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RE-FOOD: A Collaborative Movement Based on Volunteers Networking

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Abstract: Re-Food is a movement fuelled through community goodwill, which aims to reduce hunger by fighting food waste. Created from the work of a single person, Re-Food has grown to become a non-governmental organisation [NGO], with the status of Private Institution of Social Solidarity [PISS]. Through networking collaboration, Re-Food proposes to bring an equilibrium between demand and supply of food products. The Re-Food strategy is based on the redistribution of food received through donations. All donated food is distributed immediately, and there are no stocks to be managed. In a system of food redistribution surplus, a sustainable collaborative network with significant economic, social, and environmental impact should be considered. The sustainable collaborative network is formed by volunteers' work. The principal aim of this article is to investigate the Re-Food collaborative network. A qualitative methodology is followed, and the Chief Executive Officer (CEO) [R] and a coordinator of a Re-Food operations centre [C] were interviewed. Additionally, direct observations, and document analysis, support the investigation. The main result suggests a leadership model based on the acceptance of the different employees' capabilities and motivations, and that technology can increase the effectiveness and efficiency of networking, as well as improve communication between people.

Key terms: RE-FOOD, Motivation-Opportunity-Abilities, food loss & waste, collaborative network, volunteers

1. Introduction

The Global Harvest Initiative [GHI] has predicted that the world population will be around 9.8 billion people by 2050 [1]. However, 821 million people are estimated to suffer from food shortages [2]. Additionally, the loss and waste of edible parts of plants and animals that are not consumed amounts to as much as one-third of production. Reducing food loss and waste can be a way forward in combatting hunger [3]. In terms of impact, food waste can be considered as having an impact from production to disposal [3]. This impact is reflected negatively not only in terms of the economic level, but also on environmental and social levels. Moreover, the combination of factors associated with economic growth may lead to an increase in food waste and, consequently, have a strong negative impact on the environment [4].

Considering the existing global imbalance in food distribution, and its negative impact caused at different levels, the following question was raised: Is it possible to fight food waste and at the same time reduce hunger? Re-Food was created from the goodwill of its founder. The importance of the theme and attitude had such a strong impact on the spread among others that it resulted in a non-governmental (non-profit) institution. Re-Food is unique. It is different because it is a totally voluntary effort. The institution tries to help people who struggle, who want to eat, but do not have means to buy food. In addition to the lack of food, individuals suffer other problems, such as unemployment.

Aiming to investigate Re-Food's collaborative volunteering model of network, an exploratory research was developed. This study proposes a deeper understanding of a complex and understudied kind of organisation such as Re-Food, which depends entirely on voluntary work. This research developed two in-depth interviews, with the Chief Executive Officer (CEO) and with the coordinator of a Re-Food operations centre. The information acquired was cross-checked with the perspective of a coordinator of the institution's operations centre. This non-profit institution has a system for redistributing food surpluses, which mainly aims to reduce the hunger of people who cannot afford to buy food. This movement, powered by community goodwill, is mainly based on a collaborative approach towards redistribution, where all the food is given away daily, without being stocked.

This article shows a managerial perspective. It represents preliminary research. The main objective of this paper is to serve as a starting point for an extensive future research. The structure of the paper presents the Motivation-Opportunity-Abilities [MOA] model [5] to assess motivations and opportunities, and the formation of collaborative networks considering the food waste problem. Then, the methodology is defined, and the results obtained are presented. Finally, the final considerations are elaborated, with the respective limitations and practical implications.

2. Motivation-Opportunity-Abilities [MOA]

Over the years, food disposal practices were considered non-valued practices [6]. There is a need to recover, reduce, recycle, and reuse food [7]. In this regard, Ishangulyyev, Kim, and Lee [8] suggested facilitating the increased donation of unsold food in refectories and restaurants; implementing food safety campaigns and consumer education; reducing food portions; training about household saving; involving women in food safety campaigns; effective use of leftovers; training for managing restaurants, cafeterias, and supermarkets (ponder over demand); implementing good storage practices; interpreting expiry dates correctly; distributing excess food to groups with food shortages.



