

PIZZA KING STOCK OPTIMIZATION MANAGEMENT

Pizza King is a new F&B company that sells various premium quality pizzas. The Pizza King company itself has only been established or has only been running for about a month. Pizza King itself has various problems with their stock inventory. From the owner's side, they feel that their inventory is very messy so there are often empty items and also rotten items

WHY INVENTORY STOCK OPTIMIZATION MANAGEMENT

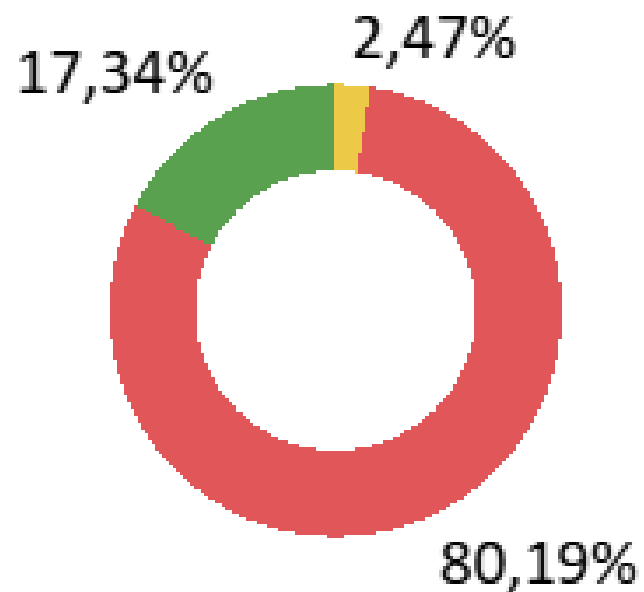
Stock optimization is a crucial process for a company because efficiently managed stock can have a significant impact on the company's performance and profitability. Here are several reasons why stock optimization is highly important:

1. **Customer Demand Fulfillment:** By having sufficient and appropriate stock, a company can ensure that customer demand is met in a timely manner. This avoids lost sales due to stock shortages or loss of customer trust due to delayed deliveries.
2. **Operational Efficiency:** By optimizing stock, a company can reduce the time spent monitoring, organizing, and managing stock. This allows the company to focus on more productive operational activities.
3. **Reducing Storage Costs:** Storing stock incurs costs for storage, including warehouse rental, electricity, insurance, and others. By optimizing stock, a company can reduce these costs by reducing the amount of unnecessary stock stored.
4. **Reducing Ordering Costs:** Ordering stock in large quantities or too frequently can increase shipping costs, administrative costs, and processing costs. By using appropriate stock optimization techniques, a company can reduce the frequency of orders and optimize order sizes, thus reducing overall costs.
5. **Reducing Stock Loss Risks:** Excessive or insufficient stock can pose risks to the company. Excessive stock can lead to losses due to expiration, damage, or depreciation, while insufficient stock can lead to lost sales and customer trust.
6. **Improving Cash Flow:** By optimizing stock, a company can reduce capital investment in excess stock. This allows the company to have more cash available for other investments or to reduce debt.

Overall, stock optimization helps companies improve operational efficiency, reduce costs, enhance customer service, and manage risks better. By continuously optimizing stock, companies can create a more sustainable and competitive environment in the market.

