

# **Wireframe Document**

## **Supply Chain Segmentation Analysis**



**Revision Number - 1.2**

**Last Date of Revision - 15/05/2025**

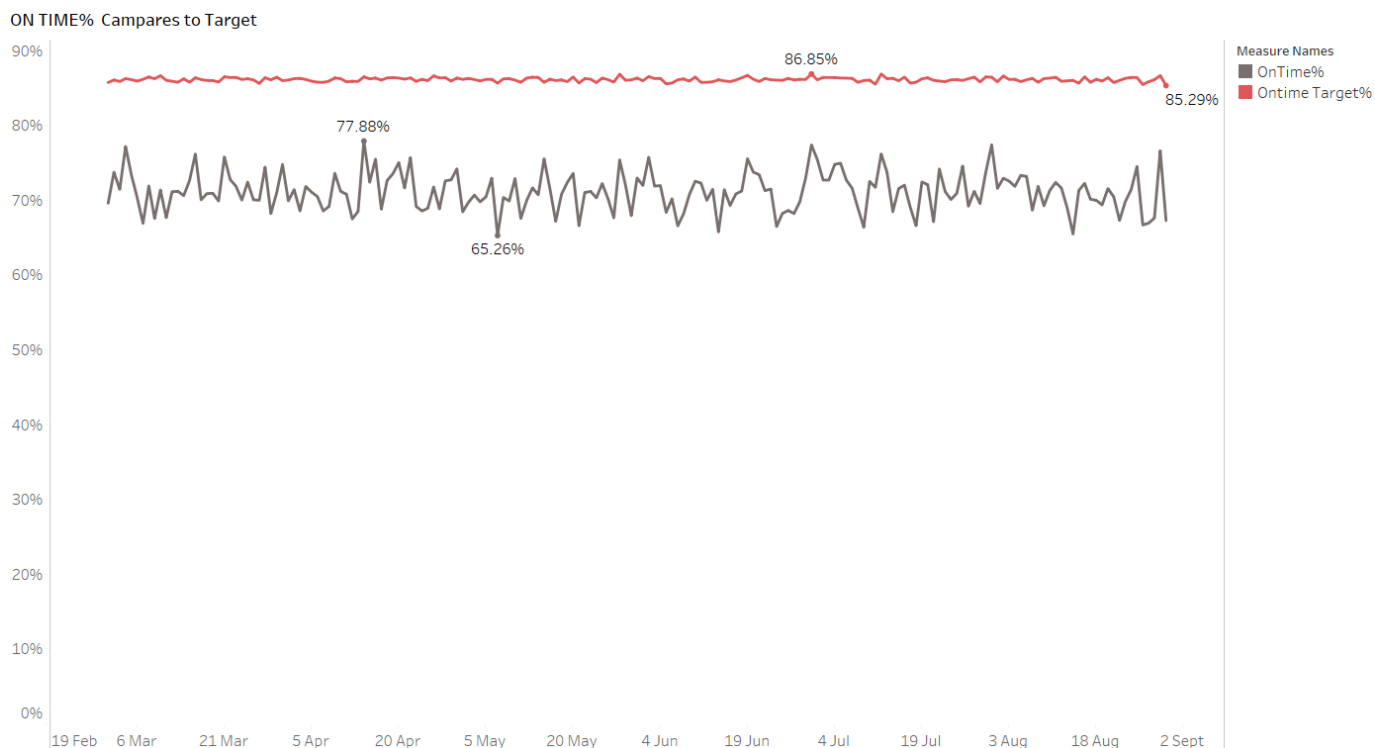
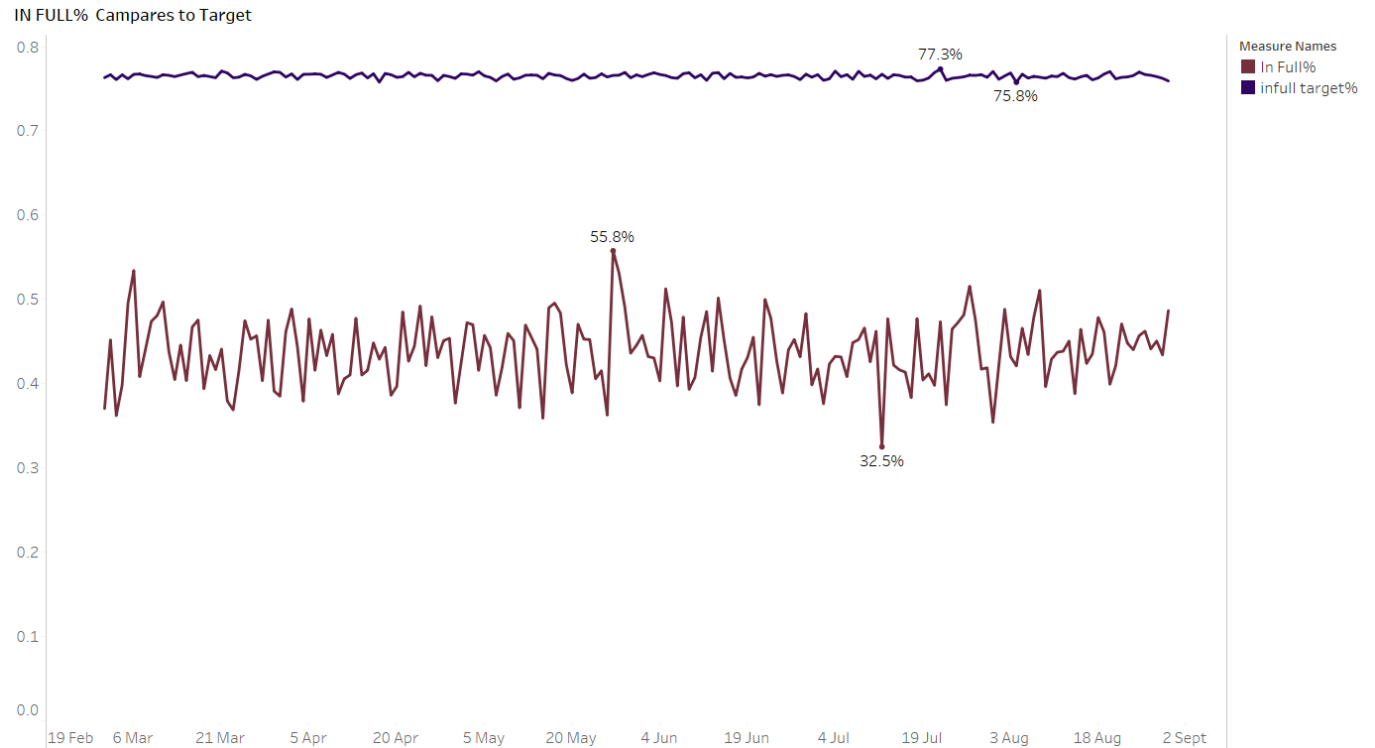
**Shubham tembhurne**

