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Fedhatrac Client Flux Business Intelligence Solution

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1.0 Executive Summary

Fedhatrac, a Kenyan fintech startup, faces significant challenges in managing its client acquisition pipeline and understanding user attrition. While the company possesses robust operational tools for personal finance management, it lacks a structured data framework to track potential clients ("leads") and analyse reasons for sales decline.

This project, the Client Flux BI Solution, was designed to bridge this gap. Our objective was to assess Fedhatrac's current BI maturity and develop a suite of interactive dashboards to transition them from ad-hoc management to data-driven decision-making.

Key outcomes of this project

1. Maturity Assessment: Identification of Fedhatrac as currently being in the "Early Descriptive" stage of BI maturity.
2. Data Architecture: Creation of a simulated dataset structure (based on a pilot subset provided by the company) to track the client lifecycle from "Potential" to "Active" or "Declined." This is to help justify why capturing certain variables is necessary to provide even more insights beyond the data we were provided with.
3. Dashboard Suite: Development of four targeted Power BI dashboards:
    - General Executive Overview
    - Client Flow & Pipeline Analysis
    - Employee Performance Tracker
    - Client Industry/Profile Analysis

The solution provides immediate visibility into the sales funnel, enabling Fedhatrac to identify high-performing employees, pinpoint bottlenecks in the sales cycle, and understand common reasons for client rejection.

2. Introduction

2.1 Background

Business Intelligence (BI) is increasingly critical for SMEs to compete with larger enterprises. For fintech startups like Fedhatrac, the ability to pivot based on real-time data regarding client acquisition is a survival necessity.

2.2 Project Objectives

The primary goal of this project was to implement a "Client Flux BI Solution" that streamlines the handling of new and potential clients. Specific objectives included:

- **Assess:** Evaluate Fedhatrac's readiness for BI adoption.
- **Structure:** Define the necessary data variables (e.g., DeclineReason, ClientStatus) required for analysis.
- **Visualize:** Create dashboards to track key metrics like "Time to Close" and "Active Client Growth."

2.3 Scope

The scope was limited to the client acquisition and retention domain (Sales/CRM data). It does not cover the internal financial performance of the company or technical app performance metrics.

3. Selection of SME

Fedhatrac is a Kenyan startup in the fintech industry that provides an all-in-one personal financial management platform through a mobile application called Fedhatrac App (or Fedhatrac).

They have both mobile and web applications that help their clients manage their finances from invoices to payments. The app includes a feature for Automatic SMS Parsing to read financial transaction details from messages for real-time updates and summaries. It helps individuals to track transactions, create budgets, manage debt, schedule payments, and gain insights into their financial health. They have a client base ranging from organisations to individuals that use the platform to manage their personal finance.

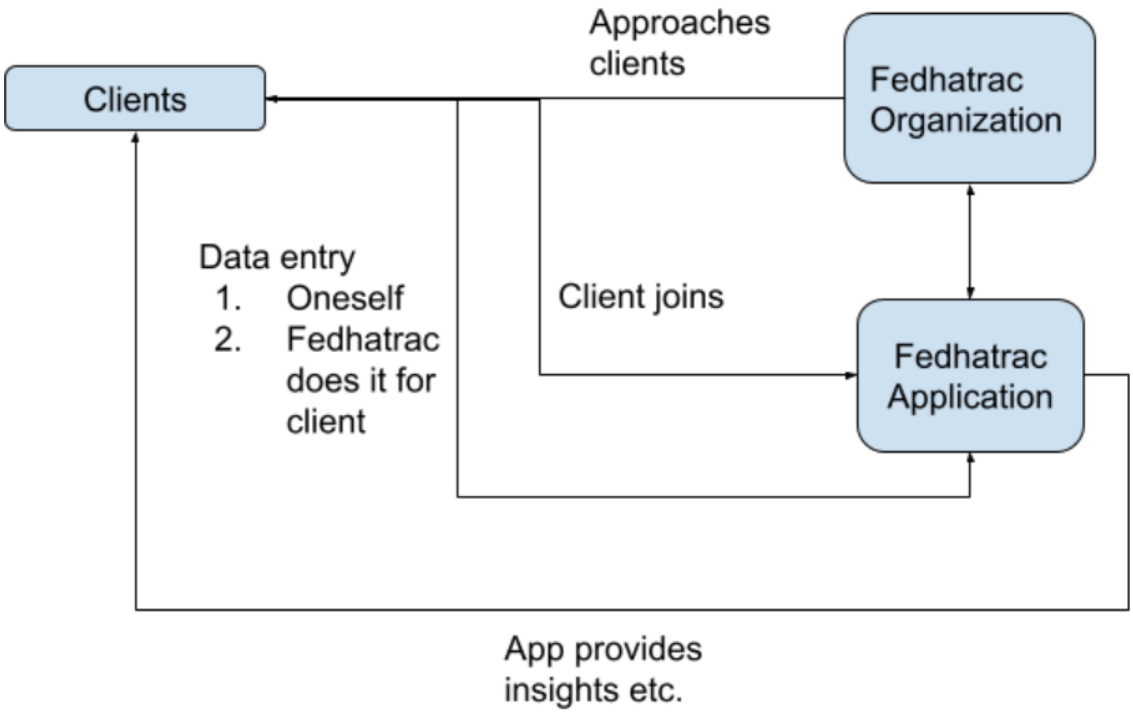
3.1 Initial contact and business understanding

3.1.1 Initial contact

Our first contact with Fedhatrac came on September 26th, 2025. This contact came to us, after one of the SME we were actively pursuing referred them to us and that is how it all began. On that day there were multiple back and forth between Fedhatrac and our group till we received the verbal confirmation they would be opening in working with us and providing data.
One key issue we encountered during the initial phase was clearly stating what we were proposing to Fedhatrac. Which did cause us nearly 4-5 working days to iron out our proposal and have Fedhatrac understand what we were about. This was later helped by the lecture we had about KPIs which gave us a new perspective on the project which translated to our proposal refinement.

3.2 Operational Context

Fedhatrac's business model was semi complex, and we are quickly able to map it out in a diagram as to how we understood the organization. Attached below is the model we came up with.



From the interview and casual contact with Fedhatrac, we got the process they use in enrolling a new client as follows.

1. Fedhatrac approaches a potential client via multiple ways.
2. They go back and forth and then the client agrees to join, and thus they make an account in the app.
3. This is then followed by the client themselves or Fedhatrac team keys into the app current and historical financial information into the app.
4. From here on the client will perpetually be feeding the app data to gain insights on their finance or they can organize with the Fedhatrac team such that they will show up and key the data for them.

This is one dimension of the business, the other is how they manage to keep it all running. From what we picked up is, there is an IT department in charge of maintaining and updating the website, a sales team that approached new clients which doubles as the team that helps with keying data for the client and human resource (though not confirmed) that deals with issues concerning employees.

3.3 Overview of the Fedhatrac's industry, target market, products/services, and current business processes.

Fedhatrac operates in the Fintech for SMEs industry in Kenya, which is focused on leveraging technology to bridge the significant financial and information gap faced by small and midsize enterprises, a key backbone of the Kenyan economy. Their primary target market consists of Kenyan SMEs and entrepreneurs who require structured, compliant, and real-time financial tracking but often lack the resources for complex accounting systems. The main product/service is the Fedhatrac App, an all-in-one financial management platform that offers transaction tracking, budget creation, payment scheduling, debt management, and key financial insights, with a focus on streamlining compliance requirements like KRA filings and tax obligations. Their current business processes are built around

digital automation, particularly by allowing users to easily log invoices, receipts, and expenses, secure document storage for audit readiness, and generate real-time financial statements (like balance sheets and P&Ls) on the go, effectively serving as an affordable, mobile-first virtual CFO for small businesses.

3.4 Challenges in Engagement

- Remote Operations: The company operates remotely, which required virtual coordination rather than physical site visits.
- Data Sensitivity: Initial data access was restricted. We received a small, redacted subset (approx. 21 entries) which we then expanded via simulation to demonstrate the proof of concept.

4.0 BI Maturity Assessment

Using the Gartner BI Maturity Model, we assessed Fedhatrac's current state.

Dimension	Assessment	State
Data	Operational data exists but is siloed. No centralized data warehouse for sales lead	Level 1 (Unaware)
Reporting	Ad-Hoc updates and no automated tracking of the sales cycle.	Level 1 (Unaware)
Decision making	Decision are based on intuition or immediate need rather than historical trends analysis	Level 2 (Opportunistic)
Overall ranking	Pre-BI / Early Descriptive	

The organization has the technical capacity (app developers) but lacks the business process to capture *meta-data* about their clients (e.g., DeclineReason). Moving to the next level requires standardizing data collection at the "Approach" stage.

