

Enhancing hospital resilience : A study on supply chain risk management (non- medical) and inventory optimization through ABC analysis

Organization : Apollo hospitals ,Seshadri Puram, Bangalore
Faculty mentor: Dr. Vidya Bhushan Tripathi
Organization mentor: Mr. Kiran

BRIEF HISTORY AND DESCRIPTION

Apollo Hospitals is a pioneering healthcare institution in India, founded in 1983 by Dr. Prathap C. Reddy in Chennai. It was the nation's first corporate hospital, marking a significant shift in the Indian healthcare landscape by introducing private sector participation in providing world-class medical services. Dr. Reddy, motivated by personal experiences and the lack of advanced medical facilities in India, envisioned a system where high-quality healthcare would be accessible and affordable to all Indians.

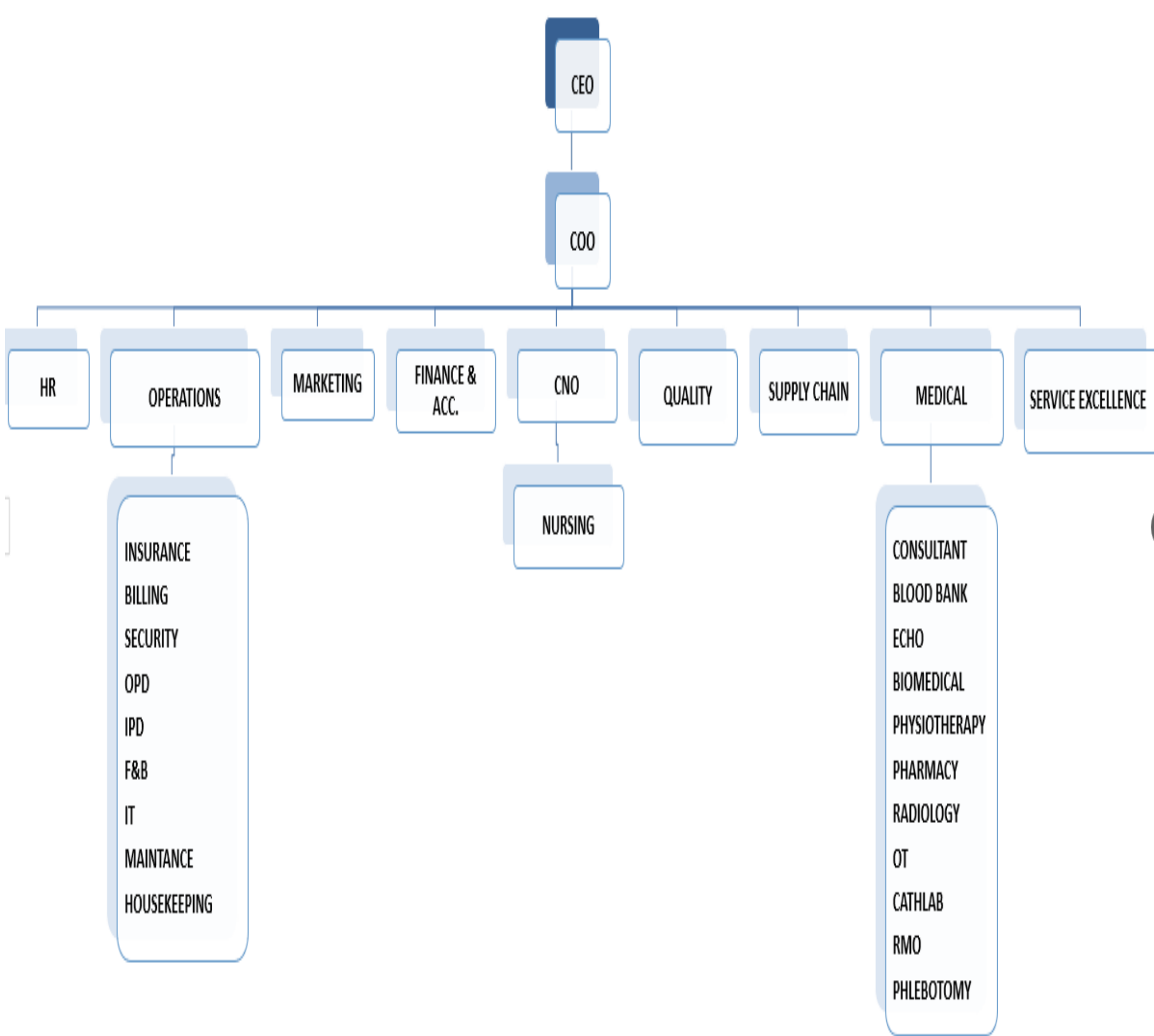
VISION

Apollo Hospitals envisions its next phase of development as an endeavor to “Touch a Billion Lives”, aiming to extend its healthcare services to a vast population.