## Document Control

Date	Version	Description	Author
02/05/2025	1.0	Introduction, Problem Statement	Shubham tembhurne
02/05/2025	1.1	Dataset Information, Vi Architecture Description	Shubham tembhurne
02/05/2025	1.2	Final Revision	Shubham tembhurne

## We Performed Exploratory Data Analysis on Jupyter Notebook and then created a Tableau Desktop Dashboard.

### 1. What is the daily ON Time, IN FULL, Otif% on Targets?



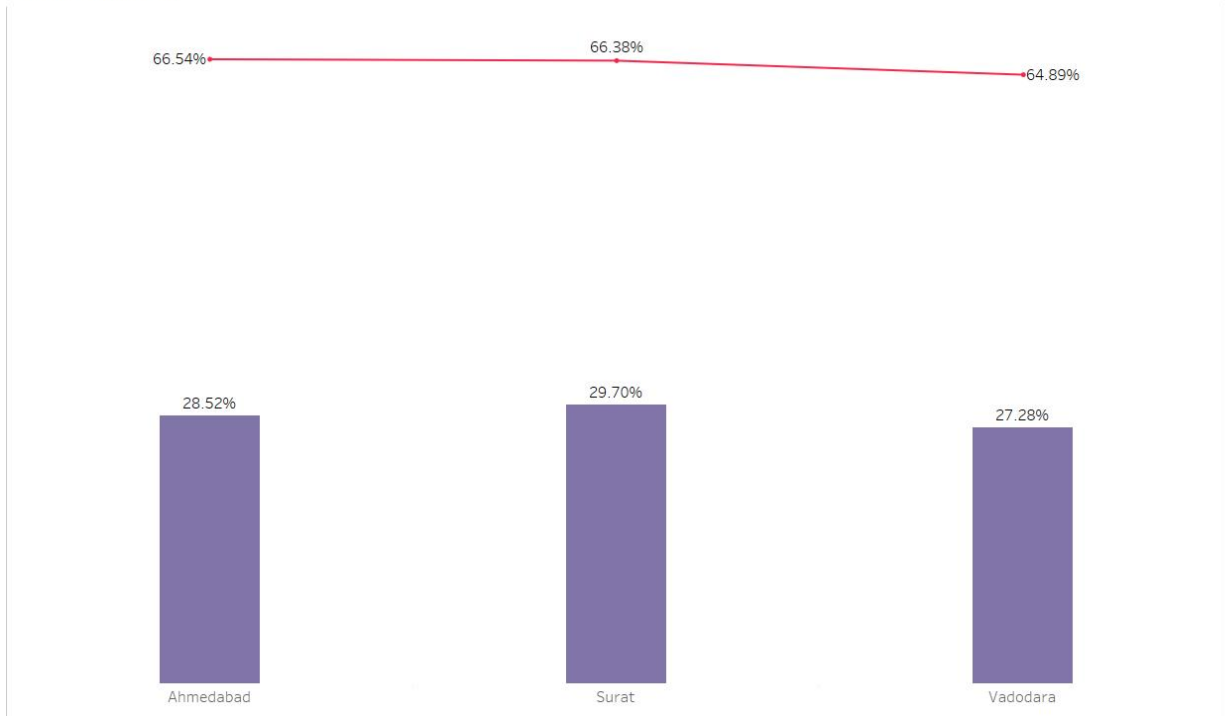


- The maximum number of In full Target% is 77.3% in the month of July and only 47.4% of target achieved and the rest is not fulfilled.
- The maximum number of In full % is 55.8% in the month of May and the rest 76.6% and they never reach the targets on time.
- The minimum number of In full Target% is 75.8% in the month of August Only 42.1% of target achieved and the rest is not fulfilled.
- The minimum number of In full % is 32.5% in the month of July and the 76.6% of target is not achieved.
- The maximum number of On Time Target% is 86.85% in the month of June only 77% of target achieved and the rest is not fulfilled.
- The maximum number of On Time % is 77.88% in the month of April and the rest 86.48% and they never reach the targets on time.
- The minimum number of On Time Target% is 62.26% in the month of may only 67% of target achieved and the rest is not fulfilled.
- The minimum number of On Time % is 85.29% in the month of August and the 85.61% of target is not achieved.
- The maximum number of Ofit Target% is 66.68% in the month of march and only 21% of target achieved and the rest is not fulfilled.
- The maximum number of Otif % is 38.38% in the month of May and achieved its target with 66.19% when all the targets are fulfilled.

- The minimum number of Otif Target% is 64.79% in the month of August only 27% of target achieved and the rest is not fulfilled.
- The minimum number of Otif % is 20.39% in the month of July and the 68.18% of target is not achieved.

## 2. What is the city level performance vs Targets?

Otif% by City Vs Target



- We can see that some cities are performing well to achieve their target as compare to other thus we have the area of improvement.
- Surat City is Doing well as compare to others with 73% of on time delivery, completing 76% on in full target.

### 3. What is the customer level Otif% vs target for the top 15 customers by order count?



- We can see that some customers are consistently below their OTIF targets, while others are much closer or even exceeding them.

