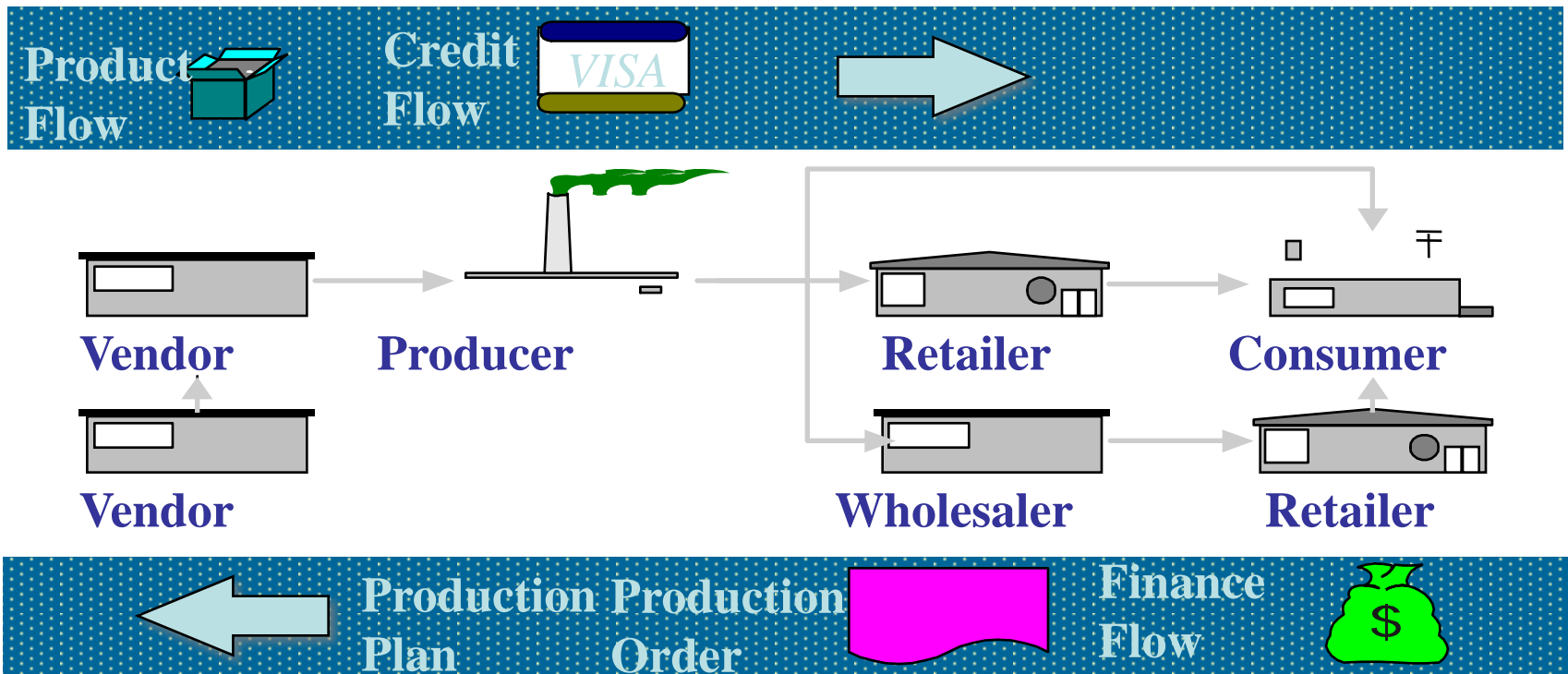

Supply Chain Management

Contents

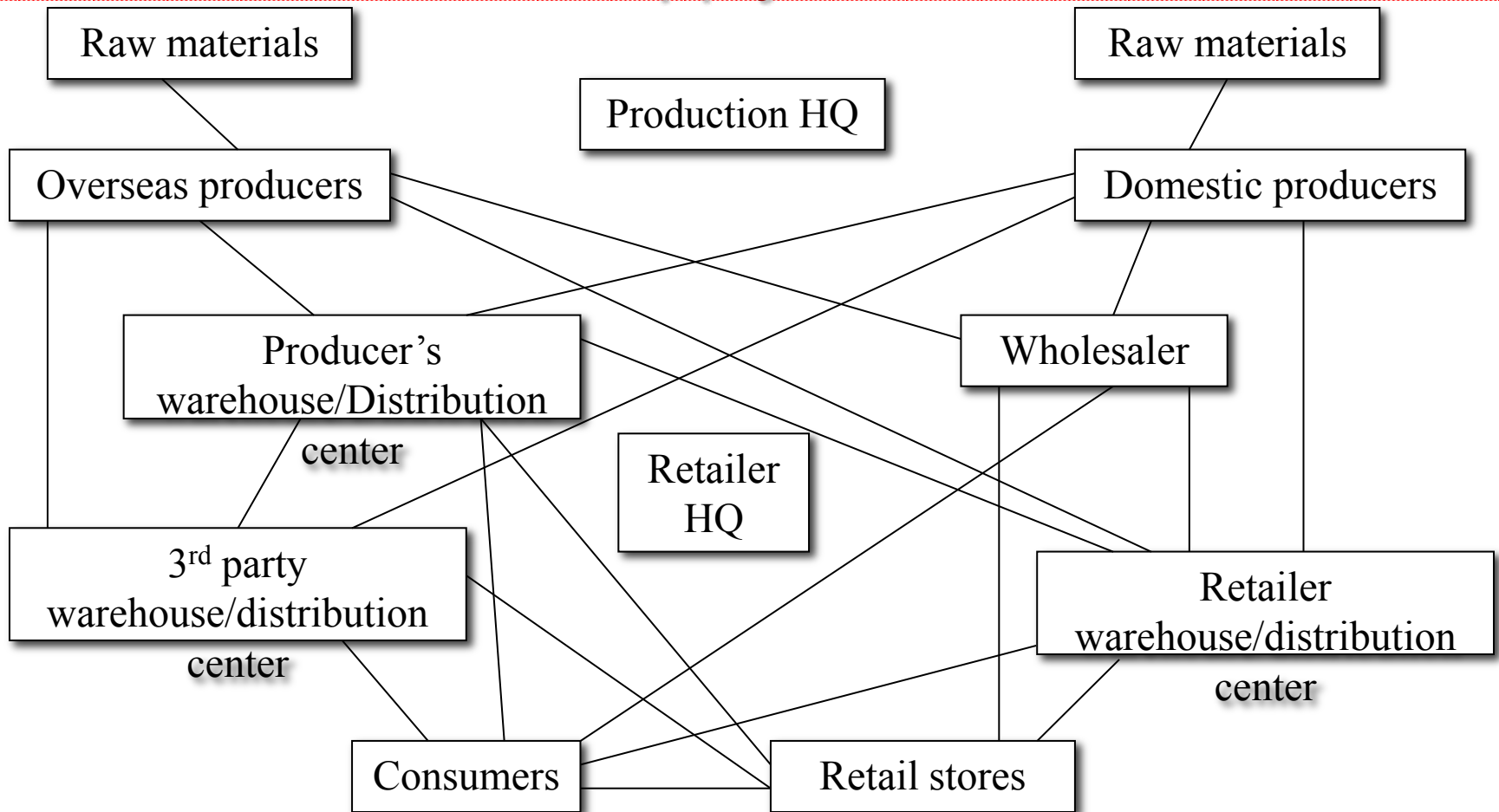
- A. Definition and Terminologies**
- B. Evolution of SCM**
- C. Supply Chain Management**
- D. Integrated Logistics**
- E. Fulfillment Process**
- F. Specialized Supply Chains**
- G. Supply Chain Operations Reference (S.C.O.R) Model**

CARECA. Definition and Terminologies

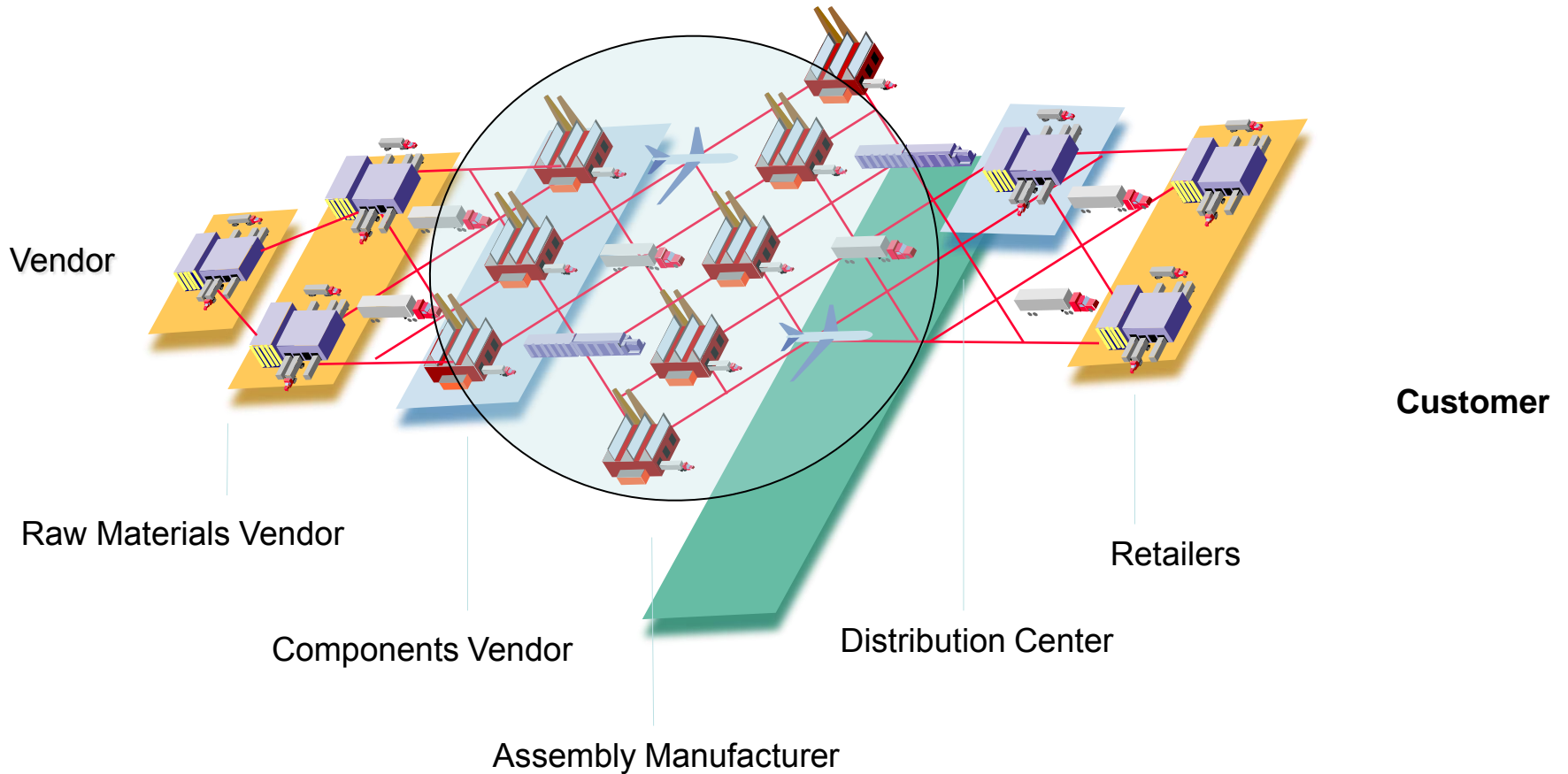
- Definition



The Product Flow in Supply Chain

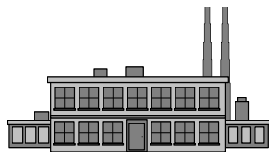


Global Supply Chain: A Complex Subject



What is Supply Chain Management (SCM)?

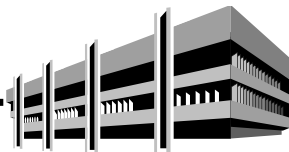
- Definition – A total systems view of the links in the chain that work together efficiently to create customer satisfaction.
- Service Level – From the customer's perspective, service level is how well can a company provide much needed and attractive products in stock at a reasonable price.
- Customer demand is a driving force. Hence, SCM is sometimes referred to as Demand Chain Management.



