DEPARTMENT OF INFORMATION TECHNOLOGY

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SB8067-salesforce developer

PROJECT TITLE: TO SUPPLY THE LEFTOVER FOOD TO POOR

SUBMITTED BY

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Introduction

Food is both a basic human need and a precious, finite resource. Unfortunately, in India—and globally—there is a dual challenge: large volumes of edible food are wasted or remain unused, even while many people go hungry. In India, for example, studies show that up to ~40 % of food produced may be lost or wasted along supply chains or at the consumer level.
At the same time, significant numbers of people lack reliable access to adequate, nutritious meals. This mismatch presents both a moral and practical opportunity: what if the edible leftover/surplus food could be collected, safely handled, and redirected to feed those in need?

Several initiatives have already shown success: for example, the Robin Hood Army mobilises surplus food from restaurants and distributes it to disadvantaged communities.

Another case: in Mumbai the Roti Bank model leverages surplus from hotels/households and uses a coordination-centre to deliver meals.
This proposed project seeks to adapt and implement such a model in your local context, establishing a sustainable system for surplus edible food collection, storage/handling, and distribution to the poor — thereby reducing food waste, improving food security, and strengthening community engagement.

Project Objectives

1. To collect surplus edible food from partner sources (restaurants, event caterers, institutional canteens, households) on a routine basis.
2. To establish safe handling, minimal-processing (if needed), packaging and transport protocols to deliver meals to targeted needy populations.
3. To distribute meals to identified poor and vulnerable groups in a dignified way—street dwellers, slum dwellers, orphanages, old-age homes, hospital waiting areas etc.
4. To build awareness among donors and community about food waste, its social cost, and the opportunity of redistribution.
5. To monitor and evaluate: quantity of food rescued, number of meals served, reduction in waste, number of beneficiaries, cost per meal, volunteer hours, satisfaction of recipients.
6. To design the model to be replicable and sustainable (volunteer network, donor partnerships, sponsor funding, community engagement).

Ideation Phase

In the Ideation Phase we establish the vision for the project: supplying leftover edible food to the poor, thereby addressing

both food waste and food insecurity. We begin by providing background and context—how in our region and beyond there is a mismatch between surplus food and unmet need—then articulate the problem statement, sketch the initial concept and vision, identify key stakeholders (donors, volunteers, partner organisations, beneficiaries), and make a preliminary feasibility assessment (logistics, food safety, regulatory issues). We also define success criteria and key benefits, and list assumptions and initial risks.

Additional points to cover in this phase

- Conduct a preliminary stakeholder mapping and analysis: who will benefit, who needs to participate, and what their motivations might be.
- Estimate high-level resource needs (vehicles, containers, volunteers, storage) and point out constraints or gaps.
- Identify potential pilot locations or donor sources (e.g., restaurants, institutions) and begin informal outreach.
- Explore initial branding and awareness ideas that might engage communities and highlight the dual benefit of waste reduction + food provision.

