

# FinTechCorp Case Study: A GenAI-Driven Customer Experience Transformation

Course/Context: Business Analysis & Strategy

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## Executive Summary

This case study analyzes a critical failure in FinTechCorp's customer experience, identified through a provided feedback dataset. The analysis revealed a severe 62.66% Detractor rate and an average NPS of just 5.07. Compounding this, a systemic data integrity failure (placeholder text in feedback forms) has rendered the company "blind," making it impossible to diagnose the root cause of this dissatisfaction. The high 37.04-hour average resolution time was also found to have no correlation with customer sentiment, proving the company is focused on the wrong metrics.

This document proposes a comprehensive, Generative AI-driven solution: the **Customer Feedback Intelligence (CFI) Platform**.

This platform is not merely a technical upgrade; it is a strategic business transformation. It moves FinTechCorp from a reactive, inefficient, and "gut-feel" organization to a proactive, intelligent, and customer-obsessed one.

**The proposed solution will:**

1. **Ingest & Analyze:** Use GenAI to read, understand, and categorize all customer feedback in real-time, finally uncovering the "why" behind the negative sentiment.
2. **Automate & Triage:** Intelligently route support tickets, provide "Agent Co-pilots" to reduce resolution times, and auto-escalate churn/compliance risks.
3. **Visualize & Action:** Deliver real-time dashboards and automated narrative reports to management, enabling data-driven decisions to fix the root causes of customer pain.

The project's success metrics are tied directly to business outcomes: **increasing NPS from 5.07 to > 7.0, reducing the Detractor rate from 62.66% to < 40%, and cutting average resolution time to under 24 hours**. This document details the data analysis, the formal Business Requirements Document (BRD) for the solution, key process improvements, agile user stories, and a stakeholder communication plan.

## Section 1: Initial Data Analysis & Key Insights

An analysis was performed on the customer feedback dataset (n=10,000). The findings below

form the foundation for the proposed solution.

## 1.1. Sentiment Analysis (Overall)

Customer sentiment was classified using the Net Promoter Score (NPS) methodology. The distribution is critically poor:

- **Detractors (Negative): 62.66%** (NPS Score 0-6)
- **Promoters (Positive): 18.91%** (NPS Score 9-10)
- **Passive (Neutral): 18.43%** (NPS Score 7-8)

This distribution results in an **Overall Average NPS of just 5.07**, signaling a severe, systemic failure to meet customer expectations.

## 1.2. Top Pain Points (Ranked)

1. **Extreme Customer Dissatisfaction (Severity: Critical):** The 62.66% Detractor rate is the most severe issue, posing a significant risk to customer retention and brand reputation.
2. **Long Service Resolution Times (Severity: High):** The average time to resolve an issue is **37.04 hours**, a poor performance metric that adds to customer frustration.
3. **Systemic Poor Performance (Severity: High):** The issues are not isolated to one team. All departments are performing at a similarly poor level.

## 1.3. Department-Wise Issues

Analysis shows a concerning uniformity in poor performance. This rules out a "single bad apple" and points to foundational, cross-functional problems.

Department	Total Feedback	Avg. NPS Score (0-10)	Avg. Resolution Time (hrs)	Detractor Rate
Loans	1948	<b>4.97</b>	<b>38.04</b>	63.91%
Investments	2000	5.01	37.01	62.80%
Insurance	2014	5.09	37.01	62.26%
Support	2030	5.14	37.17	62.17%
Credit Cards	2008	5.15	35.99	62.20%

## 1.4. Key Themes (Analysis Limitation)

This part of the analysis could not be completed. The Feedback Text column in the dataset

contains only placeholder text (e.g., "Machine happy animal usually..."), not real customer feedback. Therefore, it is **impossible to determine why** customers are so dissatisfied. This data integrity failure is the single most critical problem to be solved.

## 1.5. Key Patterns & Findings

- **No Correlation Between Speed and Sentiment:** The correlation between Resolution Time and NPS Score is **-0.011**. This is a crucial insight: **simply resolving issues faster will not fix the problem**. The root cause of dissatisfaction is qualitative (e.g., policy, product, agent professionalism), not just speed.
- **Slow, Consistent Processes:** The 37-hour average resolution time is not an anomaly; it is the predictable standard, indicating a systemically inefficient process.

# Section 2: Business Requirements Document (BRD)

Based on the analysis, the following BRD outlines the proposed Generative AI solution.

