

Institutional Economics & Path Dependence Applicability to Planning in the United States

Jan Whittington

University of Washington

Global Planning Course

April 22, 2018



AGENDA

Big Picture, Theory, and History

- > Getting Situated
- > Historical Overview of Planning in the USA
- > Planning and Markets
- > Understanding Markets
- > Institutional Economics
- > Path Dependence
- > Political Economy of the USA
- > The Purpose of Planning



GETTING SITUATED

- 
- > From the Netherlands
 - > to the United States of America



North America

Legend

Google Earth

US Dept of State Geographer

©2018 Google

Image Landsat / Copernicus

Data SIO, NOAA, U.S. Navy, NGA, GEBCO

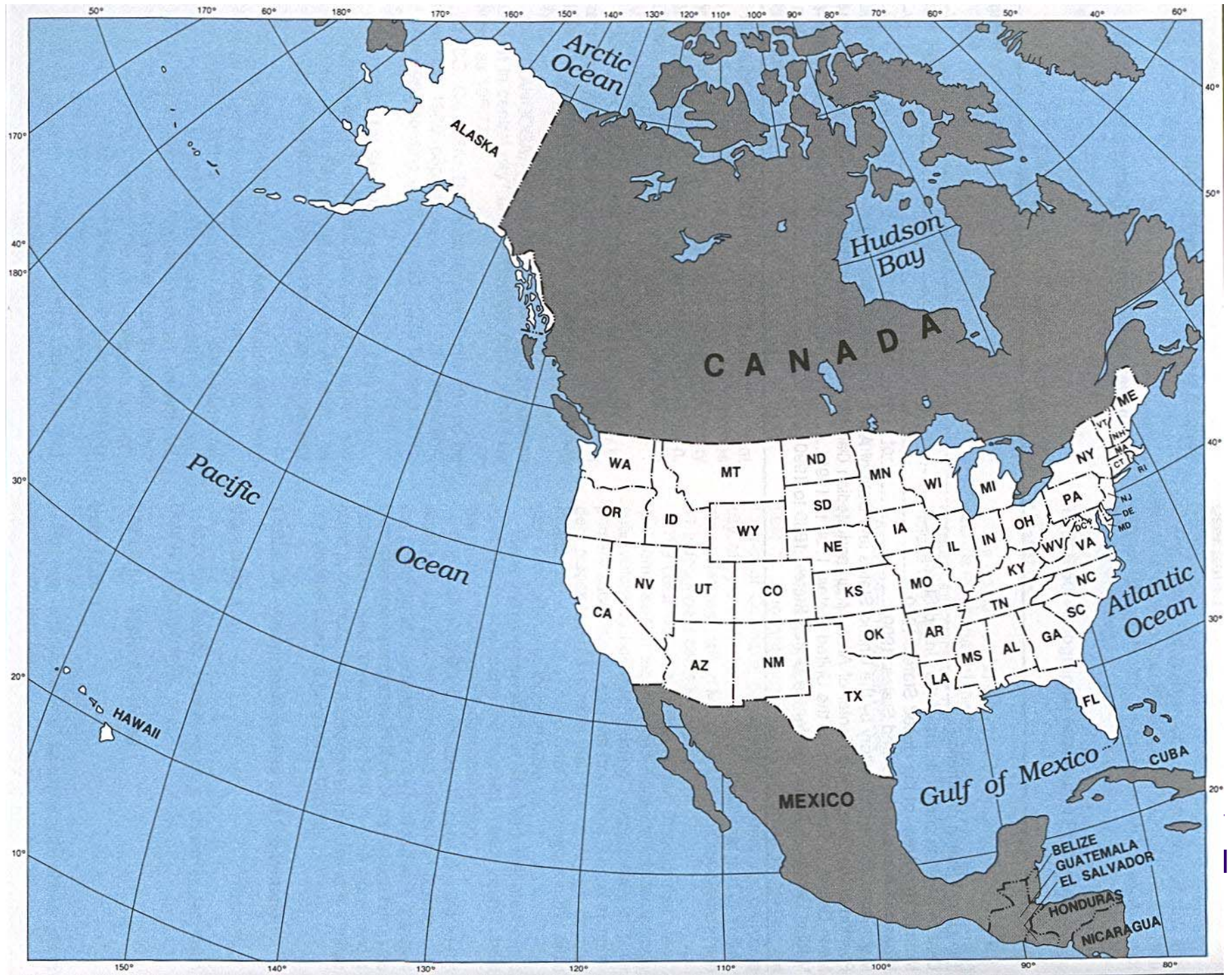
View from Space (Altitude: 6095 mi)

