

Executive Summary

Purpose

The objective of this BRD is to outline the requirements for the 'Customer Feedback Analysis & Automation Platform' project. The platform's goal is to cut down the manual review time by 70% and enhance actionable insights for the product teams.

Background / Context

Given the increasing volume of customer feedback to process, there is a strong need to automate the feedback analysis process. The current process is labor-intensive, resulting in delayed responses and missed opportunities for improving the products based on customer insights.

Objectives

The main objectives of this project are:

1. Reduce manual review time of customer feedback by 70%
2. Extract actionable insights from customer feedback
3. Improve product development efficiency based on customer feedback

Project Overview

Project Scope

In-Scope:

1. Creation of a platform to automate the analysis of customer feedback
2. Integration of the platform with existing customer feedback channels
3. Deployment of machine learning algorithms to extract actionable insights

Out-of-Scope:

1. Redesigning the existing feedback channels
2. Handling feedback outside the scope of the specified product teams

Assumptions

- Existing feedback channels are capable of providing adequate and accurate data
- All customer feedback will be in a language the machine learning algorithm can understand

Constraints

- Time constraints for development and deployment
- Availability of technical skills for machine learning algorithms

Stakeholders & Roles

Stakeholders	Roles
Project Manager	Oversee project management
Developers	Building the platform
Data Scientists	Implementing ML algorithms
Product Teams	Providing feedback & inputs

Non-Functional Requirements

- **Performance:** The platform must be capable of processing high volumes of customer feedback quickly.
- **Security & Compliance:** The platform should comply with all GDPR and similar data privacy regulations.
- **Usability & Accessibility:** The platform should be user-friendly, offering ease of use even to non-technical product team members.
- **Availability & Reliability:** The platform should have high uptime and data should be backed up regularly to prevent loss.
- **Maintainability:** The platform should be easy to maintain and update.

Implementation Considerations

- **Technology Stack:** The platform could utilize technologies like Python for backend development, React for frontend development, and appropriate Machine Learning libraries for sentiment analysis.
- **Integration Points:** The platform should integrate with all existing customer feedback channels.
- **Training Needs:** The product teams may require training to use the platform effectively.
- **Change Management:** Changes should be communicated to all relevant stakeholders and users should be given adequate training and transition time.

Tools

Efficient project management tools like JIRA, data processing tools like Python, and machine learning libraries would be relevant for this project.

[Industry Best Practice Recommendations] Consider using Natural Language Processing (NLP) for feedback analysis, machine learning algorithms for sentiment analysis, and robust cybersecurity measures to protect customer data.

[Information Not Provided: Specific Tools, Detail Customer Feedback Channels, Specific Deployment Platforms, Data Backup Methods]

Business Requirements Document (BRD)

Project ID: BRD-2025-001

Project Title: Customer Feedback Analysis & Automation Platform

Business Domain: IT & Software

Business Requirements

Requirement ID	Description	Acceptance Criteria	Sub-requirements	Rationale (High Priority)	Linked Functional Requirements
BR-01	Integrate with multiple customer communication channels (Gmail, Slack, Facebook Messenger).	The platform successfully authenticates and receives feedback messages from all target channels.	BR-01.1: Channel authentication; BR-01.2: Feedback synchronization	High – Enables comprehensive collection of customer feedback, ensuring product team has holistic insights.	FR-01, FR-02
BR-02	Perform automated sentiment analysis on all incoming feedback using NLP.	At least 90% of feedback is classified with positive/neutral/negative sentiment within 5 minutes of receipt.	BR-02.1: English support; BR-02.2: Vietnamese support	High – Drives actionable insights for product teams by enabling fast assessment of customer mood.	FR-03
BR-03	Generate and deliver automated weekly summary reports to designated product team members.	Reports are delivered by email weekly by 9 AM every Monday, summarizing feedback volume, sentiment distribution, and top themes.	BR-03.1: Scheduled reporting; BR-03.2: On-demand reports	High – Reduces manual reporting overhead and ensures timely decision-making.	FR-04