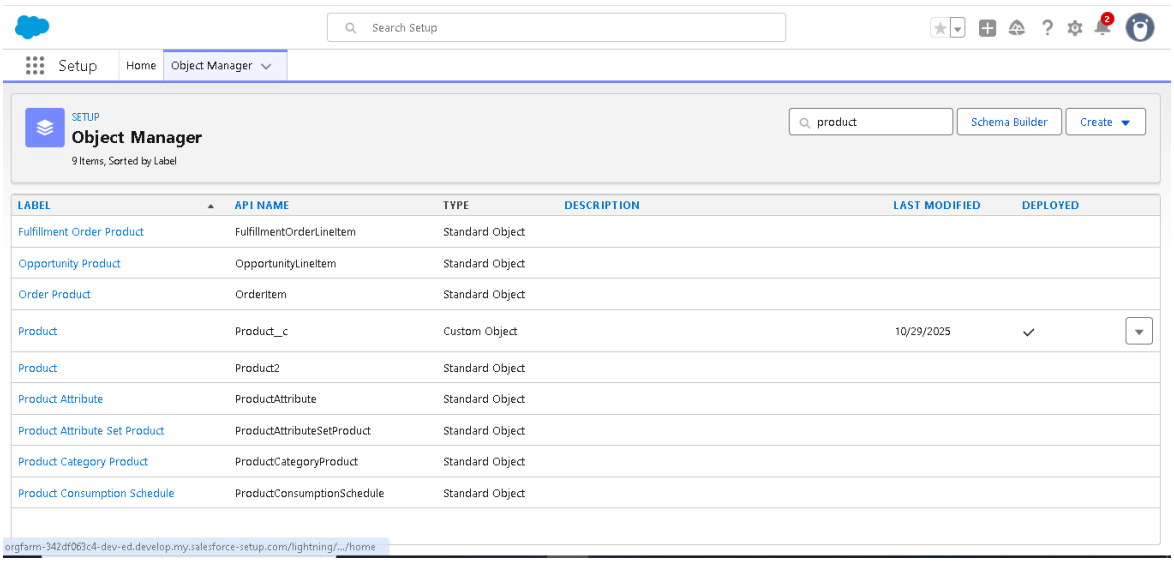
Step 1: Developer Account Setup

- Registered for a Salesforce Developer account to create a dedicated environment for development and testing.

- Verified the account to unlock full access to Salesforce features, ensuring a smooth setup process.

Step 2: Custom Object Creation

- Used Salesforce Object Manager to create custom objects for Product, Purchase Order, Order Item, Inventory Transaction, and Supplier to manage various aspects of medical inventory.



- Configured fields such as text, numbers, dates, and relationships to capture essential details, ensuring each object accurately represents the operational requirements of medical inventory management.

Project Planning Phase:-

- In this phase, the project's goals, timelines, and scope were clearly defined.

- A detailed roadmap was created to ensure systematic progress through all stages from design to testing.

Step 3: Custom Tabs for Navigation

- Created custom tabs for objects — Product, Purchase Order, Order Item, Inventory Transaction, and Supplier using Salesforce Setup → Tabs, enhancing navigation and data accessibility.

Configured tab styles and visibility settings to ensure easy access and seamless management of each object within the application.

