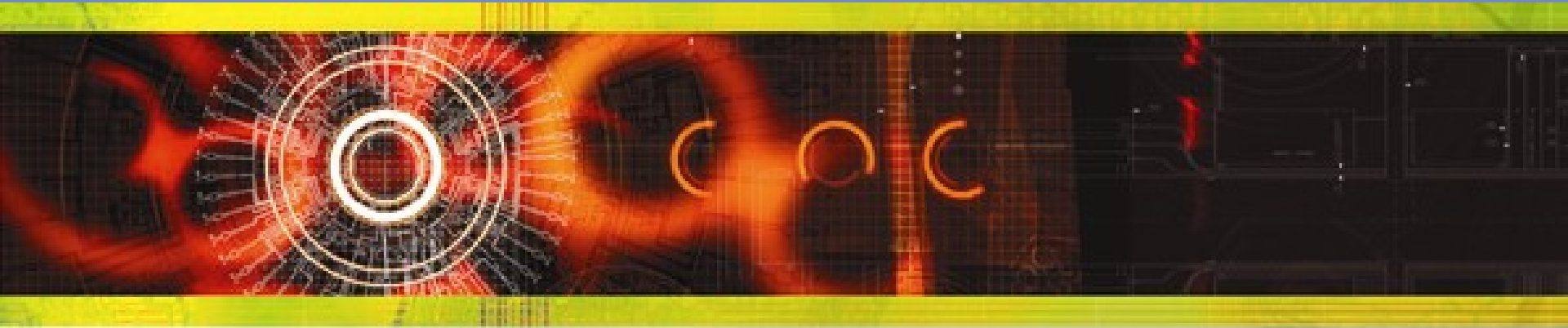


CHAPTER 1- INTRODUCTION TO SUPPLY CHAIN MANAGEMENT



Principles of Supply Chain Management:
A Balanced Approach

Learning Objectives

You should be able to:

- Discuss the current state & future challenges of SCM.
- Explain why Supply Chains are becoming more global.
- Describe how firms are expanding their SCM efforts to second- & third-tier members of their supply chains.
- Discuss why & how supply chains are making greater efforts to become more environmental responsible.
- Explain how supply chains are becoming faster.
- Explain why firms are outsourcing some or all SCM processes.
- Describe some of the ways supply chains are reducing total costs.

Chapter Outline

- Introduction
- What is Supply Chain management?
- Why is Supply Chain Management important?
- The origins of Supply Chain Management
- Important Elements of Supply Chain Management:
 - Purchasing
 - Operations
 - Distribution
 - Integration
- Future Trends in Supply Chain Management
 - Expanding the Supply Chain
 - Increasing Supply Chain responsiveness
 - The Greening of Supply Chains
 - Reducing Supply Chain costs

What is a Supply Chain?

