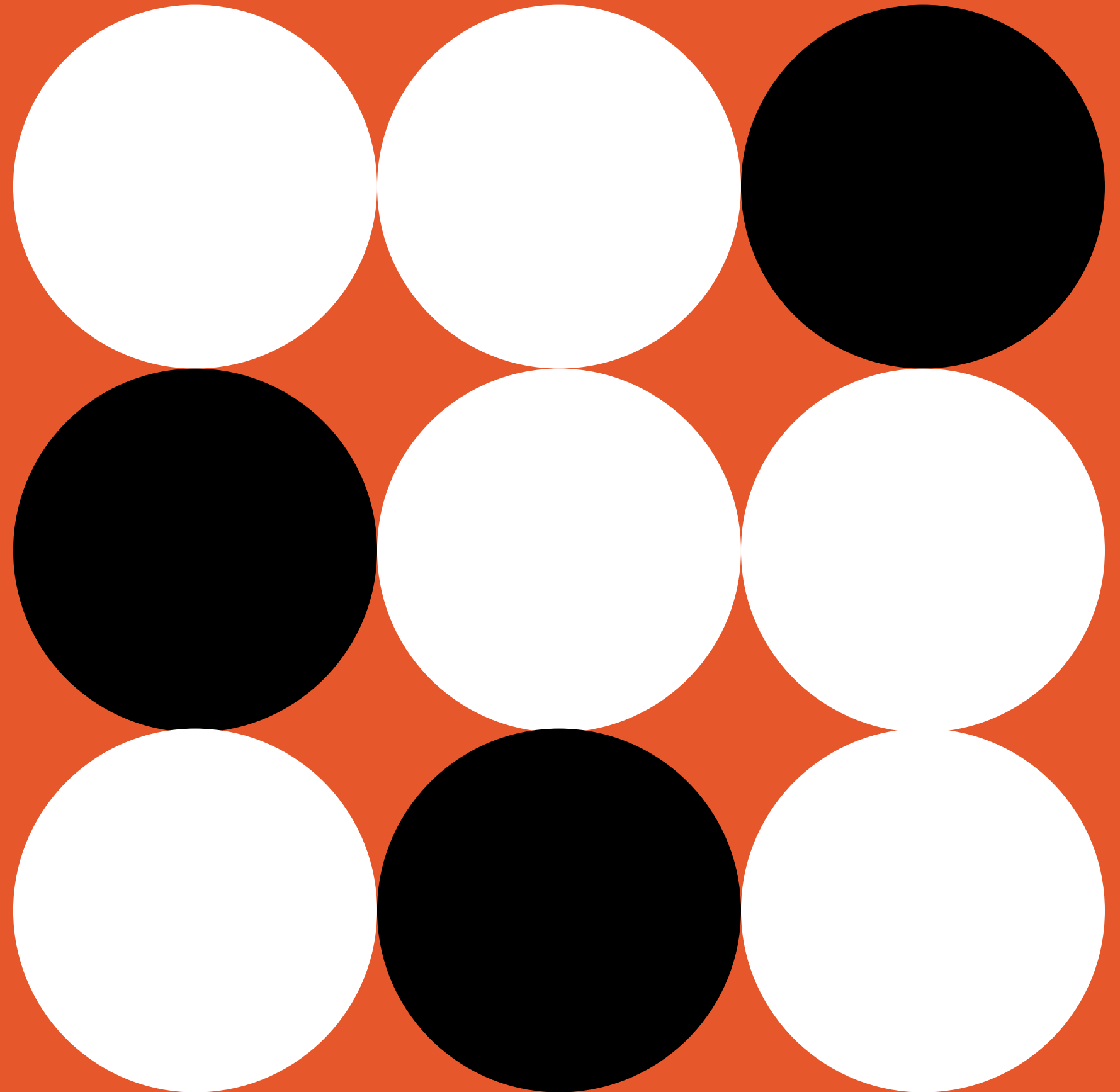


Supply Chain Analysis

April, 10th 2025



● Company's background



AlitQ Mart:

- FMCG Manufacturer, India
- Operate in Ahmedabad, Surat, Vadodara
- Business problem:
 - ***Only a small number of customers renew their annual contracts because of the service quality***

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Objectives

- Assessing service levels to evaluate the performance of our delivery service.
- Understanding key and potential Customers.
- Gaining insights into the customer experience for each individual Customer.
- Analyzing key performance metrics, including delivery delays by City.
- Understanding Product category performance and related key metrics.

Key Metrics

Metrics	Definition	Business Implication
On Time (OT) Delivery %	% of orders delivered on or before the agreed delivery date.	Low OT may indicate planning or transportation issues. High OT reflects good delivery timing.
In Full (IF) Delivery %	% of orders delivered with full quantities as requested.	Low IF suggests inventory or fulfillment problems. High IF indicates good stock management.
On Time In Full (OTIF) Delivery %	% of orders delivered both on time and in full.	A key service level metric. Low OTIF means poor customer satisfaction.
Line Fill Rate (LIFR)	% of order lines delivered in full (at line item level).	Reveals how well individual product are being fulfilled.
Volume Fill Rate (VOFR)	% of total quantity ordered that was delivered.	Reflects how much of the demand (by volume) was actually fulfilled.
Order Cycle Time	Time from order placement to actual delivery date.	Long cycle times signal potential process delays.