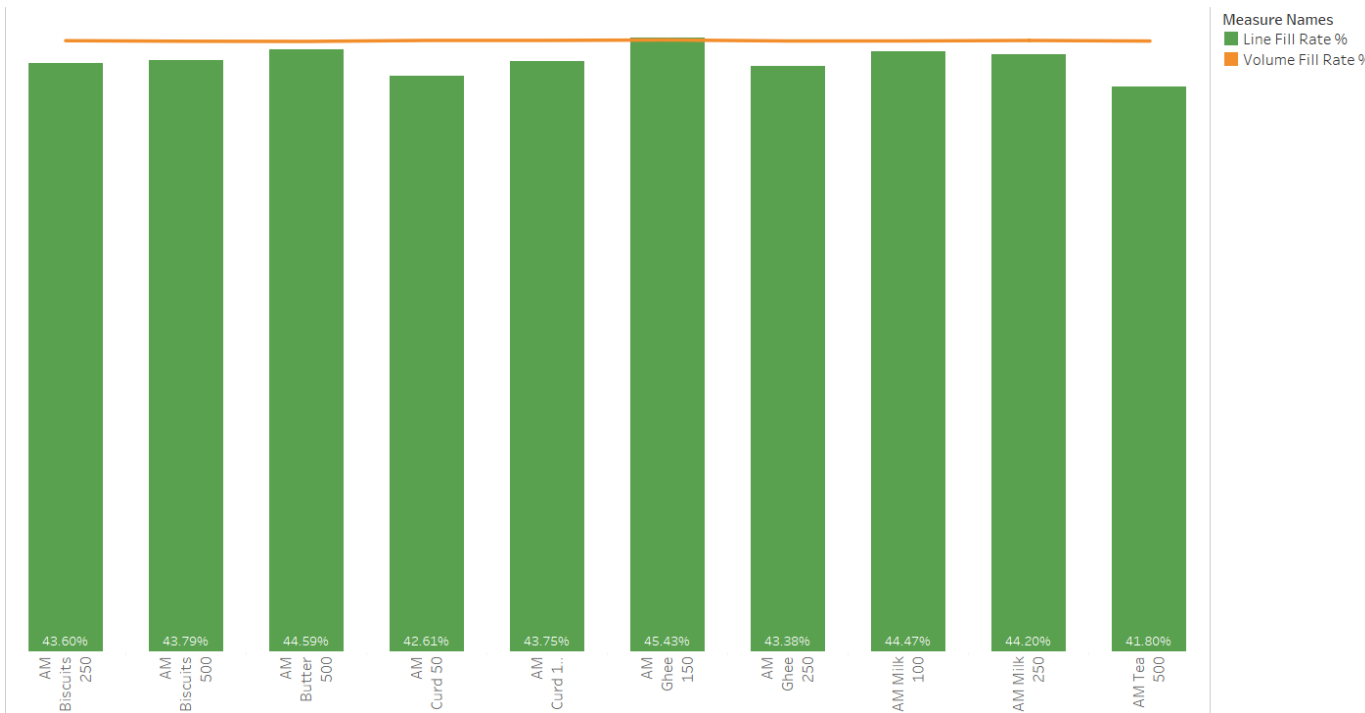
#### 4. What is the calculated LIFR (Line fill Rate) and VOFR (Volume Fill Rate)?

