



www.foodsavingproject.it

FOODSAVING IN EUROPE:

At the crossroads of social innovation

Partners:



Università Commerciale
Luigi Bocconi



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THE FOODSAVING PROJECT

Objectives and methodology

The Foodsaving project aims to analyze the best practices of surplus food recovery and redistribution in four European regions: **Lombardy (Italy), Catalonia (Spain), Baden-Württemberg (Germany), Rhône-Alpes (France)**. The project has an interdisciplinary approach, studying **both business and non-profit organizations involved in the generation, management and redistribution of surplus food** to people in need. Research focuses on various relevant issues, such as the creation

and management of surplus food along the food supply chain, implications of corporate social responsibility, management of non-profit organizations involved, policies and the regulatory context.

The research team includes three Italian universities with different research interests (industrial engineering and business economics, CSR, non-profit management and policy analysis), three small and medium enterprises and an Italian food bank.

Objectives

The project aims to:

- **enhance the development of an international network of advanced knowledge** on the issue of food surplus;
- **increase the competitiveness of both business and non-profit actors;**
- **encourage a wide dissemination of the topic** to generate awareness both at corporate and citizenship levels;
- **enhance the advancement of research** on the topics of social innovation, social enterprise, corporate social responsibility and social impact;
- **support policy makers** with empirical evidence to develop an evidence-based policy framework.

Methodology

The project uses mainly qualitative research methods based on analysis of case studies. A general framework has been developed through a systematic literature review, while semi-structured interviews with companies and non-profit organizations have been conducted for building up the case studies.

The interviews were conducted with representatives of companies as well as non-profit organizations using a semi-structured questionnaire and participating in visits to the facilities and spaces where food surplus is generated, recovered or redistributed.

The research analyzes forty case studies, selected purposively, in Lombardy (twenty for-profit and twenty non-profit organizations) and ten case studies (five for-profit and five non-profit organizations) in each one of the three other European regions. Data saturation has been respected for supporting the validity of the research.



WHAT WE ARE TALKING ABOUT

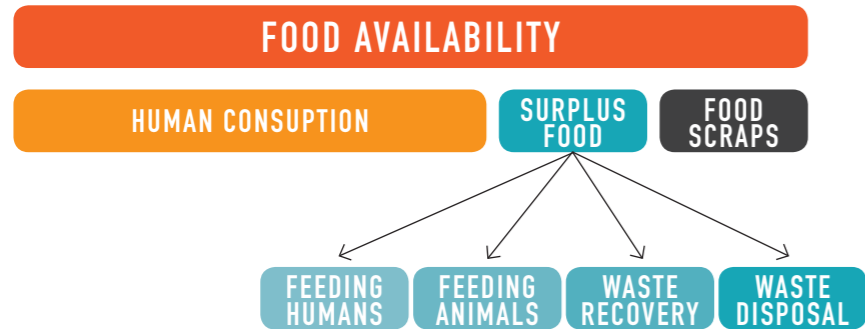
Foodsaving problems and definitions

While more than 10% of the global population is undernourished (FAO, 2013), a great amount of surplus food is generated and wasted every day along the food supply chain. For various reasons, in fact, if high quality edible food is not sold in the main market, it often does not reach the final consumer and most of the time it is disposed of, in spite of the presence of people in need.

To better understand this "paradox", it is worth defining the main terms of the process. Total **food availability** can be defined as the total amount of food produced by the entire supply chain. It includes goods processed in all stages of the supply chain at each production level: raw materials, partially finished

goods and finished goods. Food availability can be divided into three parts. The first is the edible part, which reaches the final customer through traditional channels and is consumed by people (**human consumption**). The second part includes the edible food that is processed, delivered or served but for some reason is unsold or not consumed (**surplus food**). The last part is not edible and it is not destined for human consumption (**food scraps**).

From an environmental point of view, all surplus food which is not recovered and reused in some way, but disposed of in a landfill, is considered food waste. **Social food waste** is the part of surplus food which is not recovered for human consumption.



