CEBU INSTITUTE OF TECHNOLOGY
UNIVERSITY

IT317-G3 PROJECT MANAGEMENT

FUNCTIONAL REQUIREMENTS SPECIFICATION (FRS)

Project Title: RelieFlow

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1. Introduction

The purpose of this Functional Requirements Specification (FRS) document is to define and detail the functional and non-functional requirements of the RelieFlow system. It serves as a reference point for stakeholders, project team members, and developers to ensure a common understanding of the system's objectives, capabilities, and constraints.

2. Project Overview

RelieFlow is designed to enhance disaster relief efforts in the Philippines by providing a web-based platform that connects donors, organizations, and beneficiaries. The system leverages real-time inventory management, automated scheduling, beneficiary verification, reporting, and end-to-end tracking to improve efficiency and transparency. By streamlining donation and distribution processes, RelieFlow aims to reduce response times, optimize resource allocation, and ensure that aid reaches those in need more effectively.

3. Team

Name	Role
Marc Louis P. Ortizano	Product Owner
Danielle Maxine P. Ocampo	Business Analyst
Harvey A. Ortega	Scrum Master
Monica A. Najarro	Lead Developer
Ana Claire Ellen R. Naranjo	Developer
Denz A. Nadal	Developer

4. Functional Requirements

FR-1: The system shall allow users to register with a unique email and password.

FR-2: The system shall validate registration inputs and encrypt user passwords before storage.

FR-3: The system shall allow users to log in, reset their password, and log out securely.

FR-4: The system shall enforce role-based access (Admin, Donor, Beneficiary) to restrict feature usage.

FR-5: The system shall allow users to manage and update their profile information.

FR-6: The system shall allow donors to enter and track their donation history.

FR-7: The system shall allow admins to record incoming donations and manage inventory (add, update, delete).

FR-8: The system shall categorize donations and items by type (e.g., food, clothing, medicine).

FR-9: The system shall provide donation tracking for transparency and generate receipts.

FR-10: The system shall generate low-stock alerts and inventory summary reports.

FR-11: The system shall provide a beneficiary registration form with required identification details.

FR-12: The system shall allow admins to validate and verify beneficiaries before approval.

FR-13: The system shall allow beneficiaries to claim relief items and maintain claim history.

FR-14: The system shall provide an Admin Dashboard showing statistics, donations, and inventory.

FR-15: The system shall provide a Donor Dashboard summarizing donation history and impact.

FR-16: The system shall provide a Beneficiary Dashboard showing claim status and received aid.

FR-17: The system shall generate donation reports, beneficiary reports, and distribution reports.

FR-18: The system shall provide in-app notifications for updates, claims, and approvals.

5. Non-Functional Requirements

NFR-1: The system shall respond to user requests within 3 seconds under normal load and scale to support high-traffic disaster periods.

NFR-2: The system shall handle up to 500 concurrent users without performance degradation.

NFR-3: The system shall encrypt user passwords, personal data, and donation records using secure hashing and encryption algorithms.

NFR-4: The system shall implement role-based access control and enforce secure session management.

NFR-5: The system shall use HTTPS for all data transmissions and comply with relevant data privacy regulations (e.g., Philippine Data Privacy Act, GDPR).

NFR-6: The system shall provide an intuitive and mobile-responsive interface accessible on desktops, tablets, and smartphones.

NFR-7: The system shall provide clear error messages and meaningful feedback for user actions.

NFR-8: The system shall maintain 99% availability during operational hours, with backup and recovery mechanisms in place.

NFR-9: The system shall preserve user session data to prevent data loss in case of disconnections or unexpected logouts.

NFR-10: The system shall be modular and well-documented to support future updates, scalability, and third-party integrations.

NFR-11: The system architecture shall support integration with additional modules such as donation analytics, geolocation services, and advanced reporting.

NFR-12: The system shall be compatible with modern web browsers (Chrome, Firefox, Edge, Safari) and optimized for different screen sizes.

NFR-13: The system shall generate audit logs for key activities (user access, donations, inventory changes, claims).

NFR-14: The system shall provide secure role-specific dashboards with minimal latency when retrieving large data sets.

NFR-15: The system shall ensure disaster recovery through regular data backups and cloud redundancy.

6. Use Cases

Use Case 1: User registers or logs in and accesses the system.

Use Case 2: User resets password using a secure email link.

Use Case 3: User views and updates their profile information.

Use Case 4: User logs out and ends the session safely.

Use Case 5: Donor records a new donation and views donation history.

Use Case 6: Admin records incoming donations and updates inventory.

Use Case 7: Admin categorizes donations and items by type.

Use Case 8: System generates low-stock alerts and inventory reports.

Use Case 9: Beneficiary registers through the system with required details.

Use Case 10: Admin validates and verifies beneficiary eligibility.

Use Case 11: Beneficiary submits a relief claim and views claim history.

Use Case 12: Admin accesses the dashboard to view system statistics, donations, and inventory.

Use Case 13: Donor accesses the dashboard to view donation impact and history.

Use Case 14: Beneficiary accesses the dashboard to view claim status and aid received.

Use Case 15: Admin generates donation, beneficiary, and distribution reports.

Use Case 16: User receives in-app notifications for updates, approvals, or claim status.

7. System Interfaces

The system will interact with:

- Email Service Provider (SMTP/Third-Party API) for sending account verification, password reset, and notification emails.
- Cloud Database Service (e.g., Supabase) for storing user, donation, and inventory data.

- Authentication Service (e.g.,Supabase Auth) for secure user login, registration, and role-based access control.

8. Assumptions and Constraints

Assumption: Users will have a stable internet connection when using the system.

Assumption: Donors, organizations, and beneficiaries will provide accurate information during registration and transactions.

Constraint: The system requires an active cloud hosting and database subscription with defined usage limits.

Constraint: The platform must comply with data privacy and security regulations such as the Philippine Data Privacy Act.

9. Acceptance Criteria

The system will be accepted if:

- User registration, login, password reset, and profile management work as specified.
- Admin dashboard displays accurate statistics, donation summaries, and user data.
- System performance supports at least 100 concurrent users without degradation.
- Data security measures (encryption, role-based access control) are fully implemented.
- No critical defects remain unresolved before deployment.

10. Approval Sign-off

	Full Name	Signature	Date
Prepared By:	Danielle Maxine P. Ocampo		10/05/25
Developer	Ana Claire Ellen R. Naranjo		10/05/25

Developer	Denz A. Nadal		10/05/25
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10. Appendices

Appendix A: Glossary of key terms used in the RelieFlow system.

Appendix B: User stories derived from requirements gathering sessions.

Appendix C: Work Breakdown Structure (WBS).