Raw Material



制造商



零售商

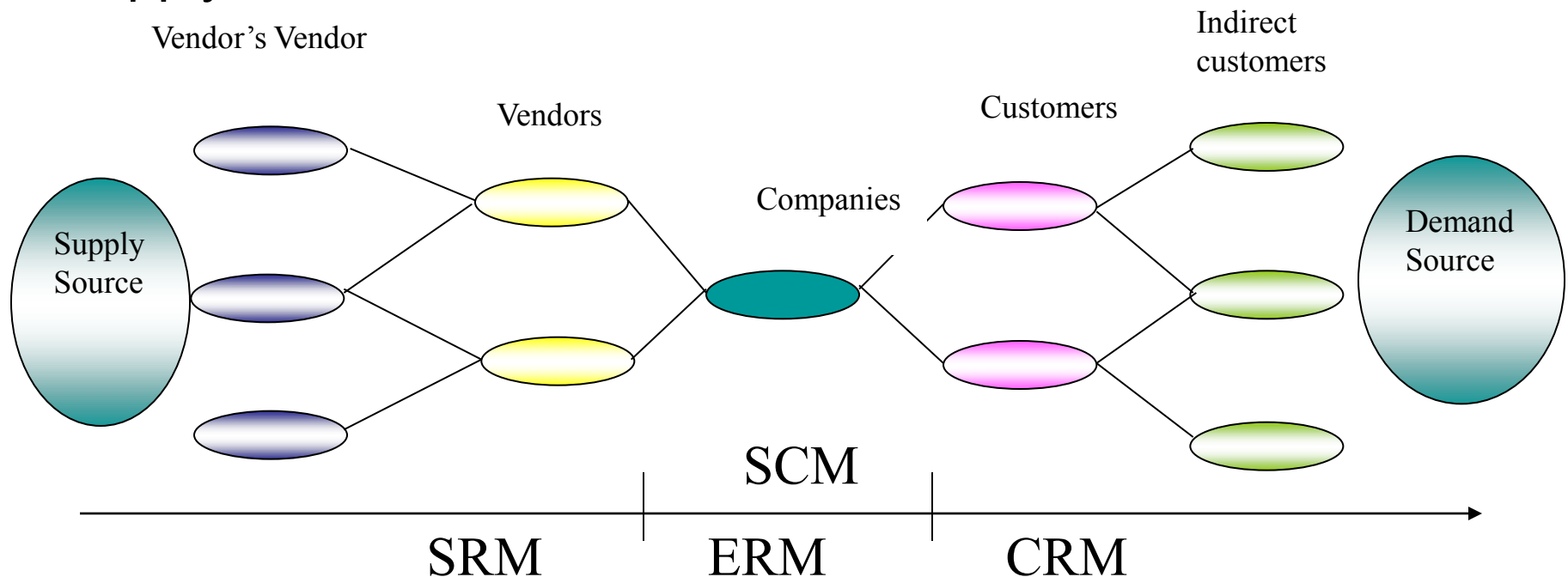


消费者

Definition of SCM

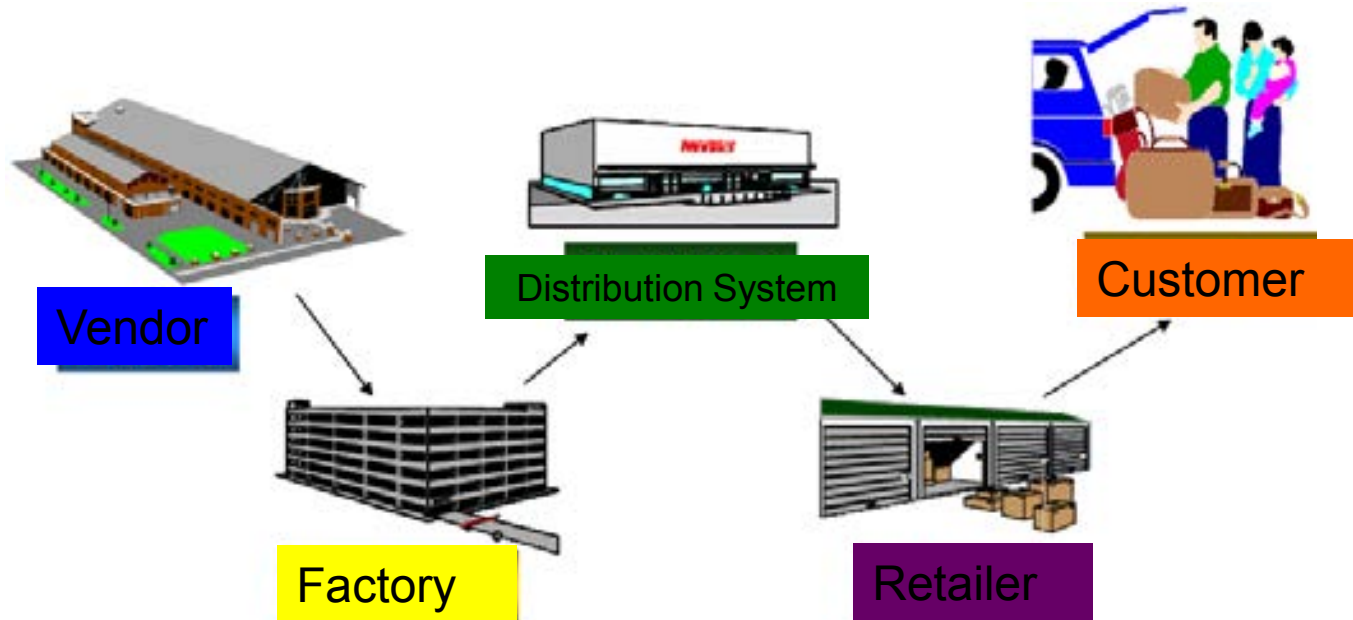
SCM focuses on a network (of companies, suppliers, customers, partners, etc.)

Competition between producers are competition between supply chains.



Definition of SCM

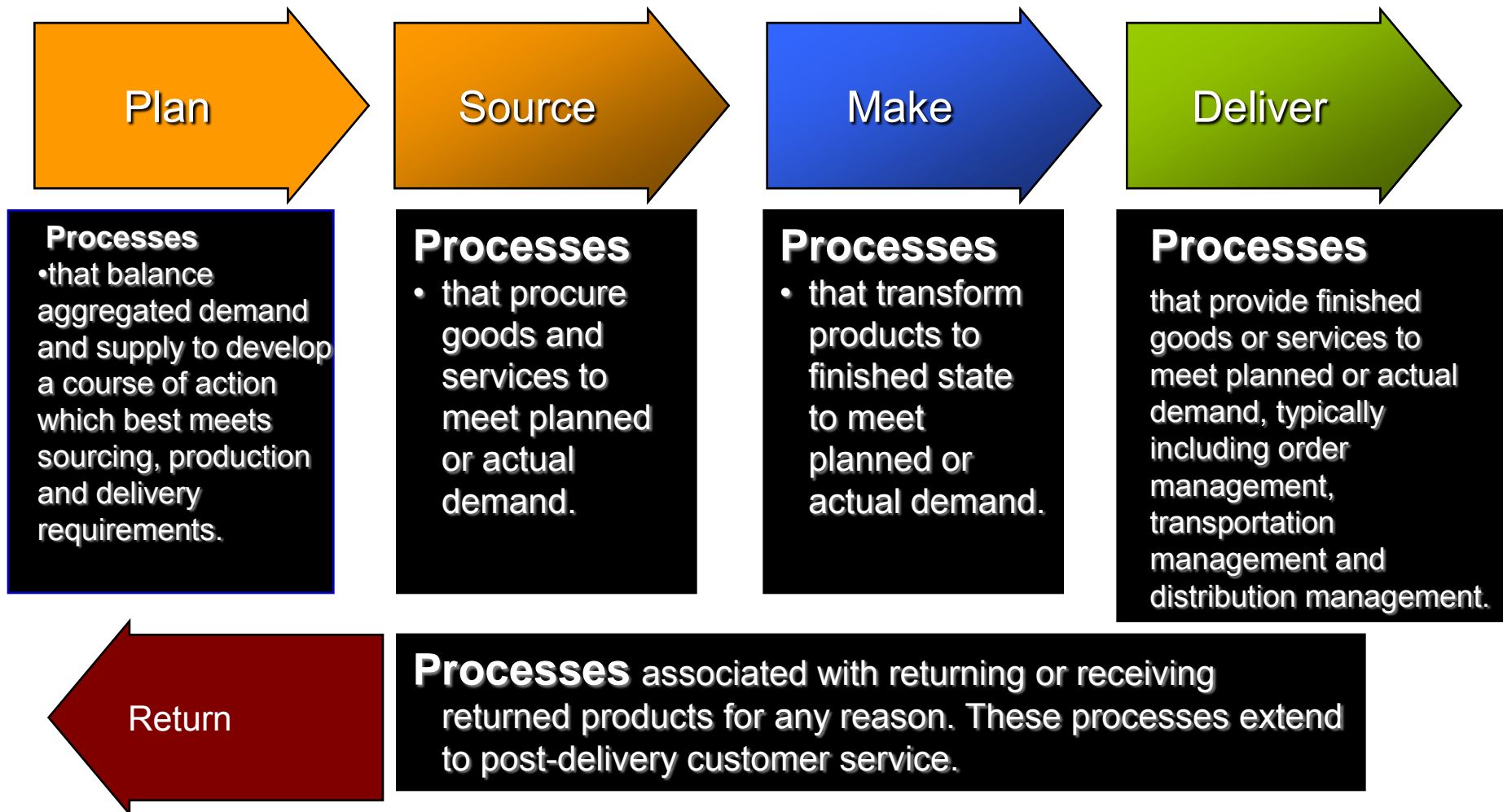
- SCM focuses on a process (to coordinate the planning, organization, synchronization and control of the flow of products, information and finances).
- Efficiency can be improved through technology. Better decision making with information sharing.
- Logistics vs. SCM



Definition of Process



SCOR is based on five core management processes



Basic Decisions

SCM Decisions

Strategic

—— Long-term decisions related to numbers, location, capacity, network structure and logistics of factories/warehouses/sales nodes.

Tactical

—— Decisions related to Sourcing, production, inventory, distribution, and transportation, etc.

Operational

—— Day-to-day planning, distribution, collection & analysis of sales data, lead time forecast, distribution & transportation arrangement.