Metrics by Customer								AGG(In Full Change %)	
Customer Name	In Full %	In Full Target %	On Time %	On Time Target %	On Time In Full %	On Time In Full Target %	Line Fill Rate %	Volume Fill Rate %	-0.500 0.500
Acclaimed Stores	58.93%	75.41%	26.89%	76.35%	12.72%	57.74%	46.55%	95.85%	AGG(On Time in Full Ch... -0.500 0.500
Atlas Stores	75.48%	78.00%	84.20%	88.00%	37.52%	68.50%	48.68%	97.58%	
Chiptec Stores	75.61%	81.00%	83.76%	89.03%	37.68%	72.03%	49.64%	97.58%	AGG(On Time Change %) -50.00% 50.00%
Coolblue	51.53%	70.98%	26.81%	77.00%	11.77%	54.48%	39.84%	95.08%	
Elite Mart	52.74%	73.00%	84.74%	91.00%	21.65%	66.50%	28.90%	95.29%	
Expert Mart	75.48%	79.99%	84.62%	90.99%	36.60%	72.97%	47.93%	97.44%	
Expression Stores	75.28%	78.00%	83.13%	88.51%	37.32%	69.00%	49.59%	97.54%	
Info Stores	53.05%	70.98%	83.14%	92.00%	23.64%	65.49%	32.51%	95.24%	
Logic Stores	74.39%	76.00%	83.39%	87.49%	37.18%	66.50%	49.03%	97.45%	
Lotus Mart	60.08%	75.38%	25.73%	77.30%	13.78%	58.01%	48.15%	96.01%	
Propel Mart	75.62%	79.34%	85.62%	86.69%	39.07%	68.69%	49.14%	97.70%	
Rel Fresh	74.54%	79.36%	84.84%	87.95%	36.96%	69.66%	48.06%	97.43%	
Sorefoz Mart	53.40%	72.01%	84.79%	87.00%	23.22%	62.50%	30.51%	95.33%	
Vijay Stores	59.23%	75.97%	84.73%	89.36%	25.82%	68.00%	34.78%	95.87%	
Viveks Stores	75.06%	81.02%	83.42%	88.93%	38.98%	72.46%	50.22%	97.57%	

- The overall LIFR is about 66%, meaning about two-thirds of order lines are delivered in full.
- The overall VOFR is about 97%, indicating that nearly all ordered volume is being delivered, even if some lines are not completely filled.
- This table shows that most products have a LIFR in the mid-60% range, but their VOFR is much higher, close to 97%.
- This suggests that while some lines are not fully delivered, the shortfall per line is relatively small.

