

Introduction

Roberto Pinto
CELS – Dept. of Engineering
University of Bergamo



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What are we going to talk about?

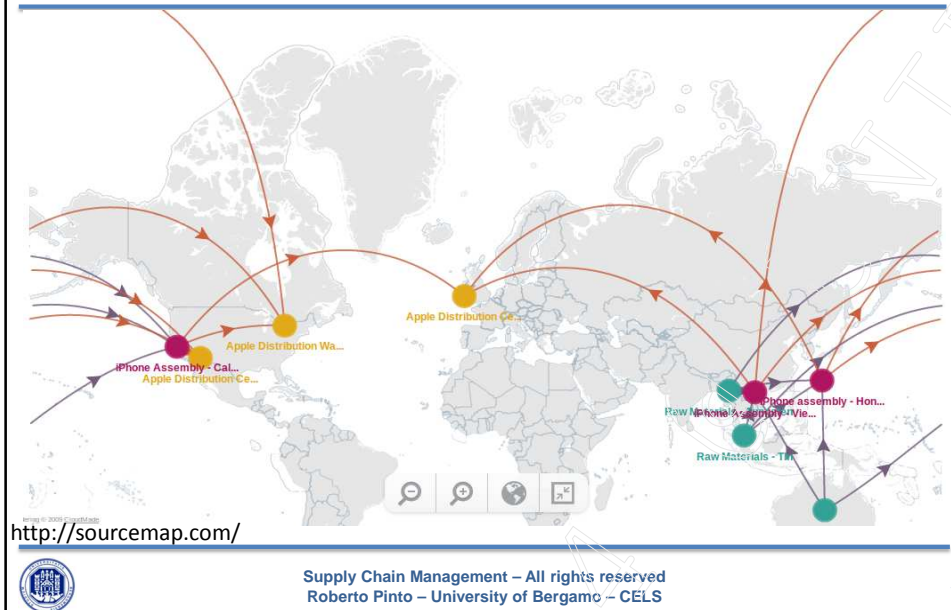
- Think to any product you use, wear, consume...
- Try to answer these questions:
 1. Who produced it?
 2. Who sold it?
 3. Where it comes from? What about the materials it is made of?
 4. How it has arrived to me?
 5. How many miles it has traveled?
 6. When was it produced? How really “old” is it?
 7. How many companies/people have worked on it?



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What are we going to talk about?



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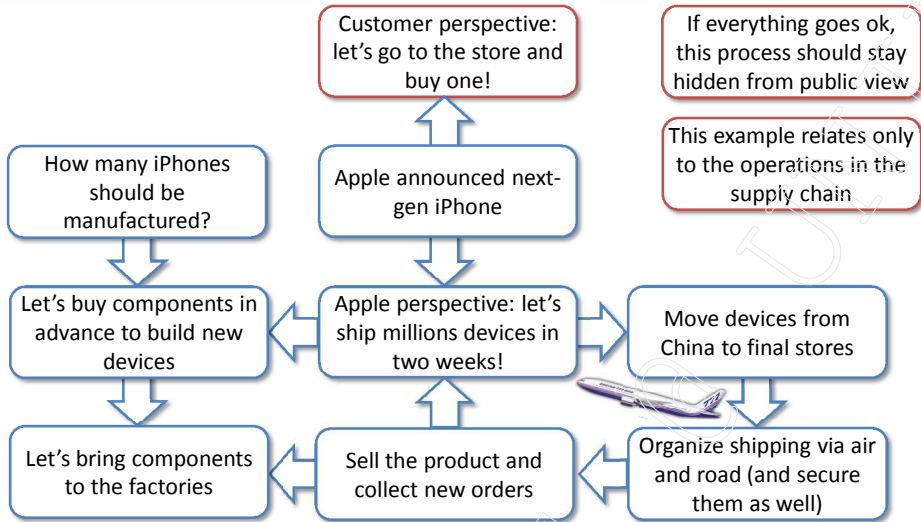
■ Now, ask yourself:

1. If I were a manager in a company involved in the production/sell/transportation of that product, how should I organize and manage my activities?
2. Which are the best “collaborators” (i.e. suppliers) in doing these activities?
3. How it is possible to do all these activities in the cheapest way?
4. How can I do that, still satisfying my customers?
5. What do I need (knowledge, competencies, skills, tools) to manage the product from manufacture to selling, and even beyond? How should I use them?
6. **How can I manage such a complexity?**

■ In essence, we are going to answer some of these questions!



