

Household Issues

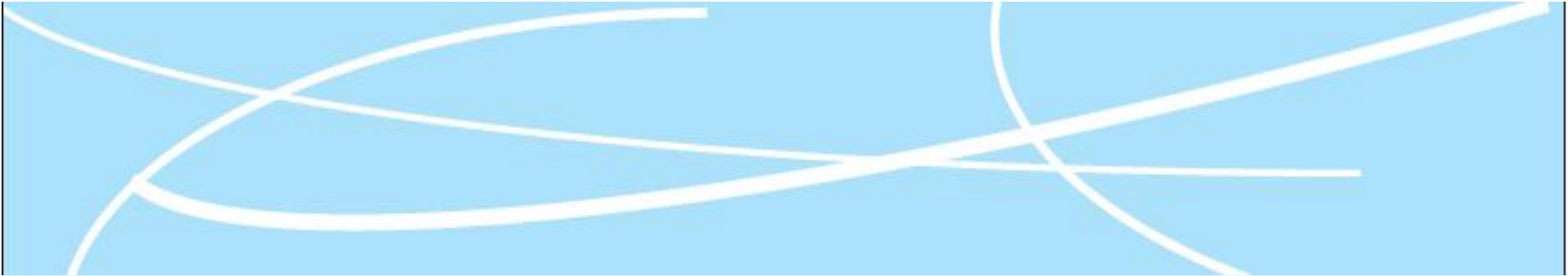
- This Thursday there is NO CLASS
- Quiz on Production and Logistics (Chapter 17) Due on Connect though...
- Next week Tuesday, International Marketing – Connect Quiz on Chapter 18
next week Thursday – no class session

Household Issues

- Exam Review on Tuesday, April 21
- Special pre-exam office hours 11:00 a.m.
– 12:30 p.m. on Thursday, April 23
- NO CLASS ON APRIL 23

Final Exam

- Wednesday, April 29, Schneider 2000
 - 12:30 p.m. – 2:30 p.m.
- Since everybody is having final exams printed up: Unless you notify me by next week – there is no time to get an exam shipped off to Student Diss. Services

