



Supply Chain Analytics

Welcome to the captivating world of supply chain analytics. In this presentation, we delve into the critical challenges that impact the efficiency and resilience of global supply chains. Buckle up for an exploration of key issues that will equip you with the knowledge to navigate today's dynamic business landscape.

● Dr. Maharajan K





Recap: Discussion on Supply Chain Optimization

1

Efficiency

Streamlining processes and reducing costs to improve profitability.

2

Agility

Quickly adapting to changes in demand and supply to stay competitive.

3

Resilience

Maintaining operational stability in the face of disruptions and uncertainty.

4

Sustainability

Minimizing environmental impact and promoting ethical practices.



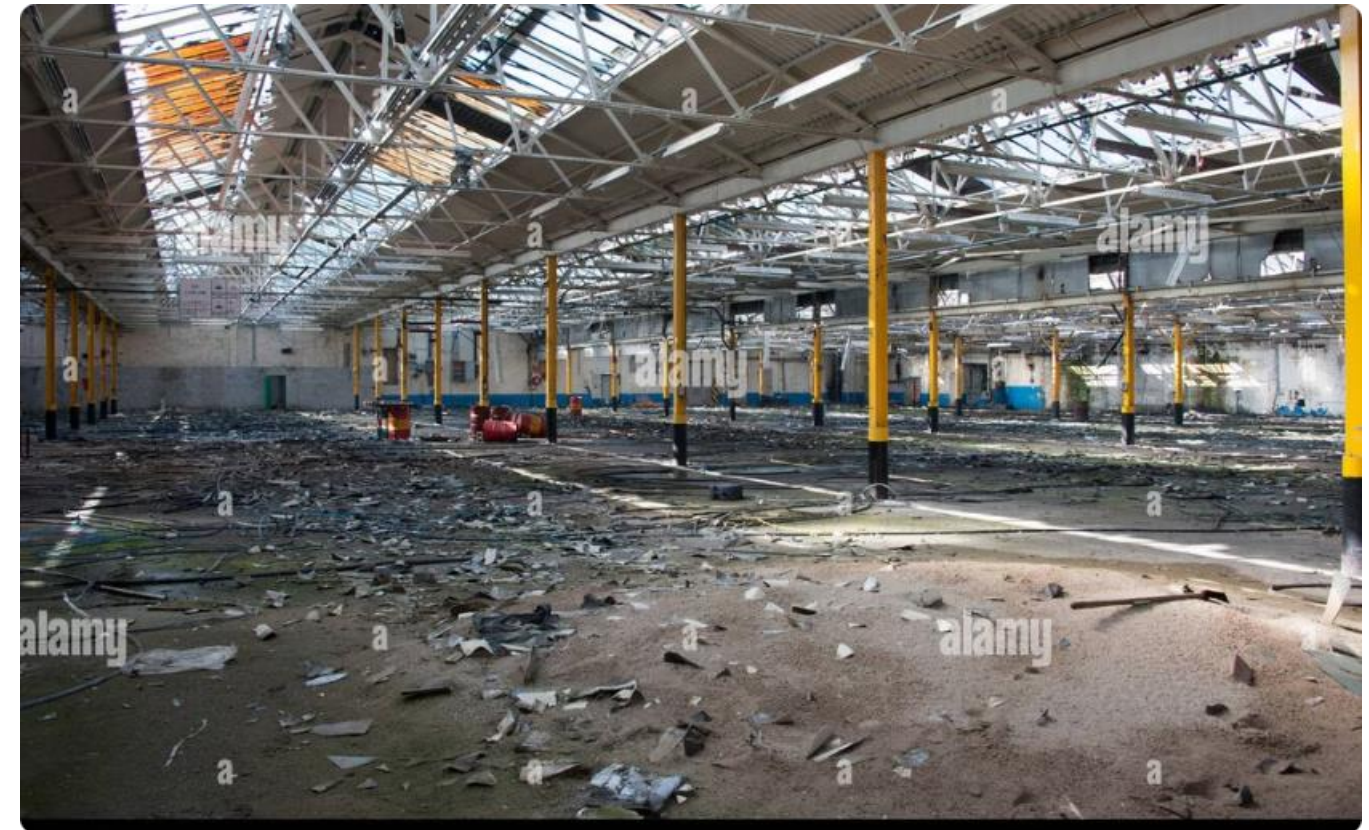


Guess the Topic: Images of disrupted ...



Port Congestion

Ships waiting for berths, delays in unloading, and a ripple effect on global trade.



Manufacturing Disruptions

Supply chain disruptions can impact factory operations, leading to production halts and supply shortages.



Real-Life Case Study 1: Impact of the Suez Canal blockage

1

March 2021

The Ever Given container ship runs aground in the Suez Canal, blocking a major trade route for six days.

2

Global Supply Chain Disruptions

Significant delays in shipments, disruptions to global trade, and a surge in transportation costs.

3

Lessons Learned

Highlighting the vulnerability of global supply chains to unforeseen events and the importance of contingency planning.





Real-Life Case Study 2: The Semiconductor Shortage Crisis

Causes

- Increased demand for electronics
- Production constraints due to COVID-19 disruptions
- Geopolitical tensions and trade wars

Impacts

- Delayed production of automobiles, smartphones, and other electronic devices
- Higher prices for electronic goods
- Supply chain disruptions across industries.



Key Issue 1: Data Visibility and Integration Challenges

1

Siloed Data

Data is often fragmented across different departments and systems, limiting visibility and insights.

2

Lack of Real-Time Data

Traditional data collection methods are often slow and outdated, hindering timely decision-making.

3

Data Integration Challenges

Integrating data from multiple sources can be complex and time-consuming, requiring standardized formats and data quality management.





Key Issue 2: Demand Forecasting Inaccuracies

| Issue | Impact |
|------------------------------|--|
| Inaccurate demand forecasts | Excess inventory, stockouts, and lost sales opportunities. |
| Lack of historical data | Difficulty in establishing accurate baseline demand patterns. |
| Unpredictable market factors | Sudden changes in consumer behavior and external events can significantly impact demand. |





Test Your Knowledge: Quiz on discussed issues



What are the major challenges in achieving data visibility and integration in supply chains?

Think about siloed data, real-time data access, and data integration complexities.



Explain the impact of inaccurate demand forecasting on a supply chain?

Consider the implications for inventory management, production planning, and customer satisfaction.



Discuss the lessons learned from the Suez Canal blockage in terms of supply chain resilience.

Reflect on the importance of contingency planning and the vulnerability of global supply chains.





Summary: Overcoming Supply Chain Analytics Challenges

Improve Data Visibility

Implement data integration strategies, embrace real-time data analytics, and create a centralized data repository.

Enhance Demand Forecasting

Utilize advanced forecasting techniques, leverage historical data, and incorporate external factors into demand models.

Foster Collaboration

Promote cross-functional communication and data sharing among departments to improve coordination and decision-making.



References: Books and Online Resources

- Supply Chain Management: A Global Perspective by Sunil Chopra and Peter Meindl
- Supply Chain Analytics by Sunil Chopra and Moin A. K Hanif
- The Lean Startup by Eric Ries
- Harvard Business Review - <https://hbr.org/>
- McKinsey & Company - <https://www.mckinsey.com/>