Basis of SCM

- **Basis of effective SCM**

- ☞ **Mutual trusts based on common interests!**

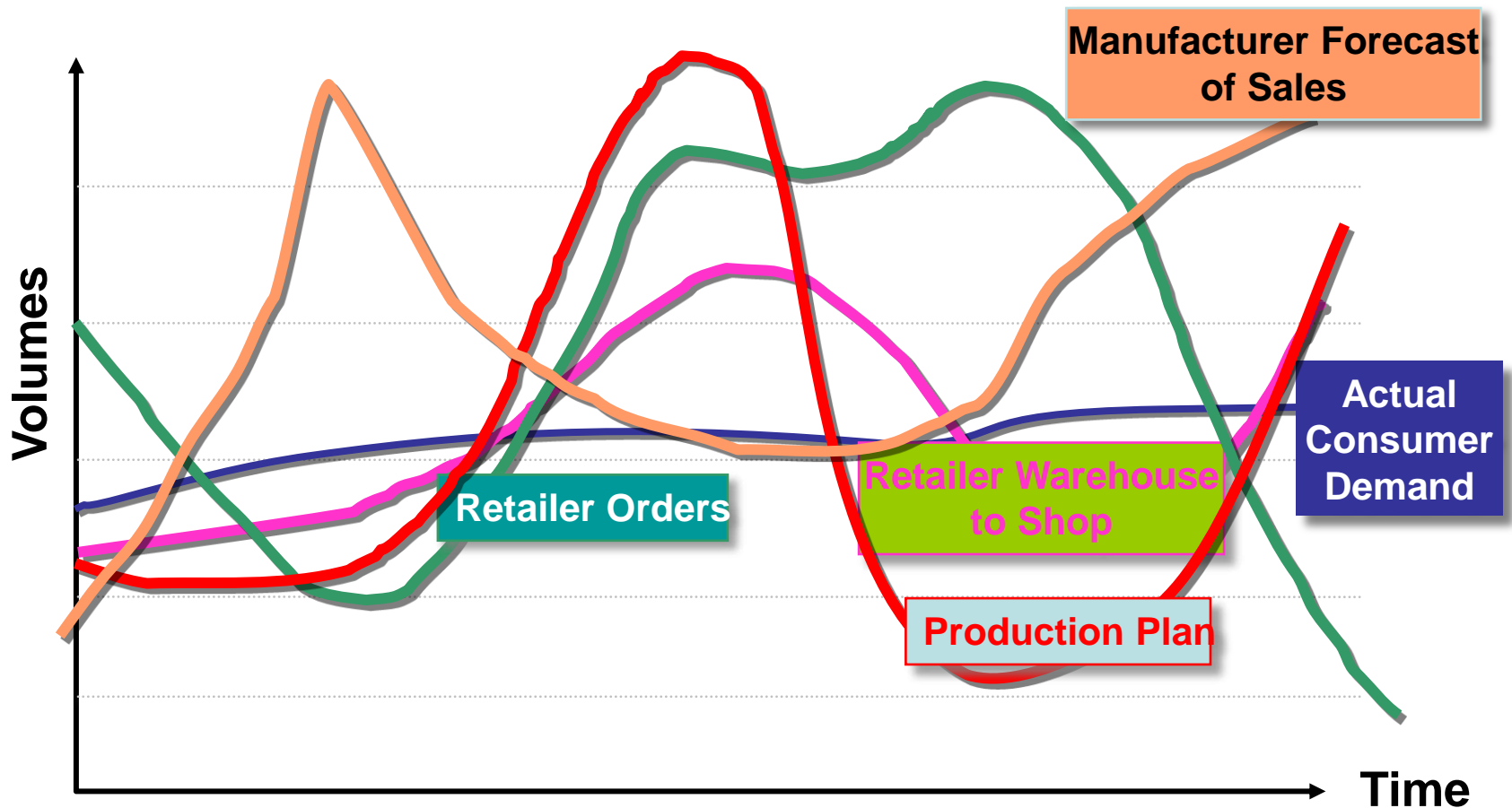
A collection of parties of interest, to share the interests and the risks

A mechanism is needed to effectively distribution interests and benefits

Without the basis

- ✘ Lack of trust, work uncoordinatedly, increased uncertainty → had to increase inventory to compensate
- ✘ Out-stock risks – “Zero-inventory” risks
- ✘ Probably partial lean – but not lean for the whole chain, merely shifting the stock to upstream or downstream and still bearing the cost.

Supply Chain Variability

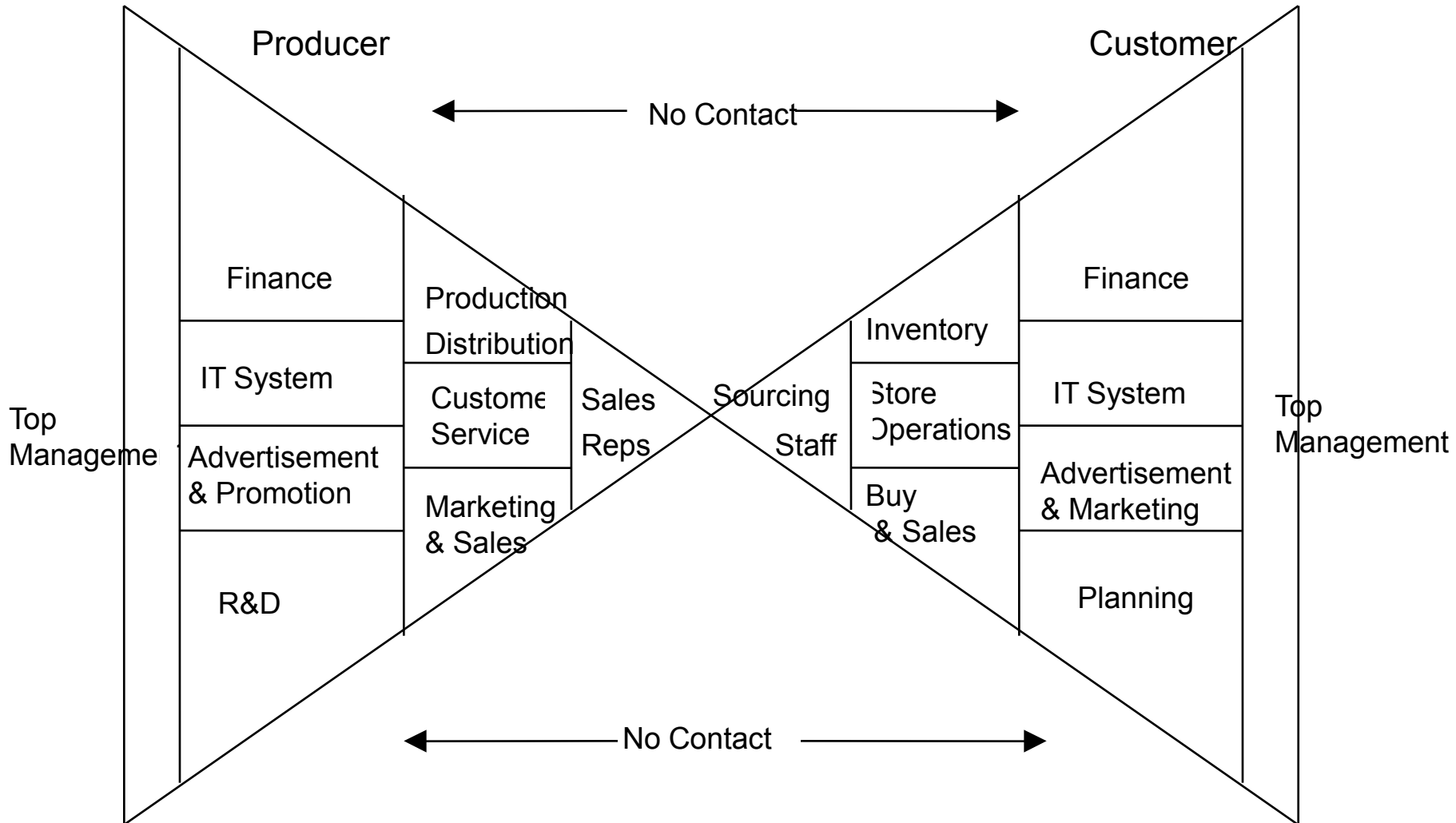


Challenges

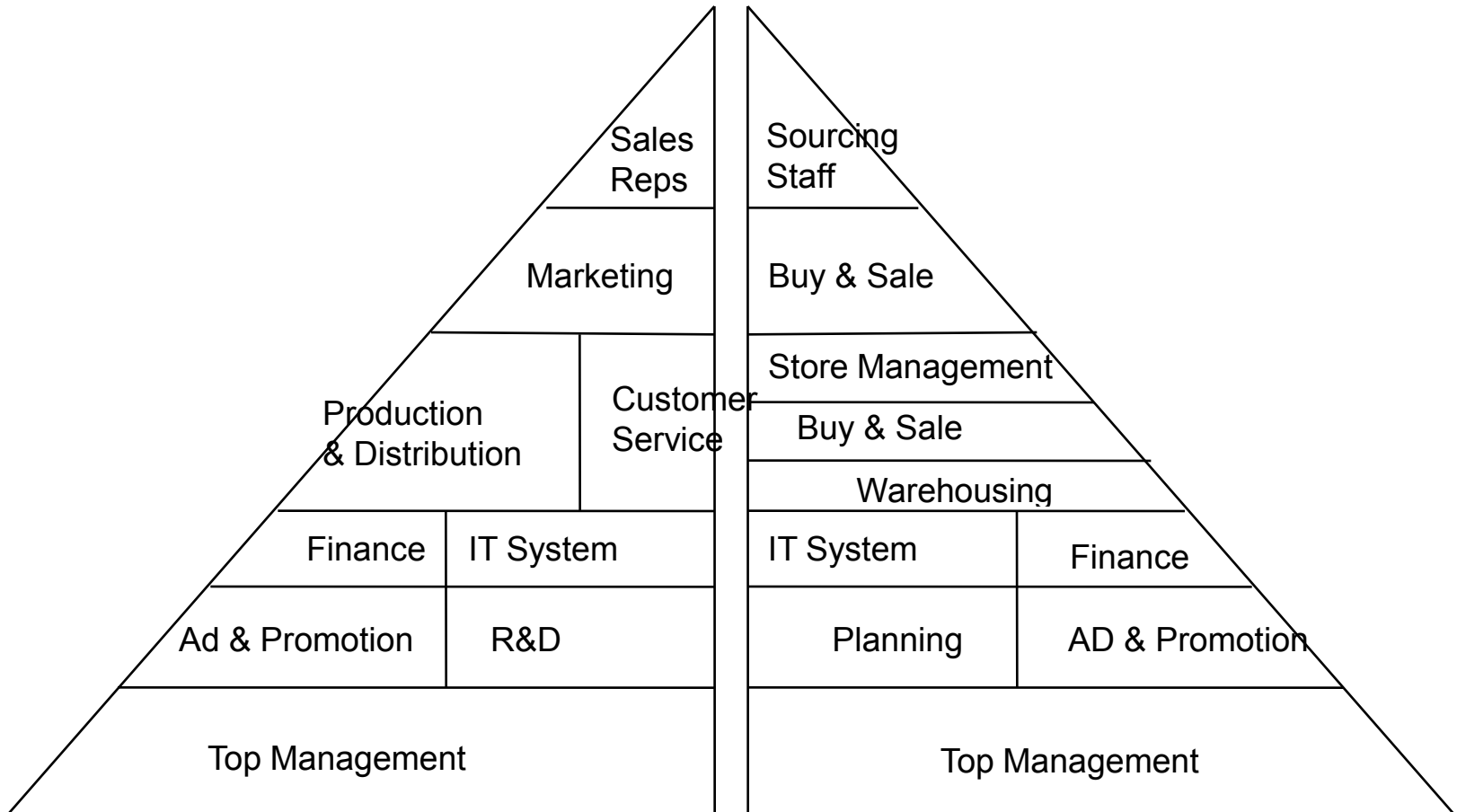
Challenges in SCM

Supply chain is a complex system with multiple members (nodes). Members have conflicts among each others (based on their goals and interests pursuit). It is therefore challenging to match supply with demand, because of too many variables and changes over time. The production cycle is becoming shorter, and marketing is becoming more flexible and diversified.