Fedhatrac's current BI maturity regarding client acquisition and retention appears to be at the Pre-BI stage, in spite of primarily using slack to keep track of clients they are pursuing. While the company has sophisticated operational capabilities such as mobile and web app and SMS parsing for transaction tracking their sales and client management processes. They are currently facing significant challenges in effectively managing potential clients and tracking the reasons why deals are not closing. This disconnect suggests that while they generate operational data, they are not yet harnessing it to explain what is happening in their sales funnel or why it is happening.

The "Client Flux BI Solution" is a strategic initiative to move the organization into the Diagnostic and Strategic stages of maturity. By implementing structured variables like ClientStatus, ApproachDate, and specifically DeclineReason, the project aims to transition Fedhatrac from anecdotal management to data-driven decision-making. This shift will allow them to move beyond simple tracking to understanding causal factors—such as identifying bottlenecks in the sales cycle or pinpointing why clients say "no". Successfully implementing this project will establish the "ideal client profile", laying the necessary groundwork for future predictive analytics capabilities.

5.0 Data Identification and Analysis

Before addressing gaps, it's important to acknowledge the solid foundation that Fedhatrac has already established. The existing data architecture demonstrates several strengths:

Comprehensive Client Identification: Every client receives a unique identifier (CLIENT_ID) following a consistent format (CL-####), ensuring no duplicate records and enabling reliable tracking across time periods.

Clear Employee Accountability: The dataset maintains explicit assignment of responsibility through EMPLOYEE_ID and EMPLOYEE_NAME fields, with six employees tracked (E001 through E006), enabling individual performance analysis and workload distribution assessment.

Temporal Tracking: Three date fields (APPROACH_DATE, STATUS_UPDATE_DATE, LAST_ACTIVITY_DATE) create a timeline of client engagement, allowing analysis of sales cycle duration and activity patterns.

Status Lifecycle Management: The CLIENT_STATUS field captures progression through the sales funnel with five distinct states (Potential, Yet Closed, Active, Dormant, Declined), providing visibility into where each client stands in the acquisition journey.

Decline Intelligence: For clients who don't convert, the DECLINE_REASON field captures valuable qualitative data with fourteen distinct decline reasons, providing insight into market dynamics and product-market fit issues.

These strengths indicate that Fedhatrac has established good data discipline and is ready to advance to the next level: transforming operational data into strategic intelligence.

5.1 Overview

While conducting this project we used a synthetic (simulated) dataset representing Fedhatrac's client acquisition and management process. Which cross referenced from the data we were given and build on top of it. Generated using Python to mimic real-world business data for data visualization, analytics, and business intelligence (BI) purposes.

The dataset models Fedhatrac's interactions with potential and existing clients, including when they were approached, their current engagement status, and reasons for declining engagement. This simulated data was created based on a small snippet of actual company data to support comprehensive analysis and dashboard development.

5.2 Purpose of the Dataset

The primary purpose of this dataset is to support the development of a Business Intelligence (BI) dashboard or data analysis project that tracks client interactions, progress, and decline trends. However, it is important to note that there was not enough dataset provided by the company, which limits the depth and scope of certain analytical components. As a result, supplementary data sourcing,

assumptions, or synthetic data generation may be necessary to ensure comprehensive analysis and effective dashboard development.

5.3 Data Structure

Column Name	Description	Data Type	Example Value
CLIENT ID	Unique identifier assigned to each client	String	CL-1012
CLIENT NAME	Name of the client (individual or organization)	String	Wanjiku Holdings
COUNTY	Kenyan county associated with the client (for regional BI analysis)	String	Nairobi
EMPLOYEE ID	Unique ID of the Fedhatrac team member who interacted with the client	String	E002
EMPLOYEE NAME	Name of the employee responsible for client engagement	String	Samuel Kiptoo
APPROACH DATE	Date when the client was first contacted by Fedhatrac	Date (YYYY-MM-DD)	2024-04-10
STATUS UPDATE DATE	Date when the client's engagement status last changed	Date (YYYY-MM-DD)	2024-05-02
LAST ACTIVITY DATE	Last recorded client interaction date (may be missing)	Date (YYYY-MM-DD)	2024-05-10
CLIENT STATUS	Current state of the client in the acquisition funnel	String (Categorical)	Declined
DECLINE REASON	If the client declined, reason for not joining or continuing with Fedhatrac	String	Already using a competing platform

5.4 Data Characteristics

General Statistics:

- **Total Records:** 151 clients
- **Data Type:** Simulated (non-personal, non-sensitive)
- **Date Range:** January 2023 – November 2025
- **Geographic Scope:** Kenyan counties (10+ counties represented)
- **Time Span:** 34 months of client interaction data

5.5 Data Generation Details

Technical Specifications:

- **Language Used:** Python 3
- **Libraries:** pandas, numpy, random, datetime
- **File Format:** CSV (UTF-8 encoding)

Generation Methodology:

1. **Name Generation:** Kenyan-style names (surnames and business entities) using common Kenyan naming patterns
2. **Date Sequencing:** Randomized but logically ordered (Approach < Update < Activity)
3. **Status Assignment:** Weighted probability distribution matching realistic client funnel conversion rates
4. **Decline Reasons:** Assigned only to "Declined" clients with realistic business reasons
5. **Employee Assignment:** Random distribution across 6 Fedhatrac team members
6. **Missing Data:** Strategic introduction (~5%) in non-critical fields to increase realism
7. **County Selection:** Weighted toward major urban centres with rural representation

5.6 Ethical and Privacy Notes

The synthetic dataset does not contain any real client information. All names, dates, organizations, and data points were synthetically generated using random algorithms based on a small snippet of anonymized company data.

5.7 Dataset Limitations

The reader should be aware of the following limitations:

1. **Simulated Nature:** While realistic, the data does not reflect actual business patterns or market dynamics
2. **Temporal Distribution:** Dates are randomized within constraints but may not reflect seasonal business cycles
3. **Sample Size:** 151 records provide adequate training data but may not capture all edge cases
4. **Geographic Coverage:** Not all Kenyan counties are represented

5. **Missing Data:** Introduced artificially and may not match real-world missing data patterns
6. **Employee Workload:** Random assignment may not reflect actual territory or client assignment strategies

6.0 Business Intelligence Report and Dashboard Design

This is the heart of our project, the insights that we speak of are found in this section of the project. We utilized Microsoft Power BI to develop four distinct dashboard pages, targeting the various departments that exist in the company i.e. the executives, sales department and the IT department.

The primary objectives of this project were to design, develop, and refine a set of interactive dashboards in Power BI aimed at analysing client performance, employee closing efficiency, and segmentation insights. The dashboards are intended to help Fedhatrac's management understand client distribution, evaluate employee productivity, and identify high-performing regions, contact methods, and industries.

The design philosophy we followed in the creation of the dashboards were as follows:

- Visual simplicity by using soft colours
- Easy to understand intuitively and this was implemented in multiple ways
- Limiting the amount of information displayed by each dashboard
- Using the grid method to arrange visuals in our dashboards and not exceeding 3 rows and 4 columns
- The dashboard had to speak for themselves meaning they had to be less technical

These the key philosophies used to design our dashboard resulted in visually appealing and easy to comprehend dashboards. We also ensured the dashboards maintained:

- Visual Consistency: aligned layout, consistent card styling, colour palette, and typography
- Minimalist Design: simple visuals and clear labels
- Colour Logic: purple theme with contrasting white KPIs for clarity
- Responsiveness: visuals update dynamically with slicers
- Clarity & Accessibility: descriptive chart titles and intuitive placement

Data Preparation

- Imported the dataset into Microsoft Power BI Desktop
- Cleaned and validated column data types (numeric, dates, categorical)
- Standardized the **CLIENT STATUS** values
- Created a dedicated **Measure Table** for all DAX measures
- Developed dynamic measures for deal values, client counts, conversion rates, and time-to-close metrics

6.1 General Overview Dashboard

The targeted viewers are the executives in the organization that provides a birds eye view of the company with regards to acquiring clients and retaining the ones we have. Minimizing the chance of information paralysis, meaning the viewer was over-loaded with information.

6.1.1 The objectives

1. Inform on how many active clients the company has
2. Inform and visualize how many leads the company has chased
3. Inform the number and give a visual of current potential and yet closed leads.

4. Visualize the leads segmentation, that is what percentage of a lead status covers the total leads chased.
5. Visualized the active client share of a particular employee.

6.1.2 What to the dashboard tells

In the section we shall discuss the intricate visual in the dashboards, since the call out cards that show numbers speak for themselves.