N

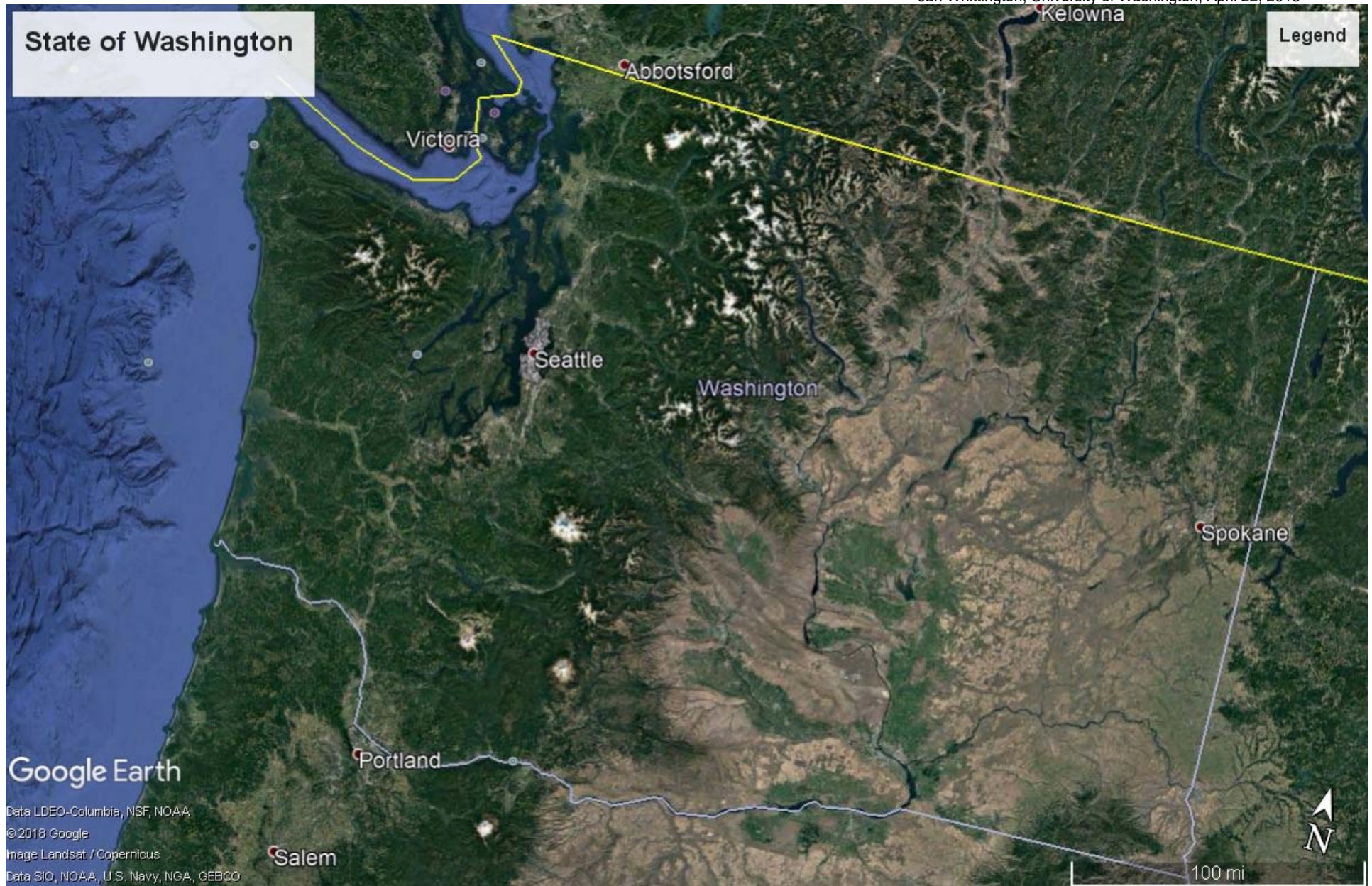




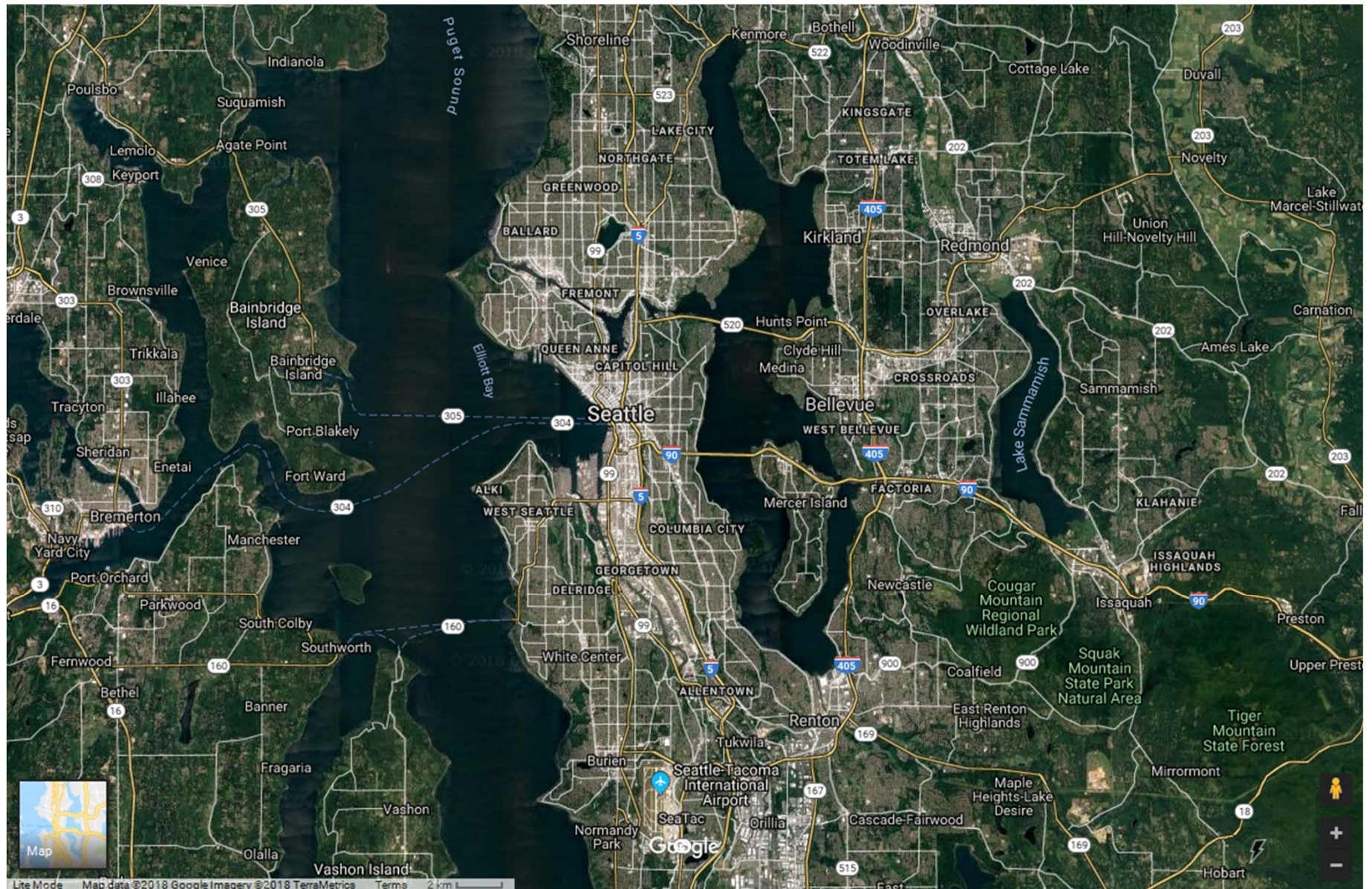
W

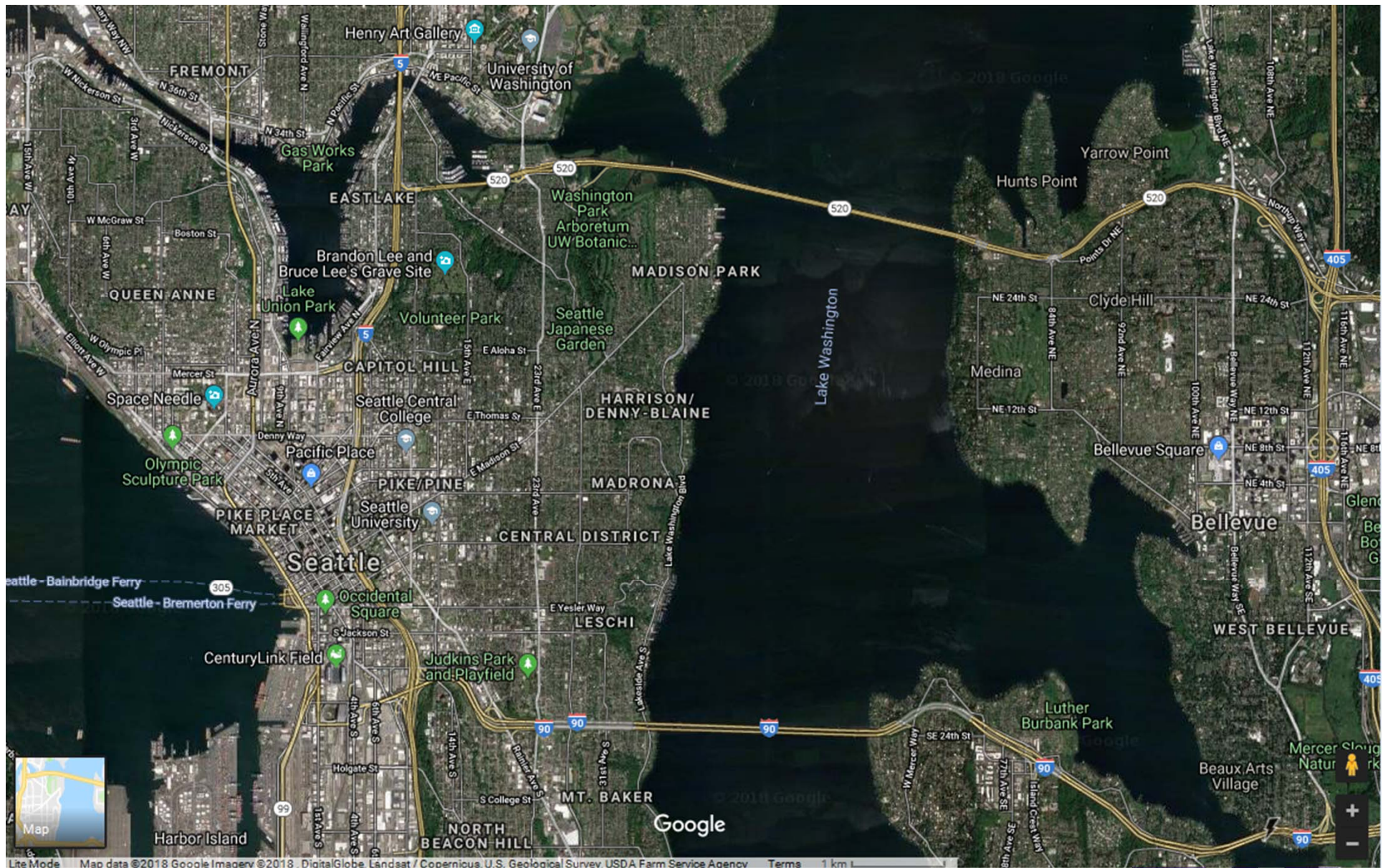


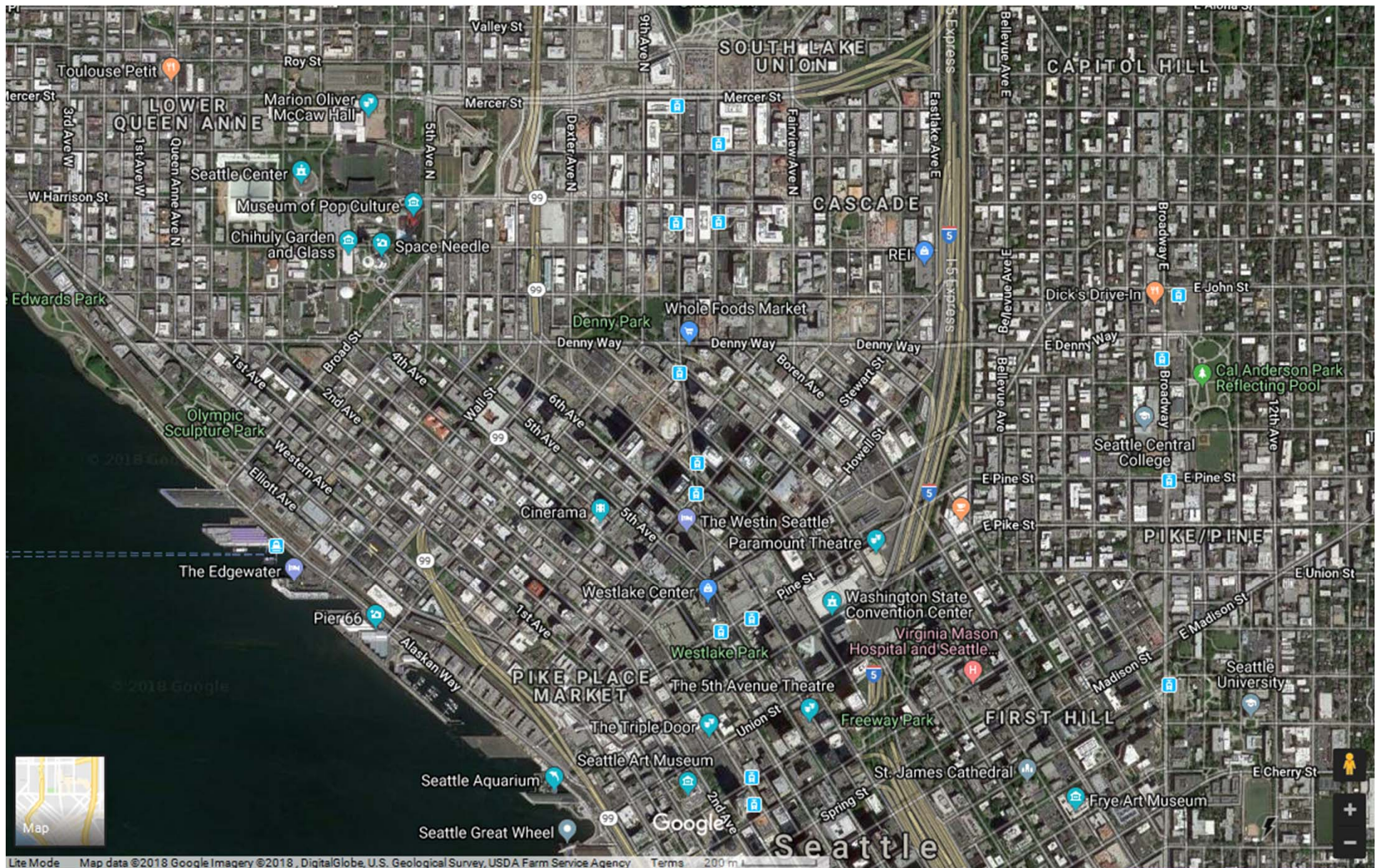




W



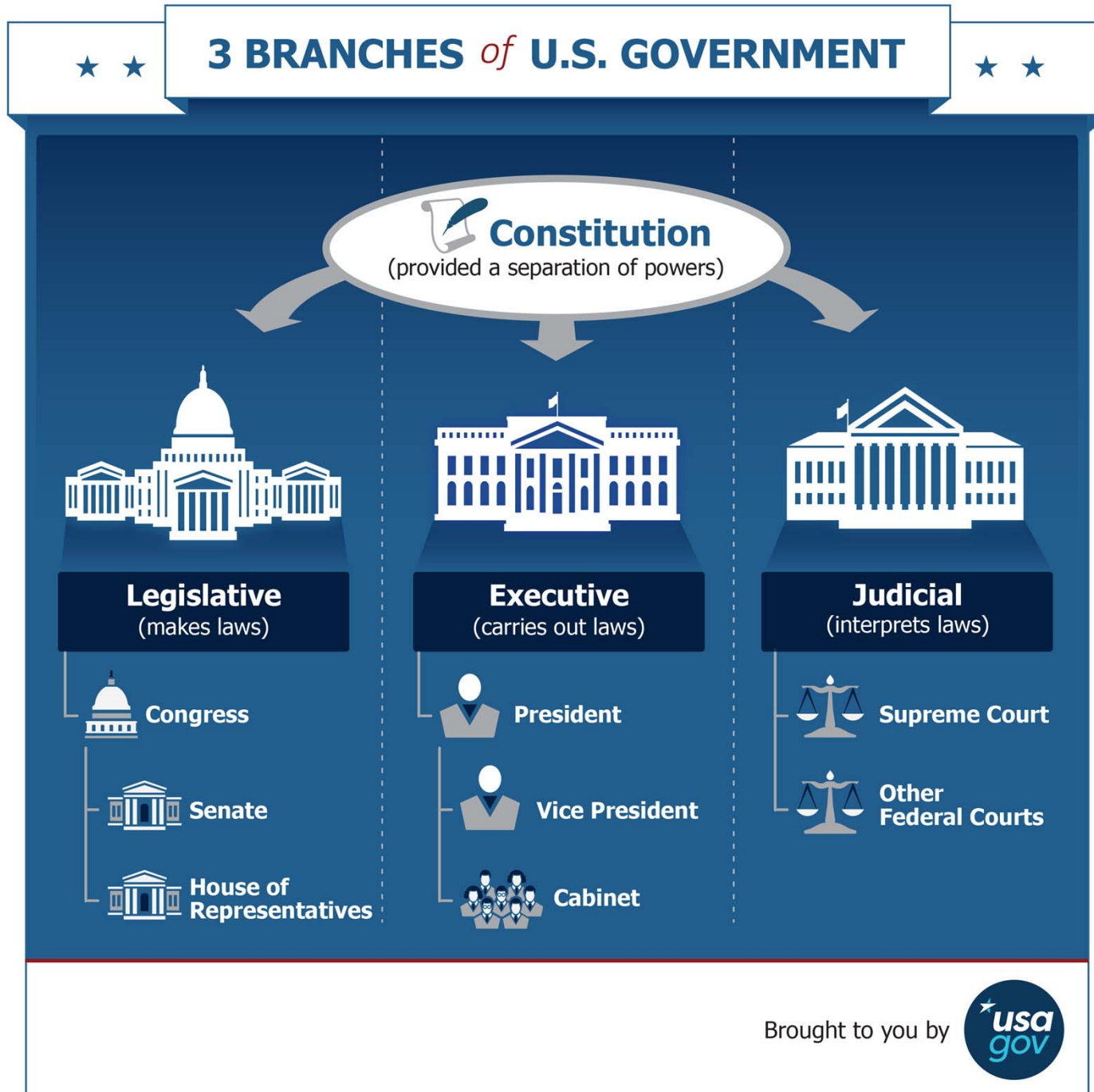




HISTORICAL OVERVIEW OF PLANNING IN THE US

- > The US as a nation is a collection of federated States
 - 1776 Declaration of Independence from England
 - US Constitution ratified in 1788
 - 13 colonies of England became the United States of America
- > US Constitution is the founding document the nation
 - Outlines the structure of government
 - Functions for democratic governance
 - Amendments, the Bill of Rights and others (a living document)
- > Allocates authority and responsibility at the Federal Level
 - Separation of powers



