

A blue textured background with white paper cut clouds and a small airplane hanging from the top.

2019 National Planning Conference – San Francisco

Preparing for the AICP Exam

Trevor Dick, AICP | Devin Lavigne, AICP





TODAY'S **OUTLINE**

1. Introduction

2. Overview of planningprep.com

3. How to prepare for the exam

4. Content review

- Fundamental Planning Knowledge
- Plan Making & Implementation
- Areas of Practice
- Leadership, Administration & Management
- AICP Code of Ethics & Professional Conduct

5. Conclusion

Introduction



Introductions

Trevor Dick, AICP, LEED AP

- Director of Development Strategy and Facilitation, City of Aurora, IL
- 20+ years public and private sector
- Illinois Professional Development Officer
- Education
 - BS, Urban and Regional Planning, Ryerson Polytechnic University

Devin Lavigne, AICP, LEED AP

- Principal, Houseal Lavigne Associates
- 20+ years public and private sector
- Adjunct Professor, University of Illinois
- Education
 - BS, Urban and Regional Planning, Ryerson Polytechnic University

Overview of planningprep.com



What is Planning Prep?

- Planning Prep (www.planningprep.com) was created in 2002
- Includes practice questions, practice exams, planning related links, article summaries, and discussion forums.
- Membership is free
- Over 1,000 questions and 7 practice exams
- Each multiple-choice question contains an explanation for each correct answer
- Links for further reading are also provided with our questions
- User statistics are tracked for each area of focus
- No affiliation with the APA or AICP

Overview of Planningprep

Planningprep.com

HOME CONTACT US FAQ SUGGEST QUESTION LOGIN

Welcome to Planningprep.com - the best way to prepare for the American Institute of Certified Planner's certification exam.

What is Planning Prep?

Planning Prep is a web-based study resource to help planners prepare for the American Institute of Certified Planners' certification exam.

Members have access to our growing database of practice questions, practice exams, planning related links.

Currently, we have **1668 practice questions** and **12 practice exams** aimed at refreshing, broadening, and testing their planning knowledge. Each question contains an explanation for each correct answer, so our members know why one answer is correct and another is not. Links for further reading are also provided with our questions, to help our members find additional information about the topic.

Membership

Planning Prep is now provided free of charge. Since the site has gone live we have established one of the most successful planning firms in the Country – **Houseal Lavigne Associates**. Unfortunately our dedication to the firm and our clients has meant we cannot put as much time into Planning Prep as we would like. Rather than let it die out we have decided to give the site to the profession and help out as many AICP hopefuls as we can. We have introduced features that will enable the user community to keep the site fresh and relevant. If you feel thankful and compelled to give something, please donate to our personal charitable cause, the National

Question of The Week

CRA is the better known acronym for which of the following:

- ☐ A) Central Reserve of America
- ☐ B) Community Reinvestment Act
- ☐ C) Community of Real Estate Association
- ☐ D) Center for Reinvestment Activity

Submit Clear

Important Dates

Early Bird Application Deadline: June 18, 2013
Final Application Deadline: July 30, 2013
Early Bird Notification Deadline: August 6, 2013
Final Notification Deadline: October 8, 2013
Testing window: November 4-18, 2013

Features

- 1668 practice questions, taken by random, by category (i.e. history, theory and law), or searchable by keyword. Questions

Continued Success

- Winner of the *2007 ILAPA Gold Award in the Planning Program, Project, or Tool Category*



- We have taught this course throughout the country including:
 - Chapters including:
 - Illinois, Kansas, Missouri, National Capital (Washington, DC), Texas
 - National APA Conferences:
 - 2012, 2013, 2014, 2015, 2016, 2017, 2018, 2019
 - Multiple AICP Training Webinars

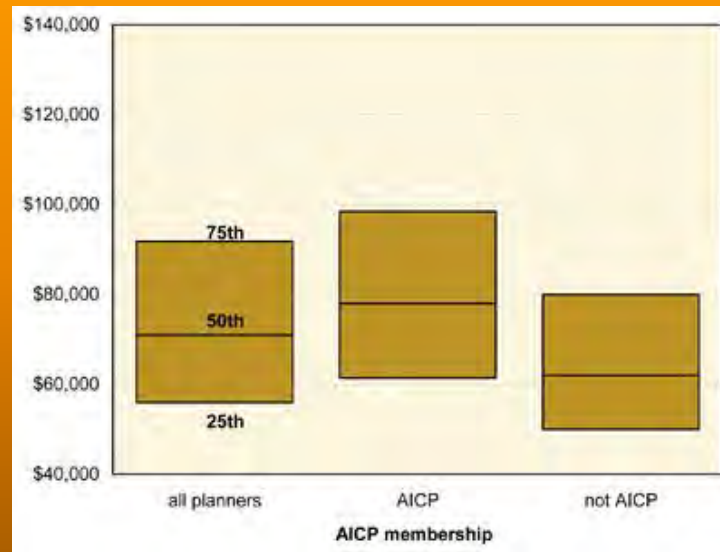
How to Prepare for the Exam



Benefits of AICP



- Without accounting for other variables, AICP members make, on average, \$16,000 more than non-AICP members.
- When we control for experience, AICP members still earn a higher salary across the board but at narrower margins.



Structure of the Exam



The purpose of the exam is that it tests the knowledge and skills of candidates eligible for membership in AICP relative to the practice of planning.

Questions on the exam include scenarios that cover a wide range of subject matter.

It tests how you think as a planner

Structure of the Exam

Prepare yourself for a seemingly endless number of these types of questions:





Reminds us of.... the Cognitive Reflection Test

The CRT was designed to assess a specific cognitive ability.

It assesses individuals' ability to suppress an intuitive and spontaneous ("system 1") wrong answer in favor of a reflective and deliberative ("system 2") right answer.

Practice

- A bat and a ball cost \$1.10 in total. The bat costs \$1.00 more than the ball. How much does the ball cost?
 1. \$0.10
 2. \$0.05
 3. \$0.15
 4. \$1.00

Practice

- If it takes 5 machines 5 minutes to make 5 widgets, how long would it take 100 machines to make 100 widgets?
 1. 1 hour
 2. 100 minutes
 3. 25 minutes
 4. 5 minutes

Practice

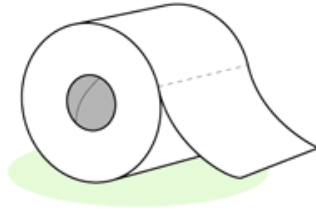
- In a lake, there is a patch of lily pads. Every day, the patch doubles in size. If it takes 48 days for the patch to cover the entire lake, how long would it take for the patch to cover half of the lake?
 1. 12 days
 2. 24 days
 3. 31 days
 4. 47 days

Practice

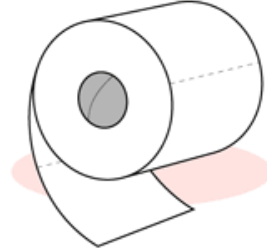
- Which of these numbers is greater than zero?

A. -1
B. 0
C. 1
D. 2

Types of Questions



This is right.
(good)



This is wrong.
(bad)



Structure of the Exam

170 multiple choice questions, 20 of which are pre-test and do not count towards the final score

Two main areas; knowledge (40%), and Skills (60%)

The exam is 4 hours

- 3 ½ hours for 170 questions
- ½ hour for tutorial

You will receive an unofficial result immediately



AICP Exam Outline

- **Fundamental Planning Knowledge (25%)**
- **Plan Making & Implementation (30%)**
- **Areas of Practice (30%)**
- **Leadership, Administration & Management (5%)**
- **AICP Code of Ethics & Professional Conduct (10%)**



Computer Based Exam

- Two 12 day windows
- Two different exams are administered each time
- Some questions are repeated from year to year, these are called "equators".

