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Supply Chain Analytics: Design Thinking Approach

In today's dynamic global marketplace, efficient supply chains are crucial. This course explores the critical issues impacting supply chain analytics in India, utilizing a Design Thinking framework to foster innovative solutions.

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Recap: Supply Chain Optimization

1 Supply Chain Optimization

We discussed the importance of optimizing supply chain processes to achieve efficiency, cost reduction, and improved customer service.

3 Real-World Examples

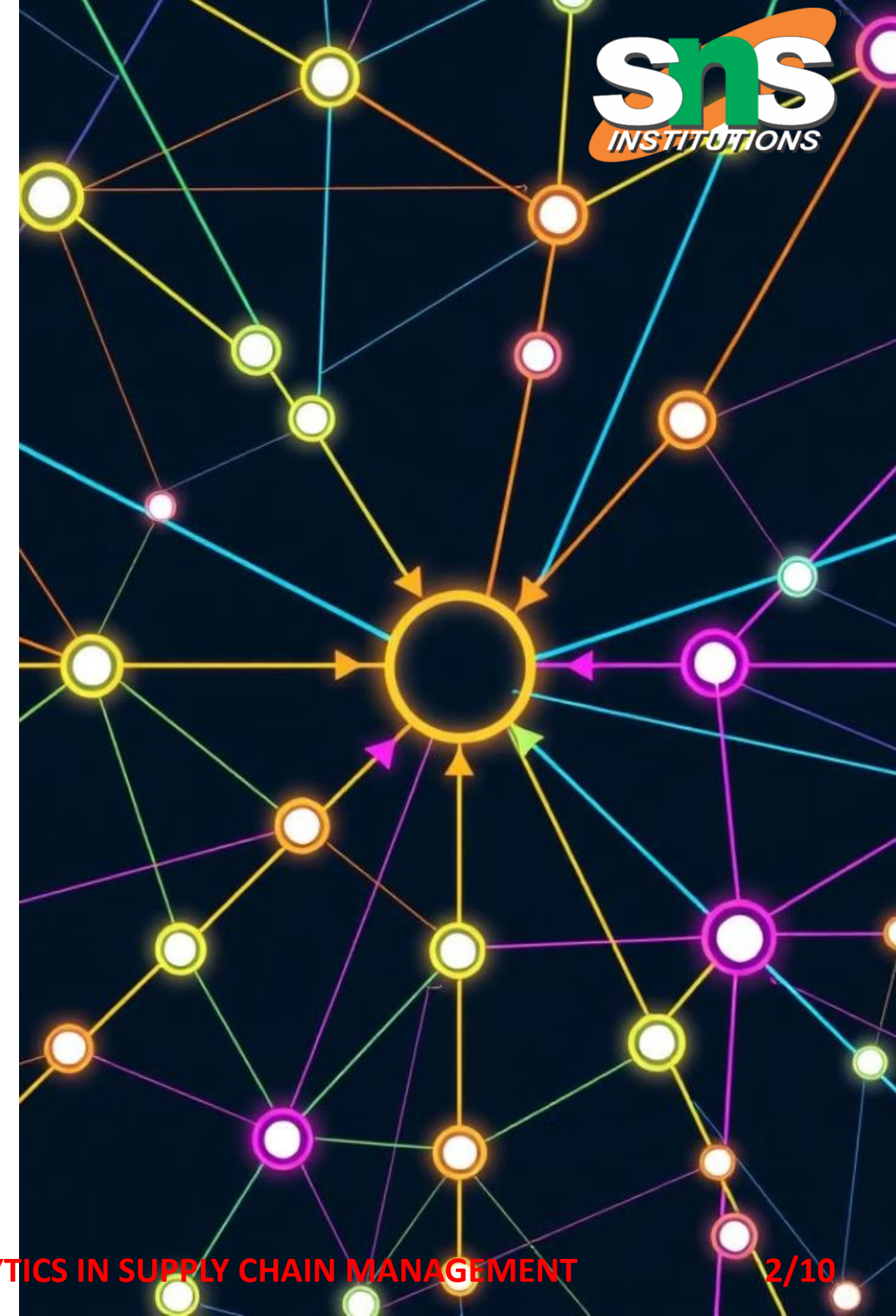
We analyzed case studies demonstrating the successful implementation of supply chain optimization strategies.