MISSION

The mission of Apollo Hospitals is to “bring healthcare of international standards within the reach of every individual.”

ORGANISATION STRUCTURE



- Well-defined SOP, Audit & Feedback systems
- Digitized Systems
- Training gaps
- Improper storage



ABOUT THE PROJECT

ABC analysis and supply chain risk management techniques to enhance inventory control and operational efficiency. By classifying items based on consumption value through ABC analysis, and identifying potential disruptions using risk management strategies, the project aims to prioritize critical supplies, optimize resource allocation, reduce carrying costs, and ensure a resilient and uninterrupted supply chain.

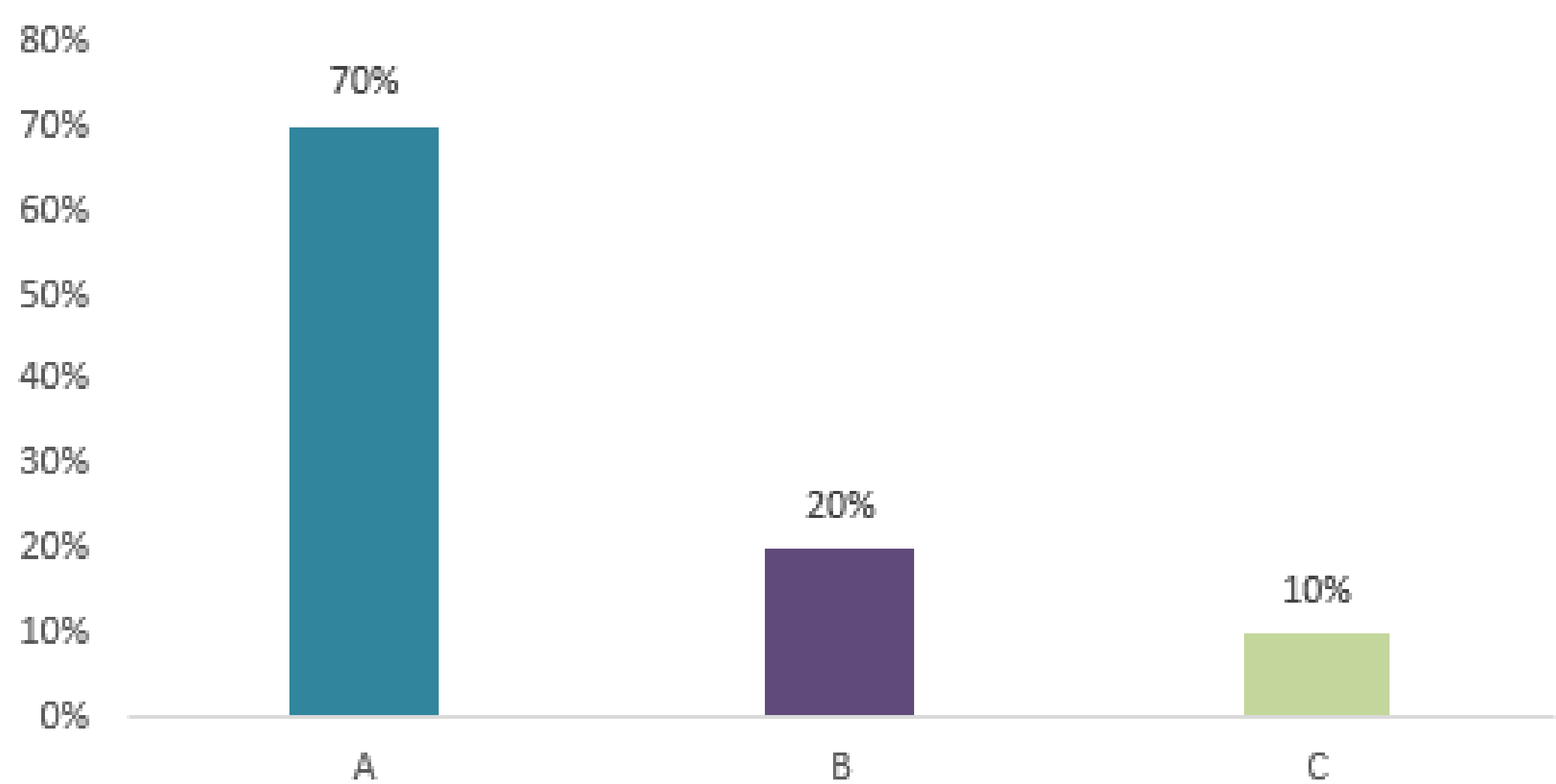
