



# INTERNATIONAL JOURNAL OF CREATIVE RESEARCH THOUGHTS (IJCRT)

An International Open Access, Peer-reviewed, Refereed Journal

## FOOD WASTAGE REDUCTION SYSTEM

REVATHY G<sup>1</sup>, Mrs.R.VIJAYALAKSHMI<sup>2</sup>

<sup>2</sup> Associate. Prof &Head

<sup>1,2</sup> KRISHNASAMY COLLEGE OF ENGINEERING AND TECHNOLOGY

### Abstract:

This project is used to manage wastage foods in a useful way. Every day the people are wasting lots of foods. So we have to reduce that food wastage problem through online. If anyone has wastage foods they are entering their food quantity details and their address in that application and then the admin maintain the details of food donator. The donator can create the account and whenever they are having wastage food they can login and give request to the admin. And the admin also maintain the buyer (orphanage, poor people,...) details too. After the admin view the donator request and give the alert message like time to come and collect the food. And the admin collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator. If the donator needs any detail about the orphanage with helping thought they can give request to the admin and collect the orphanage details. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The user's details are maintained confidential because it maintains a separate account for each user.

### I. Introduction

The sharp increase in the amount of wastage in terms of food, clothes, books, etc. makes the need for charity in terms of donation. This paper presents 'Helping Hands', a new internet-based application that provides a platform for donating old stuff and leftover food to all needy people/organizations. It provides information about the motivation to come up with such an application, thereby describing the existing donation system and how the proposed product works for the betterment of society. The product is shown to be an effective means of donating things to organizations, etc. over the internet. It shows the potential for avoiding the wastage of food, clothes, books and the other stuff.

In highly populated countries like India, food wastage is a disturbing issue. The streets, garbage bins and landfills have ample proof to prove it. Marriages, canteens, restaurants, social and family get-togethers and functions expel out so much food. Food wastage is not only an indication of hunger or pollution, but also of many economic problems. The high standard of living has resulted in the wastage of food, clothes, etc. because of quick changes in habits and lifestyle. Instead of wasting these things we can put them in use by donating them to various organizations such as orphanages, old age homes, etc. The product is an internet-based android application that basically aims at charity through donations.

## II. Literature Review

**Raak et al., 2017** Food goes through several stages along the entire supply chain, from raw material production, processing and distribution to consumers. A quarter of the food is wasted in the supply chain due to physical damage to products or packaging, insect-related causes, and attack by microorganisms. Blackouts, equipment defects, waste from technical operations, human error, logistical limitations, hygiene regulations, and presumed causes of safety risks are other sources of food waste.

**Kummu et al., 2012** Reducing waste at each stage of the supply chain can reduce the total loss by 50%. This would help improve the food available to meet the future demands of approximately one billion people. The use of technology, such as radio frequency identification, can also improve supply chain management, particularly for perishable goods. Data gathered by sensors and Internet of Things devices can help predict shelf-life throughout the supply chain.

**Naidoo and Gasparatos (2018)** explore the major factors for adopting environmental sustainability strategies in the food retail sector, and present the typical strategies and performance measures employed. The authors approach the subject from a PMS perspective. Their results suggest that the primary motivation for retailers in implementing sustainable strategies is the expected economic benefit associated with reducing resource use. These authors also identify the lack of studies on sustainability performance measures in the retail sector, particularly in developing countries. They also argue that big data should be used as a source of information for sustainable strategies and measuring performance.

**Cicatiello et al., 2016; Kaipia et al., 2013** Besides social factors and the depletion of natural and financial resources, food waste has an extreme impact on the environment and affects sustainability, a critical performance dimension in food supply chain management.

**Santos et al. (2007)** Analyzing several PMS definitions, Franco- propose three groups of elements: features; roles; and processes. Features are essentially performance measures (financial and non-financial metrics) and the necessary infrastructure for system operation (manual or digital). Roles are common usages, such as measuring performance (usually for controlling purposes), managing strategy, communicating performance, influencing behavior, and leading learning and improvement. Processes are the sequence of activities used for developing performance measures, collecting and processing data, managing information, evaluating and rewarding performance, and reviewing the system. Scholars can use PMS elements to identify and clarify the focus and contribution of an investigation.

## III. EXISTING SYSTEM

In existing system if anyone have extra food because of any function or in their home it will be become waste because instantly there is no way to share with anyone if they are having lots of food. Even if they want to give that extra food to any orphanage or poor people they don't have time or don't have an idea about that. So that we have create a website for sponsor that extra food to poor people or nearby orphanage.

## IV. PROPOSED SYSTEM

In proposed system we are reduce that food wastage using that website. This project is food redistribution is an enormously successful social innovation that tackles food waste and food poverty. The admin collect foods from donator through their nearby agent then provide to nearest orphanages or poor people. After receiving the food from the agent by admin and give alert message to that donator through this way we can reduce food wastage problem.