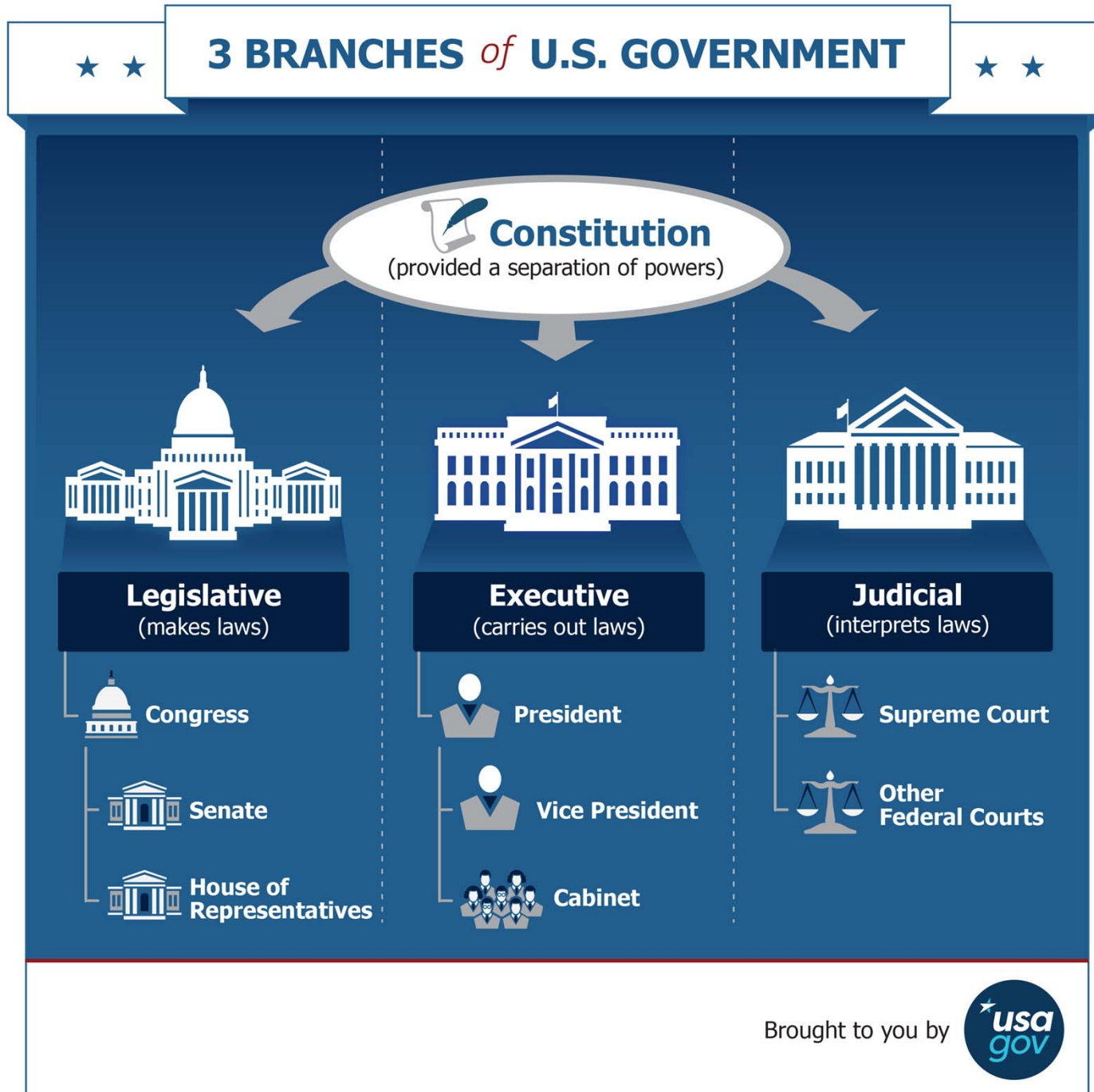


FEDERAL AUTHORITY AND PLANNING

- > Roles of the Federal Government
 - Security, defense, foreign policy
 - > Role of National Government has expanded over time
 - > Inter-State infrastructure system regulation/management
 - > Inter-State commerce and externalities (protect consumers & environment)
 - > Management of Federally-owned lands (forests, parks)
- > Planning is not at the national level unless you are planning for a particular sector (e.g., transportation) or purpose for which the Federal Government has authority (e.g., defense, management of national forests)



W



AUTHORITY TO PLAN RESIDES IN THE POLICE POWER OF THE STATES

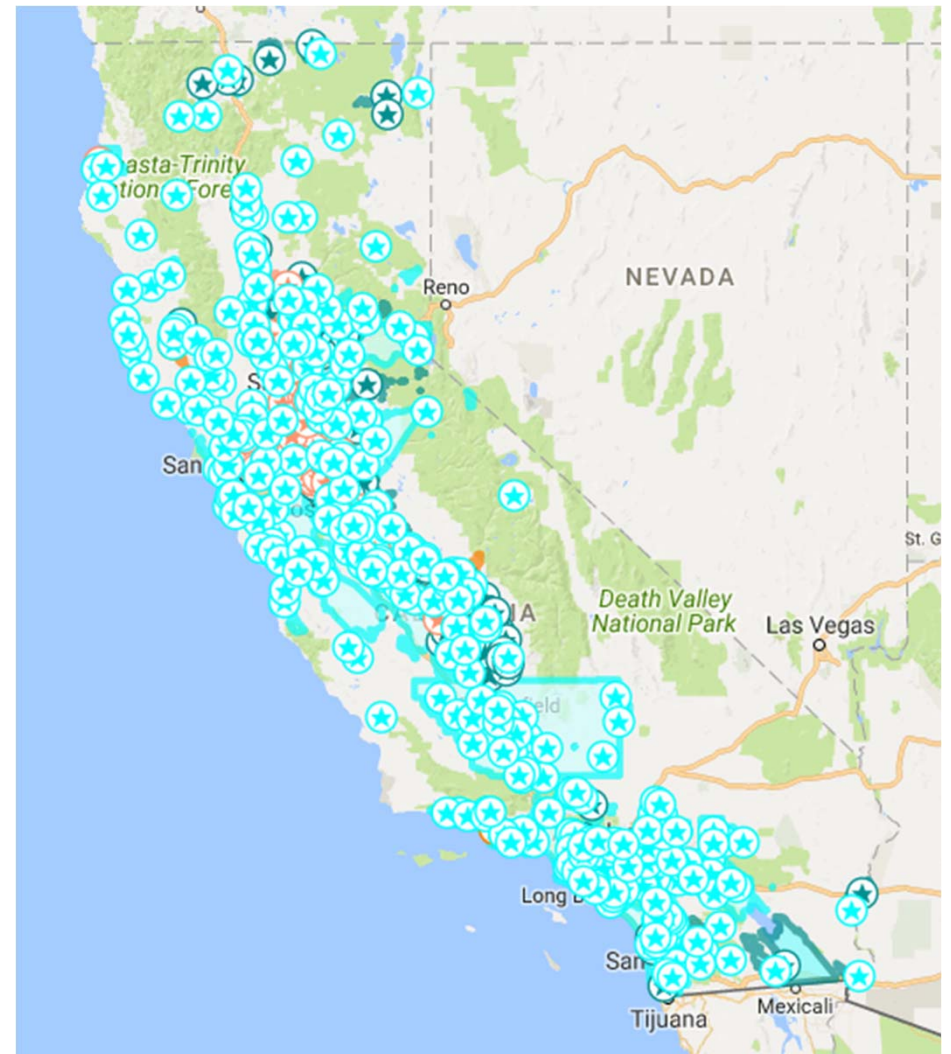
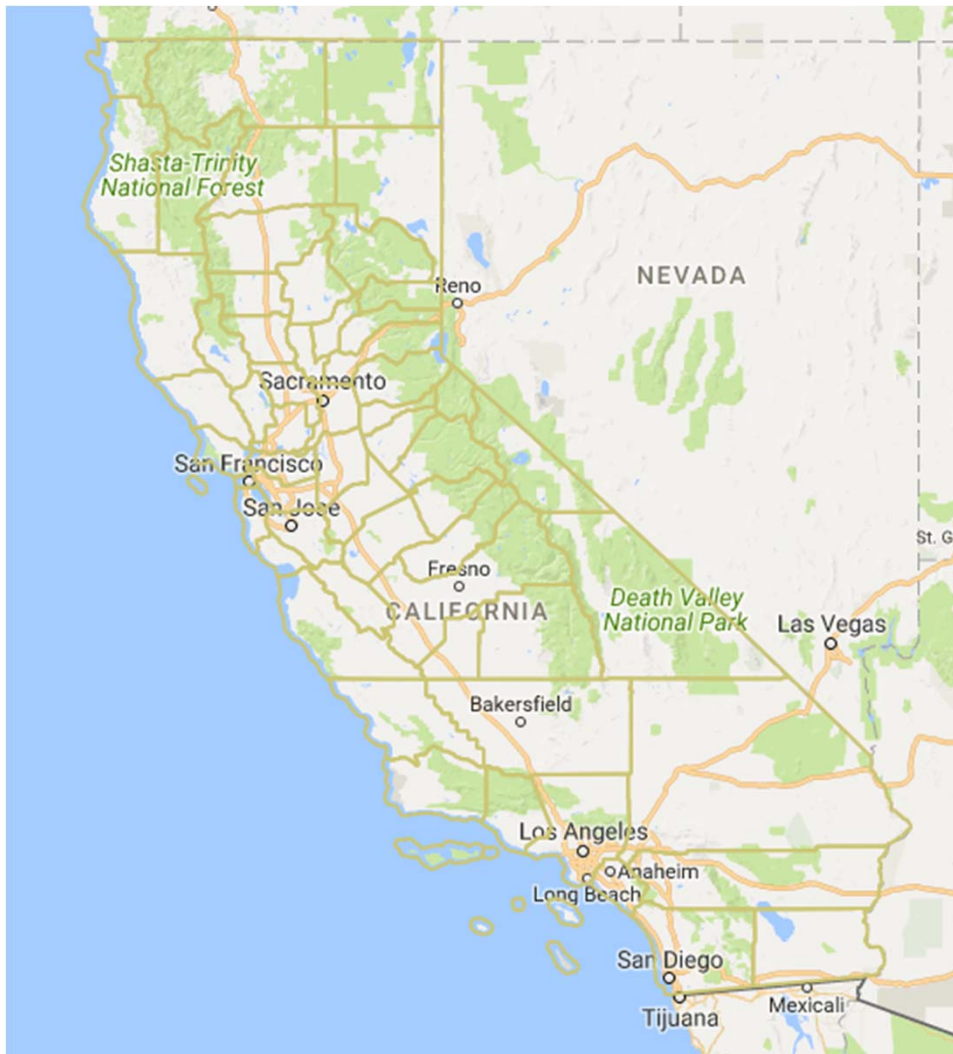
- > Tenth Amendment to the US Constitution
 - Gives States the rights and powers “not delegated to the United States” which is, really, everything else
- > States are granted the power to establish and enforce laws protecting the public health, safety, and welfare
- > Spatial planning – the regulation of land use – comes with the police power, if related to the public welfare
 - The instrument of this regulation is zoning law
- > Some States plan
 - Oregon, Florida, New Jersey (this is rare)
 - Define urban growth boundaries
 - Plan for major infrastructure (California Water Plan)