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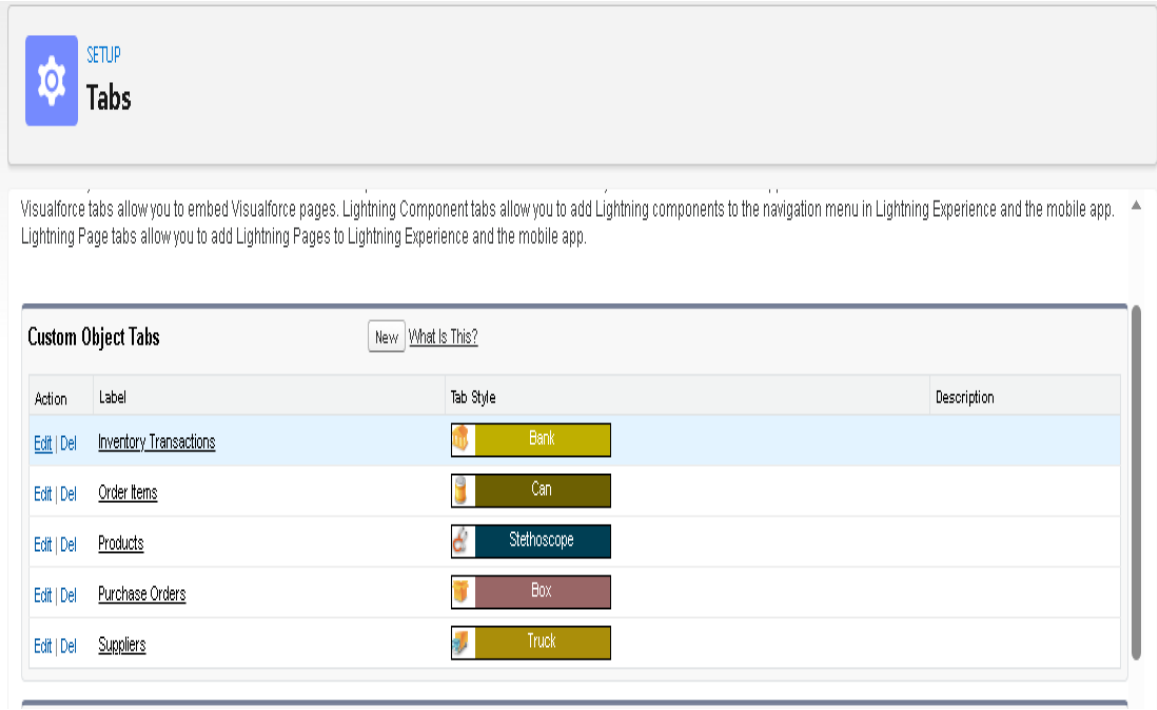
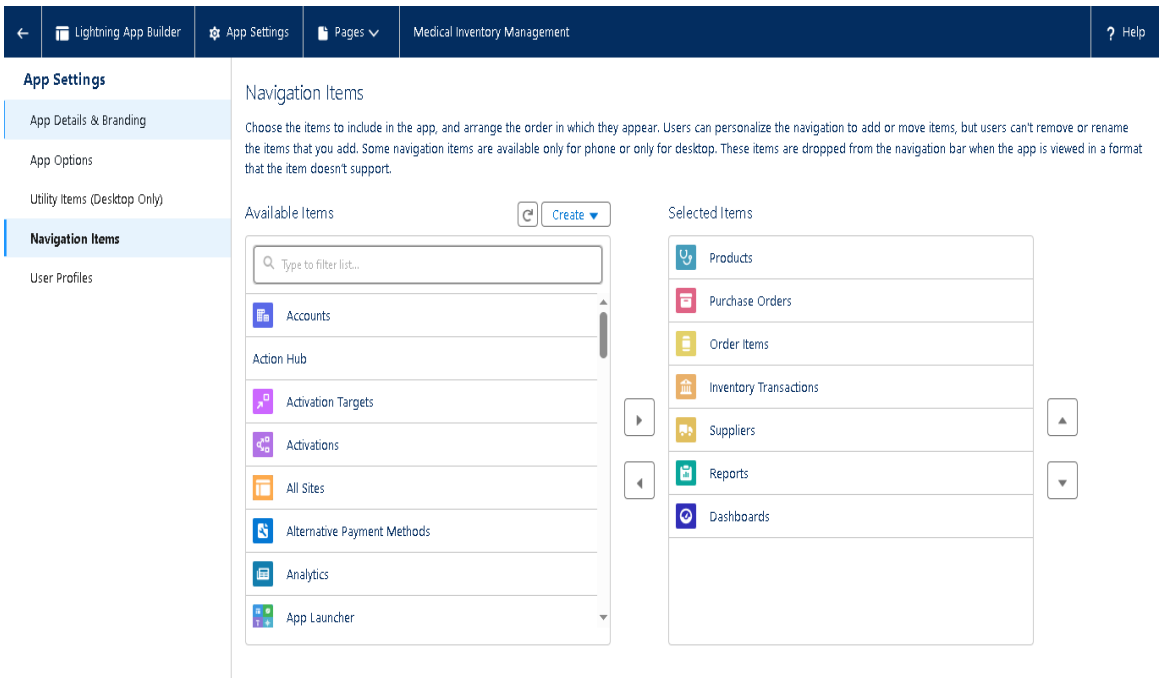


Step 4: Lightning App Development

- Created a Lightning App named Medical Inventory Management in Salesforce App Manager, uploading a relevant image and configuring default app options.

