The Hidden Cost of Unresolved Issues

Google Fiber Repeat Call Analysis

Project Requirements Document
Capstone Case Study

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Key Metrics at a Glance

KPI	Value	Insight
Total Calls	64,939	Volume of all customer service contacts
Repeat Calls	11,888	Customers who called again for the same issue
Repeat Rate	18.3%	Share of all contacts that were repeats
Worst-Performing Market	Market 1 (57%)	Highest share of repeat contacts
Top Issue Type	Type 2 (39% in Markets 1 & 3)	Major driver of repeat calls

1. Executive Summary

This dashboard analyzes customer service data from January to March 2022 to help Google Fiber's customer service team evaluate how effectively customer issues are resolved during the first call. The project identifies how often customers call back for the same issue and highlights which types of problems and markets generate the highest number of repeat calls.

2. Business Problem

Google Fiber's leadership wants to understand how effectively the customer service department resolves customer inquiries on the first contact. Repeat calls may indicate process gaps, insufficient training, or recurring technical issues. Without visibility into the volume and causes of repeat calls, it is difficult to prioritize operational improvements or evaluate performance by market.

3. Project Objectives

- Measure first-call resolution effectiveness.
- Identify repeat call frequency and variation by market and issue type.
- Reveal trends in customer contact behavior over time.
- Provide actionable insights to reduce repeat calls.
- Design a dashboard accessible to executives, managers, and analysts.

4. Data Sources and Preparation

Dataset: Google_Fiber.csv - fictional customer service interaction records (Jan–Mar 2022).

Fields: Call ID, Customer ID, Market, Call Date, Issue Type, Contact Type, Repeat Indicator.

Steps:
- Cleaned null and duplicate records.
- Standardized field names and dates.
- Created calculated fields for Repeat Calls and Repeat %.
- Aggregated data to support multi-level time analysis.

5. Key Metrics and KPIs

- Total Calls: 64,939 total contacts.
- Repeat Calls: 11,888.
- Repeat Rate: 18.3% of all contacts.
- Highest Repeat Rate: Market 1 (57%).
- Calls by Market: M1 69.8%, M3 23.4%, M2 6.8%.
- Calls by Issue Type: Type 5 = 47.4%, Type 2 = 31.2%.

6. Dashboard Capabilities

- Interactive filters for Market, Issue Type, and Time Period.
- Trend lines showing evolution of repeat calls (weekly).
- Market comparison panels.
- Distribution charts by contact type and issue category.
- Clear hierarchy for executives and agents.

7. Intended Users

- Executives: strategic overview.
- Managers: identify bottlenecks.
- Analysts: explore trends and training needs.

8. Insights and Value

Market 1 handles 70% of all calls and shows the highest repeat rate (57%). Issue Type 2 drives 39% of repeat calls in Markets 1 and 3 but only 9% in Market 2.

These differences suggest that call-center efficiency strongly influences first-contact resolution.

The dashboard supports data-driven actions to reduce repeat calls and improve satisfaction.

9. Next Steps / Future Enhancements

- Integrate CSAT or NPS metrics.
- Add agent-level performance data.
- Automate data refresh and reporting.
- Introduce alert thresholds for high repeat rates.

10. Academic Context

This project was completed as part of the Google Data Analytics Professional Certificate (Capstone Project).
It represents a fictional business case designed to demonstrate the candidate's ability to:
• Translate business questions into measurable data requirements.
• Prepare, clean, and transform raw datasets for analysis.
• Design effective Tableau dashboards for decision support.
• Communicate insights clearly to both technical and non-technical audiences.

All data used in this analysis are simulated and do not represent actual Google Fiber customer records.