Industrial Beginnings & Location
The Industrial Revolution began in Great Britain in the late 1700’s (18th century)

Britain's political stability gave the country a tremendous advantage over its neighbors. Though Britain took part in many wars during the 1700s, none occurred on British soil.

England also had:
- water power and coal to fuel the new machines
- iron ore to construct machines, tools, and buildings
- rivers for inland transportation
- harbors from which merchants ships set sail
This truly was a revolution

- The Industrial Revolution marks a major turning point in history; almost every aspect of daily life was influenced in some way.

- Most notably, average income and population began to exhibit unprecedented sustained growth.

- Economic historians are in agreement that the onset of the Industrial Revolution is the most important event in the history of humanity since the domestication of animals and plants.
New machinery

- New machines caused an explosion in productivity = higher standard of living

- Steam engines powered all early factories, steam boats and locomotives, and therefore acted as the foundation of the Industrial Revolution.
Steam engine

- James Watt patented the first steam engine in 1769
- It allowed steam to move machinery
- The first areas to use the new technology:
  - Iron & textile
  - Coal mining - getting water out of mines
  - Transportation - canals (steamboats) & rail

http://science.howstuffworks.com/transport/engines-equipment/steam1.htm
Change in location of industry

- Manufacturing centers sprung up near coal deposits & ports
- Previously, home based “cottage industry” was dispersed across the landscape in people’s homes
- Now there was a clustered distribution
Population of England before and after Industrial Revolution
Major industrial areas

1) NE United States & SE Canada
2) Western & Central Europe - Rhine-Ruhr Valley became Europe’s greatest industrial complex
- Names to recognize:
  - Silesia
  - Saxony
  - Bohemia
  - Midlands
3) The former Soviet Union - Eastern Europe

Names to recognize:
Ukraine
Volga
Urals
Far East
Baykal
East Asia - Japan, China, South Korea, Taiwan

Names to recognize - Japan: Kanto Plain, Kansai

China: Guangdong, Chang
How do we determine where to locate a factory?

- SITE and SITUATION are back!
- Site- what is there?
  - The human and physical characteristics of a location- its unique characteristics
  - A company must decide what is most important: LAND, LABOR, or CAPITAL?
  - Land- natural resources
  - Labor- a workforce
  - Capital- investors, and human capital (education)
Choose land, labor, or capital

- Where would you put...
  - A lumber factory?
    - Land - near the forest
  - A tech company?
    - Capital - Silicon Valley for investors and workforce
  - A toy manufacturer
    - Labor - Asia - cheap labor
Think TRANSPORT
What should the manufacturer be closer to- the raw materials, or the market?
Lumber company
- Raw materials- the trees are the heavy part- processed paper or wood is easier to ship
Car production
- Closer to the market- cars are heavy to ship
**Situation factors**

- **Bulk-gaining vs. bulk-reducing**
- **Bulk-reducing:**
  - Final product weighs less than inputs
  - Locates near source of inputs (raw materials)
    - Copper mills near copper mines
    - Steel mills near iron ore & coal (or near ports)
- **Bulk-gaining:**
  - Product gains volume/weight during production
  - Locates near the market
    - Soft drink bottling locates near consumers
    - Cars manufacturing happens in the middle of the country
Soft drinks (and beer) are bottled around the country to save on transport cost.

Why would you ship water, when it is available everywhere?

Corn sweetener by the ton.
An industry whose location is not influenced strongly by access either to materials or markets, and which can therefore operate within a very wide range of locations. Any form of ‘direct line’ business, operated almost entirely through telephone and fax lines, would be an example.

- Companies that aren’t tied to a location
- Easy for them to move
- Examples- diamonds and computer chips