OBJECTIVE OF STUDY

- To identify and Mitigate Non-Medical Supply Chain Risks in Hospitals
- To optimize Non-Medical Inventory Management Using ABC Analysis

METHODOLGY

A retrospective observational study was conducted in the supply chain department of a tertiary care hospital. Six months of inventory data of non-medicine items were collected. MS-Excel was used as an analytical tool.

ABC Analysis

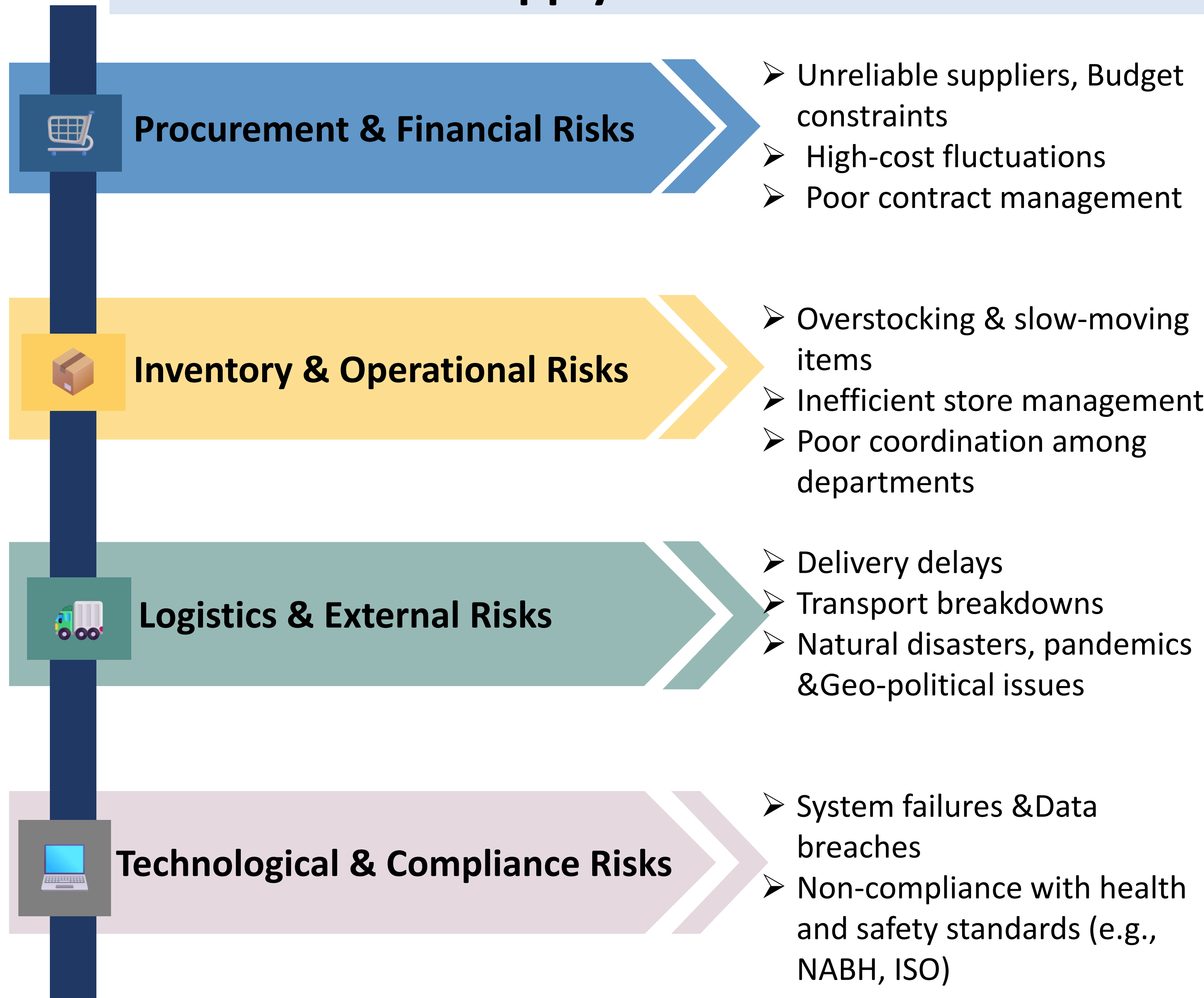


Results

- A (70%): High-cost items (76), low in no. but require strict monitoring and approval.
- B (20%): Moderately priced items (102) with balanced usage, needing regular review.
- C (10%): Low-cost, high-use items (771) , ideal for bulk purchase and efficient storage