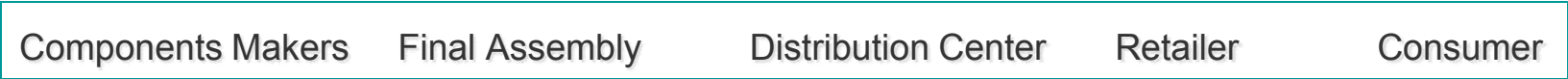
Traditional Upstream & Downstream Relationships



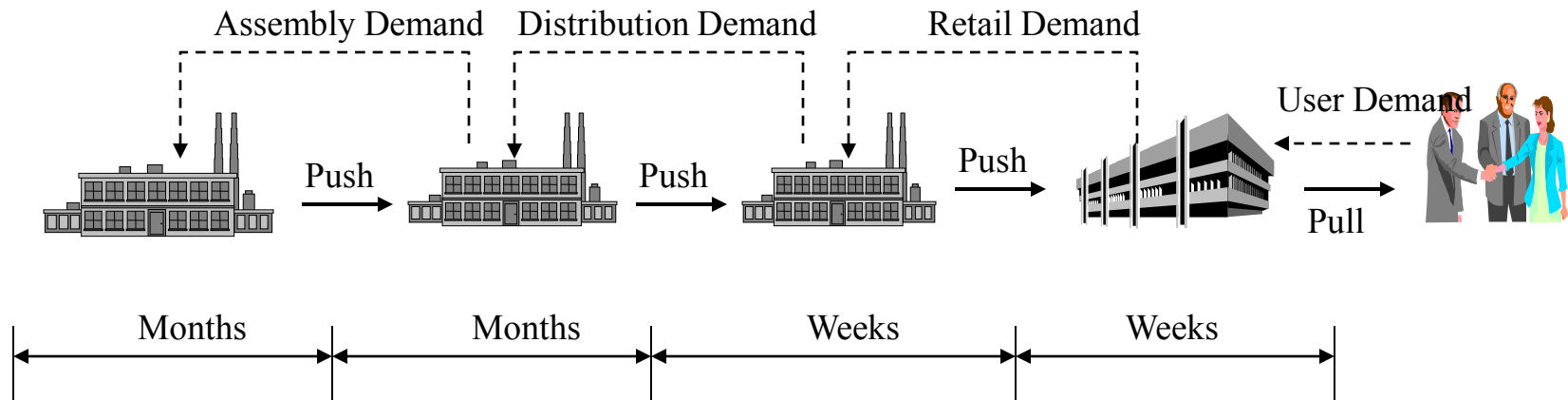
New Upstream & Downstream Partnership



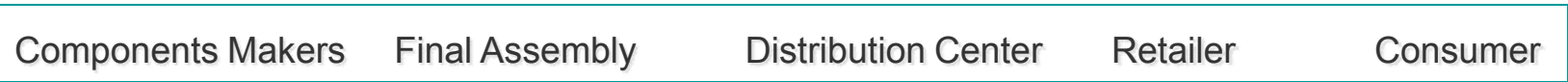
B. Evolution of SCM



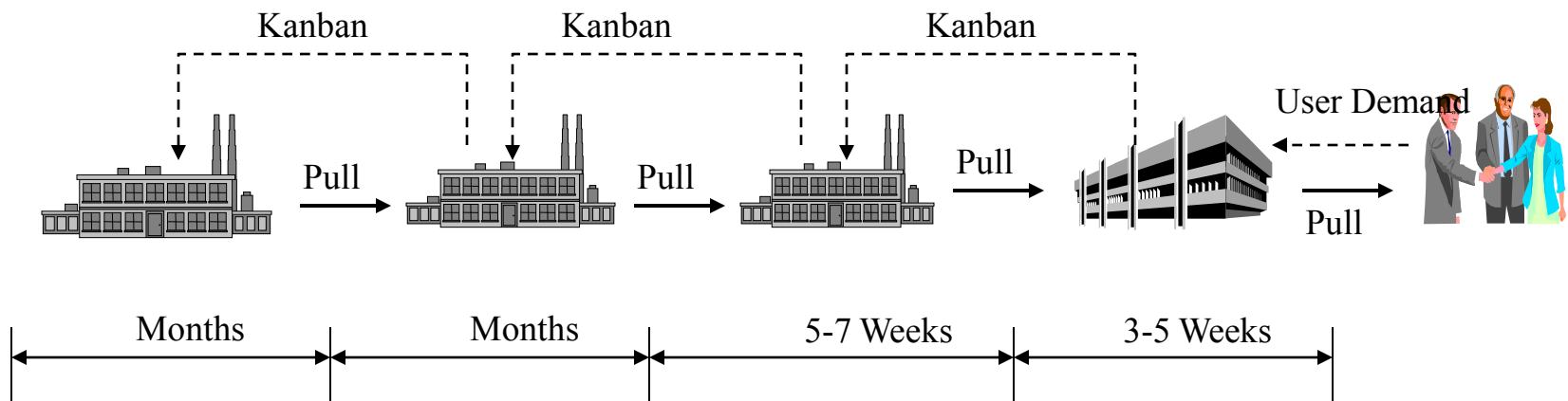
Traditional supply chain in the 1980s



SCM Development



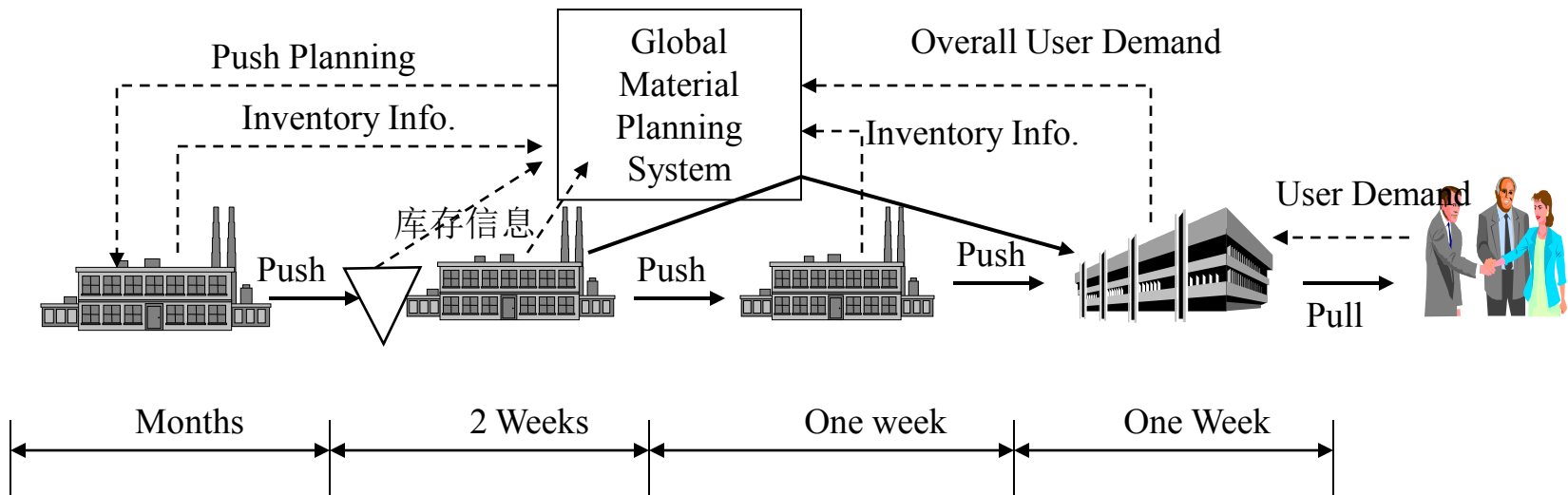
Precision supply chain in the 1990s



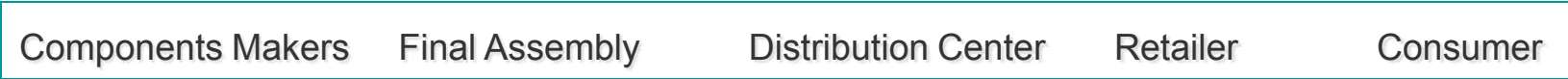
SCM Development

Components Makers Final Assembly Distribution Center Retailer Consumer

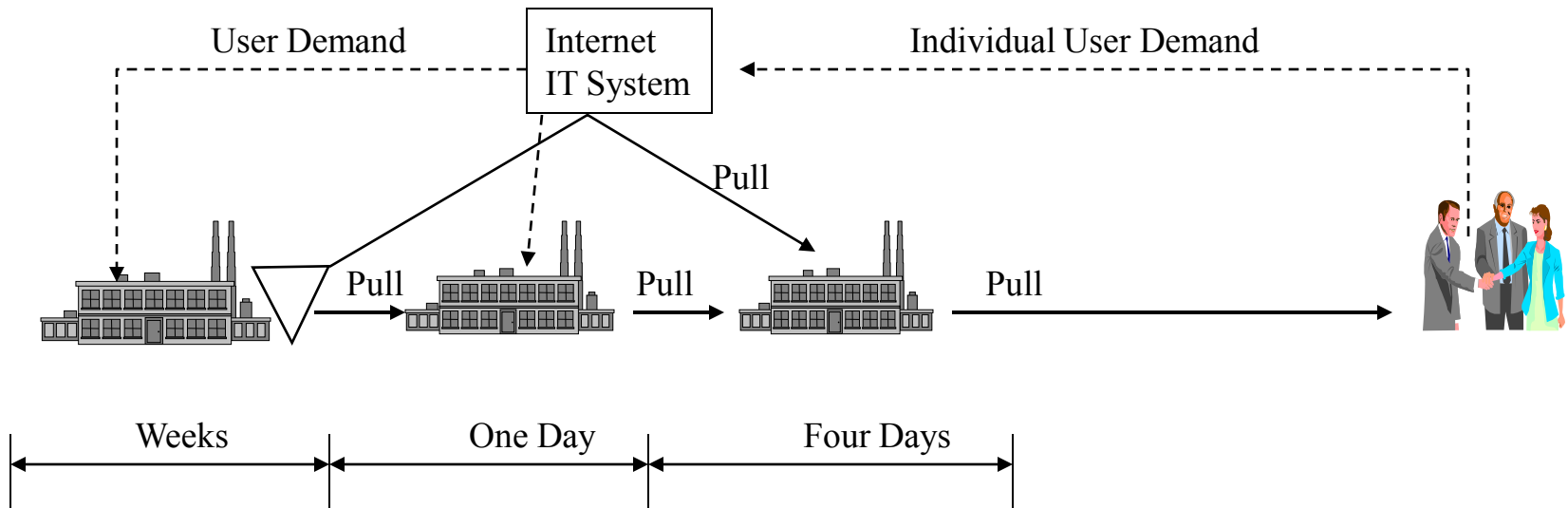
Integrated Agile Supply Chain in the 1995



