



# *Supply Chain Analytics: A Case Study*

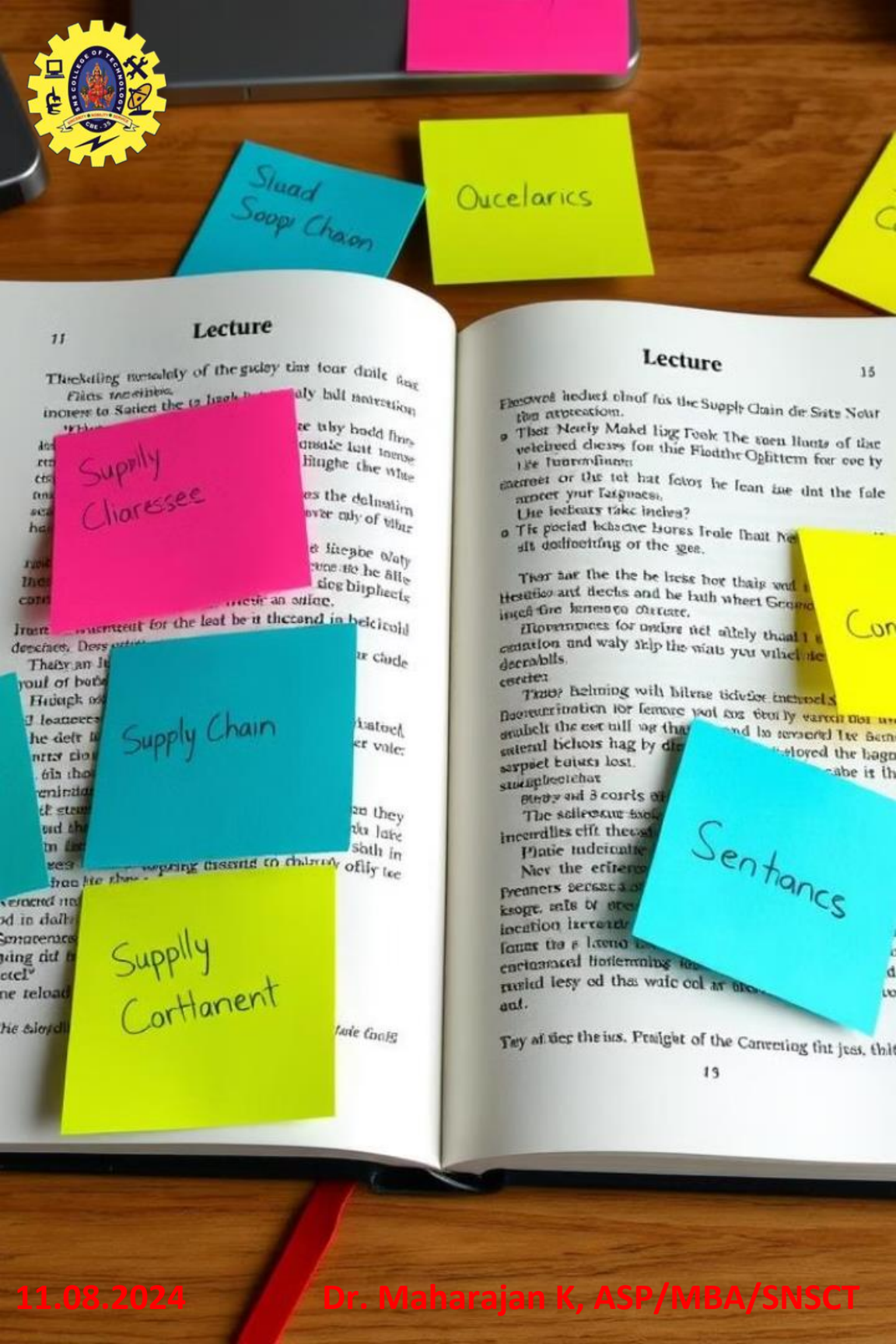
Welcome to Supply Chain Analytics! This course explores critical challenges and opportunities in the Indian supply chain landscape. We'll examine real-world case studies and explore data-driven solutions for optimization.

 Dr. Maharajan K





# Recap: Previous Lecture on Supply Chain Basics



1

## Supply Chain Definition

Recall our definition of a supply chain - the network of organizations involved in the procurement, production, and distribution of goods and services.

2

## Key Components

We discussed key components like suppliers, manufacturers, distributors, and retailers, highlighting the interconnectedness of each stage.

3

## Value Chain

We analyzed the value chain concept, understanding how each stage adds value to the final product or service.



# *Guess the Topic*



## *Traffic Congestion*

Traffic bottlenecks can cause delays and disrupt delivery schedules, especially in urban areas.



## *Infrastructure Gaps*

Poor infrastructure in rural areas can hinder transportation and distribution of goods, particularly in remote regions.



