Urban Land Use

Urbanization

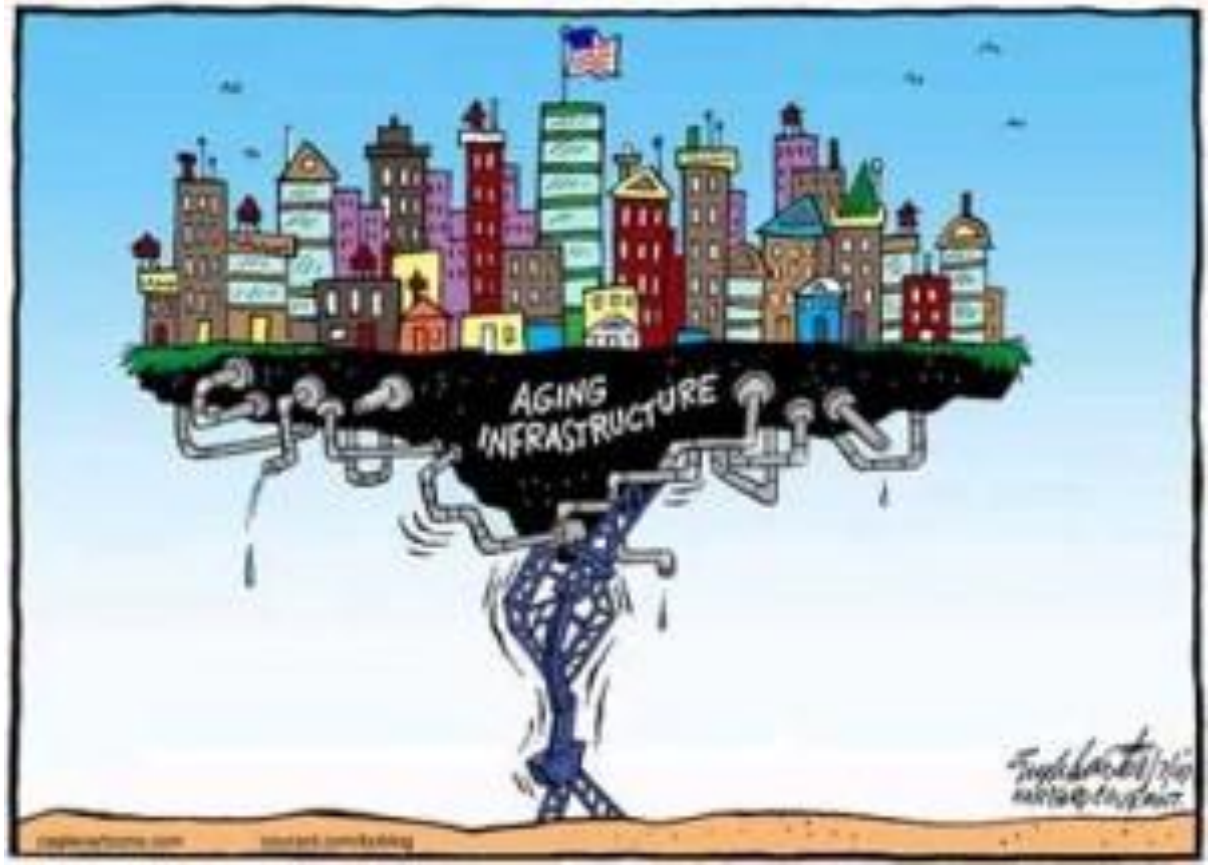
- Urbanization: the movement of people from rural areas to cities.
- People usually move for more or better paying jobs.

The Urban Crisis

- Infrastructure: all of the things that a society builds for public use.
  - Roads, sewers, bridges, canals, fire and police stations, schools, libraries, hospitals, water mains, and power lines, etc.

The Urban Crisis Continued

- When more people live in a city than its infrastructure can support, the living conditions deteriorate.
- This is called Urban Crisis.