THE FOODSAVING SUPPLY CHAIN

The recovery and redistribution of surplus food and the players involved

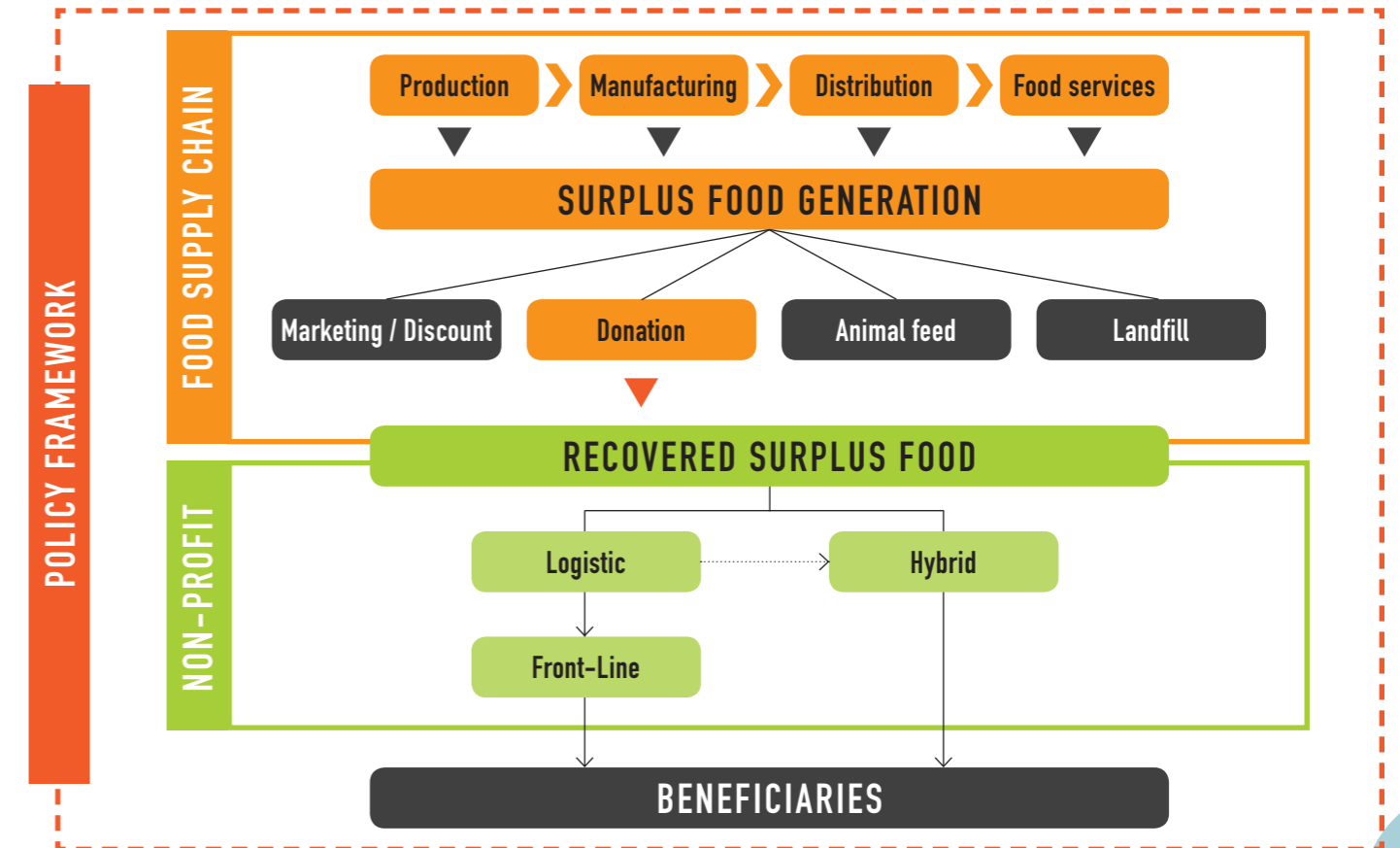
Surplus food originates all along the **food supply chain**, from production to retailers and food service companies. Each segment of the supply chain generates surplus food for different reasons and implements various strategies to manage it and to reduce waste.

One of the strategies for reducing food waste consists in companies donating ed-

ible surplus food to non-profit organizations, such as logistic (food-banks), front-line or hybrid organizations. While the first generally act as intermediaries between donors and other non-profit organizations, front-line organizations relate directly to beneficiaries, donating the collected food to people in need. Hybrids present features of both these types of organizations. Thus,

foodsaving research aims to understand the best practices in managing surplus food and organizing partnerships between these actors.

Moreover, policies influence both companies and non-profit actors, e.g. through fiscal incentives and hygienic regulations, representing an important variable in the analysis.