SALES ANALYSIS

Sales Category



Item Category

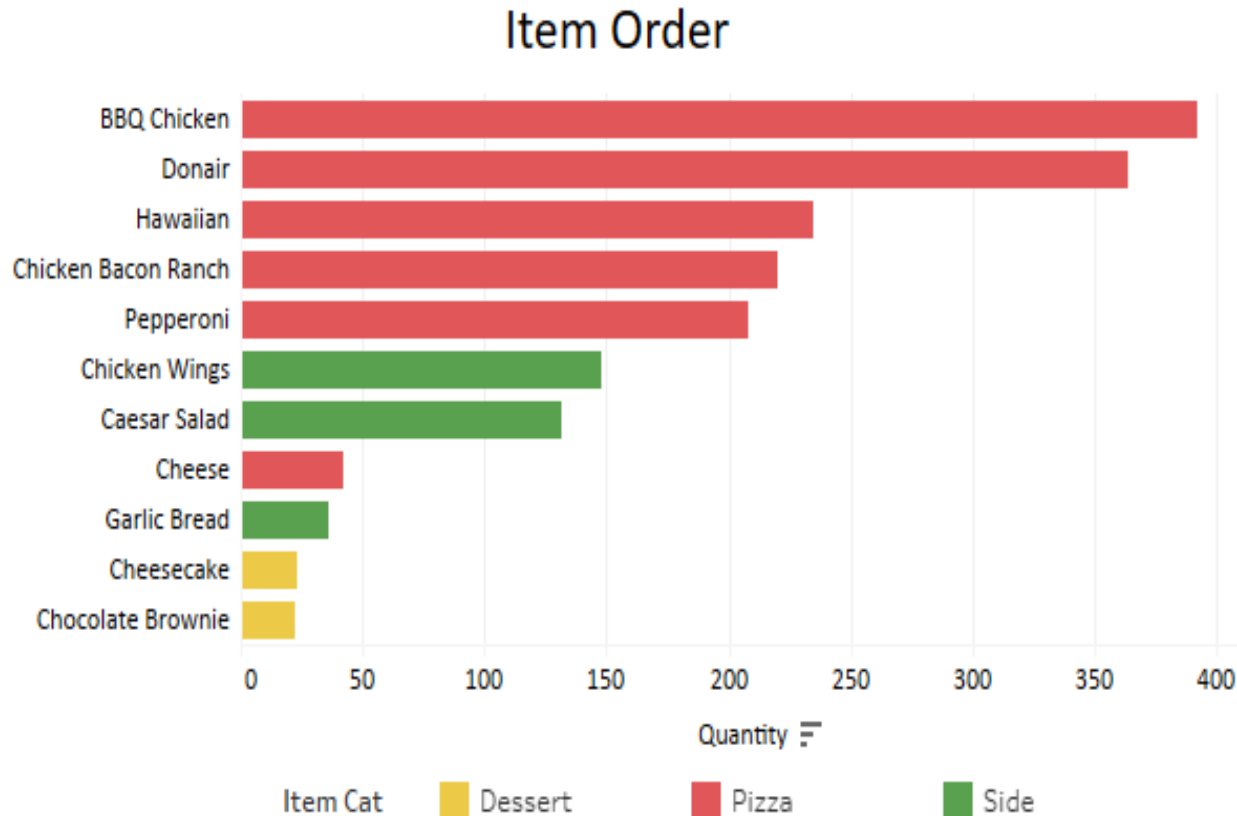
- Dessert
- Pizza
- Side

Quantity

1.822

The donut chart on the left shows that the highest sales were in the pizza category with a figure of 80.19% with total sales of 1,822 of the total sales. which leads us to focus more on controlling the availability of stock of ingredients related to pizza production ingredients