6.1.2.1 Count by client status

Give a direct comparison between the number of leads labelled *potential* and *yet closed*. It measures the size of the near-term opportunity.

6.1.2.2 Count by day

This tracks and visualises operational velocity and momentum. Shows the month's engagement, lead generation, and status changes of leads. Helping to identify activity spikes or slumps throughout the month.

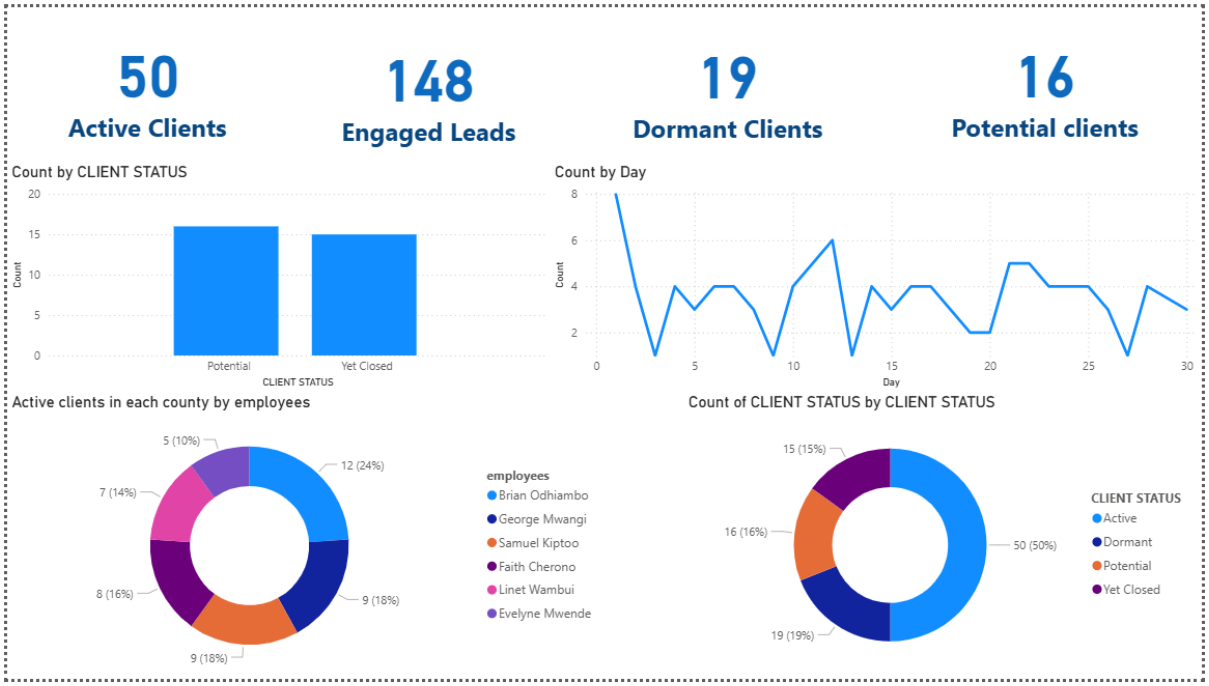
6.1.2.3 Count of client status by client status pie chart

This visualizes the composition of the entire database. It shows what percentage of the total database is making money (Active clients), waiting to close (Potential & yet closed), or has gone cold (Dormant).

6.1.2.4 Active clients by employee pie chat

This is a simplified salesperson performance metric. It breaks down which employees brought in the active client base share. It informs management about workload distribution and who the top performers are.

6.1.3 Dashboard snapshot



6.1.4 Future Improvements

1. Narrowing down the scope at which this dashboard operated on, to a range to a particular quarter or current fiscal year. Currently its scope given the synthetic data we used is since the inception of the organization.
2. Ironing out the Count by day visual to inform more information.

6.2 Client Flow Over Time Dashboard

6.2.1 The objectives

The dashboard aims to analyse the sales velocity and seasonality. This dashboard looks at when things are happening.

6.2.2 What to the dashboard tells

6.2.2.1 Potential clients by month

This tracks the lead generation rate. It informs the viewer if marketing efforts are bringing in a growing number of new prospects over time.

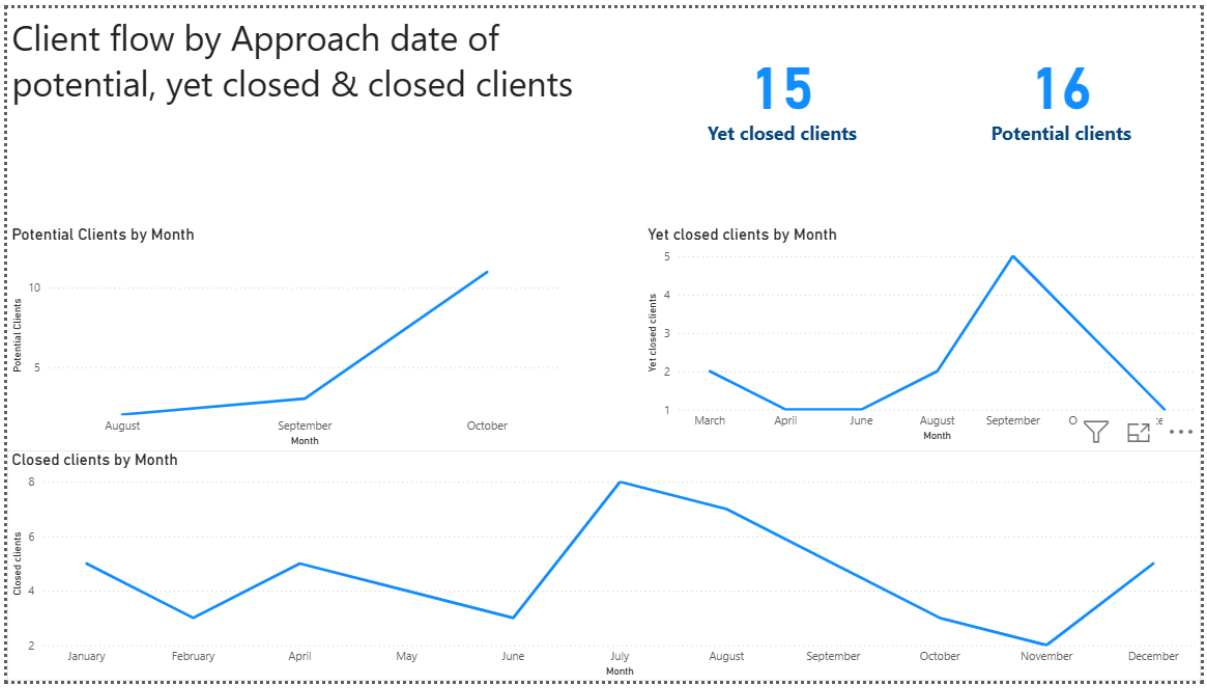
6.2.2.2 Yet closed clients by month

This tracks the "bottleneck." A spike here indicates a specific month where many deals were initiated but haven't crossed the finish line yet, and ideally this line graph should be less jagged and the count should be lower.

6.2.2.3 Closed clients by month

This is the success tracker. It shows the actual rate of closing deals over the year, highlighting seasonal trends (e.g., distinct peaks in certain months) and the impact of specific sales campaigns like when the company had ads running in instagram or in other social media sites.

6.2.3 Dashboard snapshot



6.2.4 Future Improvements

1. The yet closed clients by month visualizes the bottleneck in the pipeline thus there should be a calculated threshold that the company should be operating under and once crossed it should trigger action like reducing workforce in the campaign of pursuing new clients to transition these clients to active clients.
2. The potential clients by month should have a threshold that the company should operate above. This will come by calculating the sales team's theoretical number of clients they can bring in a month factoring in the various aspects like employee years of experience etc.

6.3 Client Background Dashboard

6.3.1 The objectives

The dashboard maps out the market penetration of the company. This dashboard answers the question, "Where are we winning, and where are we stagnating?"

6.3.2 What to the dashboard tells

6.3.2.1 Yet closed by county

This identifies regions where potential deals are stalling and/or where the sales team is spending its workforce on. It informs the viewer which specific counties have high interest but low closure rates, indicating a need for targeted sales intervention in those areas. These can be knowing where to use targeted and generalised advertisements.

6.3.2.2 Active/Closed client by county

This shows regional dominance. It identifies the business's strongholds and the counties that generate the most revenue. It helps in deciding where to replicate success or where to double down on marketing.

6.3.2.3 KPI Scorecard

These highlight the total geographic footprint and the volume of the client base (Active vs. Pipeline). The "Top 3 Counties" metric indicates concentration risk showing how heavily the business relies on its best-performing regions.