STATES HAVE INFRASTRUCTURE AND PATCHWORKS OF LOCAL GOVERNMENT

- > People migrated, settled, and set up governments for distinctive purposes
 - States passed laws enabling the formation of local governments
- > As a result, the governance of land is in layers
 - Patchworks of jurisdictions, layered one over the other
 - For distinctive purposes (cities, counties, and many others)
- > Historical trajectory
 - Mining
 - Reclamation (irrigation and flood control)
 - Forestry and agriculture
 - Urban development





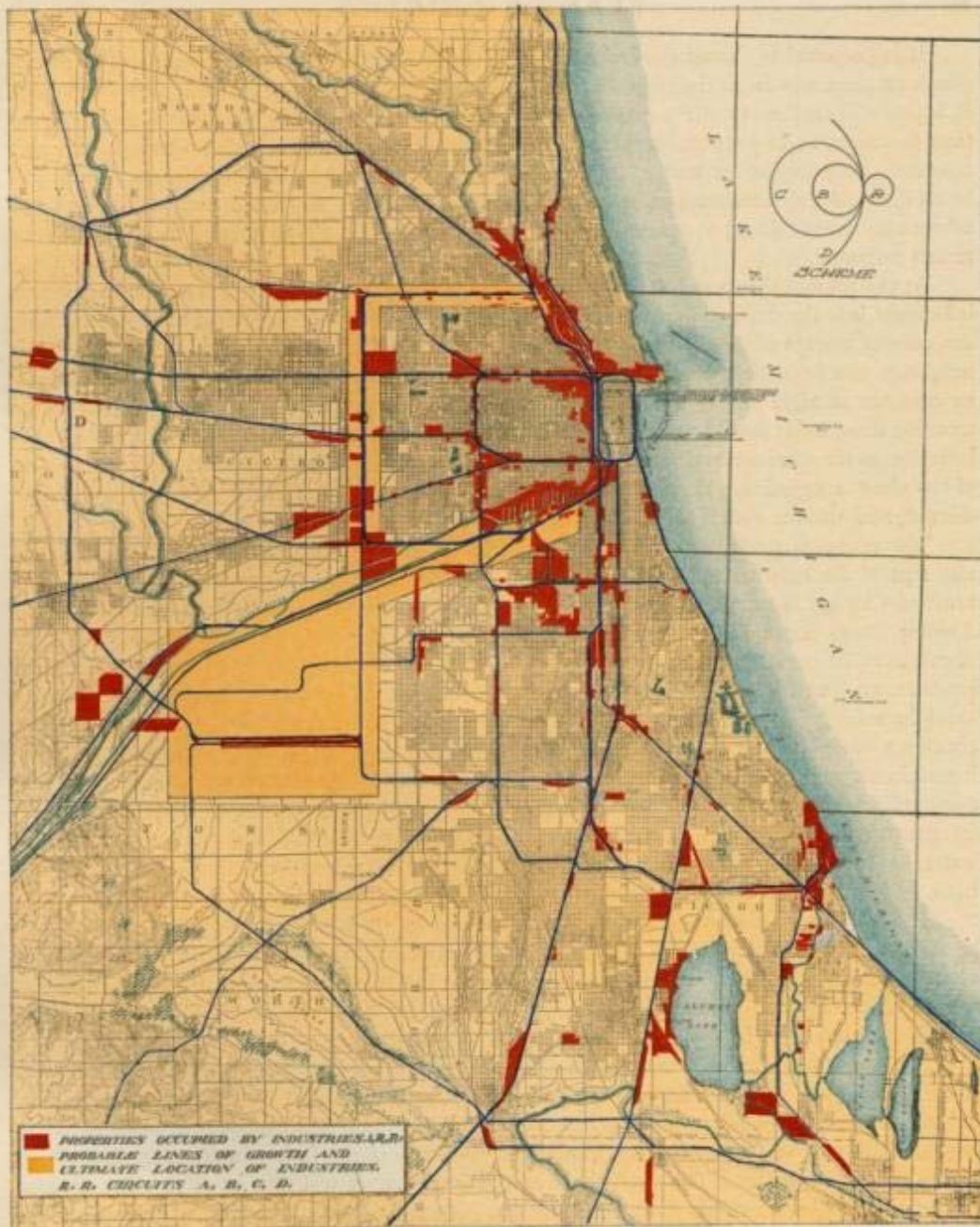
California Special Districts Association, "Special Districts Mapping Project" <https://demos3.calcad.com/CSDA/>



CITIES, COUNTIES, AND DISTRICTS ARE THE TRUE ENGINES OF PLANNING IN THE USA

- > First city plan?
 - Many settlements had informal plans
 - Grid city plan of Philadelphia, Pennsylvania, 1682
- > First President, George Washington, appointed Pierre L'Enfant to design the capital city in 1791
 - Was not implemented until 1902
- > Plan of Chicago, by Daniel Burnham and Edward Bennett, 1909
 - People were settling the West, traveling the railroads
- > First zoning resolution in New York City, 1917
 - Followed by Regional Plan of New York and its Environs, 1928





1909 Plan of Chicago (the Burnham Plan)

co-authored by Daniel Burnham and
Edward H. Bennett

Image Source:
http://burnhamplan100.uchicago.edu/multimedia/image_gallery/detail/1976

LXXIII. CHICAGO. DIAGRAM OF THE CITY AND SURROUNDING COUNTRY, SHOWING RAILROAD CIRCUITS, B, C, D, AND E, WHICH ARE, OR MAY BECOME, TANGENT TO THE INNER CIRCUIT (A).

The diagram also shows the existing industries, and the probable trend of growth away from the center of the city.

THE AGENDA (KEY RECOMMENDATIONS) IN THE 1909 PLAN OF CHICAGO

1. The improvement of the Lake Front
2. The creation of a system of highways outside the city
3. The improvement of railway terminals
4. The acquisition of an outer park system, and of parkway circuits
5. The systematic arrangement of the streets and avenues within the city
6. The development of centers of intellectual life and of civic administration, so related as to give coherence and unity to the city



DANIEL BURNHAM, PLAN OF CHICAGO



MAKE NO LITTLE PLANS. THEY HAVE NO MAGIC TO STIR
MEN'S BLOOD AND PROBABLY THEMSELVES WILL NOT
BE REALIZED. MAKE BIG PLANS; AIM HIGH IN HOPE AND
WORK, REMEMBERING THAT A NOBLE, LOGICAL
DIAGRAM ONCE RECORDED WILL NEVER DIE, BUT LONG
AFTER WE ARE GONE WILL BE A LIVING THING,
ASSERTING ITSELF WITH EVER-GROWING INSISTENCY





Plan of Chicago - Water front, rendering by Jules Guerin

(Courtesy Chicago History Museum)



Image Source: http://burnhamplan100.uchicago.edu/multimedia/image_gallery/detail/1756

Plan of Chicago - The Chicago River at Lake Street (Courtesy Chicago History Museum)



Image Source: http://burnhamplan100.uchicago.edu/multimedia/image_gallery/detail/1747

Plan of Chicago - Michigan Avenue (Courtesy Chicago History Museum)



Image Source: http://burnhamplan100.uchicago.edu/multimedia/image_gallery/detail/1754

NATIONAL PLANNING BOARD AND THE GREAT DEPRESSION

- > At the height of the Great Depression, 1933
 - Keynesian economics [John Maynard Keynes]
 - Use public expenditures (public works) to provide jobs
- > Established the National Planning Board
 - Inspired by the Garden City of Tomorrow [Ebenezer Howard]
 - Developed a handful of new towns
 - Public works to boost the economy
- > What does that say about planning in the US?
 - Planning is widely seen as valid in the case of market failure