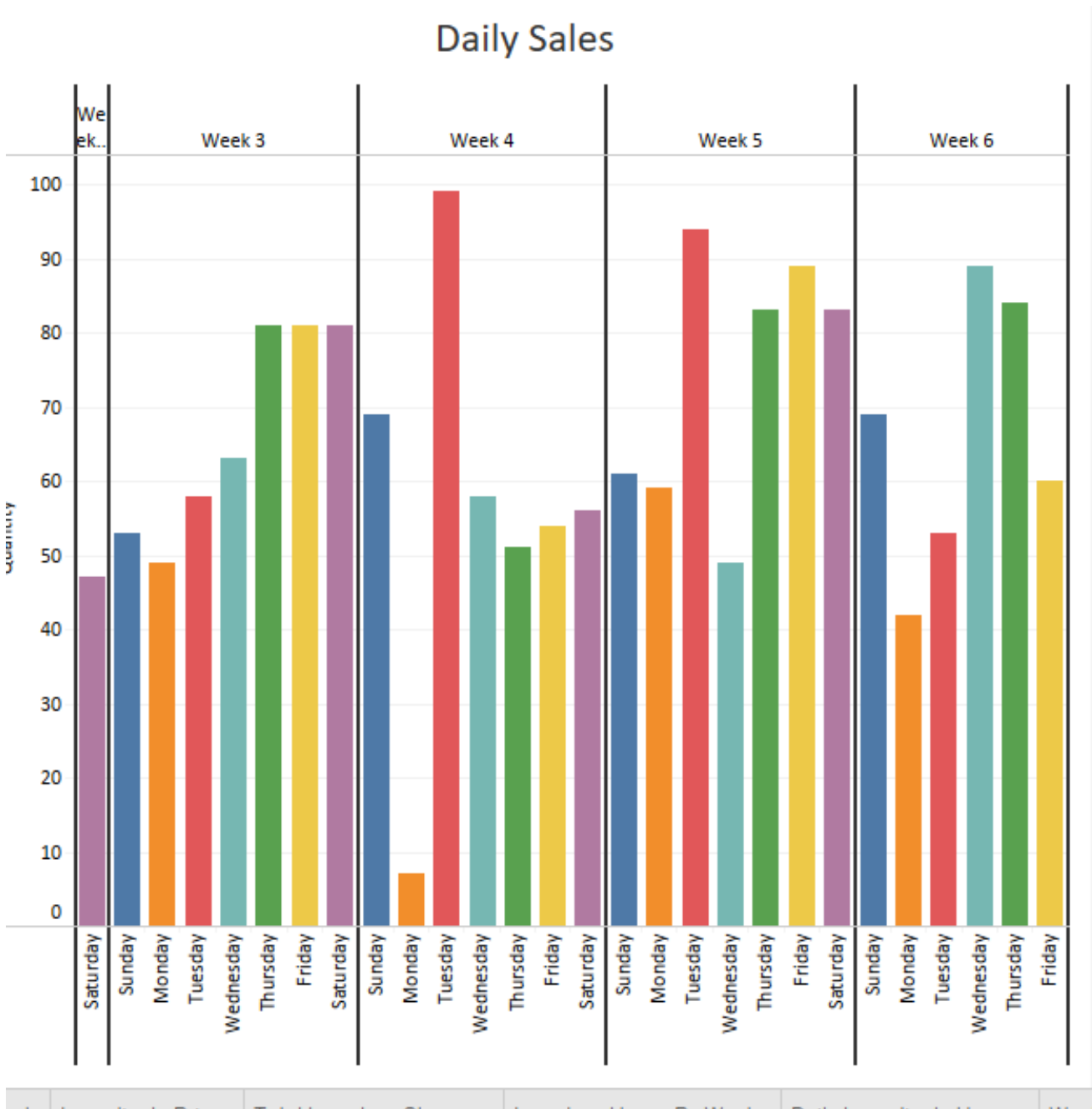
MOST SELING ITEM



From the visualization beside, it can be observed that BBQ Chicken is the most popular pizza type, while Cheese is the least popular. Additionally, Chicken Wings are the most popular side, whereas Garlic Bread is the least popular. It's noted that the dessert category sees fewer orders overall.

From this analysis, it can be concluded that we should focus on maintaining inventory levels for BBQ Chicken and Donair pizza ingredients to ensure they are always available. Conversely, for Cheese pizza, the inventory levels should be reduced.

Furthermore, dessert ingredients should only be stocked in small quantities due to their low sales volume.



DAILY SALES ANALYSIS

From the visualization beside, it can be observed that sales typically increase from Tuesday to Saturday, while Mondays usually experience a decrease in sales, sometimes significantly.

From this analysis, it can be concluded that it is advisable to place ingredient orders every Monday to anticipate the surge in orders on Tuesday. Additionally, it is important to conduct real-time inventory checks on Mondays to avoid discrepancies between the system and actual stock levels.