6.3.3 Dashboard snapshot

6.3.4 Future Improvements

1. Introducing a country metric & visuals for when the company decides to go international or when they start getting international clients.

6.4 Client Profile Dashboard

6.4.1 The objectives

To align workforce allocation with market sectors. This dashboard helps management understand if they are putting the right amount of effort into the most lucrative and/or widespread industries.

6.4.2 What to the dashboard tells

6.4.2.1 Counties and number of employees by industry

This visual compares the geographic reach of an industry against the internal resources, that is the employees on deck dedicated to it. It aims to highlight if a specific industry is resource-heavy or if it has a wide geographic footprint that might require more staff.

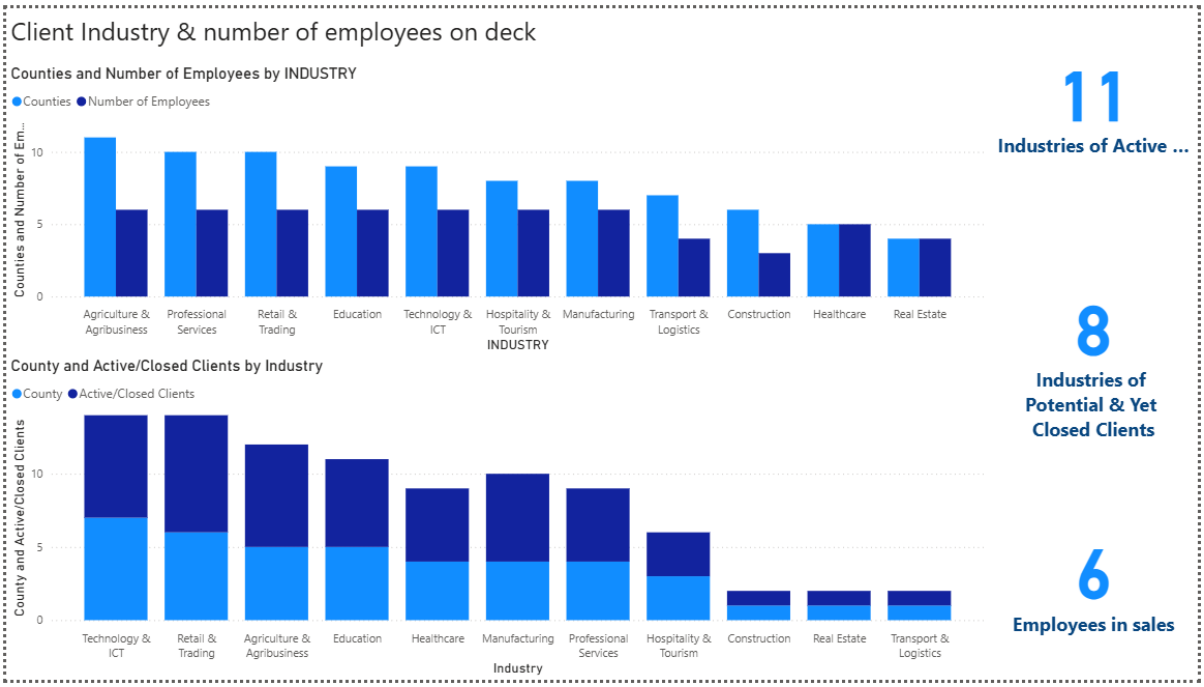
6.4.2.2 Counties and Active/closed clients by industry

This compares successful deals (active clients) against the number of counties those deals cover within each industry. It informs the viewer which industries are dense versus sparse, that is few clients spread across many locations.

6.4.2.3 Scorecards

These provide quick snapshots of the business scope: the diversity of industries currently active, the number of target industries in the pipeline, and the size of the sales force.

6.4.3 Dashboard snapshot



6.5 Client Flow Dashboard

The Client Flow Dashboard was developed to provide a clear and data-driven overview of the company's client engagement patterns. The dashboard focuses on showing where clients come from, which industries interact most, and how clients progress through the engagement pipeline.

The purpose is to give management a simple, executive-friendly snapshot of client background, engagement strength, and workflow efficiency. This enables better decision-making and more targeted strategies for client acquisition and retention.

6.5.1 Objectives of the Dashboard

The main objectives of the Client Flow Dashboard were to:

1. Analyse the geographical distribution of client interactions by county.
2. Identify industries with the highest engagement.
3. Visualize client flow through different client status stages (Active, Declined, etc.).
4. Understand client interaction trends over time.
5. Explore the major reasons for client decline.
6. Evaluate the effectiveness of contact methods used by employees.

These insights help management see where the company is performing well and where improvements are required.

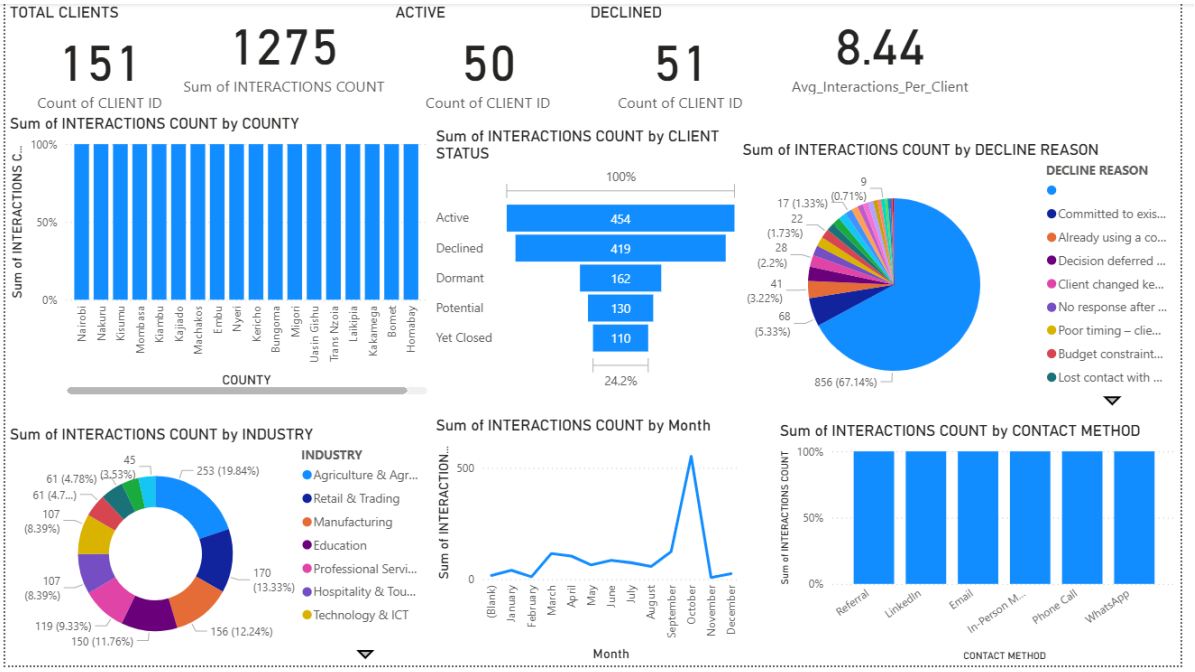
6.5.2 Data used

The dashboard uses the Fedhatrac Client Flux Data Realistic dataset. Key fields in this dataset include:

- Client ID, Client Name
- County
- Industry
- Client Status
- Interactions Count
- Contact Method
- Decline Reason
- Estimated Deal Value
- Approach Date, Last Activity Date
- Employee Name

These variables enabled a comprehensive analysis of client behaviour, flow, and activity.

6.5.3 Dashboard Components



6.5.3.1 KPI Summary

At the top of the dashboard, several KPI cards give a quick overview of key client activity metrics:

- Total Clients
- Total Interactions
- Active Clients
- Declined Clients
- Average Interactions Per Client

These KPIs instantly highlight engagement intensity and the overall status of the client pipeline.

6.5.3.2 County-Level Client Engagement

A bar chart visualizes interactions by county, showing which geographical areas contribute the highest client engagement.

This helps the business identify strong markets and counties with potential for growth or targeted outreach.

6.5.3.3 Industry-Level Engagement

A donut chart displays interactions by industry, highlighting which industries dominate the company's client activity.

This helps management understand which sectors the business serves most and where specialization may be developing.

6.5.3.4 Client Flow Funnel

A funnel chart shows client progression across status stages, such as:

- Contacted
- Active
- Closed
- Declined

Using **Interactions Count** as the value makes it possible to see where engagement increases and where client drop-offs occur within the pipeline.

6.5.3.5 Decline Reason Analysis

A pie chart summarizes the different **decline reasons**, helping the company identify the most common issues leading to lost prospects.

This provides clear direction for improving communication, pricing, or service offerings.

