

# Business Model For Excess And Waste Food Distribution System

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*Abstract: Wasted food and Excess food is both a growing problem and an untapped opportunity. Food waste is an untapped energy source that mostly ends up rotting in landfills, thereby releasing greenhouse gases into the atmosphere. Major generators of food wastes include hotels, restaurants, supermarkets, residential blocks, cafeterias, airline caterers, food processing industries, etc. Food that is discarded in landfills decomposes to create methane, a strong greenhouse gas that contributes to climate change. Food waste can be turned into valuable resources such as natural fertilizer, energy, and animal feed. Every day we see people throw away food without even realizing the damage they are doing to themselves and the environment. This inspired us to build this project. Thankfully, technology has enabled a new era for food waste management. The objective of the project is to develop a Web Based application that reduces the amount of food wastage produced in Major Generators of food waste. This web-based application for food waste management can assist in collecting the leftover food from hotels, restaurants, marriage halls, social, political functions & religious events to distribute among those who are in need. This web application provides the interface between food donors and those who require the food for orphan or farmers and Fertilizer Industry to produce natural fertilizer. The donor-donated items will be displayed to other users as a reminder in the donation tab and the message will be saved in the backend folder.*

## I. INTRODUCTION

The Free Food Donation Management System is an innovative solution designed to streamline the process of donating surplus food to people in need. This system is intended to be used by organizations, such as restaurants, supermarkets, and caterers, to easily and efficiently manage their food donations and ensure that it reaches those who need it the most.

The system is built on a user-friendly interface that allows food donors to upload information about the food items they have available for donation. The information includes the type of food, quantity, and expiry date. The system then matches the food donation with the nearest food bank or shelter that can collect it.

This system aims to eliminate food waste and ensure that people in need have access to fresh and healthy food. It promotes sustainable living by reducing the environmental impact of food waste and improving the well-being of individuals and communities.

This system is beneficial for food donors, food banks, and shelters as it simplifies the donation process and helps them to better manage their resources. It also allows for increased transparency, tracking, and reporting of food donations, which can help organizations to identify areas for improvement and make data-driven decisions.

In this era where food insecurity is a significant issue, the Free Food Donation Management System provides a vital solution that can improve the efficiency of food donations, reduce waste, and ensure that people in need receive the food they require.

## II. SOFTWARE ANALYSIS

✓ Front End	:	PHP
✓ Client Side	:	Html, CSS, Bootstrap
✓ Back End	:	MYSQL
✓ Server	:	WAMP
✓ Operating System:	:	Windows OS
✓ System type	:	32-bit or 64-bit Operating System
✓ IDE	:	Dreamweaver
✓ DLL	:	Depends upon the title

## III. EXISTING SYSTEM

Presently people who wish to donate items need to personally visit the organizations and donate foods or other items. Otherwise, they have to search for some websites to donate surplus food. In general, the large manufacturers, wholesalers, and

organized community provide food items to food banks or waste tons of foods daily. They have to search for some organization that needs food. This process involves a lot of time to contact the organization to check the requirement. If they do not need the food, then the person has to contact another organization. This makes the donor tired and exhausted.

#### PROPOSED SYSTEM

The application for food donation acts as an interface between the users who are looking for a channel to give the excess food without wasting it. It enables us to donate the excess food by notifying nearby users with the details of the food that is available. The required users claim the notification. The system allocates the food items based on the priority.

#### IV. MODULES

The Free Food Donation Management System consists of several modules that work together to provide a comprehensive solution. These modules include:

**Food Donor Module:** This module allows food donors, such as restaurants, supermarkets, and caterers, to upload information about the food items they have available for donation. The information includes the type of food, quantity, and expiry date.

**Food Bank Module:** This module provides food banks and shelters with a platform to access and collect food donations from food donors. The system matches the nearest food bank or shelter with the food donation based on their location.

**Volunteer Module:** This module enables individuals to sign up as volunteers to collect and deliver the donated food from the food donors to the food banks or shelters.

**Reporting Module:** This module provides reporting capabilities for food donors, food banks, and shelters, enabling them to track and report on the food donations received and distributed.

**Notification Module:** This module sends notifications to food banks and shelters when a new food donation is available in their area.

**User Management Module:** This module allows the system administrator to manage user accounts, roles, and permissions.

**Dashboard Module:** This module provides a comprehensive dashboard that allows food donors, food banks, and shelters to view and manage their activities on the platform, such as the status of their donations and collections.

**Analytics Module:** This module provides advanced analytics and data visualization capabilities that enable organizations to gain insights into their donation and collection activities and make data-driven decisions.

#### V. RESULT

The business model for an **Excess and Waste Food Distribution System** creates a sustainable loop where surplus food is redistributed to alleviate hunger and reduce environmental impact. It provides economic incentives for businesses to participate, supports low-income communities, and leverages technology to streamline operations. The model can be adapted to different geographic areas and scaled with the right partnerships, infrastructure, and funding sources.

#### VI. CONCLUSION

The **Excess and Waste Food Distribution System** offers a transformative solution to the persistent challenges of food wastage and hunger by bridging the gap between surplus food sources and those in need. By leveraging technology to create a centralized platform, this system ensures efficient coordination between donors and beneficiaries, enabling the timely collection and distribution of food. It not only reduces the environmental impact caused by food waste in landfills but also addresses pressing social issues such as food insecurity and resource inefficiency. Through streamlined processes, real-time notifications, and quality assurance mechanisms, the system fosters transparency, accountability, and trust among all stakeholders.

This innovative approach promotes sustainability by redirecting food to those who need it most, transforming waste into value for society. It also supports environmental conservation by mitigating greenhouse gas emissions, contributing to global efforts against climate change. Furthermore, the system's adaptability and scalability make it an essential tool for various organizations, including hotels, restaurants, event planners, and community initiatives, to participate in the fight against food wastage and hunger.

#### REFERENCE

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