

## Chapter 13

# Supply Chain Management

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## LEARNING OUTCOMES

- 13-1 Define the terms *supply chain* and *supply chain management*, and discuss the benefits of supply chain management
- 13-2 Discuss the concepts of internal and external supply chain integration and explain why each of these types of integration is important
- 13-3 Identify the eight key processes of excellent supply chain management and discuss how each of these processes affects the end customer

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## LEARNING OUTCOMES

- 13-4 Understand which supply chain functions affect business success, and how
- 13-5 Understand the importance of sustainable supply chain management to modern business operations
- 13-6 Discuss new technology and emerging trends in supply chain management

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13-1

### Supply Chains and Supply Chain Management

Define the terms *supply chain* and *supply chain management*, and discuss the benefits of supply chain management

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## Supply Chain

The connected chain of all of the business entities, both internal and external to the company, that perform or support the logistics function.

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## Supply Chain Management

A management system that coordinates and integrates all of the activities performed by supply chain members into a seamless process, from the source to the point of consumption, resulting in enhanced customer and economic value.

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## Benefits of Supply Chain Management

Supply chain oriented companies commonly report:

- Lower inventory, transportation, warehousing, and packaging costs
- Greater supply chain flexibility
- Improved customer service
- Higher revenues
- Increased performance and profitability

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## Supply Chain Integration

Discuss the concepts of internal and external supply chain integration and explain why each of these types of integration is important

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## Supply Chain Integration

- A systems approach where the overall performance of the chain is greater than the sum of its parts.
- Occurs when multiple functional areas coordinate business processes to seamlessly link to one another.

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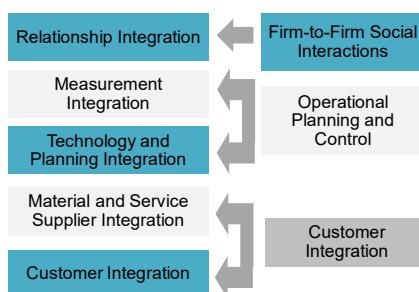
## Internal Supply Chain Integration

- Management practices that reflect a highly coordinated effort between supply chain firms or across business functions within the same or different firms are said to be “integrated.”
- From an internal perspective, the very best companies develop a managerial orientation toward demand-supply integration (DSI).

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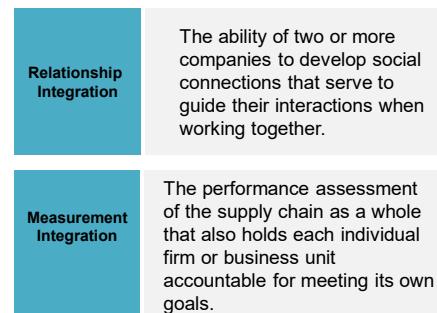
## External Supply Chain Integration



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## Supply Chain Integration



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## Supply Chain Integration

### Technology and planning integration

The creation and maintenance of information technology systems that connect managers across and through the firms in the supply chain.

### Material and service supplier integration

Requires firms to link seamlessly to those outsiders that provide goods and services to them so that they can streamline processes and provide quality customer experiences.

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## Supply Chain Integration

### Customer Integration

A competency that enables firms to offer long-lasting, distinctive, value-added offerings to those customers who represent the greatest value to the firm or supply chain.

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## Key Processes of Supply Chain Management

Identify the eight key processes of excellent supply chain management and discuss how each of these processes impacts the end customer

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## Key Business Processes

1. Customer relationship management
2. Customer service management
3. Demand management
4. Order fulfillment
5. Manufacturing flow management
6. Supplier relationship management
7. Product development and commercialization
8. Returns management

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## Customer Relationship Management

CRM allows companies to prioritize their marketing focus on different customer groups according to each group's long-term value to the company or supply chain.

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## Customer Service Management

The customer service management process presents a multi-company, unified response system to the customer whenever complaints, concerns, questions, or comments are voiced.

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## Demand Management

The demand management process seeks to align supply and demand throughout the supply chain by anticipating customer requirements at each level and create demand-related plans of action prior to actual customer purchasing behavior.

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## Order Fulfillment

The order fulfillment process is a highly integrated process, often requiring persons from multiple companies and multiple functions to come together and coordinate to create customer satisfaction at a given place and time.

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### Manufacturing Flow Management

The manufacturing flow management process is concerned with ensuring that firms in the supply chain have the needed resources to manufacture with flexibility and to move products through a multi-stage production process.

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### Supplier Relationship Management

The supplier relationship management process supports manufacturing flow by identifying and maintaining relationships with highly valued suppliers.

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### Product Development and Commercialization

The product development and commercialization processes include the group activities that facilitates the joint development and marketing of new offerings among a group of supply chain partner firms.

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### Returns Management

The returns management process enables firms to manage volumes of returned product efficiently, while minimizing returns-related costs and maximizing the value of the returned assets to the firms in the supply chain.