SCM Development

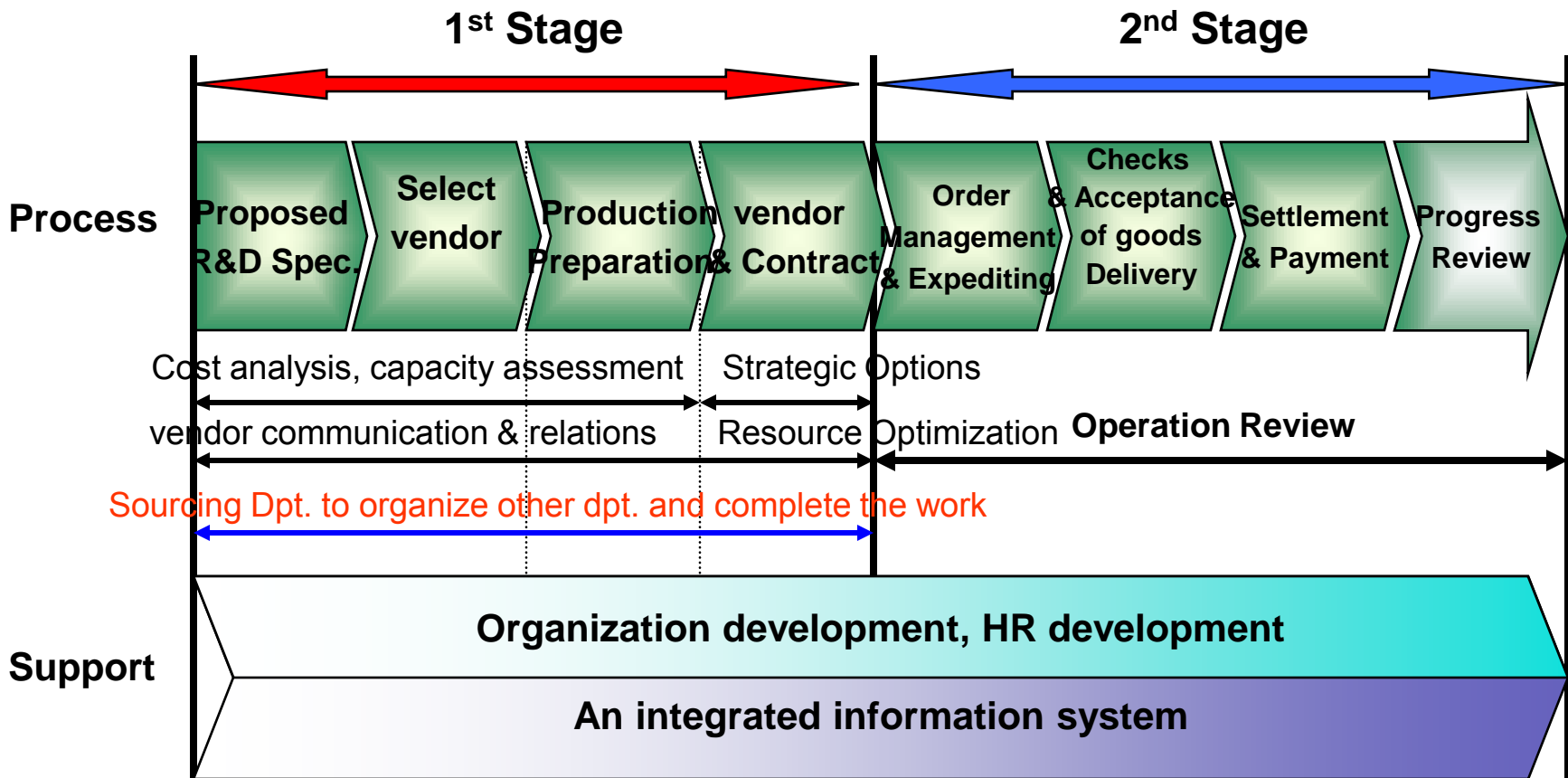


Customized Agile Supply Chain in 2000

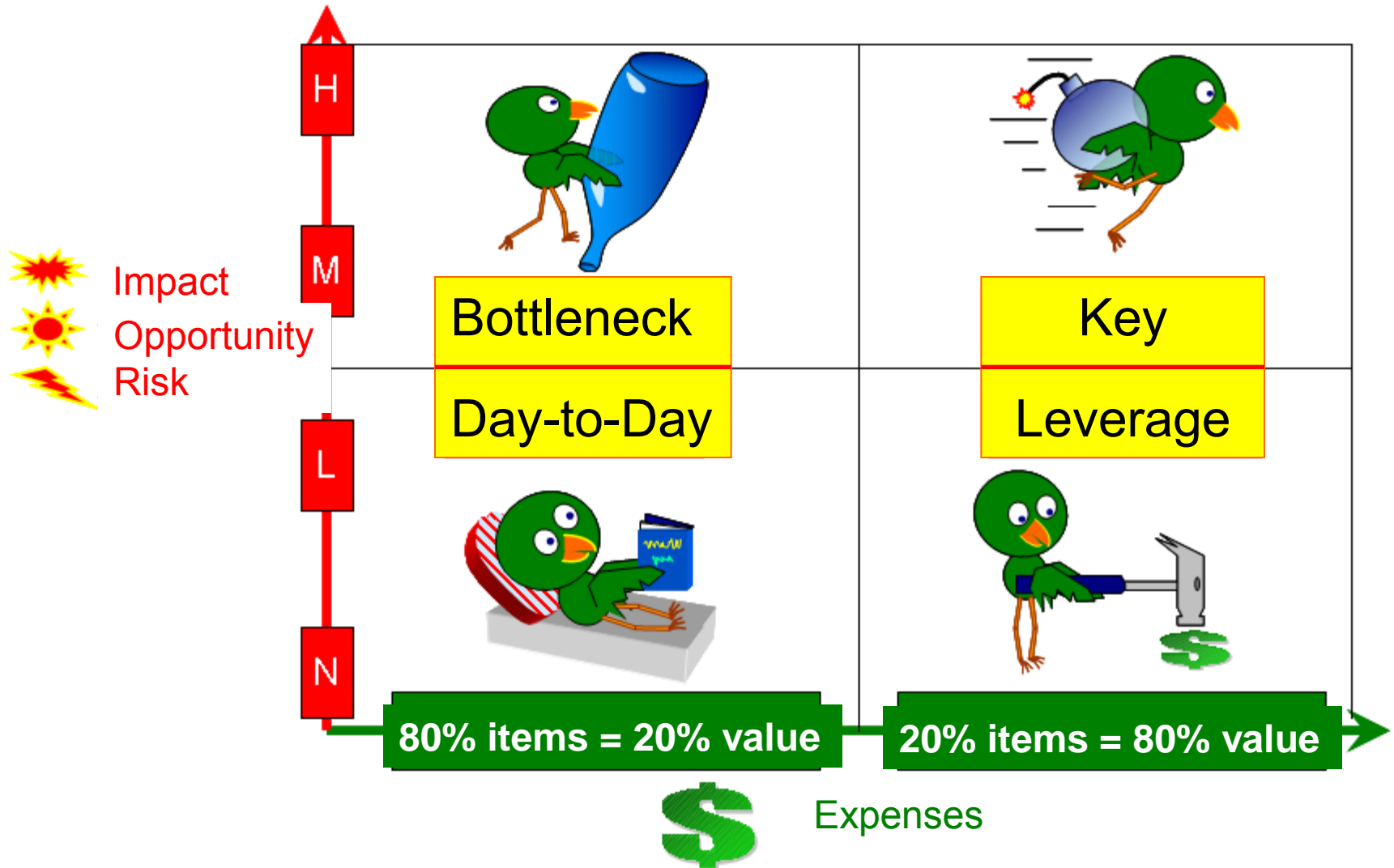


C. Supply Chain Management

Strategic Sourcing



Supply Positioning Model



Strategic Supply Goals

- Develop and optimize supply network system
- Supply adequate quality products at the lowest cost
- Improve SCM and increase supply flexibility
- Establish and maintain a high level supply management team

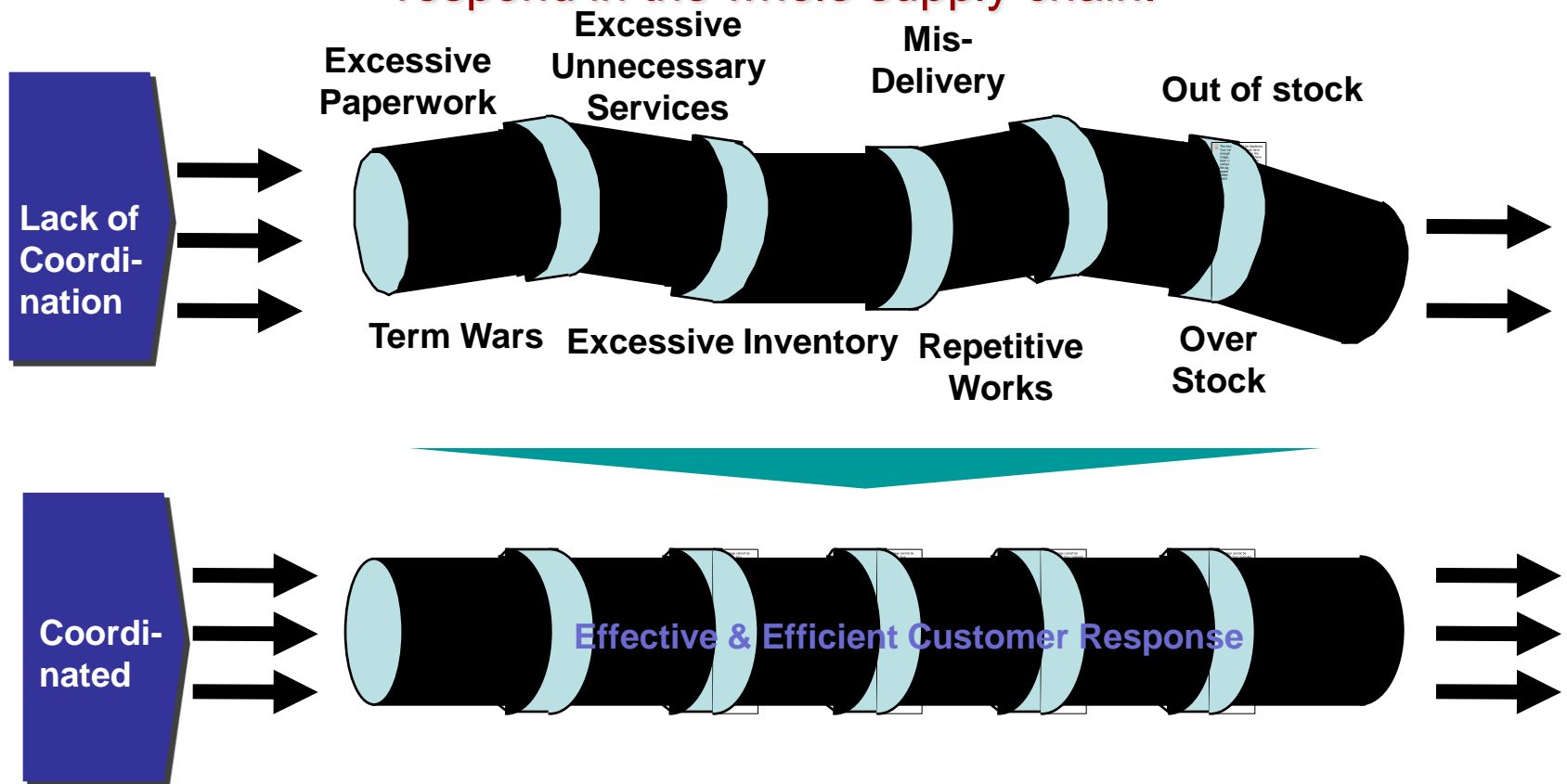


D. Integrated Logistics

- MRP—Material Requirements Planning
- MRP II—Manufacturing Resource Planning
- ERP—Enterprise Resource Planning
- DRP—Distribution Resource Planning
- JIT—Just in Time (Zero-Inventory Production)
- QR—Quick Response
- ECR—Effective Customer Response
- VMI—Vendor Managed Inventory
- JMI—Jointly Managed Inventory

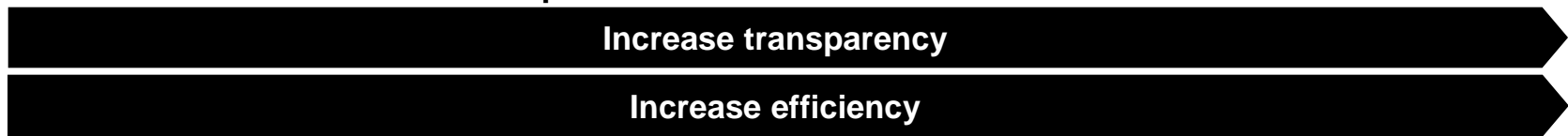
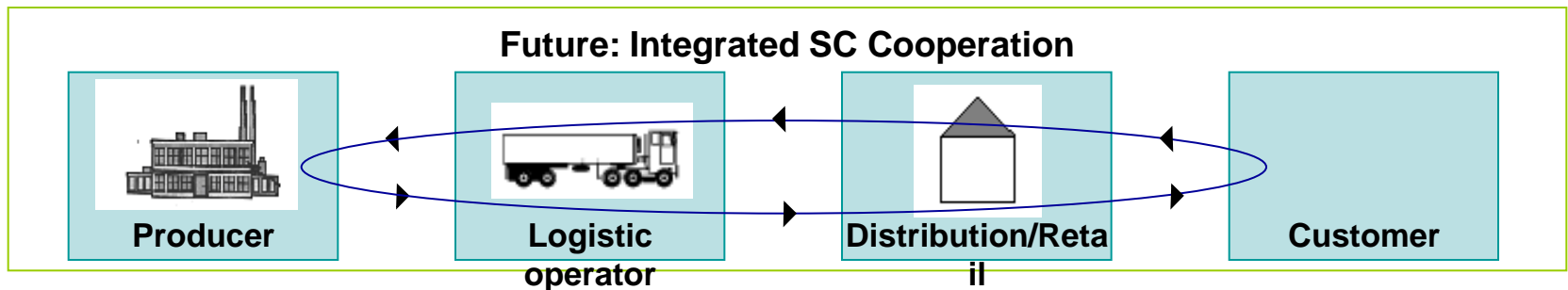
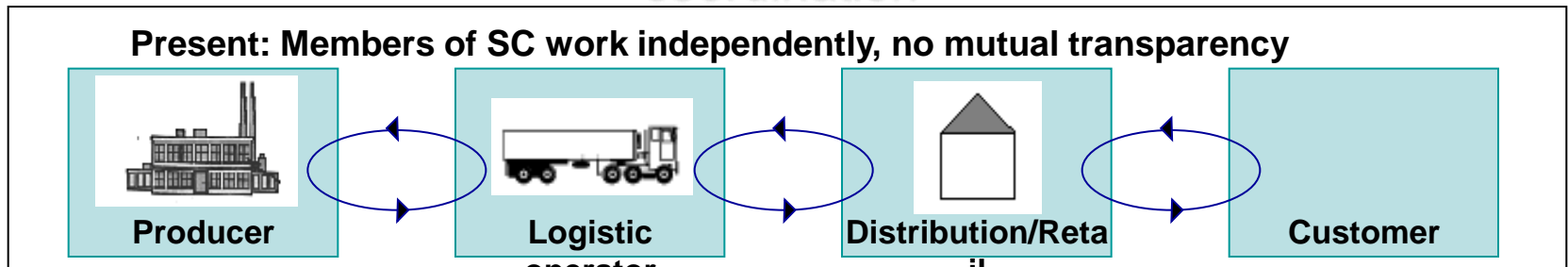
Logistic Coordination

Highly coordinated logistics enables effective and efficient customer response in the whole supply chain.

