

Introduction

Additional slides

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Supply Chain Management

- Strategic, tactical and operating issues
 - Strategic - long term and dealing with supply chain design
 - Determining the number, location and capacity of facilities
 - Make or buy decisions
 - Forming strategic alliances
 - Tactical - intermediate term
 - Determining inventory levels
 - Quality-related decisions
 - Logistics decisions
 - Operating - near term
 - Production planning and control decisions
 - Goods and service delivery scheduling
 - Some make or buy decisions

Supply Chain Management

- Key issues in supply chain management include
 - Distribution network configuration
 - How many warehouses do we need?
 - Where should these warehouses be located?
 - What should the production levels be at each of our plants?
 - What should the transportation flows be between plants and warehouses?
 - Inventory control
 - Why are we holding inventory? Uncertainty in customer demand? Uncertainty in the supply process? Some other reason?
 - If the problem is uncertainty, how can we reduce it?
 - How good is our forecasting method?

Supply Chain Management

- Distribution strategies
 - Direct shipping to customers?
 - Classical distribution in which inventory is held in warehouses and then shipped as needed?
 - Cross-docking in which transshipment points are used to take stock from suppliers' deliveries and immediately distribute to point of usage?
- Supply chain integration and strategic partnering
 - Should information be shared with supply chain partners?
 - What information should be shared?
 - With what partners should information be shared?
 - What are the benefits to be gained?

Supply Chain Management

- Product design
 - Should products be redesigned to reduce logistics costs?
 - Should products be redesigned to reduce lead times?
 - Would delayed differentiation be helpful?
- Information technology and decision-support systems
 - What data should be shared (transferred)
 - How should the data be analyzed and used?
 - What infrastructure is needed between supply chain members?
 - Should e-commerce play a role?
- Customer value
 - How is customer value created by the supply chain?
 - What determines customer value? How do we measure it?
 - How is information technology used to enhance customer value in the supply chain?

Supply Chain Management

- How can you assess how well your supply chain is performing?
 - The SCOR model - Supply Chain Operations Reference Model - developed by the Supply Chain Council can be used to assess performance
 - SCOR model metrics include:
 - On-time delivery performance
 - Lead time for order fulfillment
 - Fill rate - proportion of demand met from on-hand inventory
 - Supply chain management cost
 - Warranty cost as a percentage of revenue
 - Total inventory days of supply
 - Net asset turns

Supply Chain Management

- Creating an effective supply chain
 - Develop strategic objectives and tactics
 - Integrate and coordinate activities in the internal portion of the supply chain
 - Coordinate activities with suppliers and customers
 - Coordinate planning and execution across the supply chain
 - Consider forming strategic partnerships

SCM - Inventory Management Issues

- Manufacturers would like to produce in large lot sizes because it is more cost effective to do so. The problem, however, is that producing in large lots does not allow for flexibility in terms of product mix.
- Retailers find benefits in ordering large lots such as quantity discounts and more than enough safety stock.
- The downside is that ordering/producing large lots can result in large inventories of products that are currently not in demand while being out of stock for items that are in demand.

