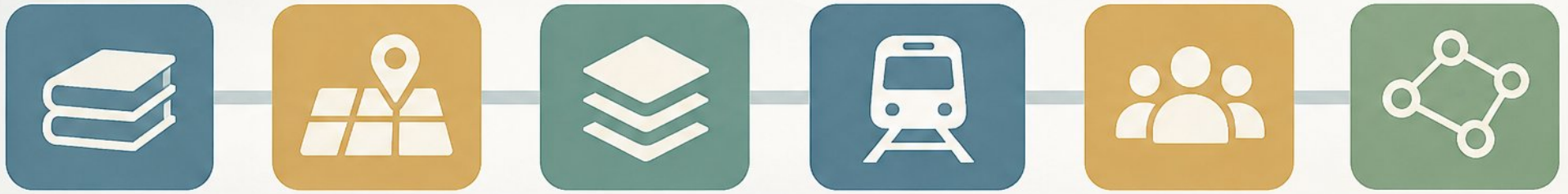
How Cities Are Organized: Urban Geography Basics

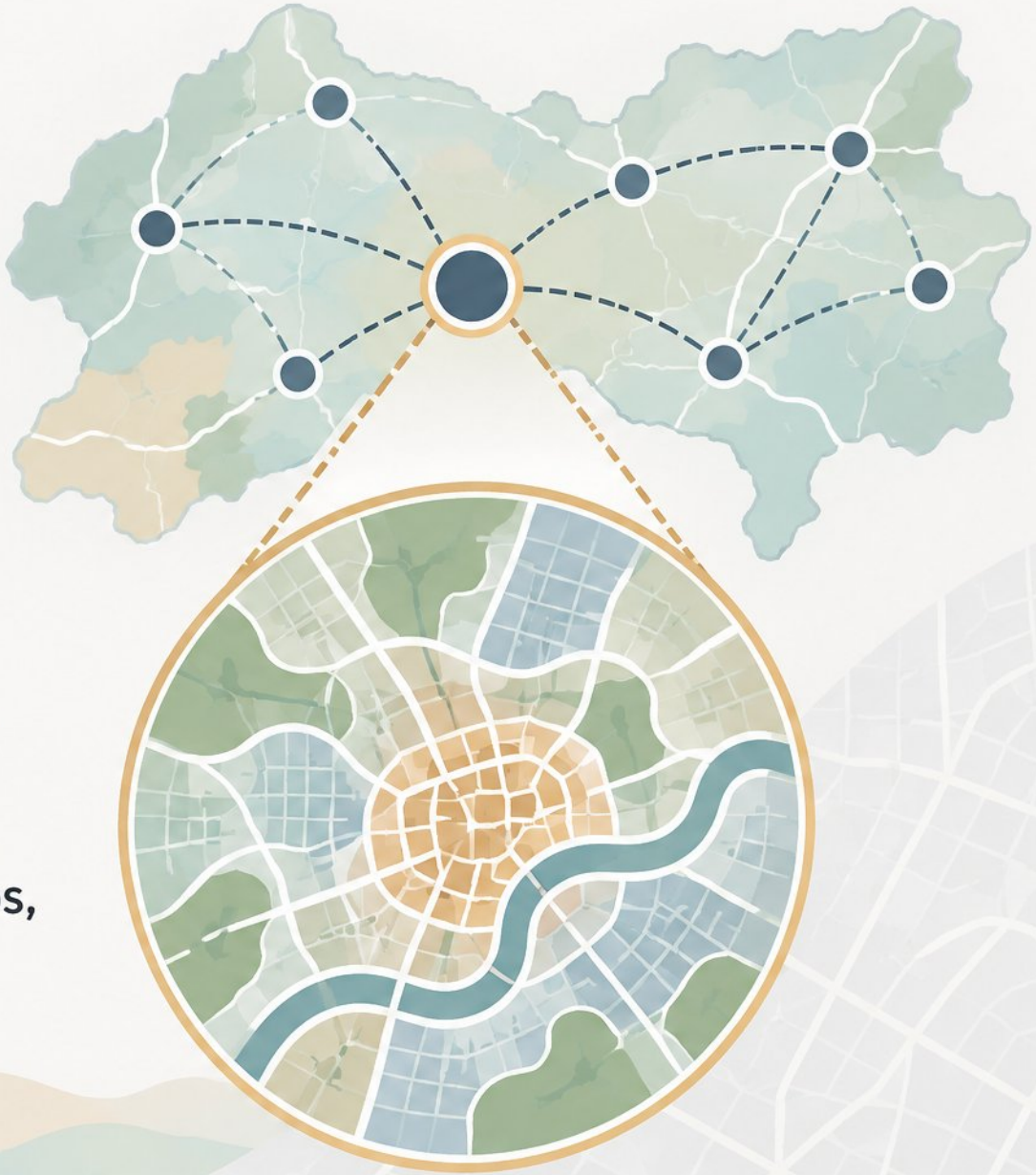


- Course purpose: explain the spatial logic behind urban form, function, and change
- Three lenses: site and situation, internal structure, and regional systems
- Why it matters for students, teachers, planners, and everyday city users
- Course map: foundations, land value, models, transport, social space, regional futures



