

Enterprise System

Unit 4

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Supply Chain Concepts

- **Definition:** SCM involves managing the flow of goods, information, and finances across the supply chain, from raw material suppliers to end consumers.
- **Key Goals:**
 - Improve efficiency and responsiveness.
 - Reduce costs while ensuring quality and service levels.
 - Optimize inventory and minimize waste.

SCM in the Manufacturing Industry

- **Role:**

- Coordinates procurement, production, and distribution activities.
- Ensures the availability of raw materials and components for production.
- Aligns supply with demand to avoid overproduction or stockouts.

- **Trends:**

- Integration of IoT for real-time tracking.
- Automation in warehouses and logistics.
- Demand forecasting using AI and machine learning.

Push and Pull Scheduling

- **Push Scheduling:**

- Based on forecasted demand.
- Focuses on producing and distributing products in advance.
- Benefits: Economies of scale, reduced lead times.
- Drawbacks: Risk of overproduction and excess inventory.

- **Pull Scheduling:**

- Driven by actual demand from customers.
- Produces goods only when an order is placed.
- Benefits: Reduced waste, increased flexibility.
- Drawbacks: Higher lead times and potential delays.

Make or Buy Strategy

- **Definition:** Deciding whether to produce goods in-house (make) or procure them from external suppliers (buy).
- **Factors to Consider:**
 - **Cost:** Compare production costs vs. supplier costs.
 - **Core Competency:** Focus on core strengths; outsource non-core activities.
 - **Quality:** Evaluate internal capabilities versus external supplier reliability.
 - **Scalability:** Assess the ability to scale production or supply.

SCM Framework

- **Key Components:**
 - **Planning:** Demand forecasting, production planning, and inventory control.
 - **Sourcing:** Selecting suppliers and negotiating contracts.
 - **Manufacturing:** Ensuring efficient production processes.
 - **Logistics:** Managing transportation, warehousing, and distribution.
 - **Returns:** Handling defective or returned goods (reverse logistics).

Managing Global SCM

- **Managing Global SCM**
- **Challenges:**
 - Complexities in managing global suppliers and logistics.
 - Currency fluctuations and trade regulations.
 - Cultural differences and communication barriers.
- **Strategies:**
 - Use of global ERP and SCM systems for end-to-end visibility.
 - Diversify supplier base to reduce dependency on a single source.
 - Adopt advanced analytics for risk management and scenario planning.

SCM Products and Vendors

- **Popular SCM Software:**
 - **SAP SCM:** Provides comprehensive supply chain planning, execution, and analytics.
 - **Oracle SCM Cloud:** Cloud-based solutions for demand planning, logistics, and order management.
 - **Blue Yonder (formerly JDA Software):** Specializes in AI-driven supply chain optimization.
 - **Infor Supply Chain Management:** Industry-specific SCM solutions.
 - **Manhattan Associates:** Focused on warehouse and logistics optimization.

SCM Selection and Implementation

- **Steps in Selection:**
 - Identify business requirements and pain points.
 - Evaluate scalability, customization, and integration capabilities.
 - Conduct vendor assessments and product demonstrations.
- **Implementation Phases:**
 - **Preparation:** Define objectives and build a project team.
 - **Planning:** Develop an implementation roadmap and timeline.
 - **Configuration:** Customize the system to meet business needs.
 - **Integration:** Link the SCM system with ERP and other enterprise systems.
 - **Testing:** Perform end-to-end testing to ensure system functionality.
 - **Deployment:** Roll out the system and provide user training.
 - **Monitoring:** Continuously evaluate system performance and optimize.

Integration with ERP

- **Purpose:**

- Ensures seamless communication between supply chain and business processes like finance, production, and sales.

- **Benefits:**

- Real-time visibility into inventory and order statuses.
- Better demand forecasting and resource allocation.
- Streamlined procurement and production planning

Integration with Internet-Based Marketing Systems

- **Role:**
 - Links SCM with e-commerce platforms and digital marketing systems.
 - Enhances customer experience through real-time order tracking and updates.
- **Examples:**
 - Integrating SCM with CRM systems for improved customer service.
 - Using digital platforms like Amazon or Alibaba for global sourcing and distribution.