

Urban Design

An overview of the field, its techniques, and its uses



Main
Menu

Created by the Design Center for American Urban Landscape, University of Minnesota
for Community Planning and Economic Development, City of Minneapolis

Image locations:

From left:

East Village, Minneapolis

Linden Hills, Minneapolis

Nicollet Mall, Minneapolis

Central Avenue, Minneapolis

Urban Design

Contents

1. What is urban design?
2. The value of urban design
3. Issues in urban design
4. Approaches to urban design
5. A history of urban design
6. Scales of urban design
7. Analysis and representation techniques in urban design
8. Implementing urban design



©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

Main
Menu

[Contents](#) • [Urban Design](#) • [Approaches](#) • [History](#) • [Scales](#) • [Techniques](#) • [Implementation](#)
Urban Design

This overview of urban design is in eight sections. These are outlined below in order.

1. The presentation defines urban design as an activity that deals with the urban environment and that is practiced by several professions including planners, landscape architects, and architects.
2. Urban design has value for the public in that it can make better places.
3. Urban designers deal with a variety of issues including the physical environment and social needs.
4. There are a number of different approaches to the practice of urban design. Often a professional emphasizes a small range of approaches but the field is actually quite varied.
5. People have been designing towns and cities for a long time but urban design in its current form is at least partly a reaction to the architecture of the 1950s and 1960s, an architecture that was perceived by many to be inhumane.
6. As cities have become bigger, the potential scale of urban design has too. The sixth section outlines some of this range.
7. Given all this complexity, what can neighborhoods expect to get when they hire or work with an urban designer? The seventh section explains a number of the techniques that urban designers use to understand or analyze spaces and to represent options for change.
8. Finally, urban design needs to get implemented. However, such large projects rarely get built all at once. The final section of this presentation outlines the range of strategies for getting urban design implemented from education to construction.

Image locations:

South Street Seaport, NY (top)

Sculpture Garden, Minneapolis (bottom)

1. What is Urban Design?

Urban design is the making of better places for people.

It is usually done at a scale larger than a building, and usually with multiple groups involved.

It is an overlapping specialty within architecture, landscape architecture, and planning.

It tries to balance many considerations: physical form, functional needs, social issues, economic issues, community values, environmental sustainability.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

The core of the definition on the slide is from Carmona, et al. (2003, 3) who define “urban design as the *process* of making *better* places for people *than would otherwise be produced*.”

These four statements deal with a variety of issues:

- That urban design involves human environments.
- It is done at a large scale.
- There are many different groups of people who are affected by urban design—residents, visitors, business-owners, and governments.
- Several different fields lay claim to expertise in urban design.
- Overall, it is an area that has to take into account many different values and issues.

Urban Design in Minneapolis



©2003 Regents of the University of Minnesota. All Rights Reserved.
Used with the permission of Design Center for American Urban Landscape.

In Minneapolis, urban design can create long-term value, livability, and efficiency by coordinating investments in areas such as:

- Districts around new transit lines
- Commercial corridors
- Community corridors
- Neighborhood centers

[Main](#)
[Menu](#)

[Contents](#) • [Urban Design](#) • [Approaches](#) • [History](#) • [Scales](#) • [Techniques](#) • [Implementation](#)
Urban Design

In Minneapolis, urban design can create long-term value, livability, and efficiency by coordinating investments in areas such as:

- Districts around new transit lines
- Commercial corridors
- Community corridors
- Neighborhood centers

As areas like this are redeveloped, urban design can help ensure that the best possible places are created.

Image location: Downtown Minneapolis

2. The Value of Urban Design



©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

In an era of crowded freeways, placeless development, and environmental problems, urban design offers the possibility of creating places that are more attractive, satisfying, efficient, and environmentally sound.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

Places are created by many different participants—such as residents, architects, developers, road engineers, parks planners and investors—that each act in their own interests.

By focusing on the overall quality of the built environment, urban design can help coordinate individual efforts.

It can make better places—places that enrich human life, function efficiently, and take account of natural systems. It can balance physical, functional, social, community, and environmental values.

Image location: Maple Grove

3. Urban Design Issues

Urban designers must consider a wide variety of issues that affect the built environment:

Physical form
Functional needs
Human issues
Social equity
Community values



All images ©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

Main
Menu

Contents • [Urban Design](#) • Approaches • History • Scales • Techniques • Implementation

Urban Design

Urban designers must consider a wide variety of issues that affect the built environment:

- Physical form
- Functional needs
- Human issues
- Social equity
- Community values

Sometimes one issue is dominant, but in most situations all must be considered to some extent.