6.5.3.6 Interaction Trend Over Time

A line chart visualizes **monthly interactions** based on the Last Activity Date.

This highlights seasonal patterns, increases or drops in activity, and months where engagement requires action.

6.5.3.7 Contact Method Effectiveness

A column chart shows the number of interactions by **contact method** (phone, email, visit, etc.).

This identifies which communication strategies perform best and which methods may need improvement.

6.5.4 Key Insights

From the dashboard, several important insights emerge:

1. **Some counties show much higher interaction levels**, indicating strong regional presence and engagement.
2. **A few industries dominate client interactions**, showing where the company's services resonate most.

3. **The funnel reveals drop-off stages**, helping the company improve follow-ups and conversion processes.
4. **Decline reasons provide actionable feedback**, revealing client concerns that can be addressed.
5. **Monthly interaction trends show engagement behaviour over time**, helping management plan resources and campaigns.

6.5.5 Conclusion

The Client Flow Dashboard successfully captures the movement, behaviour, and background of clients throughout the company's engagement pipeline. By combining geographic, industry, behavioural, and status-based insights, it gives management a comprehensive and simple tool for operational monitoring and strategic planning.

The dashboard offers clear visibility into:

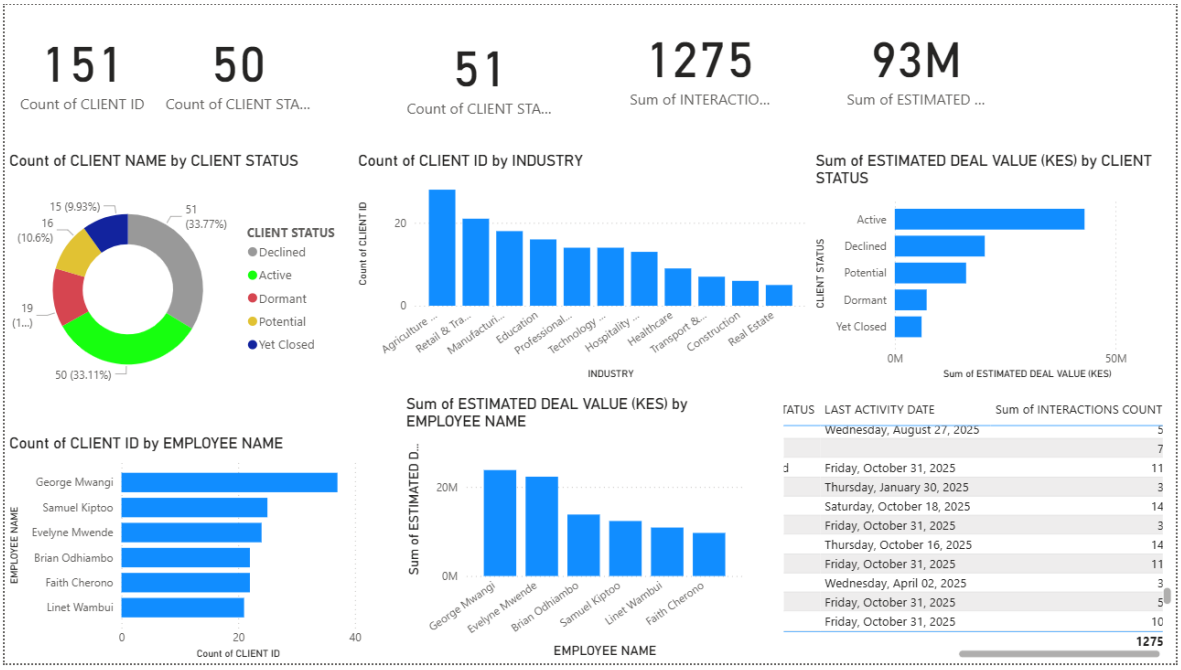
- Where the company performs strongly
- Where improvement is needed
- Which clients and industries offer the most potential
- How effectively prospects are being converted

As more client data is collected, the dashboard can easily be expanded with additional metrics and deeper insights

6.6 Executive Dashboard Report

6.6.1 Introduction

The purpose of this dashboard is to provide Fedhatrac leadership with a clear and simplified overview of the current client pipeline. The dashboard summarizes client status distribution, employee performance, deal value potential, and recent activity to support quick, data-driven decision-making for the next two weeks. All insights are based on the existing client data fields: Client Status, Industry, Estimated Deal Value, Employee Name, Interaction Count, and Last Activity Date.



6.6.2. Key Performance Indicators (KPIs)

The top section of the dashboard presents six high-level metrics that highlight the overall state of the pipeline:

- **Total Clients:** Shows the total number of clients currently tracked by Fedhatrac.
- **Active Clients:** Indicates clients with ongoing engagement.
- **Declined Clients:** Leads that have opted out or stopped the process.

These KPIs help leadership immediately recognize where the organization's primary focus should be.

6.6.3 Client Status Distribution

A donut chart visualizes how clients are distributed across the six statuses (Active, Dormant, Potential, Yet Closed, Declined, and Total). This chart provides a snapshot of pipeline health, highlighting:

- Areas with strong activity (e.g., Active Clients)
- Areas of concern (e.g., rising Dormant or Declined clients)
- Opportunities for conversion (e.g., high Potential or Yet Closed clients)

6.6.4 Industry Distribution

A bar chart shows how clients are spread across industries. This helps leadership understand:

- Which industries generate the most engagement
- Where Fedhatrac has the strongest presence
- Which sectors may need more marketing or follow-up

This supports strategic resource targeting and market prioritization.

6.6.5 Deal Value by Client Status

This visual summarizes the total **Estimated Deal Value (KES)** grouped by client status. It allows executives to immediately see:

- How much potential revenue is in the pipeline
- Which statuses hold the highest-value opportunities
- Revenue at risk in Dormant or Declined segments

Understanding where money sits in the pipeline helps leadership prioritize follow-up and optimize conversion strategies.

6.6.6 Employee Performance Overview

Two charts display:

- **Number of clients handled per employee**
- **Total deal value associated with each employee**

These charts enable management to:

- Identify top-performing staff
- Balance workloads
- Recognize capacity gaps
- Provide targeted support or coaching where required

This contributes to improving overall employee efficiency and client conversion rates.

6.6.7 Recent Activity Table

The bottom of the dashboard features a detailed table showing:

- Client Name
- Employee Assigned
- Client Status
- Last Activity Date
- Interaction Count

This table helps leadership track the most recent engagement with clients and quickly identify:

- Clients requiring follow-up
- Employees who may need to reconnect with their leads
- Clients at risk due to long periods without activity

Sorting by **Last Activity Date** makes it easy to focus on overdue or inactive accounts.

6.6.8 Insights and Recommendations

Based on the trends observed in the dashboard, the following actions are recommended for the next two weeks:

1. **Follow up on Dormant Clients**
   These represent stalled opportunities that may still convert if properly re-engaged.
2. **Prioritize High-Value Potential and Yet Closed Clients**
   These groups contain the largest deal values, and focused attention can drive significant revenue increase.
3. **Monitor employees with low activity or low closure rates**
   Provide support, training, or reassignments as needed.
4. **Leverage industry insights**
   Direct outreach and marketing to industries that show higher engagement or stronger potential.

6.6.9 Conclusion

The Executive Dashboard provides a simplified, high-level view of client flow designed for quick interpretation by leadership. By focusing on client status, pipeline value, employee performance, and recent engagement, Fedhatrac can make informed decisions that improve conversion rates, strengthen client relationships, and grow revenue over the coming weeks.

6.7 Dashboard 1: Employee Closing Rate Dashboard

This dashboard focuses on employee performance in client acquisition and conversion.
It highlights closing efficiency, identifies bottlenecks in the sales cycle, and evaluates overall staff productivity.

Key measures built include:

- **Total Clients**
- **Closed Clients**
- **Declined Clients**
- **Closing Rate (%)**
- **Total Deal Value (KES)**
- **Average Deal Value (KES)**
- **Average Days to Close (Closed Only)**

These measures are dynamically updated across slicers, charts, and tables.

6.7.1 Key Purpose

The Employee Closing Rate Dashboard provides an executive-level overview of staff performance in converting clients.

It helps management understand workload distribution, closing efficiency, and areas requiring improvement.

6.7.2 Key Performance Indicators (KPIs)

The top KPI section includes:

- **Total Clients** — Total number of clients approached.
- **Closed Clients** — Successfully converted clients.
- **Declined Clients** — Clients who opted out.
- **Closing Rate (%)** — Percentage of successful conversions.

These KPIs offer a quick snapshot of overall performance.

6.7.3 Employee Closing Comparison

A bar chart compares Closing Rate (%) for each employee.
This visual helps identify top performers and staff needing support.