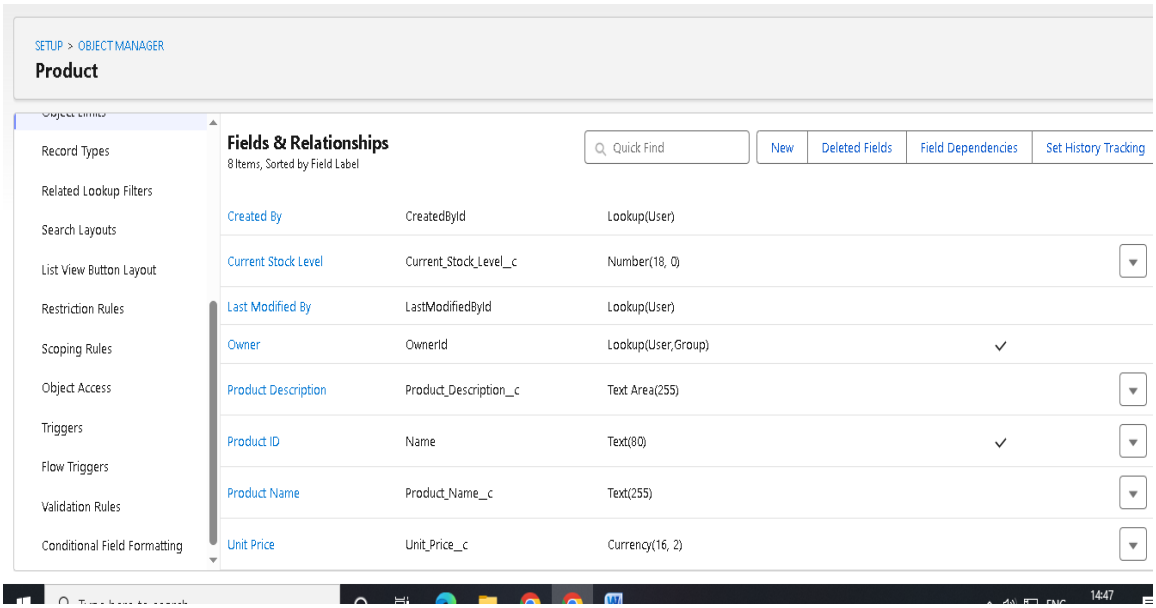
- Added Products, Purchase Orders, Order Items, Inventory Transactions, Suppliers, Reports, and Dashboards tabs, assigning access to the System Administrator profile for efficient management.



Step 5: Field Configuration

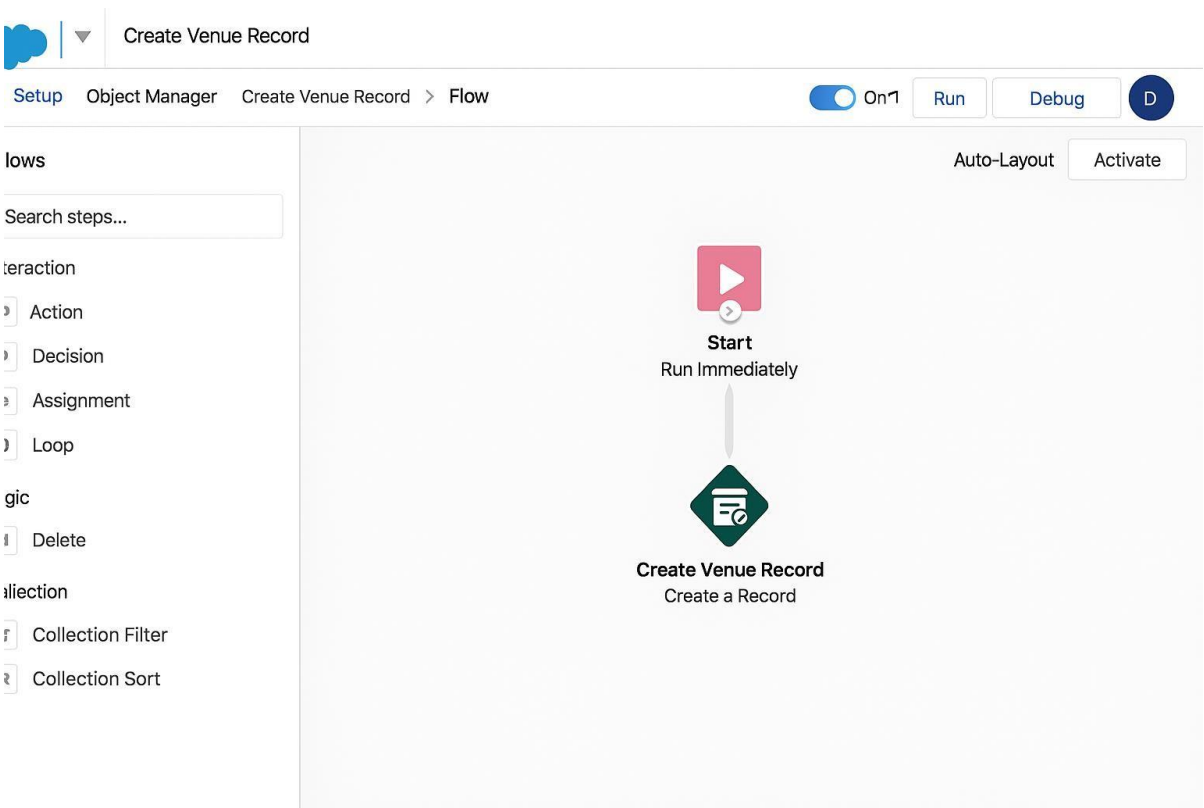
- Created custom fields for objects — Product, Purchase Order, Order Item, Inventory Transaction, and Supplier in Salesforce Object Manager, defining appropriate data types and relationships.

