

# LOGISTICS REPORT



***Presented by- Syed Arif***



About

To showcase my data analytics skills, I have completed a comprehensive Logistics Dashboard using Power BI. This dashboard analyzes over 10,000 rows of data across 10 columns to provide critical insights into various logistics operations, including total orders, quantities sold, customer data, and shipment details.

1. About Dataset:

The dataset includes the following columns: Date, Order, Quantity, Customer, State, Category, Sub-Category, Ship Mode, City, and State/Region. The data spans from 2014 to 2017, providing a robust foundation for trend analysis and operational insights.

- Date
  - Order
  - Quantity
  - Customer
  - Department
- State
  - Category
  - Sub Category
  - Ship Mode
  - City
  - State
  - Region

Q 2. Tools Used for this Project

In this Logistics Analysis project, I utilized a combination of powerful tools to ensure a comprehensive and visually appealing analysis:

- 1. Power BI :** As always, I leveraged Power BI for data visualization and analysis. Its robust capabilities allowed me to create interactive and insightful dashboards that highlight key trends and patterns in employee attrition.

**2. Excel :** Excel was instrumental in data preparation. I used it for data profiling, cleaning, and transformation to ensure that the dataset was ready for detailed analysis in Power BI.

**3.PowerPoint :**Some of the graphics and visual elements were created using PowerPoint, which helped in crafting a clear and professional presentation of the findings.

**4.Canva :** Canva was used for designing certain elements, enhancing the overall aesthetic appeal of the presentation and dashboards.

**5.ChatGPT :** ChatGPT assisted in generating content and refining the narrative for the project documentation, ensuring clarity and coherence in the presentation of insights.



Why This Project is Important?

The Logistics Dashboard project plays a crucial role in enhancing operational efficiency, identifying key sales trends, and enabling data-driven decision-making. By leveraging the powerful capabilities of Power BI, this dashboard transforms raw data into actionable insights, driving improvements in logistics management and customer satisfaction.

This project is significant because it:

1. Enhanced Operational Efficiency

The dashboard helps quickly identify bottlenecks and inefficiencies within the logistics process. By visualizing data trends and operational metrics, it provides insights that allow for the streamlining of workflows, reducing delays, and optimizing resource utilization. This leads to a smoother, more efficient operation overall.

2. Identification of Key Sales Trends

By analyzing the sales data over time, the dashboard uncovers patterns and trends that might otherwise go unnoticed. This information is invaluable for inventory management, as it helps predict demand, plan stock levels, and reduce the risk of overstocking or stockouts. Capitalizing on identified peak sales periods can also maximize revenue opportunities.

3. Data-Driven Decision Making

The dashboard provides accurate, up-to-date data, enabling stakeholders to make informed decisions based on real-time insights. This reduces reliance on guesswork or intuition, leading to more strategic and effective business decisions. It supports better forecasting, budgeting, and planning activities.

4. Improved Logistics Management

With a clear view of shipping modes, order volumes, and customer distribution, the dashboard helps optimize logistics strategies. It ensures that shipments are handled in the most efficient and cost-effective manner possible. This optimization can lead to faster delivery times, lower shipping costs, and improved service levels.

5. Customer Satisfaction

Efficient logistics and timely deliveries are crucial for maintaining high levels of customer satisfaction. The dashboard helps ensure that orders are processed and delivered promptly, leading to a better customer experience. Satisfied customers are more likely to become repeat buyers and recommend the service to others.

This logistics dashboard, project underscores the transformative impact of using Power BI for business intelligence, driving better outcomes for operations and customer service. It highlights the importance of data analytics in modern logistics management, paving the way for continuous improvement and competitive advantage.

Insights

Our analysis reveals a total of 3,000 orders and 49,000 units sold, highlighting significant demand and volume. Customer insights show 978 unique customers, while shipping data indicates optimal periods for different shipping modes. Top-performing categories include Office Supplies, Technology, and Furniture, with Texas leading in regional sales. Sales peaked in December 2017, emphasizing the importance of strategic planning during the holiday season.