6.7.4 Decline Reasons

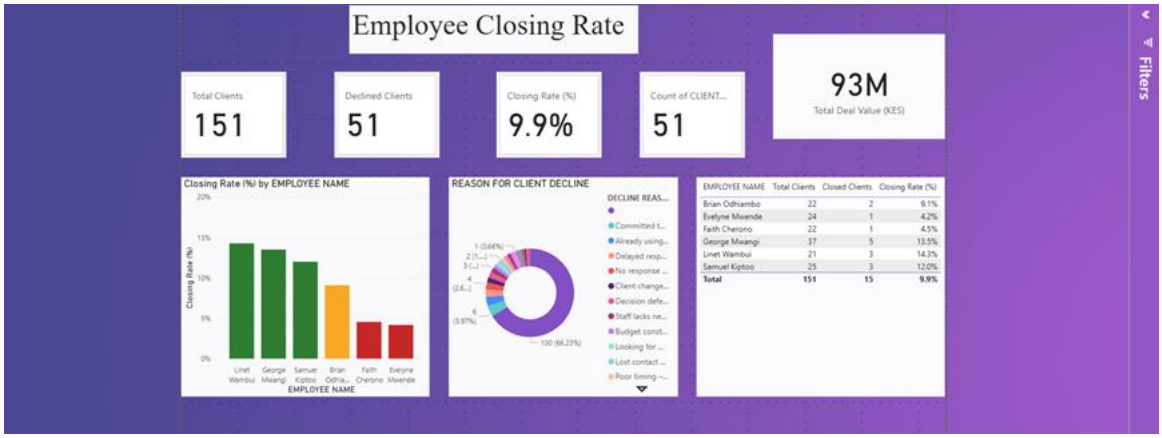
A pie chart displays client decline reasons, allowing leadership to monitor why clients fall out of the pipeline.

6.7.5 Employee Performance Table

A matrix summarizes:

- Total Clients
- Closed Clients
- Declined Clients
- Average Days to Close
- Closing Rate (%)

This enables a detailed comparison of employee performance metrics.



6.7.6 Insights & Recommendations

- The largest proportion of clients fall under 'Potential' and 'Active', indicating opportunity for nurturing.
- Closing rate appears low relative to the engagement volume.
- Recommendation: Initiate follow-ups for dormant clients and build structured engagement workflows.

6.8 Dashboard 2: Segmentation Insights Dashboard

This dashboard analyses client distribution by Industry, County, and Contact Method.
It helps the organization understand market trends, identify high-engagement segments, and prioritize communication strategies.

6.8.1 Key Purpose

This dashboard explores how clients are distributed across demographic and behavioural segments.
It supports strategic decision-making by identifying strong markets, underperforming regions, and effective communication methods.

6.8.2 KPI Cards

Includes KPIs for:

- Total Clients
- Closed Clients
- Decline Rate
- Average Days to Close

These KPIs change dynamically with filters.

6.8.3 County, Industry & Contact Method Analysis

This section includes:

- Column charts analysing client distribution across counties.
- Bar charts showing client distribution by industry.
- Visuals analysing contact methods such as calls, email, and physical outreach.

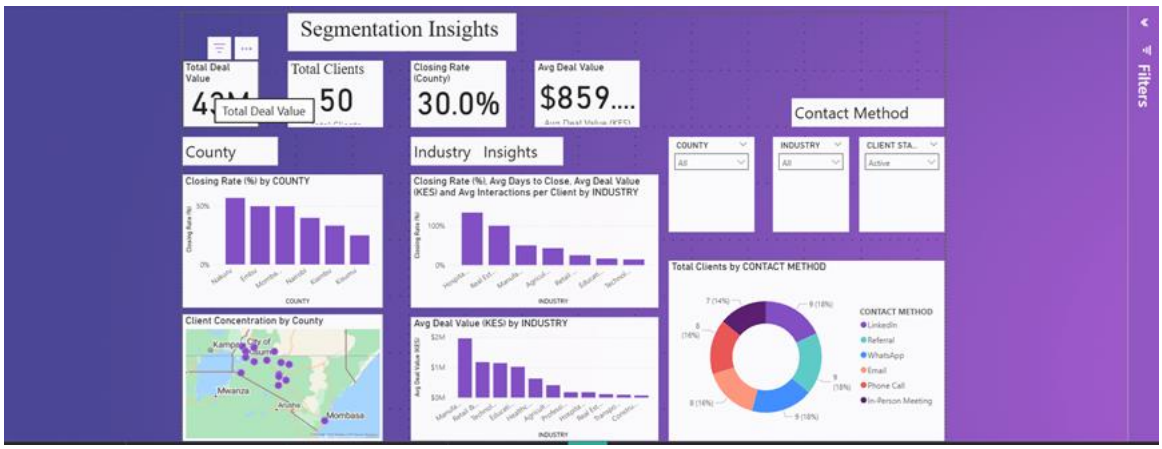
These insights support targeted outreach and resource optimization.

6.8.4 Interactive Slicers

Slicers included:

- Industry
- County
- Contact Method
- Employee Name

These filters enable dynamic analysis across different customer segments.



6.8.5 Insights & Recommendations

- Counties such as Nakuru and Mombasa exhibit stronger performance; other counties may benefit from targeted campaigns.
- Industries like Hospitality and Real Estate show higher deal values.
- Recommendation: Allocate sales resources toward high-performing industries and regions while improving outreach for low-performing ones.

6.9 Dashboard 3: Client Pipeline & Status Dashboard

This dashboard visualizes the full client journey, showing where clients sit in the pipeline, who requires follow-up, and how workload is distributed across employees.

6.9.1 Introduction

This dashboard provides visibility into client movement through the sales pipeline.
It shows where clients are progressing, where they are stalled, and which employees handle various stages of the workflow.

6.9.2 Key Performance Indicators (KPIs)

This section includes:

- Total Clients
- Active Clients
- Potential Clients
- Yet Closed Clients (clients nearing conversion)

These KPIs summarize the current pipeline health.

6.9.3 Client Pipeline Funnel

The funnel chart visualizes client movement through the stages:

- Potential
- Active
- Yet Closed
- Declined

This helps identify drop-offs and conversion challenges.

6.9.4 Status Distribution

A donut chart shows the distribution of client statuses such as:

- Active
- Dormant
- Declined
- Potential
- Yet Closed

This provides a snapshot of high-risk areas and opportunities for follow-up.

6.9.5 Employee Status Load

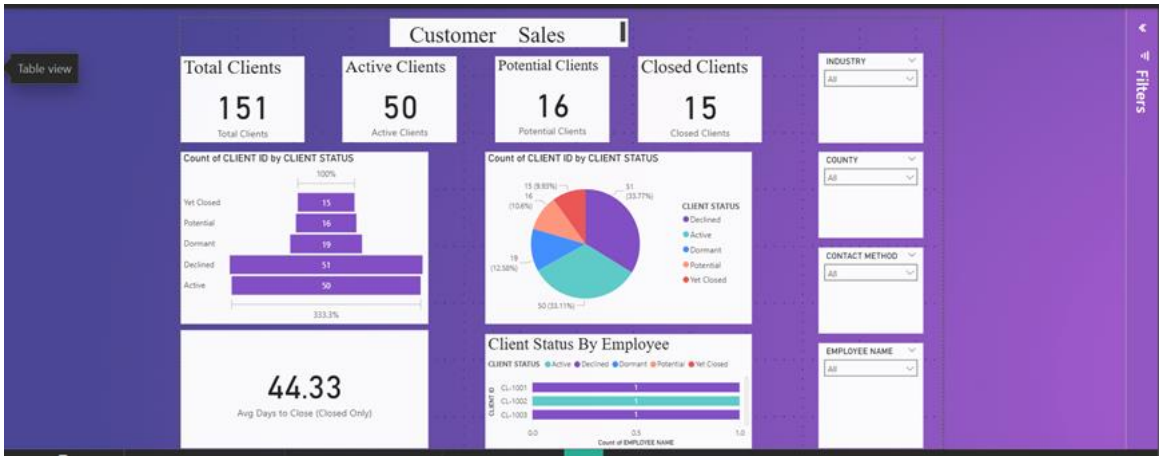
The stacked bar chart displays how clients across different statuses are distributed among employees. This helps management recognize overloaded staff, reassign clients, or support employees managing high-risk leads.

6.9.6 Filters & Interactivity

Slicers allow filtering by:

- Industry
- County
- Contact Method
- Employee Name

This enhances interactivity and supports deep exploration of the pipeline.