THE KEY PLAYERS OF THE FOODSAVING MODEL

Food supply chain companies: Main features

In spite of their efforts food supply chain companies generate surplus food. If well managed, surplus food can be an important opportunity both for companies and for society. Among the **twenty case studies** conducted with food supply chain companies, fourteen involved manufacturers, three involved distributors and three involved food service companies.

The processes analysis has shown that the more **structured the food surplus management process**, the smaller the amount of food waste. In order to appreciate the degree to which a process is structured, four axes of analysis have been considered: surplus food measurement, level of processes formalization, level of coordination among functions and company involvement in the donation process. Companies which have a better positioning on the axes evaluated were found to generate lower levels of food waste compared to those weaker in the process structuring.



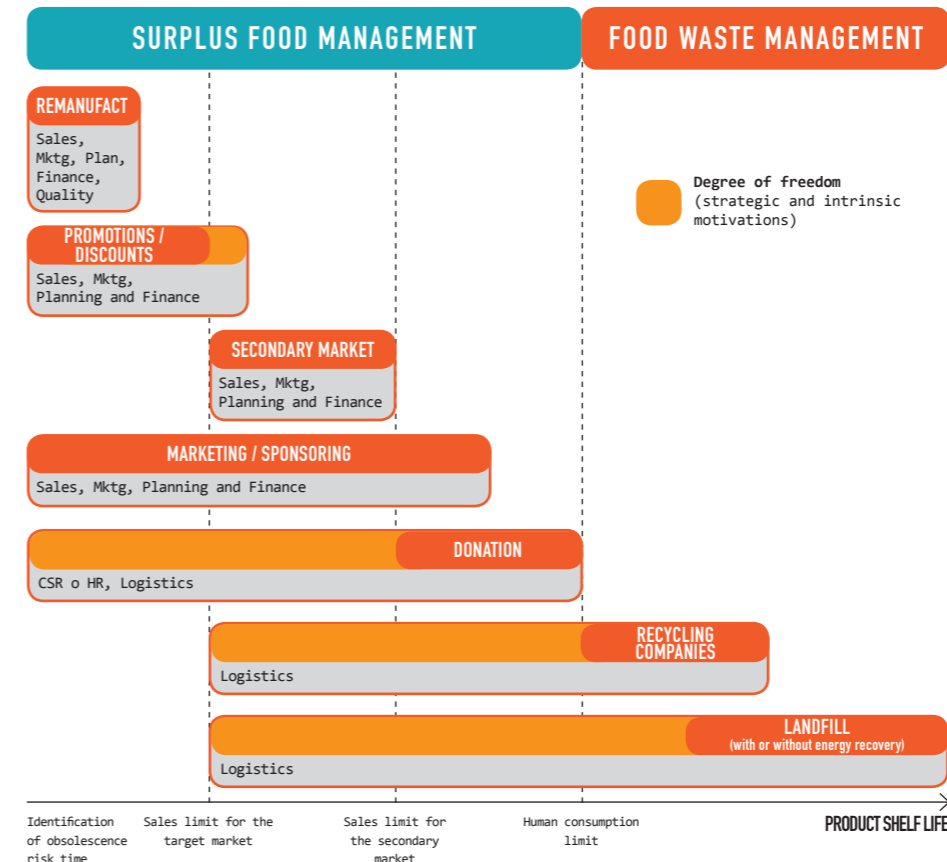
Process features of low food waste level companies

KPI/MEASUREMENT PROCEDURES <ul style="list-style-type: none"> Ad hoc measurement Recurring measurement Structured measurement 	FORMALIZATION OF THE PROCESS <ul style="list-style-type: none"> Not structured process Structured process for some causes Structured process for each relevant cause
COORDINATION AMONG FUNCTIONS <ul style="list-style-type: none"> No coordination Informal coordination Formal coordination 	DONATION PROCESS CONFIGURATION <ul style="list-style-type: none"> Reactive management - Occasional donation Reactive management - Periodical donation Proactive management - Occasional donation Proactive management - Periodical donation

An improvement in performance can be achieved through an increasing formalization of the process, based on different causes of surplus generation.

According to the analysis of case studies, in more than 60% of cases surplus food is generated because the internal sell by date is reached. The cross cases analysis leads to the development of an operative model that

can support surplus food management. First, milestones related to each product lifetime have to be fixed. Second, available alternatives have to be defined for each period. Finally, all management functions involved have to be recognized and included in the process. Roles of each function and coordination process need to be defined in advance for managing the process during unexpected events.



