**Problem Definition & Approach**

**COMPANY OVERVIEW**
- Schlumberger: World's leading company in Oil & Gas industry
- Provides widest range of products & services, 95% of oil & gas operations rely on Artificial Lift
- Full control of its supply chain
- Global presence in 80 regions in the world
- Provides 70,000 products across 1,000 different levels

**PROBLEM STATEMENT**
- High Inventory Level
- High Inventory Cost
- Poor inventory management:
  - No standardized methodology
  - Misunderstanding of inventory concepts
  - Sub-optimized inventory policies
  - Manual process: inefficient and incur human error

**PROJECT OBJECTIVE**
- Reduce Inventory Level
- Reduce Inventory Cost
- Holistic inventory management:
  - Development of standardized methodology
  - Revise inventory concepts
  - Re-design inventory policies
- Process automation: improve efficiency and reduce error

**Implementation Detail & Result Analysis**

**DATA PROCESSING**
- We aim to analyze the raw data to ensure the data can be properly used for further methodology development and policy design.
- We focus on dealing with Bullwhip Effect and Data aggregation.

**DEMAND FORECASTING**
- We aim to find out the most suitable forecasting method. Forecasting is a very important step as its result is crucial for production planning, inventory management, and affects the overall supply chain performance.
- We will filter out the unpredictable random component and focus on estimating the systematic component which includes level, trend, and seasonality.

**PRODUCT CATEGORIZATION**
- We aim to adapt & improve on Schlumberger's current practice and categorize products into different classes according to demand type and its monetary value to simplify the management process.

**INVENTORY REPLENISHMENT**
- We will revise the inventory replenishment policies based on product category, using the improved forecasts as input. We aim to achieve the same service level but reduce the total inventory cost which includes ordering cost, holding cost, and shortage cost.
- We will demonstrate the saving in total cost and the inventory profile of the product.

**Conclusion & Future Development**

**Conclusion**
- Developed 4 Steps methodology & Revised various inventory practices
- Automated data processing, forecasting & categorization processes
- Significant reduction in inventory position and inventory cost

**Future Development**
- Adopt RFID technology & Implement Continuous Review inventory policy
- Further reduce company’s inventory level and inventory cost
- Increase product visibility, reduce errors and enable better management
- Benefit the supply chain strategy and long-run competitiveness of company

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