6.9.7 Insights & Recommendations

- Some employees demonstrate significantly higher closing efficiency.
- Declined reasons highlight budget constraints and competition as main obstacles.
- Recommendation: Offer training for lower-performing employees and address decline trends with targeted value propositions

6.9.8 Key Insights from the Dashboards

Across the three dashboards, the following data-driven insights are obtained:

- Overall client closing rate stands at approximately **9.9%**.
- Certain industries (e.g., Hospitality, Real Estate) show stronger conversion rates.
- In-person meetings and referrals appear to generate better engagement outcomes.
- Counties such as Nakuru, Embu, and Mombasa show relatively stronger performance.

- Declined clients are concentrated around specific reasons such as “Client already using competitor” and “Budget constraints.”

6.9.9 Reflection

This project enhanced proficiency in:

- Data cleaning
- DAX measure creation
- Dashboard layout design
- Interactive filtering
- Visual storytelling using Power BI

6.9.10 Conclusion

The three dashboards—Employee Closing Rate, Segmentation Insights, and Client Pipeline—collectively provide a comprehensive BI solution tailored to Fedhatrac’s operational needs.

They allow leadership to:

- Monitor employee performance
- Evaluate client conversion behavior
- Identify high-performing segments
- Track pipeline efficiency
- Improve follow-up strategy
- Support data-driven management decisions

These dashboards serve as a unified system for evaluating performance, optimizing workflows, and strengthening client engagement across the entire organization.

7.0 Implementation Plan

To move this project from a student course project to a live business tool, Fedhatrac should follow this phased approach:

7.1 Phase 1: Data Standardization (Week 1-2)

- Modify Intake forms to make DeclineReason, ClientLineOfWork, and ReferralSource mandatory fields.
- Standardize the ClientStatus definitions across the team.

7.2 Phase 2: Integration (Week 3)

- Connect Power BI directly to the live data source (SQL Database or centralized Excel SharePoint) to replace static CSV imports.
- Configure scheduled refreshes (daily/weekly).

7.3 Phase 3: Training & Adoption (Week 4)

Executives: Training on interpreting the "Executive Overview" for strategic decisions.

Sales Team: Training on operational data entry to ensure dashboard accuracy.

8.0 User Documentation/Manual

8.1 How to Update the Dashboard

This assumes the organization has standardized data capture of interactions between sales team and the client/lead

1. Open the ClientFlux_BI_Solution.pbix file.
2. Ensure the source data file is updated in the designated directory.
3. Click the "Refresh" button on the Power BI Home ribbon.

8.2 Navigation Tips

Given the design philosophy we applied when generating the dashboards, there should be minimal interaction with it and more of looking at it to get the insight. However there are some dashboards that involve elements like slicers that need one to interact with to acquire even more insights, below is a simplified manual on using them:

- **Cross-Filtering:** Click on any bar chart element ("Real Estate" industry) to filter all other visuals on the page. This allows you to see, for example, the "Decline Reasons" specifically for Real Estate clients.
- **Drill Down:** On time-based charts, use the drill-down arrows to switch between Yearly, Quarterly, and Monthly views.
- **Slicers**: Click the arrow pointing down to uncover the category the entire dashboard will display insights on.

9.0 Project Evaluation

9.1 Dashboards

Our initial dashboard drafts were critiqued for being too technical. Thus we designed the dashboards with the persona of a non-technical inclined viewer in mind, ensuring high contrast, large KPI numbers and minimal clutter. We increased font sizes, used high-contrast colours for KPIs, and replaced raw data tables with intuitive charts like Donut and Funnel visuals.

- Critique: Initial drafts were too technical.
- Refinement: We simplified the visuals to focus on *actionable* insights (e.g., "Top 3 Reasons for Decline") rather than raw data tables.

9.1.1 Value Proposition

The final dashboards provide actionable intelligence. Instead of just knowing *how many* clients declined, Fedhatrac now knows *why* they declined and *which* industries are most receptive, allowing for immediate strategic pivots.

10.0 Future Recommendations

While the current solution is a significant step forward, our analysis identified critical "blind spots" in Fedhatrac's data collection that must be addressed to unlock advanced analytics.

10.1 Financial Intelligence

Despite its operational strengths, the Fedhatrac dataset suffers from one overwhelming deficiency as an absence of any financial data. The dataset provided contains no information about revenue, contract values, pricing, or any monetary outcomes whatsoever.

10.1.1 Revenue Visibility

Fedhatrac cannot calculate its total Monthly Recurring Revenue (MRR) or Annual Recurring Revenue (ARR) from this dataset. The most fundamental question for any subscription business—"How much revenue are we generating?"—remains unanswerable from the data alone.

10.1.2Pipeline Valuation

Sales managers cannot quantify the value of the sales pipeline. While the dataset shows 38 clients in "Potential" status, there's no way to know if these represent KES 2 million or KES 20 million in potential monthly recurring revenue.

10.1.3 Performance Measurement Distortion

Employee performance metrics are fundamentally skewed when based solely on client count rather than revenue generated. An employee who closes five large enterprise contracts generating KES 2 million in MRR appears less productive than an employee who closes twenty small accounts generating KES 200,000 in MRR—when in fact the former is ten times more valuable to the business.

10.1.4 Customer Lifetime Value Impossibility

One of the most important metrics for subscription businesses—understanding how much value each customer relationship generates over its lifetime—cannot be calculated. This prevents sophisticated analysis like CLV-to-CAC ratios, essential for determining whether sales and marketing investments are economically viable.

10.1.5 Forecasting Paralysis

Without contract values, forecasting models must rely on crude averages or external assumptions rather than actual deal-specific data, dramatically reducing forecast accuracy.

The absence of financial data is not just one gap among many—it is the fundamental limitation that prevents Fedhatrac's dataset from serving as a true business intelligence asset.

10.2 The Missing Layer of Engagement Quantification

The second major gap is the complete absence of engagement metrics—quantified measures of sales effort and activity intensity. The dataset captures when things happen but not how much is happening.

10.2.1 Sales Effort Invisibility

The current dataset provides no measurement of how much work is required to move a client through the sales funnel. We can calculate that the average time from Approach to Active is perhaps 75 days, but we don't know if that represents 5 touchpoints or 50 touchpoints.

10.2.2 Optimal Effort Determination

Without tracking touchpoint counts, Fedhatrac cannot identify the point of diminishing returns—the threshold beyond which additional sales effort produces minimal incremental conversion improvement.

10.2.3 Activity Type Blindness

The dataset doesn't distinguish between different types of engagement: phone calls, face-to-face meetings, email correspondence, WhatsApp messages, or product demonstrations. Yet these activities likely have dramatically different conversion impacts.

10.2.4 Process Optimization Impossibility

Continuous improvement requires measurement. To optimize the sales process—identifying bottlenecks, testing new approaches, measuring the impact of changes—Fedhatrac needs quantified metrics of process execution.

10.3 The Blind Spot: Client Segmentation

The third major gap is the complete absence of client segmentation variables. The current dataset treats all clients as homogeneous, undifferentiated entities, when in reality Fedhatrac likely serves dramatically different client types with distinct characteristics, needs, and value profiles.

10.3.1 Conversion Rate Variation

Individual consumers, small businesses, and large corporations likely convert at dramatically different rates. Without segmentation data, Fedhatrac cannot identify these patterns. The overall conversion rate masks the reality that the company should be pursuing different segments with different strategies.

10.3.2 Industry Vertical Blindness

The dataset provides no indication of what industry each client operates in. Yet industry sector is often the single best predictor of product fit and adoption success.

10.3.3 Size-Based Dynamics

Business size influences virtually every aspect of the client relationship: decision-making speed, budget availability, complexity requirements, support needs, and churn risk. Without capturing business size, Fedhatrac cannot segment its analysis by this critical dimension.

10.3.4 Ideal Customer Profile Uncertainty

Every successful business eventually identifies its "ideal customer profile"—the specific type of client that converts most easily, generates the most revenue, stays longest, and requires the least support. Fedhatrac's current dataset cannot support this analysis.

10.4 Competitive Intelligence: The Strategic Blind Spot

The fourth critical gap is the minimal capture of competitive intelligence—information about which competitors are encountered, how often Fedhatrac wins or loses against specific competitors, and what competitive advantages clients cite.

10.4.1 Limited Competitor Tracking

The current DECLINE_REASON field includes "Already using a competing platform" as one option, but this provides only binary information. It doesn't identify which competitor, what advantages that competitor offers, or whether the competitor was an incumbent platform or a simultaneous evaluation.

10.4.2 Win/Loss Analysis Impossibility

Sophisticated sales organizations conduct rigorous win/loss analysis to identify patterns and improve future performance. Fedhatrac's current dataset cannot support this analysis.