What Urban Geography Studies

- Cities and metropolitan areas understood as spatial systems
- Two scales: urban systems (between cities) and intrametropolitan (within them)
- Core vocabulary: site, situation, hinterland, agglomeration, density, accessibility, spatial interaction
- Synthetic field: borrows from planning, sociology, economics, and ecology
- Distinct focus: interpreting spatial patterns and relationships, not just describing places



What Makes a Settlement Urban? Definitions and Data

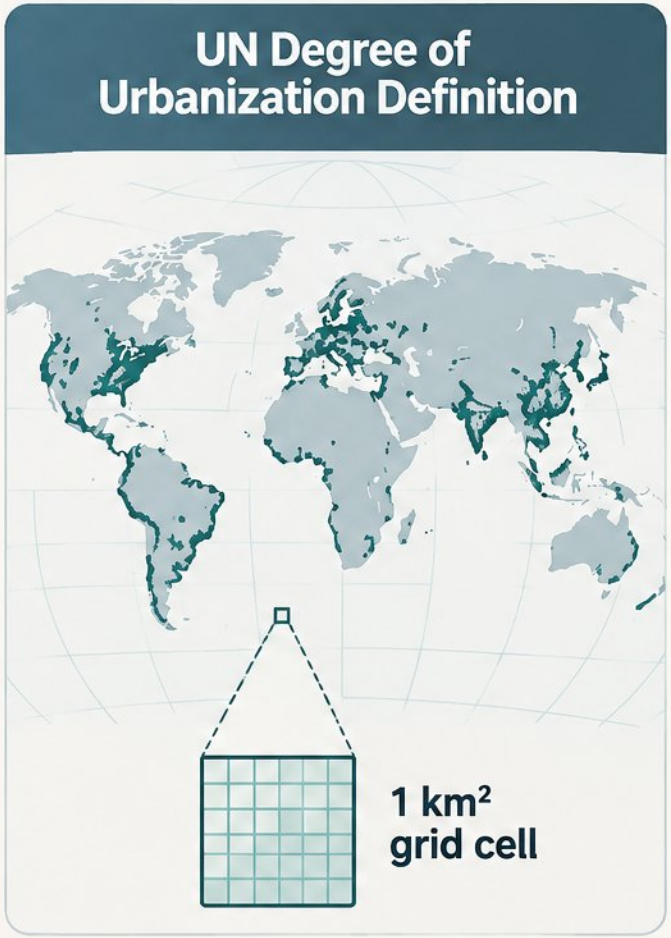
- National thresholds range from 200 (Denmark) to 50,000 (Japan) residents

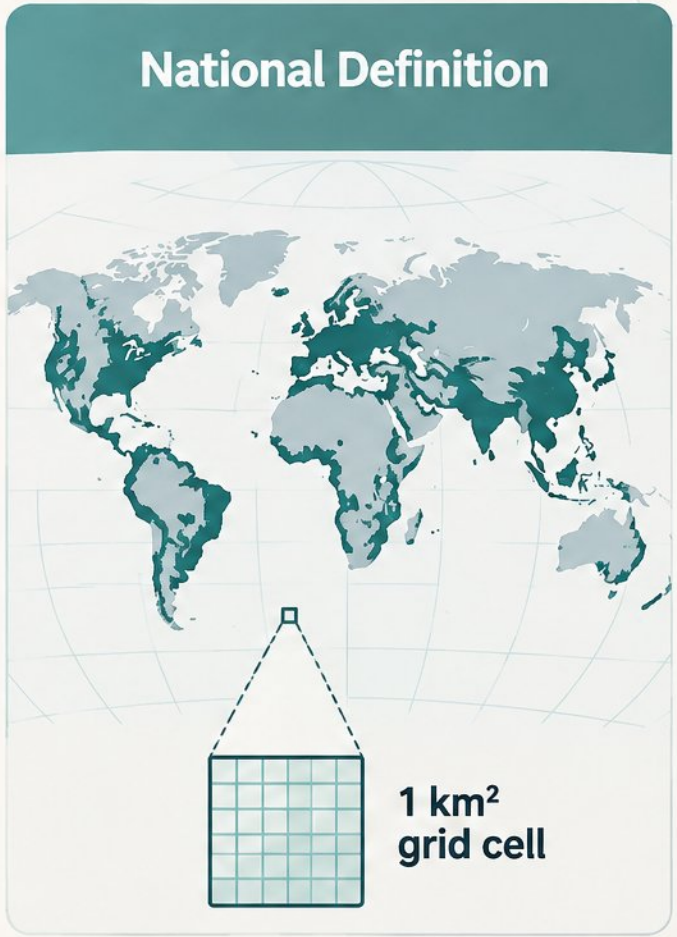
- UN Degree of Urbanization classifies 1 km² grid cells into three types