Your Exam Score

- Test takers receive an official score immediately after completing the computerized exam.
- A few weeks after the exam window closes, examinees that passed the exam will receive an email prompting them to begin paying their AICP dues through the APA website.
- Scores are reported on a scale of 25-75, with 55 as the passing score.

Common Myths



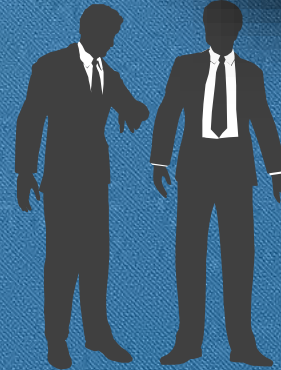
You can prepare by studying one book



Passing the exam is the end of the certification process

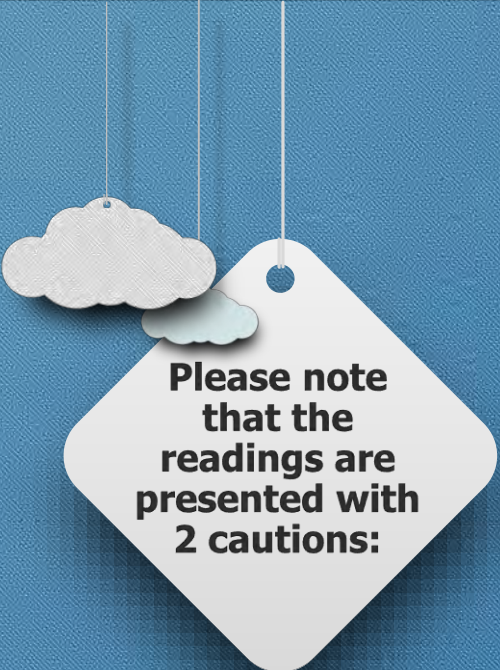


You can prepare by memorizing information




References and Recommended Study Guides

APA's Recommended Reading List – Refer to Booklet



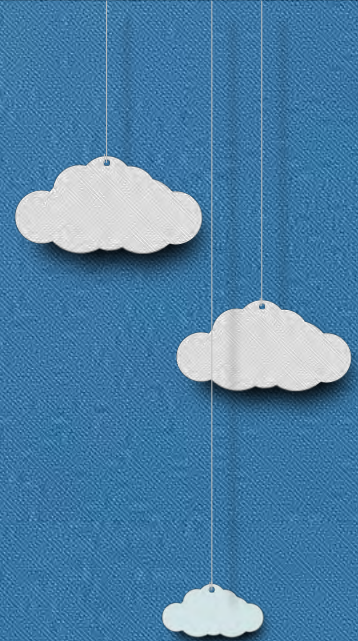
**Please note
that the
readings are
presented with
2 cautions:**

- 
1. No short reading list can span the entire range of material in the AICP exam. As a result, the list is not a condensed substitute for professional planning experience and education.
 2. AICP exam questions are drawn, only in similar subject matter preparatory context, from these readings.

Source: www.planning.org

APA's Recommended List

- No reading list can span the entire range of material in the AICP exam.
- It is not expected that exam takers will have read all the resources **cited and the readings are intended as "guidelines"**
- **Many readings are available for download on the web or in any "well stocked" planning office library.**
- Now presented in groups to allow you to focus your reading to the areas you need to improve.



References and Recommended Study Guides

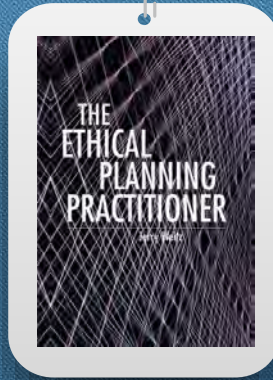
There are some books that we strongly recommend you read



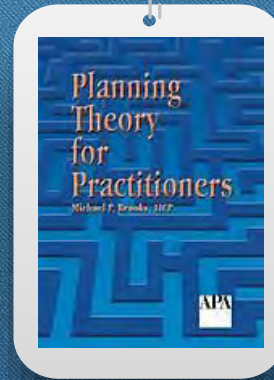
**The Practice of
Local
Government
Planning
3rd Edition,
published in
2000 by the
ICMA.**



**4th Edition
released in
2009
Local Planning:
Contemporary
Principles and
Practices**



**The Ethical Planning
Practitioner. Weitz, Jerry.
Chicago: APA Planners
Press. 2016.**



**Brooks, Michael.
Planning Theory for
Practitioners.
Chicago:
APA Planners Press
2002.**



**Planning and Urban
Design Standards by the
American Planning
Association (2006)**

APA Recommendations

- The APA recently launched a refreshed Exam Prep page on its main site.

<https://planning.org/certification/examprep>



APA Recommendations

Step 1: Contact Your Chapter/Section Professional Development Officer

- Your Professional Development Officer is a critical information source.
- PDOs are your best local resource and may even know of study groups in your area.
- Exam prep sessions offered by PDOs are a valuable starting point.
- They can provide detail on the application process, exam content, and testing tips.



APA Recommendations

Step 2: Map Your Study Plan

- Review the exam content online to understand the scope of the exam and areas on which you should focus
- Balance your exam prep according to the percentage for each category
- Study over multiple months
- Create a study plan
 - When, where, and how often should you study



APA Recommendations

Step 3: Select a Comprehensive Preparation Product

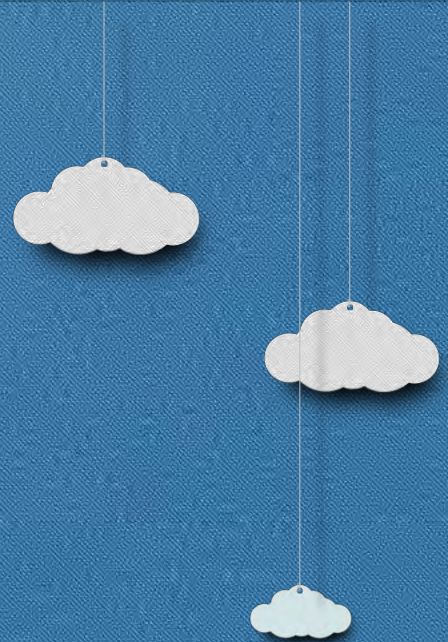
- A certification exam prep resource is an important component of exam preparation.
- Obtain additional information from suggested resources for clarity and to fill in areas where your experience/background may be weak.



APA Recommendations

Step 4: Access Online Resources

- Additional resources are available online.
- The following resources are recommended by the APA:
 - PAS Reports
 - Planning magazine
 - Selected Readings: AICP Certification Exam
 - APA Policy Guides
 - AICP Code of Ethics and Professional Conduct
 - National Planning Pioneers
 - Planning and Law Division Foundational Land Use Law Cases
 - American Planning History Since 1900
 - APA Chapter websites



Source: APA's website. www.planning.org



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APA Recommendations

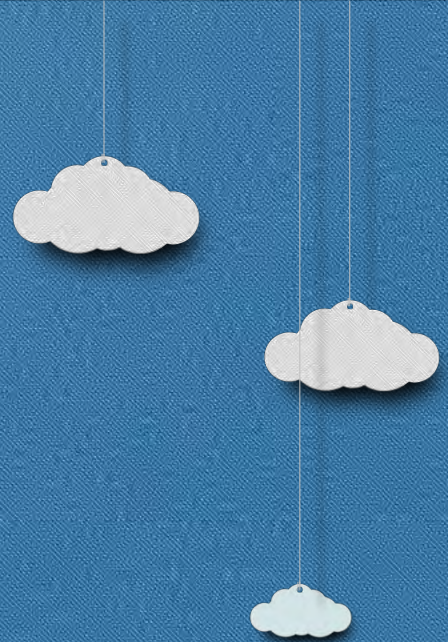
Step 5: Familiarize Yourself with Taking an Exam

- Practice exams will familiarize you with the structure and flow of exam questions and help identify areas of knowledge that need additional study
- APA provides on their website AICP Exam Illustrative Questions.