1. Total Orders Count Unit Sold:

Q 1. How many Total orders ?

3000

Total orders

To address the question of the overall sales volume, the analysis reveals that there are 3,000 total orders. This metric helps in understanding the total demand and frequency of purchases over the analyzed period.

Q 2. How many are Quantity sold ?

4900

Quantity Sold

To determine the total number of units sold, the data indicates that 49,000 units were sold. This highlights the volume of goods moved and is crucial for inventory and supply chain management..

Q 3. What is Customer Insights?

978

Unique customers

To determine the number of customers engaged, the data shows a total of 978 unique customers. This information is vital for understanding the customer base and potential market reach.



2. Order Distribution Insights:

Q2. What is the order distribution by ship mode ?

Ship Mode	January	February	March	April	May	June	July	August	September	October	November	December
First Class	886	1012	1246	1357	881	1068	508	1073	1244	1096	784	840
Same Day	894	719	909	1001	1051	1383	958	1057	1293	552	976	1085
Second Class	870	1018	965	841	1592	1202	1087	1205	892	961	1218	1237
Standard Class	1273	392	964	550	1166	1376	1323	807	1267	1419	933	1325

To understand shipping preferences, the data indicates:

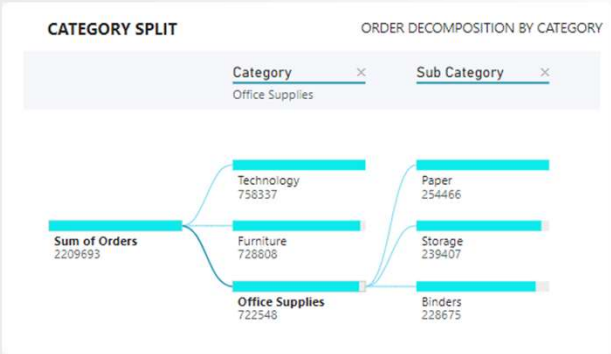
- First Class:** Highest orders in April; lowest in July.
- Same Day:** Highest orders in June; lowest in October.
- Second Class:** Highest orders in May; lowest in January.
- Standard Class:** Highest orders in October with 1,419 orders; lowest in February with 392 orders.

The analysis of shipping preferences revels distinct patterns across different shipping modes. First Class shipments peaked in April and saw the lowest volume in July, indicating seasonal variations. Same Day shipping experienced the highest orders in June and the lowest in October, reflecting urgent delivery trends. Second Class shipping had its peak in May and its lowest in January, while Standard Class shipping was most utilized in October with 1,419 orders and least in February with 392 orders. These insights are crucial for optimizing shipping strategies, ensuring efficient delivery operations, and meeting customer expectations effectively.

5. Category and Sub-Category Analysis

Q1. What is the Top Selling Category

The analysis identifies **Office Supplies**, **Technology**, and **Furniture** as the top-performing categories. Understanding which categories drive the most sales is crucial for efficient inventory planning and effective marketing strategies. This knowledge helps businesses prioritize stock levels, tailor promotional efforts, and better meet customer demand, ultimately enhancing sales performance and operational efficiency.



The category analysis identifies Office Supplies, Technology, and Furniture as the top-performing categories, which is vital for efficient inventory planning and targeted marketing strategies. In the sub-category analysis, Office Supplies show that papers are the most sold product. In the Technology category, phones have impressive sales, outperforming other sub-categories. For Furniture, chairs have the highest sales count. This detailed analysis allows for pinpointing specific products that significantly contribute to overall sales, facilitating targeted promotions and optimal inventory stocking.