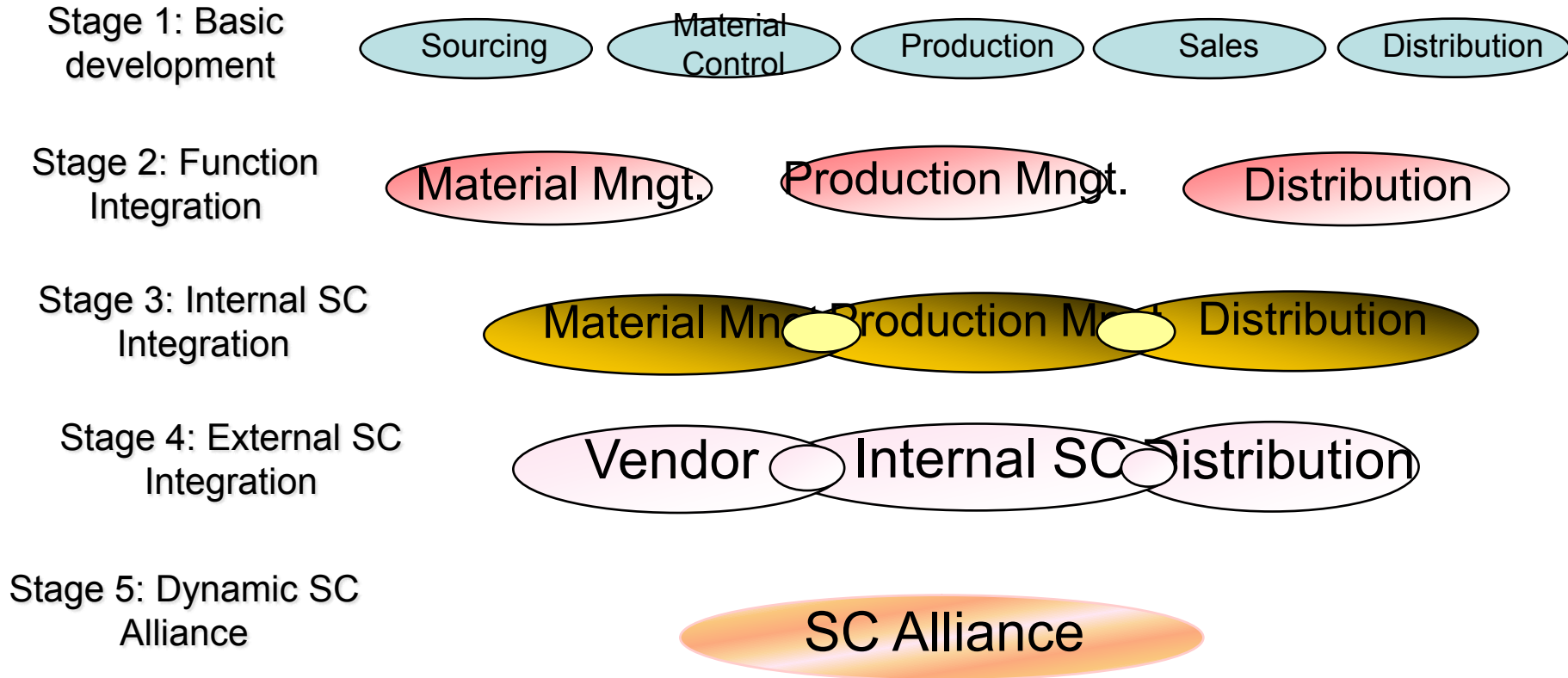


Logistic Coordination





Breakdown the boundaries along the SC to enable inter-company coordination



E. Fulfillment Process



SC Performance

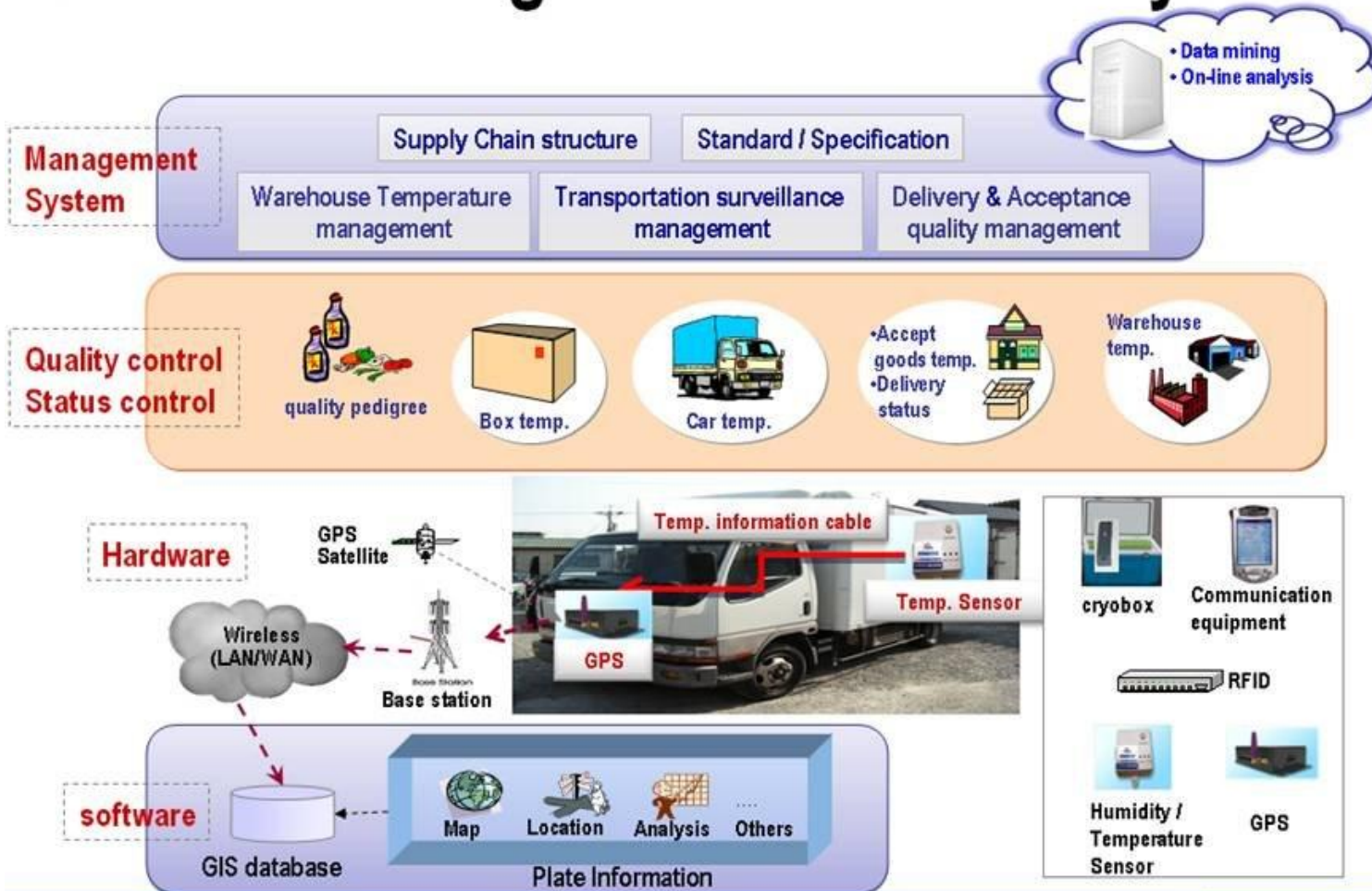
SCOR level 1 Performance	Customer			Internal	
					
	Reliability	Responsiveness	Agility	Cost	Assets
Payment			3		
Delivery Speed			3		
Perfect order fulfillment			3		
Lead time	3				
SC Response Time			3		
Product Agility			3		
SCM Cost				3	
Sales Cost				3	
Value-Added Productivity				3	
Warranty/Return Cost				3	
Cash to Cash cycle					3
Inventory Days of Supply					3
Inventory Turnover					3

F. Specialized Supply Chains



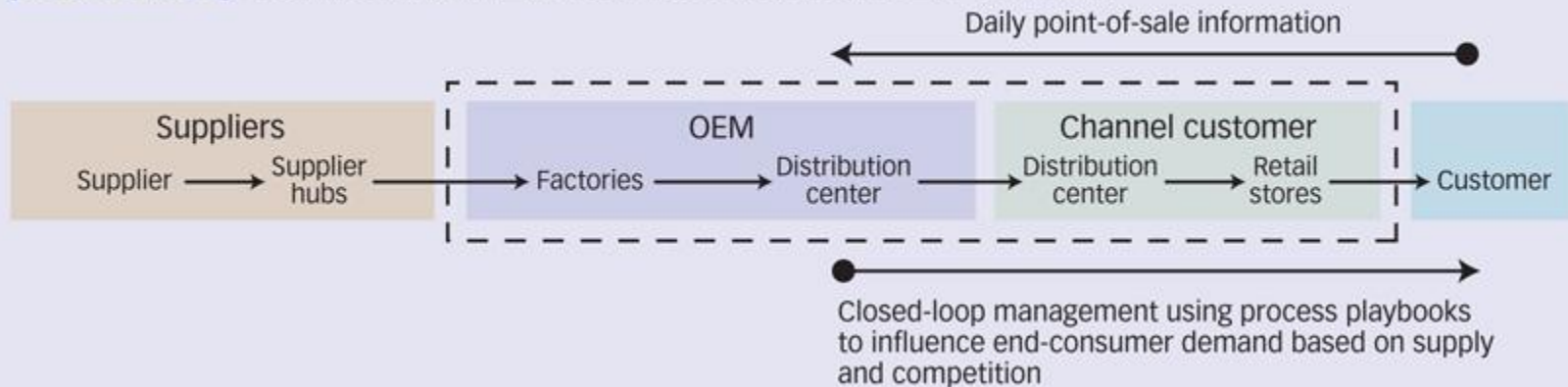
- Cold chain
- Consumer electronics
- Military cargoes
- Reverse logistics
- Furniture logistics
-