PLANNING AND MARKETS

- > What is the role of planning in the US?
 - It's main regulatory instrument is zoning
 - It's reason for being is the regulation of the real estate market
 - (though other reasons are also valid, as for infrastructure)
- > Arguments for planning and zoning?
 - Efficiency
 - Social justice
 - Economic growth
- > Much of planning in the US occurs in the midst of already thriving markets
- > Planning is justified to prevent or alleviate market failures



PLANNING AS PART OF LOCAL GOVERNMENT

- > Local government consists of same three branches
 - Executive (Mayor), Legislative (Council), Judicial (Courts)
- > As a profession, planning is one of many departments



City Auditor	Fire Department	Immigrant & Refugee	Seattle Center
City Budget Office	Human Resources	Intergov Relations	Transportation
City Light	Human Services	Prof Accountability	Municipal Court
City Purchasing	Information Tech	Sustainability & Env	Office for Civil Rights
Customer Service	Neighborhoods	City Clerk	Parks & Recreation
Economic Devt	Arts & Culture	The Waterfront	Police Department
Edu & Early Learning	Cable Comms	Planning & Devt	Public Library
Emergency Mgmt	Film & Music	Retirement	Public Utilities
Finance & Admin Svc	Housing	Animal Shelter	Special Events

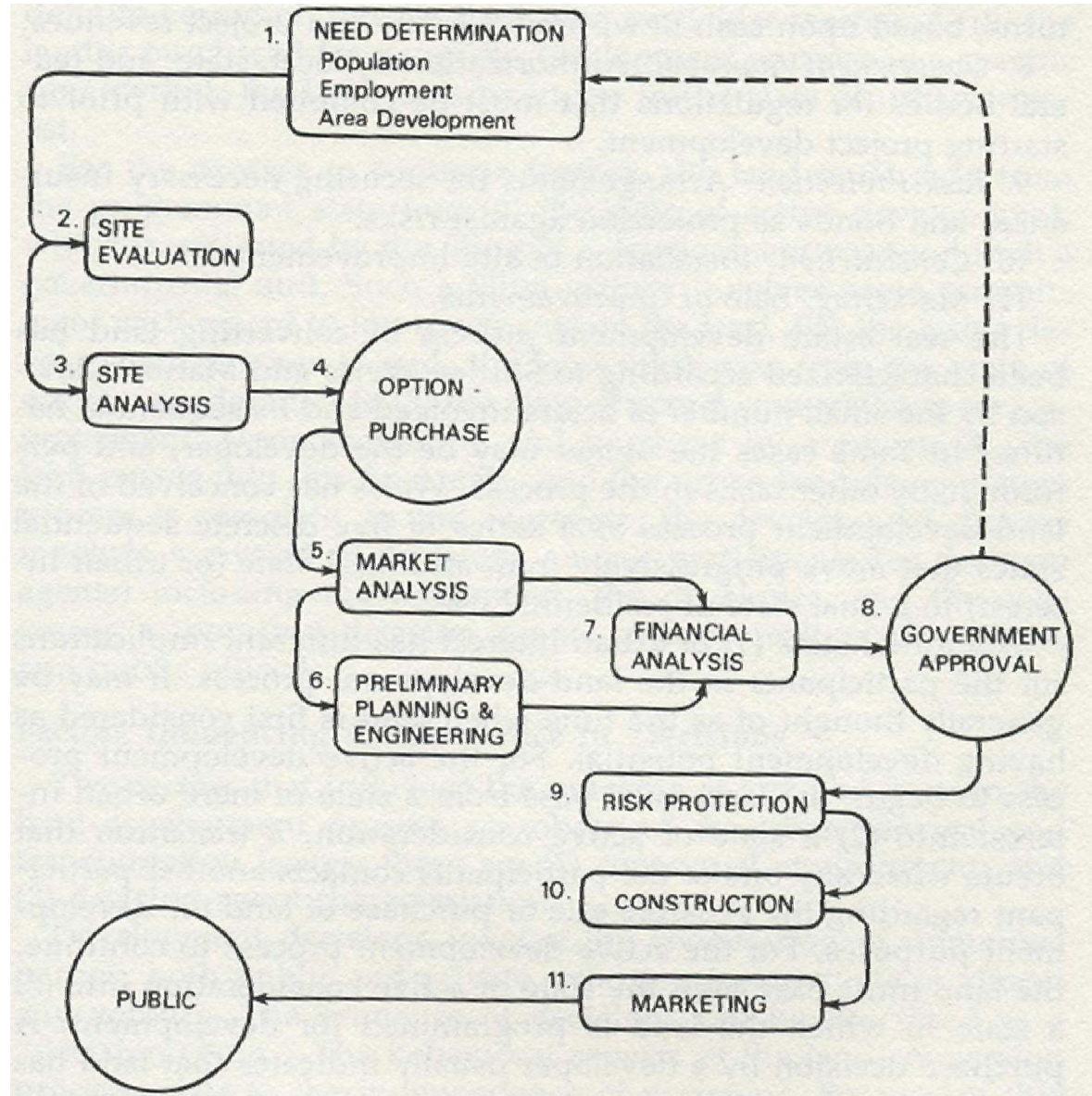


PLANNING AS PART OF LOCAL GOVERNMENT

- > Local government consists of same three branches
 - Executive (Mayor), Legislative (Council), Judicial (Courts)
- > As a profession, planning is one of many departments
- > Our tools of the trade are aspirational, and regulatory
 - General plans, specific area plans, visioning, informational
 - Aspire to understand the public interest
 - Zoning, permitting of development and subdivision, regulation
 - Enforcement of zoning, consistency with plans
- > Participation in Capital Improvement Plans
 - Selecting infrastructure investment priorities
 - Selecting priorities for investing in new plans



THE MARKET as A FORCE TO BE RECKONED WITH...



Kaiser, H. 1978. *The Building of Cities*. Ithaca: Cornell U Press.

The Real Estate Development Process

UNDERSTANDING MARKETS

Classical Theory

- > Adam Smith, *The Wealth of Nations*, 1776
 - The Butcher and the Baker
 - Self-interest in trade
 - The “invisible hand”
 - Benefits society
- > A virtuous cycle
 - Gains from trade are invested back into production
 - Organize a division of labor (coordination)
 - Labor becomes specialized
 - Invest in labor: expand production
 - Invest in technology: produce more with less
 - Division of labor shifts with technology
 - More surplus is produced, traded, and so on



UNDERSTANDING MARKETS

Neoclassical Theory

- > The Chicago School
 - Assume competition is ubiquitous
 - Supply and demand reach equilibrium, result in price
- > An optimal state
 - Marginal benefit = price = marginal cost
 - For the consumer, prices provide perfect information
 - The producer has to provide a competitive price
 - Both are rational decision-makers
 - Their preferences are stable (not changing over time)
 - The trade isn't making anyone worse off



In Neoclassical Theory, says RONALD COASE (1937)

THE ECONOMIC SYSTEM WORKS ITSELF. THIS DOES NOT MEAN THAT THERE IS NO PLANNING BY INDIVIDUALS. THESE EXERCISE FORESIGHT AND CHOOSE BETWEEN ALTERNATIVES. THIS IS NECESSARILY SO IF THERE IS TO BE ORDER IN THE SYSTEM. BUT THIS THEORY ASSUMES THAT THE DIRECTION OF RESOURCES IS DEPENDENT DIRECTLY ON THE PRICE MECHANISM. INDEED, IT IS OFTEN CONSIDERED TO BE AN OBJECTION TO ECONOMIC PLANNING THAT IT MERELY TRIES TO DO WHAT IS ALREADY DONE BY THE PRICE MECHANISM.



ENTER TRANSACTION COST ECONOMICS

Ronald Coase, 1937

- > What are transaction costs? Ronald Coase, 1937
 - The economy is not organized this way!
 - We have organizations: companies, firms
 - What is the origin of the firm?
- > There must be a cost to using the price mechanism
- > And it seems “improbable that a firm would emerge without the existence of uncertainty”
 - If uncertain about the needed tasks
 - People employ labor using contracts
 - And firms engage in transactions
 - With each other, and consumers
 - All to reduce the burden of transaction costs



WHAT ARE TRANSACTION COSTS?

RONALD COASE (1937)

THE MAIN REASON WHY IT IS PROFITABLE TO ESTABLISH A FIRM WOULD SEEM TO BE THAT THERE IS A COST OF USING THE PRICE MECHANISM. THE MOST OBVIOUS COST OF “ORGANIZING” PRODUCTION THROUGH THE PRICE MECHANISM IS THAT OF DISCOVERING WHAT THE RELEVANT PRICES ARE. ... THE COSTS OF NEGOTIATING AND CONCLUDING A SEPARATE CONTRACT FOR EACH EXCHANGE TRANSACTION WHICH TAKES PLACE ON A MARKET MUST ALSO BE TAKEN INTO ACCOUNT... NOW, OWING TO THE DIFFICULTY OF FORECASTING, THE LONGER THE PERIOD OF THE CONTRACT IS FOR THE SUPPLY OF THE COMMODITY OR SERVICE, THE LESS POSSIBLE, AND INDEED, THE LESS DESIRABLE IT IS FOR THE PERSON PURCHASING TO SPECIFY WHAT THE OTHER CONTRACTING PARTY IS EXPECTED TO DO.