Image locations:

Hennepin Avenue and Lake Street, Minneapolis (top left)

Sibley Court, Saint Paul (top right)

Loring Park, Minneapolis (bottom right)

Humboldt Greenway, Minneapolis (bottom left)

Linden Hills, Minneapolis (center left)



All images ©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

Physical Form

The arrangement of physical elements in a place and their aesthetic character (proportion, scale, surfaces, organization) are the most visible aspect of urban design.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation

Urban Design

The arrangement of physical elements in a place and their aesthetic character (proportion, scale, surfaces, organization) are the most visible aspect of urban design.

In these two places illustrated on the slide—both big streets—roadways, trees, parking, grass, and buildings are arranged in different ways to create very different characters.

Designers use a number of different concepts to describe physical form. Some of these are listed below. For more detail see Carmona et al (2003) and Ching (1979) in resources list at the end of this slide show.

- Positive versus negative space: Positive space has a shape of its own, for example in a relatively enclosed street; negative space is the left over space around objects such as buildings.
- Permeability—how easy it is to move through a space.
- Organizational systems: In a visual sense, places may be organized to be symmetrical around an axis, in terms of a hierarchy of spaces or built elements, and to repetition of certain forms. Organization can also be based on function—for example the needs for different activities to be near each other.

Image locations:

Victory Memorial Parkway, at the border of Minneapolis and Robbinsdale (left)

Intersection of Bass Lake Road and Shingle Creek Parkway, Brooklyn Center (right)



©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

Functional Needs

Basic functions such as transportation, economic development, and ecology must be understood and incorporated in urban design.

Main
Menu

Contents • [Urban Design](#) • Approaches • History • Scales • Techniques • Implementation
Urban Design

Urban design deals with basic functions of the city such as transportation, economic development, and ecology.

Many of the signature projects of urban designers involve making big infrastructure investments more humane, for example improving the design of streets for pedestrians.

Image location:

Grand Avenue near Victoria Street, Saint Paul

Human Issues

Urban design is also concerned with how the built environment supports its users, such as its fit with human needs, sense of vitality, meaning, and history.



©2003 Regents of the University of Minnesota. All Rights Reserved.
Used with the permission of Design Center for American Urban Landscape.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

The support and comfort of users is a key consideration for making better places for people.

Support and comfort includes physical elements such as seating and water fountains, but it also includes cultural consideration such as community history and vitality.

Image location:

Minneapolis Sculpture Garden, Minneapolis



©2003 Regents of the University of Minnesota. All Rights Reserved.
Used with the permission of Design Center for American Urban Landscape.

Social Equity

Social vitality and equal access to opportunities can be encouraged through urban design.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

Urban design is centrally concerned with the design of public spaces. Creating spaces that can support the needs and desires of a diverse public is an important issue in urban design.

Image location:

Wolfe Park, St. Louis Park



©2003 Regents of the University of Minnesota. All Rights Reserved. Used with the permission of Design Center for American Urban Landscape.

Community Values

Urban design can help express shared priorities of the community, such as efficiency, fairness, and respect for nature.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

Urban design can help express shared priorities of the community, such as efficiency, fairness, and respect for nature.

In the Cedar Lake Wetlands, shown here, the community replaced open park lands with a storm water-cleansing wetland system, to protect the quality of water in the lake. Identifying this kind of trade-off based on community values is at the heart of the urban design process.

Image location:

Cedar Lake, Minneapolis

4. Approaches to Urban Design

There are different approaches to urban design, which are often used in combination with each other

1. Civic architecture—big or contextual projects
2. Urban restoration—(re)creating or filling in historical patterns
3. Participatory or community design
4. New town and land planning
5. Urban infrastructure e.g. streetscapes
6. Sustainable urban form from small to large scale

[More on urban design approaches](#)

Main
Menu

Contents • Urban Design • [Approaches](#) • History • Scales • Techniques • Implementation
Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on urban design approaches.

There are several different approaches to the practice of urban design. This list above outlines a range of such approaches. Many urban design professionals favor a small number of approaches.

The approaches include:

1. Civic architecture involves the design of large building complexes or individual buildings that consider the urban context.
2. Urban restoration preserves an existing historic fabric, or recreates some version of a historic urban pattern, often quite loosely.
3. Participatory or community design is less about a scale of work—though it tends to be small in scale—and more about a process that values public input, particularly from those who usually do not have a voice in the design and planning.
4. New town and land planning are two related areas, included here for comprehensiveness. Both build new developments generally in greenfield sites, at the scale of the subdivision (the smallest scale of land planning) to the city (the largest scale of new town planning).
5. Physical infrastructure includes the structures that help the city function—streets, sewers, utilities. In urban design urban infrastructure work humanizes some of these engineered elements.
6. Sustainable urban form considers the long term health of people and nature.