A real-life example

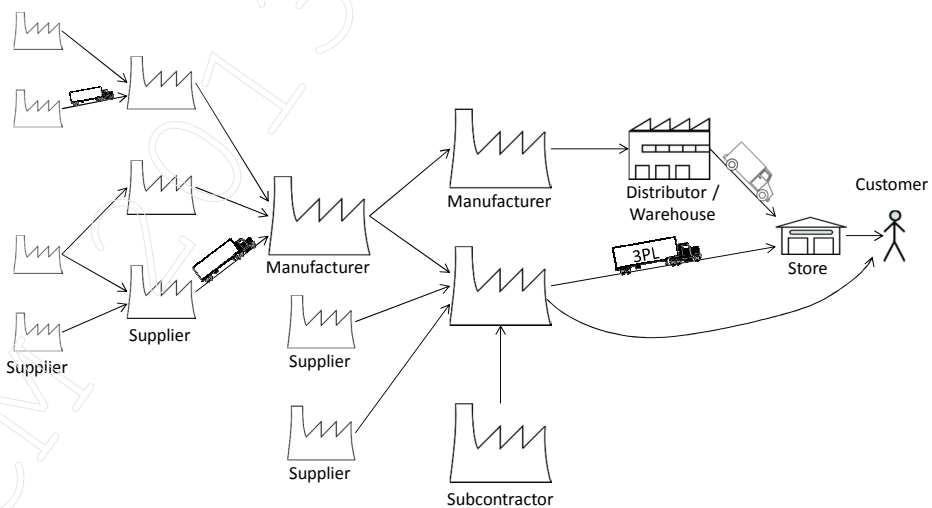


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Adapted from: bloomberg.com

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What is a supply chain?



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What is a supply chain?

- A supply chain consists of all parties involved, directly or indirectly, in fulfilling a customer request for a product or a service
- Many actors are involved:
 - Manufacturers
 - Suppliers
 - Wholesalers / Distributors / Retailers
 - Transporters/3PL
 - Subcontractors
 - Customers

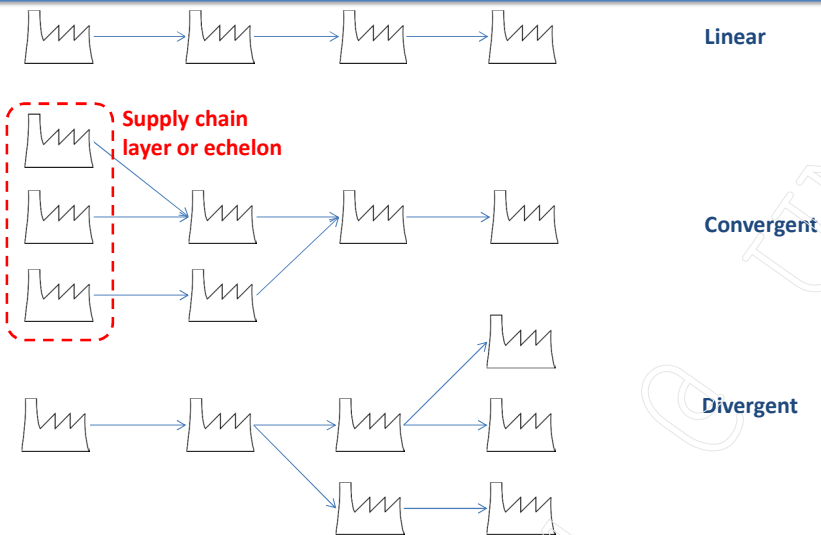


SC configuration characteristics

- Number of levels
- Number of facilities per level
- Level of integration
- Geographical extension



SC configuration characteristics

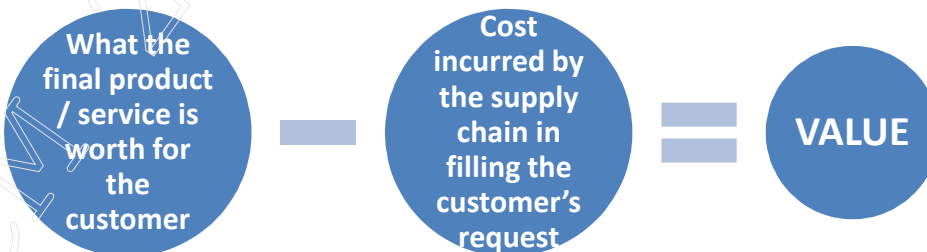


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What is the objective of a supply chain?

- The objective is to maximize the overall value generated
- What is value?