Project Name: Customer Feedback Intelligence (CFI) Platform

Version: 1.0

## 2.1. Problem Statement

Customer dissatisfaction has reached a critical level (62.66% Detractors, 5.07 NPS). The organization is currently **incapable of diagnosing the root cause** of this dissatisfaction due to a data integrity failure in the Feedback Text field. This combination of severe negative sentiment, a complete lack of qualitative insight, and high operational inefficiency (37.04-hour resolution) poses an immediate threat to customer retention and brand reputation.

## 2.2. Business Objectives

- **Objective 1 (Insight):** Establish a reliable system to capture, analyze, and act upon real-time, qualitative customer feedback to identify specific pain points.
- **Objective 2 (Satisfaction):** Dramatically improve customer satisfaction (NPS) by addressing the *true drivers of dissatisfaction*.
- **Objective 3 (Efficiency):** Reduce operational inefficiencies and cut the average issue resolution time.

## 2.3. Scope

### In-Scope Items

- Remediation of all customer feedback collection points.
- Development of the "Customer Feedback Intelligence (CFI) Platform."
- Integration of a GenAI engine for sentiment analysis, topic modeling, and summarization.
- Creation of real-time, role-based dashboards for management.
- Configuration of automated alerts for high churn risk or compliance issues.
- API integration with the existing customer support ticketing system.

## **Out-of-Scope Items**

- Re-engineering of core banking or loan origination systems.
- Analysis of third-party social media data (slated for Phase 2).
- Execution of product/policy changes (this platform will *inform* those changes).

## **2.4. Proposed GenAI-driven Solution**

We will develop a **Customer Feedback Intelligence (CFI) Platform** to:

1. **Ingest:** Connect to remediated data sources (webforms, emails, chat transcripts) with a validation layer to ensure data quality.
2. **GenAI Analysis:** Process valid feedback in real-time to enrich it with tags for Department, Sentiment (e.g., Frustrated), Key Themes (e.g., Application Process), Urgency, and an AI-generated Summary.
3. **Visualize & Action:** Populate a real-time BI dashboard. Department heads can filter by theme to see their specific issues. "Critical" alerts will be routed immediately to support managers for intervention.

## **2.5. Functional Requirements**

- **Data Ingestion:** System shall ingest structured (forms) and unstructured (email, chat) text data and include a validation gateway to reject placeholder entries.
- **GenAI Analysis:** System shall accurately classify feedback by department (>95% accuracy), perform multi-label topic classification, assign granular sentiment, and flag high-risk compliance keywords.
- **Dashboard & Reporting:** System shall provide a main dashboard (Overall NPS Trend, Sentiment by Department, Top 5 Issues) with drill-down capabilities.
- **Alerting & Integration:** System shall send automated email alerts for Critical (Churn Risk) and automatically create high-priority tickets via API for Legal Risk feedback.

## **2.6. Non-Functional Requirements**

- **Security:** All PII must be masked before AI analysis. Access must be role-based (RBAC).
- **Scalability:** System must process up to 20,000 feedback entries per day.
- **Performance:** Near real-time analysis (<= 5 minutes). Dashboard load time < 3 seconds.
- **Reliability:** 99.9% uptime.

## **2.7. Assumptions**

1. The upstream feedback collection points (webforms, app) **will be successfully remediated**. This is the single most critical dependency.
2. APIs for the Customer Support ticketing system are available and documented.
3. SMEs from each department will be available during UAT to validate AI model classifications.

## **2.8. Risks & Mitigation**

Risk ID	Risk Description	Probability	Impact	Mitigation Strategy
R-01	<b>Data quality remains poor.</b> Upstream teams fail to fix collection forms.	High	Critical	Establish a joint steering committee. Project will not proceed past Milestone 1 (Data Validation Gateway) until this is certified as fixed.
R-02	<b>GenAI model is inaccurate.</b> Model misunderstands FinTech jargon.	Medium	High	Implement a "Human-in-the-Loop" (HITL) process for the first 60 days. A 10% sample of classifications will be reviewed by SMEs to fine-tune the model.
R-03	<b>Low business adoption.</b> Managers do not trust or use the new dashboard.	Medium	Medium	Develop a comprehensive change management and training plan. Tie dashboard KPIs directly to managerial performance reviews.