- Configured fields such as Text, Number, Currency, Date, Lookup, Master-Detail, Formula, Roll-Up Summary, Picklist, and Text Area to capture detailed information for efficient management of medical inventory operations.



Step 6: Flow

In this initiative, the journey begins with identifying and onboarding donors — restaurants, event venues, institutional kitchens or households — that generate surplus edible food and are willing to participate. These donors package and prepare the leftover food according to agreed hygiene standards, label it with details (time, donor, contents) and notify the collection team when the surplus is ready. The collection team then arrives at the donor site, transports the food in suitable containers/vehicles (maintaining temperature, integrity) to a holding or sorting location where the food condition is verified: unacceptable items are discarded, suitable items are sorted and logged.



Step 7: Creation of user

When rolling out the project portal in Salesforce for *Supplying Leftover Food to the Poor*, the first step will be to create user accounts for the various stakeholders (donor contacts, volunteer coordinators, distribution hub staff, beneficiary-programme managers). In Setup, you navigate to *Users → New User*, enter mandatory details like first and last name, email address, a unique username in email format, choose the correct user license and profile, and assign a role if needed. Additionally, you must assign appropriate permissions or permission sets so users can access only what they need To ensure security and clarity, you should: (1) define user roles aligned with project functions — e.g., “Donor Partner”, “Volunteer Collector”, “Distribution Coordinator”, “Admin”; (2) create standard profiles and if necessary custom ones to segregate access — e.g., a custom profile for donor contacts that limits them to input forms only

Step 8: Dashboards

dashboards created in Salesforce serve as vital tools for visualising project-performance data and guiding decision-making. By consolidating key metrics such as volumes of food collected, number of donor partners, meals distributed, and beneficiary feedback, the dashboard provides a real-time overview of how the initiative is progressing. It allows project managers and stakeholders to monitor trends, spot bottlenecks (for instance in transport or distribution), and identify opportunities for improvement. Additionally, dashboards can be configured to deliver role-specific views (for donors, volunteers, coordinators) so each user sees the information most relevant to them.