- Cities hold 45% of 8.2 billion people; towns 36%, rural 19% (2025)

- National definitions give about 58% urban worldwide, a lower figure

- Two-thirds of growth to 2050 is projected in cities; growth is slowing

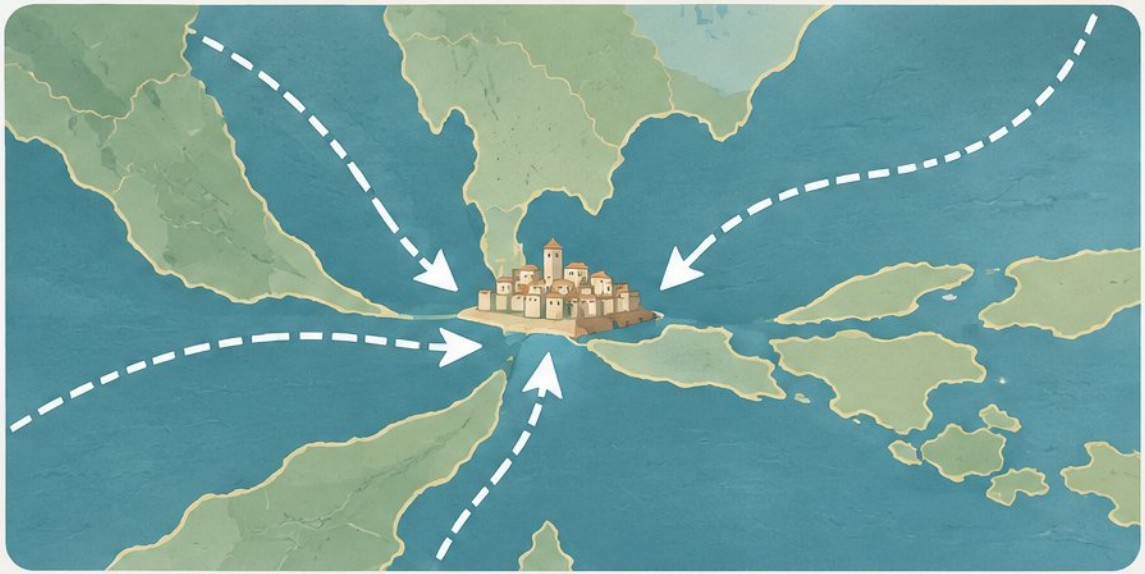




Site and Situation: Why Cities Grow Where They Do

- **Site:** physical land — relief, water supply, drainage, defensibility, harbor quality
- **Situation:** location relative to routes, resources, other settlements, regional networks
- Site explains why a city started; situation explains why it grew or did not
- As technology overcomes site limits, situation matters more over time
- **Singapore:** swampy site, but commanding situation beside the Strait of Malacca