Inventory Data

ing_name	total_inventory_weight	total_inventory_cost	Price_pergram
Bacon	10000	\$ 7.310,00	\$ 0,7310
BBQ sauce	18000	\$ 1.996,00	\$ 0,1109
Caesar dressing	7600	\$ 3.530,00	\$ 0,4645
Cheesecake	5000	\$ 930,00	\$ 0,1860
Chicken	10000	\$ 6.250,00	\$ 0,6250
Chicken wings	60000	\$ 65.830,00	\$ 1,0972
Chocolate brownie	5000	\$ 930,00	\$ 0,1860
Croutons	2500	\$ 1.050,00	\$ 0,4200
Donair meat	10000	\$ 7.144,00	\$ 0,7144
Donair sauce	18000	\$ 1.996,00	\$ 0,1109
Garlic herb butter	3000	\$ 5.212,00	\$ 1,7373
Ham	15000	\$ 9.735,00	\$ 0,6490
Mozzarella	15000	\$ 8.670,00	\$ 0,5780
Onion	20000	\$ 9.940,00	\$ 0,4970
Parmesan	2500	\$ 1.465,00	\$ 0,5860
Pepperoni	10000	\$ 9.288,00	\$ 0,9288
Peppers	5000	\$ 1.725,00	\$ 0,3450
Pineapple	15000	\$ 1.929,00	\$ 0,1286
Pizza dough ball (8 pack)	40000	\$ 9.180,00	\$ 0,2295
Ranch sauce	18000	\$ 1.996,00	\$ 0,1109
Romaine lettuce	7500	\$ 1.379,00	\$ 0,1839
Tomato sauce	22500	\$ 1.945,00	\$ 0,0864
Tomatoes	15000	\$ 5.670,00	\$ 0,3780
Total	334600	\$ 165.100,00	

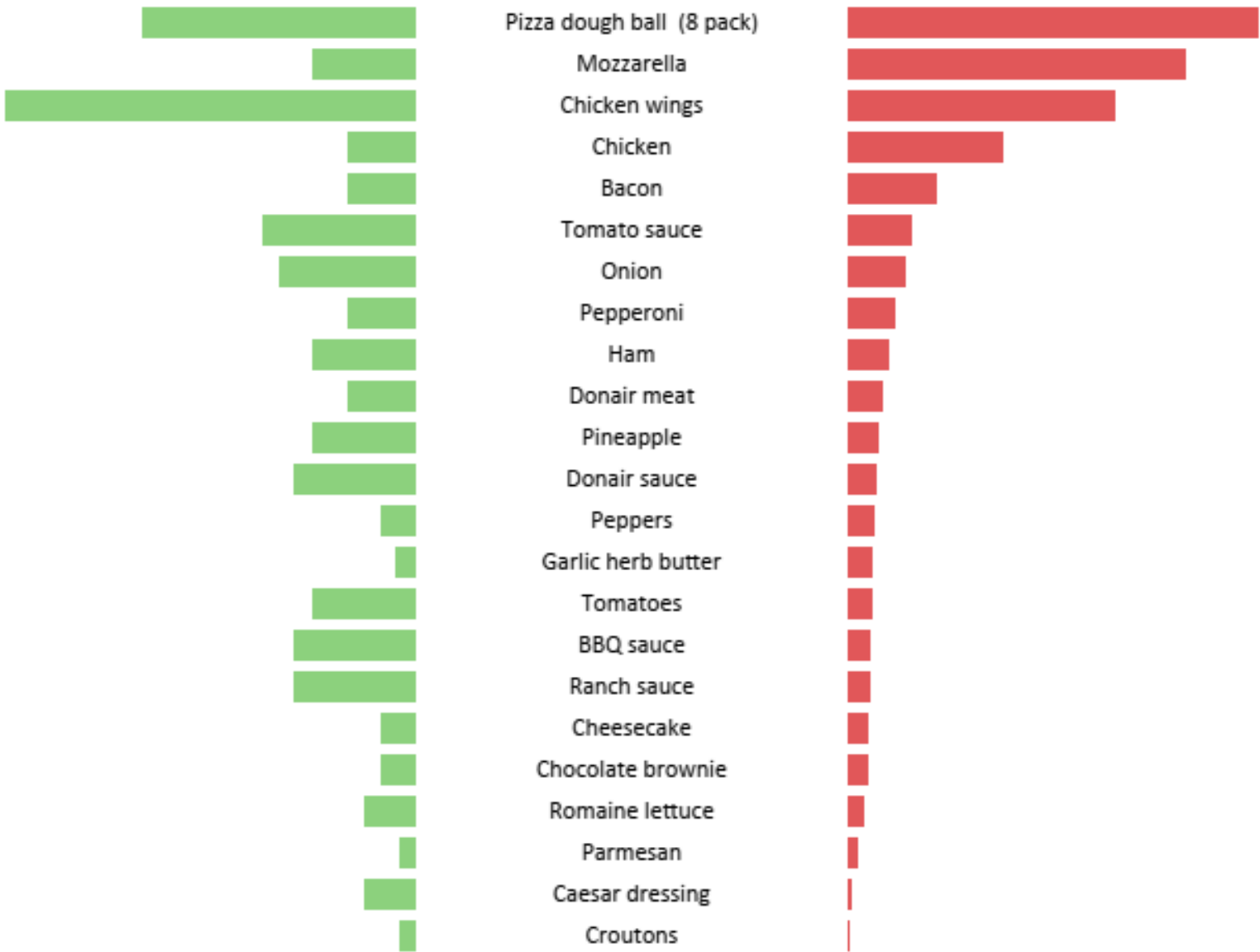
The table on the side contains a list of all the raw materials in stock.