Additional Preparation Strategies

- We advise you to start studying for the exam early
- Focus on your weak areas
- Try and join a study group
- Think in terms of a National perspective
- Make sure you know where the test center is



AICP Candidate Pilot Program

- Students and graduates of PAB accredited programs can:
 - Enroll in the program at any time
 - Register for the AICP Certification Exam starting in December or June after you graduate
 - Use the payment program for exam fees
 - Take the exam prior to earning professional planning experience



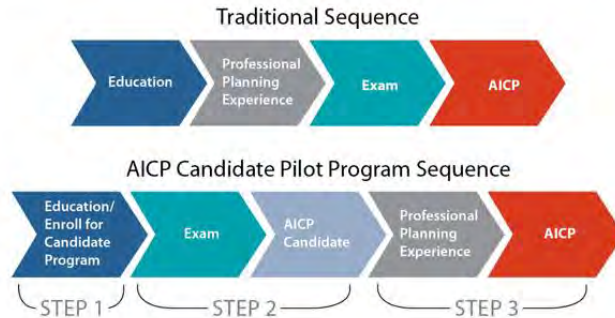
AICP Candidate Pilot Program

Realize the Benefits



Paths to AICP

The AICP Candidate Pilot Program provides you with a path to start earlier — the criteria to become AICP are the same.



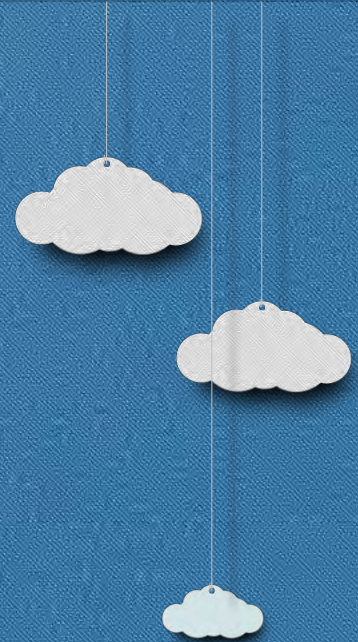
Source: APA's website. www.planning.org



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Certification Maintenance (CM)

- AICP members must earn a total of 32 CM credits within their two-year reporting period.
- A minimum of 1.5 credits must be on the topic of ethics, and another 1.5 credits must be on the topic of current planning law.
- AICP members can carry over a maximum of 16 credits from one reporting period into the subsequent reporting period; however, ethics and planning law credits cannot be carried over to the next two-year reporting period.
- AICP members who do not meet CM requirements within four years will lose AICP certification and will be obliged to seek recertification.





4 Content Review





4.1 Fundamental Planning Knowledge (25%)





Section 4.1:

FUNDAMENTAL PLANNING KNOWLEDGE

- **History of Planning, Planning Movements and Influences**
- **Foundational Legal Principles and Decisions**
- **Theories of, and about Planning**
- **Patterns of Human Settlement**
- **Statutory Basis of Planning**
- **General Terminology, Practices and Principles of Related Professions**
- **Natural, Social and Economic Systems**
- **Core Values of Planning**

Fundamental Planning Knowledge

HISTORY OF PLANNING, PLANNING MOVEMENTS, AND INFLUENCES ON PLANNING

Recommended

Reading List



Planning Theory for Practitioners

Brooks, Michael

Chicago: APA Planners Press. 2002.



Local Planning: Contemporary Principles and Practice

Hack, Gary, Eugenie L. Birch, Paul H. Sedway, and Mitchell J. Silver.

Washington: ICMA. 2009.



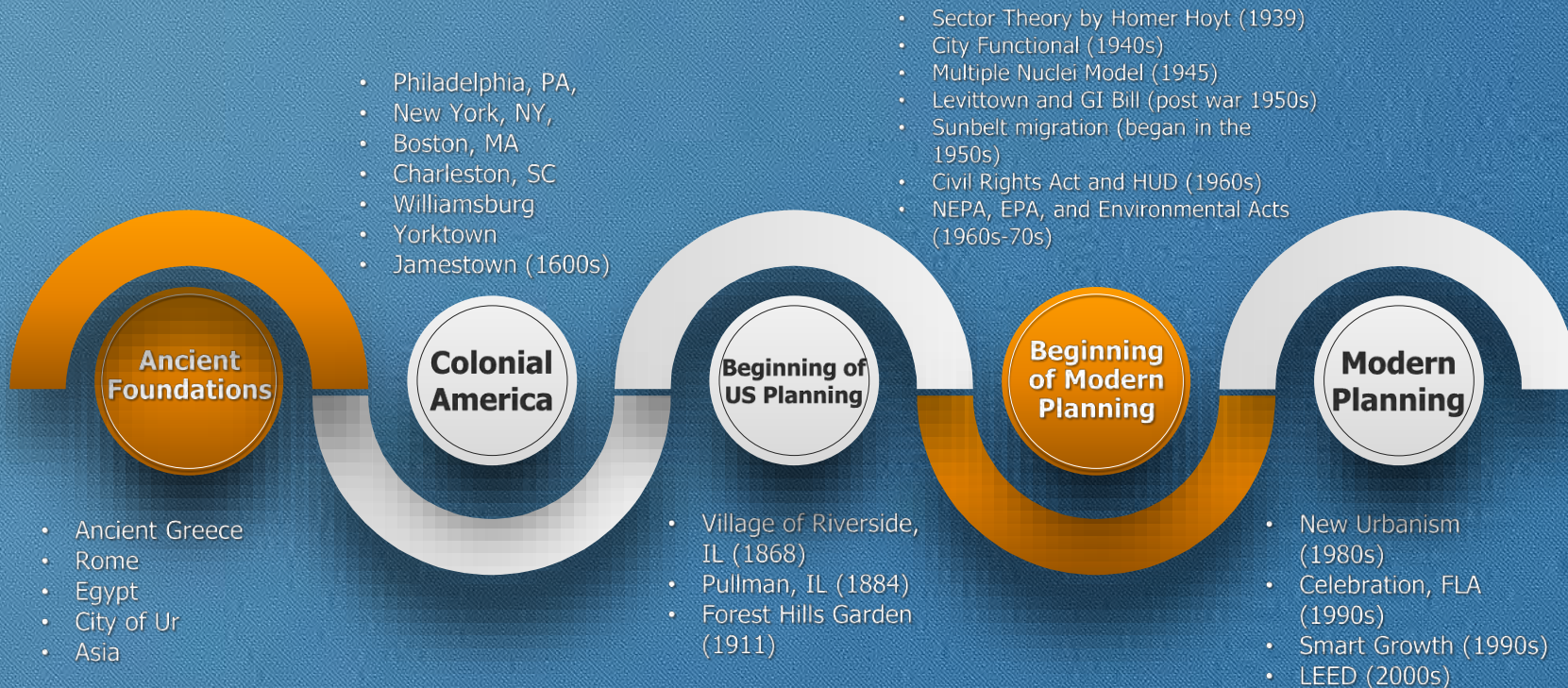
Timeline of American Planning History

Originally posted on the APA website

http://www.txplanning.org/media/files/page/Planning_History_1785_to_2000.pdf

History of Planning

Timeline



History of the American Planning Association (APA)



- 1909 The first National Conference on City Planning (Washington, D.C.)
- 1917 American City Planning Institute (renamed the American Institute of Planners (AIP) in 1939) was created
- 1934 American Society of Planning Officials (ASPO) was created
- In 1978 AIP and ASPO merge to form the APA
- 1999 AICP inaugurates a College of Fellows to recognize distinguished individual contributions