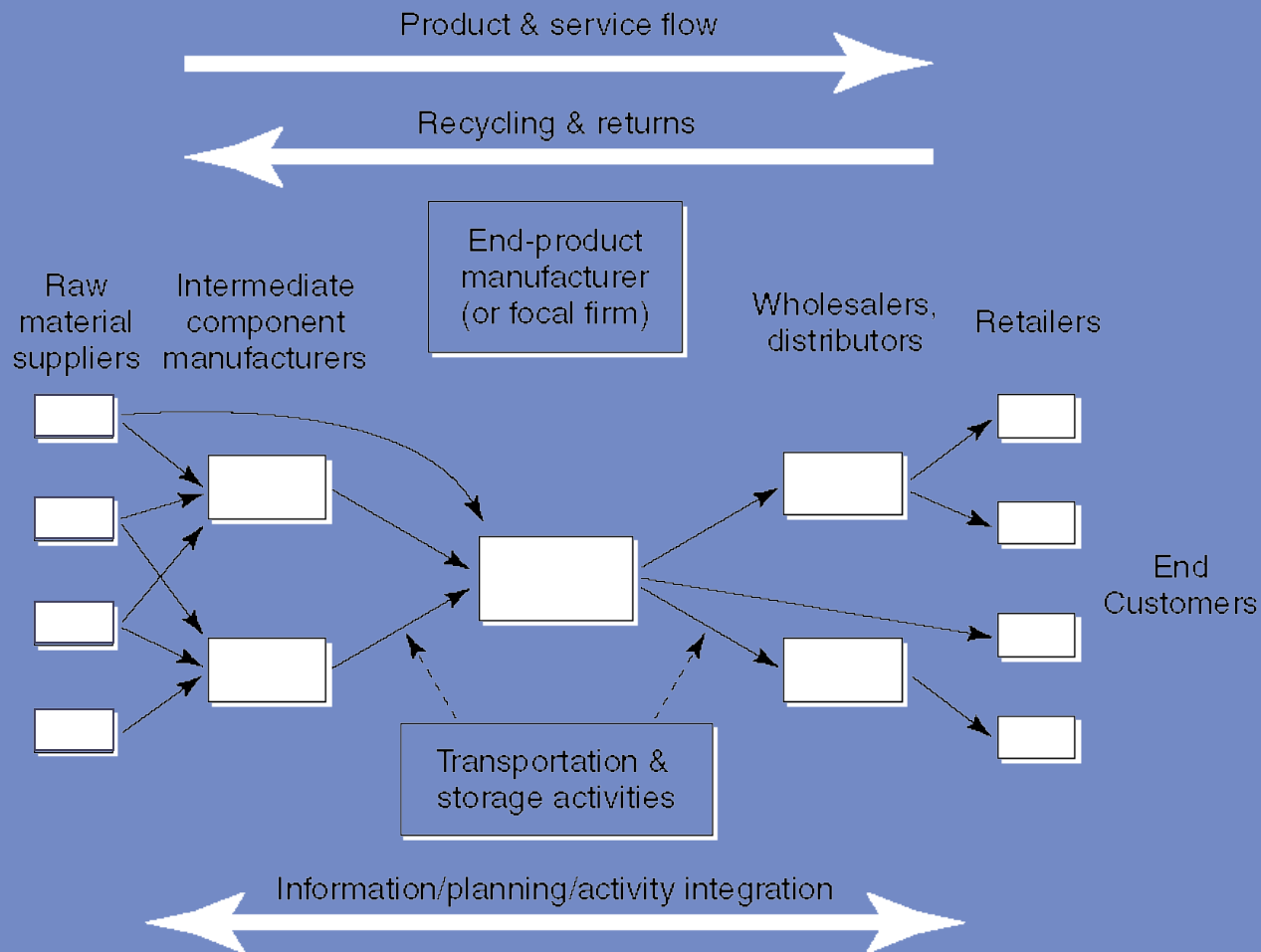
A supply chain consists of the flow of products and services from:

- Raw materials manufacturers
- Intermediate products manufacturers
- End product manufacturers
- Wholesalers and distributors and
- Retailers

Connected by transportation and storage activities, and

Integrated through information, planning, and integration activities

What is a Supply Chain?



What is Supply Chain Management?

Here are two definitions:

The design and management of seamless, value-added process across organizational boundaries to meet the real needs of the end customer

Institute for Supply Management

Managing supply and demand, sourcing raw materials and parts, manufacturing and assembly, warehousing and inventory tracking, order entry and order management, distribution across all channels, and delivery to the customer

The Supply Chain Council

What is Supply Chain Management? - Cont.

- *Old paradigm*- Firm gained synergy as a vertically integrated firm encompassing the ownership and coordination of several supply chain activities.
- *New paradigm*- Firm in a supply chain focuses activities in its area of specialization and enters into voluntary and trust-based relationships with supplier and customer firms.

Importance of Supply Chain Management?

Firms have discovered value-enhancing and long term benefits

Who benefits most? Firms with:

- Large inventories
- Large number of suppliers
- Complex products
- Customers with large purchasing budgets

Importance of Supply Chain Management? –Cont.

Firms with Supply Chain Management:

1. Start with key suppliers
2. Move on to other suppliers, customers, and shippers
3. Integrate second tier suppliers and customers (second tier refers to the customer's customers and the supplier's suppliers)



Importance of Supply Chain Management? –Cont.

Cost savings and better coordination of resources are reasons to employ Supply Chain Management

- Reduced Bullwhip Effect- the magnified reduction of safety stock costs based on coordinated planning and sharing of information
- Process Integration- Interdependent activities can lead to improved quality, reduced cycle time, better production methods, etc.