Requirement ID	Description	Acceptance Criteria	Sub-requirements	Rationale (High Priority)	Linked Functional Requirements
BR-04	Enable tagging and categorization of individual feedback messages.	Users can manually and/or automatically tag feedback (e.g., Bug, Feature request, Complaint) via UI/API.	BR-04.1: Manual tag assignment; BR-04.2: AI-based auto-tagging	High – Structured data helps identify trends and respond faster to product issues.	FR-05
BR-05	Comply with GDPR for all collected and processed feedback data.	Audit trails available for all data collection, processing, and deletion actions; sensitive data pseudonymized; consent management enforced.	BR-05.1: Consent tracking; BR-05.2: Right-to-be-forgotten workflow	High – Legal requirement for operating in relevant jurisdictions.	FR-06
BR-06	Support multi-language processing, specifically English and Vietnamese for sentiment and categorization.	>95% correct language-based handling and accurate sentiment/tagging per language.	N/A	Medium – Expands target market and enables product teams to serve broader customer bases.	FR-03, FR-05
BR-07	Achieve 70% reduction in manual	Baseline manual review	N/A	High – Fulfills project's ROI and	All FRs (esp. FR-03,

Requirement ID	Description	Acceptance Criteria	Sub-requirements	Rationale (High Priority)	Linked Functional Requirements
	review time for feedback analysis.	averages X hours per week (establish metric); target system reduces to $\leq 0.3X$ hours within 3 months of rollout.		productivity goals for product teams.	FR-04, FR-05)
BR-08	Provide actionable insights and trends for product teams via dashboard and reports.	Users rate insights as “actionable” (via survey) at least 80% of the time during UAT; top product issues and suggestions are highlighted.	BR-08.1: Exportable summaries; BR-08.2: Visualization of trends	High – Key source of value for the platform’s users and stakeholders.	FR-04, FR-07

Functional Requirements

FR-01: Channel Integration

- **FR ID:** FR-01
- **Title:** Integration with Customer Feedback Channels
- **Actors:** System Admin, Integration Services, End Users
- **Preconditions:** Valid authentication credentials available; Channel APIs are accessible.
- **Main Flow:**
 1. Admin provides or authorizes channel access (OAuth/API keys).

2. System establishes secure connection and imports historic and new feedback.
 3. Feedback data is normalized and stored for further processing.
- **Alternate / Exception Flows:**
 - API credentials invalid: system notifies admin and retries after notification.
 - Temporary channel API downtime: system auto-retries every 15 minutes.
 - **Postconditions:** Feedback from connected channels is available for analysis.
 - **Related Business Requirements:** BR-01
 - **Process Flow:** [To be designed]
 - **Data Requirements:**
 - Channel name (string)
 - Message ID (string)
 - Sender info (string, pseudonymized for compliance)
 - Timestamp (ISO 8601)
 - Message content (text)
 - **Validation Rules:** All fields are required; message content must be non-empty.
 - **Mandatory for MVP:** Yes
 - **Integration Behavior:** Direct via Gmail, Slack, Facebook APIs.
 - **Error Handling Logic:** Log errors, send admin alerts, retry configurable.
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FR-02: Feedback Synchronization & Storage

- **FR ID:** FR-02
- **Title:** Feedback Data Synchronization and Storage
- **Actors:** System, End Users, Data Services
- **Preconditions:** FR-01 completed; Database operational.
- **Main Flow:**
 1. System ingests new feedback as it arrives from channels.
 2. System stores messages in a structured format.
 3. Metadata (timestamp, channel, language, sender) is extracted.
- **Alternate / Exception Flows:** Duplicate messages ignored; malformed input rejected and logged.
- **Postconditions:** All feedback is queryable and available for sentiment/tagging.
- **Related Business Requirements:** BR-01
- **Process Flow:** [To be designed]
- **Data Requirements:**
 - Feedback ID (UUID)
 - Raw message (text)
 - Metadata fields (see above)
- **Validation Rules:** Feedback ID unique; message length limits enforced (e.g., 10K chars).
- **Mandatory for MVP:** Yes

- **Error Handling Logic:** Log/reject invalid entries, monitor for failures.
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FR-03: NLP Sentiment Analysis Engine

- **FR ID:** FR-03
 - **Title:** Sentiment Analysis with Multi-language NLP
 - **Actors:** NLP Engine, System, Data Analysts
 - **Preconditions:** Feedback ingested and stored; Language detected.
 - **Main Flow:**
 1. System detects language (English/Vietnamese).
 2. Appropriate NLP pipeline analyzes sentiment.
 3. Sentiment (positive/neutral/negative) is saved with feedback record.
 - **Alternate / Exception Flows:** Unrecognized languages flagged for manual review.
 - **Postconditions:** Each feedback message is labeled with sentiment.
 - **Related Business Requirements:** BR-02, BR-06
 - **Process Flow:** [To be designed]
 - **Data Requirements:**
 - Language code (EN/VI)
 - Sentiment (enum)
 - Confidence score (float)
 - **Validation Rules:** Confidence score ≥ 0.5 for acceptable results.
 - **Mandatory for MVP:** Yes
 - **Error Handling Logic:** Flag low-confidence results; trigger manual workflow.
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FR-04: Automated Summary Reporting

