ROHINI COLLEGE OF ENGINEERING AND TECHNOLOGY
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MASTER OF BUSINESS ADMINISTRATION

NAME OF THE SUBJECT: SUPPLY CHAIN

CONCEPT AND PLANNING

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UNIT I

Manufacturing Supply Chain Dynamics:

Tangible Products:

Manufacturing supply chains deal with the production of physical goods. This involves raw materials sourcing, Production processes, and distribution. Manufacturers need to manage raw material inventories, work-in-progress, and finished goods inventories efficiently to meet demand while avoiding excess stock.Planning is critical in Manufacturing, involving forecasting, scheduling, and ensuring the availability of resources to meet production Targets. Quality assurance is paramount. Manufacturers implement rigorous quality control measures at various stages of production to ensure that the end product meets specifications. Manufacturing often involves longer lead times due to the production process, procurement of raw materials, and the time required to produce finished goods.Manufacturers often focus on end-to-end supply chain visibility to optimize processes, reduce costs, and Ensure timely delivery.

Service Supply Chain Dynamics:
Intangibility:

Services are intangible, meaning they cannot be touched or stored. Service supply chains involve managing the flow of information, skills, and resources.Customer engagement is critical in service supply chains. Interaction, communication, and customer satisfaction are key factors.Service supply chains involve allocating human resources, expertise, and technology to deliver the service efficiently.Service demand can be more variable and unpredictable than manufacturing demand, making capacity planning and resource allocation more challenging. Service providers often need to respond in real-time to changing customer needs and demands, requiring flexibility and adaptability in the supply chain.Quality in services is often measured by customer satisfaction, which involves managing expectations and delivering a positive experience.

Supply Chain Collaboration:

Both service and manufacturing supply chains benefit from collaboration and communication among different stakeholders in the supply chain.Technology plays a crucial role in optimizing both service and manufacturing supply chains, with the use of advanced systems for inventory management, demand forecasting, and logistics. Both types of supply chains need to address risks such as disruptions, geopolitical issues, and market fluctuations. Sustainability practices are becoming increasingly important in both service and manufacturing supply chains, with a focus on environmental and social responsibility.

while there are unique dynamics in service and manufacturing supply chains, both share common elements such as the need for effective communication, technology integration, and a focus on sustainability and risk management. Understanding these dynamics is crucial for designing and managing efficient and responsive supply chain systems in either context.

Procurement Challenges:

Manufacturers must carefully manage relationships with suppliers to ensure a stable supply of raw materials. Issues such as supplier reliability, quality, and geopolitical factors can impact the supply chain.

Manufacturers need to balance efficiency with flexibility. The ability to quickly adapt production processes to changes in demand or unexpected events is crucial for competitiveness.

Global supply chains are common in manufacturing, leading to challenges related to transportation costs, lead times, and the coordination of activities across different regions.

Manufacturers face various risks, including natural disasters, geopolitical tensions, and economic fluctuations. Robust risk management strategies are essential to mitigate these uncertainties.

Manufacturing supply chains are subject to numerous regulations, from environmental standards to safety requirements. Compliance with these regulations adds complexity and cost to the supply chain.

The quality of service is often directly linked to the skills and performance of service personnel. Effective human resource management is crucial to ensure the right people with the right skills are available.

Information Management:Information flow is paramount in service supply chains. Real-time data on customer preferences, feedback, and market trends are essential for making quick and informed decisions.

Capacity Planning Challenges:

Unlike manufacturing, services are often constrained by the availability of skilled personnel. Managing capacity and ensuring that services are available when and where they are needed is a constant challenge.

Customer Relationship Management (CRM):

Building and maintaining strong relationships with customers is a key focus in service supply chains. CRM systems are used to track and manage interactions, preferences, and feedback.Service providers often need to tailor their offerings to meet specific customer needs. This customization can impact supply chain processes, requiring agility and flexibility.Both service and manufacturing supply chains are increasingly leveraging technologies like IoT (Internet of Things), AI (Artificial Intelligence), and blockchain to enhance visibility, efficiency, and responsiveness.Sustainability is a growing concern in both supply chain types.

Manufacturers are focusing on eco-friendly production processes, while service providers are adopting green practices in their operations.The rise of e-commerce has transformed supply chain dynamics for both services and manufacturing. The demand for faster deliveries, order customization, and seamless customer experiences has become paramount.Recent global events, such as the COVID-19 pandemic, have highlighted the importance of building resilient and flexible supply chains in both sectors to adapt to disruptions. Understanding these nuanced aspects is vital for professionals involved in supply chain management in either the manufacturing or service industry. It enables them to develop strategies that align with the unique characteristics and challenges of their specific supply chain context.