## 5. What is the LIFR and VOFR for top 10 product by order volume?

LIFR and VOFR for Top 10 Product by Order Volume

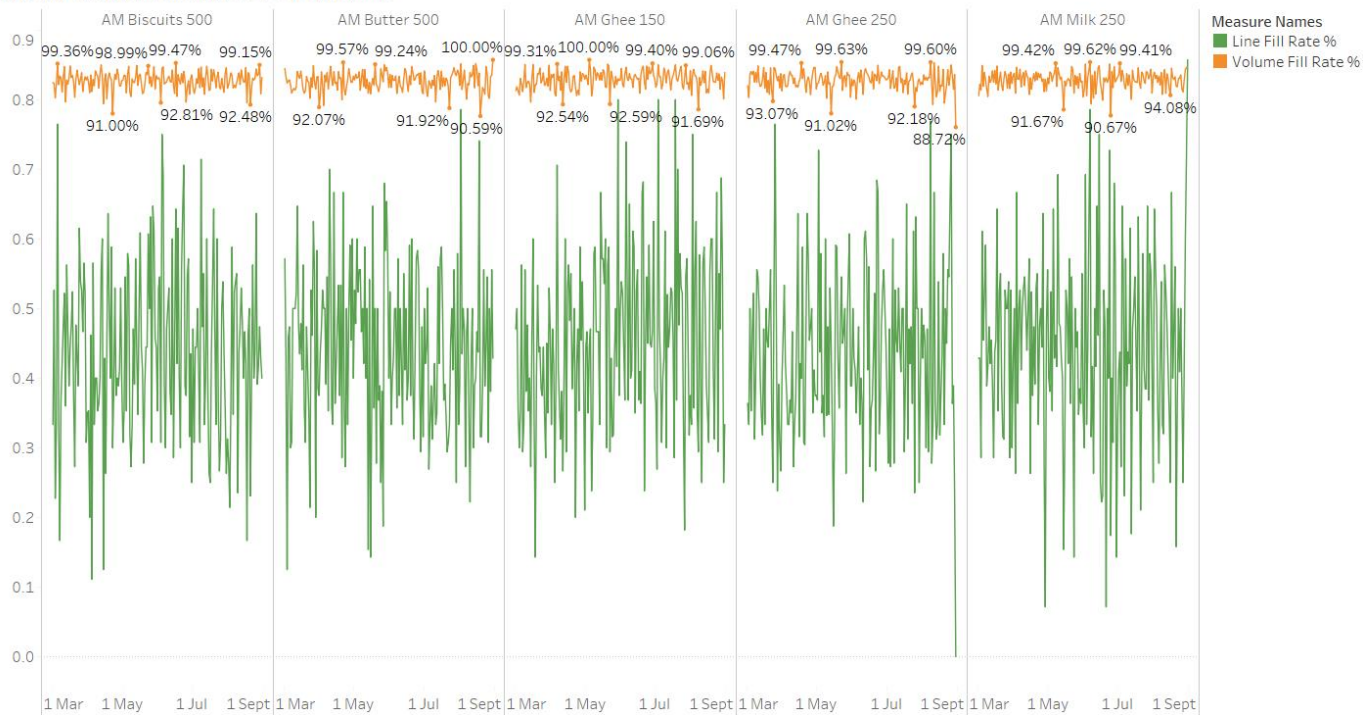


- This table shows that most products have a LIFR in the mid-60% range, but their VOFR is much higher, close to 97%.
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## 6. What is the LIFR and VOFR trends over time by top 5 products?

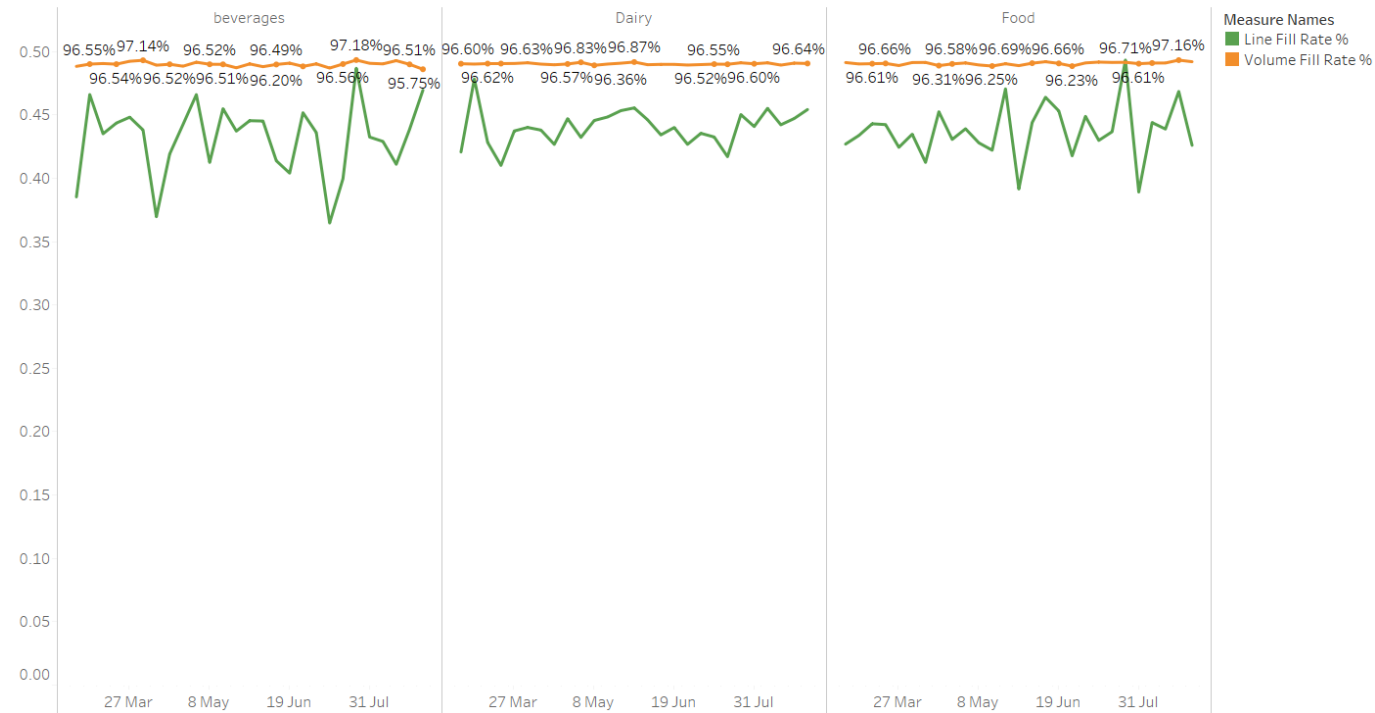
LIFR and VFR Trrend Over Time For Top 5 Products