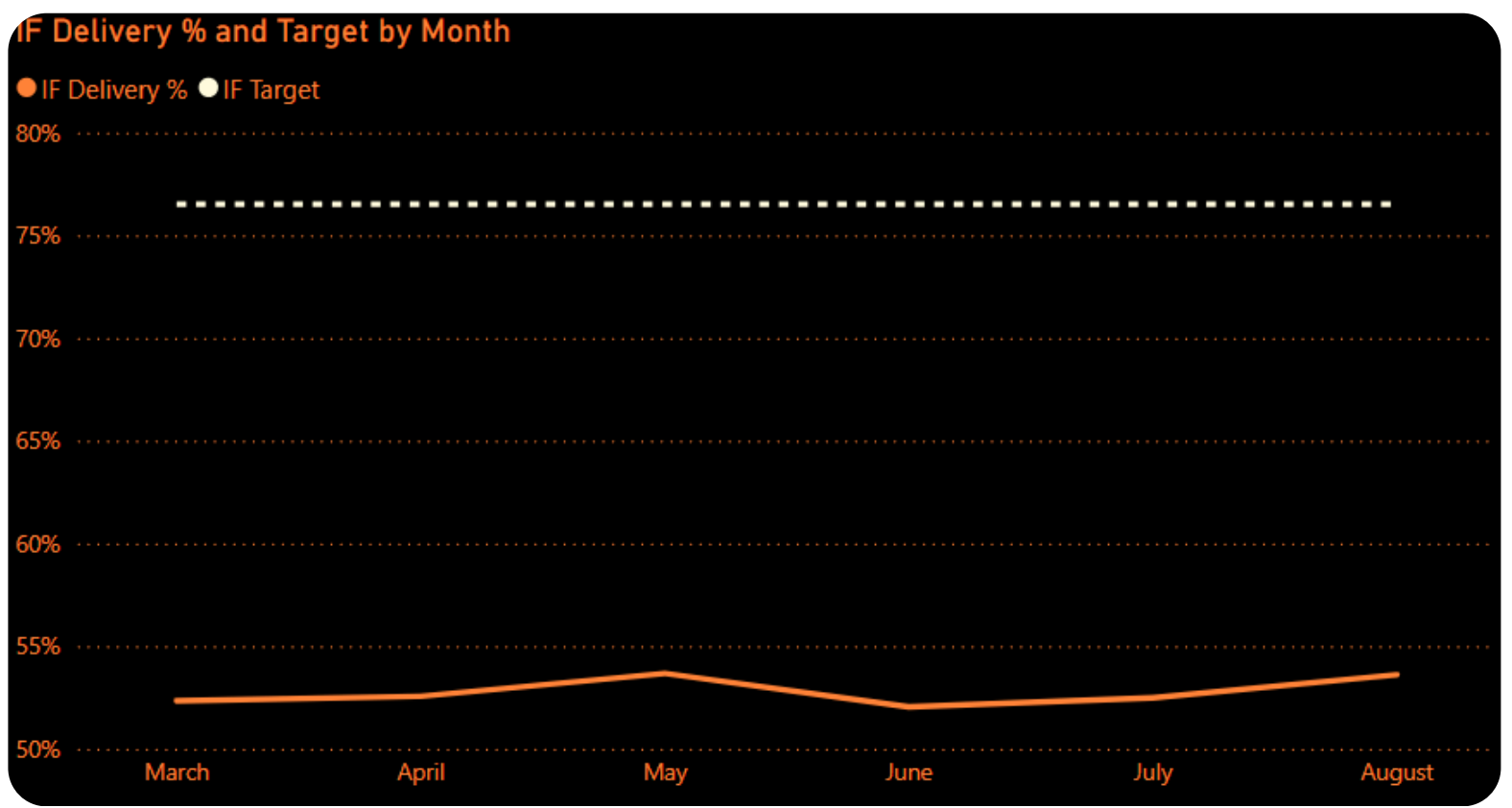
● Key Insights