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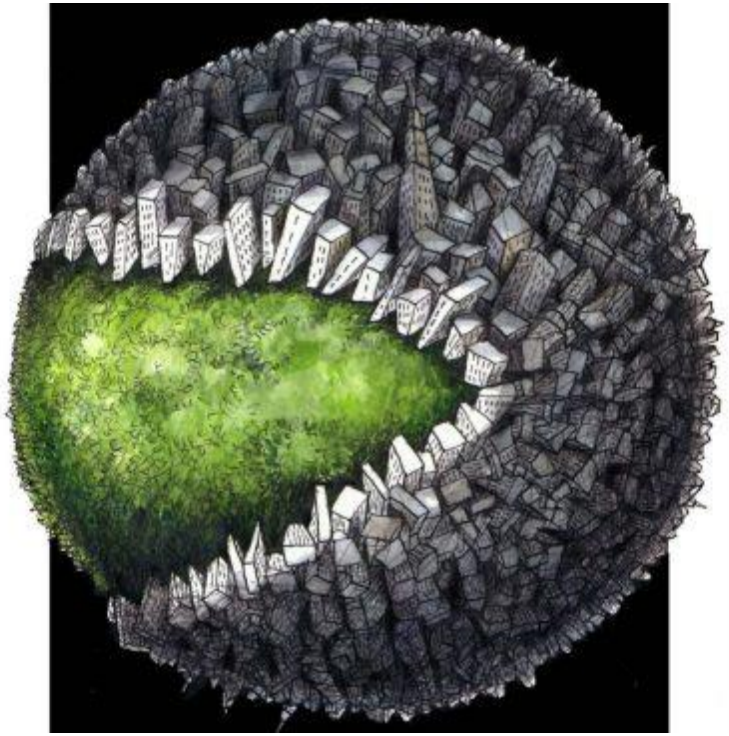
Urban Sprawl

- Urban sprawl: rapid expansion of a city into the countryside around the city.
- Much of this expansions results from the building of suburbs or housing and associated commercial buildings on the boundary of a larger city.

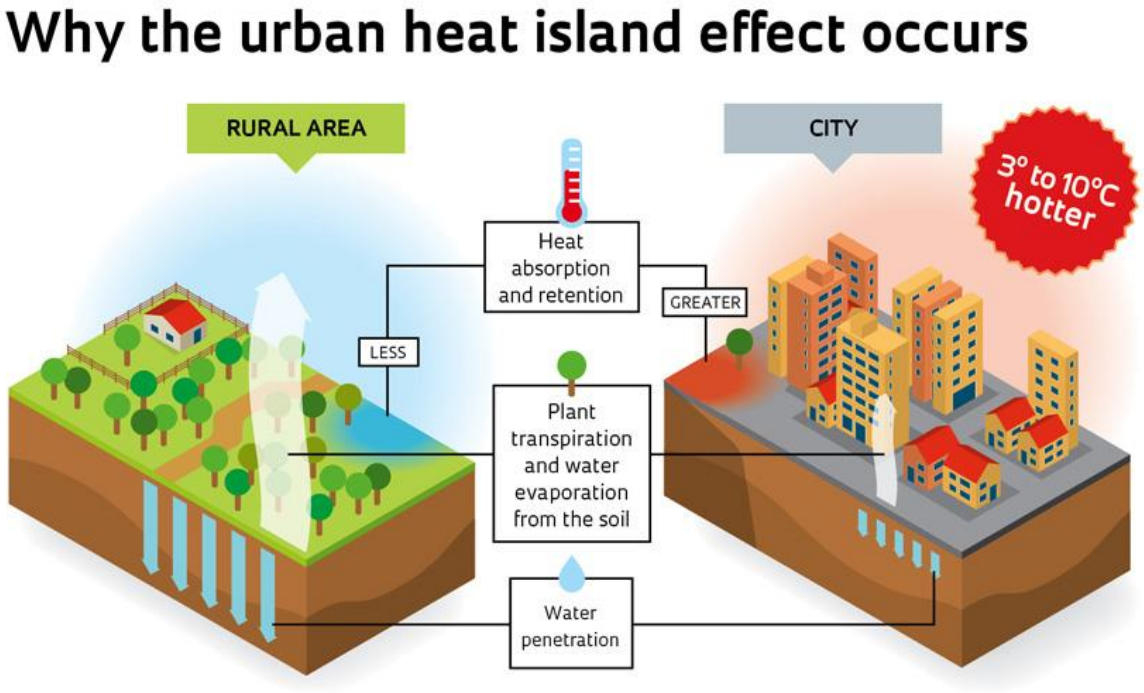
Disadvantage of Urban Sprawl

- High Car Dependence
- Inadequate facilities (cultural, emergency, health, etc.)
- High per-person infrastructure costs
- Inefficient street layouts
- Low diversity of housing and business types
- Higher per-capita use of energy, land, and water
- Perceived low aesthetic value