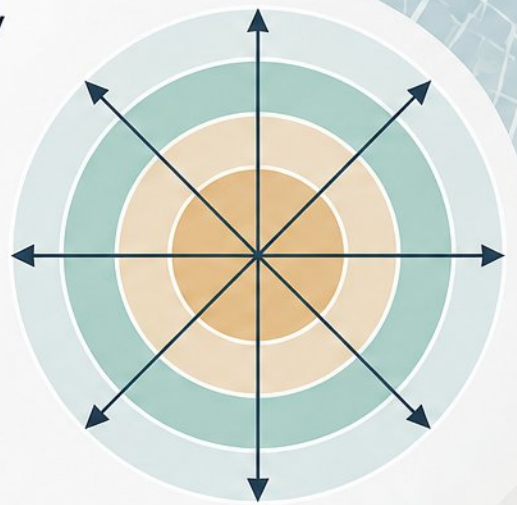


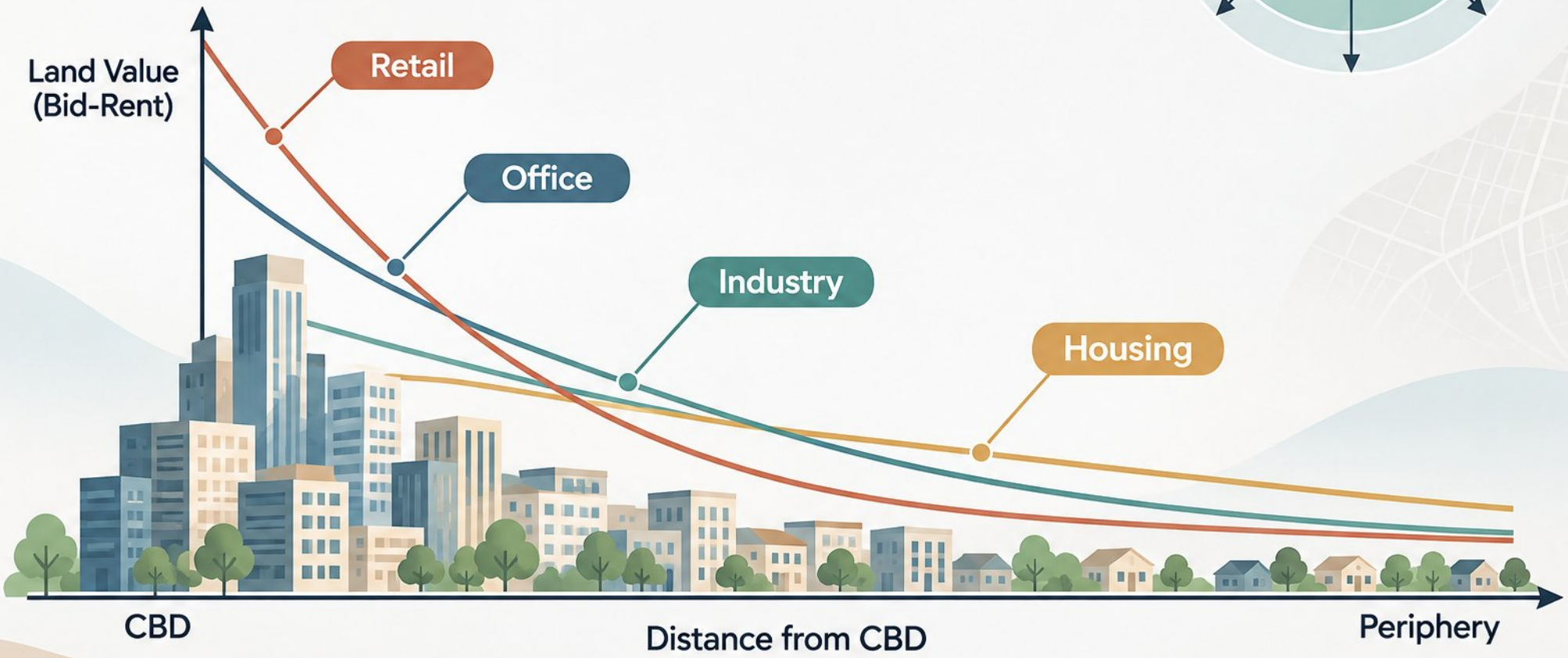




Density, Land Value, and Accessibility

- Bid-rent theory: users compete for accessible sites by willingness to pay
- Retail bids steeply for central pedestrian access; housing bids flatter
- Highest bid at each distance determines the dominant land use
- Land values and density generally fall outward from the peak value intersection
- New transport stations create secondary peaks, not a smooth gradient