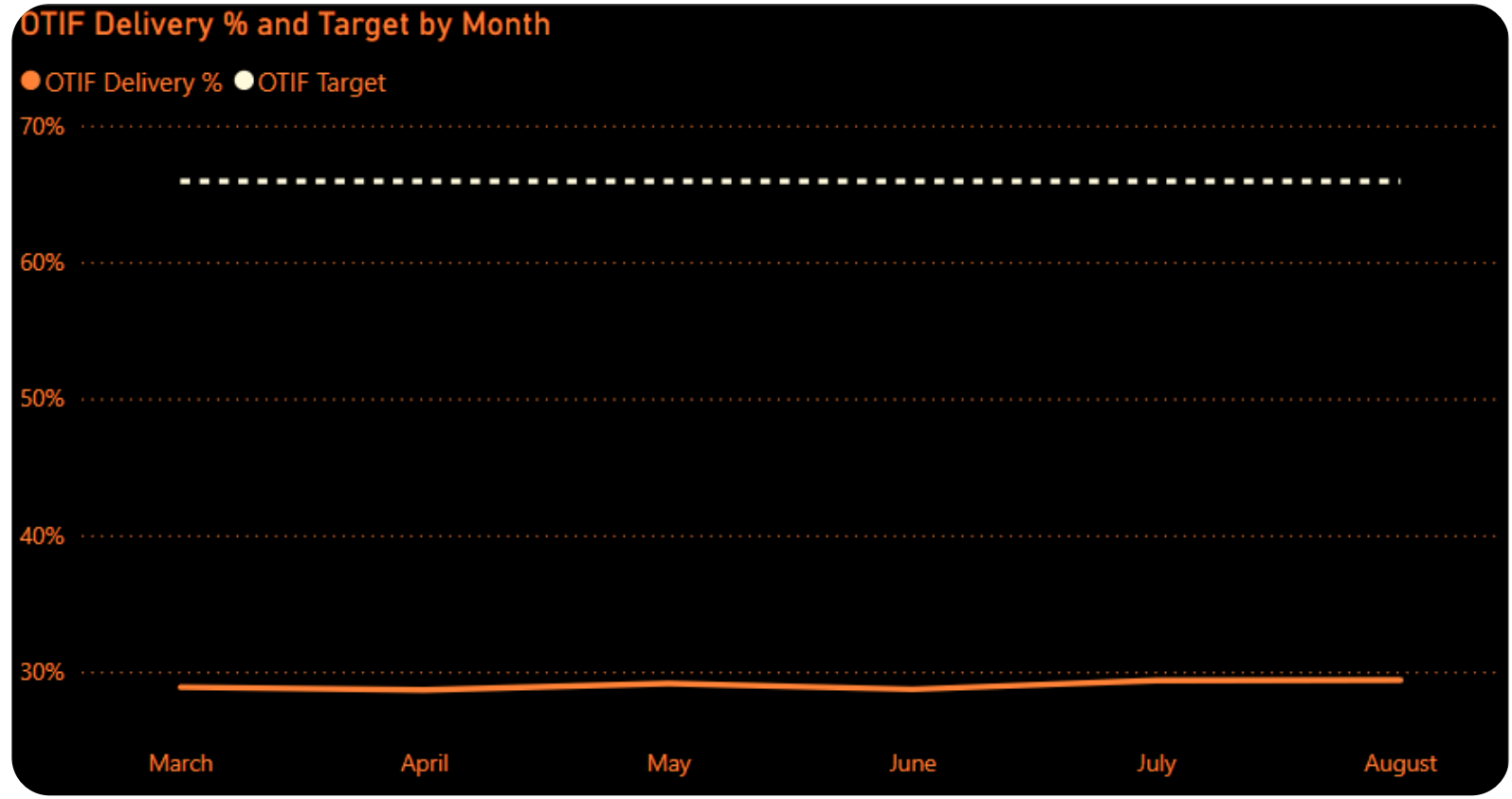
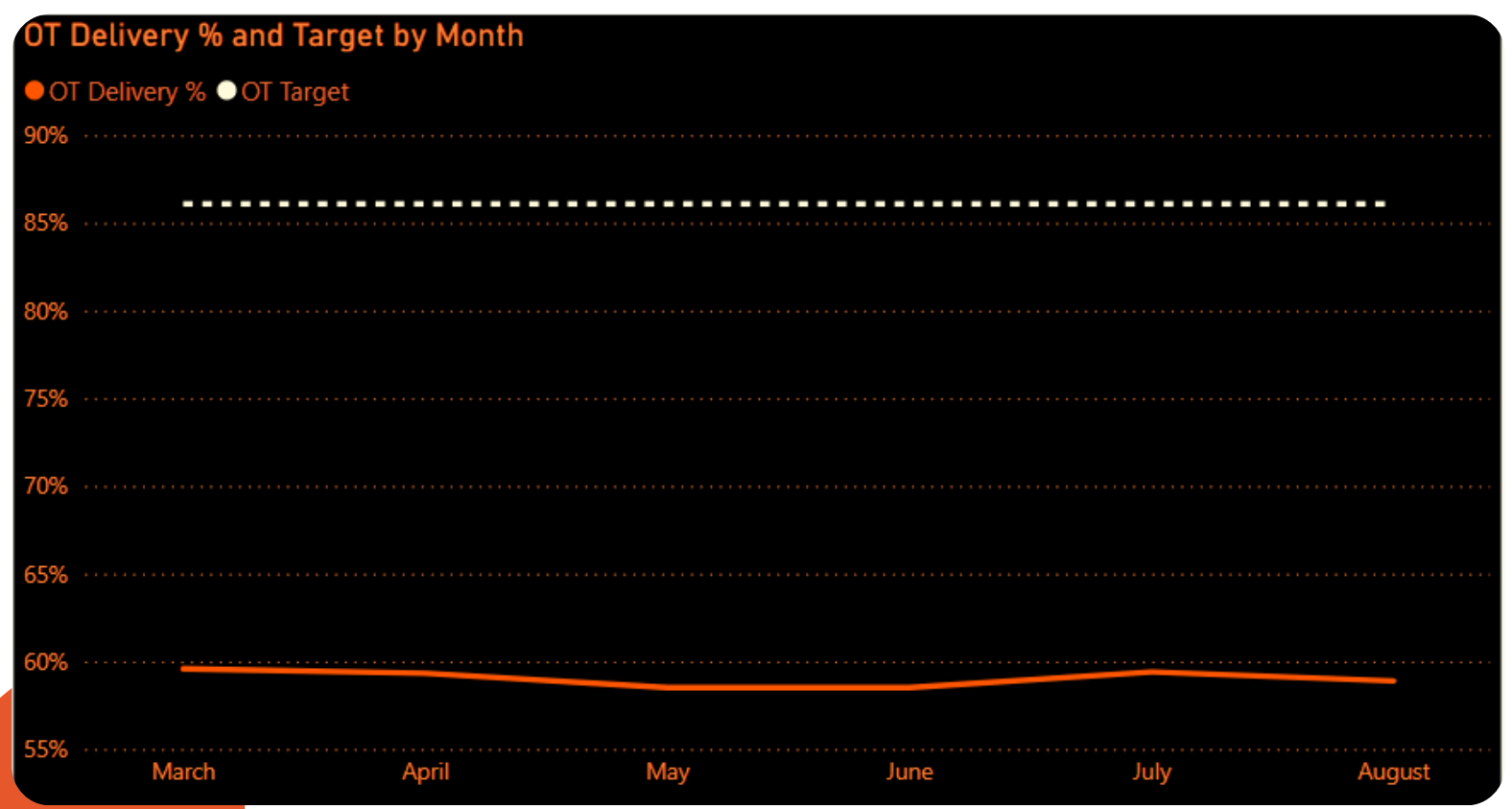
● Key Insights