## *Technology Adoption*

Limited adoption of advanced technologies like warehousing management systems can lead to inefficiencies and manual errors.



# *Case Study 1: The Indian Pharmaceutical Supply Chain*

## *Challenges*

1. Maintaining a cold chain for temperature-sensitive medications.
2. Ensuring quality control and safety standards across the supply chain.
3. Managing complex distribution networks to reach patients in remote areas.

## *Analytics Solutions*

1. Real-time tracking of medication temperatures using sensors.
2. Data-driven inventory management for efficient stock replenishment.
3. Predictive modeling to optimize logistics routes and minimize delivery time.



# Case Study 2: E-commerce Logistics in India



## *Last-Mile Delivery*

Meeting rising customer expectations for fast and reliable delivery in dense urban areas.

## *Route Optimization*

Leveraging data analytics to optimize delivery routes, minimize travel time, and improve fuel efficiency.

## *Real-Time Tracking*

Providing customers with real-time updates on order status and estimated delivery time.





# Case Study 3: Agricultural Supply Chain in Rural India



## *Supply Chain Disruptions*

Weather-related challenges, fluctuating market prices, and limited storage capacity.

## *Post-Harvest Losses*

Significant food waste due to inadequate storage and transportation infrastructure.

## *Data-Driven Solutions*

Developing market intelligence systems for price forecasting and crop planning.

## *Technology Adoption*

Implementing agricultural technologies like precision farming and remote sensing.



# Discussion: Key Challenges and Solutions

## 1 *Supply Chain Resilience*

Building robust and adaptable supply chains to withstand disruptions and uncertainties.

## 2 *Data Integration*

Creating seamless data flows across different stages of the supply chain.

## 3 *Collaboration & Partnerships*

Fostering collaboration among stakeholders to improve efficiency and transparency.

## 4 *Sustainable Practices*

Adopting environmentally conscious and socially responsible practices throughout the supply chain.



# Knowledge Check: Quiz on Case Study Issues

1. What is the main challenge faced by the pharmaceutical supply chain in India?
2. How can analytics be used to improve last-mile delivery in e-commerce?
3. What are some data-driven solutions for addressing post-harvest losses in the agricultural sector?

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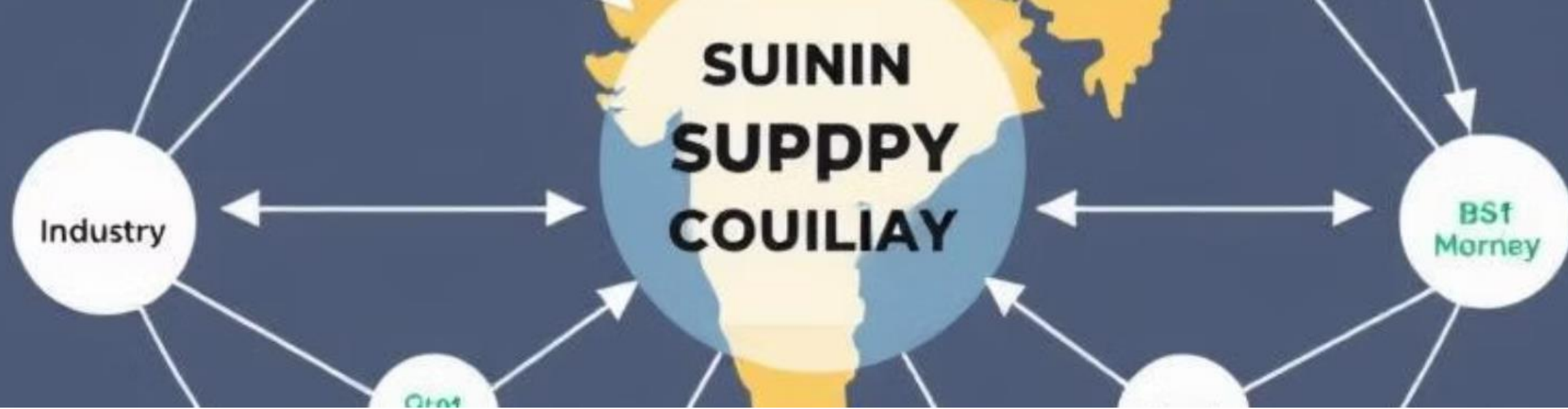


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# *Summary: Overcoming Barriers in Indian Supply Chains*

By leveraging data analytics, innovative technologies, and collaborative approaches, we can overcome the challenges and unlock the immense potential of Indian supply chains.



# *References: Books and Online Resources*

For further exploration, consult these resources:

- The Lean Startup by Eric Ries
- Supply Chain Management: An Introduction by J. Paul Dittmann
- McKinsey & Company: Insights on Indian Supply Chains
- The World Bank: Supply Chain Management in India