THE KEY PLAYERS OF THE FOODSAVING MODEL

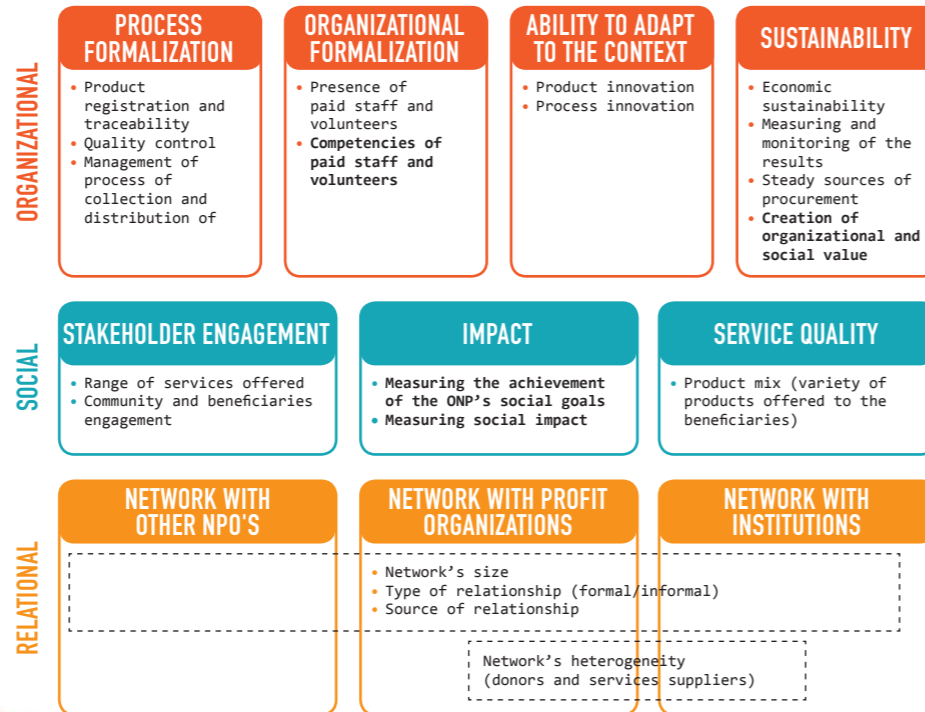
Non-profit organizations: Main features

Case studies have been analyzed through a model composed of three macro-dimensions: **organizational, social and relational**. Some of these dimensions were investigated during the interviews, while others, highlighted in bold, need to be further explored.

The organizational dimension refers to those variables (e.g. resources, processes and procedures) that, if well managed, allow non-profit organizations to fulfil their mission.

The social dimension analyzes the beneficiaries' perspective by looking at how non-profit organizations interact with their stakeholders and how it is possible to assess their efficacy in implementing their social aims.

The relational dimension studies networks of non-profit organizations both in terms of quality and typology. Bold variables in the model represent possible future research developments.



Among the variables of the **organizational dimension, human resources**, and especially volunteers, play a pivotal role, as the formalization of the process, the ability of the organization to adapt to a changing context and to its needs, and, in the long term, even the sustainability of the organization all depend from them.

Several interviewed organizations find it difficult to build steady relationships with their volunteers, and they acknowledge their need of better managerial competencies. A partial way to address this need could be to share best practices in human resources (volunteers) management and motivation so as to contribute to enabling innovation. In addition, the presence of public incentives adding value to the act of volunteering (for example by a certification of competences acquired during volunteering) or providing incentives for volunteer training could help keep the volunteers engaged for longer periods and in a more systematic manner.

Concerning the **social dimension**, our findings unveil the organizational impact on **beneficiaries and communities** and many organizations' problematic approach to their **measurement of social impact**.