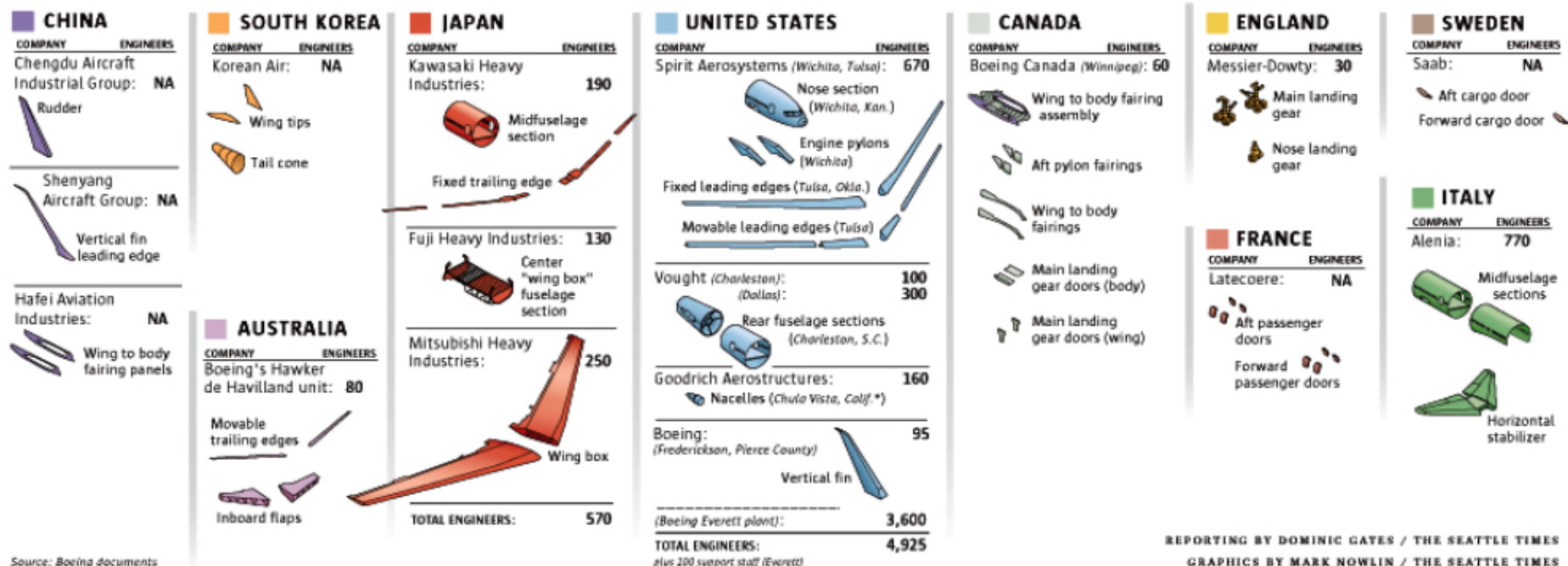


Chapter 11 = Chapter 17
(Connect)

**Global Production,
Outsourcing, and
Logistics**

Who makes the parts and where the engineering jobs are

Numbers of engineers are projections for the end of 2005 made by Boeing's first-tier partners, and may not include all engineering specialties. Production workers are not included.







jörg bösche
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Extreme Example Perhaps, But:

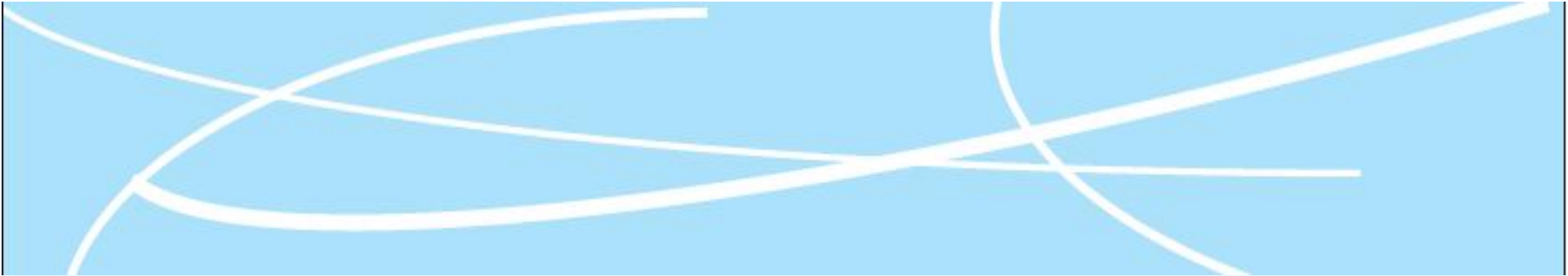
**BASICS ARE ALWAYS THE
SAME:**

What Are the Main Production Issues for Firms?

1. Where should production activities be located?
2. What should be the long-term strategic role of foreign production sites?
3. Should the firm own foreign production activities or outsource those activities to independent vendors?
4. How should a globally dispersed supply chain be managed, and what is the role of Internet-based information technology in the management of global logistics?
5. Should the firm manage global logistics itself, or should it outsource the management to enterprises that specialize in this activity?

How Are Strategy, Production, and Logistics Related?

- **Production** - activities involved in creating a product
- **Logistics** - procurement and physical transmission of material through the supply chain, from suppliers to customers



Production & Logistics

SUPPLY CHAIN MANAGEMENT



Supply Chain Management

DEMAND & SUPPLY INTEGRATION



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 - 2. Add value by better serving customer needs?
 - eliminate defective products from the supply chain and the manufacturing process

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 - That means: figure out how to manage demand

How Can Quality Be Improved?