The Adam Smith Address: Economic Theory in a Dynamic Economic World

By Douglass C. North*

The future of economics is not clear, because economic theory has failed to confront the economic problems of societies. Frictionless theory is based a framework of rational choice, which is unrealistic under conditions of uncertainty. Static theory does not account for the role of time in economic change. The paper then describes the historical source of modern economic development, suggests the direction of theoretical reconstruction needed to solve economic problems through an examination of political as well as economic markets, and considers some of the implications for development policy.

static in a world in which dynamic change is going on at an unprecedented rate. Remedying these defects requires that economics builds on its strengths, modifies the unrealistic assumptions that made it frictionless, and incorporates time into the analysis to confront the issues of economic change.

The strength of neoclassical theory has been its uncompromising focus on scarcity and hence competition as the key to economics and its power as an economic way of reasoning, evinced in microeconomic theory. Its most unrealistic assumption, which underlies its frictionless character, has been the rationality assumption. Finally, time is the dimension in which human learning, the most important source of long-run economic change, occurs.

THE RATIONALITY ASSUMPTION

US FTC. *Data Brokers: A Call For Transparency and Accountability*. Washington DC, May 2014. Exhibit 2.



Because of Transaction Costs: INSTITUTIONAL ECONOMICS

- > What are institutions? Douglass North, 1995: 10
 - “the rules of the game of a society or, more formally, are the humanly-devised constraints that structure interaction”
 - Formal rules
 - Informal norms
 - Enforcement characteristics
- > North’s story: buying oranges from Morris
- > North asks: Why do some economies perform poorly?
 - Results show that the difference between poor and good economic performance is in the institutions that govern economic behavior
 - These institutions can raise transaction costs
 - Or they can lower transaction costs



Institutions that Lower Transaction Costs MAKE MARKETS EFFICIENT, says North, 1995

THE KEY TO EFFICIENT MARKETS IS INSTITUTIONS THAT RESULT IN LOW COSTS OF TRANSACTING. TRANSACTION COSTS ARE ALL COSTS INVOLVED IN MEASURING WHAT IS BEING EXCHANGED AND IN ENFORCING AGREEMENTS... [THIS] IS ULTIMATELY A FUNCTION OF THE POLITICAL MARKETS OF ECONOMIES, BECAUSE IT IS THE POLITY THAT SPECIFIES THE PROPERTY RIGHTS AND PROVIDES THE INSTRUMENTS AND RESOURCES TO ENFORCE CONTRACTS.



Journal of Economic Literature
Vol. XXXVIII (September 2000) pp. 595–613

The New Institutional Economics: Taking Stock, Looking Ahead

OLIVER E. WILLIAMSON¹

1. *Introduction*

I OPEN MY DISCUSSION of the new institutional economics with a confession, an assertion, and a recommendation. The confession is that we are still very ignorant about institutions. The assertion is that the past quarter century has witnessed enormous progress in the study of institutions. The recommendation is that, awaiting a unified theory, we

development (1994, p. 75). In consideration, however, of the “splendid plausibility of error” to which Lord Acton refers,² we need to sort the sheep from the goats. That is accomplished by asking each would-be theory to advance refutable implications to which the data are applied.

R. C. O. Matthews, in his presidential address to the Royal Economic Society in 1986, pronounced that “the econom-

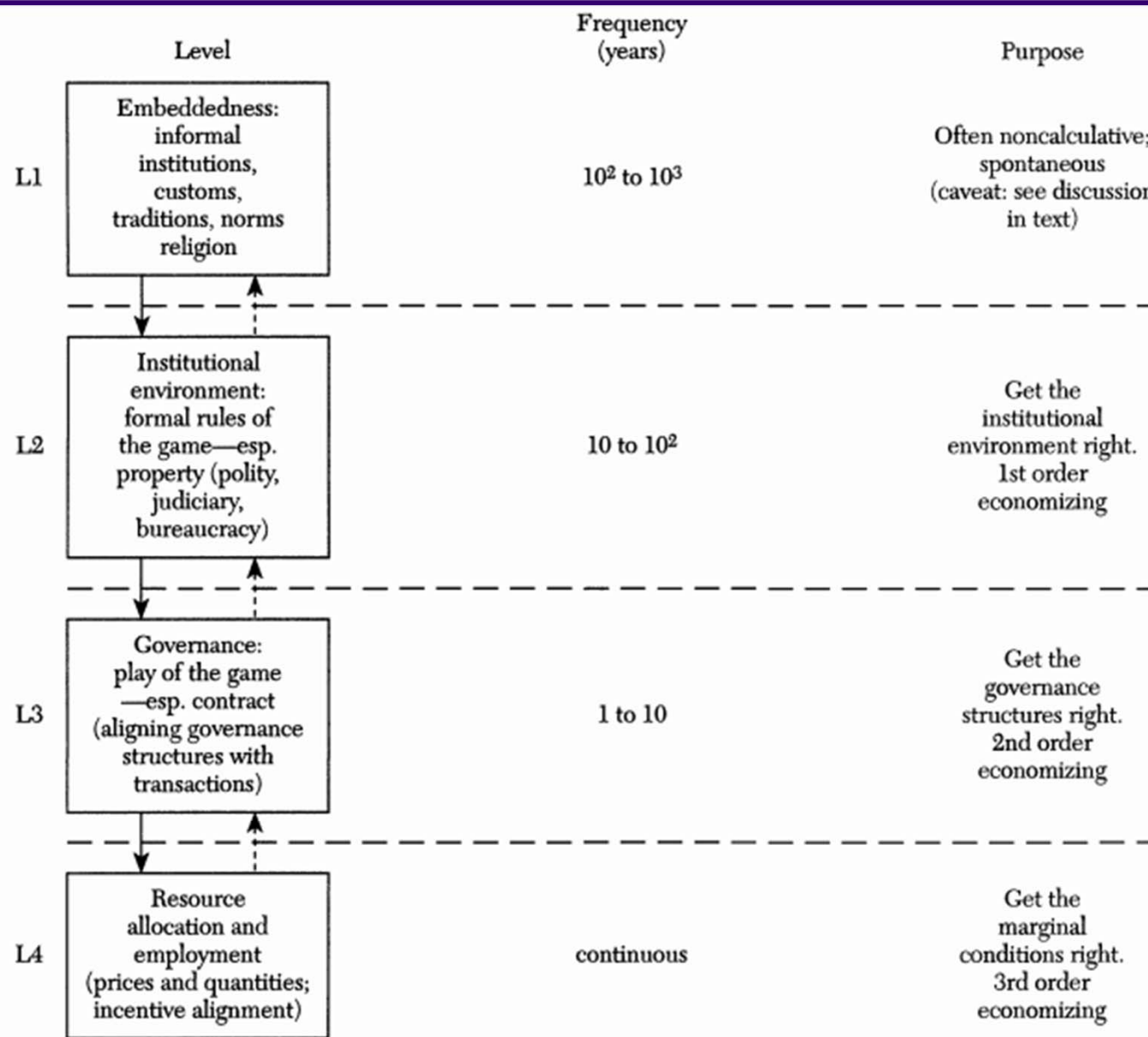


TRANSACTION COST ECONOMICS

Oliver Williamson, 2000

- > Inspired by Coase, set out to operationalize a theory of transaction cost economics, with empirical literature
- > *Williamson* asks: Why do some economies perform *well*?
- > His research explains how Western economies are organized
 - Contracts, all are institutional arrangements
 - To govern transactions
 - > Aligning transactions with governance structures in a discriminating way, to economize (reduce) transaction costs
 - To safeguard transactions against human behaviors
 - > Bounded rationality (Herbert Simon)
 - > Opportunism with guile





L1: social theory
 L2: economics of property rights/positive political theory
 L3: transaction cost economics
 L4: neoclassical economics/agency theory

Figure 1. Economics of Institutions



Positive Feedbacks in the Economy

A new economic theory elucidates mechanisms whereby small chance events early in the history of an industry or technology can tilt the competitive balance

by W. Brian Arthur

Conventional economic theory is built on the assumption of diminishing returns. Economic actions engender a negative feedback that leads to a predictable equilibrium for prices and market shares. Such feedback tends to stabilize the economy because any major changes will be offset by the very reactions they generate. The high oil prices of the 1970's encouraged energy conservation and increased oil exploration, precipitating a predictable drop in prices by the early 1980's. According to conventional theory, the equilibrium marks the "best" outcome possible under the cir-

natives will be the "best" one. Furthermore, once random economic events select a particular path, the choice may become locked-in regardless of the advantages of the alternatives. If one product or nation in a competitive marketplace gets ahead by "chance," it tends to stay ahead and even increase its lead. Predictable, shared markets are no longer guaranteed.