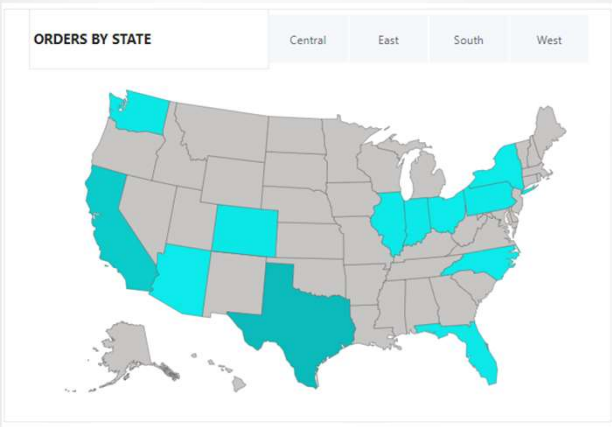
6. Regional Sales Analysis Based Insights:

Q1. What is the Top & Lowest Region by Sales.

To pinpoint regional performance:

- **Highest Sales:** Texas
- **Lowest Sales:** New York, Washington, etc.

By analyzing sales data by state, we can identify high-performing regions and regions that may need targeted marketing efforts. Texas shows the highest sales, indicating strong market presence, while states like New York and Washington show lower sales, suggesting opportunities for market penetration and growth strategies.



The analysis reveals that the highest attrition occurs among employees with a tenure range of 0-4 years. Specifically, 141 employees in this tenure range have left the organization, accounting for 59% of the total attrition of 237.

## 7. Sales Trend by Date:

### Q1. Which month is peak by sales trend ?

Analyzing sales trends by date reveals significant insights into consumer behavior and seasonal patterns. For instance, December 2017 stands out with a notable spike in sales, totaling 50,000 units purchased by 1,000 customers. This surge indicates a clear seasonal trend where sales peak during the holiday season, driven by increased consumer spending and gift purchases.

To capitalize on such peak periods effectively, businesses should consider several strategic measures:

- **Inventory Management :**

Anticipate the heightened demand by ensuring adequate stock levels of popular products. Consider leveraging forecasting techniques and historical data to optimize inventory planning.

- **Marketing Strategies :**

Tailor marketing campaigns to align with seasonal themes and consumer preferences. Highlight promotions, discounts, and gift ideas to attract holiday shoppers and maximize sales potential.

- **Customer Engagement :**

Enhance customer experience during peak periods by offering seamless purchasing options, such as online ordering, expedited shipping, or extended customer service hours. This proactive approach can foster customer loyalty and satisfaction.

- **Post-Holiday Strategy :**

Plan for post-holiday sales and promotions to sustain momentum and capitalize on lingering consumer interest. Consider strategies such as clearance sales, bundled offers, or loyalty rewards to maintain sales momentum into the new year.

By leveraging insights from sales trends by date, businesses can not only optimize operational efficiency but also strategically position themselves to capitalize on seasonal peaks, ultimately driving growth and profitability throughout the year.



## 8. Calculations & Insights:

### Calculations and Insights:

- **Total Orders and Quantity Sold :**

By aggregating the 'Order' and 'Quantity' columns, we derive comprehensive metrics of transaction volume and product movement, providing a clear picture of sales activity.

- **Customer Count :**

Utilizing unique identifiers in the 'Customer' column, we ascertain the distinct number of customers engaged, essential for understanding consumer reach and market penetration.

- **Ship Mode Analysis :**

Through meticulous grouping of data by 'Ship Mode' and date, we uncover nuanced trends in shipping preferences over time, enabling strategic adjustments in logistics and customer service to optimize delivery efficiency.

- **Category and Sub-Category Sales :**

Aggregating sales data by product category and sub-category unveils high-performing segments, empowering targeted marketing strategies and inventory management decisions to capitalize on lucrative market niches.

- **Regional Sales Trends :**

Leveraging date filters, we discern evolving sales patterns across different regions, facilitating informed regional marketing strategies and resource allocation to maximize market share and revenue growth.