What urban design is not, or at least
not often these days:
a single vision written into the land



Source: Hofstra University Archives. Used by permission

[Main](#)
[Menu](#)

[Contents](#) • [Urban Design](#) • [Approaches](#) • [History](#) • [Scales](#) • [Techniques](#) • [Implementation](#)
[Urban Design](#)

Once, urban design was seen as a job for visionary individuals such as Robert Moses of New York, pictured here and responsible for a large number of urban renewal projects.

Today, urban design is more often a process of collaboration and consensus building between many individuals and institutions.

5. History of Urban Design, part 1

<u>Pre-industrial city</u>	Traditional design
<u>Industrial city</u>	Aesthetic, housing, and transportation problems as cities grow
<u>19th and Early 20th century</u>	Early attempts to beautify cities, rationalize transportation, create suburban alternatives
<u>Early 20th century</u>	Increasing gap between planners, housers, and designers doing “civic design”

[More on urban design history](#)

Main
Menu

Contents • Urban Design • Approaches • [History](#) • Scales • Techniques • Implementation
Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on the history of urban design.

Pre-industrial city:

Before the 19th century, cities were created through long-standing traditions of building.

Industrial city:

The rise of industry created new wealth in cities but living, transportation, and health conditions could be deplorable.

Late 19th/early 20th Century:

In this era, recognition of urban problems led cities to attempt civic beautification, improved transportation, and alternative suburban models such as garden cities. Gaps between the goals and methods of designers and planners appeared and grew wider.

1990s-2000s:

Success in redevelopment and growing dissatisfaction with sprawling cities fueled new interest in urban design, including sustainable growth patterns, new urbanism, ecological reclamation, and great coffee shops.

History of Urban Design, part 2

1950s and 1960s

Urban renewal, modernist architecture, and suburbs all seem ugly and inhumane

c. 1960

Urban design emerges in its contemporary form—key authors include J.Jacobs, Lynch, Cullen.

Educational programs develop in architecture; landscape architects do a lot in practice

1990s

Success of big revitalization projects and new rounds of criticisms of sprawl increase urban design interest among the public and in planning

[More on urban design history](#)

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on the history of urban design.

1950s-1960s:

Urban renewal policies and projects, modernist redevelopments, and rapid suburban expansion were important in this era. Contemporary urban design and historic preservation emerged out of critiques of these activities

1990s-2000s:

Success in redevelopment and growing dissatisfaction with sprawling cities fueled new interest in urban design, including sustainable growth patterns, new urbanism, ecological reclamation, and great coffee shops.

6. Scales

Urban design can be applied at a variety of scales

Areas



Site



Block



Center



District or
Neighborhood



City or Group of Cities



Metropolis

Linear systems



Street



Corridor

Other



Natural Systems

[More on scales](#)

Main
Menu

[Contents](#) • [Urban Design](#) • [Approaches](#) • [History](#) • [Scales](#) • [Techniques](#) • [Implementation](#)
Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on urban design scales.

Urban design happens at a variety of scales. At the smaller scales, such as the block or street, designers can create more detailed plans and designs. At the larger scales, such as the city or corridor, they more often develop guidelines, concepts, or frameworks that shape later detailed design.

7. Analysis and Representation Techniques in Urban Design

Many different techniques are used to understand the urban environment and to represent changes:

1. Observing and recording
2. Drawing physical plans and three dimensional analyses
3. Representing history and meaning
4. Analyzing density, activities, and movement or circulation
5. Understanding ecology and sustainability
6. Assessing public needs
7. Representing alternative options

[More on analysis techniques](#)

Main
Menu

Contents • Urban Design • Approaches • History • Scales • [Techniques](#) • Implementation
Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on analysis and representation techniques.

Designers use a number of techniques to come to understand places as they are now and to represent how they could be.

1. First are simple observations, recorded in some way. Most urban designers start their work by looking at a place and recording what is there through photography, drawing, and inventories. Inventories involve systematically collecting information on particular aspects of the place, for example locating all street trees or blank walls.
2. Urban designers also draw the space then see in two and three dimensions. This allows them to compare the size of the place with other places and to assess what can be physically fitted in.
3. The history and meaning of a place are important. Some aspects of history are very visible—such as historic buildings and landscapes—but others require close attention. Urban designers may use archives and historic maps to find what came before; they may also talk with residents and others about what is important about the place.
4. Several practical issues are important in urban design including the intensity of development that is present and possible in the area, what activities occur or could occur, and how people move to, from, and around the space.
5. Also important are the underlying natural systems that provide the framework for development.
6. In the past designers often thought they could understand public needs with little public input. However, today urban designers use a number of strategies to get ideas and feedback from the public.
7. Finally, urban designers use drawings, models, photographs, and computer simulations to show what changes could be like.