Bullwhip Effect

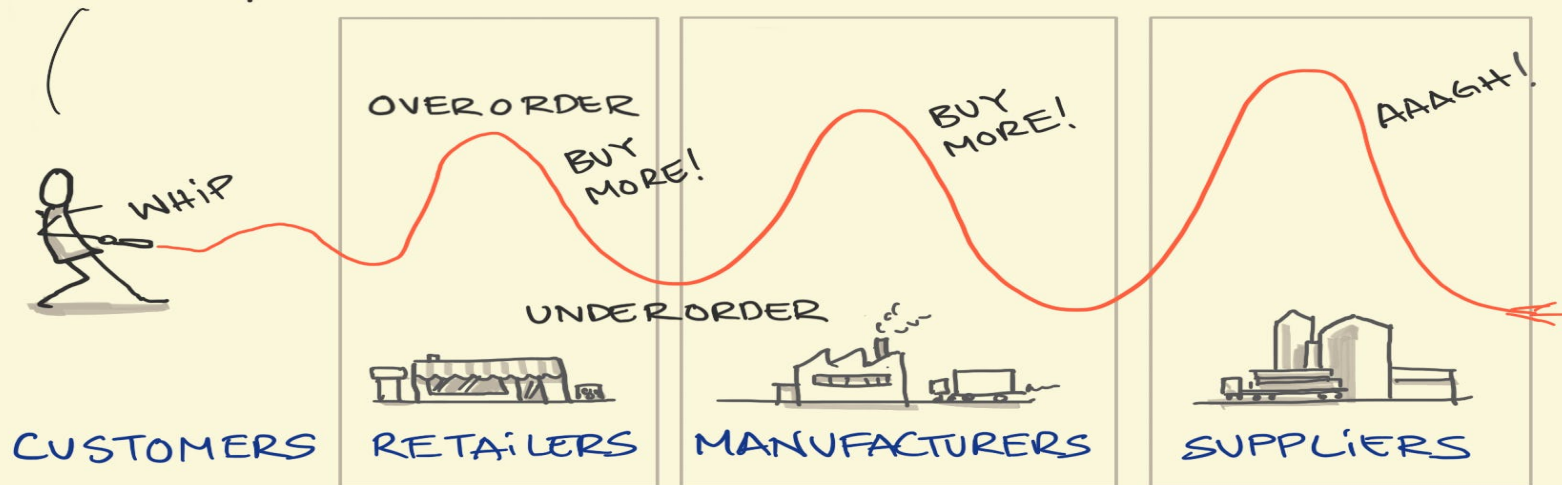
THE BULLWHIP EFFECT

SMALL CHANGES
IN DEMAND

CAN PRODUCE
→

A WHIP-LIKE
EFFECT UPSTREAM

QUICK! BUY TOILET PAPER



sketchplanations

Bullwhip Effect



Figure 1. The bullwhip effect refers to the phenomenon whereby orders become more variable upstream in the supply chain.

Origins of Supply Chain Management

1950s & 1960s

U.S. manufacturers focused on cost reduction and productivity improvement strategies

1960s-1970s

Introduction of new computer technology lead to development of Materials Requirements Planning (MRP) to coordinate inventory management

Origins of Supply Chain Management – Cont.