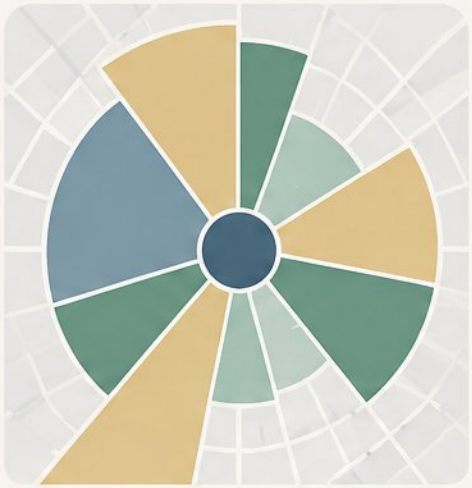




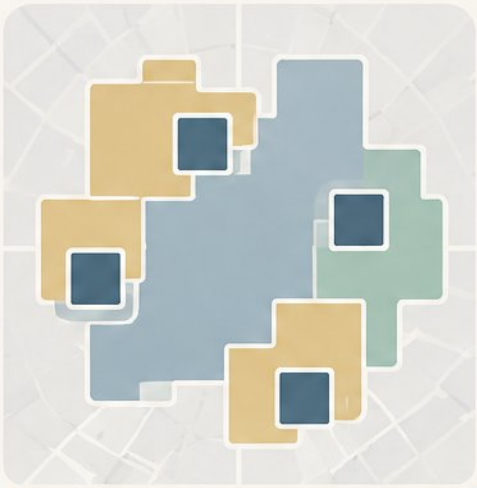
Classic Models of Urban Structure



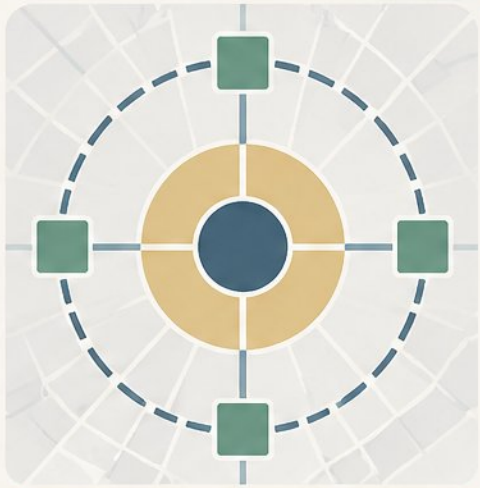
Concentric zone



Sector



Multiple nuclei

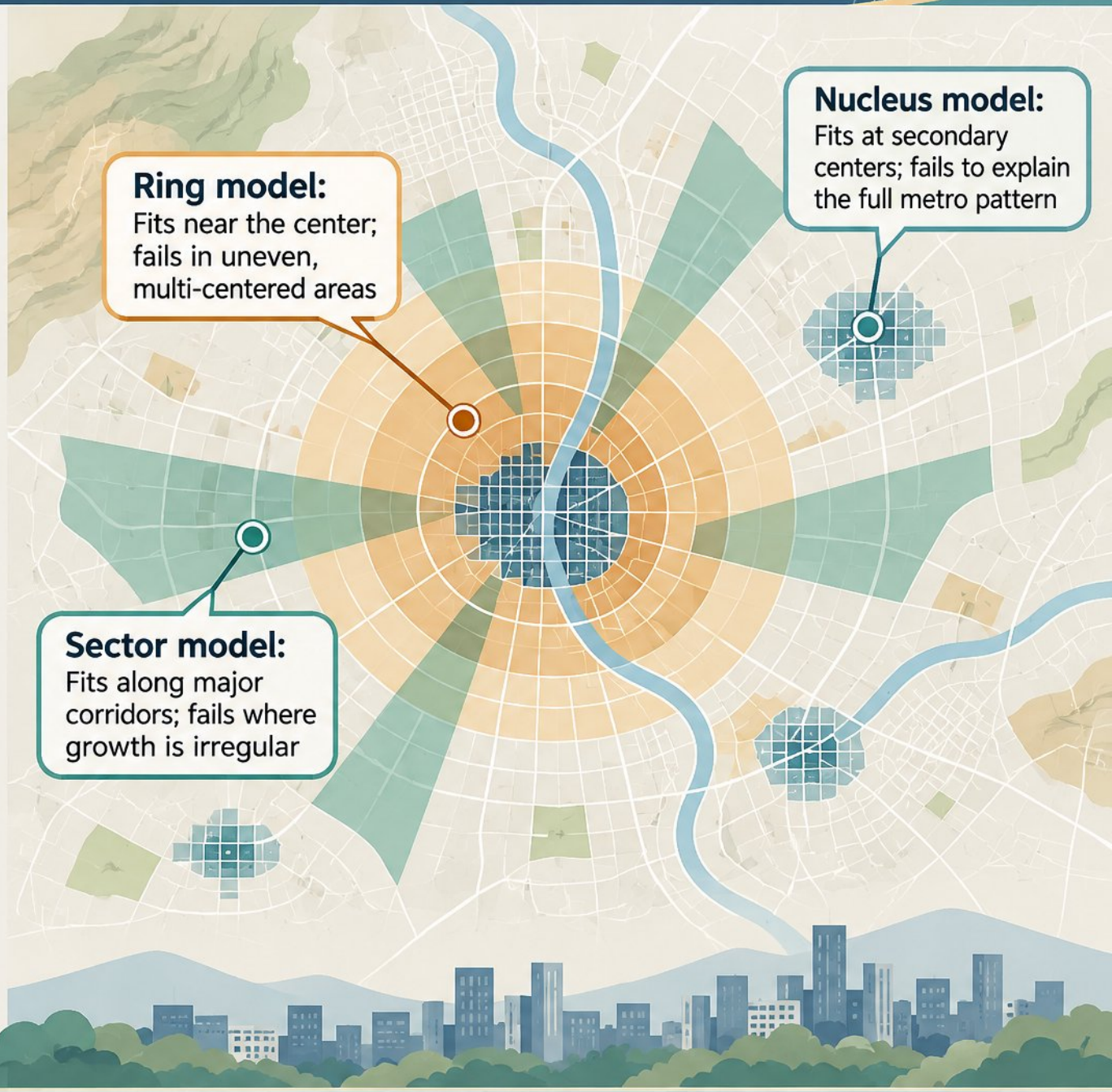


Galactic city

- **Concentric zone (Burgess, 1925):** rings around the CBD, based on 1920s Chicago
- **Sector (Hoyt, 1939):** wedges along transport routes, from U.S. rent data
- **Multiple nuclei (Harris & Ullman, 1945):** several specialized centers in car-based cities
- **Galactic city:** edge cities and beltways around an older core
- Each model simplifies one region and era—test them as hypotheses, not maps