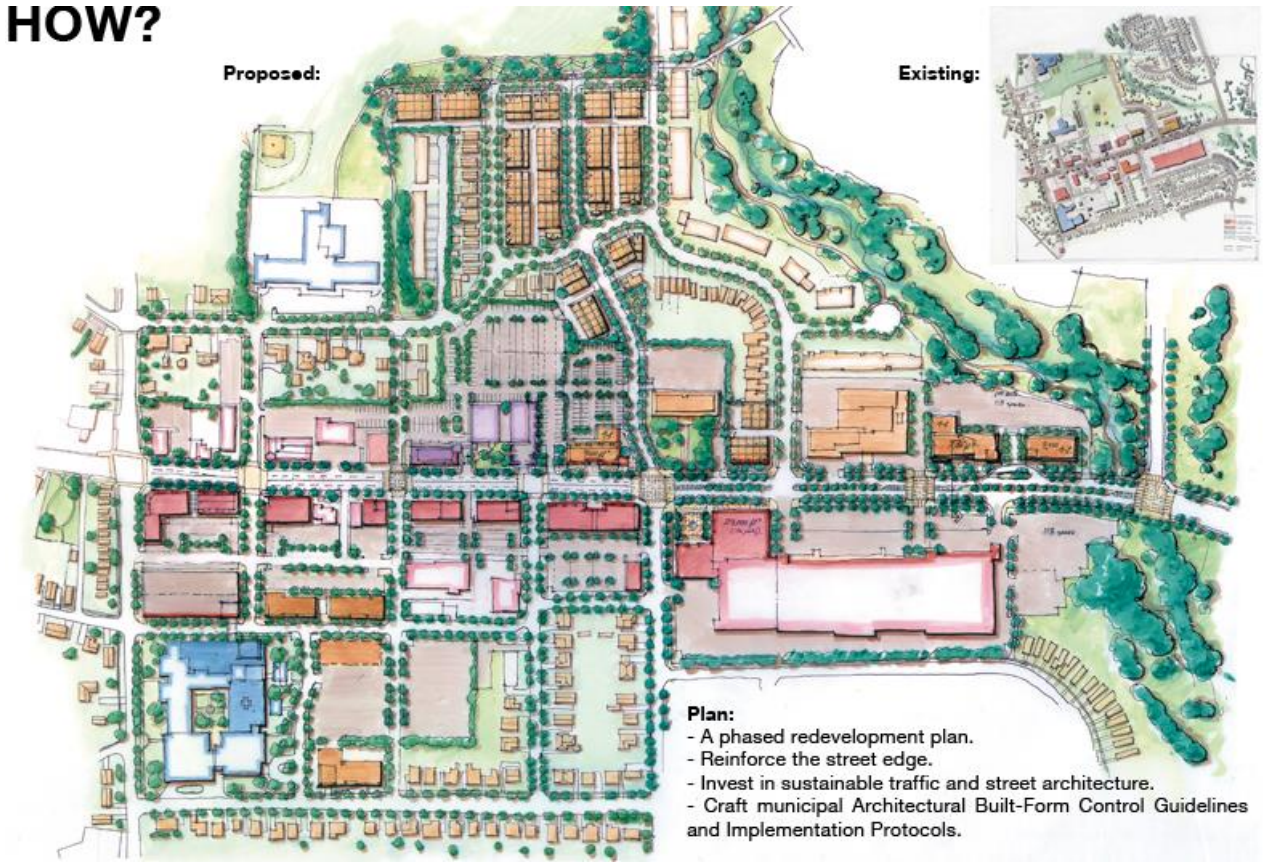
Other Impacts of Urbanization

- Environmental conditions in a city differ from those in the countryside.
- Cities generate and trap heat.
- The increased temperature in a city is called heat island.
- Can affect local weather patterns, specifically rain.
- Effect can be moderated by planting trees for shade or installing rooftops that reflect heat.