Conceptualised as food that spills, deteriorates, or declines in quality, such as developing blemishes in appearance, or food that is lost before consumption, food loss has been considered an unintended outcome, and wastage of food an outcome of a conscious decision [9]. Food can be discarded before cooking, in a raw or precooked state, or after cooking. However, food discarded in the manufacturing processes, distribution, and within the scope of services and sales, has been considered in the literature as food waste [10]. Therefore, it can be said that "food waste" still retains some quality or may be fit for consumption [9].

In order to investigate Re-Food's model of volunteering work, the conceptual framework that was considered suitable to be applied to volunteering work, namely volunteering related to food waste, was the conceptual model MOA, as it addresses associated determinants at the individual and societal level [5]. At the basis of the theory is the intention, which is cognitive, dependent on everyone, and indicates the individual's subjective probability of performing (or not performing) a certain behaviour; it is influenced by the expectation of the consequences of a particular behaviour [11].

Intention increases as there are favourable attitudes towards the behaviour, but also as a function of other individuals' perceptions of it. However, beliefs correspond to a subjective value judgment, concept, or attribute that an individual believes he or she has about themselves and the world around them, and they are supported according to the consequences of performing or not performing the behaviour [12]. Attitude is related to evaluation, and it depends on individual beliefs regarding consequences [13], and indicates an individual's predisposition to feel, think or act [14]. Perception of others, or normative beliefs, was defined by Fishbein and Ajzen in 1975 as the expectation or social pressure that affects perception. Approval by the group in which the individual is included can influence the individual's behaviour. The subjective norm can be defined as the perception of social pressure in relation to behaviour [13]. Beliefs might be tendentious, true, or false, accurate or inaccurate, rational or irrational, but the outcomes produced by attitudes, intentions and behaviours will be consistent with these individual's beliefs [15].

On the one hand, opportunities (conscious, explicit) were defined as a function of the preconditions for the behaviour. Additionally, the concept of capacity, which may favour using the "opportunities", was incorporated into the model. On the other hand, motivations were defined as cognitive factors (implicit, unconscious) [16]. Given that it has been used to assess food waste behaviour, and because it combines factors related to beliefs, individual, social, opportunities (conscious, explicit) and cognitive motivations (implicit, unconscious) [17], the MOA was considered the appropriate model for this research. However, since it considers that motivation is necessary for voluntary behaviour, such as waste reduction, the main object of study was the motivation for collaborative networking in terms of doing voluntary work. Furthermore, one might further state that the impact of this volunteer work is significant in the three dimensions: economic, social, and environmental.

3. Collaborative networks

Relationships develop commitments gradually [18-20]. And socio-psychological aspects were also considered significant by many authors such as [21-23]. The dynamic in personal relationships requires trust [24, 25]. In the field of social psychology, an important study of inter-organisational relationships has been developed [26, 27] as well as social exchange theory [28, 29]. Personal relationships use constructs considered to be the key elements in the network formation process, such as trust, friendship, commitment and the sharing of values and beliefs.

This study draws on volunteering work where the main motivation is to help the community [30]. Following the work developed by [30], to attract the best volunteer work, some recruitment methods should be included, such as open calls, word of mouth, and deliberate recruitment. Furthermore, complementary collaborative networks can facilitate capitalising on diversity [31]. Personal reputation, group identification, and sharing willingness have different effects on the motivations, and team motivation has a specific effect as a regulator on relationships [32]. Furthermore, flexibility is necessary in order to connect people, as is ongoing communication [33], and extrinsic motivation is a crucial factor for knowledge sharing within a network [34].

Intrinsic motivation has an influence on absorptive capacity in three dimensions: recognition, assimilation, and exploitation, and motivation should be a multidimensional construct [35]. The literature highlighted a positive interaction between position in the network and intrinsic motivation [36]. Aiming to achieve the best results, teams should be as homogeneous as possible [37]. The authors identified that the effort influences the intervention and indirectly, influences the individual performance.