1. Service Level Analysis

1. Service Level Analysis

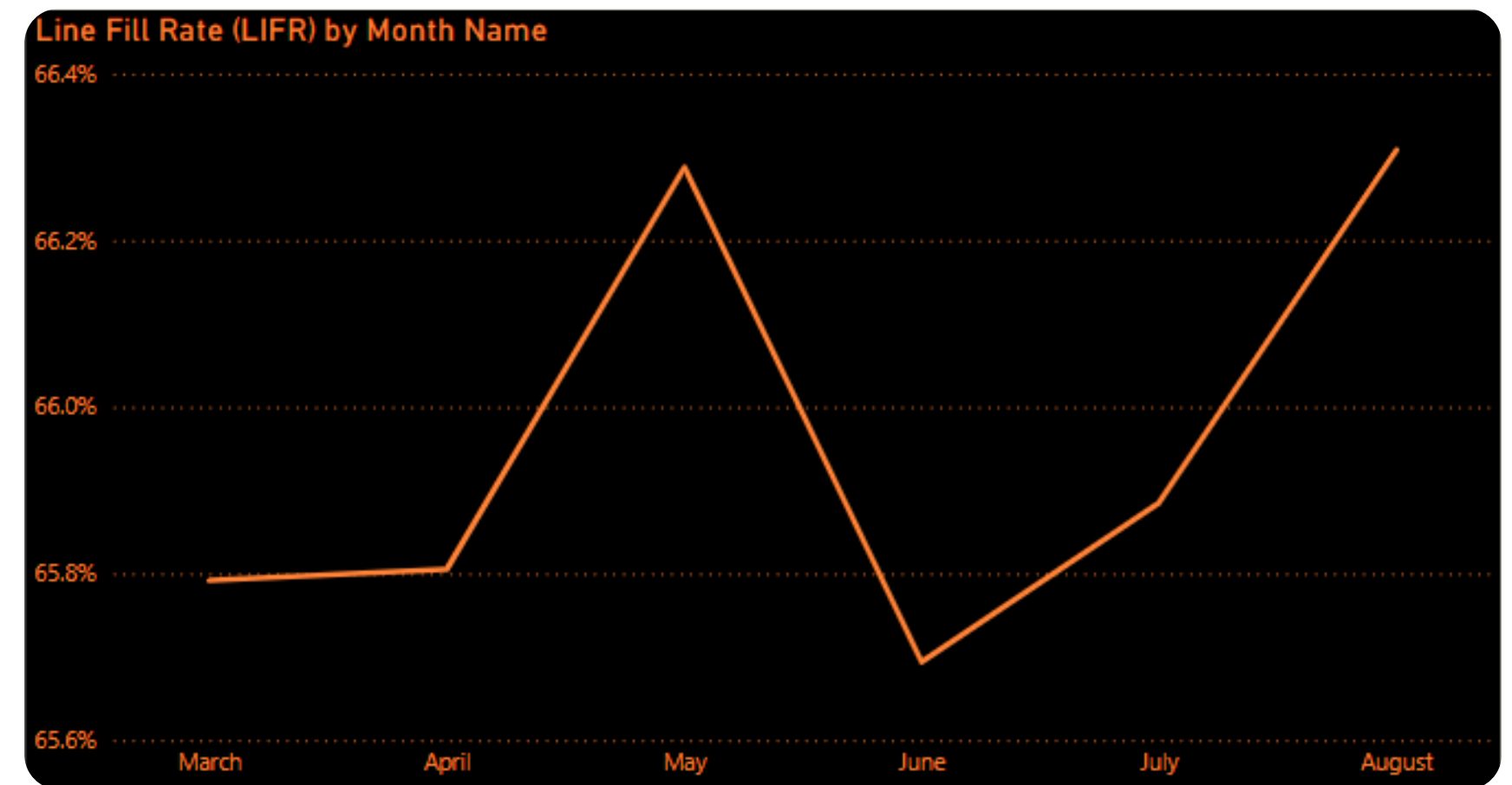
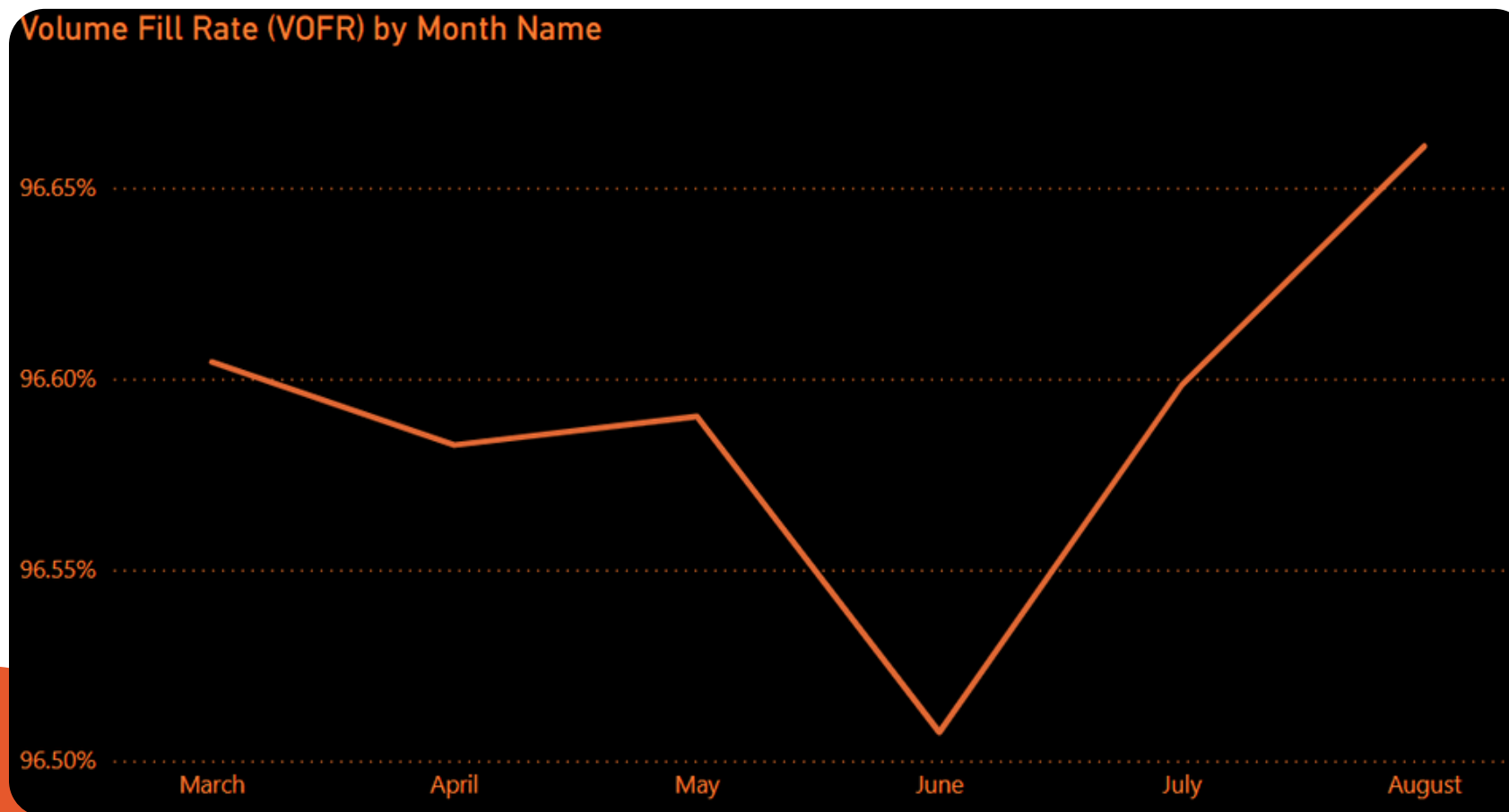


- OT, IF, and OTIF percentages consistently **fall short of their targets.**
- Each metric is approximately **30% below its respective goal.**