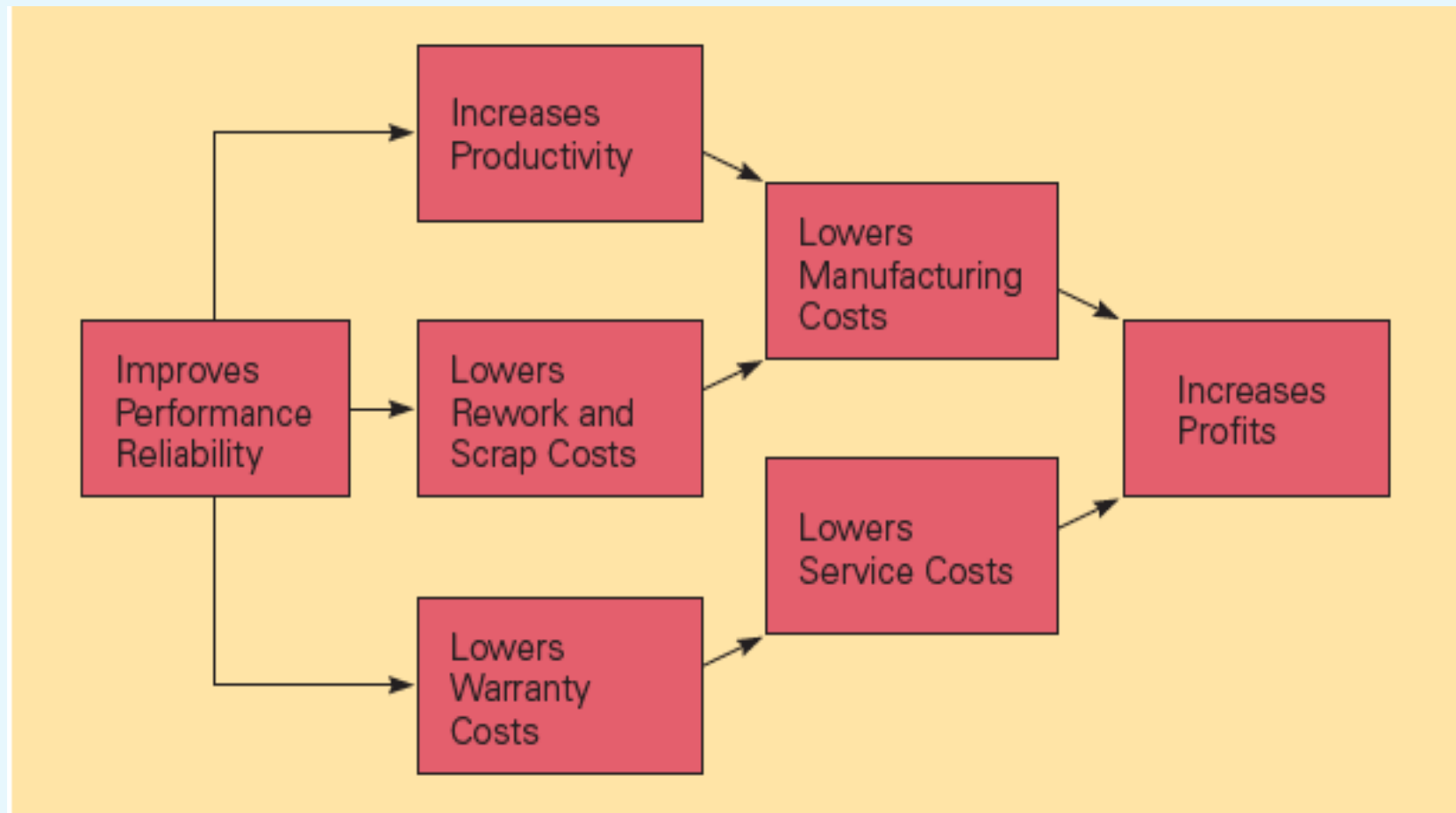
- Most firms use the Six Sigma program - a direct descendant of total quality management (TQM)
- aims to reduce defects, boost productivity, eliminate waste, and cut costs throughout the company