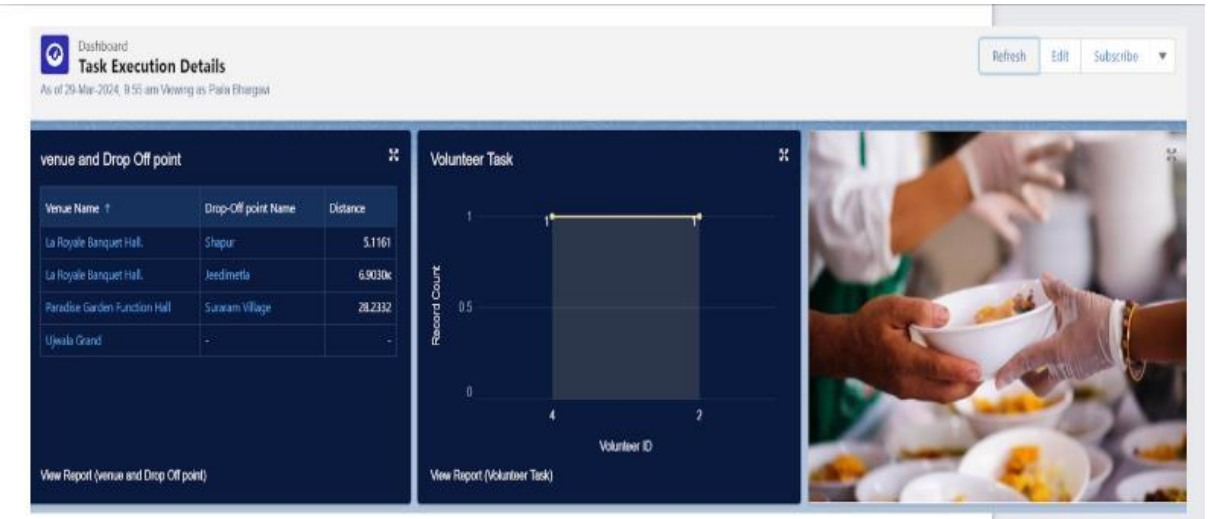
- **Select meaningful KPIs and metrics** — Choose indicators that directly reflect the project's goals (e.g., kilograms of surplus food collected, number of meals served, food-waste reduction percentage, volunteer hours logged).

- **Use visual components appropriately** — Employ charts, gauges, tables and summary metrics so users can quickly interpret performance (for example a gauge showing % of target meals delivered, bar chart of donor contributions by source).

- **Configure user access and "running user" settings** — Ensure that the dashboard shows the right

data for each stakeholder and respects data-visibility rules. For example, volunteers might see only their assigned distribution zones while administrators see full-scope data.

 Set up maintenance and review protocols — Schedule regular dashboard refreshes, review data accuracy, update metrics as project evolves (e.g., new distribution zones) and ensure the dashboard remains aligned with project aims rather than becoming static.



2. Project Planning Phase:

During the Project Planning Phase we take the vision and convert it into a structured roadmap. We define the project scope—what is included and excluded. We set objectives and deliverables for the project (e.g., number of meals served, number of donor

partners, waste diverted). We develop a Work Breakdown Structure (WBS) of major tasks, set milestones, and create a timeline for implementation. We estimate resources and budget, assign roles and responsibilities, craft a communication plan (to donors, volunteers, beneficiaries, internal team), and develop a preliminary risk management plan. We also incorporate a quality and food-safety plan, and outline how we'll monitor and control progress.
Additional planning items to include:

- Develop a detailed project schedule (Gantt chart or similar) with dependencies between tasks (e.g., donor onboarding must precede first pickup).
- Create a procurement plan for any required equipment or services (insulated containers, transport vehicle, volunteer training materials).
- Define a volunteer and partner recruitment strategy (how many volunteers needed, roles, training, scheduling).
- Set up key performance indicators (KPIs) and data-tracking methods (e.g., food weight collected, meals delivered, time from pickup to delivery, beneficiary feedback).

3. Project Design Phase

In the Project Design Phase we design how the project will function in detail. This means laying out system

processes and workflows: how food is collected from donors, how it is stored/transported, how distribution to beneficiaries is managed. We create infrastructure and logistics design (vehicles, containers, storage, holding area) and technology/tools design (for example a simple database or app to track donors, pickups, recipients). We design food safety and hygiene protocols (including packaging, labelling, handling time limits) and visual/branding design (logo, colours, communication materials). We may also design a pilot layout or prototype of the workflow, and define approval and sign-off criteria before full launch.
Additional design items to include:

- Develop process flow diagrams or swimlane charts for each major workflow (donor → collection → transport → distribution → beneficiary).
- Specify containers and packaging standards (type of container, insulation, labelling of date/time, donor information) and handling time limits to uphold safety.
- Design technology architecture: for example, a web form or mobile app for donor registration, pickup scheduling, volunteer check-in, recipient tracking and feedback.
- Create marketing/awareness collateral: posters/flyers for donors and volunteers, branding

guidelines, social media templates to promote the initiative and build recognition.