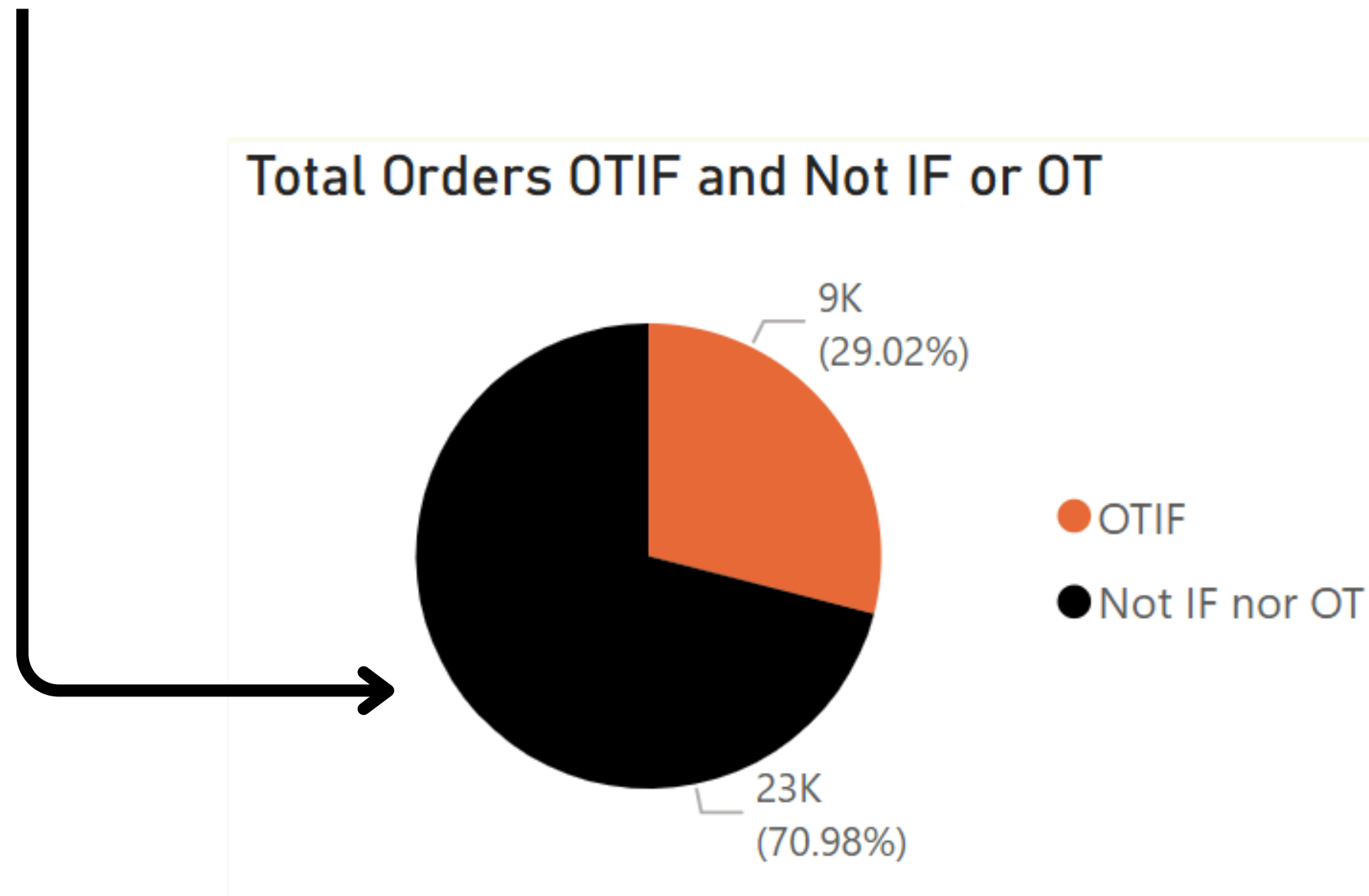
1. Service Level Analysis

- VOFR is strong (~96.5%) with minor fluctuations — **volume fulfillment is stable.**
- LIFR is low (~66%) but shows slight improvement — **line-level fill rate needs attention.**
- The gap between high VOFR and low LIFR indicates frequent partial fulfillment across order lines.



1. Service Level Analysis

Around **71%** of total orders are **not delivered in full or on time**.

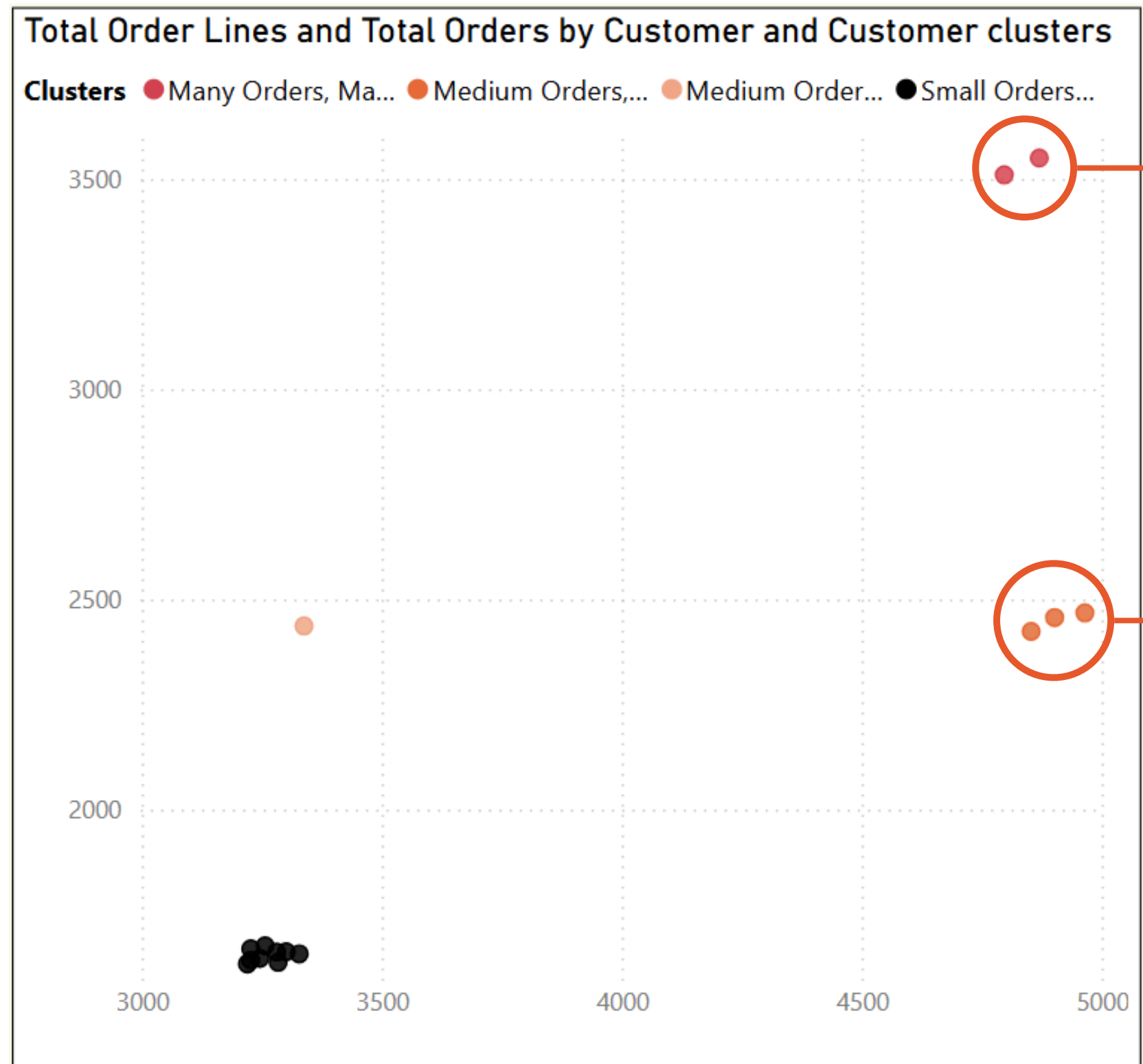


● Key insights

2. Customer Insights



2. Customer Insights: Key customer



Lotus Mart and Acclaimed Stores are two **key customers** of AlitQ Mart.

Propel Mart, Rel Fresh and Vijay Stores are customers with high potential

2. Customer Insights: Delivery Performance

- The metrics for Acclaimed Stores, Lotus Mart, and Coolblue are cause for serious concern.
 - Their **IF%, OT%, OTIF%, and LIFR** values are **significantly below average**.
 - These customers also experience **long Average Order Cycle Times** and **high average delivery delays**.

Customer name	Cluster	IF%	OT%	OTIF%	LIFR	VOFR	Average Order Cycle Time	Average Delay Delivery Day
Acclaimed Stores	Many Orders, Many Lines	52.36%	29%	15.47%	58.93%	95.85%	3.23	1.25
Lotus Mart	Many Orders, Many Lines	53.35%	28%	16.34%	60.08%	96.01%	3.30	1.28
Propel Mart	Medium Orders, Many Lines	59.74%	74%	40.92%	75.62%	97.70%	2.14	0.15
Rel Fresh	Medium Orders, Many Lines	58.69%	72%	38.18%	74.54%	97.43%	2.16	0.17
Vijay Stores	Medium Orders, Many Lines	44.98%	72%	28.28%	59.23%	95.87%	2.16	0.17
Coolblue	Medium Orders, Small Lines	44.73%	29%	13.75%	51.53%	95.08%	3.28	1.27
Atlas Stores	Small Orders & Lines	59.78%	72%	39.55%	75.48%	97.58%	2.15	0.17
Chiptec Stores	Small Orders & Lines	60.35%	72%	38.73%	75.61%	97.58%	2.18	0.18
Elite Mart	Small Orders & Lines	37.94%	72%	24.37%	52.74%	95.29%	2.15	0.16
Expert Mart	Small Orders & Lines	59.81%	73%	39.11%	75.48%	97.44%	2.19	0.17
Expression Stores	Small Orders & Lines	60.83%	70%	38.39%	75.28%	97.54%	2.23	0.21
Info Stores	Small Orders & Lines	41.16%	71%	25.52%	53.05%	95.24%	2.20	0.20
Logic Stores	Small Orders & Lines	60.14%	71%	38.78%	74.39%	97.45%	2.22	0.19
Sorefoz Mart	Small Orders & Lines	39.19%	73%	25.89%	53.40%	95.33%	2.16	0.16
Viveks Stores	Small Orders & Lines	60.07%	71%	39.44%	75.06%	97.57%	2.22	0.20
Total		52.78%	59%	29.02%	65.96%	96.59%	2.42	0.42

