Chapter 1
Understanding the Supply Chain

Supply Chain: Entities & Flows

- Suppliers
- Suppliers
- Manufacturers
- Warehouses, Distribution Centers, Transportation
- Retailers
- Customers/Endusers

Solid bi-directional arrows represent material flows. Backward flows may refer to returns of products/materials.
Dotted bi-directional arrows represent information flows.


Supplementary Slides

Supply Chain
Alternative Definition

- Encompasses all activities associated with the flow and transformation of goods from the raw materials stage (extraction), through to the end user, as well as the associated information flows.
- (Handfield & Nichols, Introduction to Supply Chain Management, 1999)

Supply Chain Management (SCM): Definition

- Planning and control of total materials flow from suppliers through customers
  - early papers, c. 1985
- Not only materials flow, but both materials information, and funds flows
  - later literature referred to both materials and information flows
  - latest literature refers to all three

Textbook

Supply Chain Management: Strategy, Planning, and Operation, 3/e
Prentice Hall, c2007

Online resources:
http://www.prenhall.com/chopra
Supply Chain Management (SCM): Definition

➢ Integration of supply chain activities through improved supply chain relationships, to achieve a sustainable competitive advantage.
   ❖ Handfield & Nichols, 1999

Supply Chain Management (SCM): Definition

➢ Set of approaches utilized to efficiently integrate suppliers, manufacturers, warehouses, and stores, so that merchandise is produced and distributed at the right quantities, to the right locations, and at the right time, in order to minimize systemwide costs while satisfying service level requirements.
   ❖ Simchi-Levi et al., 2003

Logistics Management

Council of Logistics Management (prior to 1998)

◆ The process of planning, implementing, and controlling the efficient, cost-effective flow and storage of raw materials, in-process inventory, finished goods, and related information flow from point-of-origin to point-of-consumption for the purpose of conforming to customer requirements.

Logistics Management

Council of Logistics Management (since October 1998)

◆ Logistics is that part of the supply chain process that plans, implements, and controls the efficient, effective flow and storage of goods, services, and related information from the point-of-origin to the point-of-consumption in order to meet customers’ requirements.

Council of Supply Chain Management Professionals - http://www.cscmp.org/

◆ CSCMP Definition of Supply Chain Management
   ◆ Supply Chain Management encompasses the planning and management of all activities involved in sourcing and procurement, conversion, and all Logistics Management activities. Importantly, it also includes coordination and collaboration with channel partners, which can be suppliers, intermediaries, third-party service providers, and customers. In essence, Supply Chain Management integrates supply and demand management within and across companies.

Evolution to SCM

◆ Refer to Figure
   – ‘Logistics evolution to SCM’
Supply Chain Management (SCM):
Current Understanding

- Integrating and managing the key business processes associated with the flow and transformation of goods and services, as well as the attendant information flows, from the sources of raw materials to the end user.
- Has gone beyond merely integrating logistics across the supply chain.
- Not just another name for logistics.

Supply-Chain Council [SCC]

- Independent, not-for-profit corporation organized in 1996 by Pittiglio Rabin Todd & McGrath (PRTM) and AMR Research.
- Initially included 69 voluntary member companies.
- Council membership now open to all companies and organizations interested in applying and advancing state-of-the-art supply chain management systems and practices.

The Supply Chain Operations Reference-model (SCOR) has been developed and endorsed by the SCC.

- Member companies pay a modest annual fee to support Council activities. All who use the SCOR-model are asked to acknowledge the SCC in all documents describing or depicting the SCOR-model and its use.
- All who use SCOR are encouraged to join the SCC, both to further model development and to obtain the full benefits of membership. Further information regarding the Council and SCOR can be found at the Council’s web site, www.supply-chain.org.

Process reference models integrate the well-known concepts of business process reengineering, benchmarking, and process measurement into a cross-functional framework.

The Boundaries of Any Model Must Be Carefully Defined

“From your supplier’s supplier to your customer’s customer”

SCOR spans:
- Sales and marketing (demand generation)
- Sales and marketing (demand management)
- New product development
- Product development
- Supply chain planning
- Supply chain operations
- Demand-driven customer support
- Product development
- New product development

SCOR does not attempt to describe every business process or activity including:
- Sales and marketing (demand generation)
- Sales and marketing (demand management)
- New product development
- Product development
- Supply chain planning
- Supply chain operations
- Demand-driven customer support

Link is made to processes not included within the model’s scope, such as product development, and some are used in SCOR.

SCOR assumes that does not explicitly address:
- Training
- Quality
- Information Technology (IT)
- Administrative uses (e.g., human resource management)
**Supply Chain ‘Macro Processes’ in a Firm**

- **Customer relationship management (CRM)**
  - Processes focusing on interface between firm and its customers
- **Supplier relationship management (SRM)**
  - Processes focusing on interface between firm and its suppliers
- **Internal supply chain management (ISCM)**
  - Processes internal to firm

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**Difficulty of Supply Chain Integration: Two Main Reasons**

- The various entities along the supply chain will have different, often conflicting objectives.
- The supply chain is a dynamic system.
  - Customers’ expectations and customer demand change over time.
  - Suppliers’ and distributors’ capabilities change over time.

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**Dimensions of SCM**

- Intra-functional coordination
- Inter-functional coordination
- Inter-organizational coordination

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