Examples of Planning Firsts



- **What City was the first skyscraper constructed in 1884?**
 - Chicago, Illinois
- **What was the first U.S. City that had a subway?**
 - Boston, Mass. (1897)
- **What year was the first planning commission enacted:**
 - 1907 in Hartford, Connecticut
- **The First Comprehensive Plan was completed in what US City in 1925?**
 - Cincinnati, Ohio

Planning Movements



- The Agrarian Philosophy
- Laissez Faire Philosophy
- Public Health Movement
- Garden City Movement
- City Beautiful Movement
- City Efficient Movement
- New Towns
- City Functional Movement
- New Urbanism (1980s)
- Edge Cities (1990s)
- Smart Growth (1990s)

Famous Planning Books and Authors



- **How the Other Half Lives (1890)** by Jacob Riis
- **Cities in Evolution (1915)** by Patrick Geddes
- **Neighborhood Unit (1929)** by Clarence Perry
- **The Image of the City (1960)** by Kevin Lynch
- **The Death and Life of Great American Cities (1961)** by Jane Jacobs
- **Design with Nature (1969)** by Ian McHarg
- **The Power Broker (1974)** by Robert Caro
- **Edge City: Life on the New Frontier (1991)** by Joel Garreau
- **Rural By Design (1994)** by Randall Arendt
- **The High Price of Free Parking (2005)** by Donald Shoup

Planning Pioneers



**Daniel
Burnham**



**Edward
Bassett**



**Ian
McHarg**



**Lawrence
Veiller**



**Patrick
Geddes**



**Paul
Davidoff**

APA's Planning Landmarks



- **The APA's Planning Landmark Awards are presented for projects "at least 25 years old that are historically significant, initiated a new direction in planning or impacted American planning, cities or regions over a broad range of time or space."** (Source: <https://www.planning.org/awards/landmarks.htm>)
- **Examples of APA Planning Landmarks:**
 - The Nine Square Plan of New Haven (1639)
 - The Plan of Annapolis (1695)
 - The Plan of the Vieux Carre, New Orleans (1721)
 - The Plan of Savannah (1733)
 - The 1791 Plan of Washington, DC (1791)
 - Central Park, New York City (1857)
 - Yellowstone National Park (1872)
 - The Denver Parks and Parkway System (1906+)
 - The Salt River Project (1911)
 - Forest Hills Gardens, Queens (1911+)
 - The Napa County Agricultural Preserve (1968)
 - The Sanibel Plan (2007)

Examples of Key People Involved in Planning



**Frank Lloyd
Wright**



**Jane
Jacobs**



**Robert
Moses**



**Saul
Alinsky**

Influences on Planning

01

Social Influences

Demographics, race, age, income

02

Political Influences

Elected and appointed officials, government policy, funding

03

Economic Influences

Housing values, sales tax, local, state and federal economy, jobs

04

Environmental Influences

Flooding, natural disasters, water, energy, preservation

Fundamental Planning Knowledge

Foundational Legal Principles and Decisions



Recommended

Reading List

APA Planning Magazine

Land Use and the Constitution

American Planning Association (ed.) Chicago: APA Planners Press, 1989

APA Policy Guides

APA Amicus Briefs

Land Use in a Nutshell

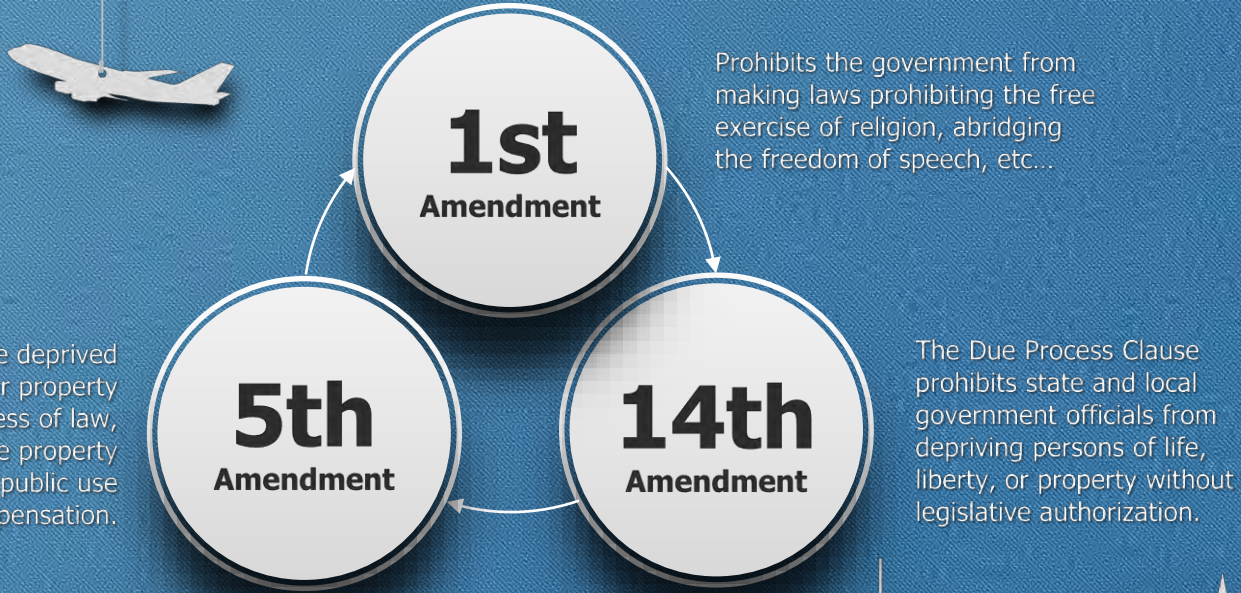
Wright and Gitelman

Timeline of American Planning History

Originally posted on the APA website

http://www.txplanning.org/media/files/page/Planning_History_1785_to_2000.pdf

Key Amendments to the United States Constitution Impacting Planning



Housing Law



- **Be familiar with important Housing Acts and housing case law:**
 - Housing Act of 1945
 - Housing Act of 1954
 - Housing Act of 1968

Housing Case Law Example: Mt. Laurel (1983)

The New Jersey Supreme Court rules that all 567 municipalities in the state must build their "fair share" of affordable housing. A precedent-setting case against racial segregation.

Property Rights



- **Be familiar with the impacts that planning has on property rights:**
 - Basis of zoning
 - Right to undertake land use planning

Property Rights Law Example: Village of Euclid v. Ambler Realty (1926)

The Court held that the zoning ordinance was not an unreasonable extension of the village's police power and it was not unconstitutional. It was the first significant case regarding zoning and served to substantially bolster zoning ordinances in towns throughout the U.S.

Eminent Domain



- The "takings" issue is addressed in the Fifth Amendment to the U.S. Constitution, which reads in part, "nor shall private property be taken for public use, without just compensation."

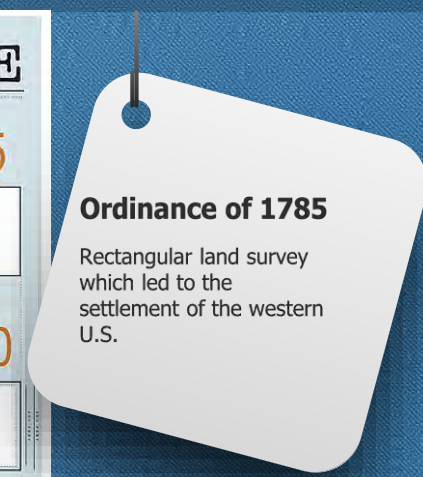
Eminent Domain Example: Kelo v. City of New London (2005)

A US Supreme Court case involving the use of eminent domain to transfer land from one private owner to another to further economic development. The Court held that the benefits a community enjoyed from economic growth qualified private redevelopment as a permissible "public use" under the Takings Clause of the Fifth Amendment.

