Case Study**: Analyze data to find out the root cause of declining sales of AtliQ Hardware**

Domain: Marketing

Company Overview:

AtliQ Hardware is a computer hardware and peripherals supplier based in India with its headquarters in New Delhi and regional offices throughout India. Currently it is operational in Central, North and South regions of India only. It supplies to stores such as Excel stores, ElectricalSara stores, Nomad stores, Surge stores, etc.

Problem Statement:

Bhavin Patel who is a Sales Director in this company is facing lots of challenges in terms of sales. In this dynamically changing market, tracking of growing sales has become a major issue and therefore lost track of the insights of this business. During the meetings with the managers of the regional officers, they try to paint a rosy picture of the performance of their business, without giving the actual raw insights. Mr. Patel knows that the overall sales are declining according to his analysis and he wants to know the root cause but is not getting the real picture. When asking for insights he is getting huge number of excel files but not the simple insights. He is more interested in a reports dashboard that will give him the true insights in simplest way understandable.

Scenario:

I am a data analyst in the supply chain team who joined AtliQ Hardwares recently. I have been briefed about the task in the Sales Director meeting. I am to play the role of the new data analyst who is excited to build this dashboard and perform the following task:

Task 1:

1. Create the metrics to show total revenue and sales.
2. Create a dashboard according to the requirements to show top selling products and top performing markets.
3. Create relevant insights to show revenue of each market while highlighting top revenue producing markets or products.

After a meeting with stakeholders:

After a meeting of Sales Director and Stakeholders, we received feedback that the report dashboard did not provide enough information as to why the overall sales are declining. They want a simple visual dashboard with most important information. With this feedback I will make a more detailed dashboard.

Task 2:

1. KPI dashboard to define your key important indicators.
2. Revenue and Sales quantity by zone
3. Revenue Trend
4. Revenue by market and sales quantity

5. Profit margin by zones and markets
6. Revenue contribution by market
7. Profit contribution by market
8. Comparison of Revenue with last year
9. Revenue Trend yearly and all four years
10. Identify least revenue producing customers and products
11. Identify top revenue giving markets
12. Profit growth by months and years
13. Identify the products going into loss
14. Identify whether markets are meeting their profit targets

Roadmap:

Data cleaning and filtering:

- MySQL
- PowerQuery

Visualization:

- Power BI

Actions undertaken:

1. Cleaned and filtered data through MySQL
2. Converted raw data into actionable insights
3. Improved reports by DAX formulas
4. Improved overall decision-making by designing and developing reports and providing invaluable insights
5. Comprehended business requirements in a BI context
6. Improved insights by providing KPIs outlined with the project
7. Developed sales reports with the knowledge of MySQL, PowerQuery, and PowerBI

Insights found:

1. Most revenue producing year was 2018 and least producing was 2017. However overall sales have declines from 2017 to 2020.
2. 2019 has the most profit margin and 2020 has the least which indicates the declining performance of company.
3. Revenue trends shows that revenue overall revenue has decreased by 42% from 26 million to 15 million.
4. Profit margin of 'Brick and mortar' customers is more than 65%
5. 'Brick and mortar' customers contribute to profits more than three times than 'E-commerce' customers.
6. North zones produce 68.5% of revenue while South zone produces only 5%.
7. Overall profit contribution by Delhi NCR is the most but Surat has the most profit margin.
8. In Central India, Mumbai has most profit contribution but Bhopal has the most profit margin of 4% while Mumbai has 3%.

9. In North India, Delhi contributes most towards its profit but most profit margin is of Surat at 5% while Delhi at 2%.
10. In South India, Kochi contributes most towards its profit but most profit margin is of Bhubaneshwar at 4% while Kochi at 3.7%.
11. In 2020, Mumbai's profit contribution was 23.9% but most profit margin was of Bhubaneshwar at 10%.
12. Most sales is done by Delhi in all 4 years.
13. Most sales occur during December-January
14. Product090 has the most amazing performance with 5% profit margin
15. The same product has been giving the most revenue throughout 4 years.
16. ElectricalSara store contributes to at least 37% profit margin while Flawless -30% and Control -22% and Sound -13%.
17. Most revenue contribution is done by ElectricalSara i.e., 42%
18. For each year the previous year's revenue seems better.

Summary:

- Allocate more products to stores that have good sales and making good revenue
- Increase sales in poor performing zones by lucrative offers, discounts, advertisements and promotion campaigns.
- Replenish the best-selling products as soon as they get over
- Study stores that are doing well and use that analysis to improve the poor stores.
- Adjusting sales more accurately according to store performance
- Manipulating the budget according to profit analysis
- Use of this analysis by teams and departments to streamline their efforts and goals.
- Increase the average order value of the negative revenue producing products
- Improving inventory visibility by product management of less profit margin products
- Increase of prices on certain products to increase overall profit margin
- negotiating better contracts with your suppliers to reduce the costs of products that are not doing good and widen the margins
- Consider personalized discounts for markets or products with negative performance
- Analysing the products with less revenue and further elimination of waste by **DOWNTIME**:
  D – Defects (defective products due to issues like quality control, poor handling, etc.)
  O – Overproduction (ordering or making more merchandise than necessary)
  W – Waiting (unplanned downtime, absences, unbalanced workloads, etc.)
  N – Not utilizing talent (not fully leveraging the skills or potential of your team, having employees do the wrong tasks, etc.)
  T – Transportation (unnecessary movements of products — e.g., unnecessary shipping, inefficient movement from one store to the next)
  I – Inventory excess (surplus or dead stock sitting in your backroom)
  M – Motion waste (unnecessary movements of people — e.g., inefficient store layout)
  E – Excess processing (having to process, return, or repair products that don't meet the customer's needs)
- Get more sales from your existing customers as they are more profitable than acquiring new ones.