1980s & 1990s

Intense global competition led
U.S. manufacturers to adopt

Supply Chain Management along
with

Just-In-Time (JIT),

Total Quality Management (TQM),
and

Business Process Reengineering
(BPR) practices



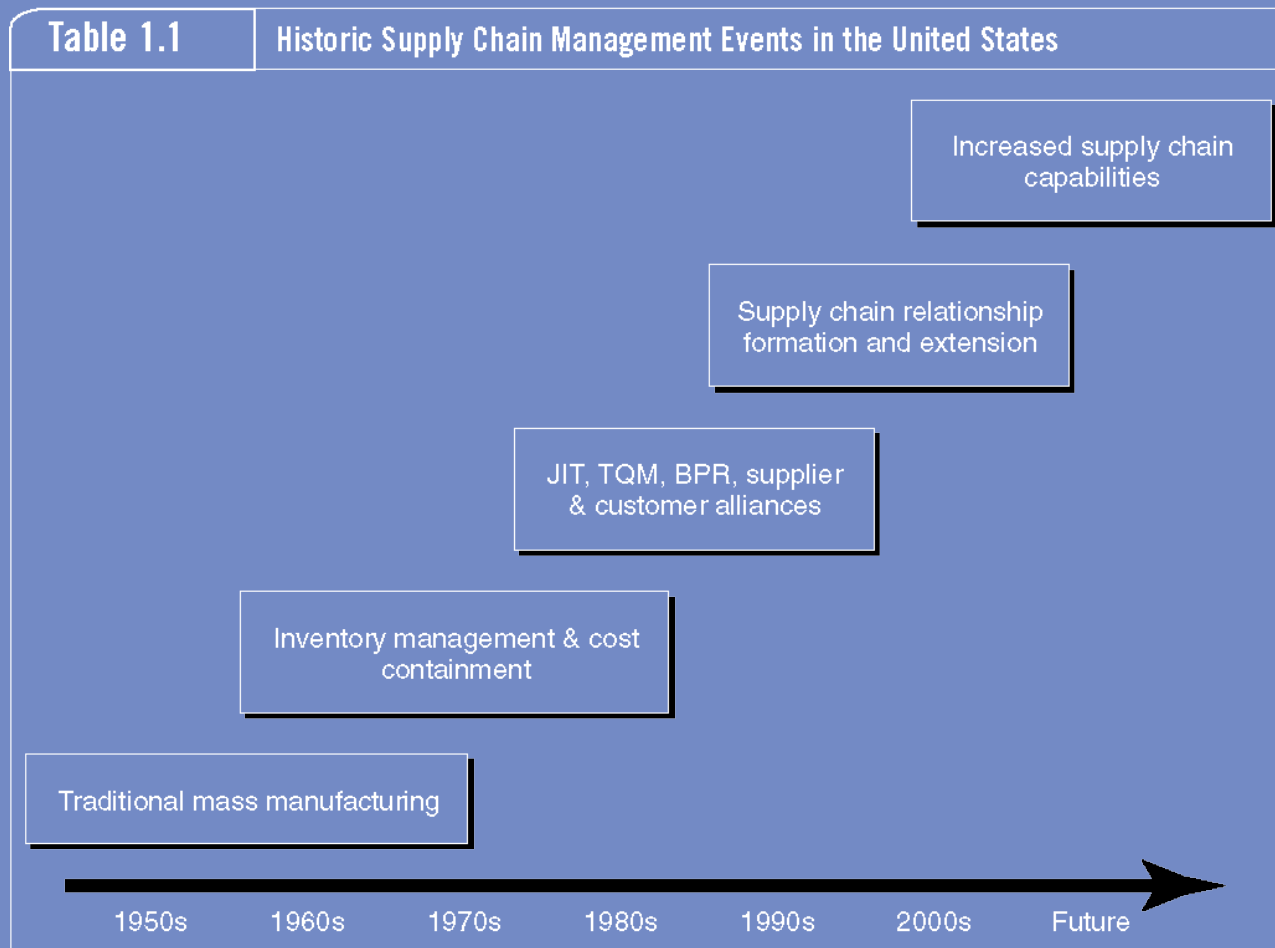
Origins of Supply Chain Management – Cont.

2000s and Beyond

Industrial buyers will rely more on *third-party service providers* to improve purchasing and supply management

Wholesalers/retailers will focus on transportation and logistics more & refer to these as *quick response, service response logistics, and integrated logistics*

Origins of Supply Chain Management – Cont.



Important Elements of Supply Chain Management

Purchasing-	Supplier alliances, supplier management, strategic sourcing
Operations-	Demand management, MRP, ERP, JIT, TQM
Distribution-	Transportation management, customer relationship management, network design, service response logistics
Integration-	Coordination/Integration activities, global integration problems, performance measurement

Important Elements of Supply Chain Management-Cont.

Purchasing- Trends:

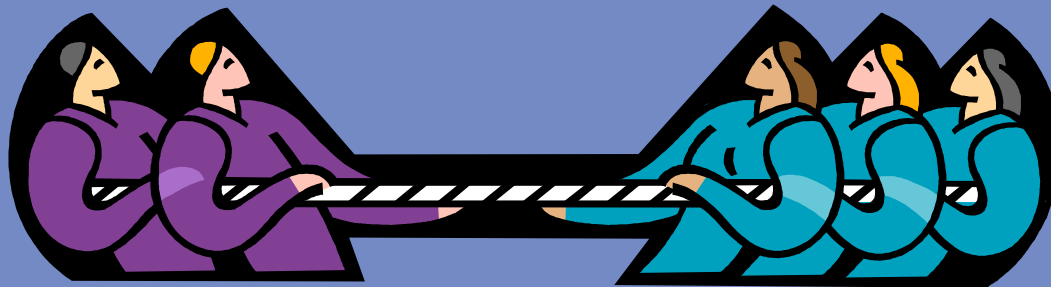
- **Long term relationships**
- **Supplier management-** improve performance through-
 - **Supplier evaluation** (determining supplier capabilities)
 - **Supplier certification** (third party or internal certification to assure product quality and service requirements)
- **Strategic partnerships-** successful and trusting relationships with top-performing suppliers



Important Elements of Supply Chain Management-Cont.

