CUSTOMER SEGMENTATION AND PROFITABILITY ANALYSIS DASHBOARD FOR A B2B SALES OPERATION

1. Background and Problem Statement:

A mid-sized manufacturing company serving B2B clients across multiple industries wanted to better understand the profitability of its customer base. Although overall revenue was growing, management lacked insight into which clients were actually contributing to profits. Sales efforts were being allocated uniformly, ignoring customer behavior and value. The company needed a **Power BI dashboard** to segment customers based on purchase behavior and analyze revenue contribution and profitability by segment.

2. Objectives:

- To segment B2B customers using RFM (Recency, Frequency, Monetary) analysis

- To identify high-value, loyal customers versus low-frequency, low-profit accounts

- To calculate customer-level contribution margins and visualize sales team performance

- To support strategic decisions in customer retention, sales targeting, and discounting

3. Methodology:

Data Sources and Integration:

- **ERP Database Export:** Customer invoices (amount, date, margin), customer metadata

- **CRM System:** Sales rep mapping, customer tier data, interaction logs

- **Power BI Tools Used:** Power Query, DAX, Matrix Visuals, Custom Slicers

Steps and Features:

1. **Data Preparation:**

   o Consolidated invoice data from 18 months

   o Created RFM scores for each customer

   o Calculated Gross Profit = Revenue – Cost of Goods Sold (COGS)

2. **Dashboard Features:**

- o **Customer Segmentation Page:**
  - RFM segmentation matrix: New, Loyal, At-Risk, Low Value
  - Average revenue and margin per segment
- o **Profitability Analysis Page:**
  - Customer-wise margin %, sales volume, and cost breakdown
  - Segment-wise contribution to total profit
- o **Sales Rep Performance Page:**
  - Customers managed vs. revenue contributed
  - Retention rate and margin by rep
- o Interactive filters: Region, Industry, Rep, Customer Tier

4. Results:

- Identified that **15% of customers contributed over 70% of gross profit**
- Flagged **24% of customers with negative margins** due to excessive discounts or high servicing costs
- Top-tier customers had **5x frequency** and **3.2x revenue** compared to low-tier segments
- Sales reps reallocated efforts toward higher-LTV customers based on dashboard data
- Customer retention strategy revamped, leading to a **12% increase in repeat purchase rate** in 3 months

5. Interpretation and Insights:

- RFM segmentation revealed a significant mismatch between revenue and profitability
- Sales time spent on unprofitable customers could be redirected to growth segments
- High-frequency customers with low margins signaled potential for price renegotiation or service optimization
- Visual heatmaps helped identify segment-wise growth potential by region

6. Recommendations:

- Focus account management and retention programs on Loyal and High Monetary segments

- Set contribution margin thresholds for discount approvals

- Train reps to identify and upsell within profitable customer clusters

- Use dashboard alerts to flag clients slipping from "Loyal" to "At-Risk"

7. Future Work:

- Integrate Net Promoter Score (NPS) feedback to align sentiment with financial value

- Add predictive churn risk based on declining frequency or recency

- Connect with marketing automation platform for segment-based outreach

8. Stakeholder Relevance:

Academic:

- Practical example of RFM segmentation, customer profitability, and CRM analytics in Power BI

- Valuable for business intelligence, customer analytics, and sales strategy coursework

Corporate:

- Helps B2B firms optimize sales effort and maximize profitability across customer segments

- Equips sales and finance teams with shared KPIs and insight-driven decision tools