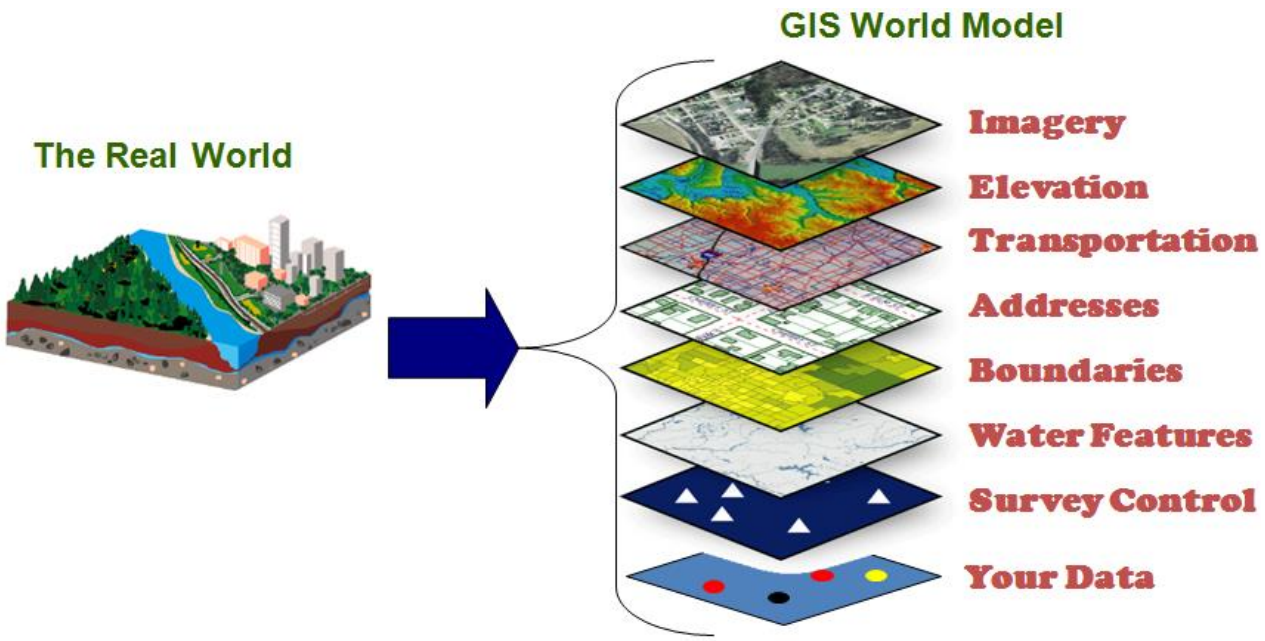
Urban Planning

- Land-use planning: determining in advance how land will be used.
- Where is the best location for housing, businesses, roads, etc?
- Where will land be protected for recreation and conservation?
- Where will sewers, electrical lines, etc. go?
- Complex and controversial
- Businesses, governments, and citizens often disagree about land-use plans.



Technological Tools for Urban Planning

- GIS – Geographic Information System
- A computerized system for storing, manipulating, and viewing geographical data.
- GIS allows the user to look for specific data about an area, such as sewer lines, roads, parks, etc.
- GIS users can layer information to help inform decisions.



Urban Planning and Transportation

- Many U.S. cities are difficult to travel in without a car.
- Most U.S. cities were built after the invention of the automobile.
- At the time, availability of land was not an issue, so many cities are spread out over large areas.
- Most cities in Europe were built before cars, so they are more compact.

Mass Transit Systems

- Uses buses or trains to move many people at one time.
- Save energy
- Reduce highway congestion
- Reduce air pollution
- Limit loss of land to roadways and parking lots
- In places where mass transit systems are not well developed, carpooling is an important alternative!

Open Space

- Open space is land that is set aside for agriculture or scenic and recreational enjoyment.
- Parks, public gardens, bicycle and hiking trails, etc.
- Greenbelts are open spaces left in their natural condition.
- Greenbelts provide important ecosystem services.

Environmental Benefits of Open Spaces

- Plants absorb CO_2 and produce O_2, and filter out pollutants from the air and water.
- Plants help keep the city cooler in the summer.
- Provide food resources.
- Reduce drainage problems.
- Places for exercise and relaxation