Critiques and Alternatives to the Classic Models

- - Models assume an isotropic plain, ignoring terrain, planning, and political forces
- - Built from 1900s U.S. industrial cities; they fit poorly in South Asia, Latin America, Africa
- - Real metros mix rings, sectors, and nuclei in one metro area
- - Alternatives: Latin American model, fragmented and post-suburban models, poly subcentric networks
- - Habit: state what a model predicts, test it, name where it fails



Central Business Districts and Polycentric Regions

- CBD: peak land values, towers, transport convergence, few residents
- Core and frame: dense commerce inside, parking and warehouses outside
- Edge cities (Garreau, 1991): suburban job clusters with offices and retail
- Subcenter-led polycentric form now dominates U.S. metros (~43%, 2020)
- Zoning and mixed-use reshape CBDs through decline, revival, adaptation



Transport Networks and Urban Form

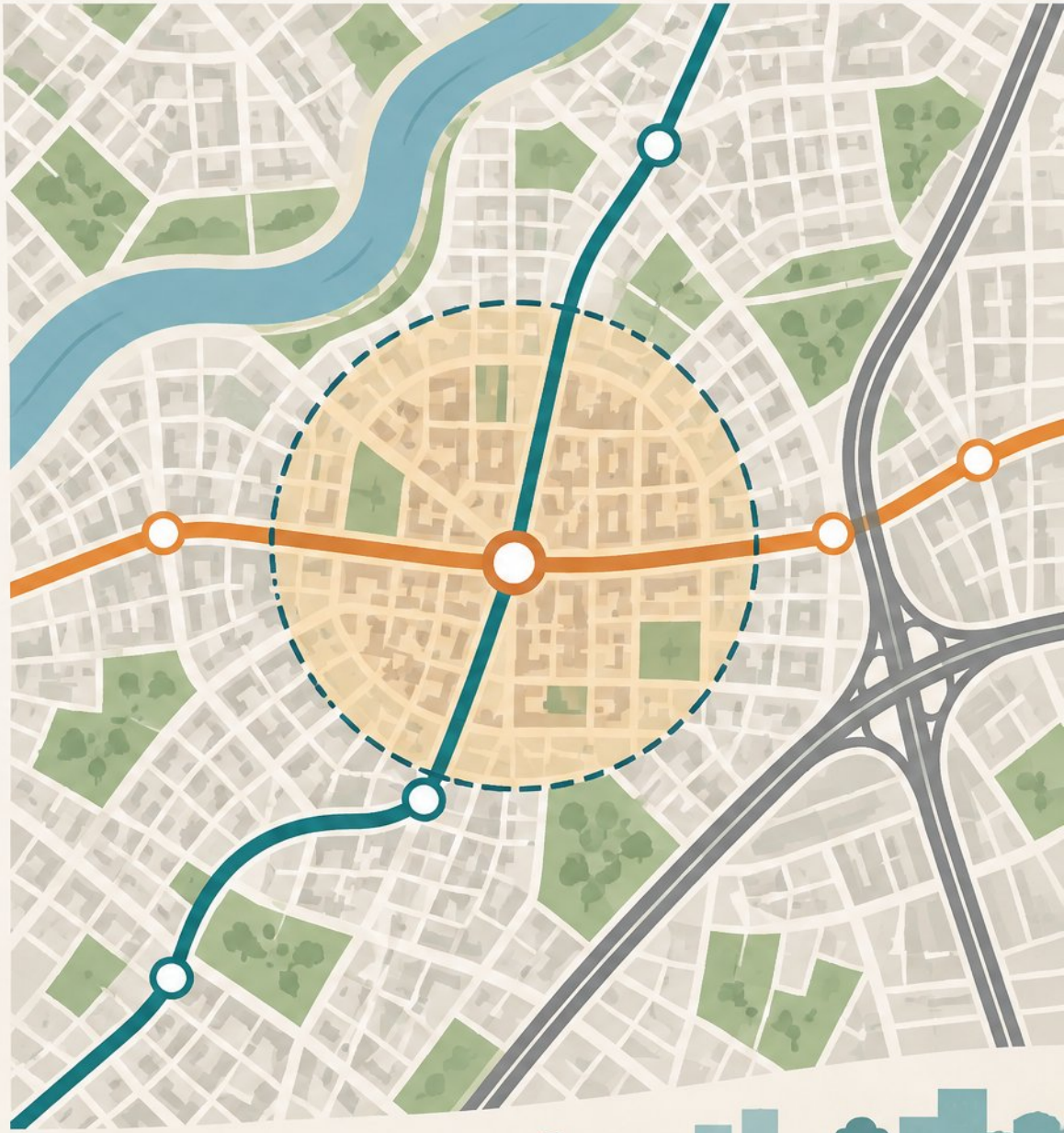
- Transport technologies shaped city shape: streetcar suburbs, automobile sprawl, transit corridors

