



# Datapool Project – (Supply Chain Analysis and Presentation)

Supply chain analysis is a crucial process for businesses seeking to optimize their operations and ensure the efficient flow of goods and services.

*Created By:*

*Nirmala Raut Chhetri*

# Executive Summary

1. Problem Statement
2. Key Metrics and KPIs
3. Daily Metrics Calculation to identify patterns and trends
4. Visualization into the count of orders by different cities
5. Calculation of KPIs respective of their targets to make the expansion of the business in coming 2 years time period
6. Power BI Dashboard Representation
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# Problem Statement

AtliQ Mart is a growing FMCG manufacturer headquartered in Gujarat, India. It is currently operational in three cities Surat, Ahmedabad and Vadodara. They want to expand to other metros/Tier 1 cities in the next 2 years.

AtliQ Mart is currently facing a problem where a few key customers did not extend their annual contracts due to service issues. It is speculated that some of the essential products were either not delivered on time or not delivered in full over a continued period, which could have resulted in bad customer service. Management wants to fix this issue before expanding to other cities and requested their supply chain analytics team to track the 'On time' and 'In Full' delivery service level for all the customers daily basis so that they can respond swiftly to these issues.

The Supply Chain team decided to use a standard approach to measure the service level in which they will measure 'On-time delivery (OT) %', 'In-full delivery (IF) %', and OnTime in full (OTIF) %' of the customer orders daily basis against the target service level set for each customer.





# Key Metrics and KPIs

1

## On-Time Delivery

This metric measures the percentage of customer orders delivered by the agreed-upon delivery date. It reflects the reliability of the supply chain and is calculated as the number of orders delivered on time divided by the total number of orders, expressed as a percentage.

2

## In-Full Delivery

This metric measures the percentage of customer orders delivered with all requested items, indicating the effectiveness of order fulfillment. It is calculated as the number of orders delivered in full divided by the total number of orders, expressed as a percentage.

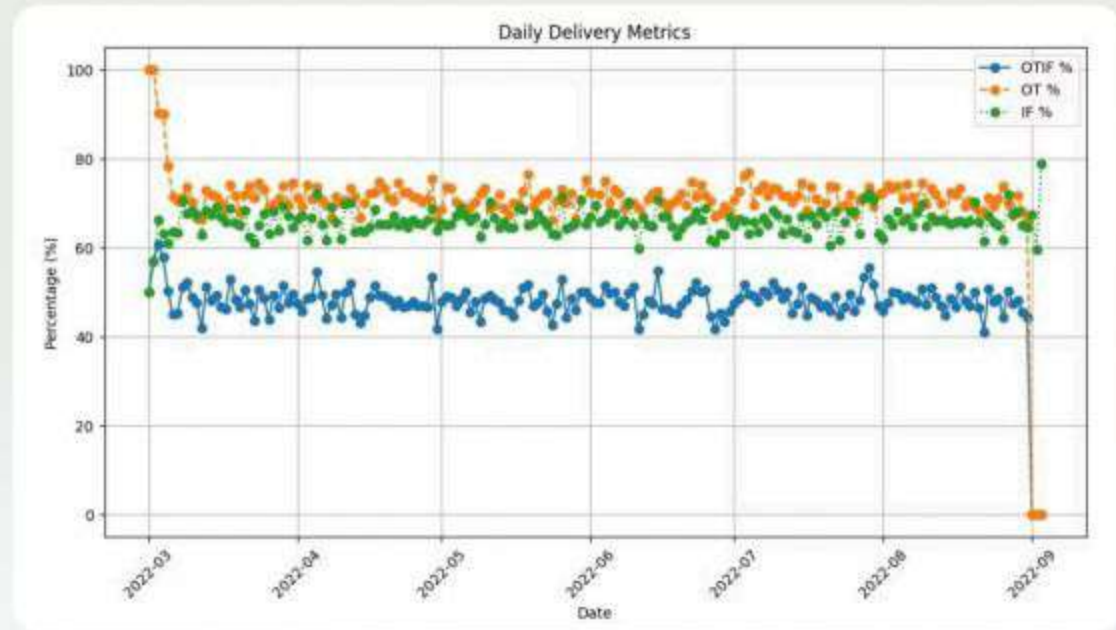
3

## On-time-In-Full Delivery

This metric measures the percentage of customer orders that are delivered both on time and in full. It indicates the efficiency and reliability of the order fulfillment process. OTIF is calculated as the number of orders delivered on time and in full divided by the total number of orders, expressed as a percentage.

# Daily Delivery Metrics

This shows the percentage of OTIF, OT and IF in the following year which is basically 29.02%, 57.78% and 59.03% respectively in average.