Theories of and about Planning

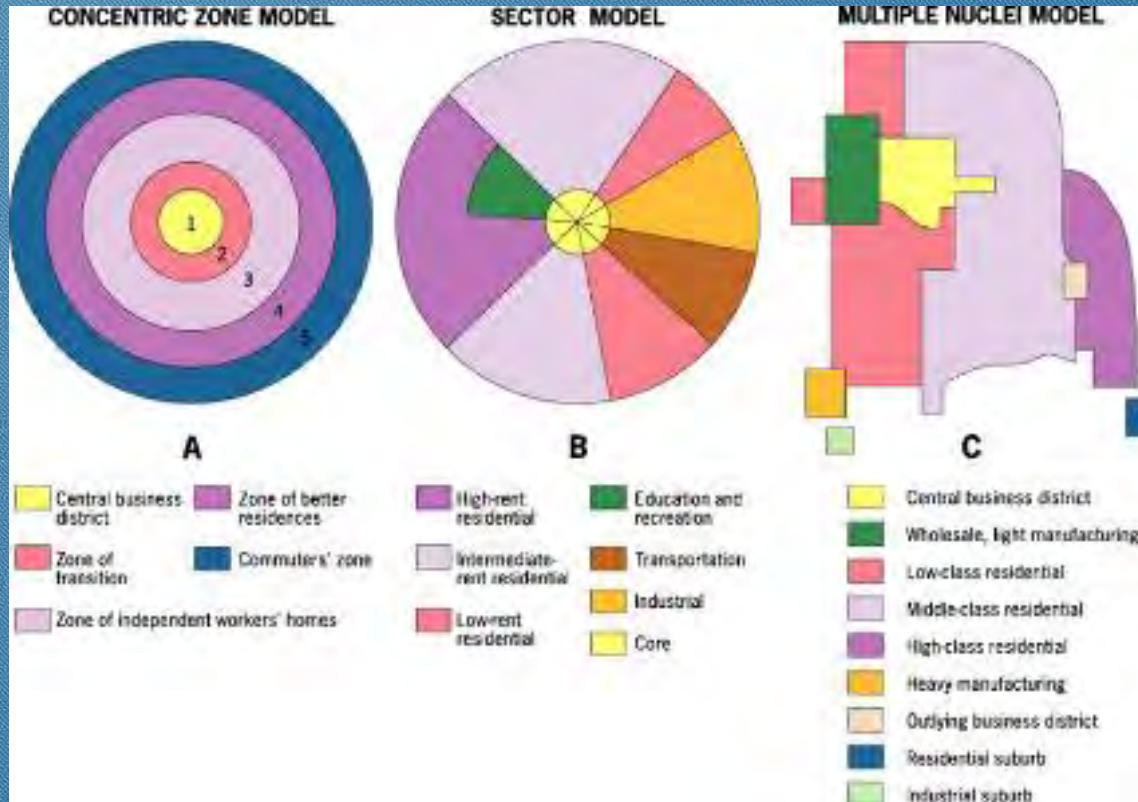


- Synoptic Planning
- Rational Planning Model
- Incremental Planning
- Transactive Planning Theory
- Advocacy Planning
- Radical Planning
- Utopianism
- Methodism



Rectangular land survey
which led to the
settlement of the western
U.S.

Growth and Development of Places Over Time



Role of Transportation in Shaping Urban Form



Shape of the City

- Cities have been shaped by the evolution of transportation infrastructure overtime
- Historically, movements were restricted to walking which created compact urban forms.
- Some early cities were based upon the grid street pattern
- Suburbanization saw the role and function of Central Business Districts shift outwards away from the city core.

Amount of Land Allocated for Transportation

- The amount of land allocated to transportation can be tied with the level of mobility.
- Think about how much land is now allocated to cities, from wider streets, parking lots, interchanges, rail, ports and airports.

Cultural Influences on the Form of Places



- Promotes tourism, arts education, creative industries and cultural districts/neighborhoods
- Creates an identity, positive image and local pride.
- Stresses historical preservation
- Needs public spaces and buildings such as museums, art centers, parks, concerts, stadiums, landmarks, and gathering places.

Statutory Basis of Planning



Relationship to National and State Government

- The police power is the basis for land use planning authority in the United States.
- This authority is usually delegated by state governments to local governments, including counties and cities.
- It is these local governments that most frequently exercise police power in land use planning matters.
- National and State government set policies and statutes that planners must follow.

Governance structure

- Be familiar with the typical municipal government structure and how a planning department often fits in.
- Typical Government Structure for Zoning
- The governing body is the local legislative branch which has most of the power and responsibility for zoning decisions.
- The appointed planning commission is typically advisory
- A board of adjustment or appeals commonly considers requests for variances or exceptions to zoning standards.

Typical Governance Structure



- The **governing body**, (i.e. city council, Village board, board of county commissioners, etc..) is the local legislative branch which has most of the power and responsibility for zoning decisions.
- The **appointed planning commission** is typically advisory to the governing body on zoning matters.
- A **board of adjustment or appeals**, which is appointed by elected officials, commonly considers requests for variances or exceptions to zoning standards.
- **Planning staff** supports the governing body, planning commission, and zoning board in their zoning functions.

Source: APA Chapters President Council 2015-16, Chapter 11 - Development Regulations by Teresa Wilkinson, AICP, Gretna, LA

General Terminology, Practices, And Principles Of Related Professions



- Planners do not create great communities alone.
- The planning profession excels with great teamwork.
- Planners work with several different professions including (but not limited to) public health professionals, architects, attorneys, engineers, realtors, landscape architects, and environmentalists.
- The following slides illustrate some examples of these key related professionals...

Public Health Profession



- Over the last several years there has been a strengthening between the public health and planning professions.

Cook County Department of Public Health's "Healthy HotSpot" Program

The program aims to multiply the number of places that make healthy living easier in neighborhoods.

Key goals are to help residents to eat better, move more, live tobacco-free, and respond to emergencies quicker.

The heart of the program is an interactive website that includes educational materials as well as an interactive map that shows where Healthy HotSpots are located within Cook County.

Source: <http://www.cookcountypublichealth.org/healthy-hotspot>

Architecture



- Architects are an important part of community development especially when it comes to the look and appearance, design, and function of buildings.
- Some of the best developments are a result of collaboration between planners and architects.
- For projects with the goal of sustainability, architects are often relied upon to design energy efficient buildings, and if LEED certification is desired, architects are often in charge of that pursuit.

General Terminology, Practices, And Principles Of Related Professions



Attorneys

- Attorneys are an integral part of the development process providing guidance and input especially when there is money involved, when entitlements are needed, or there are agreements that need to be entered into.
- Examples of areas that attorneys are often relied upon include development review, annexations, development agreements, real estate transactions, financing, land use decisions, zoning ordinances, and negotiations.
- Planners often work with attorneys on the same side, or are put in positions where they must negotiate with attorneys on behalf of municipalities.

Civil Engineers

- Civil engineers design, build, supervise, operate, and maintain construction projects and systems in the public and private sector, including roads, buildings, airports, tunnels, dams, bridges, and systems for water supply and sewage treatment.
- Planners often rely upon engineers to make plans become a reality.
- While planners may only identify where a new road should go, or where a new stormwater management system should be placed, it is the engineers that develop detailed plans that include cost estimates, budgets, and timelines that lead to actual construction.

General Terminology, Practices, And Principles Of Related Professions



Realtors

- Realtors and realtor groups can be advocates for good planning.
- Planners can also learn valuable information from realtors that will help to stay ahead of housing trends and needs.

Be familiar with some basic terminology:

- **Real estate agent:** Anyone who earns a real estate license can be called a real estate agent.
- **REALTOR®:** A real estate agent who is a member of the National Association of REALTORS®
- **Real estate broker:** A person who has taken education beyond the agent level as required by state laws and has passed a broker's license exam.
- Source: <http://www.realtor.com/advice/buy/whats-difference-real-estate-salesperson-broker/>

General Terminology, Practices, And Principles Of Related Professions



Landscape Architects

- Planners and Landscape Architects work closely on a number of different types of projects such as site plans, streetscapes, and park/open space developments.
- Landscape Architects help provide important information and input in the design process.

