SUPPLIER INTEGRATION INTO THE ORDER REALIZATION PROCESS

Topic 6

Supply chain is defined as the connected series of organizations, resources and activities involved in the creation and delivery of value to end customers.

Supply chain management is management connected series of organizations, resources and activities involved in the creation and delivery of value to end customers.

Supply Chain Management

1) Traditional Supply Chain management
2) Integrated Supply Chain management

CHARACTERISTICS OF TRADITIONAL SUPPLY CHAIN MANAGEMENT

1. **Linear and Fragmented**: Each stage operates independently.
2. **Focus on Local Optimization:** Each stage focuses on its own efficiency.
3. **Limited Visibility**: Information sharing is restricted.
4. **Reactive Decision-Making:** Decisions are made in response to disruptions.
5. **Bullwhip Effect:** Small changes amplify throughout the chain.
6. **Inventory Management**: Focus on storing inventory.
7. **Supplier-Vendor Relationships:** Transactional and arms-length

CHARACTERISTICS OF INTEGRATED SUPPLY CHAIN MANAGEMENT

1. **Networked and Collaborative**: Stages work together seamlessly.
2. **Focus on Global Optimization**: Entire chain efficiency is prioritized.
3. **End-to-End Visibility**: Real-time information sharing.
4. **Proactive Decision-Making:** Data-driven predictions enable proactive decisions.
5. **Reduced Bullwhip Effect:** Real-time data minimizes amplification.
6. **Just-In-Time (JIT) Management:** Produces and delivers just in time.
7. **Strategic Partnerships**: Collaborative and mutually beneficial relationships.

Integrated supply chain management implements a coordinated total supply or value chain from determination of customer needs through product/service development, production/operations and distribution, including (as appropriate) first, second, and third tier suppliers.

The objective of the integrated supply chain is to provide the highest levels of customer satisfaction and value while making most effective use of the competencies of all organizations in the supply chain.

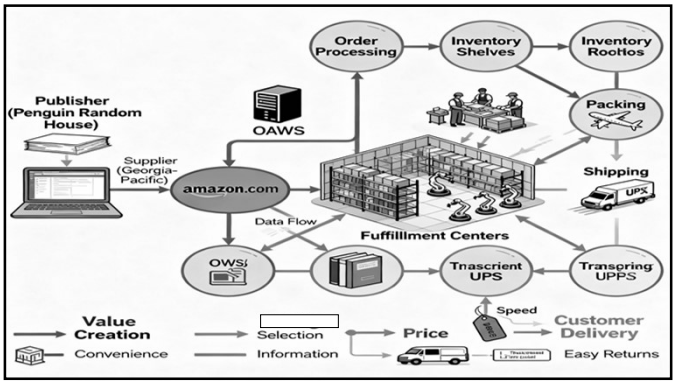
The supply chain rather than the individual business unit is positioned as the key competitive unit.

WORLD CLASS EXCELLENCE CHARACTERISTICS

1. The supply chain, rather than the individual firm is the key competitive unit
2. Strong customer value orientation
3. Alignment of objectives of organizational members of the supply chain
4. Supply chain "total cost" awareness
5. "Demand pull", response-based system, in which the final customer demand drives production and supply, pulling inventory through the supply chain

WORLD CLASS EXCELLENCE CHARACTERISTICS

6. Synchronization of customer demand and supply chain material and information flows reduces inventory, capacity, and lead time buffers
7. Work allocated to supply chain members according to the core competencies of each, in order to maximize the effectiveness of the total supply chain
8. Cooperative, rather than adversarial relationships among members of the supply chain, characterized by mutual support, cooperation and collaboration
9. Extensive information sharing among supply chain members and rapid transmission of information throughout the supply chain
10. Reduced order cycle times, increased customer service levels.



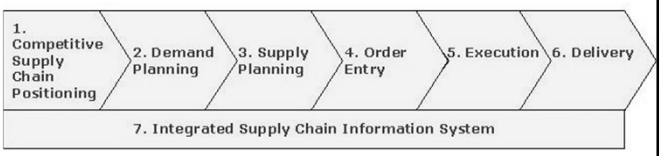
Learning Scope

- Supply Chain Management Types
- World class excellence characteristics
- Process definition and implementation
- Process Model
- Suggested areas for improvement

Process definition involves coordinating and controlling all activities from raw material sourcing to final product delivery to the customer, encompassing planning, sourcing, making, delivering, and returning goods, information, and finances.

Process implementation refers to the systematic integration and alignment of these SCM processes with overall business goals, utilizing a unified and cross-functional approach to optimize efficiency, satisfy customer needs, and gain a competitive edge.

Process Model



STEP 1: COMPETITIVE SUPPLY CHAIN POSITIONING

a) Examine requirements and current performance; It is important to have a profound understanding of the industry and the competitive dynamics. (Current performance relative to competitors, overall customer requirements should be determined and shortcomings of the current system)

(b) Determine how supply chain should compete

Key in this step is to'

i) establish the competitive priorities on which the supply chain should focus.

ii) Based on the competitive thrust, the firm should identify the required supply chain competencies and capabilities.