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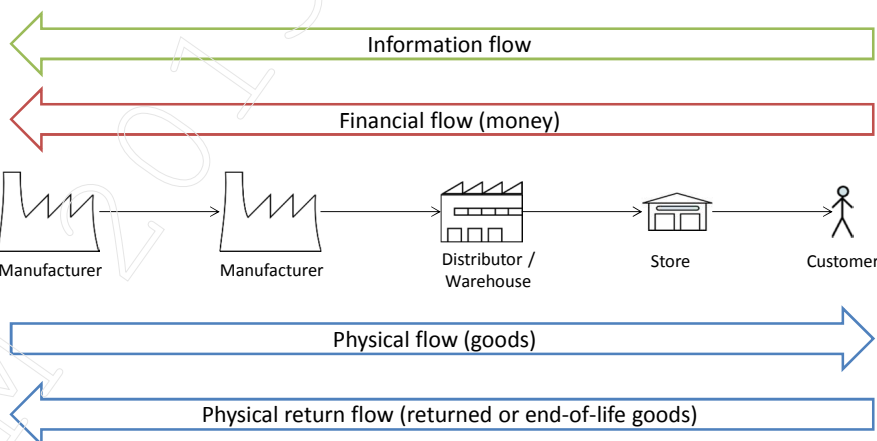
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What is supply chain management (SCM)?

- Supply Chain Management (SCM) is the management of supply chain assets, products, information, and fund flows to maximize the total supply chain value
- SCM deals with efficient and effective material, financial, and information flows



Supply chain flows



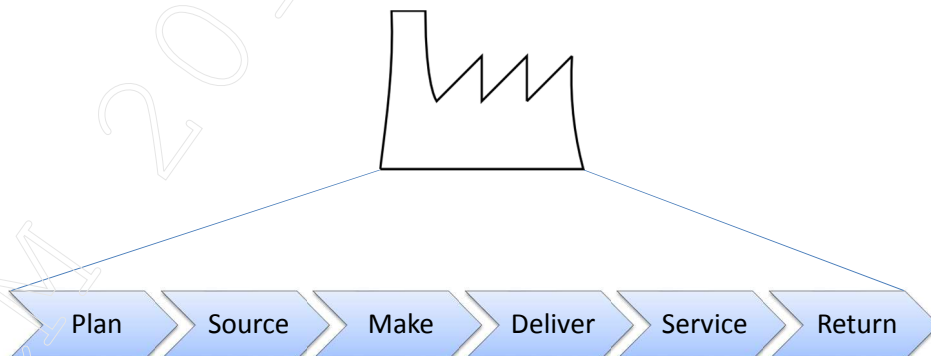
What is supply chain management (SCM)?

- SCM encompasses several processes
 - Internal perspective
 - External (interface) perspective

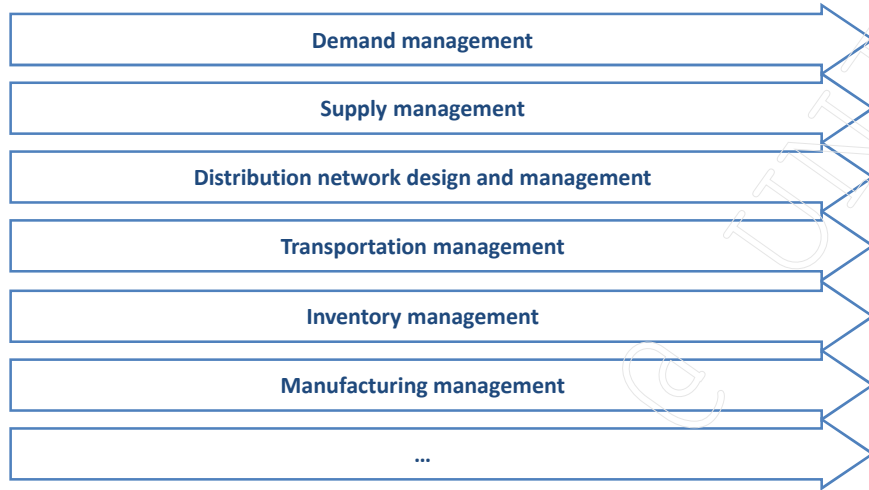


What is supply chain management?