2 Key Techniques

We explored techniques like inventory management, demand forecasting, and transportation optimization.

4 Future Directions

We identified emerging trends and technological advancements in supply chain optimization.





Guess the Topic



Delays and Disruptions

Delays in transportation, manufacturing, or distribution can significantly impact supply chain efficiency.



Bottlenecks and Congestion

Traffic jams at ports, border crossings, or distribution centers can lead to delays and increased costs.



Inventory Imbalances

Excess inventory can lead to storage costs and obsolescence, while insufficient inventory can result in lost sales.



Introduction: Growing Importance of Supply Chain Analytics in India



1

Rising Consumption

India's rapidly growing economy and increasing middle class have fueled a surge in demand for goods and services.

2

Globalization

Indian companies are increasingly involved in global supply chains, requiring sophisticated logistics and analytics capabilities.

3

Technological Advancements

The adoption of big data, artificial intelligence, and cloud computing is transforming the way supply chains operate.

4

Competitive Advantage

Companies that leverage data-driven insights to optimize their supply chains gain a competitive edge.



Key Issue 1: Data Integration and Quality Challenges in Indian Supply Chains

Data Silos

Different departments and organizations within a supply chain often operate in silos, leading to data fragmentation.

1. Lack of standardization
2. Data quality issues
3. Inconsistent data formats

Data Quality Issues

Data inaccuracies, missing data, and inconsistencies can hinder the effectiveness of analytics.

1. Outdated information
2. Human error
3. Lack of data validation processes

Data Integration Challenges

Integrating data from multiple sources presents significant technical and logistical challenges.

1. Different data formats and structures
2. Security and privacy concerns
3. Limited IT infrastructure



Key Issue 2: Lack of Skilled Professionals in Supply Chain Analytics



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1

Demand Outpacing Supply

There is a growing demand for skilled professionals in supply chain analytics, but the supply is lagging behind.

2

Skills Gap

Many professionals lack the necessary technical skills, including data analysis, programming, and modeling.

3

Education and Training

Investing in education and training programs is crucial to bridge the skills gap and develop a competent workforce.

4

Industry Collaboration

Collaboration between academia and industry is essential to ensure that education programs meet the needs of employers.



Real-Life Case Study: A recent supply chain crisis in India

Case Study	2020 COVID-19 Pandemic
Impact	Disruptions in global supply chains, leading to shortages of essential goods and raw materials in India.
Challenges	Production stoppages, transportation delays, and border closures.
Solutions	Increased reliance on domestic suppliers, adoption of digital technologies to enhance supply chain visibility, and improved inventory management.





Test Your Knowledge: Quiz on Data Integration and Skill Gaps



Question 1

What are the key challenges in data integration within Indian supply chains?



Question 2

How can the skills gap in supply chain analytics be addressed?



Question 3

What are the benefits of utilizing data-driven insights in supply chain management?



Question 4

How can technology be leveraged to improve supply chain resilience?



Summary: Addressing Key Challenges for Improved Supply Chain Performance

Data Integration

Establish a robust data integration strategy to consolidate fragmented data sources.

Data Quality

Implement data quality measures to ensure accuracy, completeness, and consistency.

Skill Development

Invest in training and education programs to bridge the skills gap in supply chain analytics.

Technology Adoption

Embrace advanced technologies to enhance supply chain visibility, optimize processes, and improve decision-making.



References: Books and online resources on supply chain analytics

- Supply Chain Analytics by David Simchi-Levi, Philip Kaminsky, and Edith Simchi-Levi
- Supply Chain Management: A Global Perspective by Michael Handfield and Ernest Nichols
- The Lean Startup by Eric Ries
- Harvard Business Review - Supply Chain Management articles
- MIT Sloan Management Review - Supply Chain Management articles