## Supply Chain Analytics Dashboard

View in Power BI

Last data refresh: 03/11/2022 11:36:39 UTC

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Visualising logistics metrics to improve efficiency and forecasting.











### **Supply Chain Analytics**

Visualising logistics metrics to improve efficiency.







Analyses









Recommendations

**Overview Analysis** 

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**OTIF% by Month** 



Z 9.4 %0! OTIF% Target: 65.9% (-55.41%) **OT% by Month** 



58.9%! OT% Target: 86.1% (-31.6%) IF% by Month



53.6%! IF% Target: 76.5% (-29.94%) August COCT



14.8

(Minutes per Order)

LIFR%



66.0%

VOFR%



96.6%

Distribution of Total Orders by Categories

60K

10K

57K

20K

0K

Dairy Food Beverages Total



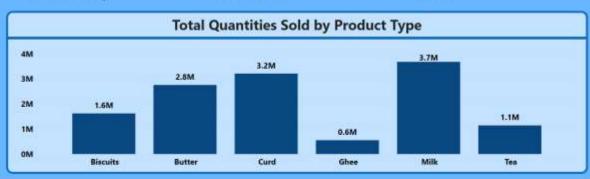
City		Ahme	dabad		Surat				Vadodara			
<b>Product Type</b>	Orders	LIFR%	VOFR%	сост	Orders	LIFR%	VOFR%	сост	Orders	LIFR%	VOFR%	сост
Biscuits	3252	68.0%	96.8%	20.3	3022	67.0%	96.7%	19.1	3265	64.4%	96.4%	20.0
Butter	3256	67.5%	96.8%	11.6	2995	65.3%	96.5%	11.5	3316	62.6%	96.2%	11.8
Curd	3311	68.0%	96.9%	10.2	2939	66.8%	96.6%	9.8	3252	64.5%	96.5%	9.9
Ghee	3290	68.1%	96.8%	58.7	2993	65.9%	96.6%	57.6	3224	63.7%	96.4%	58.4
Milk	3273	66.7%	96.6%	8.8	2983	68.6%	96.8%	8.6	3264	63.9%	96.4%	8.9
Tea	3294	67.0%	96.7%	28.5	2910	66.6%	96.6%	26.8	3257	63.2%	96.3%	28.0

in Delivery - 0.42

Total 'Orders Received'

57K

Total 'Quantity - 13M







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**KPIs Based Analysis** 

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#### OTIF% by Month



29.490 ! OTIF% Target: 65.9% (-55.41%)

#### **OT% by Month**



58.9%! OT% Target: 86.1% (-31.6%)

#### IF% by Month



53.6%! IF% Target: 76.5% (-29.94%) August

City	DID	сост	OTIF%	OTIF% Target	от%	OT% Target	IF%	IF% Target
Ahmedabad	0.45	15.1	29.3%	66.5%	58.2%	85.8%	54.2%	77.3%
Surat	0.38	14.5	30.1%	66.4%	61.2%	86.3%	52.5%	76.9%
Vadodara	0.44	14.9	27.8%	64.9%	58.0%	86.2%	51.6%	75.3%
Total	0.42	14.8	29.0%	65.9%	59.0%	86.1%	52.8%	76.5%