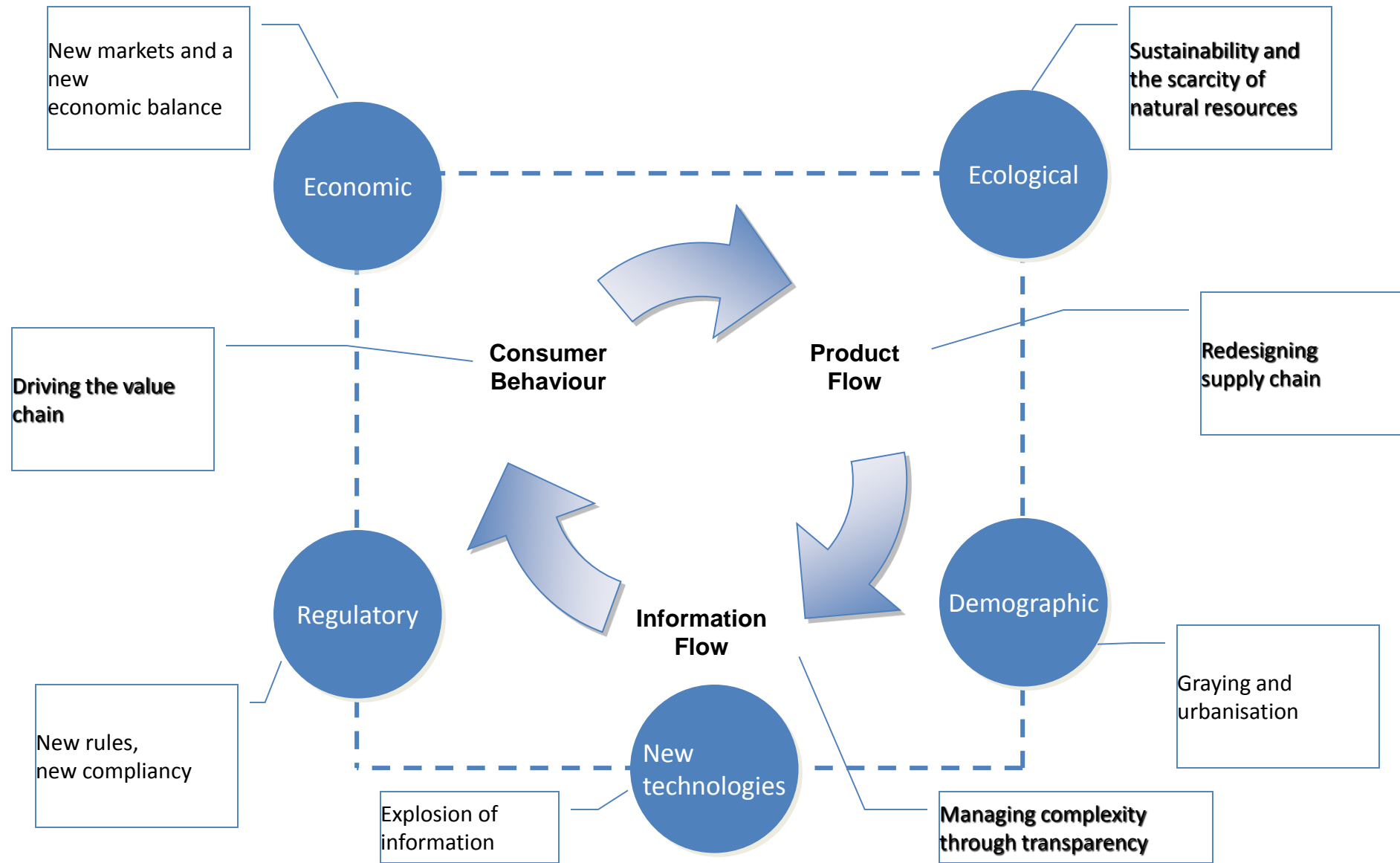
Key Issues in Supply Chain Management

	Chain	Global Optimization	Managing Risk and Uncertainty
Distribution Network Configuration	Supply	Y	
Inventory Control	Supply		Y
Production Sourcing	Supply	Y	
Supply Contracts	Both	Y	Y
Distribution Strategies	Supply	Y	Y
Strategic Partnering	Development	Y	
Outsourcing and Offshoring	Development	Y	
Product Design	Development		Y
Information Technology	Supply	Y	Y
Customer Value	Both	Y	Y
Smart Pricing	Supply	Y	

Trends surrounding the future of GSCs...