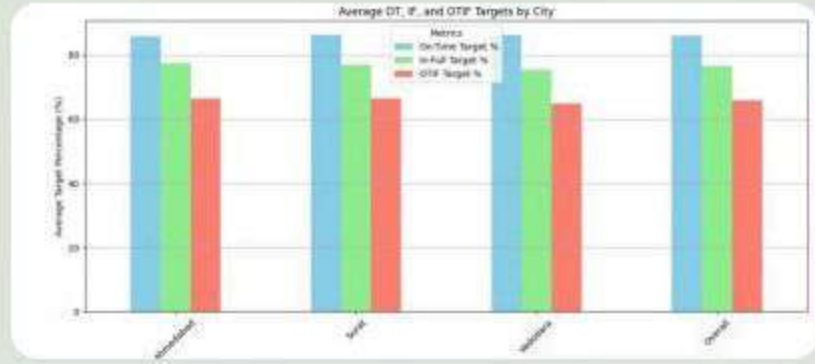


# Orders in Different Cities

This graph shows the number of Orders in different cities which helps in identifying the business to focus more on the city where more number of product is sold.

Here, it shows that in Ahmedabad and Vadodara, most number of products are sold.





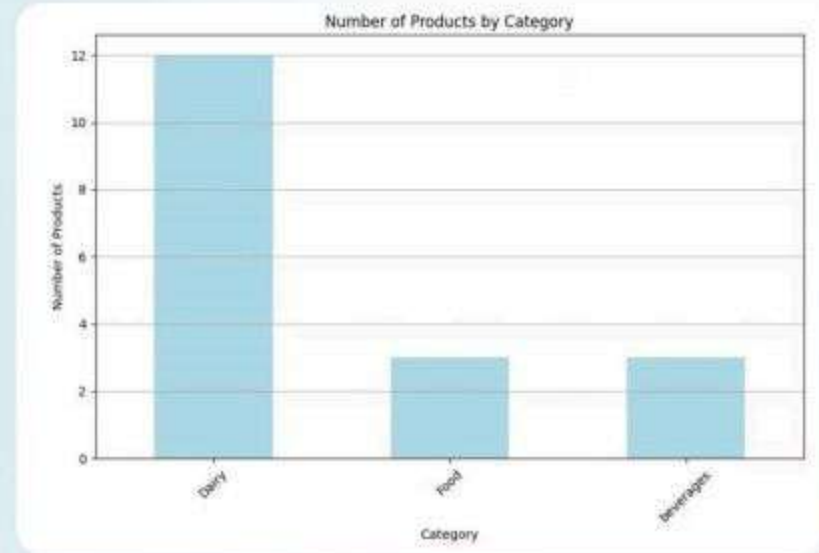
## KPIs mean vs their Targets

This demonstrates the calculation of average KPIs(ie. OT, IF and OTIF) and their targets to be achieved for the business to enhance in the next two years with respect to the cities.

# Number of Products by Category

It reveals the number of products in different category.

Also, Dairy being the category having most number of products that are being sold.