10.4.3 Competitive Encounter Frequency Unknown

Understanding how often sales representatives encounter competitive situations is essential for resource planning and strategy development.

10.4.4 Market Position Uncertainty

Without temporal tracking of competitive encounters and outcomes, Fedhatrac cannot assess whether its competitive position is improving or deteriorating.

11.0 Essential Variables

This section presents the minimum viable set of variables required for effective data visualization and business intelligence.

11.1 Client segmentation variables

11.1.1 Client Type

Data Type: Categorical
Values: Individual | SME | Corporate | NGO
Collection Point: During initial client approach

11.1.1.1 Why Client Type Matters

Client type is the foundational segmentation variable that enables virtually all comparative analysis. Different client types have fundamentally different characteristics:

- Individuals: Lower contract values, faster decisions, price-sensitive
- SMEs: Medium values, moderate sales cycles, seeking efficiency
- Corporates: High values, long sales cycles, require customization
- NGOs: Specialized needs, grant-dependent budgets

11.1.1.2 Dashboard Applications:

- Client distribution pie charts showing portfolio composition
- Conversion rate comparison across client types
- Average contract value by segment
- Sales cycle duration by type
- Status distribution segmented by type

11.1.2 Industry Sector

Data Type: Categorical
Values: Agriculture | Retail/Trade | Professional Services | Manufacturing | Hospitality | Education | Healthcare | Transportation | Construction | Technology | NGO/Non-Profit | Government | Other
Collection Point: During qualification stage

11.1.2.1 Why Industry sector Matters

Industry sector reveals which vertical markets are most receptive to Fedhatrac's solution. Some industries may have higher digital adoption, better payment reliability, or stronger need for financial management tools.

11.1.2.2 Dashboard Applications:

- Heatmap showing client concentration by industry
- Industry-wise conversion rate comparison

- Sector penetration analysis
- Decline reason patterns by industry
- Geographic distribution layered with industry data

11.1.3 Business size

Data Type: Categorical (dropdown)
Values: Micro (1-9 employees) | Small (10-49) | Medium (50-249) | Large (250+)
Collection Point: During qualification stage

11.1.3.1 Why This Matters for BI:

Business size correlates strongly with contract value, decision-making complexity, and sales cycle length. It's essential for understanding deal dynamics and resource allocation.

11.1.3.2 Dashboard Applications:

- Deal size distribution histograms
- Sales cycle length by business size
- Win rate comparison across size segments
- Employee performance: large deals closed vs. small deals
- Revenue contribution by business size

11.2 Financial Variables

11.2.1 Contract Value Monthly

Data Type: Numeric (KES - Kenyan Shillings)
Collection Point: For Potential clients: Expected/quoted monthly value; For Active clients: Actual contracted monthly value

11.2.1.1 Why This Matters for BI:

This is the single most important missing variable in the current dataset. Without revenue data, no financial analysis is possible. This variable transforms the dataset from operational tracking to strategic business intelligence.

11.2.1.2 Dashboard Applications:

- Total Monthly Recurring Revenue (MRR) calculation and trending
- Revenue pipeline value (sum of Potential clients' expected contracts)
- Average contract value calculations
- Revenue distribution histograms
- Employee performance ranked by revenue generated, not just client count
- Revenue concentration analysis (what % comes from top 20% of clients)
- Forecasting models based on historical contract values

11.2.1.3 Data Quality Note

For Active clients, this is an actual value. For Potential clients, use an estimated value.

11.2.2 First Payment Date

Data Type: Date (YYYY-MM-DD)
Collection Point: When client makes first payment (Active status)

11.2.2.1 Why This Matters for BI

Measures time-to-revenue—the gap between approach date and first payment. This is critical for cash flow forecasting and identifying bottlenecks in the onboarding process.

11.2.2.2 Dashboard Applications:

- Time-to-revenue analysis (approach date to first payment)
- Revenue realization timeline charts
- Onboarding efficiency metrics
- Bottleneck identification
- Monthly revenue recognition tracking

11.3 Sales Process Variables

11.3.1 Total Touchpoints

Data Type: Numeric (integer count)
Definition: Total number of interactions (calls + meetings + emails + messages) from approach to status decision
Collection Point: Auto-increment in CRM with each logged interaction, OR manual entry at each status change milestone

11.3.1.1 Why This Matters for BI

Quantifies sales effort required per client. This is essential for measuring efficiency and identifying diminishing returns—the threshold beyond which additional sales effort produces minimal incremental conversion improvement.

11.3.1.2 Dashboard Applications:

- Scatter plots: Touchpoints vs. Conversion outcome
- Average touchpoints by client status
- Employee efficiency comparison (conversions per touchpoint)
- Effort-to-revenue ratio
- Identification of high-effort, low-value opportunities to avoid

11.3.2 Demo Completed

Data Type: Boolean (Yes/No checkbox)
Collection Point: After proposal/presentation stage

11.3.2.1 Why This Matters for BI

Product demonstrations are typically high-correlation events with conversion. Tracking demo completion enables funnel analysis and identifies missed opportunities.

11.3.2.2 Dashboard Applications

- Conversion rate comparison: Demo completed vs. No demo
- Demo penetration rate (% of Potential clients who receive demo)
- Employee effectiveness: Demo-to-conversion rates
- Funnel analysis showing drop-off at demo stage

11.3.3 Proposal Sent Date

Data Type: Date (YYYY-MM-DD)
Collection Point: When formal proposal/pricing is sent to client

11.3.3.1 Why This Matters for BI

Marks progression to late-stage sales funnel. Enables calculation of proposal-to-close time and identification of stalled deals.

11.3.3.2 Dashboard Applications:

- Sales velocity charts (approach → proposal → close)
- Proposal-to-decision conversion rates
- Time-to-decision analysis
- Identification of proposals pending >30 days
- Stage progression funnel analysis

11.3.4 Primary Competitor

Data Type: Categorical
Values: [List of Kenyan fintech competitors offering the same product as Fedhatrac] | Other | None
Collection Point: During needs assessment, mandatory for declined clients

11.3.4.1 Why This Matters for BI

Identifies which competitors Fedhatrac encounters most frequently and loses to most often. Essential for competitive positioning and win/loss analysis.

11.3.4.2 Dashboard Applications

- Competitive encounter frequency (bar chart of competitor mentions)

- Win rate by competitor (% of deals won when facing each competitor)
- Competitive landscape matrix
- Decline reason analysis filtered by competitor
- Competitive threat trending

11.4 Status Tracking Enhancement

11.4.1 Previous Status

Data Type: Categorical (same values as CLIENT_STATUS)
Collection Point: Auto-populated when CLIENT_STATUS changes

11.4.1.1 Why Capturing the Previous Client status Matters

Tracks client journey through the funnel, enabling flow analysis and identification of common progression or regression patterns.

11.4.1.2 Dashboard Applications:

- Sankey (flow) diagrams showing all status transitions
- Reactivation analysis (Dormant -> Active transitions)
- Status regression identification (Active -> Dormant patterns)
- Conversion pathway analysis
- Status change velocity metrics

11.5 Marketing Attribution

11.5.1 Referral source

Data Type: Categorical
Values: Direct Outreach | Existing Client Referral | Social Media | Website | Event/Conference | Partner Referral | Traditional Marketing (Radio/TV/Print) | Other
Collection Point: At initial approach

11.5.1.1 Why Referral Source Matters

Enables marketing attribution analysis. Which acquisition channels produce the highest quality leads and best conversion rates. Essential for optimizing marketing spend.

11.5.1.2 Dashboard Applications

- Marketing funnel by source (approach -> active conversion rates)
- Lead quality by source
- Cost-per-acquisition by channel
- Channel mix trends over time
- Source-specific average contract values

11.6 Geographic Enhancement

11.6.1 Sub county

Data Type: Text field
Collection Point: During initial approach

11.6.1.1 Why Capturing Sub County Matters for BI:

Provides more granular geographic analysis than county alone, especially critical for urban areas like Nairobi (17 sub-counties) and Mombasa (6 sub-counties).

11.6.1.2 Dashboard Applications:

- Detailed geographic heatmaps showing penetration at sub-county level
- Urban vs. rural performance comparison
- Territory optimization analysis
- Micro-market identification
- Geographic expansion planning

12.0 Conclusion

The Client Flux BI Solution successfully demonstrates that even with a lean operation, Fedhatrac can leverage data to improve client acquisition. By tracking *why* clients say no and *who* brings in the best business, Fedhatrac can pivot its marketing strategy to target the industries that yield the highest conversion rates, moving them toward a data-driven future.

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2. Fedhatrac Project Proposal (Internal Document).
3. Fedhatrac Website & App Documentation.

Appendices