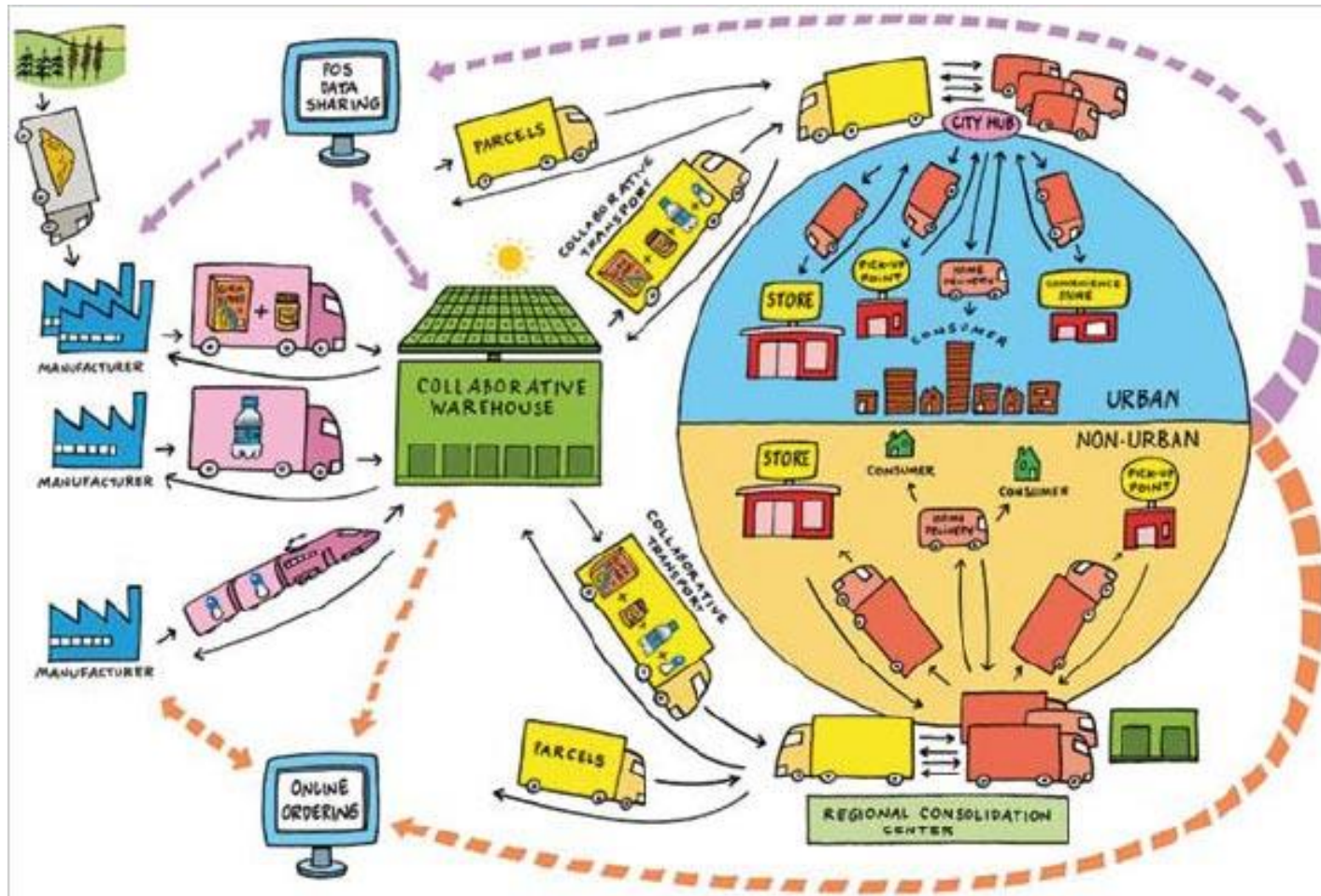
- **Declining economy**
- **Cost and availability of raw materials**
- **Awareness of sustainability**
- **Consumers and technology**
- **Business models change**
- **Availability of information in the supply chain**
- **Product safety**

Forces and trends that will impact the Future Supply Chain



New Model for the Future Supply Chain

Highlights Sustainability Benefits



Source: Global Commerce Initiative, Capgemini (2008)

New KPIs for the Future Supply Chain

○ Current KPIs

- Availability to consumer (percent in-stock)
- Cost reduction
- Financial KPIs
 - Return on investment (ROI)
 - Gross Margin Return on "X" (GMROX)
 - Return on brand equity
 - Inventory
- Traceability



○ Sustainability KPIs

- Energy consumption
- CO2 emissions (greenhouse gases)
- Traffic congestion
- Water consumption
- Security compliance
- Infrastructure simplification

What are Global Value Chains?