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## How Supply Chain Functions Impact Company Success

**Understand which supply chain functions affect business success, and how**

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## Supply Chain Functions

Critical to the success of any supply chain is orchestrating the means by which products move physically through it.

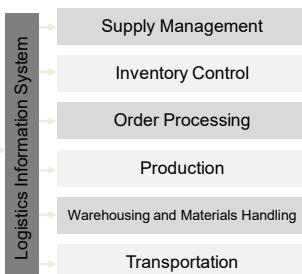
This is accomplished via the execution of three interdependent groups of supply chain functions that exist within a business organization.

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## Logistical Components of the Supply Chain

Supply Chain Team



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## Supply Management

Supply managers plan strategies, develop specifications, select suppliers, and negotiate price and service levels.

The goal of most supply management activities is to reduce the costs of raw materials and supplies.

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## Inventory Control

A method of developing and maintaining an adequate assortment of materials or products to meet a manufacturer's or a customer's demand.

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## Inventory Control

Most companies carry inventory as a sort of insurance policy against customer stockouts:

- Cycle stocks
- Safety stocks
- In-transit inventory
- Work-in-process inventory
- Seasonal inventory

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## Inventory Control

Tools for managing inventory include:

- Materials requirement planning (MRP) or materials management
  - Supplier to manufacturer
- Distribution resource planning (DRP)
  - Manufacturer to end user
- Automatic replenishment programs
  - Minimal forecasting

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## Order Processing

A system whereby orders are entered into the supply chain and filled.

Order processing is becoming more automated through the use of computer technology known as electronic data interchange (EDI).

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## Production Scheduling

	Traditional Focus	Customer Focus
<b>Push / Pull Strategy</b>	Push	Pull
<b>Start of Production</b>	Inventory-Based	Customer-Order Based
<b>Manufacturing</b>	Mass Production	Mass Customization

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## Postponement

A hybrid strategy that takes advantages from build-to-stock and build-to-order strategies.

- Product based on generic forecasts
- Shipped to locations near major customers
- Customer places order and manufacturing is completed to customer's specifications.

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## Warehousing and Materials Handling

**Materials-Handling System**

a method of moving inventory into, within, and out of the warehouse.

Most manufacturers today have moved to automated materials-handling systems to minimize the amount of handling.

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## Transportation

Rail

Truck

Pipe

Water

Air

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## Transportation Mode Choice

Supply chain managers choose a mode of transportation on the basis of several criteria:

- Cost
- Transit time
- Reliability
- Capability
- Accessibility
- Traceability

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## 13.1

### Criteria for Ranking Modes of Transportation

	Highest ← → Lowest				
Relative Cost	Air	Truck	Rail	Pipe	Water
Transit Time	Water	Rail	Pipe	Truck	Air
Reliability	Pipe	Truck	Rail	Air	Water
Capability	Water	Rail	Truck	Air	Pipe
Accessibility	Truck	Rail	Air	Water	Pipe
Traceability	Air	Truck	Rail	Water	Pipe

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## Supply Chain Technologies

The logistics information system serves as the link connecting all of the operational components of the supply chain.

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## Sustainable Supply Chain Management

Understand the importance of sustainable supply chain management to modern business operations

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## Sustainable Supply Chain Management

Sustainable supply chain management involves the integration and balancing of environmental, social, and economic thinking into all phases of the supply chain management process.

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## Trends in Supply Chain Management

Discuss new technology and emerging trends in supply chain management

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## Trends in Supply Chain Management

### Outsourcing Logistics Functions

### Supply Chain Risk, Security, and Resilience

### Electronic distribution

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## Outsourcing Logistics Functions

### Outsourcing Benefits

- ◆ Reduces inventories
- ◆ Locates stock at fewer plants and distribution centers
- ◆ Provides same or better levels of service

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## Supply Chain Risk, Security, and Resiliency

The management of supply chain risk is a critical business focus.

Proactive supply chain security measures seek to protect key inventory and assets while reactive supply chain resiliency measures ensure that the supply chain is back up and running as soon as possible in the event that a disruption occurs.

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## Electronic Distribution

A distribution technique that includes any kind of product or service that can be distributed electronically, whether over traditional forms such as fiber-optic cable or through satellite transmission of electronic signals.

Three-dimensional printing is the newest method for distributing products. Special printers create products based on a digital file using liquefied raw materials shipped to the printer's location.

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## Global Logistics and Supply Chain Management

- Strategically, there are many reasons why a company might wish to globalize its supply chain.
- At the same time, globalization has brought about great uncertainty for modern companies, and specifically, their supply chains.

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## Chapter 13 Video

### Geoffrey B. Small

Geoffrey B. Small, a super-luxury fashion designer, discusses how he sources the materials needed to develop his clothing lines. He also discusses how he makes distribution decisions based on his micro production process and global distribution channels.

[CLICK TO PLAY VIDEO](#)

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