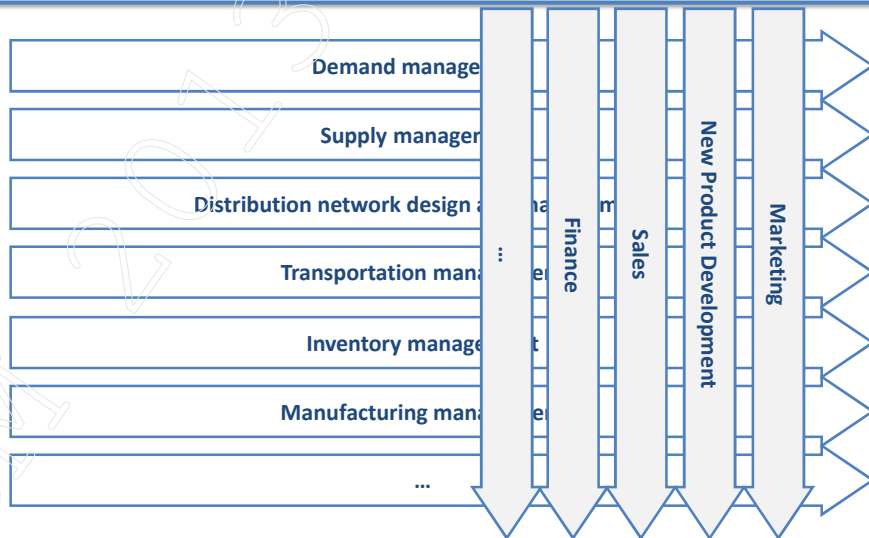
- Internal perspective



Main supply chain management processes

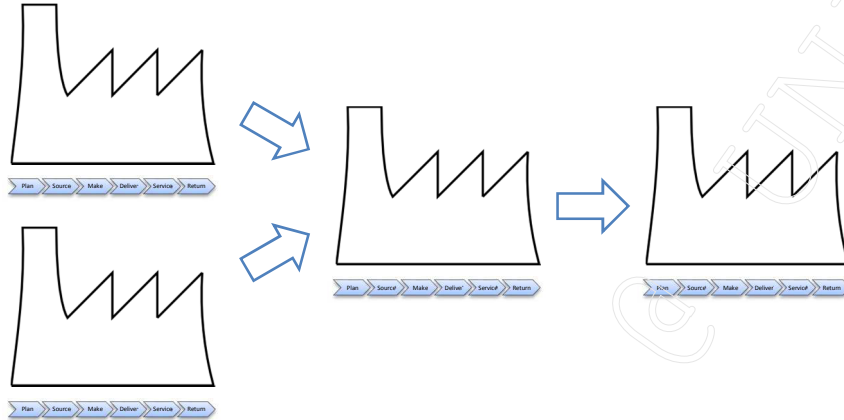


Main supply chain management processes



What is supply chain management?

- External (interface) perspective

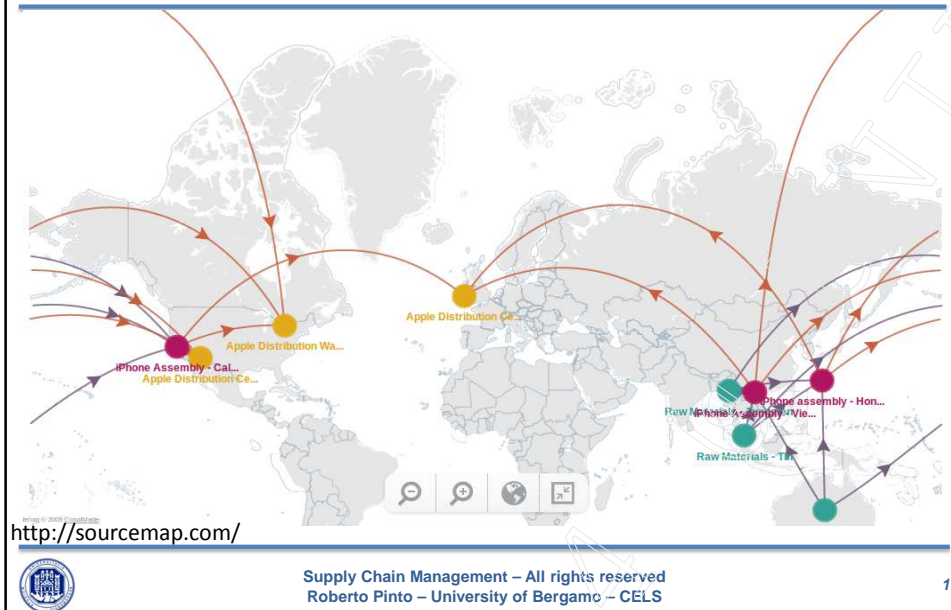


The major SC issues

- Supply chain network design and management
- Complexity management
- Inventory deployment
- Information management
- Cost /value
- Organizational relationship
- Performance measurement
- Technology
- Transportation management
- Supply chain security