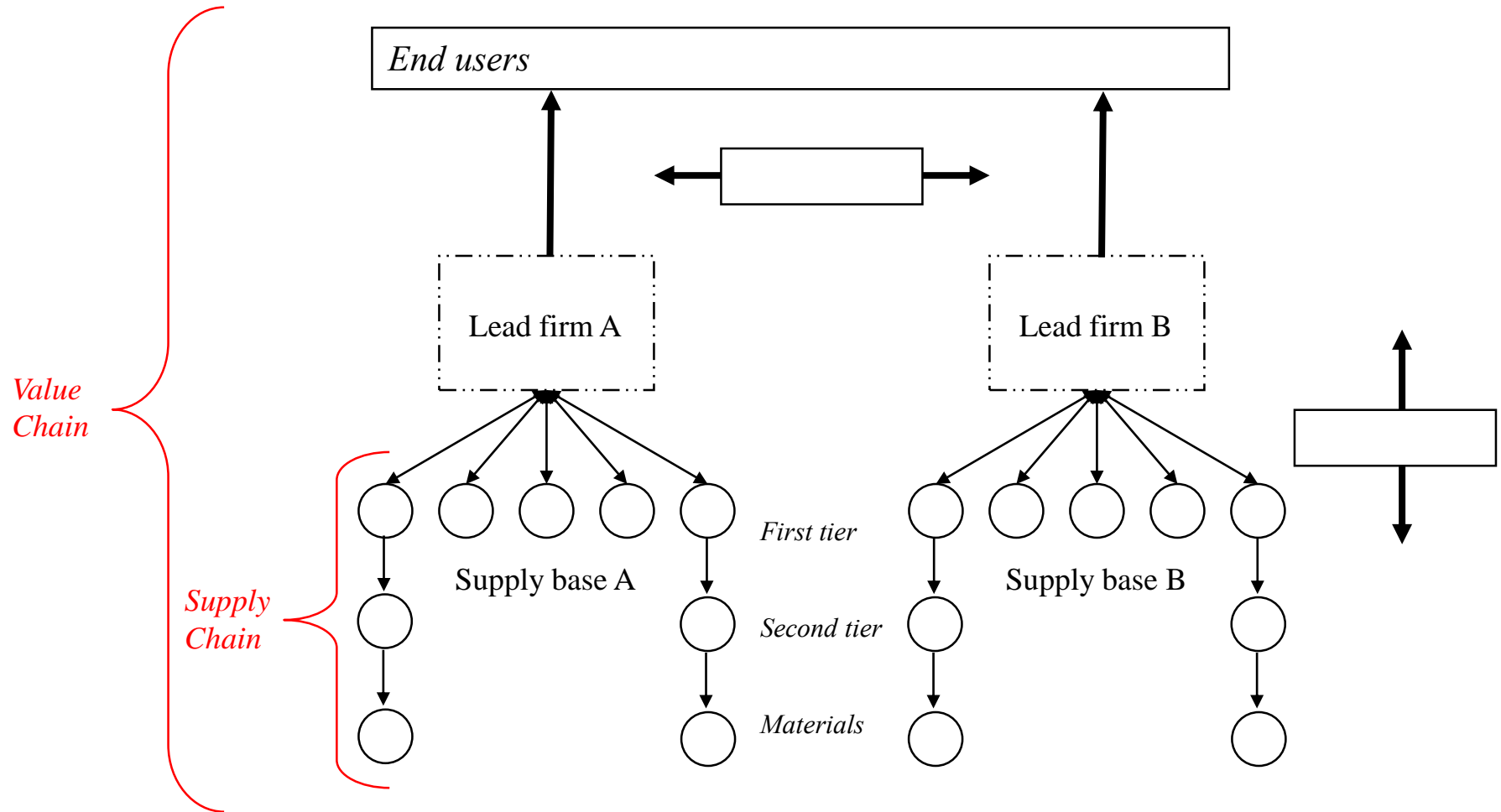
Global Value Chains (GVCs) include the full range of activities that are required to bring a product from its conception to its end use and beyond (e.g. design, production, distribution). Value chain activities can be contained within a single firm or divided among different firms, and can be contained within a single geographical location or spread over wider areas.

(Gereffi, Humphrey, Sturgeon, Global Value Chains Initiative, www.globalvaluechains.org/concepts/index.html, 2006)

Global Value Chains: A New Paradigm for all Firms

- Globalization trends are placing particular pressure on industries offering both opportunities and challenges
 - Fast growing emerging markets
 - Increasingly global competition for talent and innovation
 - Rise of intermediate trade reinforces the need for global connection
 - **Firms are increasingly fragmenting their production processes and spreading them around the world**
 - **GVCs are about a lot more than developing foreign markets**
 - Foreign affiliates no longer only serve local markets
 - Global transactions and partnerships seen as key to access skills, inputs, technology and other opportunities
- Challenge is to be involved in high value-added, high impact sectors...**

Value chains and supply chains



Key questions raised by global value chains

- What business functions are establishments doing internally and externally (**outsourcing**)?
- What business functions are establishments doing domestically and abroad (**offshoring**)?
- **What types of jobs** go with various business functions, including employment by occupation, wages, tenure, and number and type of new hires in past 12 months?
- **What educational and training requirements** are associated with various business function combinations?
- How do the business functions that an establishment engages in relate to the goods and services bought and sold (**inputs and outputs**)?
- How do the business functions that an establishment engages in relate to its economic performance (**market share, profitability, employment, share of value added, market share**)?
- How do the **mix of business functions** in firms compare to establishments in other countries?

The business model has changed dramatically...

Issue	Old Economy	New Economy
Boundary of the firm:	Established	Less clear
Production:	Mass production	Specialized
Product cycles:	Long	Shortened
Integration of industries:	Vertically integrated	Horizontally integrated
Innovation model:	Proprietary and closed model	Open and collaborative model
Foreign investment:	Capture local markets	Serve all components of firms activities
Firm size:	Giant vertically integrated lead-firms	Smaller highly-specialized lead-firms
Capacity utilization:	Volatile	Volatility managed through outsourcing

Note: this doesn't apply to all sectors or all firms of the economy.

The keys for global supply chain excellence

1. Total delivered cost management
2. Global logistics process automation
3. End-to-end visibility
4. Supplier portals and ASN(advanced shipping notice) capabilities
5. Total product identification and regulatory compliance
6. Dynamic routing
7. Variability management