- LIFR patterns: Most products show fluctuating LIFR performance over time, with values typically ranging between 40-80%. You can see periods of better and worse line fill performance.
- VOFR patterns: Volume fill rates are much more stable and consistently high (80-100%), showing that even when lines aren't completely filled, the volume shortfall is minimal.
- Product comparison: AM Milk 500 appears to have the best overall LIFR performance among the top products, while AM Milk 100 shows more volatility.

## 7. What is weekly LIFR and VOFR trends for product category?

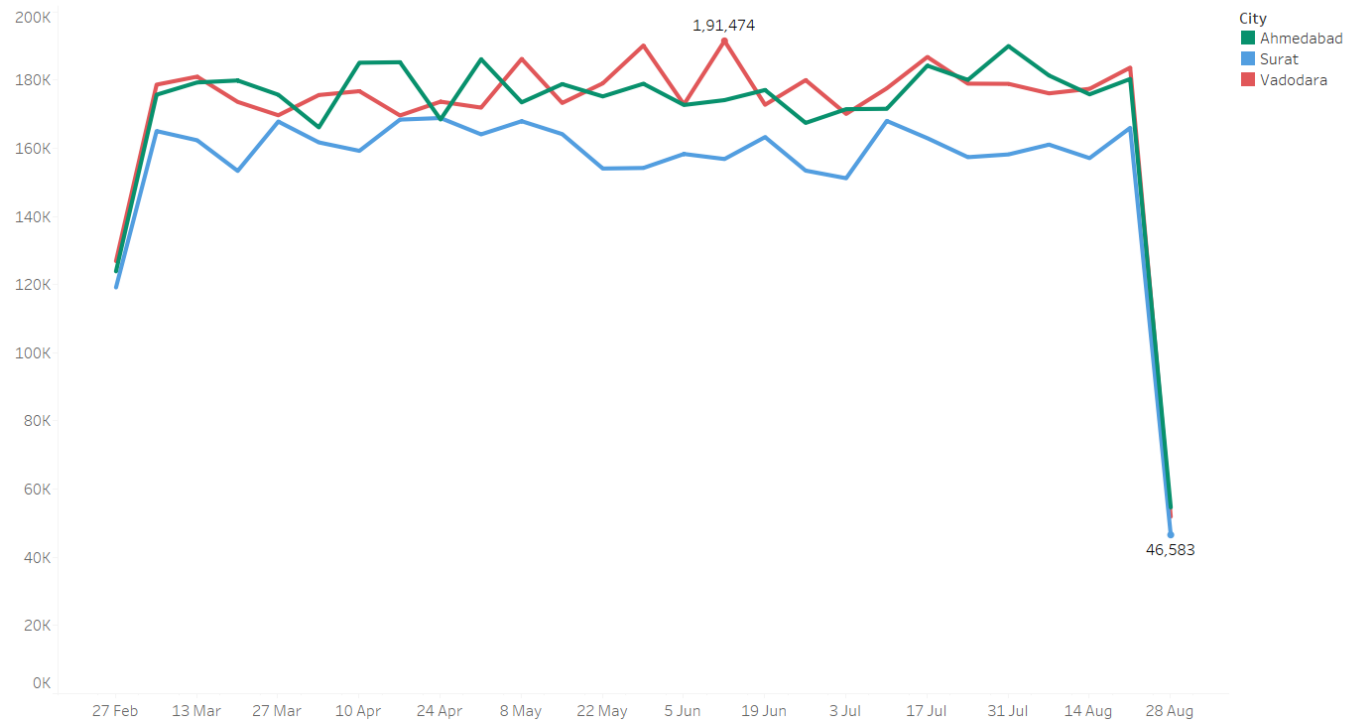
LIFR and VFR WeeklyTrend Over Time For Products Category