Environmentalists

- Planners may often work with other professions that are specialized in different areas of the environment – including biologists, scientists, and naturalists.
- Examples where planners and environmentalists may work closely together are in the identification of important trees, waterways, habitats or acquirers.
- Or it may be in situations where solar farms, or wind farms are to be established, or even where brownfields exist and what remediation options are available.

Natural, Social, and Economic Systems



Political Context

To be successful planners must navigate through the political waters.

Demographics

We must understand current demographics while also projecting future demographic trends.

Social Trends

Understand the social trends that impact planning.



Ecology and Water

Consider ecological conditions in your decision-making process.



Natural, Social, and Economic Systems




Health

The APA has taken great strides to support the integration of health and planning.

Climate

More local governments have adopted goals, policies, plans and programs that address climate change. Often referred to as Climate Action Plans (CAP).



Core Values of Planning






4.2 Plan Making and Implementation (30%)



Plan Making and Implementation



Recommended Reading List

Books

APA (ed.) Land Use and the Constitution. Chicago: APA Planners Press. 1989.

Dandekar, Hemalata. Planner's Use of Information (2nd ed.). Chicago: APA Planners Press. 2003.

Family Friendly Communities: "Using Smart Growth and Universal Design to Link the Needs of Children and the Aging Population." 2011.

Hack, Gary, Eugenie L. Birch, Paul H. Sedway, and Mitchell J. Silver. Local Planning: Contemporary Principles and Practice. Washington: ICMA. 2009.

APA PAS Reports

#548. Zoning as a Barrier to Multifamily Housing Development. Gerrit Knaap, Stuart Meck, Terry Moore, and Robert Parker. 2007. 70pp.

#561. Fiscal Impact Analysis: Methodologies for Planners. L. Carson Bise II. 2010. 68pp.

#564. E-Government. Revised Edition. Jennifer Evans-Cowley and Joseph Kitchen. 2011. 105pp.

#573. Working with Planning Consultants. Eric Damian Kelly, FAICP. 2013. 72pp.

#17. "Population Forecasting" Information Report No. 17, 1950,

Other Sources

Planners' Communications Guide 2.0.

United States Census Bureau: 2010 Census Briefs and Reports.



Section 4.2:

PLAN MAKING AND IMPLEMENTATION

- **Conducting Research And Acquiring Knowledge**
- **Spatial Analysis**
- **Public Engagement**
- **Communication**
- **Preparing to Plan**
- **Formulating Plans and Policies**
- **Plan Implementation**
- **Monitoring and Assessment**
- **Project or Program Management**
- **Social Justice**

Quantitative Research



Quantitative Research

- Population Estimates and Projections
- Shift Share Analysis
- Comparing Alternatives with Unequal Lives
- Budgeting
- Finance & Cost Analysis
- Benefit/Cost Analysis

Types of Data

- **Discrete** – Set of finite data values (e.g. count or score), integers only
- **Continuous** – Values in a continuous range (e.g. temperature or height)
- **Nominal** – Values represent labels/names (e.g. 1=Good, 2=Bad)

Quantitative Research



Types of Scales

- **Ordinal** – Number indicates position in a list, ranking
- **Interval** – Measurement between values is proportional through the range (e.g. time, ruler)
- **Ratio** – Ratio between intervals is independent of the unit of measurement or zero point(e.g. Floor Area Ratio)

Key Terms

- **Variance** - a measure of how far a set of numbers is spread out
- **Standard Deviation** – the measurement of variability or dispersion around a mean (square root of variance) “how a typical number differs from the rest”
 - A low standard deviation
 - A high standard deviation
 - Z-Score

Quantitative Research



Mean

Average

Median

Value that divides a group of numbers into two equal parts

Mode

Value with the highest frequency

Range

Difference between the largest and smallest values

Mean, Median, Mode and Range



3, 4, 6, 8, 3, 6, 11	\$21,000	\$17,600
17, 5, 23, 6, 18, 21	\$37,400	\$18,320
3, 17, 20, 20, 4, 16	\$31,600	\$20,010

Mean	
Median	
Mode	
Range	

Mean, Median, Mode and Range



3, 4, 6, 8, 3, 6, 11	\$21,000	\$17,600
17, 5, 23, 6, 18, 21	\$37,400	\$18,320
3, 17, 20, 20, 4, 16	\$31,600	\$20,010

Mean	11.10526	\$24,321.67
Median	8	$(\$20,010 + \$21,000) / 2 = \$20,505$
Mode	3, 6	All Values
Range	$23 - 3 = 20$	$\$37,400 - \$17,600 = \$19,800$

Quantitative Research



U.S. Census

- The census is a count of everyone living in the United States every 10 years.
- The census is mandated by the U.S. Constitution.
- Census data are used to distribute Congressional seats to states, to make decisions about what community services to provide, and to distribute \$400 billion in federal funds to local, state and tribal governments each year.

Surveying

- Be familiar with the different types of survey tools available:
 - Face-to-face
 - Telephone
 - Mail
 - Web-based
- When should you use a certain survey method?
- What are the pros and cons?
- Know what sample size you need? What should your confidence level be? How do you calculate your response rate?

Qualitative Research



- Gathers information that is not in numerical form.
- Typically descriptive data and as such is harder to analyze than quantitative data.
- Unlike quantitative “numbers” -- qualitative analysis yields data in words and images.
- Planners can obtain qualitative data by undertaking field research, conducting interviews, holding a focus group, and taking photography.



Mapping and GIS



Mapping:

- Visualizing data is a powerful way for planners to tell their story.
- For many, maps are easier to understand than a large database or spreadsheet of information.

GIS:

- Used for collection, analysis, and modeling of spatial and geographic data.
- GIS is common in planning offices because the cost has decreased, the analytical skills of planners has increased, and large amounts of data has become readily available.

Interpretation

- Maps may not only show locations, or area and distances, but special analysis can also show how places are related, help with detecting patterns, and assisting with projections.

Mapping and GIS

Lockport I-355 Corridor Master Plan Update

Bruce Road Subarea

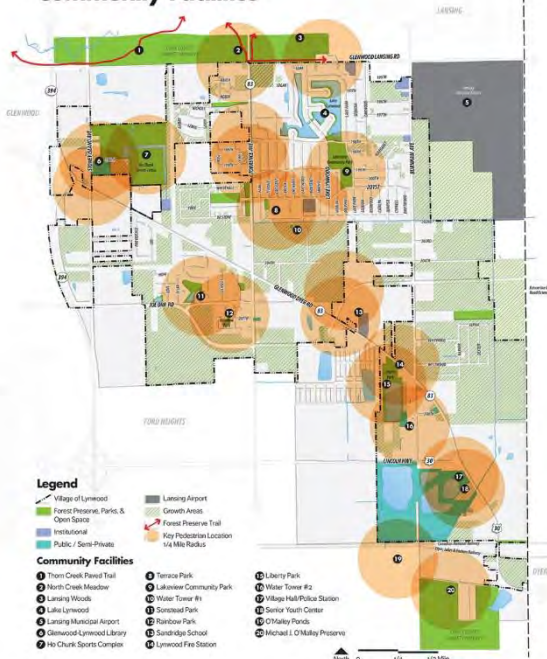
The Land Use Framework Plan for the Bruce Road Sub-Area anticipates the construction of the future Bruce Road interchange at I-355, and provides a mix of land uses to capitalize on the future improvements. Over time, the new interchange, Bruce Road improvements, and a new bridge over the Des Plaines River will dramatically alter the character of the Bruce Road corridor. The subarea includes retail/commercial, residential, light industrial/business park, and office/business park uses.