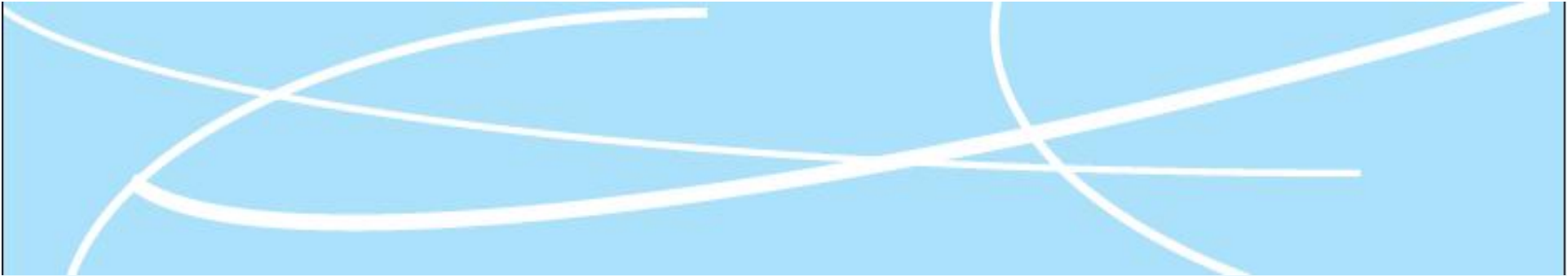
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- Most firms use the **Six Sigma** program - a direct descendant of **total quality management (TQM)**
 - aims to reduce defects, boost productivity, eliminate waste, and cut costs throughout the company
 - Firms use **ISO 9000** standards Improved quality reduces costs

How Can Quality Be Improved?

The Relationship Between Quality and Costs





With Regards to Quality and Supply Chain Management:

IMPORTANT POINT:

Quality is a Supply Chain Issue

- Quality is changing to become a “Supply Chain Responsibility”
- That means:.....



Production Management

LOCATION, LOCATION....

Where Should Production Be Located?

- Firms should locate production so that
 - production and logistics can be locally responsive
 - production and logistics can respond quickly to shifts in customer demand

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- Firms should locate production so that
 - production and logistics can be locally responsive
 - production and logistics can respond quickly to shifts in customer demand
- Firms should therefore consider:
 1. Country factors
 2. Technological factors
 3. Product factors

Why Are Country Factors Important?

- Manufacturing should be located where economic, political, and cultural conditions are most conducive to the performance of that activity
 - create a global web of activities
 - global concentrations of activities at certain locations

Why Are Country Factors Important?

- Firms should consider
 - the availability of skilled labor and supporting industries
 - formal and informal trade barriers
 - expectations about future exchange rate changes
 - transportation costs
 - regulations affecting FDI

Why Are Technological Factors Important?

- Firms should consider
 1. The level of fixed costs

Why Are Technological Factors Important?

➤ Firms should consider

1. The level of fixed costs

- if fixed costs are high, produce in a single location or a few locations
- when fixed costs are low, multiple production plants may be possible
 - allows firms to respond to local demands

Why Are Technological Factors Important?

2. The minimum efficient scale

- the level of output at which most plant-level scale economies are exhausted

Why Are Technological Factors Important?

2. The minimum efficient scale

- the level of output at which most plant-level scale economies are exhausted
- when minimum efficient scale is high, choose centralized production in a single location or a limited number of locations
- when minimum efficient scale is low, respond to local market demands and hedge against currency risk by operating in multiple locations

Why Are Technological Factors Important?

3. The flexibility of manufacturing technology

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 - reduces set up times for complex equipment
 - increases the utilization of individual machines
 - improves quality control

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- flexible manufacturing technology or lean production
 - reduces set up times for complex equipment
 - increases the utilization of individual machines
 - improves quality control
- allows firms to produce a wide variety of end products at a relatively low unit cost
 - mass customization (which is a marketing concept – by the way!)
 - flexible machine cells – WHAT?

What Should a Firm Do?