- Food category has the highest LIFR at 66.4%, slightly outperforming Dairy and Beverages
- VOFR is consistent across all categories (96.5-96.6%), showing volume delivery is reliable regardless of category
- Trend patterns show that all categories follow similar weekly patterns, suggesting supply chain challenges affect all product types similarly.

## 8. What is the weekly order quantity for top 5 cities?

Weekly Order Quantity for Top 5 Cities



### Regional Performance Summary

City	Avg Delivery	Avg order	Count of Orde..	Delivery Qty	Order Qty
Ahmedabad	227	234	19,676	4,462,984	4,612,298
Surat	227	235	17,842	4,050,082	4,190,467
Vadodara	228	236	19,578	4,456,091	4,624,171

- The city with maximum quantity of orders is Vadodara with 191474 orders placed in the month of June
- The city with least orders is Surat with barely 46583 orders placed.
- Overall Delivery Rate: 96.59%
- Total Units Ordered: 13,426,936
- Total Units Delivered: 12,969,157
- Total Delivery Shortfall: 457,779 units
- Worst Performing Cities (Delivery Rate):
- Vadodara: 96.37% (Shortfall: 168,080 units)
- Surat: 96.65% (Shortfall: 140,385 units)
- Ahmedabad: 96.76% (Shortfall: 149,314 units)

- the cities with the lowest delivery rates. Vadodara, Surat, and Ahmedabad have the lowest delivery rates, all just above 96%. This means that for every 100 units ordered, about 3–4 units are not delivered.

## 9.What is the delivery delay analysis?

Delivery Delay Analysis

Is delay	Avg. Delivery delay days	Count of Order Id	Delayed orders %
Delayed	2	16,491	1
	1.687	1.687	1.687
On-time/Early	0	40,605	0
	-0.089	-0.089	-0.089

- About 29% of all orders are delayed, with an average delay of 1.69 days for those that are late. The maximum observed delay is 3 days.

## 10.What is the metrics by customers, products?

Metrics by Product

Product Id	Product Name	Category	Line Fill Rate %	Volume Fill Rate %	Base
25891101	AM Milk 500	Dairy	44.89%	96.71%	3,139
25891102	AM Milk 250	Dairy	44.20%	96.61%	3,197
25891103	AM Milk 100	Dairy	44.47%	96.54%	3,184
25891201	AM Butter 100	Dairy	43.66%	96.59%	3,170
25891202	AM Butter 250	Dairy	42.46%	96.36%	3,125
25891203	AM Butter 500	Dairy	44.59%	96.46%	3,272
25891301	AM Ghee 250	Dairy	43.38%	96.53%	3,200
25891302	AM Ghee 150	Dairy	45.43%	96.69%	3,209
25891303	AM Ghee 100	Dairy	44.19%	96.59%	3,098
25891401	AM Curd 250	Dairy	44.10%	96.72%	3,138
25891402	AM Curd 100	Dairy	43.75%	96.62%	3,177
25891403	AM Curd 50	Dairy	42.61%	96.62%	3,187
25891501	AM Biscuits 750	Food	43.89%	96.85%	3,158
25891502	AM Biscuits 500	Food	43.79%	96.49%	3,195
25891503	AM Biscuits 250	Food	43.60%	96.58%	3,186
25891601	AM Tea 500	beverages	41.80%	96.52%	3,184
25891602	AM Tea 250	beverages	43.49%	96.52%	3,143
25891603	AM Tea 100	beverages	43.91%	96.59%	3,134

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