- **Date Analysis :**

By dissecting monthly sales trends, we pinpoint peak periods and seasonal fluctuations, guiding proactive marketing campaigns and operational planning to enhance profitability and customer satisfaction.

These meticulous calculations and insightful analyses not only provide a comprehensive overview of sales dynamics but also equip businesses with actionable intelligence to drive strategic decision-making and sustainable growth in competitive markets.



## Project Summary:

This project involves a detailed analysis of sales data, revealing insights such as total orders of 3,000 resulting in 49,000 units sold, engagement with 978 unique customers, and detailed shipping preferences across different modes. It identifies top-selling products by category and highlights regional sales performance, with December 2017 standing out as a peak sales period.

### Why This Project is Important

This analysis provides actionable insights for optimizing operations, enhancing customer satisfaction, and guiding strategic decisions. By understanding sales dynamics, customer behavior, and regional trends, businesses can allocate resources efficiently, streamline logistics, and tailor marketing efforts to achieve sustainable growth in competitive markets.

### Key Insights for Logistics:

#### Total Orders and Quantity Sold:

- Analyzed 3,000 orders resulting 49,000 units sold, providing a clear picture of sales volume

#### Customer Insights:

- Engaged with 978 unique customers, highlighting market reach and potential for customer relationship management

#### Order Distribution by Ship Mode:

- First Class: Highest orders in April; lowest in July.
- Same Day: Highest orders in June; lowest in October.
- Second Class: Highest orders in May; lowest in January.
- Standard Class: Peak orders in October (1,419 orders); trough in February (392 orders), guiding logistics and delivery strategy.

#### Category and Sub-Category Analysis:

- Office Supplies: Papers lead in sales.
- Technology: Phones show strong performance.
- Furniture: Chairs are the top-selling category, influencing inventory management and marketing strategies.

#### Regional Sales Insights:

- Highest sales observed in Texas, highlighting strong market presence.
- Identified growth opportunities in regions like New York and Washington.

#### Sales Trend by Date Insights:

- December 2017 marked as a peak sales period with 50,000 units sold and 1,000 customers, emphasizing seasonal sales patterns and the need for strategic planning.



## Recommendations Based on Insights:

### Optimize Shipping Schedules :

Tailor shipping schedules to capitalize on peak demand periods identified in the analysis. For instance, prioritize First Class shipments in April and ramp up Standard Class in October, aligning with historical high-order volumes. This strategic adjustment will enhance delivery efficiency, minimize delays, and improve overall customer satisfaction by ensuring timely product arrivals during peak seasons.

### Enhance Inventory Management :

Strategically manage inventory by focusing on high-demand products identified through the analysis. Prioritize stocking popular items like phones in the Technology category, chairs in Furniture, and papers in Office Supplies. This proactive approach ensures adequate stock levels to meet customer demands, reduces stockouts, and optimizes inventory turnover, thereby enhancing operational efficiency and maximizing sales opportunities.

### Targeted Marketing Efforts :

Develop targeted marketing campaigns tailored to regions with lower sales performance, such as New York and Washington. Utilize insights from regional sales analysis to tailor messaging and promotions that resonate with local preferences and consumer behavior. By addressing specific market challenges and consumer needs, businesses can increase brand visibility, stimulate customer engagement, and drive sales growth in previously underperforming markets.

### Plan for Peak Periods :

Anticipate and prepare for peak sales periods, particularly the heightened demand observed in December. Ensure sufficient inventory levels and manpower to handle increased order volumes effectively. Implement proactive planning strategies such as pre-season ordering, staffing adjustments, and streamlined operational processes to mitigate risks of stock shortages, operational bottlenecks, and customer dissatisfaction during peak periods.

These recommendations not only leverage insights derived from the analysis but also provide actionable strategies to optimize operations, enhance customer engagement, and capitalize on market opportunities. By implementing these strategies, businesses can strengthen their competitive position, foster sustainable growth, and achieve long-term success in dynamic and competitive market environments.



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Thank You

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