## 2.9. Success Metrics

Category	Metric	Current Baseline	Target (12 Months)
Customer	Net Promoter Score (NPS)	5.07	> 7.0 (Passive)
Customer	Detractor Rate	62.66%	< 40%
Operational	Average Resolution Time	37.04 hours	< 24 hours
Project	Time to Insight	(Impossible)	< 15 minutes
Project	Dashboard Adoption	0%	90% weekly login by all department heads

## Section 3: High-Impact GenAI Process Improvements

The CFI Platform will enable the following 10 high-impact process improvements:

- Feedback Analysis: Real-time Topic & Sentiment Engine**
  - What:** Automated, real-time analysis of all incoming customer feedback to extract themes, topics, and granular sentiment.
  - Why:** The company is currently blind. The 62.66% Detractor rate is a symptom with an unknown cause.
  - GenAI Use:** NLU to classify themes (Application Process), sentiment (Frustrated), and root causes.
  - Benefit:** Reduce "Time to Insight" from impossible to **under 15 minutes** and enable data-driven prioritization.
- Customer Support: Intelligent Ticket Triage & Routing**
  - What:** A smart triage system to automatically read, understand, and route all incoming support tickets to the correct department and priority queue.
  - Why:** The 37-hour resolution time suggests a major efficiency bottleneck and manual mis-routing.
  - GenAI Use:** Analyze the *intent* and *urgency* of new tickets to auto-tag and route them.
  - Benefit:** Reduce manual triage effort by **>90%** and ensure critical issues are escalated immediately.
- Customer Support: Real-time "Agent Co-pilot"**
  - What:** A GenAI-powered assistant embedded in the support agent's workstation.
  - Why:** Agents waste time navigating complex, siloed knowledge bases, leading to long hold times and inaccurate answers.

- **GenAI Use:** Listen/read the customer query in real-time, search all internal knowledge bases, and draft a clear, policy-compliant response for the agent.
  - **Benefit:** Reduce Average Handle Time (AHT) by **20-30%** and increase First Call Resolution (FCR).
4. **Personalization: Proactive Detractor Intervention**
- **What:** A system to proactively contact dissatisfied customers (Detractors) with a personalized solution after they leave feedback.
  - **Why:** With 62.66% Detractors, a reactive model is a failing strategy.
  - **GenAI Use:** Auto-draft a personalized outreach email based on the customer's specific complaint for a human retention specialist to review and send.
  - **Benefit:** Increase Detractor-to-Passive conversion rate and directly reduce customer churn.
5. **Reporting Automation: Automated Narrative Summaries**
- **What:** Auto-generated weekly reports in plain English that summarize key trends and risks for each department head.
  - **Why:** Managers need key insights ("the so what?"), not just raw data dashboards.
  - **GenAI Use:** Analyze dashboard data and generate a narrative summary (e.g., "NPS for Loans fell 3 points, driven by a 45% spike in complaints about 'Application Process'").
  - **Benefit:** Save **10+ hours per week** of manual data analysis and increase manager engagement with data.
6. **Operations: Systemic Root Cause Analysis**
- **What:** Using AI to analyze groups of complaints to find the single, underlying process flaw.
  - **Why:** The data shows uniform poor performance, suggesting systemic issues.
  - **GenAI Use:** Analyze 500 complaints tagged Loan Application Error to find a deeper pattern (e.g., "82% of errors occur on the 'Proof of Income' page for Android users").
  - **Benefit:** Fix the root cause once, preventing thousands of future support tickets.
7. **SLA Monitoring: Predictive SLA Breach Alerts**
- **What:** An early warning system that predicts which new tickets are at high risk of breaching the SLA *before* it happens.
  - **Why:** The 37-hour average shows SLAs are being missed. The current system is reactive.
  - **GenAI Use:** Generate a "Breach Risk Score" based on the ticket's complexity and customer history, allowing managers to proactively escalate.
  - **Benefit:** Move from reactive to **predictive SLA management** and reduce the SLA breach rate.
8. **Requirement Documentation: "BA Co-pilot" for BRDs**
- **What:** A GenAI tool to assist Business Analysts in drafting comprehensive user stories and acceptance criteria.
  - **Why:** Automating the first draft frees up BAs to focus on high-value stakeholder negotiation and validation.
  - **GenAI Use:** Generate a structured first draft of a BRD or user story set based on

