Functional Specification: Customer Experience Enhancement Platform

1. Project Overview & Objectives

This platform improves customer service interactions and operational efficiency through advanced analytics and seamless system integrations, targeting a 20% improvement in satisfaction scores and streamlined workflows.

- Project Objective: To deliver a scalable and user-centric platform for enhanced personalization, real-time insights, and operational efficiency while meeting strategic KPIs and remaining on time and within budget.

2. Scope Boundaries:

Design and implement a platform to transform customer service experiences while integrating with existing systems and analytics tools.

- In-Scope: Implement advanced analytics features; Develop integration with CRM, ticketing systems, and analytics platforms; Provide automated workflows for repetitive tasks.
- Out-of-Scope: Extensive customization options or advanced predictive AI beyond basic analytics; Integration with non-critical systems; Non-data-driven personalization features.

3. Current State (As-Is)

- Customer service relies on fragmented workflows requiring manual CRM data entry.
- Business analysts spend time manually consolidating data for ad-hoc reports, delaying insights.
- Existing systems are siloed, leading to inefficiencies and slower issue resolutions.
- Data inconsistencies and manual errors hinder timely resolution of customer tickets.
- No real-time analytics or automation exist, resulting in operational inefficiencies.

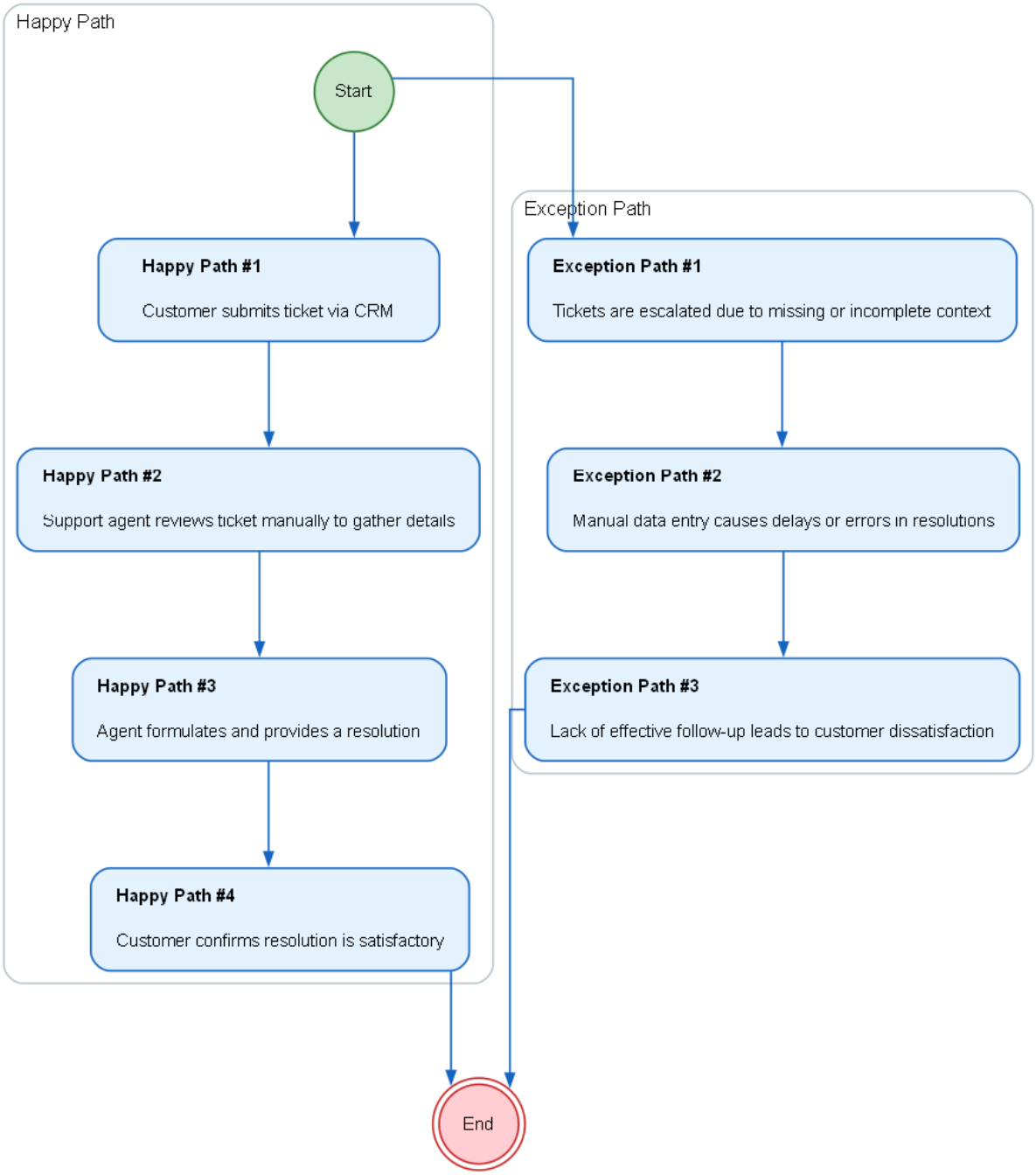
As-Is Process Flows

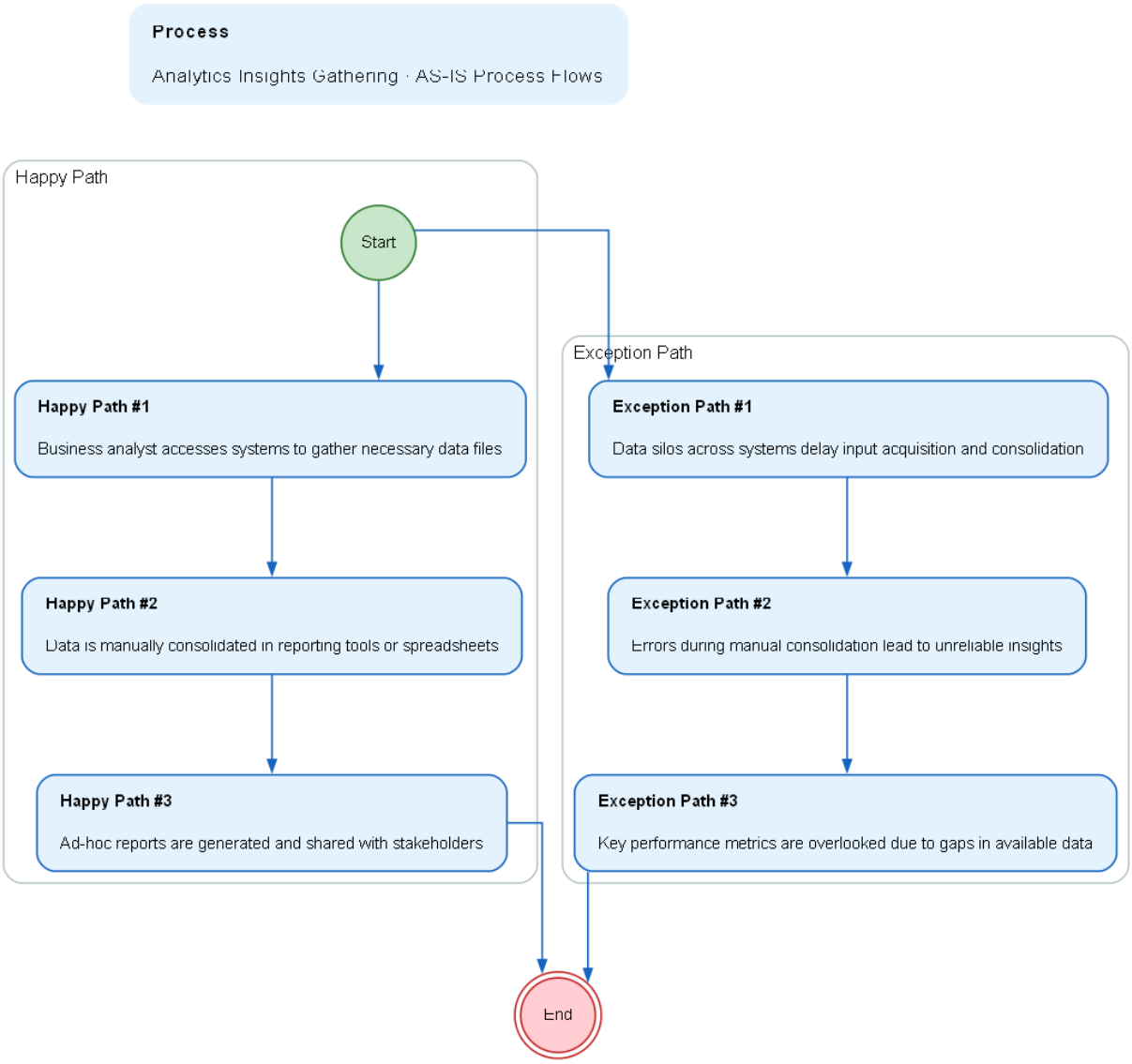
- Customer Ticket Resolution:
    - Happy path:
        - 1. Customer submits ticket via CRM
        - 2. Support agent reviews ticket manually to gather details
        - 3. Agent formulates and provides a resolution
        - 4. Customer confirms resolution is satisfactory
    - Unhappy path / exceptions:
        - 1. Tickets are escalated due to missing or incomplete context