Legend

- Study Area Boundary
- Lockport City Limits
- Creek / Drainage
- Floodplain
- Key Roadway / Extension
- Streets / Network Connection
- Buffering / Screening
- Traffic Authority Facility
- Light Industrial / Business Park
- Parks / Open Space
- Residential
- Commercial
- Office / Business Park
- Public / Semi-Public

Community Facilities



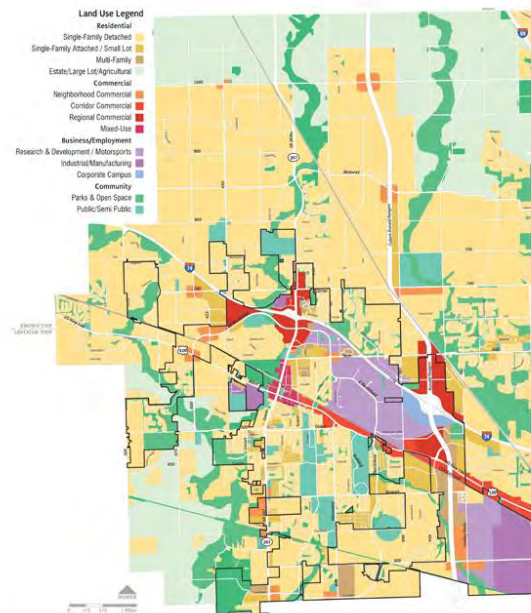
Legend

- Village of Lynwood
- Forest Preserve, Parks, & Open Space
- Institutional
- Public / Semi-Private
- Lynwood Airport
- Growth Areas
- Forest Preserve Trail
- 1/4 Mile Radius

Community Facilities

- 1 Thorn Creek Paved Trail
- 2 North Creek Meadow
- 3 Lynwood Woods
- 4 Lake Lynwood
- 5 Lynwood Municipal Airport
- 6 Lynwood Library
- 7 St. Charles Sports Complex
- 8 Terrace Park
- 9 Lakeside Community Park
- 10 Water Tower Park
- 11 Snowedown Park
- 12 Rainbow Park
- 13 Sandridge School
- 14 Lynwood Fire Station
- 15 Liberty Park
- 16 Water Tower #2
- 17 Village Hall/Police Station
- 18 Senior Youth Center
- 19 O'Malley Ponds
- 20 Michael J. O'Malley Preserve

Land Use Plan



Public Engagement



- Public engagement is at the core of the planning profession.
- It is the planner's job to make sure that public is involved effectively with a special goal to include low-income, minority, and historically underrepresented communities.
- Why is public participation so important?
 - It informs the public
 - It helps to protect the public
 - Results in better plans
 - Builds consensus
 - Increases the likelihood of implementation



Participation Methods



- Meetings, Presentations and Workshops
- Surveys (Mail, Telephone, Website, Face to Face)
- Concerns about sample size, cost, possible bias
- Visioning Sessions
- Strength, Weaknesses, Opportunities, Threats (SWOT) Analysis
- Charrettes
- Project Website
- Delphi Method



Social Media



- In today's world, using social media is an important tool for planners to use correctly.
- Multiple social media apps are available (and continues to grow) but it's important to remember that no matter what social media app/tool that you use to keep the information updated.

APA's Communication Guide 2.0 Section 4.3: Social Media.

- Using various social media platforms should be used to promote the field of planning and your specific planning messages.
- Remember to remain in compliance with open meeting laws.
- Establish social media guidelines.

Source: <https://www.planning.org/communicationsguide/section03/>

Social Media



Open Meeting Laws and Social Media Guidelines

- Establishing written social media guidelines is a good first step to ensure consistency and clarity about what is "said" about the municipality on social media.
- Example -- ***MetroPlan*** -- Orlando's Public Involvement Plan specifically addresses access, posting of comments, and public record keeping for social media.

Sunshine Laws and Open Meetings Act

- Sunshine Laws require meetings, decisions, and records of regulatory authorities be made available to the public.
- Social media poses a challenge to Sunshine Laws as it can be difficult to determine if a tweet, or a post is a record.
- Because regulations can vary depending on the area, it's critical to consult records retention laws and policies of the jurisdiction to determine how your organization should act in these situations.
- Source: APA's Communication Guide 2.0., Section 4.3: Social Media.
<https://www.planning.org/communicationsguide/section03>

Advocacy

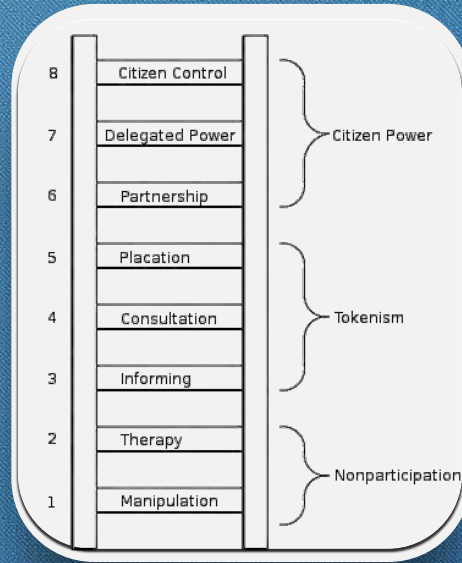


Advocacy Planning

- Created in the 1960s by Paul Davidoff.
- It is a pluralistic and inclusive planning theory where planners seek to represent the interests of various groups within society.

Ladder of Citizen Participation

- Sherry R. Arnstein



Alinsky's Organizations

- These organizations are formed when an invitation is received from a neighborhood or organization that has funding.
- An organizer is sent to the neighborhood who then identifies the problems, develops citizen awareness, and creates action.
- Part of the process is for the organizer to recruit local leaders

Communication



- To succeed planners must have excellent written and verbal communication skills.
 1. Clear and understandable visual, written, and spoken concepts
 2. Building relationships
 3. Conducting meetings
 4. Media relations

Tips

- When either writing or public speaking planners must have a clear and understandable message.
- As John Houseal often reminds planners - "Tell the story."
- Uninteresting, or rambling messages will lose your audience quickly.
- Be able to adapt your presentation style based upon the audience.
- Avoid using too much "planning jargon".

Visioning, goal setting, identifying key issues



- When beginning a planning exercise, one of the first steps should be to meet with stakeholders to determine what the overall vision for the project should be.
- Once an overall vision has been identified – goals that meet that vision should be set.
- It's also important to find out what the key issues are. These can be broad or specific – but these issues should be considered throughout the planning process – and ideally should be addressed in the plan's recommendations.
- It's important to not only consider existing issues, but also try and determine any future issues that should be addressed.

Forecasting



- Estimating both current and future populations is important for long range planning and future governmental funding.
- Population estimates are important to assist:
 - Governmental Agencies
 - Decision Makers (i.e. City Council)
 - Taxing Districts (schools, parks)
 - Senior services and facilities
 - Determining and receiving Federal and State funding