4. Requirement Analysis

In the Requirement Analysis phase we deepen the understanding of exactly *what* the system and process must deliver and what constraints exist. We document functional requirements (what the system/process must do – e.g., register donors, schedule pickups, record meals served), non-functional requirements (food safety, timeliness, reliability, user-friendliness of volunteer interface), stakeholder requirements (donor convenience, volunteer ease of use, beneficiary dignity), data & reporting requirements (metrics to capture, dashboards for managers), and compliance & regulatory requirements (local health laws, transportation laws). We also list constraints and assumptions (budget limits, volunteer availability, donor commitment) and prioritise requirements by importance.

Additional requirement analysis points:

- Conduct stakeholder interviews or workshops (with donors, volunteers, beneficiaries) to capture requirements and expectations (e.g., donors require

acknowledgement, volunteers prefer simplified scheduling).

- Define user personas and use cases: e.g., “Volunteer picks up food”, “Donor registers surplus”, “Recipient receives meal”. For each, capture key steps and pain-points.
- Specify interface and usability requirements: e.g., mobile friendly scheduling, multilingual forms if needed, minimal steps for donor sign-up.
- Define data security, privacy, and audit requirements: for example, volunteer personal data protection, safe disposal of sensitive data, tracking chain of custody for food items.

5. Performance Testing

In the Performance Testing phase we validate that our design and systems work practically under real-world conditions before fully scaling up. We create a test plan that describes what will be tested, when and how. We develop test cases covering scenarios (donor registration, pickup scheduling, transport delay, storage delay, beneficiary distribution). We define success criteria and metrics (e.g., pickup to delivery within 2 hours, <1% spoilage rate, volunteer satisfaction). We may conduct load or stress testing if we are using software/tracking system (e.g., many donors registering

simultaneously). We carry out user acceptance testing with volunteers, donors and beneficiaries to gather feedback. We log defects and issues, resolve them, and then summarise results and recommendations. Finally we decide whether it’s a go/no-go for full roll-out. Additional testing points:

- Pilot the process in a limited geography or with a limited number of donors/recipients to test logistics, timing, packaging, pickup and distribution flows.
- Simulate worst-case scenarios: e.g., delayed pickup, increased donor surplus, vehicle breakdown, beneficiary no-show, to test resilience and contingency procedures.
- Test the tracking system for correctness of data: e.g., donor information, pickup time, food weight, delivery time, recipient feedback; ensure reports generate correctly and reflect reality.
- Collect qualitative feedback from volunteers, donors and recipients: ease of process, dignity of distribution, packaging adequacy, suggestions for improvement; and incorporate changes accordingly.

Target Beneficiaries

- Homeless persons, street children, migrant labourers with irregular access to meals.
- Residents of low-income settlements/slums in the region.
- Family members of patients in public hospitals (often travel from remote places).
- Old-age home residents or shelters with limited food budgets.
- Eventually expand to other vulnerable groups (e.g., daily wage labourers with seasonal income variation).

Key Project Components & Methodology

A. Donor/Source Engagement

- Identify and onboard food-surplus generating sources: e.g., large restaurants, hotels, caterers, institutional messes, wedding/event halls, households willing for periodic surplus donation.
- Sign up agreements or MoUs with donors: define nature of surplus (fully cooked, unused plates, buffet overflow), collection time windows, packaging standards, hygiene expectations.

- Establish communication channel (hotline, WhatsApp group) to notify pickups.
- Raise donor awareness: waste stats, social impact, environmental cost, community value. (E.g., India loses ~40% of food at various stages.)