Global SCM management



Importance of inter-company coordination

- SCM pursues the coordination of the SC, occurring when all the stages of a SC work towards a common objective of maximizing the total SC value
- Coordination is based on information sharing
- Lack of coordination can result in significant losses



Supply chain management key decisions

- SCM encompasses three decisions phases



- SCM decisions differ in:
 - Frequency
 - Time frame of impact



Supply chain management key decisions

Decision phase	Frequency	Time frame of impact	Example of key decisions
SC Design	Very low (i.e. once every 5 years)	Long, several years	<ul style="list-style-type: none"> SC configuration SC facility location and size Insource / outsource Process definition Transportation available
SC Planning	Medium to high (3-4 times per year)	Few months (configuration is fixed)	<ul style="list-style-type: none"> Strategic forecasting Supplier selection and mngt Inventory and production policies Market promotions
SC Execution	Very high (daily or weekly)	Short, few days or weeks (policies are fixed)	<ul style="list-style-type: none"> Order fulfillment & shipment Inventory allocation Inbound / outbound logistics Expediting Short term forecasting



SCM vs Logistics

- 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
- Logistics is a part of the SCM
- SCM is a broader concept than logistics



SCM vs Logistics

- Logistics typical activities
 - In-bound transportation
 - Out-bound transportation
 - Storage / warehousing
 - Materials handling
 - Inventory control
 - Order fulfillment
 - *(Forecasting)*
 - *(Production planning)*
 - *(Packaging)*



SCM as Risk Management

- Modern supply chains are exposed to numerous kinds of events that may disrupt the course of their businesses
- These events are usually:
 - **Random** (they have a probability of occurrence)
 - **Disruptive** (they have a relevant impact on the performance)
- Managerial decisions always entail risks



SCM as Risk Management

- **Management of risk:** entails decisions and actions to:
 - **Reduce** the exposure to risks
 - **Mitigate** the consequences of risks
 - **Counterbalance** the impacts
- **SCM is all about managing risks!**



Appendix: the SCOR™ model

- The Supply Chain Operations Reference (SCOR®) model is the product of Supply Chain Council (SCC), an independent, nonprofit, global corporation
- SCOR® helps manage a common set of business problems through a standardized language, standardized metrics, and common business practices which accelerate business change and improve performance

<http://supply-chain.org/>

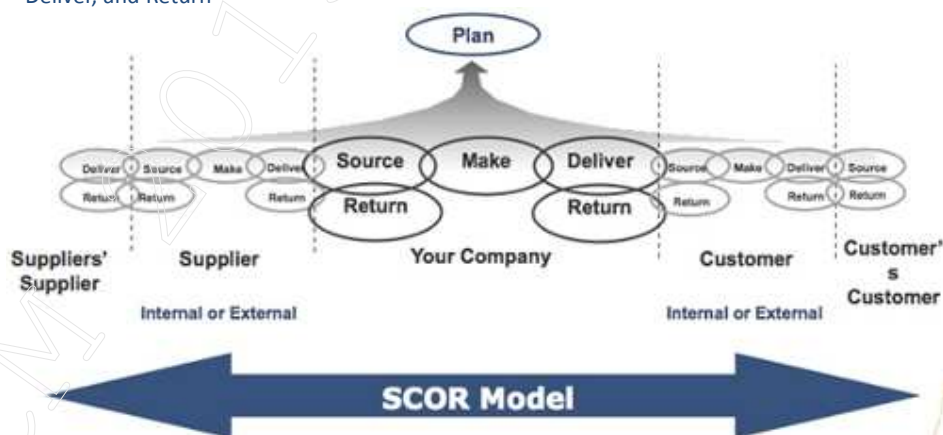


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Appendix: the SCOR™ model

SCOR is organized around the five primary management processes of Plan, Source, Make, Deliver, and Return



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Appendix: the SCOR™ model

- Provides performance indicators for the supply chain:
- **Reliability:** achievement of customer demand fulfillment on-time, complete, without damage etc.
- **Responsiveness:** the time it takes to react to and fulfill customer demand
- **Agility:** the ability of supply chain to increase/decrease demand within a given planned period
- **Cost:** objective assessment of all components of supply chain cost
- **Assets:** the assessment of all resources used to fulfill customer demand

<http://supply-chain.org/>



References

- Chopra, S., Meindl, P. (2010). Supply Chain Management (4th edition), Pearson
- Cavalieri, S., Pinto, R. (2007), Orientare al successo la supply chain, ISEDI
- www.supply-chain.org



Credits

CELS – University of Bergamo

Roberto Pinto Ph.D

Logistics and Supply Chain Specialist

<http://cels.unibg.it>

roberto.pinto@unibg.it



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SCM 2013