- Production should be concentrated in a few locations when
 - fixed costs are substantial
 - the minimum efficient scale of production is high
 - flexible manufacturing technologies are available

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- Production should be concentrated in a few locations when
 - fixed costs are substantial
 - the minimum efficient scale of production is high
 - flexible manufacturing technologies are available
- Production in multiple locations makes sense when
 - both fixed costs and the minimum efficient scale of production are relatively low
 - appropriate flexible manufacturing technologies are not available

Why Are Product Factors Important to Location Decisions?

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 - when products serve universal needs, the need for local responsiveness falls, and concentrating manufacturing in a central location makes sense

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- EXAMPLE:

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- EXAMPLE: PRINGLES

What Are the Hidden Costs of Foreign Production Locations?

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- There may be hidden costs associated with foreign production
- Before making the decision to locate production in a foreign location firms must consider the potential for
 - high employee turnover
 - poor workmanship
 - poor product quality
 - low productivity

What Is the Strategic Role of Foreign Factories?

- The strategic role of foreign factories and the strategic advantage of a particular location can change over time
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 - factories established to take advantage of low cost labor can evolve into facilities with advanced design capabilities
- Improvement in a facility comes from
 1. Pressure to lower costs or respond to local markets
 2. An increase in the availability of advanced factors of production

What Is the Strategic Role of Foreign Factories?

- Many companies now see foreign factories as globally dispersed centers of excellence
 - supports the development of a transnational strategy
 - **global learning** - valuable knowledge can be found in foreign subsidiaries
 - implies that firms are less likely to switch production to new locations simply because some underlying variable like wage rates has changed

Should a Firm Outsource Production?

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- **Question:** Should a firm make or buy the component parts to go into its final product?
- **Make-or-buy decisions** are important to firms' manufacturing strategies
 - service firms also face make-or-buy decisions
 - decisions involving international markets are more complex than those involving domestic markets

Why Make?

- Vertical integration - making component parts in-house
- 1. **Lowers costs**
 - if a firm is more efficient at that production activity than any other enterprise, manufacturing in-house makes sense

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1. Lowers costs

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2. Facilitates investments in highly specialized assets

- internal production makes sense when substantial investments in **specialized assets** are required

Why Make?

3. Protects proprietary technology

- in-house production makes sense when component parts contain proprietary technology

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3. Protects proprietary technology

- in-house production makes sense when component parts contain proprietary technology

4. Facilitates the scheduling of adjacent processes

- planning, coordination, and scheduling of adjacent processes can be easier with in-house production

Why Buy?

- Buying component parts from independent suppliers
- 1. Gives the firm greater flexibility
 - important when changes in exchange rates and trade barriers alter the attractiveness of various supply sources over time

Why Buy?

2. Helps drive down the firm's cost structure

- avoids challenges of coordination and control of additional subunits
- avoids the lack of incentive associated with internal suppliers
- avoids the difficulties with setting appropriate transfer prices

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- **NOTE: This is a large part of the B787 decision to outsource both production AND engineering!**

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3. Helps the firm capture orders from international customers

- can help firms gain orders from suppliers' countries

Do Strategic Alliances with Suppliers Make Sense?

- Firms can capture the benefits of vertical integration without the associated organizational problems by forming long-term strategic alliances with key suppliers
 - however, these commitments may actually limit strategic flexibility
 - risk giving away key technological know-how to a supplier

How Do Firms Manage the Global Supply Chain?

- **Logistics** encompasses the activities necessary to get materials to a manufacturing facility, through the manufacturing process, and out through a distribution system to the end user
- The goal is to
 - manage a global supply chain at the lowest possible cost and in a way that best serves customer needs
 - establish a competitive advantage through superior customer service

What Is the Role of Just-In-Time Inventory?

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- But, a JIT system leaves the firm with no buffer stock of inventory to meet unexpected demand or supply changes

What Is the Role of Information Technology and the Internet?

- Web-based information systems play a crucial role in materials management
 - allow firms to optimize production scheduling according to when components are expected to arrive
- Electronic Data Interchange (EDI)
 - facilitates the tracking of inputs
 - allows the firm to optimize its production schedule
 - lets the firm and its suppliers communicate in real time
 - eliminates the flow of paperwork between the firm and its suppliers