# AlgoSphere AI Solutions Company Project

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# Customer Segmentation and Strategic Marketing Framework

This document describes the comprehensive process undertaken to analyze customer data, segment clients, and develop targeted marketing strategies using a structured approach supported by RFM analysis and CRM systems.

## 1. General Informations

This section includes the foundational dataset containing detailed information about individual customers. Each record captures:  
- Customer ID, Full Name, and Company Affiliation  
- Professional role (e.g., research scientist, technical expert)  
- Contact details (phone, email)  
- Estimated sales potential associated with the lead  
- Last and next contact dates, and scheduled follow-up actions  
- Lead status (e.g., Hot, Cold) and source (e.g., Social Media)  
- Customer tier classification (Bronze, Dormant, etc.), including tier reason  
  
These details are essential for customer profiling, sales forecasting, and prioritizing CRM outreach efforts.

## 2. RFM Analysis

RFM stands for Recency, Frequency, and Monetary value. In this tab, each customer has been scored on these three dimensions based on their transactional behavior. The process includes:  
  
- Recency: How recently a customer has transacted.  
- Frequency: How often they have made purchases.  
- Monetary: How much they have spent in total.  
  
Each customer receives a composite RFM score (e.g., 434) and is categorized into strategic segments (e.g., Gold, Lead). Additional scoring logic is defined based on date thresholds (e.g., 'May 2025 or later' = score 5 for Recency).

## 3. RFM Transaction Data

This dataset contains individual transaction records for each customer, listing the specific date and value of each transaction. It serves as the primary input for calculating the RFM metrics, offering raw insights into purchasing behavior.

## 4. RFM Values

Summarized transactional data per customer is presented in this tab. It includes:  
- Total purchase amount  
- Most recent transaction date  
- Count of all transactions  
  
These aggregated values are used to feed the RFM scoring logic and provide a simplified view of overall customer value.

## 5. CRM Dashboard Planning (CRM EREN)

This tab is structured as a draft for the final CRM dashboard. It will later include visual elements such as triangle segmentations, funnel conversions, and summary charts. These visual insights will assist in executive reporting, opportunity management, and campaign planning.

## 6. Marketing Action Plans

A forward-looking marketing calendar is structured monthly, starting from January 2025. Each month includes segment-specific campaigns targeting customer groups such as Gold, Platinum, Dormant, and Lead. Examples of marketing activities include:  
  
- AI Demo Invitations for early engagement  
- C-level Forecast Dinners to engage Platinum customers  
- One-on-one calls with leads to boost conversion  
- “We Miss You” reports and Win-Back campaigns for dormant contacts  
- Executive Briefings and Case Study launches for thought leadership  
  
These activities are aligned with customer segment insights to ensure relevance, personalization, and conversion potential.

## 7. Data Cleaning and Preparation (Optional but Recommended Section)

*Before any analysis, raw data undergoes cleaning and formatting processes to ensure consistency and accuracy.*  
Key steps typically include:

* Removing duplicates
* Standardizing date formats
* Handling missing values
* Validating transaction amounts and timestamps
* Normalizing categorical values (e.g., segment names)

This step ensures the integrity of all subsequent analysis and scoring.

## 8. RFM Scoring Methodology (Technical Breakdown)

To make the RFM scoring transparent and reproducible, the scoring logic can be explicitly described:

* **Recency Score**: Based on the number of days since the last transaction (recent = high score)
* **Frequency Score**: Based on the number of transactions (more frequent = high score)
* **Monetary Score**: Based on the total transaction value (higher spender = high score)

**Score Normalization Example:**  
Each metric is divided into quantiles or thresholds to assign scores (1 to 5). Final RFM scores are calculated by combining individual scores, e.g.:  
RFM Score = R \* 100 + F \* 10 + M → 434 means R:4, F:3, M:4.

## 9. Customer Segmentation Logic

*After scoring, customers are segmented for targeted actions.*  
You can describe the logic behind segmentation, for example:

* **Platinum**: RFM score > 444 → Most valuable customers
* **Gold**: High frequency and monetary scores, medium recency
* **Lead**: Recent but low-spending customers
* **Dormant**: Low recency and frequency, low overall engagement

These thresholds can be determined based on quantiles or business strategy.

## 10. KPI Definition and Measurement Strategy

Include how you’ll measure success from campaigns:

* **Customer Lifetime Value (CLV)** improvements
* **Churn Rate** reduction
* **Campaign Conversion Rate**
* **Segment Movement** (e.g., Dormant → Lead → Gold)
* **Engagement Rate** by customer tier

This allows future impact analysis of marketing efforts.

## 11. CRM Dashboard Suggestions

When visualizing this in tools like Power BI, Tableau or Excel, you can include:

* Funnel charts (Lead > Qualified > Customer)
* Tier distribution pie chart
* Monthly revenue by segment
* Conversion heatmaps
* Segment movement over time

## 12. Advanced Add-ons (Optional Enhancements)

* **Churn prediction model** (logistic regression / decision trees)
* **Customer Lifetime Value Prediction**
* **Market Basket Analysis** for cross-sell/upsell
* **Email open/click behavior analysis** if you have campaign interaction data