

# Production Processes

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- Analytic production system
  - reduces a raw material to its component parts in order to extract one or more marketable products.
- Synthetic production system
  - Is the reverse of an analytic system. It combines a number of raw materials or parts or transforms raw materials to produce finished products.
- Continuous production process
  - generates finished products over a lengthy period of time.
- An intermittent production process
  - generates products in short production runs, shutting down machines frequently or changing their configurations to produce different products.

# Technology and the Production Process

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- **Robot-** a reprogrammable machine capable of performing a variety of tasks that require the repeated manipulation of materials and tools.
- **Computer-Aided Design**– allows engineers to design components as well as entire products on computer screens faster and with fewer mistakes than they could achieve working with traditional drafting systems.
- **Computer-Aided Manufacturing-** computer tools to analyze CAD output and enable a manufacturer to analyze the steps that a machine must take to produce a needed product or part.
- **Flexible Manufacturing Systems**– a production facility that workers can quickly modify to manufacture different products.
- **Computer-Integrated Manufacturing**– production system in which computers help workers design products, control machines, handle materials, and control the production function in an integrated fashion.

# The Location Decision

LOCATION FACTOR	EXAMPLES OF AFFECTED BUSINESSES
<b>Transportation</b>	
Proximity to markets	Baking companies and manufacturers of other perishable products, dry cleaners, hotels, other services
Proximity to raw materials	Paper mills
Availability of transportation alternatives	Brick manufacturers, retail stores
<b>Physical Factors</b>	
Water supply	Computer chip fabrication plants
Energy	Aluminum, chemical, and fertilizer manufacturers
Hazardous wastes	All businesses
<b>Human Factors</b>	
Labor supply	Auto manufacturers, software developers
Local zoning regulations	Manufacturing and distribution companies
Community living conditions	All businesses
Taxes	All businesses