OTIF %

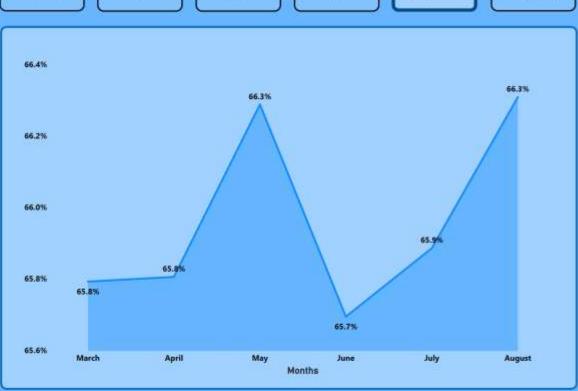
OT %

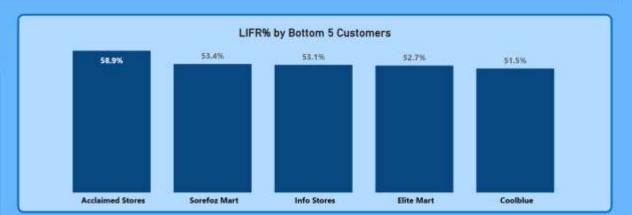
IF %

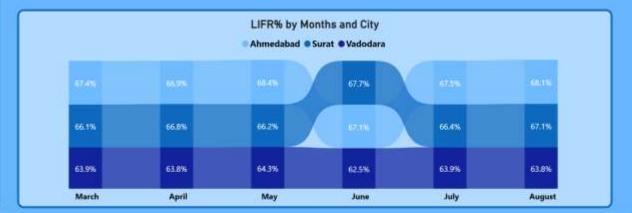
COCT

LIFR %

**VOFR** %









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**Product Analysis** 

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**Total Quantities Ordered** 



**Total Quantities Undelivered** 





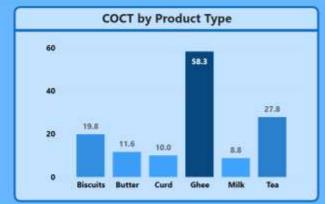


(-29.94%)August

#### Product wise Orders Count, LIFR%, VOFR%, LIFR% by Months, and VOFR% by Months

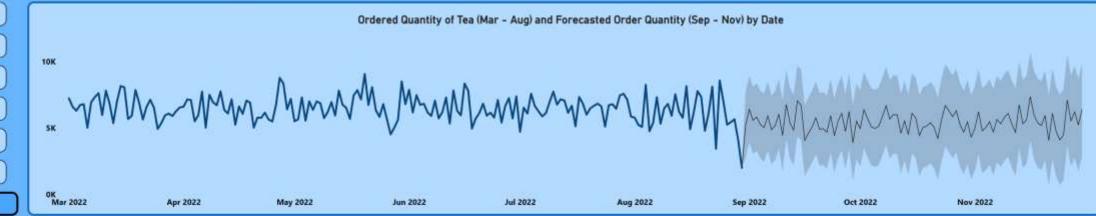
Products	Orders	LIFR%	VOFR%	LIFR% by Months	VOFR% by Months
Am Biscuits 250	3186	65.2%	96.6%		~
Am Biscuits 500	3195	66.1%	96.5%		
Am Biscuits 750	3158	68.0%	96.9%		
Am Butter 100	3170	66.7%	96,6%		
Am Butter 250	3125	63.5%	96.4%		
Am Butter 500	3272	65.2%	96.5%		_
Am Curd 100	3177	66.7%	96.6%	~	
Am Curd 250	3138	67.0%	96.7%		
Am Curd 50	3187	65.5%	96.6%		
Am Ghee 100	3098	65.8%	96.6%		
Am Ghee 150	3209	66.7%	96.7%	_	
Am Ghee 250	3200	65.3%	96.5%		
Am Milk 100	3184	65.5%	96.5%		
Am Milk 250	3197	65.9%	96.6%		
Am Milk 500	3139	67.5%	96.7%	~	~
Am Tea 100	3134	65.3%	96.6%		
Am Tea 250	3143	65.2%	96.5%		
Am Tee 500	3184	66,3%	96.5%	~	
Total	57096	66.0%	96.6%		







Tea



#### **Supply Chain Analytics**

Visualising logistics metrics to improve efficiency.







**Total Orders** 

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0.01M

Vijay Stores

Average Delay in Delivery



0.42

(In Days)

Average COCT



14.8 (Minutes per Order)