Population Estimate Terms



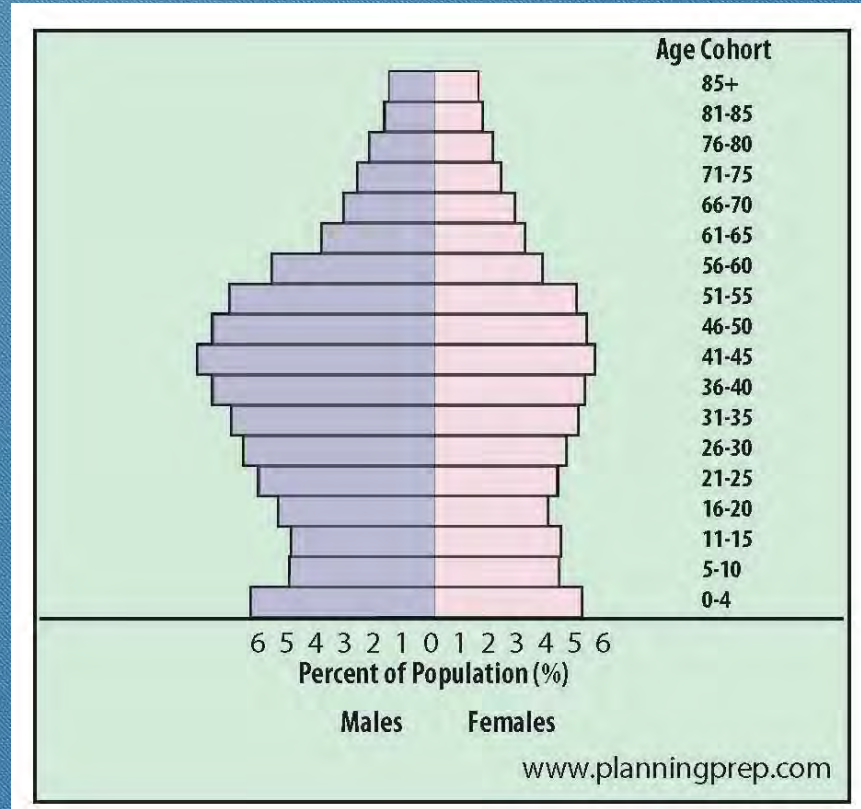
- **Population** – a collection that contains anything
- **Sample** – a subset of that population
 - **Random Sample** – a randomly selected sample, where each member of the population had an equal chance of being selected – **CRITICAL TO VALIDITY**
 - **Stratified Random Sample** – variation of random sample, but the population is divided into mutually exclusive groups (strata)
- **Estimates** - are calculated for current population levels
 - **Estimating**
 - **Migration and Natural Increase**
 - **Ratio/Step Down**
 - **Symptomatic Methods**

Population Estimate Terms



- **Forecasts** - are subjective and include projections
- **Projections** - are calculated for future population levels
 - Cohort Survival
 - Net Migration and Natural Increase
 - Employment Driven
 - Step Down
 - Mathematic & Graphics
 - Holding Capacity
- **Migration** - is the movement of people in and out of a study area
- **Natural Increase** - is the crude birth rate minus the crude death rate of a population

Population Pyramid

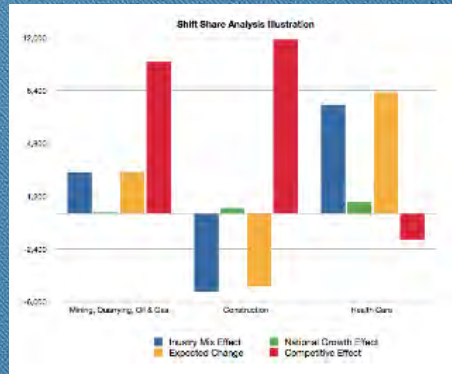


Shift Share Analysis and Location Quotient



Shift Share Analysis

- Determines what portions of regional economic growth or decline can be attributed to national, economic industry, and regional factors.
- Helps identify industries where a regional economy has competitive advantages over the larger economy.



Source: Understanding Shift Share, December 5, 2011 By Rob Sentz <http://www.economicmodeling.com/wp-content/uploads/shift-share-illustration.png>

Location Quotient

- Ratio of proportion of local employment in one sector to similar proportion in national economy.
- Used to identify the degree of self-sufficiency in an employment sector.
- Only 3 outcomes:
 - $LQ < 1.0$ suggests that local employment is less than was expected for a given industry.
 - A $LQ = 1.0$ suggests that the local employment is exactly sufficient to meet the local demand
 - A $LQ > 1.0$ suggests local employment is greater than expected and it is therefore assumed extra jobs and they must export their goods and services

Creating and Evaluating Alternatives



- As part of the planning process you may create alternatives. For example, if you are creating a community-wide comprehensive plan there may be a key redevelopment site that may have the opportunity to develop at different intensities, or with different uses.
- Consider evaluating the alternatives visually (for example different site plans for the site) or you may show potential development impacts for each alternative.
- Each alternative should be evaluated by stakeholders to ensure the most efficient and realistic and/or cost effective way to realize the plan's vision/goals.
- During this step each alternative should be weighed given its potential positive and negative effects and impacts on the community.

Visualization Techniques



- Over the last few years the variety – and quality – of tools available to planners to help create visuals of our plans and ideas continues to grow.
- These tools also can encourage public input and participation.
- Be familiar with some of the key techniques; when they are appropriate; and potential issues.

Visualization Techniques



Plan Implementation



Update Codes and Regulations

- Future Land Use Plans
- Zoning Map and Codes
 - PUD, Overlay, TDRs, Incentive, Intensity, FAR, Bulk
- Zoning Administration
- Subdivision Regulations

Understand the typical Administration and Approval Process

- Plan Commission
- Zoning Board of Appeals
- City Council

Decision Maker Buy-in

- Local decision-makers – possibly elected/appointed officials, the public, or most likely both – need to **embrace the plan's recommendations and work** towards implementation.

Budgeting



Budgeting

- **Why is a budget important to planners?**
- **Understand the differences between capital and operating budgets**
- **Budget Preparation**
- **Revenue**
 - **Identify Sources**
- **Forecasting**
 - **Estimate expenses**

Finance

- Equity versus efficiency
- Horizontal versus Vertical Equity
- Market Value
- Progressive, proportional and regressive taxation
- Cost Analysis
 - Goals Achievement Matrix (GAM)
 - Cost Effectiveness Analysis
 - Cost Benefit Analysis
 - Cost Revenue Analysis

More information about budgeting and finance is discussed later in Section IV: Leadership, Administration, and Management: Internal Organizational Management

Demonstration Projects



- Over the last few years it seems that more communities are installing demonstration projects to help implement long-term strategies.
- Demonstration projects are usually up for only short-term, and are small-scale, however while they are up they can influence long-term change.

Denver 21st St Demonstration Project (*as of 4.19.2017*)

- In 2015, Denver partnered with the Downtown Denver Partnership and the Colorado Rockies to continue it's the vision and urban design plan for 21st Street.
- To test the design concepts the City is working to fund a demonstration project.
- Some concepts include new and expanded streetscapes, pedestrian seating, adaptable special event tents, bike corrals, and street closures.

Source: City of Denver. 2017 <https://www.denvergov.org/content/denvergov/en/community-planning-and-development/planning-and-design/plans-in-progress/21st-wynkoop.html>



Monitoring and Assessment



Measures of Performance

- **Performance measurement involves the regular measurement of results, which builds data on the effectiveness and success of programs and developments.**
- **Consider what outcomes matter, how they should be measured, and if there are any costs/time issues that could limit the measurements.**
- **In general, determining measures of performance is an excellent way to track a plan's progress, it helps sets workload priorities, and assists in budgeting.**
- **Examples of performance measures include: vacancy rates, housing permits, census data, sales tax, jobs, etc...**

Outcome Indicators

- **An outcome indicator is a specific, noticeable, and measurable characteristic or change that represents achievement of a particular outcome.**

Project or Program Management



RFI, RFPs and RFQs

Grants

Preparing budgets

Project or Program Management



Managing Contracts

Scheduling

Allocating Staff



Social Justice



Planning for Diverse or Underserved Communities

- Planners must advocate for social justice.
- Our Code of Ethics states "*we shall seek social justice by working to expand choice and opportunity for all persons. Recognizing a special responsibility to plan for the needs of the disadvantaged and to promote racial and economic integration.*"
- This is especially important today as the country's demographics continue to become more diverse and economic gaps become even greater.

Social Empowerment

- In planning, especially during the 1960s planning began to see grassroots organizations that were created to solve local issues.
- Planners at all levels should support grassroot organizations and also make sure during planning processes that residents' concerns are taken into account.