During the past few years I and other economic theorists at Stanford University, the Santa Fe Institute in New Mexico and elsewhere have been developing a view of the economy based on positive feedback. Increasing-re-

Such a market is initially unstable. Both systems were introduced at about the same time and so began with roughly equal market shares; those shares fluctuated early on because of external circumstance, "luck" and corporate maneuvering. Increasing returns on early gains eventually tilted the competition toward VHS: it accumulated enough of an advantage to take virtually the entire VCR market. Yet it would have been impossible at the outset of the competition to say which system would win, which of the two possible equilibria would be selected. Furthermore, if the claim that



EXPLAINING PATH DEPENDENCE

W. Brian Arthur

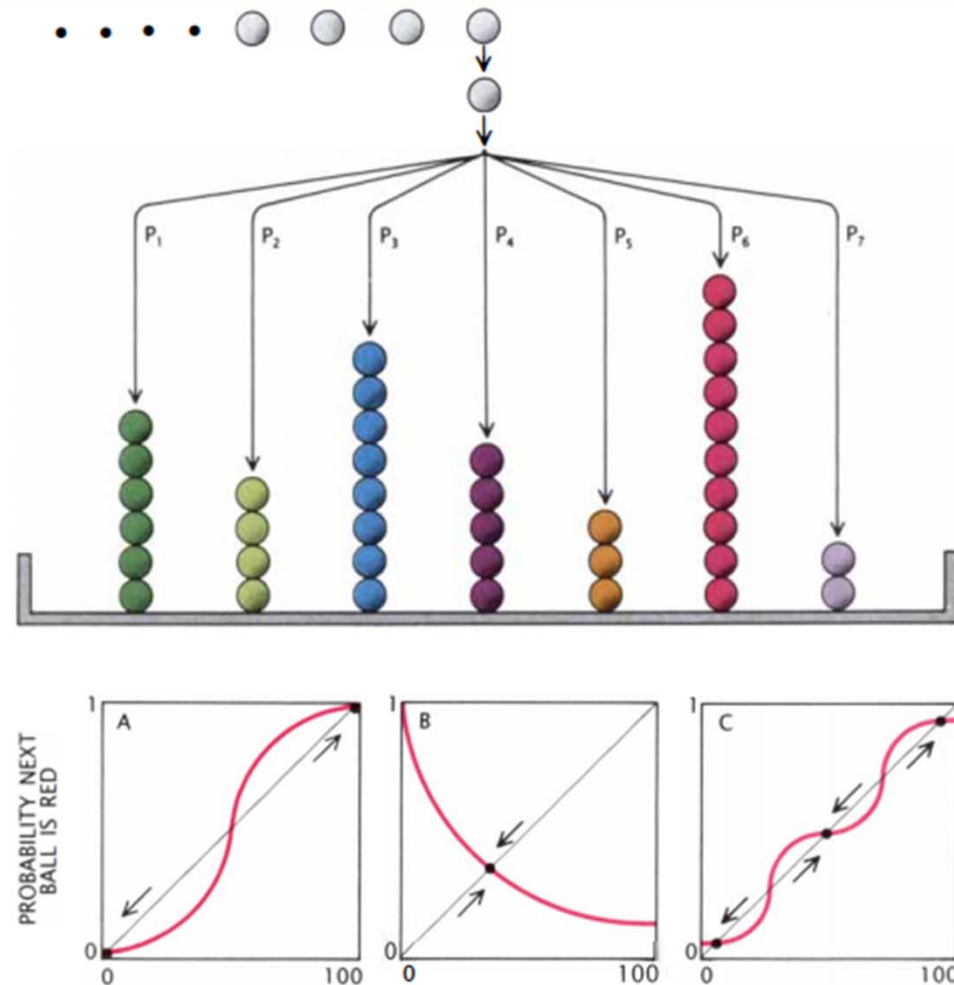
- > Neoclassical idea assumes market equilibrium
 - Marginal benefit = price = marginal cost
 - Based on diminishing returns to scale
 - More labor does not lead to proportionally more production
 - This has limited applications in the real world
- > Markets have multiple equilibria
 - Knowledge-based markets have increasing returns to scale
 - May start with many companies competing
 - In the same market, substitutable technologies
 - Which company will win a greater share of the market?
- > If one firm can dominate others, neoclassical theory collapses
 - Firms set prices and the past matters



How it Works

The Polya Urn Scheme

Models positive reinforcement for prior decisions or outcomes



NONLINEAR PROBABILITY THEORY can predict the behavior of systems subject to increasing returns. In this model, balls of different colors are added to a table; the probability that the next ball will have a specific color depends on the current proportions of colors (*top*). Increasing returns occur in A (the graph shows the two-color case; arrows indicate likely directions of motion): a red ball is more likely to be added when there is already a high proportion of red balls. This case has two equilibrium points: one at which almost all balls are red; the other at which very few are red. Diminishing returns occur in B: a higher proportion of red balls lowers the probability of adding another. There is a single equilibrium point. A combination of increasing and diminishing returns (C) yields many equilibrium points.



POLITICAL ECONOMY OF THE USA

A case in economic history, Douglass North

- > Douglass North refers to the “Second Revolution” (1995)
- > The merging of science and technology
 - Technology is recognized as a source of productivity in the economy
- > From *Institutions, Institutional Change, and Economic Performance*, North, 1990
 - A historical case of institutional economics
 - Set in 1850-1880
 - The emergence of the steam engine
 - Expansion of railroads across the US
 - Railroad companies grew
 - The first truly large economic organizations





POLITICAL ECONOMY OF THE USA

A case in economic history, Douglass North

> Results of the Case

- Railroads cross state boundaries: inter-state commerce
- Farmers rose up in protest over railroad pricing practices
- The first agency of the federal government created to regulate commerce (Interstate Commerce Commission)
- Court case in 1877, *Munn v. Illinois*
- Upheld the right of the federal government to regulate inter-state commerce



POLITICAL ECONOMY OF THE USA

Reviewing the Case

- > Institutional economic perspective
 - Railroads “hold up” delivery of grain for a higher price
 - Classic example of transaction cost
 - Opportunism with guile on the part of the railroads
 - Bounded rationality on the part of the farmer planting crops
 - Regulatory oversight to safeguard against opportunism
 - Make credible commitments possible, lowering transaction cost
- > Path dependence perspective
 - Creation of new rules of the game
 - Opens federal government to the role of regulating industry
 - Opens federal government to influence by large companies



POLITICAL ECONOMY TODAY

Observations from Douglass North, 1995

- > Today's technological advancements
 - Require unprecedented occupational and territorial specialization
 - Number of economic exchanges is growing exponentially
 - Firms make heavy investments in capital assets (e.g., robotics)
- > Problems on the horizon, North, 1995: 9
 - Increased problems and resources devoted to measuring the quality of output and performance of agents
 - Expansion of teams, in team-based production
 - More opportunities for opportunistic behavior
 - Rise of large-scale hierarchies (global firms)
 - Global externalities
 - Role of the family is being displaced
 - Rising inequality, structural inequality (Piketty)



PURPOSES OF PLANNING

From Institutional Economics

- > Internalize externalities
 - Change the rules of the game in favor of better environmental outcomes
 - Carbon negative and resilience in matching rights to uses
- > Address structural inequalities
 - Provide education and opportunity suited to specialized labor markets
- > Ensure access to opportunity
- > The allocation of property rights in land/infrastructure
 - Set expectations
 - Allow credible commitments to improve property
- > Institutions governing land use (zoning)
 - Lower the transaction cost of real estate exchange



Applying Path Dependence IN SPATIAL PLANNING

- > Companies compete in markets for dominance
 - Cities compete to attract companies!
 - Agglomeration economies and spatial patterns explained
- > Institutions of government are highly path dependent
 - Ideas and evidence drive the creation of policy
 - As ideas and evidence are shared, policies spread
 - This accelerates when upper bodies of government create standards
 - > Example: repeating grid patterns in urban design
 - > Example: zoning that separates land uses
- > How to change these patterns?
 - Need new ideas and evidence
 - Standards > flexibility > experiments > new standards



Thank you!

Jan Whittington

janwhit@uw.edu

University of Washington

Seattle, USA