57K

Top 5 Customers by COCT

100%

Coolblue 20.3

Lotus Mart 20.0

Acclaimed Sto... 19.9

Expression Sto... 13.8

Logic Stores 13.7

67.7%

**Acclaimed Stores** 

**Atlas Stores** 

**Chiptec Stores** 



Coolblue

#### Customer wise OTIF%, OT%, IF%, LIFR% and VOFR%

Customer Name	OTIF%	OT%	IF%	LIFR%	VOFR%
Expression Stores	38.4%	69.9%	60.8%	75.3%	97.5%
Chiptec Stores	38.7%	71.6%	60.4%	75.6%	97.6%
Logic Stores	38.8%	70,8%	60.1%	74.4%	97.5%
Viveks Stores	39.4%	70.6%	60.1%	75.1%	97.6%
Expert Mart	39.1%	72.5%	59.8%	75.5%	97.4%
Atlas Stores	39.6%	71.8%	59.8%	75.5%	97.6%
Propel Mart	40.9%	73.6%	59.7%	75.6%	97.7%
Rel Fresh	38.2%	72.3%	58.7%	74.5%	97.4%
Lotus Mart	16.3%	28.1%	53.4%	60.1%	96.0%
Acclaimed Stores	15.5%	29.4%	52.4%	58.9%	95.8%
Vijay Stores	28.3%	72.4%	45.0%	59.2%	95.9%
Coolblue	13.7%	29.1%	44,7%	51.5%	95.1%
Info Stores	25.5%	70,9%	41.2%	53.1%	95.2%
Sorefoz Mart	25.9%	72.7%	39.2%	53.4%	95.3%
Elite Mart	24.4%	72.4%	37.9%	52.7%	95.3%
Total	29.0%	59.0%	52.8%	66.0%	96.6%

OTIF%, OT%, and IF% columns are conditionally formatted based on their gaps to respective Targets.

Rel Fresh

Sorefoz Mart



Vadodara

Surat

**Ahmedabad** 



**Expert Mart** 

Logic Stores

Lotus Mart

**Propel Mart** 

Elite Mart



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three cities, i.e., Vadodara, Surat and Ahmedabad.

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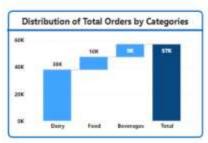






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- The most in-demand Category from the customers' side is 'Dairy' with 38K Orders, followed by Foods. The most demanding product is Milk, with 3.7M quantities sold, followed by Curd with 3.2M.

- AtliQ Marts's product demand is almost equally distributed in all

- Vadodara City's demand is being declined month by month. (Almost 1K drops)
- AtliQ Marts has received a total of 57K Orders, in which 13M Quantities have been sold.

- All the KPIs i.e., OTIF%, OT%, and IF% are much below their respective targets.
- OTIF% lags by 53% each month, with the highest being in July with 29.4%.
- OT% is lagging by almost 31% each month, with being highest in March at 59.6%.
- IF% is lagging by almost 30% each month, with being highest in July with 53.7%
- We are running good with VOFR% but need improvement in LIFR%. COCT is also decent, with 14.8 minutes per order, in all the cities.

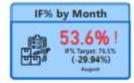


14.8





OT% by Month





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Analyses





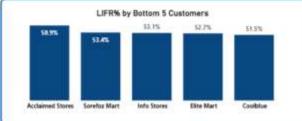


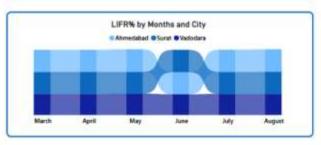


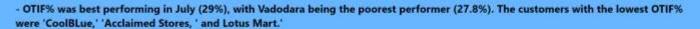
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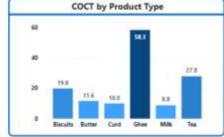






- OT% needs massive improvement since it was the best performing in March (59.6%), and Surat was the best performer with 61.2%. The customers with the lowest OT% were again the same as were in OTIF%.
- IF% was at its lowest in June (52.05%), with Vadodara with its poorest performance (51.6%). Ans 'Elite Mart, 'Sorefoz Mart,' and 'Info Stores' could have performed better than other customers.
- COCT started declining from June (14.9) to August (14.6), with all cities constantly performing, with Surat being the Top performer with the lowest COCT 14.5. 'Logic Stores' had the lowest COCT (13.7 min/order).
- LIFR% and VOFR% were nearly constant through the months, but VOFR% was performing well compared to LIFR%. This means we were supplying enough quantities ordered but failed to deliver specific products due to the unavailability of an inefficient supply chain.





- Delay in Delivery was highest for '1day' followed by'2 and 3 Days. DID was highest for Ghee, Butter and Milk, which should be improved because These products are one of the most in-demand products.
- Customer Order Cycle Time was again highest for 'Ghee' And lowest for 'Milk'. This means we need serious attention to the supply chain of Ghee and reduce it as much as possible. It is a good sign for us to have the lowest COCT for Milk for Curd to bring highest demanded products.