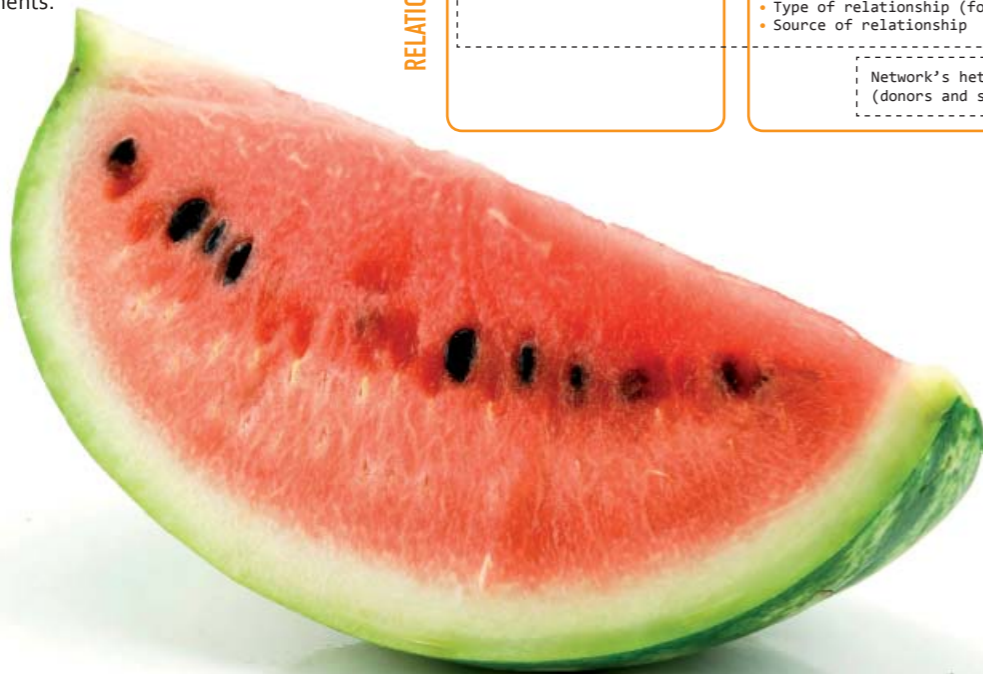
Most of the non-profit organizations interviewed are committed not only to distributing food surplus but also to assessing a wide range of social needs. The engagement of beneficiaries also allows the organizations to be more effective in assessing the right quantity and mix of food needed. At the same time, it reduces the stigmatization of beneficiaries and helps them to avoid situations of social exclusion.

The community's engagement supports the attraction of resources from civil society, donors and public institutions.

The majority of the organizations interviewed stress the importance of evaluating social impact in order to be more structured and to better perform; however, it is not often measured and qualitative instruments and self-assessment evaluations are mainly used. Therefore, the adoption of a common standard of social impact measurement remains an open issue.

The **relational dimension** focuses particularly on the **strength and variety of ties** between non-profit organizations and their main stakeholders.

All the interviewed organizations are aware of the importance of creating a stable network with other non-profit actors, with donors and with institutions. A larger network with a wider variety of types of actors would benefit the food-recovery process as each actor brings in its own specific resources and capacities. Moreover, the size and the heterogeneity of the network are important because, through the network, non-profit organizations find donors, but they also reduce operational costs through cooperation while broadening their services.



THE EUROPEAN POLICY FRAMEWORK

Policy topics related to surplus food recovery and redistribution

The policy framework related to surplus food recovery and redistribution is complex and influences in many ways the different stakeholders of the foodsaving chain.

According to the interviewees, both for-profit and non-profit actors involved in food recovery and redistribution consider the policy context a pivotal element for a successful reuse of surplus food.

Some policy developments have been recognized as particularly relevant to ease the food-saving process, such as policies limiting **company liability** (the Italian 'Good Samaritan' law) or policies providing **fiscal incentives** (France being a good example of this) but much still needs to be done on this front.

Firstly, the limited availability of reliable data on food waste is an effective obstacle for any intervention, so public administrations should therefor promote **data collection and traceability** of food at a central level, while at the

same time avoiding an increase of the bureaucratic burden for both for-profit and non-profit actors involved.

Furthermore, governments could support surplus food recovery through the adoption of **food use hierarchy policies**, prioritizing food donations to people in need among other options of reuse.

Other measures to support the process of recovery and redistribution of surplus food are the creation of coherent **fiscal incentives**, clear regulations on **food durability** as well as on **liability** (e.g. the Italian 'Good Samaritan' law) and hygiene.



NEXT STEPS AND EVENTS

The Foodsaving project started in May 2014 and will end in October 2015.

In September 2015, a dissemination event will be held with the participation of policy makers and representatives of non-profit organizations and food companies involved in surplus food recovery and redistribution.

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