B. Collection & Logistics

- Set up a small fleet (e.g., one van/truck) or partner with local transport for pick-up of surplus at scheduled times.
- Provide appropriate reusable or hygienic trays/containers to donors (if needed).
- Define safe handling: temperature control (if required), packaging, labeling (time of cooking, donor name).
- Establish a centralized coordination point (could be a small rented kitchen/room) or partner kitchen where food can be sorted, packaged, and held briefly.
- Develop route/distribution plan to reach beneficiaries during times where food is still safe/edible.

Food Handling & Safety

- Set up basic food hygiene guidelines: e.g., don’t accept leftovers that have been unrefrigerated > 4

hours, ensure no spoiled items, reheating guidelines, safe transportation.

- If necessary, provide modest reheating facility or partner with local kitchen.
- Train volunteers/workers on safe handling, sanitation, packaging, distribution etiquette.

Distribution

- Create beneficiary identification map: e.g., locations and numbers of needy persons (street clusters, slums, hospital waiting areas).
- Set distribution schedule: e.g., lunch time (12-2pm) or early evening.
- Volunteers or staff hand out meals in organized manner. Ensure dignity (no crowding, waiting list, proper serving).
- Record data: number of meals served per location/day, feedback.

Awareness & Community Engagement

- Run awareness campaigns in local community: waste awareness, value of food, encouraging households to partner.
- Use social media, local NGOs, student volunteers, schools/colleges.

- Recognize donor partners publicly (with their consent) to incentivize participation.

Monitoring & Evaluation

- Track key performance indicators (KPIs): number of donors onboarded, amount of surplus collected (kg), number of meals delivered, number of beneficiaries, cost per meal, volunteer hours, reduction in waste (estimated).
- Collect recipient feedback: satisfaction, wait-time, dignity, improvement suggestions.
- Conduct periodic review (monthly, quarterly) to identify bottlenecks and iterate.
- Prepare a sustainability plan (funding, volunteer retention, donor pipeline, transport/maintenance costs).

Project Timeline (12-Month Example)

Phase	Duration	Activities
Planning & Setup	Month 1-2	Form core team; define project charter; identify potential donors; secure minimal equipment (van, containers); set up coordination point.

Phase	Duration	Activities
Pilot Launch	Month 3-4	Onboard initial 5–10 donor sources; collect and distribute in 1–2 local beneficiary zones; test logistics, handling, distribution.
Scale-up	Month 5-8	Expand donor base; increase beneficiary zones; hire/assign more volunteers; refine processes; launch awareness campaign.
Full Operation & Review	Month 9-12	Stabilize operations; establish regular schedule; monitor & evaluate; produce report; plan for long-term sustainability/expansion.

Problem Statement :

In India, a staggering amount of edible food goes to waste every year whilst millions of people continue to face hunger and inadequate nutrition. For example, the country generates approximately 78.2 million tonnes of food waste annually, averaging about 55 kg per person per year.

At the same time, significant segments of the population—especially in low-income communities, migrant settlements, and informal urban areas—lack consistent access to safe, nutritious meals. There exists

a disconnect: surplus edible food from households, restaurants, events and institutional kitchens remains largely unused, while viable mechanisms for collecting, redistributing, and delivering this surplus to needy populations are fragmented or non-existent. This gap is compounded by logistical, hygienic, regulatory and operational hurdles. The core problem the project addresses is: **How can we systematically collect, safely handle, and distribute leftover edible food in a way that preserves dignity, ensures food-safety, reduces waste and alleviates hunger among the underserved?**

Conclusion

The paradox of simultaneous food surplus and food insecurity presents a compelling opportunity for action: by redirecting leftover edible food from donors to those in need, we can create meaningful social, environmental and economic value.

The *"Supplying Leftover Food to the Poor"* project offers a pathway to turn what would otherwise be waste into nourishment, while also conserving resources, reducing environmental burden and building community solidarity. With a well-designed operational framework—encompassing donor engagement, safe logistics, volunteer coordination, appropriate

infrastructure and beneficiary-centred distribution—the initiative has the potential to not just serve the immediate needs of vulnerable populations, but to establish a replicable model of sustainable surplus-to-service. By transforming leftover food into opportunities for dignity and nutrition, we work towards a future in which no edible meal is wasted and no hungry person is overlooked.