A key process to be established is a formal insourcing/outsourcing decision-making process in order to:

- Maximize the value-added effectiveness of each supply chain member
- Achieve synergies that improve overall supply chain performance

STEP 2: DEMAND PLANNING

a) Reduce dependence on forecasting

In order to reduce a companies' dependency on forecasting demand, minimize buffers of inventory and capital tied up in the supply chain, chain partners should try and migrate from a traditional supply-push to a demand-pull operation.

Internal and supply chain alignment should be improved through the use of real-time collection of sales data to maximize the timeliness of demand information.

(b) When forecasts are required, improve the process

When companies are dependent on forecasting, they should employ objective, data-based forecasting methods. Ensure that common forecasts are shared across functional disciplines within the organization and across organizations in the supply chain

STEP 3: SUPPLY PLANNING

a) Build a strong supply base

Through differentiated supplier management and supplier performance management, companies should strive towards optimization of their supply base. Requirements for supply should be established and communicated within the supply chain as early as possible.

Long term agreements and alliances with key suppliers should be established to allow for, and justify cross-organizational investments in planning systems

b) Use full-service suppliers

The objective is to develop supplier capabilities to standards recognized and certified by the company, enabling suppliers to take on greater responsibility in areas such as product design, development, product testing, manufacturing engineering, manufacturing support, and service support.

Furthermore, full-service supply is encouraged through: Involvement of suppliers in design/development, "ship-to-stock" and/or "ship-to-line" delivery of materials.

STEP 3: SUPPLY PLANNING

c) **Integration of information systems with suppliers through Electronic Data Interchange (EDI),** providing real time access to relevant information, including: Status to schedule, Stock on hand, Purchase order information

d) Provide visibility of requirements to suppliers - Share demand forecasts with suppliers, Share production/material plans with suppliers, Make firm commitments on requirements

e) Track supplier performance

- Ensure clear metrics and standards are established
- Clear communication of expectations to suppliers
- Provide timely and adequate feedback to suppliers
- Set continuous and aggressive improvement targets

Step 4: ORDER ENTRY

- Capture downstream sales data in real time
- Provide visibility of orders throughout the supply chain
- Integrate order entry information system fully with internal planning systems

Step 5: EXECUTION

Key processes to re-engineer the supply chain through the Simplification, standardization and synchronization these leading principles of reengineering of the supply chain

1. **Simplification**: Eliminating the Unnecessary-Remove complexity, waste, and non-value-added steps from every part of the supply chain
2. **Standardization:** Creating a Common Foundation by establishing consistent methods, materials, components, and data formats across the supply chain. Standardization creates predictability and enables scale.
3. **Synchronization:** Aligning the activities of all supply chain partners to the match actual customer demand.

Respective processes are to be applied at all levels of the order fulfilment processes to optimize supplier integration and overall supply chain performance.

Step 5: EXECUTION

1. Inventory management strategies

- Use demand-pull systems to control inventories throughout the supply chain
- Use postponement to reduce inventory and maintain customer service
- Position inventories strategically to maximize responsiveness

2. Order processing strategies

- Simplify product designs: Minimize parts, Standardize parts and materials
- Simplify processes: Minimize process steps, Standardize processes, Design for manufacture and assembly
- Drive toward just-in-time operations: Maximize flexibility, reduce setup/changeover times, reduce lot sizes, Use pull systems for material control
- Use on-site suppliers to facilitate coordination

Step 6: DELIVERY

(a) Reduce delivery cycle times

- Use faster modes of transport
- Use cross docking to improve inventory velocity

(b) Reduce transportation costs

- Reduce supply base of carriers
- Identify "preferred" carriers
- Consolidate shipments
- Coordinate inbound and outbound shipments
- Establish long-term or alliance relationships with key carriers

(c) Track performance

- Establish clear metrics and standards
- Communicate expectations to carriers
- Provide feedback to suppliers
- Set continuous improvement targets

Step 7: INTEGRATED SUPPLY CHAIN INFORMATION SYSTEM

1. **Extensive information sharing and common databases are key to the creation of an efficient and effective supply chain**:
   - Across organizations
   - Across functions
   - Across location

2. **Important drivers for common and linked systems are:**
   - Hardware/software/networking standards
   - Security standards
   - Common coding standards

SUGGESTED AREAS FOR IMPROVEMENT

- Improve/integrate/increase flexibility/transparency of (planning and execution) information systems
- Involve suppliers earlier in order fulfilment decision processes
- Involve suppliers in requirements planning, scheduling and supply (Extended Supplier Planning)
- Increase cross-organizational communications enterprise-wide
- Attune rhythm of planning and execution cycles and processes
- Increase feedback loops and responsiveness
- Reduce lead times and throughput times

SUGGESTED AREAS FOR IMPROVEMENT

- Reduce batch sizes and stock levels
- Balance supply and demand
- Improve/attune product specifications
- Improve/attune process quality and minimize process variations
- Make products specific as late as possible (Value Added Logistics)
- Improve/integrate forecasts and reduce forecast necessity (e.g. through application of Just in Time (JIT) or push/pull

Read

Explain the concept of decoupling in supply chain management

Discuss the importance of decoupling in supply chain management