

CUSTOMER COMPLAINT PATTERN MINING AND ESCALATION DASHBOARD FOR AN FMCG BRAND

1. Background and Problem Statement:

An established FMCG company dealing in packaged food products observed a growing volume of customer complaints across its email, WhatsApp, and toll-free support channels. However, these complaints were logged manually and analyzed sporadically, leading to delayed escalations, unresolved product quality issues, and poor distributor accountability. The customer experience team lacked a unified view of recurring issues across SKUs and regions. The organization sought a scalable Excel-based model to systematically mine complaint data and generate actionable insights through interactive dashboards.

2. Objectives:

- Create a centralized Excel database of customer complaints from multiple channels
- Mine historical complaint logs to identify recurring patterns by SKU, distributor, and region
- Automate escalation triggers for high-frequency issues or high-severity complaints
- Build an interactive Excel dashboard for weekly review by QA and customer support teams
- Enable visual segmentation of complaint types for root cause identification

3. Methodology:

3.1 Data Consolidation

- Sources: Email logs (CSV exports), WhatsApp transcript summaries, call logs from CRM
- Fields Extracted: Complaint ID, Date, Channel, Product SKU, Complaint Type, Distributor Code, Region, Complaint Description, Status, Severity (Low, Medium, High)
- Consolidated into a master Excel sheet using Power Query

3.2 Data Cleaning and Structuring

- Removed duplicates using Excel's "Remove Duplicates" feature
- Standardized SKU codes and complaint types using VLOOKUP mappings
- Severity classification tagged using helper columns and keyword flags

3.3 Pattern Mining Logic

- PivotTables used to count complaints by SKU, region, and distributor
- Complaint frequency trend by month calculated using COUNTIFS
- Severity-weighted issue index calculated as: $\text{Issue Index} = (\text{High} * 3) + (\text{Medium} * 2) + (\text{Low} * 1)$
- Complaints filtered where Issue Index > Threshold for escalation triggers

3.4 Escalation Matrix

- Escalation rules defined as:
 - 5+ High severity complaints on a SKU in 7 days → Flag to QA Head
 - 10+ complaints from a single distributor in 30 days → Escalate to Regional Manager
 - Reopened complaints >3 for a SKU in 15 days → Notify Product Quality Lead

3.5 Excel Dashboard Design

- Overview Sheet: Total complaints, resolved vs unresolved, top 5 complaint types
- SKU Drilldown: SKU-wise complaint frequency, severity index, resolution status
- Region-wise View: Heatmap showing complaint density by zone
- Escalation Flags: Conditional formatting to auto-highlight triggered rows
- Filters enabled for Channel, Region, Date Range, Severity

4.Key Features of the Excel Model:

- Dynamic slicers for real-time filtering by region, channel, and severity
- Auto-refresh via Power Query to update data on weekly import
- Color-coded alerts for unresolved high-severity issues
- Exportable escalation list for weekly operations review

5.Results and Benefits:

- Reduced complaint resolution time from 5.2 days to 2.8 days (post-implementation)
- Identified two SKUs with packaging flaws leading to >80 complaints in 2 months

- Replaced non-compliant distributor in West Zone after pattern detection
- Weekly dashboard review integrated into QA governance calls

6.Deliverables:

- Excel dashboard file with dynamic filtering and automated escalation logic
- Data import and cleaning template (CSV to Excel with mappings)
- Standard Operating Procedure (SOP) document for weekly update workflow
- Stakeholder briefing note summarizing implementation protocol

7.Stakeholder Relevance:

Academic:

- Demonstrates real-world application of Excel in mining unstructured complaint data
- Can be used as a case study in business analytics, operations, or service quality courses

Corporate:

- Applicable to FMCG, consumer electronics, or e-commerce businesses
- Enables integration of customer feedback loops into product and distributor reviews
- No additional software needed—fully Excel-based, ideal for mid-sized operations