Organisations should consider different workforce models, such as volunteering, for example, to support the most diverse initiatives [38]. Additionally, volunteers desired social connections, self-growth, recognition, and support. Emerging collaboration networks are invigorated through social capital [39]. Technology can increase the effectiveness and efficiency of networking, as well as improve communication between people. It is very important to consider that the introduction of technology, by using some logistic platforms and social media tools, for instance, can contribute towards strong and positive results. The advantages of the technological tools implemented can contribute not only to the development of strong relationships, but also to the forming of long-term relationships. This networking created based on strong relationships will improve the food donors, charities and volunteer work that will reflect in more food being distributed by people.

4. Materials and Methods

The conceptual framework of the study is based on the Motivation-Opportunity-Abilities framework. This model was chosen for several reasons. Firstly, because it addresses motivation. Considering there are no compensations, this variable is central in order to understand the reasons that lead to volunteer work. Secondly, because it presents the existing opportunities, and volunteer work can be reconciled with personal and professional lifestyles. Thirdly, because it requires important skills and competences for performing the work.

Re-Food model is inclusive and flexible enough. When an individual commitment overlaps voluntary work, working as a team main variables of this network. Besides, this model has already been tested on similar voluntary behaviour. Based on a volunteers' network, Re-Food is a successful movement founded on community goodwill. It is a non-profit institution with a system for redistributing surplus food. The organisation's mission is centred on reducing hunger, and the collaborative redistribution strategy, where all food is redistributed daily, without holding any stock. The principal objective was to understand the success of this voluntary network and how it can be replicated in other important and relevant contexts. So, this study tried to understand the model and the leaders.

Aiming to investigate Re-Food's collaborative volunteering model, the Chief Executive Officer (CEO) was interviewed. The information acquired was cross-checked with the perspective of an operation's centre coordinator of the charity. Interviews



were conducted with two individuals: i) one is connected to an operational centre for the distribution of food (daily surplus) to people with this type of need (to demand it), and ii) the other one is the organisation's founder and CEO.

There is no consensus among authors regarding the ideal number of interviews [40]. For this specific case and following [41] who defends the minimum of two interviews, this research opted for two in-depth interviews, with the Chief Executive Officer (CEO) and with the coordinator of a Re-Food operations centre. The interviews were recorded, and the content was transcribed. Relevant factors of Re-Food model were identified, which allows the authors to adapt this model for other important and relevant contexts.

The interviews comprised open and semi-structured questions; based on the variables, the guide was developed. The interviews were recorded, transcribed, and analysed according to the following variables: i) beliefs, individual and social; ii) opportunities; iii) motivations; iv) factors favouring the development of networks. Different sources of information were added to support the research, such as some direct observations, as well as some different documents. The interviews were analysed, and the information obtained was used to determine how the relevant variables intersect. The collaborative network, based on voluntary work, can be considered sustainable over time since it does not need many resources and uses surpluses instead.

5. Results

The exploration of factors was focused on the dimensions of the variables. The beliefs, individual and social, opportunities, motivations, and factors that favour the formation of networks.

5.1. Beliefs

The main belief identified in this research was the myth of similarity between volunteering and paid work. At Re-Food, voluntary work requires responsibility, but Re-Food's business model assumes that there is more than one person doing the same tasks, allowing for immediate replacement, even in unexpected cases. So, for Re-Food's CEO, there are two models of voluntary work: the classic and the Re-Food model: "... volunteers have to be super responsible... they have to treat it as a job! So, that is the classic theory... [R] has a different theory ... which is that everybody is different, and everybody is valuable! We are going to have five stars volunteers: volunteers with good will, who have enthusiasm, and availability, and responsibility and competences. There are volunteers like that, and we are very happy to have them, but there are other volunteers who have four of those qualities. Others have three, others who have two, others who only have one. And at Re-Food, all of them are considered valuable... we have an open model. People are welcome!"

