

# Banking Analytics Project – Business Requirements Document

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## Project Title:

Banking Customer & Operations Analytics Dashboard

## Objective:

To build a data-driven banking analytics system that enables monitoring of customer activity, account performance, transaction behavior, loan utilization, card issuance, and customer support efficiency — helping teams improve customer retention, risk assessment, and service quality.

## Data Sources (Sheets/Tables):

- 1. Customers – Basic customer info and registration date.
- 2. Accounts – Linked to customers with balance and account types.
- 3. Transactions – All financial transactions with types and amounts.
- 4. Loans – Loan records with start/end dates, amounts, and interest rates.
- 5. Cards – Issued cards with types, numbers, and expiration dates.
- 6. SupportCalls – Customer service calls including issue type and resolution status.

## Key Metrics & KPIs to Analyze:

### Customer Analytics

- ● Total active customers
- ● Monthly new customers
- ● Average account per customer
- ● Churn risks (e.g., no transaction in 6 months)

### Account & Balance Analysis

- ● Total balance by account type (Savings, Checking, Business)
- ● Average balance per customer
- ● Dormant accounts (no recent transactions)
- ● Account age vs balance correlation

### Transaction Analytics

- ● Total transaction volume (monthly/yearly)

- ● Top transaction types (Deposits vs Withdrawals)
- ● Avg transaction value by account type
- ● Fraud or anomaly detection (high-value or frequent transfers)

### **Loan Portfolio Overview**

- ● Total loan amount disbursed by type (Home, Car, Personal...)
- ● Avg interest rate per loan type
- ● Loan-to-income ratio analysis (if income available)
- ● Upcoming maturity trends (loans ending this year)

### **Card Issuance & Activity**

- ● Card issuance trend over time
- ● Active vs expired cards
- ● Card type distribution (Credit, Debit, Prepaid)
- ● Avg customer holding per card type

### **Customer Support Insights**

- ● Total number of support calls
- ● Resolved vs unresolved rate
- ● Top issue categories
- ● Avg resolution time (if timestamps available)

## **Suggested Dashboards:**

### **1. Executive Banking Overview**

- ● Total customers, total balances, total transactions
- ● Loan and card KPIs, support case summary

### **2. Customer Insights Dashboard**

- ● Churn risk tagging, onboarding funnel
- ● Customer segmentation by behavior or balance

### **3. Transactions Dashboard**

- ● Transaction heatmap (monthly/daily)
- ● Top active accounts, most frequent transaction types

### **4. Loan Monitoring Dashboard**

- ● Loan distribution map, interest rate buckets
- ● Upcoming loan closures, defaults risk (if overdue fields added)

### **5. Support & Satisfaction Dashboard**

- ● Resolution rate by issue type

- ● Agent performance (if call handler is tracked)
- ● Call frequency trends

## **Calculated Fields and Measures:**

### **KPIs and Additional Measures**

- #Amount by Transaction Type
- #Customer by Transaction Type
- Total\_Transactions by account type
- #Loans by Transaction Type
- AVG interest by loan type
- Number of customers by card type

### **Trends Over Time:**

- #Transactions by TransactionDate
- #amountTrans by TransactionDate
- Calls over time calls

### **Resolves Vs Unresolved**

### **Slicers:**

- Issue type
- Years
- Transaction type

## **Measures Table (DAX Calculations):**

Total Cards = COUNTROWS(Cards)

Expired Cards =  
 COALESCE(  
   CALCULATE(  
     COUNTROWS(Cards),  
     FILTER(Cards, Cards[ExpirationDate] < TODAY())  
   ),  
 0  
)

Average Customer Tenure (Years) =  
 AVERAGEX(  
   Customers,

```
DATEDIFF(Customers[JoinDate], TODAY(), YEAR)
)
```

```
DataTable =
ADDCOLUMNS (
    CALENDAR (DATE(2015, 1, 1), DATE(2030, 12, 31)),
    "Year", YEAR([Date]),
    "Month", MONTH([Date]),
    "Month Name", FORMAT([Date], "MMMM"),
    "Quarter", "Q" & FORMAT([Date], "Q"),
    "Day", DAY([Date]),
    "Weekday", FORMAT([Date], "dddd"),
    "Year-Month", FORMAT([Date], "YYYY-MM")
)
```

```
Resolved Calls =
CALCULATE(
    COUNTROWS(SupportCalls),
    SupportCalls[Resolved] = "Yes"
)
```

```
Resolution Rate % =
DIVIDE(
    [Resolved Calls],
    COUNTROWS(SupportCalls)
)
```

```
AvgAccountsPerCustomer =
DIVIDE(
    DISTINCTCOUNT(Accounts[AccountID]),
    DISTINCTCOUNT(Customers[CustomerID])
)
```