City	DID	COCT	OTIF%	OTIF% Target	от%	OT% Target	IF%	IF% Target
Ahmedabad	0.45	15.1	29.3%	66.5%	58.2%	85.8%	54.2%	77.3%
Surat	0.38	14.5	30.1%	66.4%	61.2%	86.3%	52.5%	76.9%
Vadodara	0.44	14.9	27.8%	64.9%	58.0%	86.2%	51.6%	75.3%
Total	0.42	14.8	29.0%	65.9%	59.0%	86.1%	52.8%	76.5%



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Analyses









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- If we analyse OTIF%, OT%, and IF% citywide, we see that there are 7 customers with whom we have the lowest performance. They are 'Lotus Mart,' 'Acclaimed Stores,' 'Vijay Stores,' 'CoolBlue,' Info Stores,' 'Sorefoz Mart, and 'Elite Mart.' They are marked with a red border alongside pictures.
- These customer issues should be addressed first with top priority because 3 account for the maximum orders from the rest of the customers.
- It can be seen that customers with good LIFR% and VOFR% have ultimately scored pretty well in OTIF%, OT%, and IF%. This means that having required products in enough quantities can benefit the customers to receive orders on time with total amounts.
- Almost all the products have equal demand (Unlike Category) and VOFR%. But products such as 'AM Butter 250', 'AM Biscuits 250', 'AM Tea 250', and 'AM Ghee 250' have low LIFR%, which means they are in demand, but due to unavailability of products or broken supply chain, the products are not being able to ship. We need to be ready with the forecasted demand.
  - With 458K products undelivered to customers, 'Lotus Mart' is at the top of the product list. Unfortunately, Vadodara tops the list with 168K products left to be delivered.
  - Un delivery of the requested product can have a severe effect on customer satisfaction. Vadodara being our 2nd most significant market, we cannot afford the inefficient supply chain to hamper the customer renewal of contract.
  - According to data insights, the customers with whom we should start working to renew the contracts are Acclaimed Stores, Lotus Mart, CoolBlue, and Vijay Stores.



Customer Name	OTHE	01%	IF%	LIFRS	VOFR%
Expression Stores	184%	63.9%	90.0%	75.3%	97.5%
Chipter Stores	38,7%	71.6%	60.4%	75.6%	97.6%
Logic Stores	38.8%	70.8%	60.1%	74.4%	97.5%
Viveks Stores	39,4%	79.6%	60.1%	75.1%	97.6%
Expert Mart	29.0%	72.5%	99.8%	75.9%	97.4%
Atlas Stores	39.6%	71.8%	39.8%	75.5%	97.6%
Propel Mart	40,9%	73.6%	69,7%	75.6%	97.7%
And French .			$\overline{}$	74.5%	57.4%
Lotus Mart	16.1%	28.1%	53.4%	88.5%	96.0%
Acclaimed Stores	3535	23.2%	12.4%	58.9%	95.8%
Vijay Stores	28,3%	72.4%	45,0%	59.2%	95.9%
Coolblue	137%	29.1%	AATTS	51.5%	95.1%
Info Stores	25.5%	70.9%	41.2%	53,1%	95.2%
Sorefoz Mart	25.9%	72.7%	35.2%	53.4%	95.3%
Elite Mart	24.4%	72.4%	37.9%	52,7%	95.3%
Total	25/8%	55.0%	52.8%	44.0%	96.6%

Products	Orders	LIFR%	VOFR%	LIFR% by Months	VOFR% by Months
April Blasselle (CIR)	3196	65.25	1(864%)		
Art Elevate SHE	3790	66.7%	363%		
der Bissols (SE	3100	44.2%	969%		
des Nutter 100	3179	96.7%	96.8%	_	_
Are Notice 258	3100	61.15	16-65		
den Batter 500	3376	65.25	94.2%		
Am Cord 169	3000	66.7%	964%		_
Am Cord 250	181001	97.8%	9676		
Are God Sil	3191	45.8%	264%		_
Ant Chica Till!	3000	65.5%	96.6%		
Am Shan 100	3.09	46.7%	96.7%		_
Ant Ohio 250	1200	84.84	94.5%	$\overline{}$	_
Am MAIL TOO	2564	-635	965%		
Apr 10% 250	1997	61.75	96.6%	_	_
Air 100: 100	0.00	47.10	9675		
Am Top 100	2194	85.95	96.6%		
Am Sea 250	2548	95.25	964%		_
Are Tou 200	3194	96.1%	96.2%		
Retail.	17996	66.8%	96.675		

Product wise Orders Count, LIFR%, VOFR%, LIFR% by Months, and VOFR% by Month



Visualising logistics metrics to improve efficiency.