        - 2. Manual data entry causes delays or errors in resolutions
        - 3. Lack of effective follow-up leads to customer dissatisfaction
- Analytics Insights Gathering:
    - Happy path:
        - 1. Business analyst accesses systems to gather necessary data files
        - 2. Data is manually consolidated in reporting tools or spreadsheets
        - 3. Ad-hoc reports are generated and shared with stakeholders
    - Unhappy path / exceptions:
        - 1. Data silos across systems delay input acquisition and consolidation
        - 2. Errors during manual consolidation lead to unreliable insights
        - 3. Key performance metrics are overlooked due to gaps in available data

Process

Customer Ticket Resolution - AS-IS Process Flows





4. Future State (To-Be)

- Enable real-time, actionable insights using a centralized analytics dashboard.
- Eliminate manual data consolidation with automated workflows for repetitive tasks.
- Ensure seamless data integration with CRM and ticketing systems to boost efficiency.
- Improve data accuracy using enhanced validation processes to prevent errors.
- Support scalability with a robust architecture for increased user demands.
- Bolster security by applying AES-256 encryption and role-based access controls.

Future Process Flows

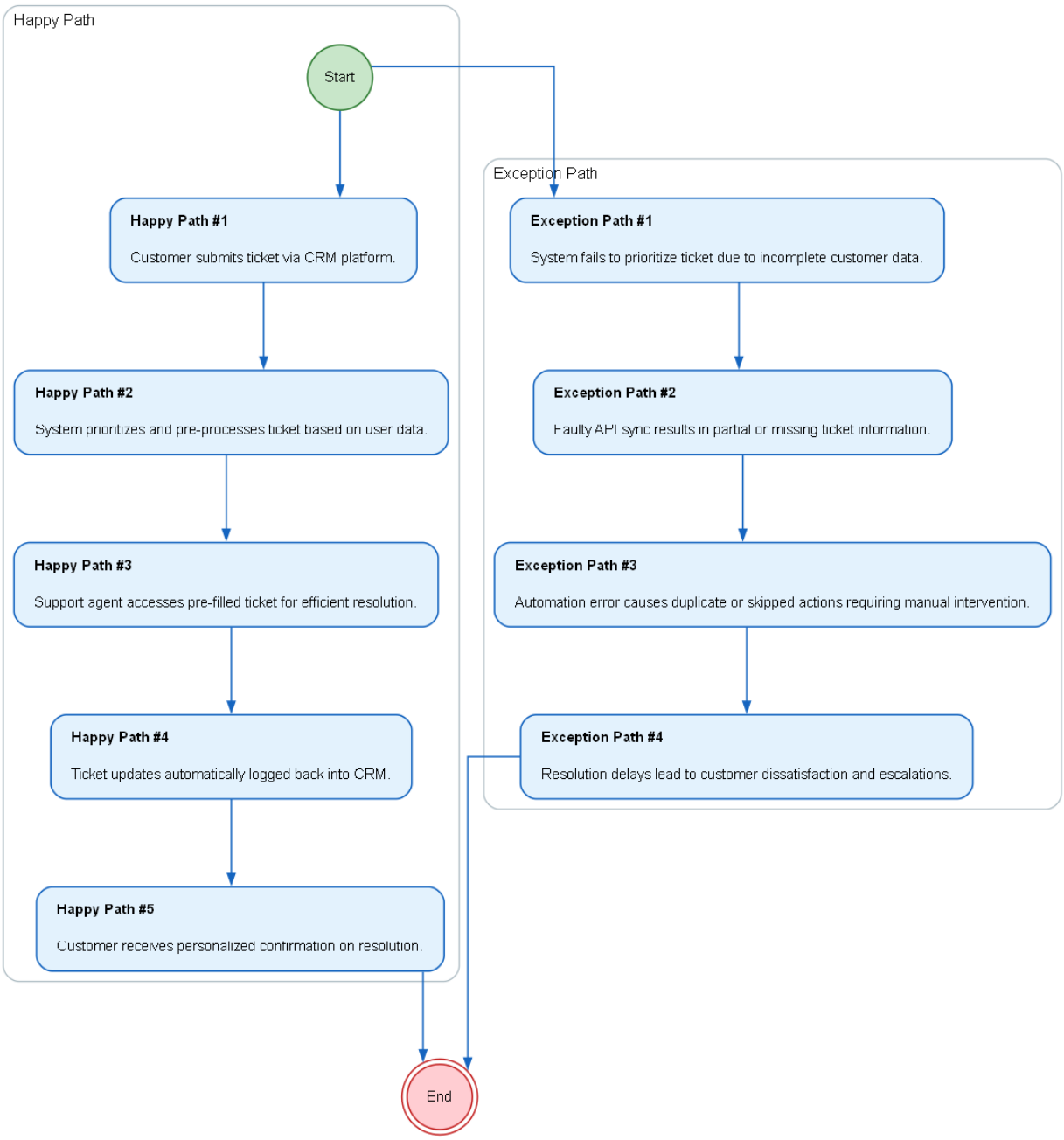
- Automated Ticket Resolution:

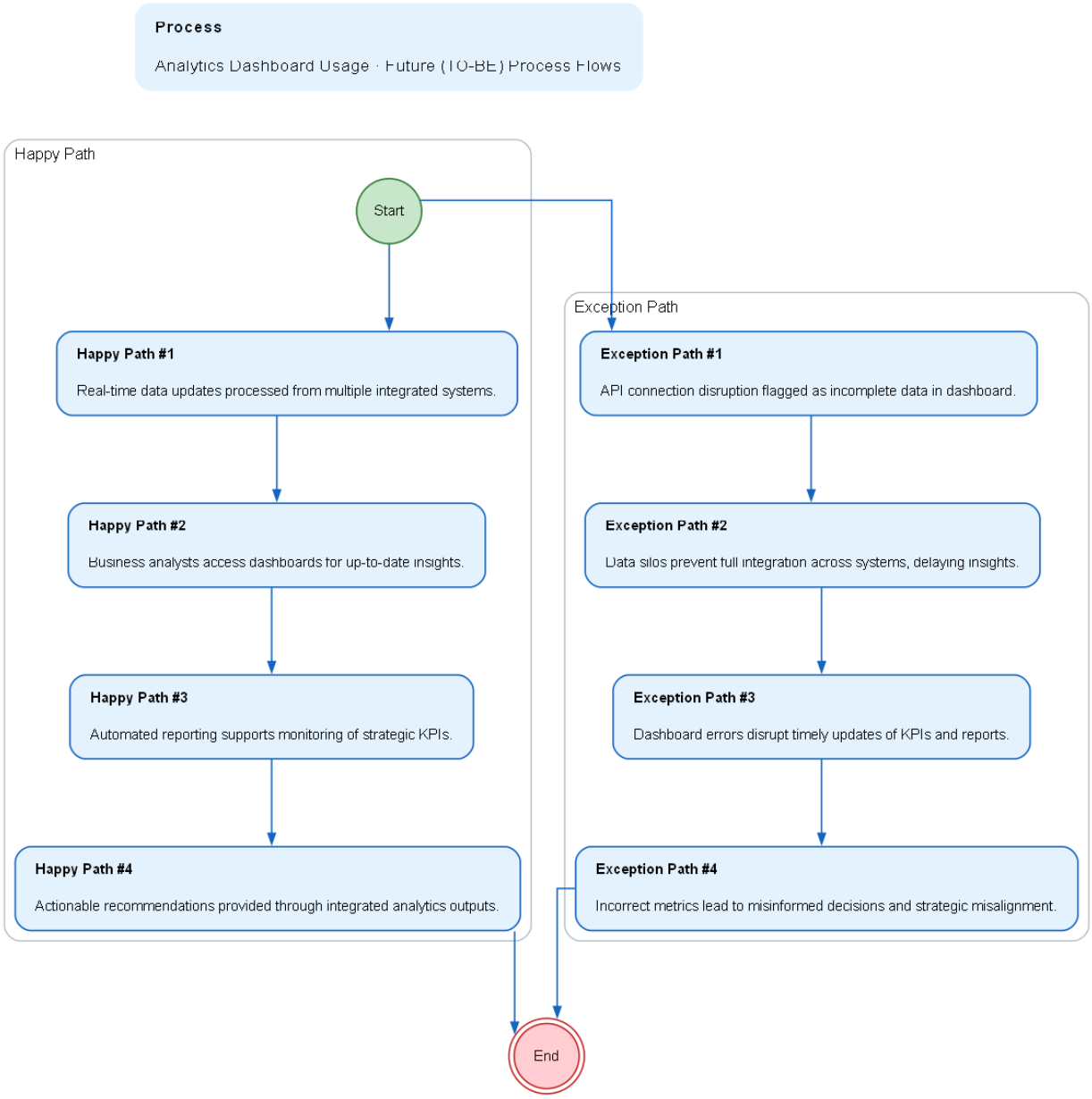
- Happy path:
    - 1. Customer submits ticket via CRM platform.
    - 2. System prioritizes and pre-processes ticket based on user data.
    - 3. Support agent accesses pre-filled ticket for efficient resolution.
    - 4. Ticket updates automatically logged back into CRM.
    - 5. Customer receives personalized confirmation on resolution.
- Unhappy path / exceptions:
    - 1. System fails to prioritize ticket due to incomplete customer data.
    - 2. Faulty API sync results in partial or missing ticket information.
    - 3. Automation error causes duplicate or skipped actions requiring manual intervention.
    - 4. Resolution delays lead to customer dissatisfaction and escalations.