● Key insights

3. Regional Insights



3. Regional Insights: Delivery Performance

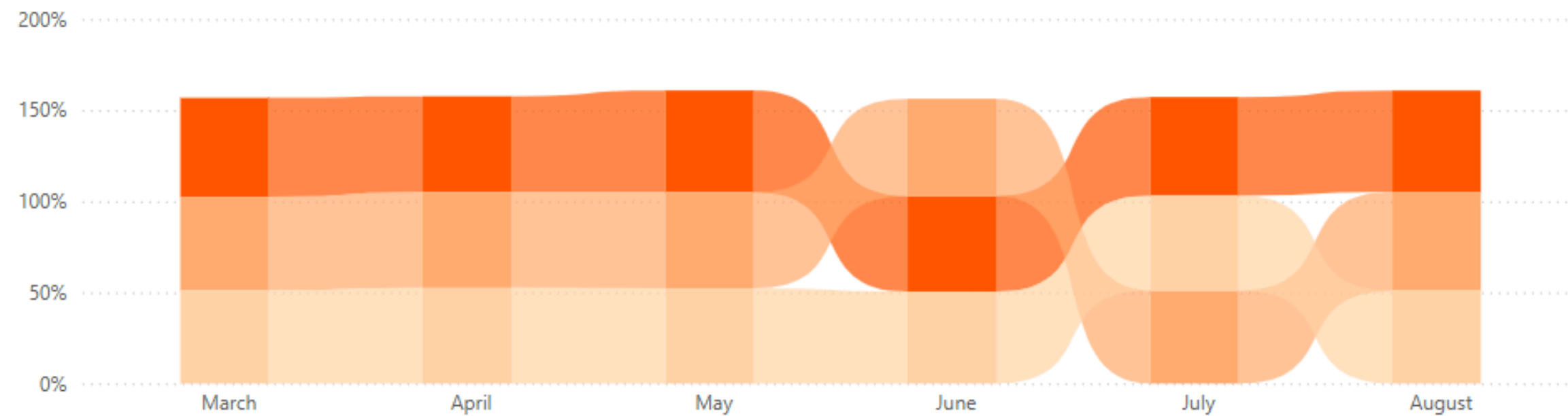
City	Total Orders	IF%	IF Target	OT%	OT Target	OTIF %	OTIF Target
Ahmedabad	11061	54.20%	77.33%	58%	85.83%	29.33%	66.50%
Surat	9696	52.55%	76.91%	61%	86.27%	30.07%	66.36%
Vadodara	10972	51.56%	75.33%	58%	86.17%	27.78%	64.92%
Total	31729	52.78%	76.51%	59%	86.09%	29.02%	65.91%

- **Vadodara** shows the **lowest performance** across all key indicators (IF%, OT%, OTIF%). With an OTIF of just 27.78%, it poses a major concern for service reliability and customer satisfaction.
 - **Ahmedabad** follows closely as the **second-lowest performer**, with the lowest OT% (58%) and only marginally better IF% and OTIF% than Vadodara.
 - **Surat** performs **slightly better but still fails to meet target benchmarks**.
- Overall delivery performance is consistently below expectations across all cities.

3. Regional Insights: Comparing Performance

IF % by Month Name and city

city ● Ahmedabad ● Surat ● Vadodara

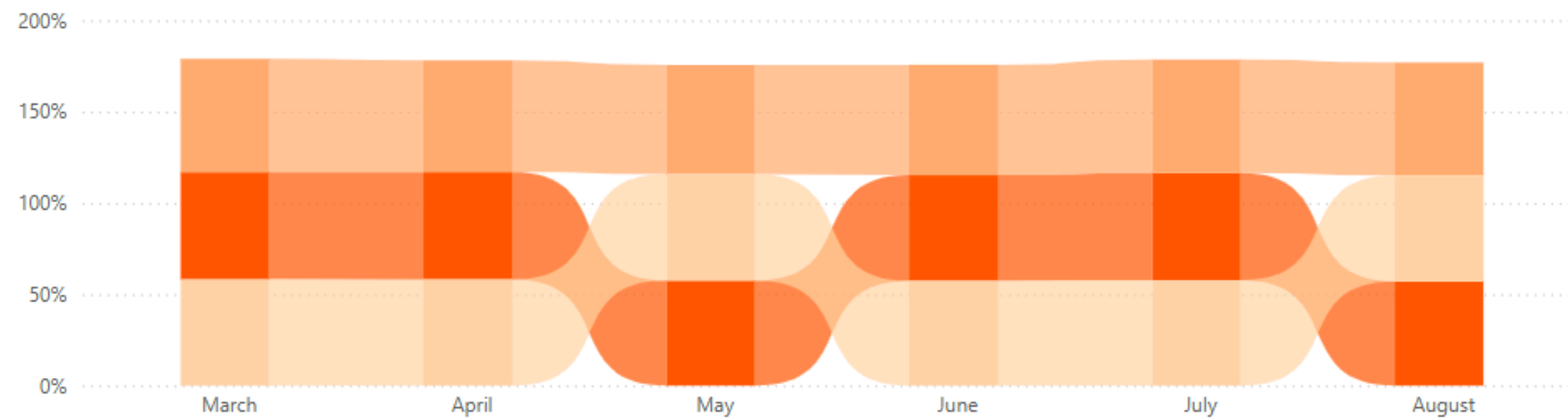


- For the majority of the surveyed period:
 - IF performance was led by Ahmedabad.