- high-level objectives.
  - **Benefit:** Reduce time-to-first-draft for documentation by **40-50%** and improve BA productivity.
9. **Personalization: Context-Aware Product Offers**
- **What:** A marketing engine that suggests relevant product offers based on a customer's recent sentiments.
  - **Why:** The company is likely sending generic offers that may be alienating frustrated customers.
  - **GenAI Use:** Suppress marketing offers to Detractors who just complained about High Fees. Send a targeted offer for a wealth consultation to a Promoter who praised the Investments platform.
  - **Benefit:** Increase marketing conversion rates and stop annoying frustrated customers.
10. **Operations: Internal Knowledge Base Automation**
- **What:** A system that uses GenAI to automatically create and update internal knowledge base articles from resolved support tickets.
  - **Why:** Agents likely solve the same problem repeatedly because the solution is never documented.
  - **GenAI Use:** Read the *problem* and *solution* from a resolved ticket and auto-draft a "How-To" article for the internal knowledge base.
  - **Benefit:** Build a rich, self-updating knowledge base with minimal manual effort and reduce new agent ramp-up time.

## Section 4: Agile Implementation (Key User Stories)

The following 10 user stories represent the core functionality for the CFI Platform's first release.

1. **Executive-Level Summary**
  - **As a CXO, I want to** see a single dashboard comparing the NPS trends and top 3 negative themes for all departments side-by-side, **so that** I can monitor the overall health of the business.
  - **Acceptance Criteria:**
    - **Given** I am logged in as an 'Executive' user
    - **When** I navigate to the main dashboard
    - **Then** I must see a "Departmental NPS Scorecard" table listing all 5 departments, their current NPS, and their "Top 3 Negative Themes."
2. **Department-Specific View**
  - **As a Head of Loans, I want to** see a dashboard automatically filtered to show *only* the feedback and metrics for my department, **so that** I can focus on the specific problems I am responsible for.
  - **Acceptance Criteria:**
    - **Given** I am logged in as the 'Head of Loans'
    - **When** I load my dashboard

- Then all widgets must only display data where the Department is 'Loans'.

### 3. Feedback Drill-Down

- As a Department Head, I want to click on a theme (e.g., "Application Process") in my dashboard, so that I can read the individual, raw feedback entries tagged with that theme.
- **Acceptance Criteria:**
  - Given I am on my dashboard and see the 'Top 5 Themes' widget
  - When I click on the theme "Application Process"
  - Then I am navigated to a "Feedback Details" view showing a table of all individual feedback entries tagged with "Application Process."

### 4. Key Theme Classification

- As a Business Analyst, I want the GenAI model to automatically read and tag each piece of feedback with one or more relevant business themes, so that we can quantify the drivers of complaints.
- **Acceptance Criteria:**
  - Given a feedback entry states: "Your loan application is too long and the website is confusing."
  - When the GenAI model processes this text
  - Then the feedback record must be enriched with the tags: Theme: Application Process and Theme: Website UI/UX.

### 5. Urgency & Churn Risk Detection

- As a Customer Support Manager, I want the GenAI model to identify and flag feedback that indicates a high risk of customer churn, so that I can escalate these cases to my retention team.
- **Acceptance Criteria:**
  - Given a feedback entry states: "If this isn't fixed, I am closing all my accounts."
  - When the GenAI model processes this text
  - Then the feedback record must be enriched with the tag: Urgency: Critical (Churn Risk).

### 6. Critical Churn Alert

- As a Customer Support Manager, I want to receive an immediate email alert whenever a piece of feedback is classified as 'Critical (Churn Risk)', so that my team can act on it within minutes.
- **Acceptance Criteria:**
  - Given a feedback record is tagged as Urgency: Critical (Churn Risk)
  - When the record is saved
  - Then an email alert must be sent to the 'RetentionTeam' group within 2 minutes, containing the full feedback text.

### 7. Automated Ticketing for Legal Risk

- As a Compliance Officer, I want any feedback that mentions legal action to automatically create a high-priority ticket in the support system, so that the legal team is engaged immediately.
- **Acceptance Criteria:**

- **Given** a feedback entry is tagged by the GenAI as Theme: Legal Risk (e.g., "I will sue")
- **When** the feedback is processed
- **Then** the platform must make an API call to the support system to create a new ticket with Priority: High in the 'Legal-Compliance' queue.

## 8. AI-Powered Summarization

- **As a** Department Head, **I want to** see a one-sentence AI-generated summary for any feedback entry over 500 characters, **so that** I can understand the gist of long complaints quickly.
- **Acceptance Criteria:**
  - **Given** I am in the "Feedback Details" view
  - **When** I click the "View AI Summary" icon on a long entry
  - **Then** a concise, accurate summary is displayed.