- Analytics Dashboard Usage:
    - Happy path:
        - 1. Real-time data updates processed from multiple integrated systems.
        - 2. Business analysts access dashboards for up-to-date insights.
        - 3. Automated reporting supports monitoring of strategic KPIs.
        - 4. Actionable recommendations provided through integrated analytics outputs.
    - Unhappy path / exceptions:
        - 1. API connection disruption flagged as incomplete data in dashboard.
        - 2. Data silos prevent full integration across systems, delaying insights.
        - 3. Dashboard errors disrupt timely updates of KPIs and reports.
        - 4. Incorrect metrics lead to misinformed decisions and strategic misalignment.

Process

Automated Ticket Resolution - Future (TO-BE) Process Flows





5. Stakeholders & Personas

- Customer: End-user seeking seamless and personalized interactions to resolve issues efficiently.
- Support Agent: Responsible for resolving customer queries efficiently while utilizing streamlined workflows.
- Business Analyst: Leverages real-time analytics to identify trends and optimize processes for operational improvements.
- IT Administrator: Manages system integration, stability, and maintenance, ensuring uptime and functionality.

6. Functional Requirements Overview

The platform will enable customer service teams and business analysts to collaborate effectively through automation, real-time insights, and seamless integrations with core business systems, streamlining workflows and driving satisfaction improvements.

7. Non-Functional Requirements

- Response times must not exceed 2 seconds for customer queries and analytics processing.
- The platform must support scalability to handle increasing user demands without performance degradation.
- Compliance with data privacy regulations, such as GDPR, through secure encryption and role-based access controls.

8. Assumptions

- Existing systems remain accessible and stable during integration.
- Stakeholders actively collaborate and align on priorities to avoid delays.
- Requested APIs will provide necessary endpoints and data formats without unexpected constraints.

9. Risks

- Stakeholder misalignment during key phases could delay timelines.
- Integration challenges with external systems may impact functionality.
- Resource constraints could affect team bandwidth and project delivery.
- Unexpected technical issues with legacy systems may require scope adjustments.
- API rate limits or compatibility issues might disrupt real-time data flow.

10. Open Issues

- Pending clarification of escalation handling during system outages.
- Finalization of API dependencies and vendor collaboration agreements.
- Validation of resource availability for development and testing phases.
- Clarification on training requirements for end-users and administrators.
- Approval of fallback mechanisms for automation error resolution.

11. Functional Requirements

Functional Requirements

Spec ID	Specification Description	Business Rules Data Dependency
FR-1	Real-time analytics dashboard for actionable insights	Dashboard will validate data flow integrity and flag incomplete data when detected.
FR-2	Integration with CRM systems for centralized data	Retry mechanisms must handle up to 3 attempts for API timeouts, with alerts for failures.
FR-3	Automated workflows for repetitive tasks	Unique transaction IDs will ensure idempotency to prevent duplicate actions during automation.
FR-4	Secure encryption for data at rest and in transit	AES-256 encryption standards will be applied, alongside compliance checks for GDPR/CCPA.
FR-5	Role-based access control for user permissions	Access levels will be validated during user authentication, with alerts triggered for invalid roles.