3. Regional Insights: Comparing Performance

OT % by Month Name and city

city ● Ahmedabad ● Surat ● Vadodara

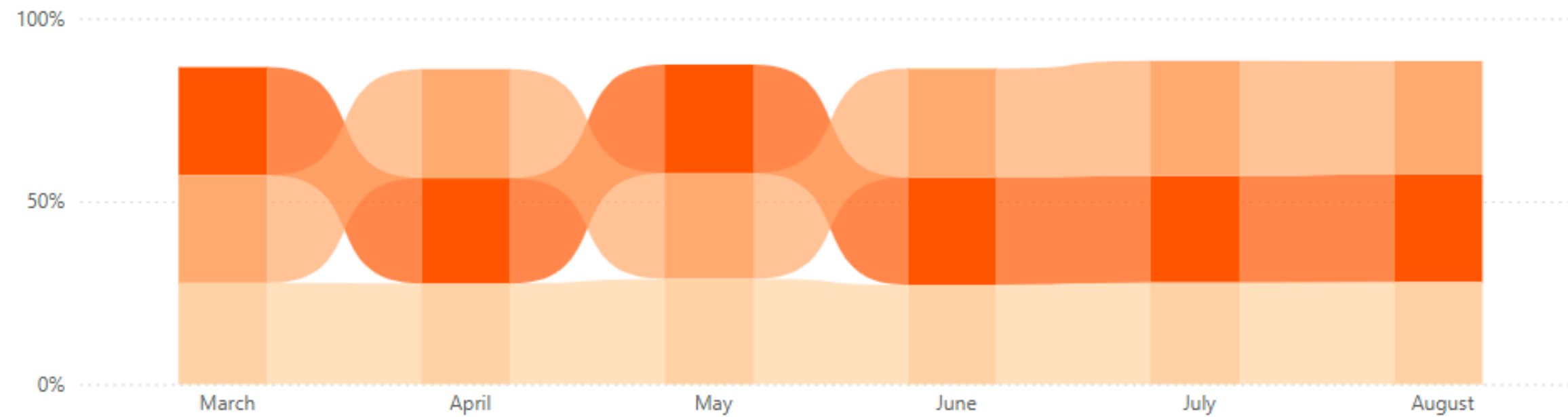


- For the majority of the surveyed period:
 - IF performance was led by Ahmedabad.
 - OT performance was led by Surat.

3. Regional Insights: Comparing Performance

OTIF% by Year, Month and City

City ● Ahmedabad ● Surat ● Vadodara



- For the majority of the surveyed period:
 - IF performance was led by Ahmedabad.
 - OT performance was led by Surat.
 - OTIF performance was led by Surat.

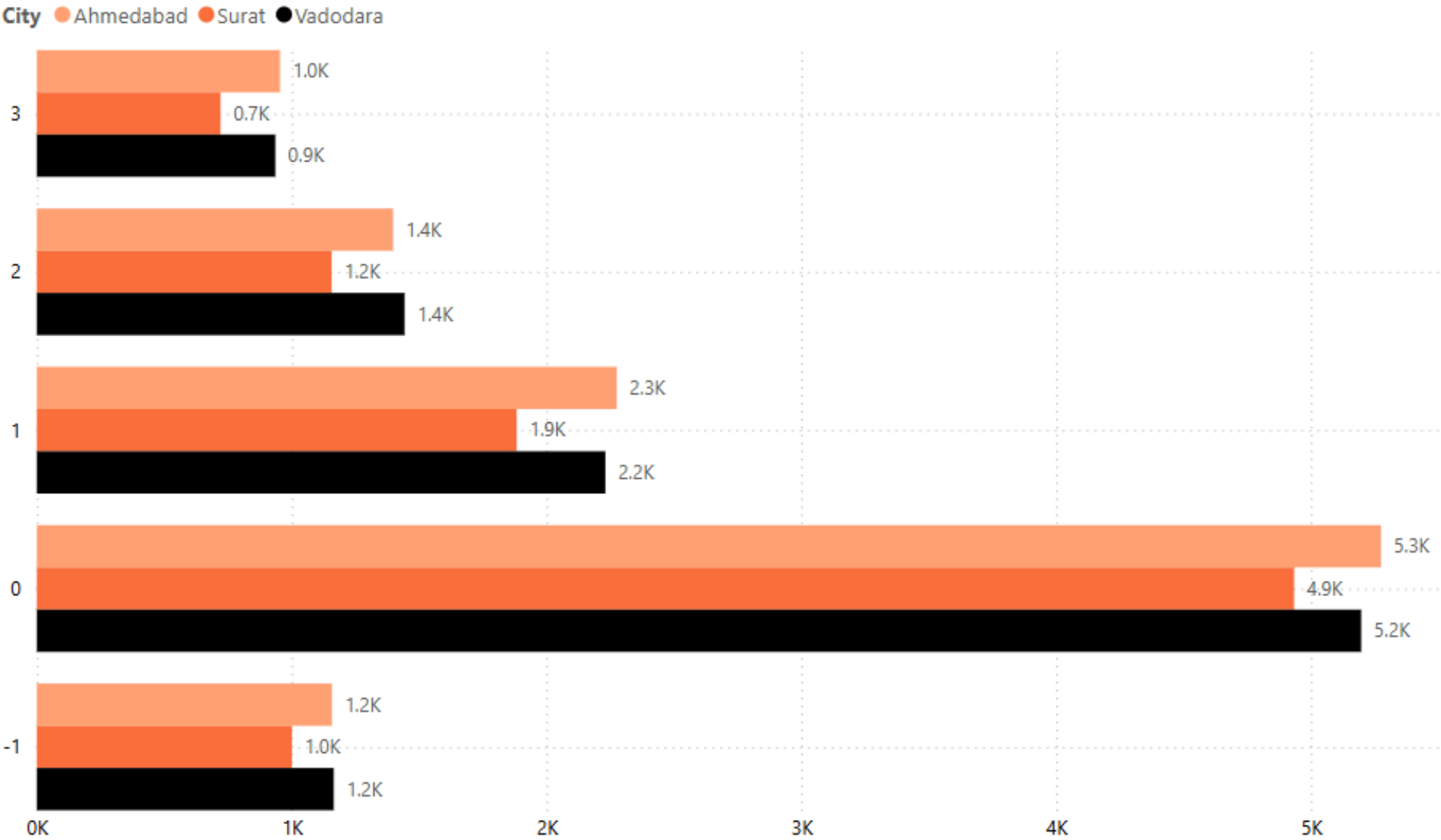
● Key insights

4. Regional Delay Insights



4. Regional Delay Insights

Number of Orders by Delayed Delivery Days and City



- Most orders were delivered on time, with Ahmedabad slightly leading.
- 1–3 day delays remain significant across all cities.
- Early deliveries (Day -1) suggest potential misalignment with customer expectations.