## 9. Rejecting Invalid Feedback

- **As a** System Administrator, **I want** the ingestion gateway to automatically reject unusable placeholder feedback (e.g., "asdfasdf"), **so that** our dashboards are not corrupted by bad data.
- **Acceptance Criteria:**
  - **Given** a feedback is submitted with the text "test"
  - **When** the ingestion gateway receives this entry
  - **Then** the entry must *not* be sent to the GenAI model.
  - **And** it must be logged in an 'Invalid\_Feedback' table for auditing.

## 10. Agent Co-pilot Knowledge Retrieval

- **As a** Support Agent, **I want** to ask my "Agent Co-pilot" a question (e.g., "What is the policy for a loan pre-payment penalty?"), **so that** I can get the correct answer instantly without placing the customer on hold.
- **Acceptance Criteria:**
  - **Given** I am in my agent desktop and a customer asks about a pre-payment penalty
  - **When** I type "loan pre-payment penalty" into the co-pilot window
  - **Then** the co-pilot must return the correct, verified policy text from the internal knowledge base within 5 seconds.

# Section 5: Stakeholder Management & Communication Plan

The success of this project depends on managing the human element of this transformation. The following is a summary of the communication plan for key stakeholder groups.

## 5.1. Customers

- **Concerns:** "You don't listen, and you're too slow."
- **GenAI Help:** AI will ensure we read and understand every piece of feedback. It will also

help our agents find answers faster.

- **Benefits:** Faster service, having to repeat yourself less, and seeing real changes based on your feedback.
- **Required Changes:** None. You will simply experience a more responsive FinTechCorp.

## 5.2. Customer Support Agents

- **Concerns:** "My tools are slow, customers are angry, and I can't find the right answers."
- **GenAI Help:** An "Agent Co-pilot" will be embedded in your workstation to find answers and draft responses instantly. AI will also auto-triage tickets, so you get the right work.
- **Benefits:** Lower stress, less manual work, and the ability to focus on solving complex problems.
- **Required Changes:** Mandatory training (est. 4 hours) on the new co-pilot interface.

## 5.3. Management (Department Heads & Executives)

- **Concerns:** "I know NPS is terrible, but I don't know *why* or *what* to fix first."
- **GenAI Help:** The CFI Dashboard will give you a real-time, objective view of the exact themes (e.g., "Loan Application UI") driving negative sentiment in your department.
- **Benefits:** The ability to make data-driven decisions, prioritize fixes, and objectively track performance.
- **Required Changes:** Training on the new dashboard. A cultural shift to hold teams accountable for the new "Top Theme" metrics.

## 5.4. IT Team

- **Concerns:** "A new AI platform sounds complex, insecure, and a hassle to integrate. I'm also tired of vague bug reports."
- **GenAI Help:** This will be a single, secure, and scalable platform with clear API protocols. It will also provide *highly specific* root cause analysis, turning vague complaints into actionable bug reports.
- **Benefits:** A modern AI architecture and a dramatic reduction in vague, time-wasting bug tickets.
- **Required Changes:** Involvement in UAT to validate API endpoints. Training on the new platform's architecture.

## 5.5. Compliance Team

- **Concerns:** "Customer PII in AI models is a risk. We might miss critical legal complaints in the noise."
- **GenAI Help:** The platform is "Privacy by Design" (PII is masked *before* analysis). The AI is also being trained to *specifically* identify and flag high-risk keywords ("legal action," "sue," "fraud").
- **Benefits:** A massive *reduction* in risk. This system finds the "needle in the haystack," auto-escalating legal/compliance risks to your team in real-time.
- **Required Changes:** Participation in UAT to validate the PII-masking process and the new

'Compliance Risk Alert' workflow.

## Section 6: Conclusion

FinTechCorp is at a critical inflection point. The discovery of its severe customer dissatisfaction (62.66% Detractors) combined with a total lack of qualitative insight has exposed a major business vulnerability.

The proposed **Customer Feedback Intelligence (CFI) Platform** is the definitive solution. By leveraging Generative AI, this initiative transforms the company's biggest weakness—its failure to listen—into its greatest strength.

This is not merely a technology project; it is a fundamental business transformation. It enables a cultural shift from a reactive, inefficient organization to a proactive, intelligent, and truly customer-centric one. The execution of this plan will provide the tools to not only fix the current crisis but also to build a sustainable, competitive advantage based on a superior customer experience.