Analyses









Recommendations

City Based Recommendations

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	Vadodara	Ahmedabad	Surat
OTIF%	37.1 %▼	37.2 %▼	36.3 % ▽
от%	28.2 % 🔻	27.6 %▼	25.1 % ▼
IF%	28.7 % ▼	23.1 %▼	24.4 % ▼
VOFR	96.4	96.8	96.8
LIFR	64.4	68.7	68.4
Avg. DID	1.21	1.23	1.17
сост	20	59	57.1
Total Orders	3265	1074	1014
Total Quantities Sold	555 K	63 K	59 K
Demand Drop	April	August	May
Mostly Affected Customers (Top 3)	CoolBlue Acclaimed Stores Lotus Mart	CoolBlue Propel Mart Acclaimed Stores	Expression Stores  Lotus Mart  Info Stores

#### Recommendations

- OTIF is a 'Hard' metric from customer's point of view, but we are unable to meet the customer's demand both by quantity ordered and timely delivery in all the cities. We are trailing with an average of 36.6% in all cities, which is hampering the reliability of customer.
- VOFR is performing good compared to LIFR in all the cities which means we are unable to deliver all requested products from customers. So, we should be prepared with inventory beforehand. At least in the demand season.
- 'Delay in Delivery' has been a major problem in all cities. We were able to deliver 18% of order before agreed delivery date. But, for so many orders were unable deliver 'On Time'. The delay is seen for 1,2, and 3 days with an average of 1.21 days.
- Vadodara, being our biggest market, has much efficient supply chain compared to other two cities since COCD in Ahmedabad and Surat is very high. We should have serious attention to this particular case.
- Customers who are our biggest client and facing serious issues are follows. Their issues should be resolved first.
- 1. Acclaimed Stores.
- 2. CoolBlue.
- 3. Lotus Mart.



Visualising logistics metrics to improve efficiency.







Analyses









**Product Based Recommendations** 

Ask a question about your data

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	Biscuits	Curd	Ghee	Milk	Tea	Butter
VOFR	96.6	96.7	96.6	96.6	96.5	96.5
LIFR	66.4	66.4	65.9	66.3	65.5	65.1
Avg. DID	1.22	1.18	1.21	1.21	1.20	1.22
сост	19.8	10.0	58.3	8.8	27.8	11.6
Total Orders	9539	9502	9507	9520	9461	9567
Total Quantities Sold	2M	3M	552 K	4M	1M	3M
Demand Drop	August	April	August	June	June	August
Mostly Affected Customers (Top 3)	Lotus Mart CoolBlue Acclaimed Stores	Vijay Stores Lotus Mart Acclaimed Stores	Lotus Mart Expression Stores CoolBlue	Lotus Mart Acclaimed Stores Vijay Stores	Rel Fresh Vijay Stores Acclaimed Stores	Vijay Stores CoolBlue Lotus Mart

what is the lifr% by category
Show all suggestic

Recommendations

- Almost all the products have their VOFR above 96% which if a good thing. Whereas LIFR has been pretty low for all the products.
- Milk being our one of the highest selling and ordered product, we need to have serious attention towards its availability in stock to improve its LIFR and reduce 'Delay in Delivery', followed by Butter and Curd.
- Curd is the worst performing product because it has high avg. DID with least order, resulting in very high COCT. It may hamper the supply chain of other product too if not maintained properly.
- We need to manage our inventory with our previous data by analysis when we have high demand when we have demand loss. Different products have different demand seasons. August is seen as the demand dropping season so we can manage our inventory accordingly.
- Some of the mostly affected customers which are repeating in every products category are Acclaimed Stores, Lotus Mart, CoolBlue, and Vijay Stores. We need to concentrate first on their service improvement and satisfaction.



If you have any other query or question, you may take the help of QnA section above.



#### **Supply Chain Analytics**

Visualising logistics metrics to improve efficiency.





