Power Bi Analysis of Axon

Methodology for Data Analysis:

1-Data Cleaning: The initial phase of the analysis involved data cleaning procedures. Data types of various columns were transformed to appropriate formats, ensuring uniformity and consistency. Moreover, missing or null attributes were formatted to achieve 100% data validity. Recognizing the significance of normalization, efforts were made to reduce dependencies among critical columns. This step was crucial to enhancing data integrity and enabling seamless data retrieval from the tables.

2- Data Modeling: The underlying data model was meticulously crafted utilizing a Snowflake schema. This model was designed to establish relationships among tables, with a specific focus on the "Order Details" table as the central facts table. There were many sub-categorized tables within the table so I have prepared one Calender table, generated using the "calendarauto" function. This approach facilitated a more streamlined analysis of Year-to-Date (YTD) and Month-to-Date (MTD) data, enabling a more granular

3- Dashboard Development: The visualization and interpretation of data were streamlined through the development of an interactive dashboard. Key features of the dashboard include slicers allowing dynamic selection of data across three years, enhancing user engagement and analytical flexibility. The dashboard was strategically designed to incorporate essential plots and charts, providing comprehensive insights necessary for informed decision-making

In the course of our Power BI analysis, the following insights have emerged:

1. Total Inventory Expenditure: Axon company allocated a significant budget of 30.53 million towards acquiring inventory,

2. Following a comprehensive analysis, the total sales revenue accrued until the year 2005 amounted to 2.08 million dollars. Notably, the pinnacle of sales was observed in the year 2004, only to be followed by a substantial decline in 2005, indicating a significant reduction in sales figures.

3. Shipping Operations: The analysis revealed an average shipping time of 4 days for product deliveries, showcasing the company's efficiency in logistics management.

4. Year-To-Date Sales: The Year-To-Date sales as of the current analysis stand at 404.15k, indicating the on-going revenue generation.

5. Seasonal Sales Patterns: Notably, November emerged as the peak month for sales. To capitalize on this trend, strategic initiatives, such as targeted promotions, special discounts, and customer-specific offers, can be implemented to stimulate sales during other months.

6. Day Sales Patterns: Regarding the sales distribution across days, our analysis indicates that Wednesday stands out as the day with the highest sales, while Sunday registers the lowest sales figures.

7. Vendor Sales Contribution: Notably, the product vendor "Exoto Designs" emerged as the top contributor, generating a substantial sales revenue of precisely 1,97,478.97.

8. Product Line Sales Pattern: Further analysis within the product lines revealed that "Classic Cars" holds the dominant position, accounting for 40.62% of the total sales and making a significant contribution to our overall revenue.

9. Geographically Sales Pattern: Our top-performing markets include the United States, Spain, and France, which have consistently displayed robust sales figures, underscoring their significance in our global sales strategy.

10. Employee performance, Employee Number 1323 has demonstrated exceptional sales acumen, emerging as the highest revenue generator. Conversely, Employee Number 1337 has contributed the lowest sales figures within our team. These findings shed light on the varying levels of effectiveness among our employees in driving sales outcomes.

In the course of our SQL analysis, the following insights have emerged:

1. \*\*Top Performing Customers\*\*: Customer numbers 141, 124, and 114 have demonstrated the highest sales performance during the analyzed period.

2. \*\*Peak Order Year\*\*: The year 2004 recorded the highest order volume with 1421 orders processed.

3. \*\*Customer Base\*\*: The total number of customers remained relatively consistent over 2 years, with approximately 1421 customers in 2004, 1052 in 2003, but dropped with a fig of 523 in 2005.

4. \*\*Decline in Customer Acquisition\*\*: The year 2005 showed a significant drop in the number of distinct customers, indicating a decline in new customer acquisition during that period.

5. \*\*Popular Product\*\*: The product with the Product Code "S18\_3232," identified as the 1992 Ferrari 360 Spider Red, emerged as the most frequently ordered item.