreeing first on the basic purpose and primary audience.
- Choose the best format to meet your objectives.
- Provide notice well in advance and in the language(s) understood by your target audiences.
- Hold the meeting at a time and in a place convenient to the people you want to attend.
- Agree on roles and responsibilities for hosts, presenters, discussion leaders, and recorders.
- Develop clear, appropriate, and readable written materials and graphics.
- Be well prepared so that you can deal with any last-minute crises or challenges.

### See also:

*Public Hearings*

## PUBLIC HEARINGS

The law requires that most public agencies and elected bodies hold public hearings before making important decisions. These hearings follow specific rules and procedures legally prescribed by state statutes and local ordinances. Generally, public hearings are held near the end of the planning and development process, just before the authority in charge votes about or decides the final disposition of the matter at hand. Notification of the hearing is sent to those parties legally required to receive them or inserted in advertisements in the local newspaper.

The hearing body usually sits on a raised dais with staff close by. The public is seated auditorium-style. Public comments are limited, and they may be recorded on audio or videotape, or by professional stenographers.

Planners participate as staff or consultants, reporting to the hearing body and answering questions. Public testimony follows. To maintain a sense of fairness, proponents and opponents may be given alternate turns to speak. Decision makers listen and rarely ask questions. If an issue is contentious, the hearing may go on for hours.

### THE ELEMENTS OF A GOOD PUBLIC HEARING

Planners, who must follow the legally prescribed rules for public hearings, can ensure that the hearings achieve their desired ends (receiving and documenting comments from the public about the nature of the matter at hand). Beyond that, however, they should also ensure that the actions they take meet the letter of the law, the spirit of the law, and the standards for effective and fair planning. The following sections offer some guidelines for effective public hearings. These actions should constitute a standard for the way in which public hearings are arranged and conducted.

#### Notification and Other Informational Materials

1. Write all notices in plain language, with translations as needed for non-English-speaking people. Disseminate as widely as your budget will allow, using community newspapers, Web pages, and

other electronic means of communicating. If legal text is required, have it accompany the plainly written notice.

2. Hand out written agendas and summaries so attendees can follow along with the presentations. Make sure to have a sufficient quantity for all, and arrange to duplicate extras if needed.
3. Present technical material in as nontechnical a manner as possible. Remember that the public and some of the decision makers are not likely to be as well versed on the subject as the planners.

#### Room Arrangements

1. Hold the hearing in a room where all can see and hear with ease. If the dais is a fixed platform, set up chairs and tables for the public officials and staff at the same level as the audience.
2. Arrange charts or screens for slides or video presentations so the public as well as the officials can see them. If the room is large, position several screens so that everyone can see.
3. Have a sufficient number of working microphones for presenters, hearing personnel, and the public, and place them strategically to give citizens easy access.
4. Combine the hearing with an "open house" or similar opportunity for the public to receive and provide information in a more informal setting.

#### Interaction and Involvement

1. Station one or two staff at the door to greet the public, give them the handouts, and show them to empty seats. It is especially important to make late-comers welcome.
2. Have a sign-in sheet for all who want to comment, and call upon them in order.
3. Divide a long agenda into manageable portions. Instead of programming all the technical reports at one time, seek public comments after each section or portion under consideration. This decreases the likelihood that large groups of angry or restless people will remain throughout, as most will leave after the matters in which they are interested have been discussed.

4. Announce beforehand and throughout if the public's comments are being recorded.
5. Provide alternative ways to give public testimony. Deploy a stenographer in another room to take down, verbatim, comments; have a tape recorder and staff person available; or hand out written comment forms.

#### See also:

*Public Meetings*

#### "USER-FRIENDLY" NOTIFICATION FORM

The key elements of a successful public hearing notification are:

- Clear statement of purpose is included at the top of the notice.
- Purpose of the meeting and the public action being taken are described in plain language.
- Date, time, and location of the public hearing are included near the top of the notice.
- Potential financial implications of the project, of interest to citizens, are included.
- Ways that citizens can provide comments, at the hearing or in other ways, are provided.
- More detailed contact information is included.
- Legal references, if needed, are cited at the end of the notice.

The user-friendly version of a notification form follows.

#### Proposal to Change Use of Residential Property to Allow Senior or Community Center

Thomas McIntire, living at 2900 Elm Street, is asking the city to rezone his property from residential use (RS-2) to PS-1, to allow construction of a senior or community center.

The city's Planning and Zoning Commission may either allow or deny this request and is holding two public hearings to obtain citizen comments. Both hearings will be held in the third-floor city hall auditorium, February 28 and March 9, at 6:30 p.m.

If the property is approved as proposed, it will be used by a nonprofit corporation, which will not pay property taxes. The remaining property taxpayers in the city will be required to make up the difference. The current property taxes paid by the owner are approximately \$1,500 per year.