Cold Chain Logistics interactive system

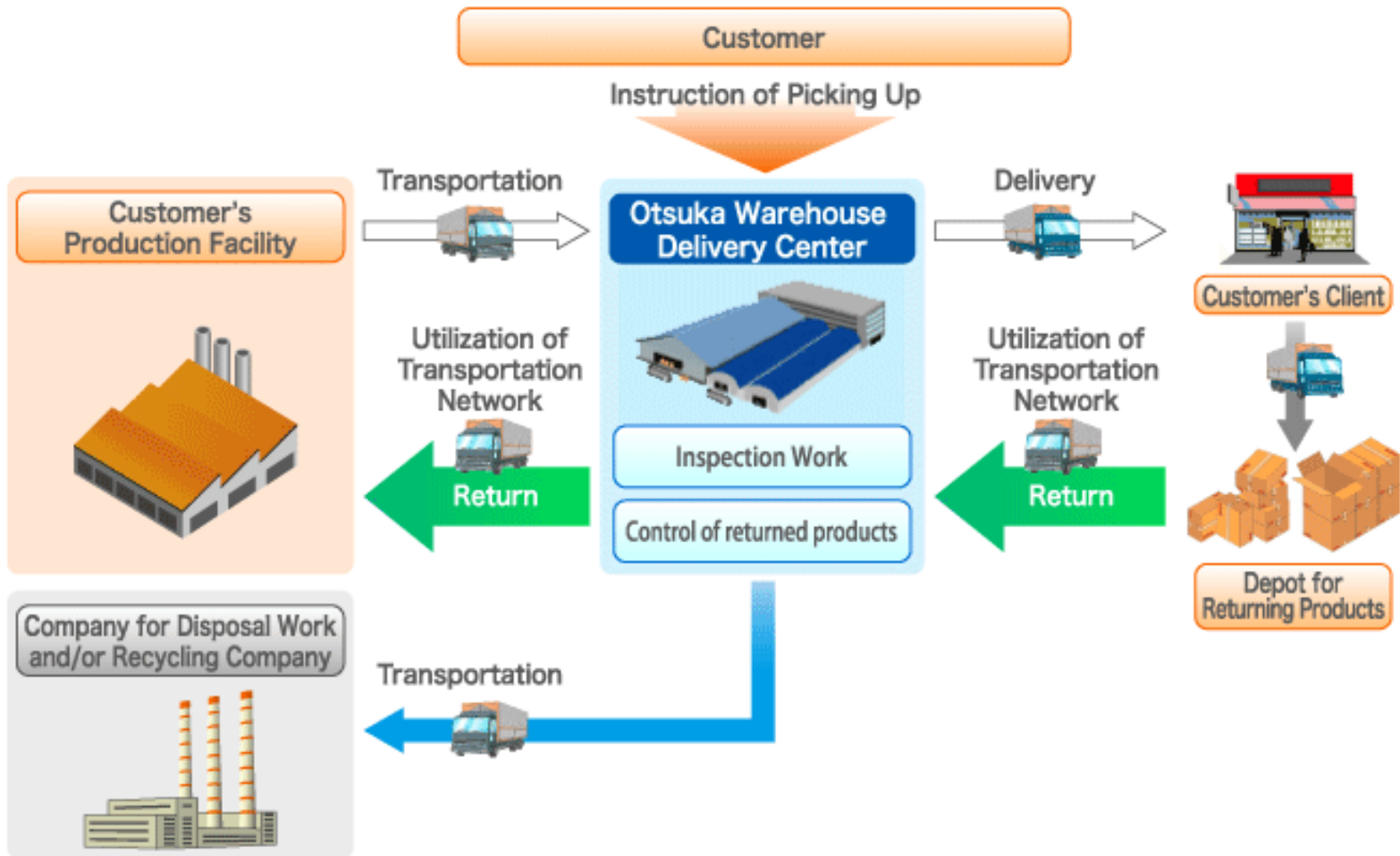


Consumer Electronics SC

[FIGURE A] CONSUMER ELECTRONICS SUPPLY CHAIN

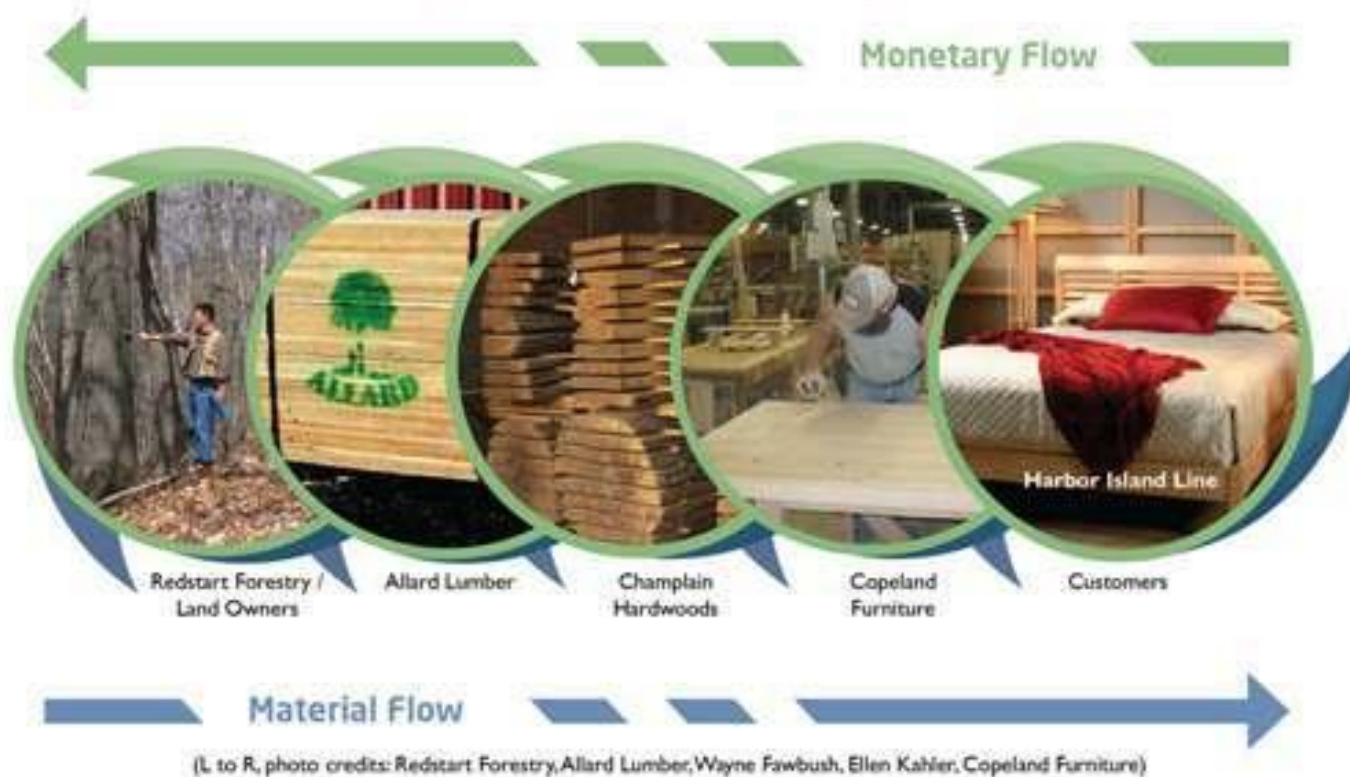


Reverse SC



Furniture SC

Keeping the 'Chain-of-Custody' Intact!



Cold Chain Operation

Requirements

The market (consumption location) can provide appropriate conditions meet with the product features.

Integrity of the goods

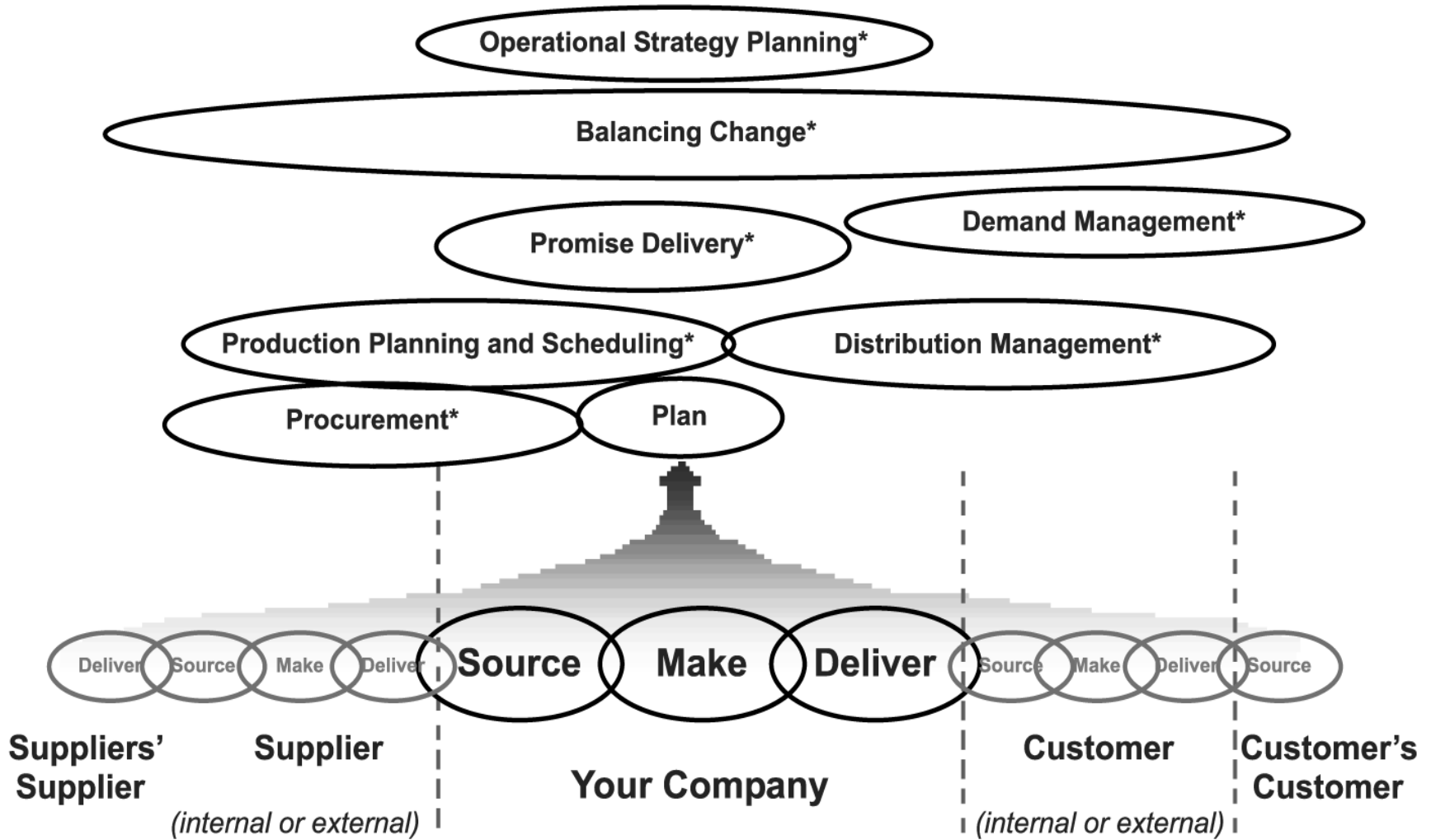
The shipping condition should ensure that the product will maintain its value during transit, including appropriate internal and external packages, and pre-transportation processing (e.g. fruits need to be cleaned and cooled).

Integrity of transportation

In the transportation chain, the temperature has to maintain stable during transit, at warehouses and distribution centers.