Inventory Out

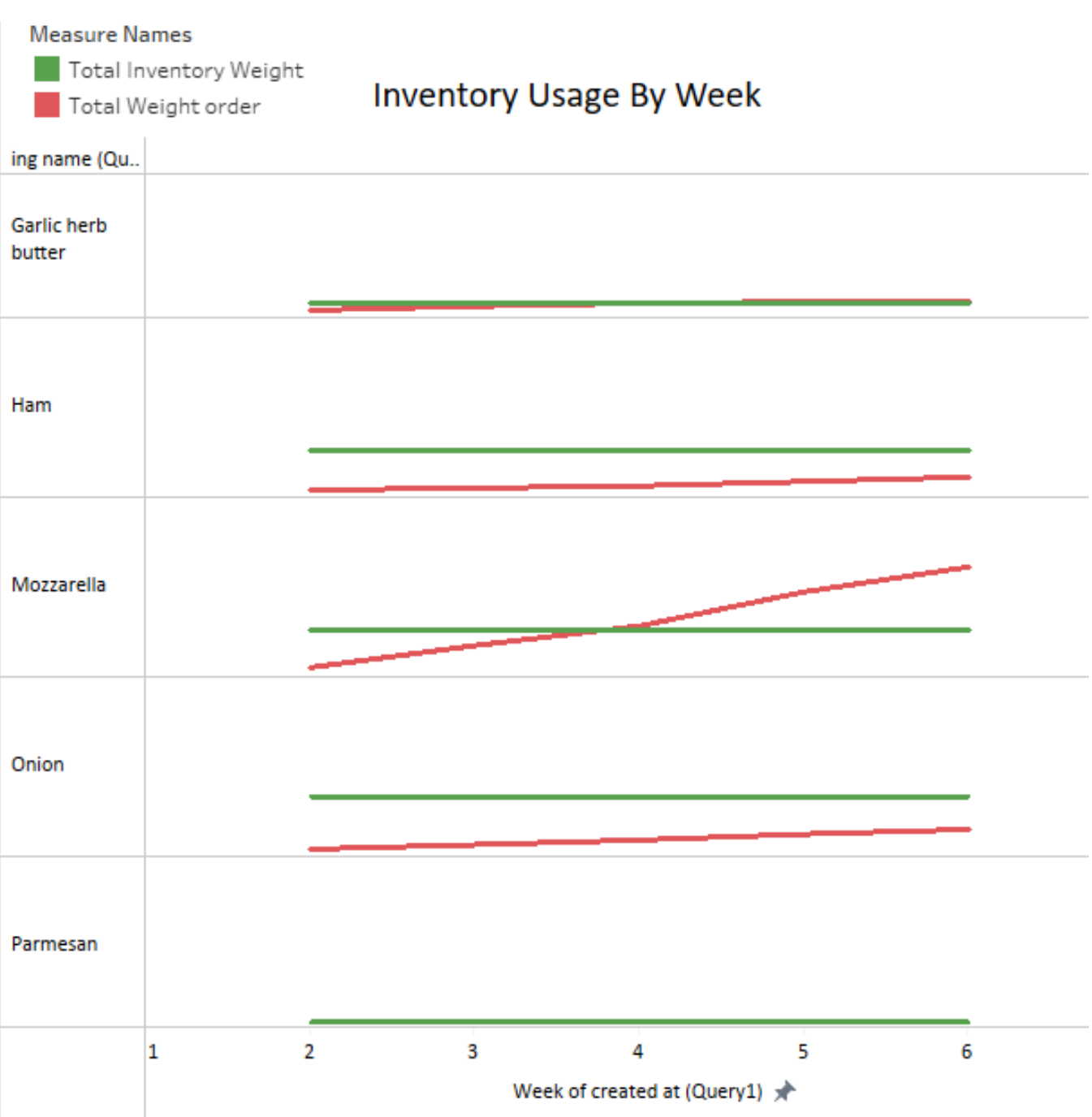
ing_name	total_order_quantity	total_weight_order	weight_price_pergram	total_cost_out
Bacon	100	11850	\$ 0,73	\$ 8.662,35
BBQ sauce	56	4020	\$ 0,11	\$ 445,77
Caesar dressing	33	330	\$ 0,46	\$ 153,28
Cheesecake	23	3450	\$ 0,19	\$ 641,70
Chicken	100	12860	\$ 0,63	\$ 8.037,50
Chicken wings	74	22200	\$ 1,10	\$ 24.357,10
Chocolate brownie	22	3300	\$ 0,19	\$ 613,80
Croutons	33	165	\$ 0,42	\$ 69,30
Donair meat	49	5590	\$ 0,71	\$ 3.993,50
Donair sauce	63	4540	\$ 0,11	\$ 503,44
Garlic herb butter	92	4220	\$ 1,74	\$ 7.331,55
Ham	47	5950	\$ 0,65	\$ 3.861,55
Mozzarella	276	46470	\$ 0,58	\$ 26.859,66
Onion	119	9040	\$ 0,50	\$ 4.492,88
Parmesan	33	330	\$ 0,59	\$ 193,38
Pepperoni	52	6580	\$ 0,93	\$ 6.111,50
Peppers	56	4250	\$ 0,35	\$ 1.466,25
Pineapple	47	5010	\$ 0,13	\$ 644,29
Pizza dough ball (8 pack)	294	71850	\$ 0,23	\$ 16.489,58
Ranch sauce	44	3840	\$ 0,11	\$ 425,81
Romaine lettuce	33	1650	\$ 0,18	\$ 303,38
Tomato sauce	113	9380	\$ 0,09	\$ 810,85
Tomatoes	63	4160	\$ 0,38	\$ 1.572,48
Total	1822	241035		\$ 118.040,89

The table on the side is a table of all the raw materials that have been deducted from inventory.

ingredients usage



Based on the data of overall material usage, it can be seen that there are still many materials experiencing both surplus and shortage of stock. Therefore, a more thorough review of the data usage is necessary.