- Simulation-Based Training
- Improved forecast accuracy.
- Tech Failures or Cybersecurity Risks
- High Competition

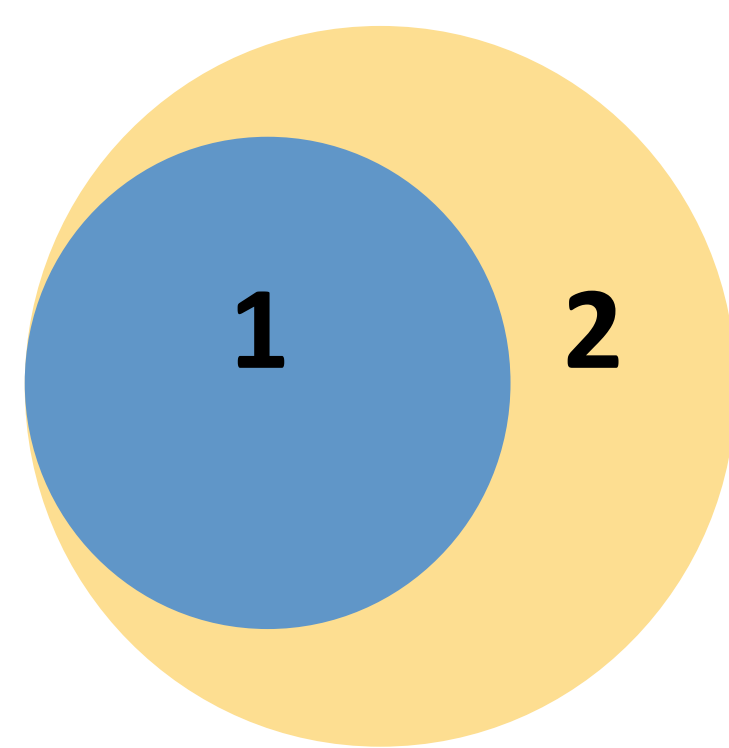
Supply Chain Risk



Mitigating Strategies

- Develop multi-vendor partnerships
- Negotiate long-term contracts
- Conduct cost-benefit analysis before procurement
- Implement ABC, FSN-XYZ analysis
- Conduct periodic audits and cycle counts
- Set min. & max. stock levels
- Establish local vendor backups use GPS- & conduct audits
- Maintain buffer stock for critical items
- Train staff on digital tools and cybersecurity & conduct audits
- Schedule routine system updates and backups

Suggestions



- Implement demand forecasting tools
- Use historical trends, departmental needs and seasonal pattern
- Staff sensitization by encouraging better indent planning better communication b/w dept. and stores

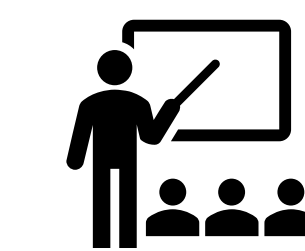


PRACTICAL

- Conduct ABC analysis using 6 months inventory data
- Observed SOPs during store visits and audits
- Participated in internal audits and tracked NPS/feedback

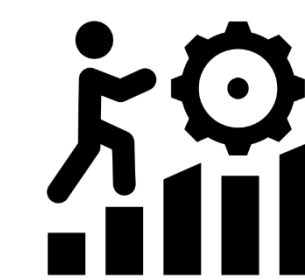
THEORETICAL

- Inventory management using ABC analysis
- SOPs and Quality Standards of hospital
- Total Quality Management and Continuous Improvement



Learnings

- Hands-on use of ABC analysis and Med Mantra software for inventory optimization.
- Practical exposure to internal audits, mystery audits, and departmental trackers.
- Application of TQM, patient feedback mechanisms, and service excellence frameworks.



Challenges

- Need for better integration between software systems and real-time tracking
- Adapting to new work environment & culture
- Data collection was difficult due to busy schedule of supply chain staff.