- Nodes, corridors, and barriers: infrastructure both connects and divides the urban fabric

- Transit-oriented development: compact, mixed-use growth around transit stations and corridors

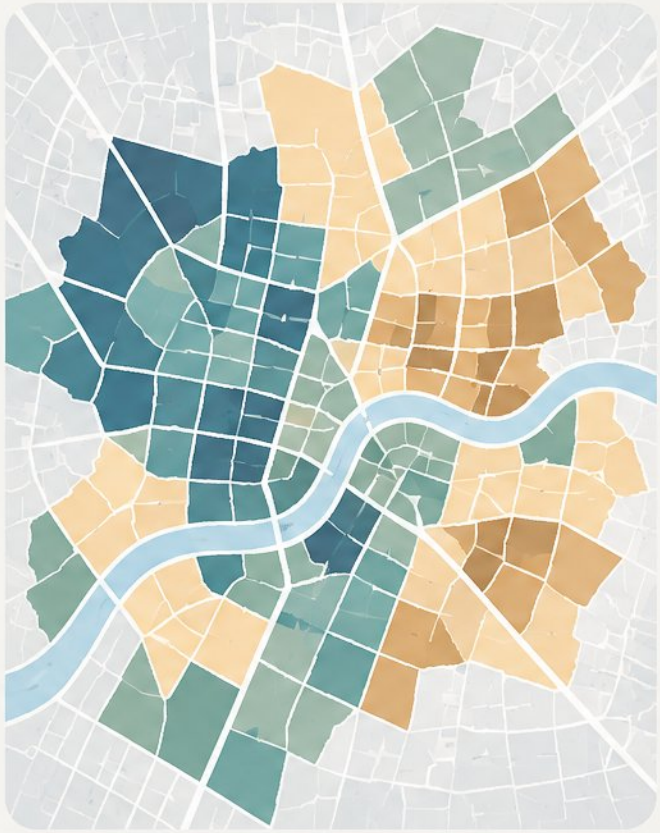
- The 15-minute city: six essential functions reachable by walking or cycling

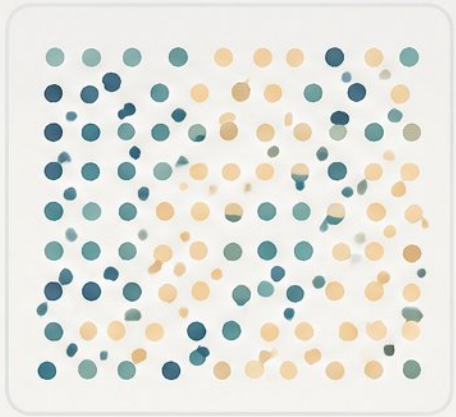
- A nearby circle on a map does not prove access; proximity must be safe, affordable, and usable



Social Space: Segregation, Housing, and Inequality

- Segregation measured by income, occupation, ethnicity, and tenure
- Dissimilarity index: share of a group needing to relocate for evenness
- European socio-economic segregation rose 2001–2011, then slowed or reversed by 2021
- Immigrant segregation higher in Western and Northern Europe
- Drivers: income inequality, housing markets, discrimination, core–suburb dynamics
- Limits: aspatial indices, neighborhood boundaries, shift to person-based data









Cities in a Regional and Global System

- Rank-size rule, primate cities, and interlocking networks of cities

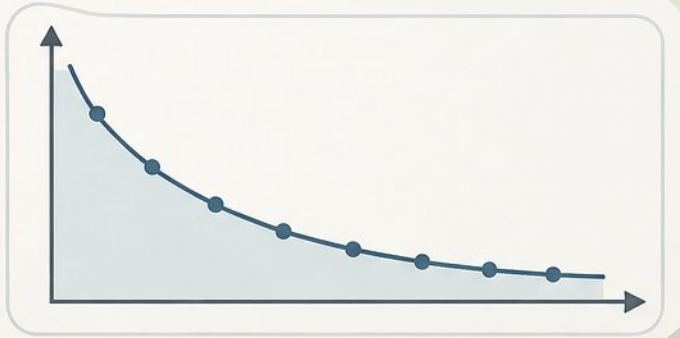
- Megaregions: overlapping commuting, shared economies, linked environmental landscapes