Although the model is flexible, smaller operational nuclei have added difficulty. For [C], "... volunteering at Re-Food is open! When I say open, I mean that you don't need any special qualifications or special technical skills to do it. Obviously, there are characteristics that we look for and that we try to encourage... in those who come to join us as volunteers, but they are characteristics that are common, that result from goodwill, good manners, love of neighbour... anyone can volunteer!".

For Re-Food's CEO, you have to know people because, for example, if Africans are offered a soup, for cultural reasons, soup is not part of their feeding habit and so these individuals do not feel they are being fed: "... and then, we receive those people, we interview them, we get to know them, ... knowing what they can't eat or they won't eat... people from Africa, very often, they don't eat soup because soup is not part of their culture. So, if you give them soup, you are not feeding them ... it's better to know and give them food that they are going to eat".

5.2. Opportunities

Regarding opportunities, it is crucial to involve the whole community to explore the opportunities in relation to the food surplus, and at the same time, identify people who have food shortage. Furthermore, all the work is based on volunteering and goodwill, and therefore it is necessary to involve the community so that everyone collaborates, in an open and flexible way. According to [C], "... it is a process that involves the community in its total dimensions... that dynamises social interrelationships, deepening bonds of solidarity... that transforms this waste... to the benefit of those who need it".

5.2.1. Opportunities were reported on the supply and demand side of food

On the supply side, it becomes essential to identify excess food that is fit for people's consumption. According to the CEO of Re-Food: "every business... has a daily cycle... so, you have these two moments in the business cycle of every food producer, which is when the food loses its commercial value, and then, at a later point, it loses its nutritional value... we work between those two moments... that is our window of opportunity". There are different formats for identifying partners, and it is possible to invite them directly or indirectly, formally or informally. According to the interviewee [C]: "...an invitation to business organizations... that all their daily food surplus... ...that these organizations would be willing to make available to the nucleus...".

Occasionally, events are organised to present the work developed by Re-Food, and in this way involve companies, individuals, and the whole community. [C] explained that: "...we invite... directly, through events, bringing together partners... companies linked to the restaurant business and similar, large distribution companies, supermarkets, hypermarkets, small and local grocery stores... and we make an invitation through either personal contact via volunteers, or contact is, let's say, more formal, through an invitation by email or by letter..."

On the demand side, the need can be identified through the volunteers' contact network or through a request for help from the individual. It is also possible to identify needs from other charities. [C] argued: "...meet people, through their social circle of friends... people who are in trouble... it is the nucleus itself that approaches people, in the sense of understanding whether these people will be interested in receiving our help... There is the individual form of self-help... people, knowing of the existence of the nucleus, then come to us... There is also the referral, through other social solidarity institutions... they also work in this social market... fourth sector, as it is now called".

5.3. Motivations

The opportunities will not be significant if people are not motivated to work, especially if it is voluntary work. However, to be stimulated, voluntary work cannot represent social pressure. On the contrary, in the Re-Food model, this type of work



enables each volunteer's personal and professional life to be reconciled. For [C], "... the Re-Food project is an inclusive project. It means that all its activity starts with an invitation, an invitation to everyone!". Considering that contingencies happen, Re-Food's business model has been supersized to be flexible. According to Re-Food's CEO: "when somebody misses, when they come back next week, we don't say... "oh, you screwed everything up" ... we just say: hey, we are glad you are here. Let's go!".

5.3.1. Factors favouring the formation of networks

The first factor identified as favouring the formation of networks was the adoption of an inclusive model. Flexibility is a keyword. And accepting differences seems to have been an appropriate decision. The [C] advocated that "Everyone is welcome!" And the Re-Food CEO included other institutions at the local level, arguing that these institutions know people in need of food: "…a lot of institutions can work local knowing the family who needs support". To promote the formation of networks, the second factor identified was to create a model capable of being replicated. For [C], "… this project… already has a cross-border dimension and, therefore, it already has an international dimension, and there are already nuclei… operating in Spain, Italy and also in Latin America…".