Analyses









Recommendations

**Product Drill Through** 

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Product Name

Am Ghee 150

**Category Type** 

**Dairy** 







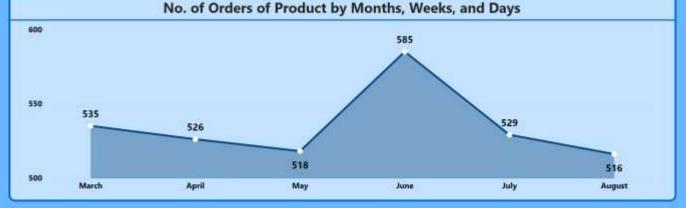
















58.2







#### **Supply Chain Analytics**

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Analyses









Recommendations

**Product Type Drill Through** 

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**Choose Product Type** 

Ghee

**Category Type** 

Dairy









Total Orders of Product Type by 'Delay in Delivery' Days

100%

1.46K

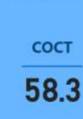
0.86K

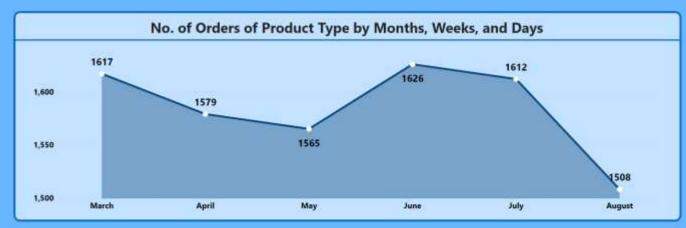
37.2%







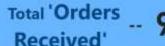






Acclai

Rel Fresh Coolblue



Total 'Quantity Sold'



#### **Supply Chain Analytics**

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City Name

Surat

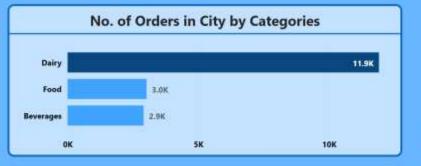
COCT

14.5 (Minutes per Order)





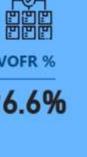




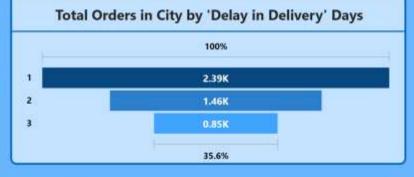




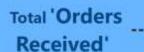












Total 'Quantity 18K Sold'







#### **About Company**

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 metro/tier1 cities in the next 2 years.

#### **Problem Statement**

AtliQ Mart is currently facing a problem where a few key customers did not extend the annual contract 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 on a 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 On Time in full (OTIF) % of the customer orders on a daily basis against the target service level set for each customer.

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#### The Stakeholders



BRUCE HARYALI DIRECTOR, ATLIQ MART





Davids

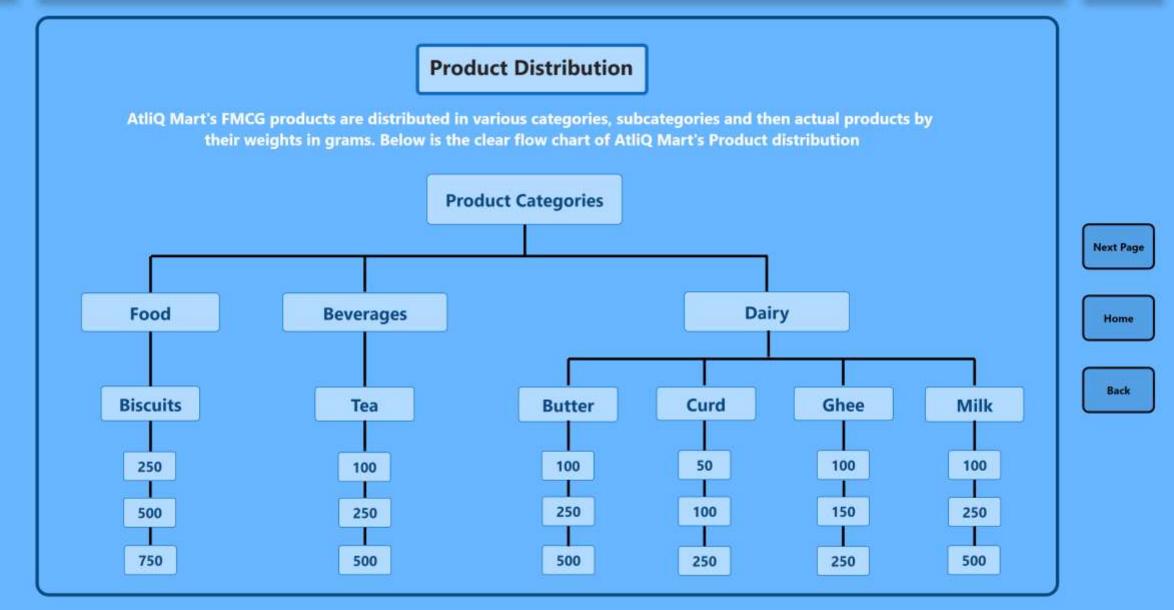
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PETER PANDEY
DATA ANALYST, ATLIQ MART