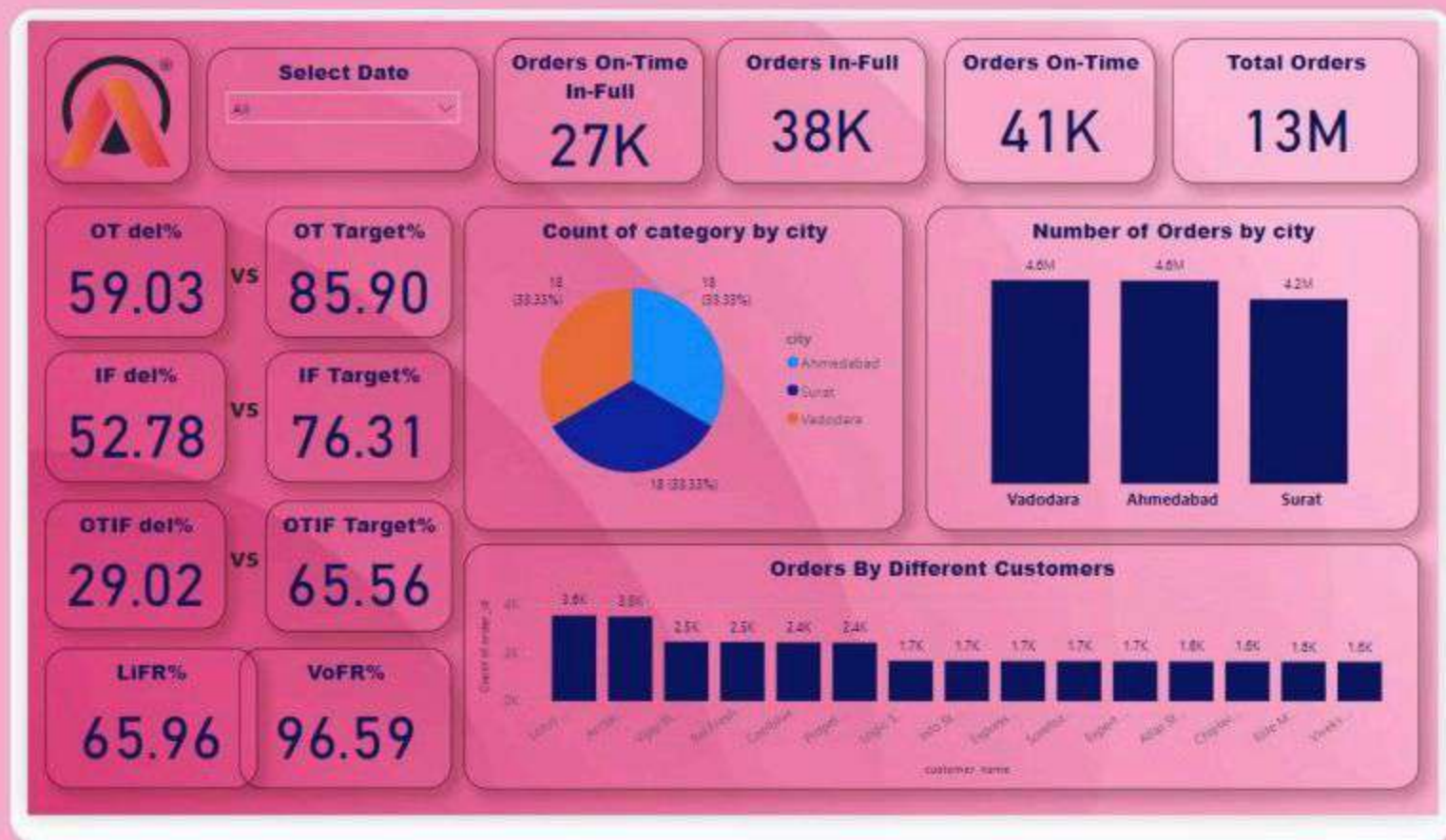
	customer_id	Line Fill Rate (LFR)	Volume Fill Rate (VFR)
0	789101	74.417178	97.335499
1	789102	73.696824	97.288940
2	789103	29.891957	93.052966
3	789121	74.022850	97.388833
4	789122	29.194030	92.828532
5	789201	74.736189	97.522693
6	789202	74.733096	97.373579
7	789203	74.143302	97.389252
8	789220	75.694016	97.611520
9	789221	75.261538	97.539757
10	789301	73.273810	97.383041
11	789303	77.359655	97.702090
12	789320	75.581395	97.556068
13	789321	75.643440	97.610435
14	789401	75.046555	97.645400
15	789402	75.799638	97.760342
16	789403	76.025237	97.709254
17	789420	74.834835	97.437541
18	789421	30.774032	93.219101
19	789422	74.048659	97.273103
20	789501	74.840764	97.504943
21	789503	75.272727	97.627003
22	789520	29.374202	92.767561
23	789521	73.011016	97.281678
24	789522	73.512837	97.371244
25	789601	30.061728	92.840591
26	789603	76.228998	97.592810
27	789621	75.517661	97.424791
28	789622	75.444840	97.449931
29	789702	30.872483	92.986393
30	789703	75.883069	97.693903
31	789720	74.112607	97.320289
32	789721	74.676525	97.580252
33	789902	75.715155	97.633090
34	789903	29.737965	92.916367

## Line Fill Rate(LiFR) and Volume Fill Rate(VoFR)

Line Fill Rate is an important metric for the supply planning team to understand how many lines they shipped out of the total lines ordered. This metric does not consider the delivery time of the order.

Volume fill rate or case fill rate is a similar metric useful for the supply planning team to understand the total quantity they are able to ship for a customer per order or for a given period of time.

Here, per customer ID, it is being calculated.



Power BI Dashboard Representation

# Key Findings

- 1.The Power BI dashboards demonstrates that the average OTIF% is significantly lower than the targeted OTIF% which shows the poor delivery capabilities.
- 2.Dairy Products are almost double the Food and Beverages Category.
- 3.First 6 customers; Lotus Mart, Acclaimed Stores, Vijay Stores, Rel Fresh, Cool Blue and Propel Mart is constituting 53% of total orders and seems to be key customers.
- 4.Cool Blue, Lotus Mart and Acclaimed Stores are those key customers who have the problem of late deliveries as they have significant difference in their KPI percentage with respect to their targets.



# Conclusion

Hence, we can draw the conclusion that AtliQ Mart's analysis reveals strong delivery metrics but highlights a critical need for improvement in On-Time and In-Full delivery rates; if not done then can cause significant decline in the customers as they aren't willing to renew their contract. Customer insights indicate purchasing trends across cities, allowing the company to tailor inventory management and marketing strategies to meet local demand effectively. By improving its delivery processes, setting up a strong system for customer feedback, and using data to understand performance better, AtliQ Mart can solve its current service problems. This will help the company grow successfully into new metro and Tier 1 cities and build lasting loyalty among its customers.