Common Proposals

When proposing changes, urban designers frequently use organizing strategies, and descriptive terminology, such as:

Areas and districts	revitalized blocks, new urbanist neighborhoods, urban villages
Corridors	green streets, waterfront promenades, greenways
Centers	town centers, activity nodes, transit-oriented development, landmarks
Gateways	gateway treatments, way-finding signage

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation

Urban Design

When neighborhoods hire urban designers, they frequently will hear terminology like the slide above.

8. Implementing Urban Design

Ideas become reality through many means, from actually building or planting through first raising awareness

- Built projects (buildings, infrastructure, art)
- Master plans
- Regulations and standards
- Policies, guidelines, performance criteria
- Incentives and bonuses
- Commissions and reviews
- Education/awareness (books, tours, talks)



©2003 Regents of the University of Minnesota. All Rights Reserved.
Used with the permission of Design Center for American Urban Landscape.

[More on implementation](#)

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation

Urban Design

NOTE: Click on the link to see an expanded presentation, with examples, on implementing urban design.

Urban design can be implemented in a number of ways. With the exception of the smallest projects it is rarely a quick process. It is often expensive and it frequently requires cooperation from many different property owners, government agencies, and residents.

The list above starts with the most concrete strategies and moves to the most general—raising awareness.

Image location:

Minneapolis Sculpture Garden, Minneapolis

Conclusion

1. What is urban design?
2. The value of urban design
3. Considerations in urban design
4. Approaches to urban design
5. A history of urban design
6. Scales of urban design
7. Analysis and representation techniques in urban design
8. Implementation strategies for urban design

Further Resources

- Camona, Matthew, Tim Heath, Taner Oc, Steve Tiesdell. 2003. *Public Places, Urban Spaces: The Dimensions of Urban Design*. Oxford: Architectural Press.
- Ching, Francis. 1979. *Architecture: Form, Space, Order*. New York: Van Nostrand Reinhold.
- Gehl, Jan. 1987. *Life Between Buildings: Using Public Space*. New York: Van Nostrand Reinhold.
- Jacobs, Jane. 1961. *Death and Life of Great American Cities*. New York: Random House.
- Jacobs, Allan. 1993. *Great Streets*. Cambridge: MIT Press.
- Lynch, Kevin. 1984. *Good City Form*. Cambridge: MIT Press.
- Whyte, William. 1988. *City: Rediscovering the Center*. New York: Doubleday.

Image Credits

All images by the Design Center for American Urban Landscape except as noted below:
Image on slide 2, Design Center for American Urban Landscape, collection of Ann Forsyth.
Image on slide 6, Design Center for American Urban Landscape, collection of Ann Forsyth.
Image on slide 13, Museum of the City of New York. Used by permission.
Image on slide 16, Metropolitan Council. Used by permission.
Image on slide 16, City of Minneapolis. Used by permission.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
U r b a n D e s i g n

Credits

This presentation was produced by the Design Center for American Urban Landscape, College of Architecture and Landscape Architecture, University of Minnesota:

Ann Forsyth, Director
Dan Marckel, Senior Research Fellow
Nancy Miller, Research Associate
Wira Noeradi, Research Fellow
Nathan Burt, Research Assistant
Matt Finn, Research Assistant
Ian Kaminski-Coughlin, Research Assistant
Allison Rockwell, Research Assistant
Jorge Salcedo, Research Assistant
Katie Thering, Research Specialist
David Lowe, Office Specialist II

This presentation was funded by the Minneapolis Community Planning and Economic Development Department. It was compiled with the guidance, review, and advice of the Community Planners in the CPED/Planning Division:

Lee Sheehy, CPED Executive Director
Barbara Sporlein, Planning Director
Pamela Miner, Community Planning Supervisor
Community Planners: Jennifer Bever, Jack Byers, Beth Elliot, Mark Garner, Mike Larson, and Tom Leighton.

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation

Urban Design

Credits

© Design Center for American Urban Landscape, College of Architecture and Landscape Architecture, University of Minnesota. The Design Center is solely responsible for statements and errors in the materials.

Permission is granted for use of this presentation for non-profit educational purposes. Acknowledgement is required. Stand-alone use of Design Center images is permitted with acknowledgement. Stand-alone use of non-Design Center images or materials requires permission of their authors.

If used as part of a larger project, the Design Center requests two copies of any materials thus produced. If used in its original state, please email to inform the Design Center of its use (dcaul@umn.edu)

Design Center for American Urban Landscape
1 Rapson Hall
89 Church Street
Minneapolis, MN 55455
612-625-9000
www.designcenter.umn.edu

Main
Menu

Contents • Urban Design • Approaches • History • Scales • Techniques • Implementation
Urban Design