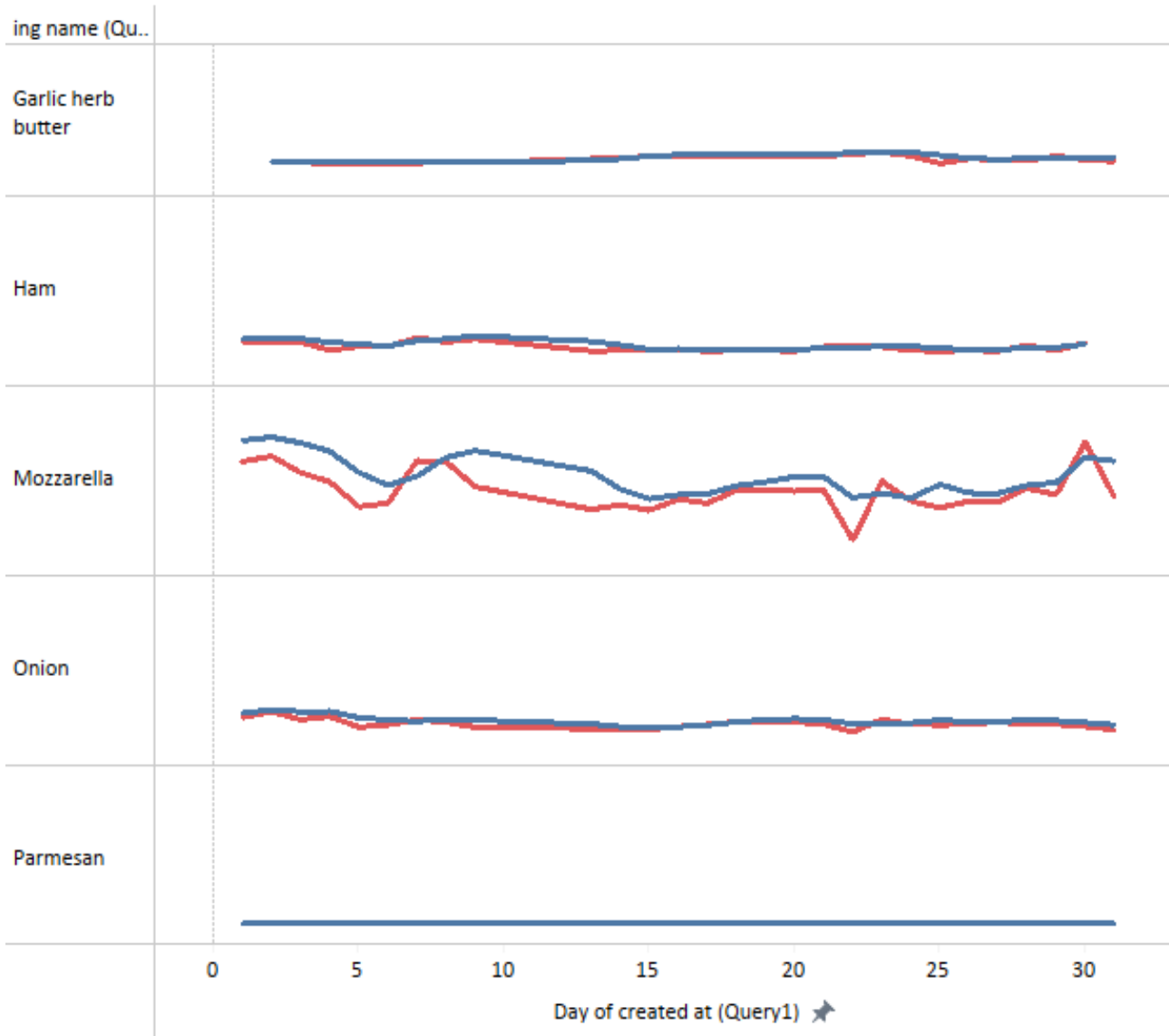


From the weekly usage data in conjunction with the overall data, it can be observed how many raw materials are deficient in inventory and how many are in surplus. Based on the data provided, it can be inferred that it's preferable to procure raw materials on a weekly basis rather than monthly, as it can affect the quality of the materials. Additionally, this approach helps in reducing losses due to spoilage and other factors related to excess raw materials. To determine the quantity of raw materials to purchase weekly, it is necessary to conduct a moving average check on daily material usage on the next slide