## Implementation and Maintenance:

**Login & Registration:** This phase involves login & registration for both the guest and Agent. The user's details are maintained confidential by maintaining separate account for each user. At the same time only, the agent can view the details of the registered guest.

**Notification:** This phase involves the notification to the agent by the guest. The user will send the notification which contains the location of food available via notification bar. This is achieved by using notification button.

**Admin:** Module In admin module, the administrator maintains the agent details as well as the donator details. The administrator collects the food from the agent. The administrator gives the orphanage details directly to the donator.

**Donator:** Module In donator module, the donator gives the wastage of food to the orphanage. The donator gives the request to the admin for the purpose of to collect the wastage food. The donator views the orphanage details and agent details

**Receiver Module:** In Agent module, the Receiver maintains the orphanage details. It can also maintain the donator details. The Receiver give the request to the admin for collect the food from the donator. After collect the food the agent gives the alert message for the donator.

## V. FUTURE ENHANCEMENT:

Development and launching of Mobile app and refining existing services and adding more service.

## V. CONCLUSION

As mentioned above in the description there is a lot of food wastage that occurs daily at restaurants and cafes. Instead of throwing away the same as trash (which usually is the scenario), it can be used to feed the homeless. Also, since the pickup is arranged for by the enterprise, the restaurants/cafes need not worry about it. Benefiters will be both the restaurants/cafés (reducing the carbon footprint and wastage), and the needy

## REFERENCE

1. Micheline L, Principato L, Iasevoli G. Understanding Food Sharing Models to Tackle Sustainability Challenges. *Ecol Econ* 2018 Mar;145:205–17.
2. Principato L. Factors and Behaviours Affecting Food Waste at Consumption Level: The Household Food Waste Journey Model. *Food Waste Consu Level*. 2018;15–34.
3. Pearson D, Miroso M, Andrews L, Kerr G. Reframing communications that encourage individuals to reduce food waste. *Commun Res Pract* 2016;3(2):137–154.
4. Graham-Rowe E, Jessop DC, Sparks P. Predicting household food waste reduction using an extended theory of planned behaviour. *Resou Conserv Recycl* 2015;101:194–202.
5. Oh J., An A.K., Yeo J., Cheung H.H.L., Lee P.K.H. "Smart Food Waste Recycling Bin (S-FRB) to turn food waste into green energy resources" *Journal of Environmental Management*, 234 (December 2018) (2019), pp. 290-296 DOI:10.1016/j.jenvman.2018.12.088.
6. Gustavsson J., Cederberg C., Sonesson U., van Otterdijk R., Meybeck A. "Global Food Losses and Food Waste" *Food and Agriculture Organization of the United Nations* (2011), p. 38 (May), DOI: 10.1098/rstb.2010.0126.

7. Dimitriadis N., Gunasekaran A., Ketikidis P., Kehajova M., Koh S. "The use of information systems for logistics and supply chain management in South East Europe: Current status and future direction" *Omega*, 36 (4) (2007), pp. 592-599.
8. Fan T., Tao F., Deng S., Li S. "Impact of RFID technology on supply chain decisions with inventory inaccuracies" *International Journal of Production Economics.*, 159 (2015), pp. 117-125 DOI: 10.1016/j.ijpe.2014.10.004.
9. Schanes K., Dobernic K., Gözet B. "Food waste matters - A systematic review of household food waste practices and their policy implications" *Journal of Cleaner Production*, 182 (2018), pp. 978-991 DOI: 10.1016/j.jclepro.2018.02.030. Research Report No.11. AERDD, the University Reading, Reading.
10. Koberg E., Longoni A. "A systematic review of sustainable supply chain management in global supply chains" *Journal of Cleaner Production*, 207 (2019), pp. 1084-1098 DOI: 10.1016/j.jclepro.2018.10.033.
11. MeyerKohlstock D., Hädrich G., Bidlingmaier W., Kraft E. "The value of composting in Germany - Economy, ecology, and legislation" *Waste Management*, 33 (3) (2013), pp. 536-539 DOI: 10.1016/j.wasman.2012.08.020.
12. Kasza G., Szabó-Bódi B., Lakner Z., Izsó T. "Balancing the desire to decrease food waste with requirements of food safety" *Trends in Food Science and Technology*, 84 (July 2018) (2018), pp. 74-76 DOI: 10.1016/j.tifs.2018.07.019.
13. Mentzer J.T., Keebler J.S., Nix N.W., Smith C.D., Zacharia Z.G. "Defining Supply Chain Management" *Journal of Business Logistics*, 22 (2) (2001), pp. 1-25 2001 1. 22(2)