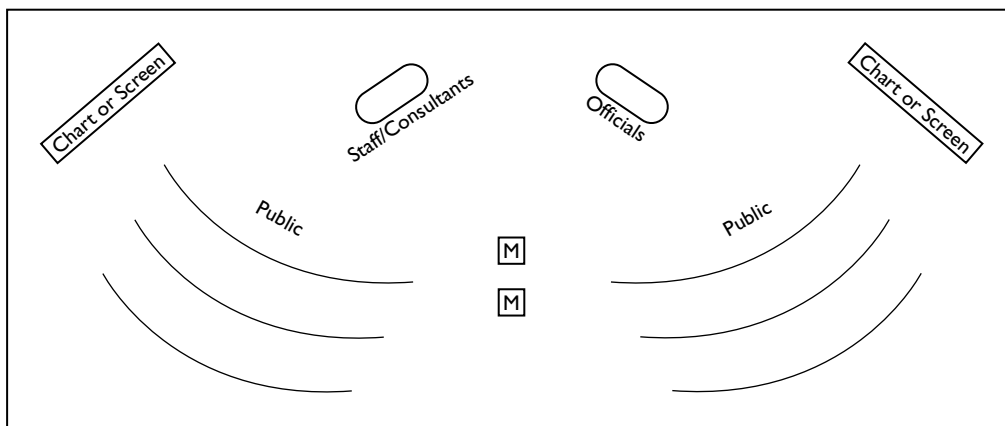
All citizens who own property within 400 feet of this property are invited to testify in person or write to the Department of Planning and Zoning before midnight of the second hearing, March 9. Any other interested parties also may speak at the hearing or write a letter.

For more information, contact Hortense Allen, project planner, Department of Planning and Zoning, City Hall, Room 725, or call Ms. Allen at 811-555-5656.

Please refer to accompanying map for specific site information. The legal petition for this case is on file as #1789222 PB and #5589167 PB.

# # # # #

Source: Elaine Cogan, 2000.



Hearing room arrangements should have public officials and staff seated at the same level as the audience. More than one screen often is provided for presentations, and they are positioned so the public and the officials can see them. Several microphones should be placed strategically so citizens have easy access.

#### HEARING ARRANGEMENT

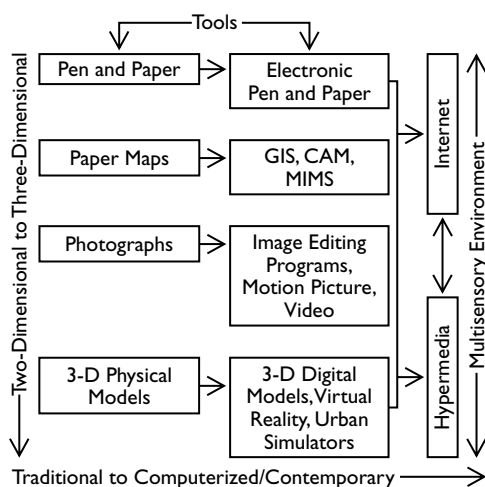
Source: Elaine Cogan.

## COMPUTER-BASED PUBLIC PARTICIPATION

Planners are increasingly recognizing the potential of computer-based participation as a key element in developing appropriate and effective solutions to community design and planning problems. As computer and Internet technology becomes more mainstream, planners should develop ways to harness these technologies to work more effectively with the public.

Computerized tools represent a paradigm shift in the planning and design process that may fundamentally change the way planners communicate ideas to the public. These computer-based participation tools presently consist of the following:

- *Electronic sketchboard.* This simulates traditional pen and paper sketching and provides additional capabilities of layering, tracing, and coloring.
- *Geographic information systems (GIS).* Use of GIS represents a move from a paper map to a digital one empowered with spatial analysis, navigation, and visualization capabilities.
- *Imaging software.* This software provides new ways of editing, manipulating, and animating traditional photographs.
- *Virtual reality (VR).* VR represents a move from 3-D physical models to digital ones that provide participants a degree of freedom in “experiencing” proposed projects before construction.
- *Urban simulation.* Building on virtual reality, urban simulation shows simulations of dynamic changes of the environment, including seasons, weather, landscape, pollution, and movement of people and automobile.
- *Hypermedia.* Also called *multimedia*, this is a new computerized environment that integrates multiple media, such as maps, photographs, videos, and sounds on a stand-alone PC.
- *Internet.* The Internet can provide a virtual setting of traditional same-place and same-time participation that integrates multiple tools, such as GIS, drawings, photographs, and virtual reality.



### THE PROGRESSION FROM TRADITIONAL TO COMPUTERIZED VISUALIZATION TOOLS

Source: Kheir Al-Kodmany, 2004.

### ADVANTAGES OF COMPUTERIZED TOOLS

#### Represent Contextual Data

Computerized tools can illustrate abstract concepts, such as environmental impacts, in a way that would be impossible with traditional tools, such as paper, photographs, or physical models. For example, with GIS, one can layer maps derived from different data on top of one another, query the database that is the source of the map information to highlight correlations between data, and visualize those correlations through the use of patterns and colors on the maps. Such tools also allow the user to extrude data into 3-D models and to simulate a fly- and walk-through experience. In a planning process that employs GIS, hypermedia, and virtual reality, average citizens are granted unprecedented access to a rich array of data presented in an easy-to-understand format. Computerized tools may enhance the public's interaction in the decision-making process because the tools provide so much more specific information that can be provided on the spot, thus enabling the public to explore alternatives quickly and with more competence.