#### **On Ground Presence**

As mentioned earlier, AtliQ Mart has its presence in three cities namely, Vadodara, Surat, and Ahmedabad. The company has customers which have their presence in one or more than one given cities. In total, the number of customers is 15.

In Ahmedabad, we have 12 Customers. In Vadodara, we have 13 Customers. Whereas, in Surat we have 11 Customers only. The number of customers in not at all related to quantity ordered from customer.

The presence of all customers in all cities currently is listed in the form of table besides.

	Ahmedabad	Surat	Vadodara
Acclaimed Stores	✓	✓	<b>*</b>
Atlas Stores	✓	✓	
Chiptec Stores	<b>V</b>	✓	
CoolBlue	✓		<b>*</b>
Elite Mart	✓		<b>✓</b>
Expert Mart	✓		<b>✓</b>
Expression Stores		<b>4</b>	<b>*</b>
Info Stores		✓	<b>✓</b>
Logic Stores	✓	<b>4</b>	<b>✓</b>
Lotus Mart	4	<b>*</b>	<b>*</b>
Propel Mart	<b>✓</b>	✓	<b>*</b>
Rel Fresh	✓	<b>4</b>	<b>*</b>
Sorefoz Mart	✓		<b>*</b>
Vijay Stores	✓	<b>*</b>	<b>1</b>
Vivek Stores		✓	✓
Total	12	11	13

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#### **KPIs used in Supply Chain Analysis**

#### 1. On Time Delivery -

- OTD is a measure which determines if an order is delivered on time as per the agreed time with the customer.
- It is measured at the order level.
- It is important for the warehouse & distribution team.
- An order is 'On Time' only when all the line items inside the order is delivered on time.

# **∃**

#### 2. In Full Delivery -

- IFD is a measure which determines if an order is delivered in full as per the requested quantity by the customer.
- It is measured at the order level.
- It is important for the supply planning team.
- An order is 'In Full' only when all the line items inside the order are delivered In Full.

#### 3. On Time In Full Delivery -

- OTIF is a measure which determines if an order is delivered both 'in Full' and 'On Time' as per the customer order request.
- It is measured at the order level.
- It is important for all the sub functions in the supply planning team.
- An order is 'OTIF' only when all the line items inside the order are delivered In Full and On Time.
- It is a hard metric which measures the reliability of an order from customer's point of view.











#### 4. Line Fill Rate -

- Line fill rate is the percentage of order lines completely filled out of the total number of order lines.
- It does not consider the delivery time of the order.
- It is important for the supply planning team.



#### 5. Volume Fill Rate -

- Volume fill rate is the percentage of quantity shipped out of the total number of quantities ordered.
- It does not consider the delivery time of the order.
- It is important for the supply planning team.



#### 6. Customer Order Cycle Time -

- COCT measures the efficiency of company's fulfilment process and the efficiency of operations
- It is affected by other KPIs like on-time shipping rate and order lead time.
- The shorter the order cycle time, the more responsive the company is toward customer orders.
- COCT = (Delivery Date Order Date) / Total Orders Shipped.



#### 7. Delay in Delivery -

- DID measures the gap between the agreed delivery date and the actual delivery date.
- It helps us to determine the loophole in company's supply chain and why and where the prediction is going wrong.
- Calculated in terms of days, hours or minutes (varies from situation to situation).
- DID = (Actual Delivery Date Agreed Delivery Date).