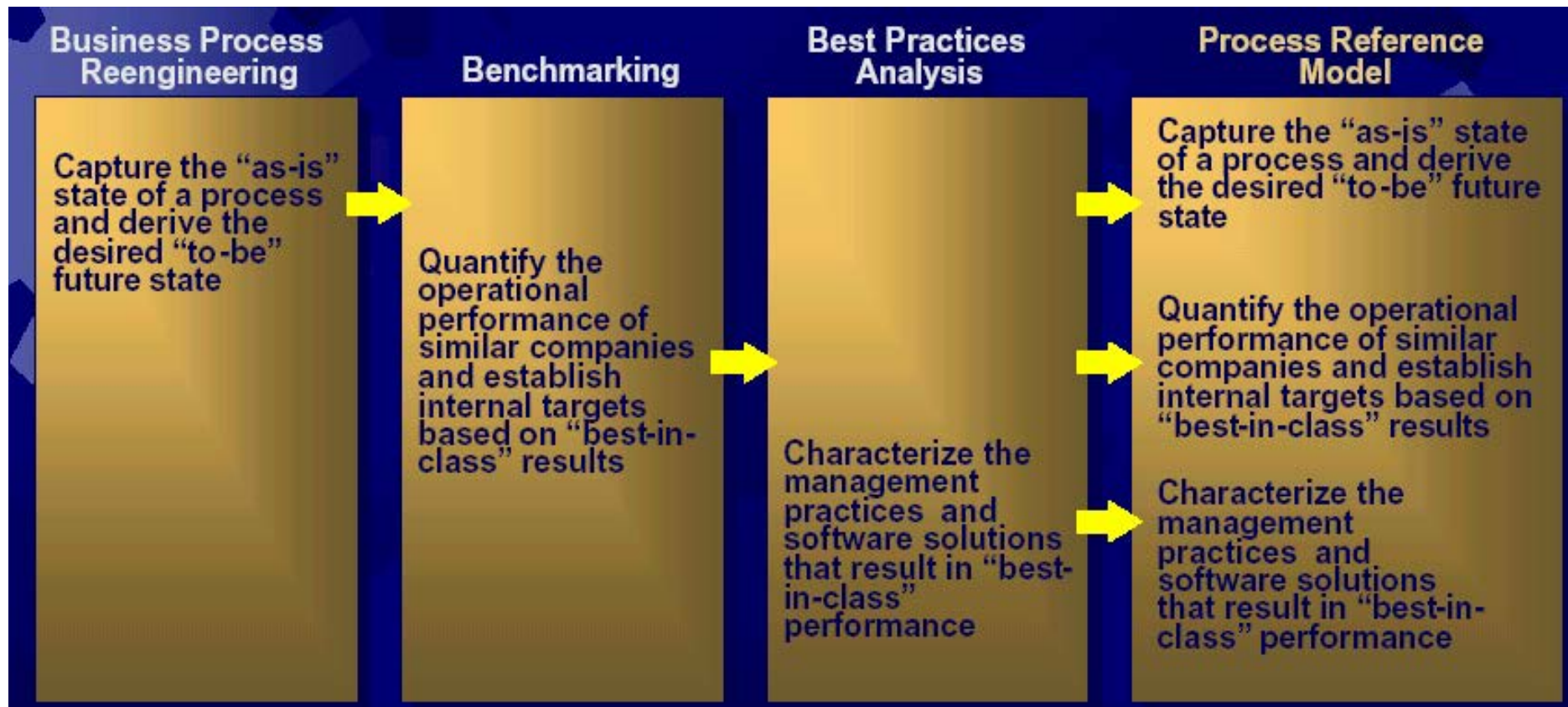
G. Supply Chain Operations Reference (S.C.O.R) Model

SCOR is based on five different management processes

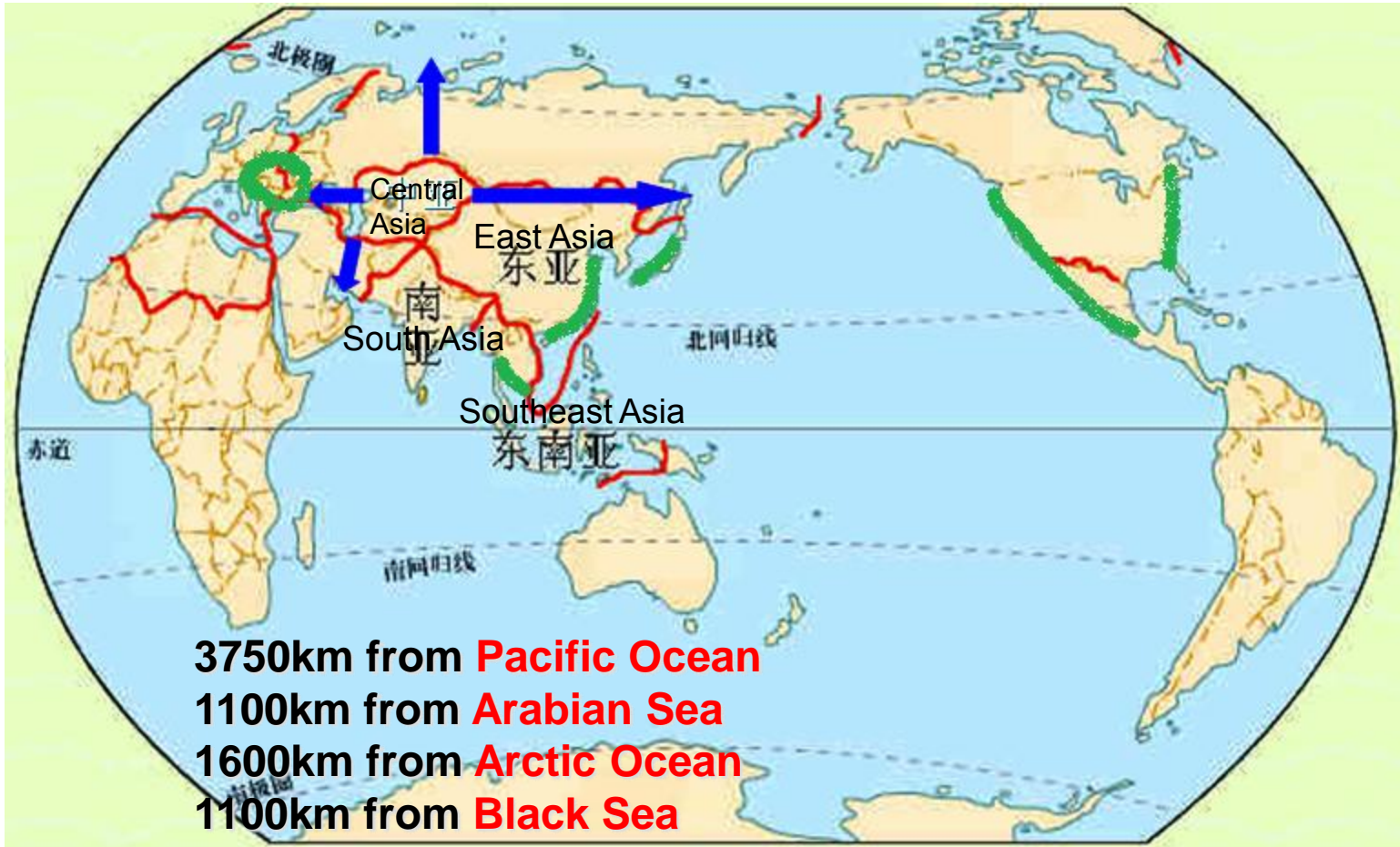


Four Pillars of SCOR

The SCOR Model has integrated business process reengineering, benchmarking, best practice analysis into the SCOR framework.



CAREC Supply Chain

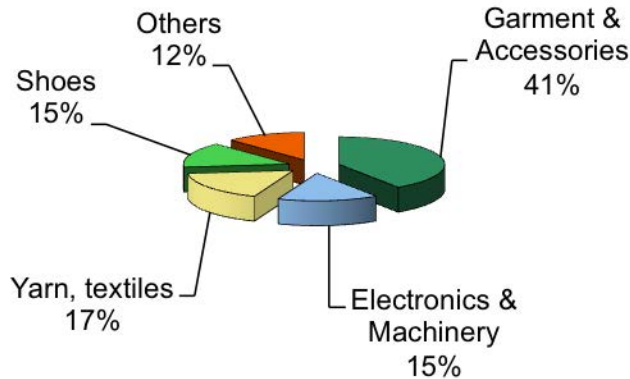


CAREC Supply Chain

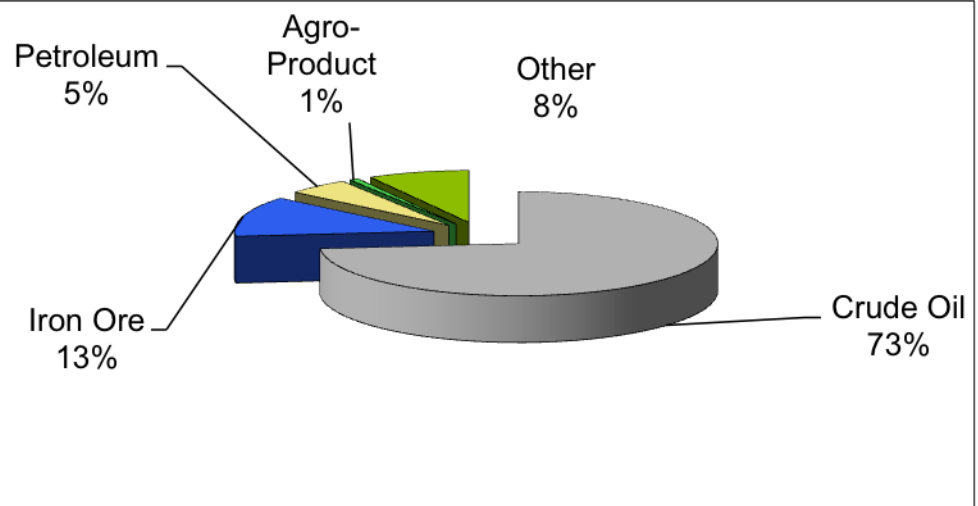


- CAREC countries mostly focuses on energy, raw materials processing and heavy chemical industry. They are at the top of global supply chain.
- Industry is relatively underdeveloped. Processing and light industry are relatively weak, apart from agriculture and food processing.
- Goods such as garments are mostly imported. Their economy is somewhat dependent on China.
- In 2012, the trade volume between CAREC countries and XUAR accounted for 78.76% in XUAR's total trade.

CAREC Supply Chain



2012 XUAR Border Trade Breakdown



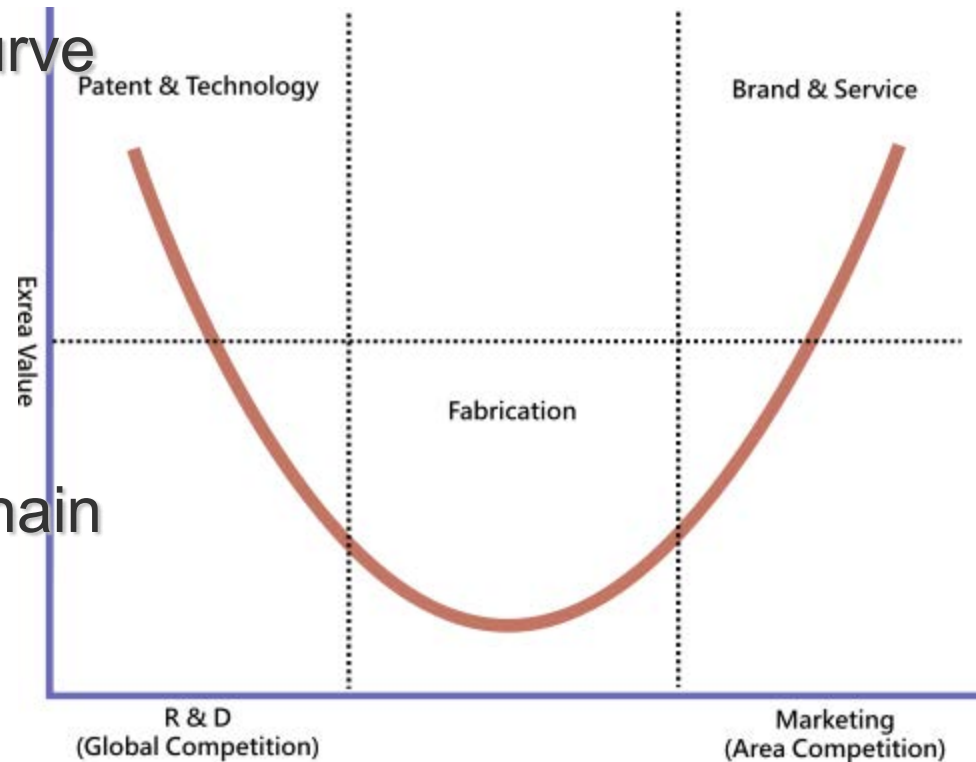
2012 XUAR Border Trade Breakdown

CAREC Supply Chain



- CAREC logistic corridors are transforming into economic corridors.
- The industrialization of cities along the corridors is the key.
- To improve CAREC industry structure and develop light industry.
- Industry restructuring that is driven by CAREC's internal demand.
- To meet the internal demand, to develop internal supply chain instead of a global supply chain.

- Value chain – Smile Curve
- OBM
- Independent channels
- Improved R&D
- Move up in the value chain





Thank You