#### Selective Display of Information

One key advantage of computerized tools is that they provide the capacity to selectively display information. When working on paper, even a relatively small amount of information can quickly become overwhelming and appear cluttered. The amount of detail displayed in computerized programs can be adjusted interactively as the scale is changed. Also, participants can easily overlay data by turning layers on and off as needed. In systems that incorporate hypermedia, different types of information can be queried and complex information displayed simply. Different types of data, such as sound, movies, animations, maps, and texts, can also be used selectively to enrich the study and analysis.

However, in a complex computerized data environment, citizens may not be able to freely participate because they will need “expert” assistance to manipulate data.

#### Geographic Scale

Another clear advantage of computerized tools is the ability to navigate geographic scale. With traditional tools, multiple maps are needed for each geographic scale: region, city, community, neighborhood, and individual lots. Computerized mapping allows for zooming in on a region, city, neighborhood, or even a specific house on a single map. As a result, computerized tools may increase interactivity, accessibility, and selectivity of information concerning issues at various geographic scales and therefore enhance discussion about contextual and spatial issues.

### CONCERNS ABOUT COMPUTER-BASED PARTICIPATION

#### Believability

One drawback of computerized tools is that the images can be so realistic and persuasive that they mislead people. It has been found that computer visu-

alization can lead to false conclusions by the public. Some critics have suggested that the use of impressive video and graphics will cause decisions to be made on the strength of visual images alone. Further, with the capability of creating very concrete, realistic images, there is the danger that audiences may see a generated image as constituting reality. The more realistic the maps and images appear, the more danger there is they will be accepted as “truthful.”

Similarly, computerized images can erroneously appear to be value-neutral. Just as these tools can be used to create compelling representations of future urban development, they can create compelling misrepresentations as well. Computer visualization must combat this by explicitly demonstrating the accuracy of the data being used and by providing accessibility to metadata (Obermeyer 1998).

#### Affordability

The hardware and software needed for computer visualization require a large capital outlay; thus the question of whether to implement advanced visualization technology often comes down to a question of resources. Depending on the scale of implementation and the richness of the data, these systems can vary widely in development and maintenance costs. Low-tech tools can provide an alternative when it is necessary to respond to a tight timeline or cost control that are a reality in many local planning arenas (Pietsch 2000).

#### Engagement

A prime consideration in any public participation-planning scheme is how well the tools engage the targeted participants. In general, traditional noncomputerized public participation methods are more participatory, experiential, and interactive. They provide more social interaction among participants. These approaches are particularly effective when the audience involves varied interest groups and stakeholders with opposing interests. They are also useful for conflict resolution when face-to-face interaction is needed to facilitate discussions. Practical experience asserts that the added value of real-time social interaction among neighbors, while using a physical simulation game, for example, surpasses computer simulations even when they have user-friendly computer interfaces. Computerized methods lose their advantages when people have to “work” the computer. Findings indicate that traditional methods of manipulating physical objects facilitate comprehension and retention more than working on a computer screen (Moughtin 2003).

#### Access to Institutions

In public participation, whether computerized or traditional, access to institutions and people remains the most challenging issue. Are citizens willing to participate? What are the motivating factors and incentives? Will their participation be taken seriously? Will their opinions make a difference in the decision-making process and ultimate outcome? How open are the planning processes? Are the powerful players willing to open up and allow others to participate through information sharing? Institutional challenges may continue regardless of technological advancement.

The foremost advantage of computerized participation is access to accurate representation and presentation of complex contextual information. That said, while computerized tools usually impress participants and help them attain a comprehensive understanding of the spatial relationships, these tools often fall short in allowing the participants to design and alter the representation; computerized tools must do a better job of allowing the public to “get their hands on” something. The real need is not to force a choice between the social benefits of low-tech meth-

ods and the efficiency and power of high-tech methods; rather, we need tools that support the integration of real worlds and virtual worlds by providing users with the flexibility to move along the continuum.

## REFERENCES

Moughtin, J.C., Rafael Cuesta, Christine Sarris, and Paola Signoretta. 2003. *Urban Design: Methods and Techniques*. 2nd ed. Oxford: Elsevier Press.

Obermeyer, Nancy J. 1998. “The Evolution of Public

Participation GIS.” *Cartography and Geographic Information Systems*. 25, no.2:65–66.

Pietsch, Susan M. 2000. “Computer Visualization in the Design Control of Urban Environments: A Literature Review.” *Environment and Planning B: Planning and Design*, 27, no. 4:521–536.

### See also:

*Charrettes*  
*Geographic Information Systems*  
Visualization