Feeding individuals who are in a time of food shortage is very important. It is part of Re-Food's mission. And it needs to be done in the short term. However, in the long term, medium and long-term alternatives need to be identified. Having proactive and open-minded people capable to be innovative enables the business model to solve the cause of the problem and restore the dignity of individuals. In this sense, the third very important factor in the formation of networks was identified: volunteers and their skills. According to [C], "... we even have some accompaniment technicians, because we also assess the possibility of, how can we, beyond food, how can we help those people to get out of that situation". The principal result is achieved: a network based on a model in voluntary work, organised by a flexible leadership model, which accepts the different capacities of the employees, and integrates them into the institution. The role of everyone in this network can be defined according to their different motivations.

6. Conclusions

Re-food is dealing with people with different basic needs, namely food, and also economic and social needs. The authors decided not to interview these people due to the sensitivity that this subject provokes. The methodology could be improved if these people were also surveyed. However, this topic is very delicate, sensitive enough to be avoided. Furthermore, leadership was considered the most important factor in understanding Re-Food's inclusive model.

The present work contributes to the food waste collaborative volunteering network in several ways. Comparing Re-Food with other institutions is a difficult task. Re-Food is an organisation literally based on voluntary network, and based on assumptions such as teamwork, inclusion, and flexibility. The result of this model allows both people and organisations to become increasingly involved.

Food waste prevention is the best option. Avoiding food waste produces the best results in terms of socio-economic and environmental impact. Food bank activities and food sharing practices were classified as reuse. Recycling or recovery includes animal feed and composting, and it was also considered among valuable recommended practices, or recovery practices that add value to the food waste prevention. Considering Re-Food's collaborative volunteering model as a success case, in order to explore the main factors associated with the Re-Food Movement, qualitative research was carried out. With the aim of presenting the best practices in the fight against food waste, direct observations and in-depth interviews were conducted to explore the activities already implemented in Portugal. The Chief Executive Officer (CEO) and a coordinator of an institution's operations centre were interviewed. It is possible to learn from the best practices, mainly when they are associated with a relevant topic such as the fight against food waste. Thus, there are two major advantages of this organisation: it has no stock, and it is based on voluntary work.

Furthermore, considering the need and the importance of reducing hunger among people suffering from food shortages, Re-Food is a non-profit institution whose model is mostly based on a collaborative strategy that integrates supply and demand. Surplus and donated food are redistributed daily, without being stored. There is no stock. And all the work of donation, organisation, and redistribution is based on volunteering work. Re-Food's system of redistributing food surplus is totally based on volunteer basis. This research may not be very extensive, but it was developed with the necessary rigor that allows readers to learn from a successful practical case study.

Among the findings, we highlight: (i) the myth of the similarity between volunteer work and paid work; (ii) Re-Food's model, which is inclusive, open, and flexible; (iii) its opportunities on the food supply side, which seeks to identify surplus quantities of food in a condition to be consumed by people; and (iv) the several opportunities highlighted on the food demand side, with multiple ways of recognising different needs, and the reconciliation of each volunteer's personal and professional life, as it provides various motivations for making the commitment to volunteer work. This research allows us to deliver the following recommendations: First, to be inclusive, voluntary work cannot be a painful obligation. Second, through simple solutions and a lot of balance, it is possible to feed all people, and help them overcome difficult moments. Third, networks have presented themselves as an excellent way to connect complementary people. Sharing knowledge allows us to optimise results from available resources, that are characterised as important but scarce.

Finally, considering that this movement is nourished by the goodwill of everyone, and considering that it does not require many resources and uses food surpluses, this network, based on voluntary work, could be considered a sustainable model over time. Furthermore, the impact of the network, which reduces negative outcomes in all three dimensions of sustainability – social, economic, and environmental – should be considered significant.

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