- **FR ID:** FR-04
- **Title:** Weekly Automated Feedback Summary Reporting
- **Actors:** Product Managers, System, Analytics Engine
- **Preconditions:** Sufficient feedback data for reporting period.
- **Main Flow:**
 1. System aggregates feedback by sentiment, tag, and frequency.
 2. Summary report (PDF/HTML) is generated.
 3. Report delivered to designated users by email.
- **Alternate / Exception Flows:** If no data, report highlights "No new feedback."
- **Postconditions:** Reports received, viewable, and exportable.
- **Related Business Requirements:** BR-03, BR-08
- **Process Flow:** [To be designed]
- **Data Requirements:**
 - Summary statistics (counts/int/float)

- Highlighted feedback (text selection)
 - Trends (graph data: JSON/CSV)
 - **Validation Rules:** Date ranges correct; no missing users in delivery list.
 - **Mandatory for MVP:** Yes
 - **API Interactions:** Internal report generation engine.
 - **Error Handling Logic:** Resend failed deliveries; log/report.
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FR-05: Tagging and Categorization Engine

- **FR ID:** FR-05
 - **Title:** Feedback Tagging and Categorization (Manual/Automated)
 - **Actors:** QA Team, End Users, AI Engine
 - **Preconditions:** Feedback message stored.
 - **Main Flow:**
 1. End user or AI assigns one or more tags to a feedback message.
 2. Tag list is editable; custom tag creation is supported per admin approval.
 3. Tag/category is visible in all search, filter, and reporting functions.
 - **Alternate / Exception Flows:** Invalid/unapproved tags are blocked.
 - **Postconditions:** Tagged feedback available for filtering/analysis.
 - **Related Business Requirements:** BR-04, BR-06
 - **Process Flow:** [To be designed]
 - **Data Requirements:**
 - Tag name (string, limited to 30 chars)
 - Tag type (enum: manual/auto)
 - Tag assignment timestamp
 - **Validation Rules:** No duplicate tags; only approved tags allowed.
 - **Mandatory for MVP:** Yes
 - **Error Handling Logic:** Block/tag error messages for UI/API.
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FR-06: GDPR Compliance Management

- **FR ID:** FR-06
- **Title:** GDPR Compliance & Consent Management
- **Actors:** DPO/Legal, System Admin
- **Preconditions:** Any data collection/processing commences.
- **Main Flow:**
 1. Consent records are created for each data subject.
 2. Data processing logs are maintained.
 3. Right-to-be-forgotten requests processed within 30 days.
- **Alternate / Exception Flows:** Consent withdrawn triggers data deletion workflow.

- **Postconditions:** GDPR logs/audits complete and accessible.
 - **Related Business Requirements:** BR-05
 - **Process Flow:** [To be designed]
 - **Data Requirements:**
 - Consent record (JSON, fields: subject ID, timestamp, processing types)
 - Audit logs (event, timestamp, user/system ID)
 - **Validation Rules:** No data processed without explicit consent.
 - **Mandatory for MVP:** Yes
 - **Error Handling Logic:** Immediate stop of processing and escalation to admin.
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FR-07: Dashboard Insights & Visualization

- **FR ID:** FR-07
 - **Title:** Actionable Insights Dashboard
 - **Actors:** Product Team, System
 - **Preconditions:** Feedback, sentiment, and tag data available.
 - **Main Flow:**
 1. System aggregates and visualizes trends (e.g., volume, sentiment, tags).
 2. Product teams view charts/tables and export summaries.
 3. Key actionable insights (top issues, trending topics) highlighted.
 - **Alternate / Exception Flows:** If no new data, show last 30 days' insights.
 - **Postconditions:** Dashboard accessible and up-to-date.
 - **Related Business Requirements:** BR-08
 - **Process Flow:** [To be designed]
 - **Data Requirements:**
 - Visualization data (JSON/table)
 - Insights text (summary fields)
 - **Validation Rules:** Data freshness (<24h); filters operate correctly.
 - **Mandatory for MVP:** Yes
 - **Error Handling Logic:** Notify users of data loading issues.
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Industry Best Practice Recommendations (if not explicitly covered)

- Ensure role-based access control (RBAC) for all sensitive data.
- Provide detailed audit logging of data access and changes.
- Conduct regular data quality and security reviews.
- Enable API/webhook integrations for downstream systems (e.g., Jira, Zendesk) in future phases.

- Establish SLAs for uptime and processing latency.

End of Business Requirements Document