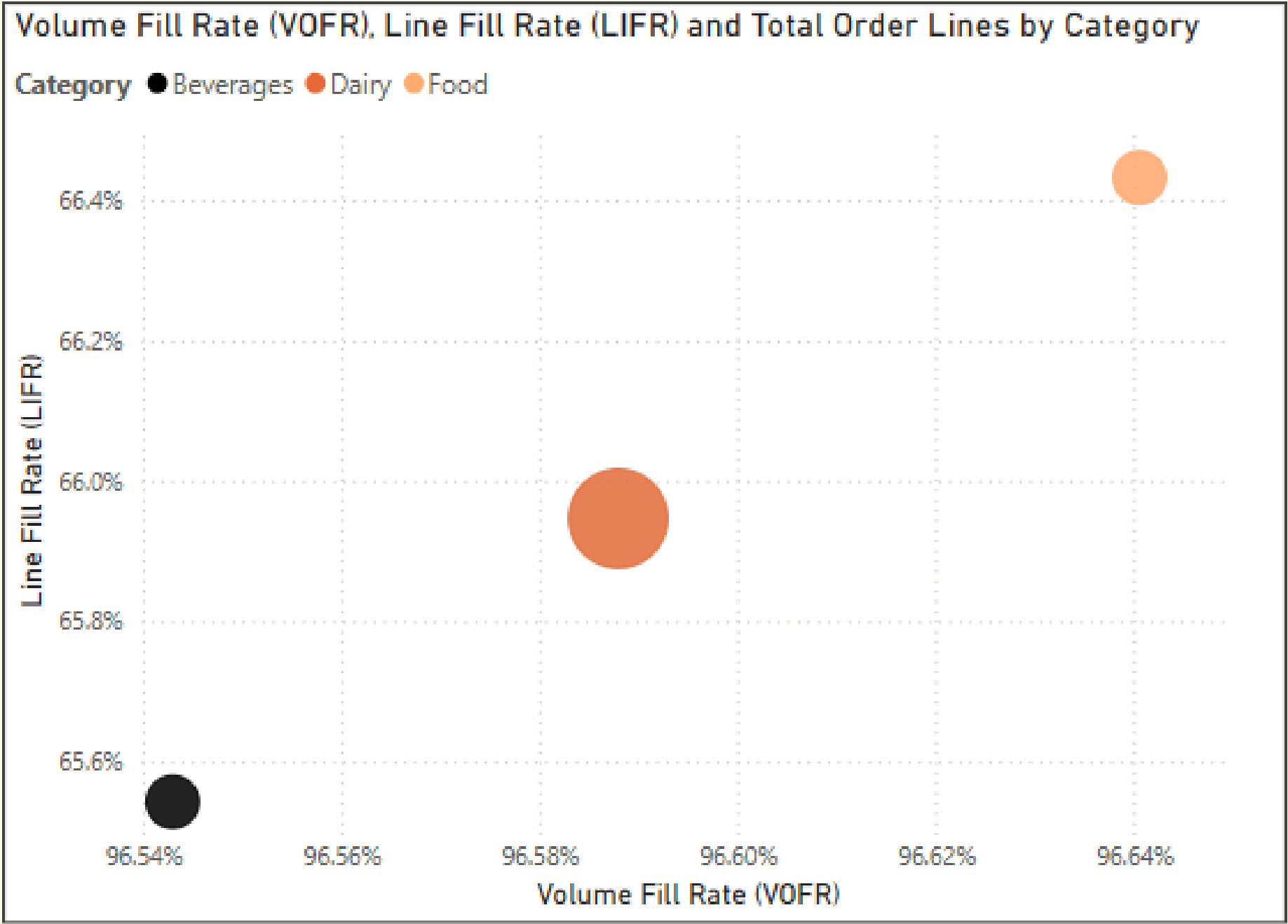
● Key insights

5. Product Insights



5. Product Insights: Performance by Category

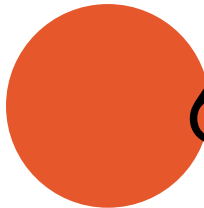
- Dairy is the most ordered category but has a lower Line Fill Rate (LIFR) compared to Food.
- Food has the highest LIFR and Volume Fill Rate (VOFR) among the three categories.
- Beverages have the lowest LIFR and VOFR.



● Key insights

6. Product Fill Rates





6. Product Fill Rates: All Products

- Butter 250 has the lowest LIFR, followed by Butter 500, Biscuits 250, and Tea 250.
- While VOFR is high, the low LIFR indicates that full lines are not being consistently fulfilled.

Product	Total Order Quantity	Line Fill Rate (LIFR)	Volume Fill Rate (VOFR)	Line Fill Rate (LIFR) by date	Volume Fill Rate (VOFR) by date
AM Biscuits 250	563366	65.16%	96.58%		
AM Biscuits 500	558119	66.10%	96.49%		
AM Biscuits 750	556996	68.05%	96.85%		
AM Butter 100	943483	66.66%	96.59%		
AM Butter 250	933107	63.52%	96.36%		
AM Butter 500	983180	65.19%	96.46%		
AM Curd 100	1105336	66.73%	96.62%		
AM Curd 250	1099401	67.05%	96.72%		
AM Curd 50	1119256	65.55%	96.62%		
AM Ghee 100	186186	65.75%	96.59%		
AM Ghee 150	193524	66.72%	96.69%		
AM Ghee 250	191494	65.25%	96.53%		
AM Milk 100	1276190	65.55%	96.54%		
AM Milk 250	1279132	65.91%	96.61%		
AM Milk 500	1254422	67.51%	96.71%		
AM Tea 100	394712	65.32%	96.59%		
AM Tea 250	392461	65.16%	96.52%		
AM Tea 500	396571	66.14%	96.52%		
Total	13426936	65.96%	96.59%		



6. Product Fill Rates: Closer Look in Dairy Products

- Milk is the most ordered product, with Curd and Butter also having high order volumes.
- Most Dairy products have low LIFR, averaging around 65%.

Product	Total Order Quantity	Line Fill Rate (LIFR)	Volume Fill Rate (VOFR)	Line Fill Rate (LIFR) by date	Volume Fill Rate (VOFR) by date
AM Butter 100	943483	66.66%	96.59%		
AM Butter 250	933107	63.52%	96.36%		
AM Butter 500	983180	65.19%	96.46%		
AM Curd 100	1105336	66.73%	96.62%		
AM Curd 250	1099401	67.05%	96.72%		
AM Curd 50	1119256	65.55%	96.62%		
AM Ghee 100	186186	65.75%	96.59%		
AM Ghee 150	193524	66.72%	96.69%		
AM Ghee 250	191494	65.25%	96.53%		
AM Milk 100	1276190	65.55%	96.54%		
AM Milk 250	1279132	65.91%	96.61%		
AM Milk 500	1254422	67.51%	96.71%		
Total	10564711	65.95%	96.59%		

● Suggestions for Actions

Suggestions for Actions

- **Investigate the inventory system** → Identify root causes like inaccurate stock levels, poor warehouse organization, or outdated software.
- Improve inventory management by using **real-time stock tracking systems** and **organizing the warehouse efficiently** → Quicker access to high-demand items.
- Use **demand forecasting tools** to adjust production schedules and warehouse organization.
→ Ensuring sufficient stock and on-time delivery to customers.
- Focus on **dairy** product demand to adjust production volumes.
- **Prioritize** fulfilling the demands of **Lotus Mart and Acclaimed Stores** while **nurturing** the **potential of Propel Mart, Rel Fresh, and Vijay Stores**, *without neglecting other customers' needs*.

- Thank you for listening!

