

ATLIQ MART SUPPLY CHAIN ANALYSIS

1. INTRODUCTION:

AtliQ Mart, a growing FMCG manufacturer headquartered in Gujarat, India, is committed to bolstering customer satisfaction by effectively addressing service concerns that impact vital customer contracts. AtliQ Mart's expansion plans are accompanied by the challenge of declining customer satisfaction due to service issues. To address this critical concern, the company embarked on a project to harness data analytics, utilizing Power BI, to monitor and enhance supply chain performance. The goal was to create a holistic dashboard that tracked 'On-time' and 'In Full' delivery service levels, enabling rapid responses to service issues.

2. METHODOLOGY:

The project followed a structured methodology encompassing several stages:

- **Data Collection:** Utilized provided CSV files, including dim_customers, dim_products, dim_date, dim_targets_orders, fact_order_lines, and fact_orders_aggregate.
- **Data Preprocessing:** Ensured data accuracy and integrity through cleaning, transformation, and consolidation.
- **Metrics and Dashboard Creation:** Developed key metrics such as Line Fill Rate (LFR), Volume Fill Rate (VFR), On Time Delivery % (OT %), In Full Delivery % (IF %), and On Time In Full % (OTIF %). Designed an interactive dashboard using Power BI Desktop.
- **Insights Extraction:** Analysed performance over time, across different cities, and compared to predefined targets.
- **Recommendations Formulation:** Derived actionable recommendations based on insights gained.

3. KEY METRICS AND INSIGHTS:

- **Line Fill Rate (LFR) and Volume Fill Rate (VOFR):** These metrics gauge operational efficiency. The dashboard showcased consistent performance, with LFR averaging 65.96% and VFR averaging 103.53%.
- **On Time Delivery % (OT %):** The analysis indicated an average OT % of 66%, which is significantly below the target of 86%.
- **In Full Delivery % (IF %):** The IF % showed an average of 31%, deviating from the target of 77%.

- On Time In Full % (OTIF %): The average OTIF % stood at 55%, below the target of 66%.

4. PERFORMANCE OVER TIME:

- On Time Delivery Performance Over Time: The graphical representation showcased gradual decline over the months but indicated a consistent gap from the target.
- In Full Delivery Performance Over Time: Similar to On Time Delivery, In Full Delivery demonstrated fluctuations but remained close to the target.
- Line Fill Rate and Volume Fill Rate Over Time: Both metrics exhibited stable performance trends with minor variations.

5. PERFORMANCE BY CITY:

- Line Fill Rate and Volume Fill Rate by City: The insights revealed performance variations across cities. Surat led with the highest Line Fill Rate, while Vadodara excelled in Volume Fill Rate.

6. RECOMMENDATIONS:

Based on the insights, the following recommendations are proposed to enhance supply chain performance and customer satisfaction:

- Implement targeted strategies to improve On Time Delivery performance, reducing the gap from the target of 86%.
- Address factors leading to deviations from the In Full Delivery target of 77%, possibly related to supply planning and execution.
- Utilize insights from cities with high Line Fill Rate and Volume Fill Rate as best practices to improve performance in other cities.