Operations- Trends:

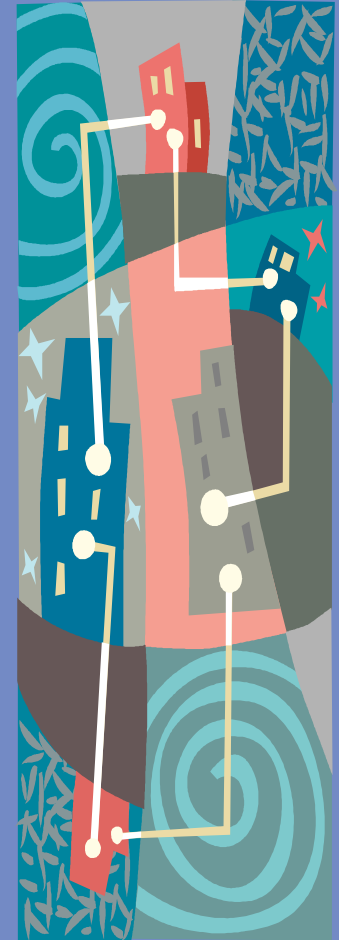
- **Demand management**- match demand to available capacity
- Linking buyers & suppliers via **MRP** and **ERP** systems
- Use **JIT** to improve the “**pull**” of materials to reduce inventory levels
- Employ **TQM** to improve quality compliance among suppliers



Important Elements of Supply Chain Management-Cont.

Distribution- Trends:

- **Transportation management-** tradeoff decisions between cost & timing of delivery/customer service via trucks, rail, water & air
- **Customer relationship management-** strategies to ensure deliveries, resolve complaints, improve communications, & determine service requirements
- **Network design-** creating ***distribution networks*** based on tradeoff decisions between cost & sophistication of distribution system



Important Elements of Supply Chain Management-Cont.

Integration Trends:

- **Supply Chain Integration-** when supply chain participants work for common goals. Requires intrafirm functional integration. Based on efforts to change attitudes & adversarial relationships
- **Global Supply Chains-** advantages that accrue from sourcing from larger global market e.g., lower cost & higher quality suppliers. May involve *operating exposure*, which is risk found in foreign settings
- **Supply Chain Performance Measurement-** Crucial for firms to know if procedures are working

Future Trends in Supply Chain Management

Expanding the Supply Chain

- U.S. firms are expanding partnerships and building facilities in foreign markets
- The expansion involves:
 - ***breadth***- foreign manufacturing, office & retail sites, foreign suppliers & customers
 - ***depth***- second and third tier suppliers & customers

Future Trends in Supply Chain Management- Cont.

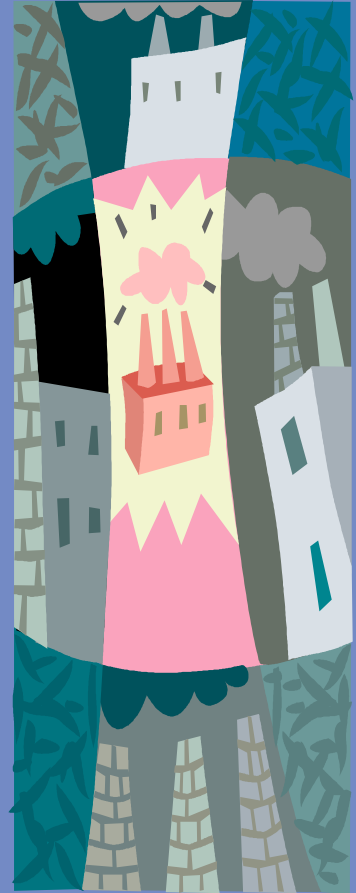
Increasing Supply Chain Responsiveness

- Firms will increasingly need to be more flexible and responsive to customer needs
- Supply chains will need to **benchmark** industry performance and meet and improve on a continuous basis
- Responsiveness improvement will come from more effective and faster product & service delivery systems

Future Trends in Supply Chain Management- Cont.

The Greening of Supply Chains

- Supply chains will work harder to reduce environmental degradation
- Large majority (75%) of U.S. consumers influenced by a firm's environmental friendliness reputation
- Recycling and conservation are a growing alternative in response to high cost of natural resources



Future Trends in Supply Chain Management- Cont.

Reducing Supply Chain Costs

- Cost reduction achieved through:
 - Reduced purchasing costs
 - Reducing waste
 - Reducing excess inventory
 - And reducing non-value added activities
- Continuous Improvement through
 - **Benchmarking**- improve over competitors' performance
 - Trial & error
 - Increased knowledge of supply chain processes

THANK YOU

Q & A