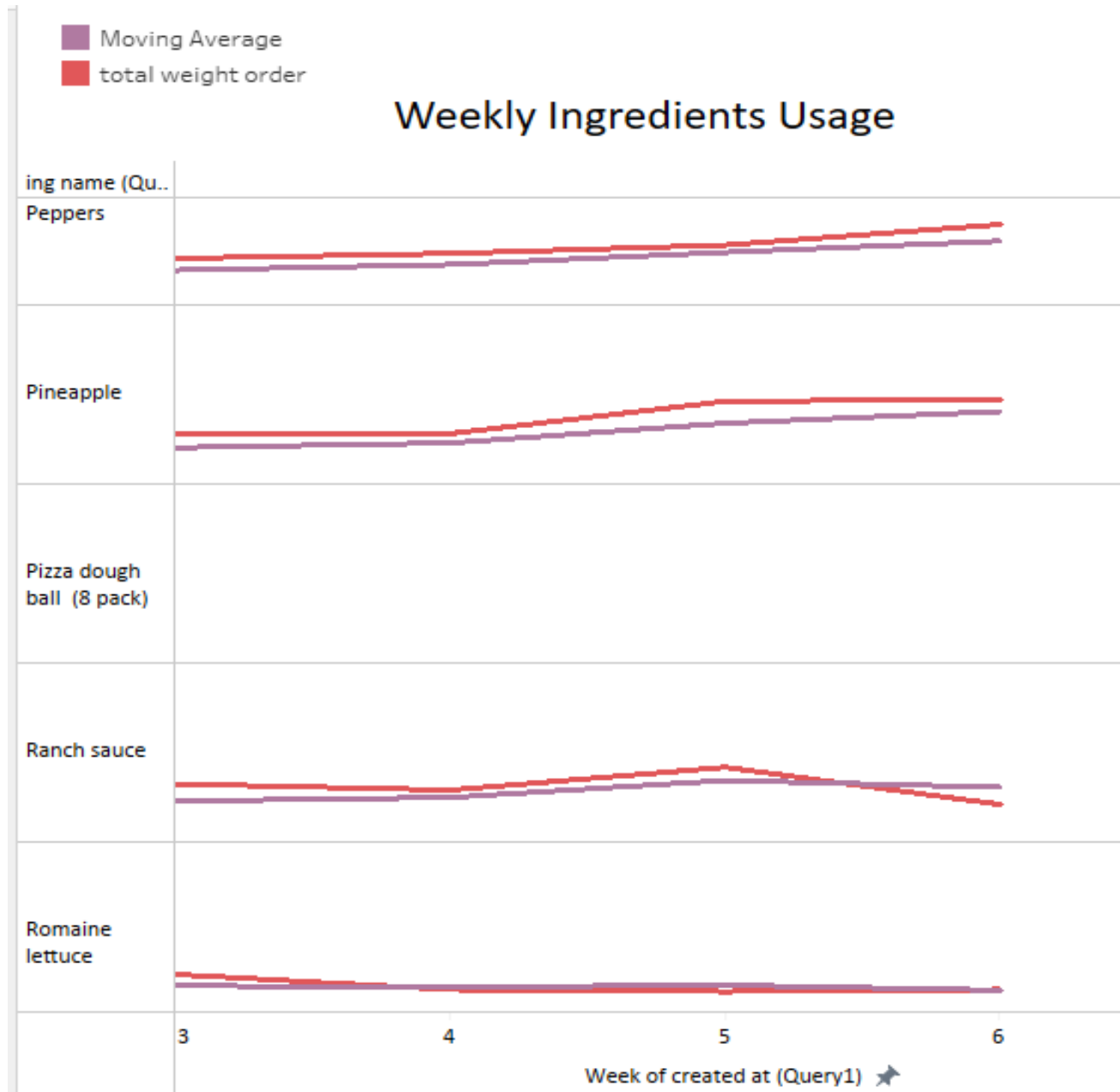
Measure Names

- AVG Weight order
- total weight order

Daily Ingredients Usage



From the data provided, it is evident that there are some materials with unstable usage patterns. Therefore, to determine the ideal stock quantity for a weekly timeframe, it is necessary to find the highest weekly moving average value and add 30% to ensure the availability of materials in case of sudden spikes in orders.



The data provided represents weekly moving averages, from which the highest weekly moving average value will be selected and increased by 30% to replenish the weekly stock for greater security.

I am confident that implementing this weekly stock method will significantly enhance cash flow, allowing for increased cash reserves and improved company profitability.