- Global examples: Greater Bay Area, Randstad, Rhine-Ruhr, U.S. Northeast

- Fragmented jursidictions lack legal recognition and clear metropolitan mandates

- Responses: metropolitan resolutions, intermunicipal councils, land-use–transport coordination





Change and Futures; Growth, Climate, and Technology

- Growth, shrinkage, and regeneration cycles reshape cities over time
- Climate adaptation is now a core spatial planning challenge: heat, flooding, sea-level rise
- Restrict–Condition–Promote: keep development out of high-risk zones
- 80% of latest national climate commitments include urban content, up from 50%
- Remote work and technology are reshaping central districts and housing demand



Practical Strategies for Teaching and Applying Urban Geography

- Classroom activities: map interpretation, CBD-to-edge transects, field observation, local case studies

- Open data: OpenStreetMap, national statistical portals, municipal open data, satellite imagery

- Free tools: QGIS plus lightweight web tools for POIs, census indicators, and accessibility

- Discussion prompts connect spatial patterns to students' everyday city experience

- Address misconceptions: models as facts, density as bad, segregation as purely natural

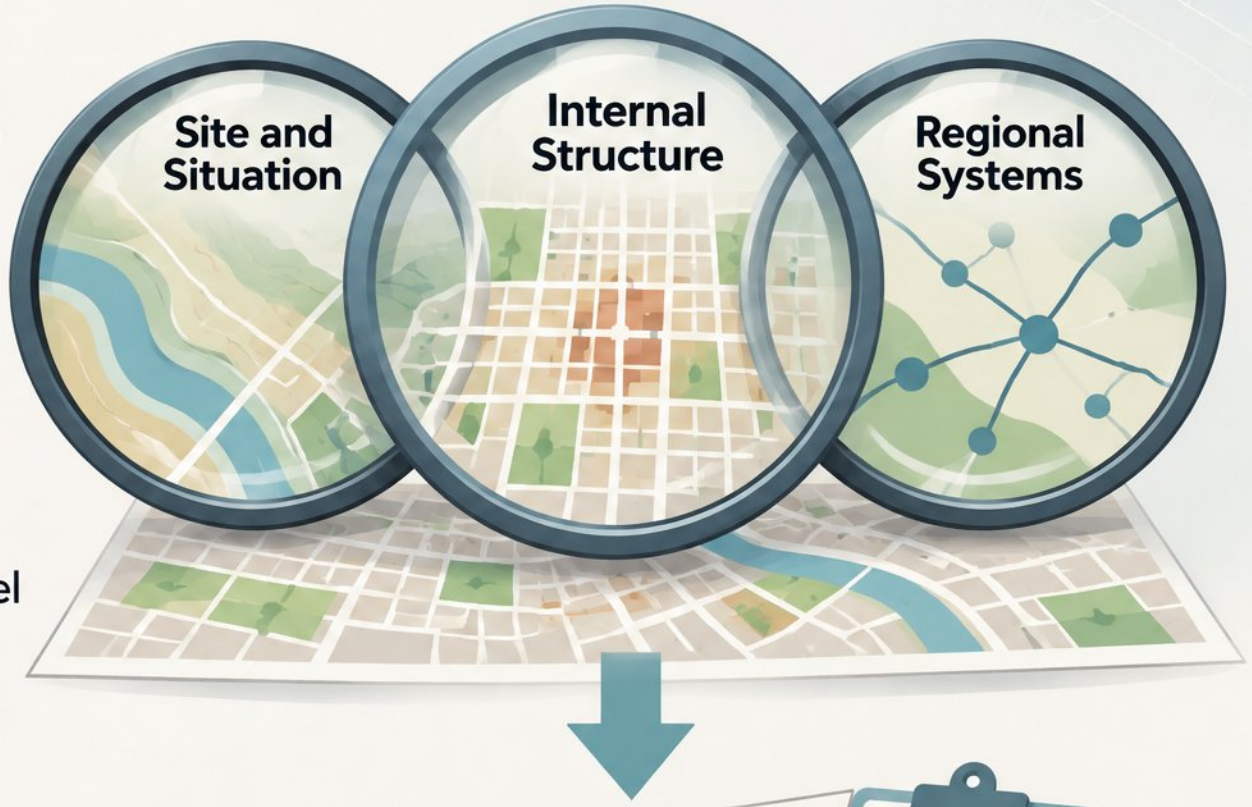






Key Takeaways and Next Steps

- Cities are spatial systems: accessibility, land competition, transport, policy, social processes
- Three working lenses: site and situation, internal structure, regional systems
- Models and metrics are tools for asking questions, not answers to memorize
- Start locally: read one map, walk one transect, test one model
- Next step: build a local case study with open data as closing assessment





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