



## Food Recovery and Waste Reduction

Progress Report

Public Part

## Project information

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Beneficiary organisation: Eurocrea Merchant srl

Project coordinator: Gianluca Coppola  
Project coordinator organisation: Eurocrea Merchant srl  
Project coordinator telephone number: +39 02 87284807  
Project coordinator email address: [gianuca.coppola@eurocreamerchant.it](mailto:gianuca.coppola@eurocreamerchant.it)

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## Executive Summary

### PROJECT IDEA

FORWARD intends to develop a free online training plan for representatives of the food supply sector and charitable association, a practical guide to help them starting a food waste reduction and recovery program at their facilities in favour of charitable associations.

Taking into consideration the European provisions concerning respect for the environment, GHG emissions reduction and waste management regulation, skills related to food waste reduction and recollection are destined to be crucial in the upcoming years, especially considering that the amount of general food waste in EU is projected to increase: that results in anticipation of skills needs of the labour market.

FoRWaRd aims to intervene in one specific link of the chain causing food waste, that of food supply: this sector is in need of specific competencies to assure a better management of food resources, in terms of waste reduction, separation and donation in favour of charitable associations.

The project main result will be to favour the improvement of the order-supply-recovery chain in the European food sector, which would lead to a change of some unsustainable commercial behaviour of the target group and, in turn, of the customers/consumers, a reduction of natural resources waste and disposal costs and indirectly a cut to GHG emissions and water consumption.

### TARGET GROUP

The target group is twofold:

1. the representatives of the food supply chain willing to reduce their waste and donate the leftover
2. NGOs and charitable associations willing to work on the collection and distribution of unsold food

The two groups will benefit from the project being trained as food waste managers: they'll be able to identify where and how waste is produced and the best solutions to reduce and collect it, saving money, pollution and time.

While target group a) will directly exploit the acquired skills in their facilities/business, target group b) could also exploit such knowledge in order to work as "consultants" for food suppliers and/or to organize recovery systems. A good practice of this field is that of Food Banks, represented by three members of the consortium.

The two target groups are involved in various stages of the project, from the initial training needs analysis to the final pilot test of the training system, as well as in the dissemination and exploitation activities.

### PROMOTERS.

The consortium of promoters is composed of 8 organisations from 8 European Countries:

- **Eurocrea Merchant (IT)** is a consulting company experienced in business and vocational training projects at European level.
- **Hungarian Food Bank (HU)**, **Lithuanian Food Bank (LT)** and the **Federation of Polish Food Banks (PL)**, three members of the worldwide network of Food Banks, whose main aim is to support the reduction of malnutrition and poverty by collecting and distributing food donations.
- **AVACA Technologies (GR)**, an independent software development house and IT integrator based in Athens, Greece and provides consulting, informatics and engineering services.
- **Greenport Venlo (NL)** is an economic network of businesses, organisations and institutions associated with the horticulture supply chain.
- **TEMPO Training and Consulting (CZ)** is the biggest private training organization in the Czech Republic.

- The **European Retail Academy (GE)** has as its scope to act as a virtual platform and as an initiator of workshops/seminars/conferences to bring more transparency about retail-research and retail-education at universities or universities of applied sciences.

**More information at [www.foodrecoveryproject.eu](http://www.foodrecoveryproject.eu)**

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# 1. Project Objectives

The project aims at promoting the integration of learning with working, in line with the provision “New skills for new jobs”. In particular, there is a need for a massive recovery of food waste, given that food suppliers are not prepared to reduce food waste and they have to turn to consultants and external experts. The project wants to promote a work-placed training specifically outlined on their needs, as a basis for development of vocational skills relevant to the labour market.

Taking into consideration the European provisions concerning respect for the environment, GHG emissions reduction and waste management regulation, skills related to food waste recovery/reduction are destined to be crucial in the upcoming years, especially considering that the amount of general food waste in EU is projected to increase: that results in anticipation of skills needs of the labour market.

## General objectives:

- To promote transnational cooperation among VET providers and stakeholders in order to detect common training pathways for the reduction of food waste
- To strengthen existing links and develop new ties between education, training and work sectors
- To develop a sense of social and civic responsibility through a righteous use of natural resources
- To reduce the negative impact on the environment of our system of production and consumption

## Specific objectives:

- To identify common strategies to bridge the gap of the labour market skill needs in the field of waste reduction and re-use of unsold foodstuff
- To train food suppliers in two directions: 1) how to reduce food waste, 2) how to recovery unsold and uneaten food. In brief, to train food waste managers
- To create, thanks to ICT, a virtual space, where training contents will be available, enriched with visual elements and simulations
- To give a practical simple solution to enable the natural matching of demand and supply of left-over foodstuff through an online platform
- To train also representatives of the charitable association willing to take part in the recovery phase
- To promote Corporate Social Responsibility in the European food supply sector

It is expected that the project main result will be an improvement of the order-supply-recovery chain, which would lead to a change of some unsustainable commercial behaviour of the target group and, in turn, of the customers/consumers, a reduction of natural resources waste and disposal costs and indirectly a cut to GHG emissions and water consumption.

Besides economic actors, the project wants to affect also charitable associations offering food services to people in need, who can act as recipient and collectors of unsold foodstuff. They will participate in the project with a double aim:

- To create links between supply and demand of unsold food in order to organise an efficient recovery;

- To train members of charitable associations to become managers of food waste, so that they can spend acquired skills to improve their services and work with the supply sector as recovery manager.

## 2. Project Approach

The overall methodology is based on the idea of creating a training plan and a food recovery solution by following strictly the target group needs.

The project combines different methodologies to collect information, materials and data:

1. Data-mining: gathering, selecting and treating information to transform it into knowledge
2. Questionnaires or standardized forms as they are quantifiable
3. In-depth interviewing with key actors to obtain contextualized information that allows a correct interpretation of quantifiable data

In this way the methodological approach on which FoRWaRD is based combines self-checking and self-evaluation templates at several levels in a self-learning system on a technological platform, allowing users to choose different materials depending on their evaluations and needs. Once the system is developed, it will be evaluated and validated by representatives of the target public, developing a validation methodology and fieldwork: the results obtained will indicate the improvements that must be made to the self-learning system, both in its technological components and in its contents, so that the created system (training path and recovery database) will be fully adapted to the target group needs.

The appraisal will be carried out from the beginning, while simultaneously designing awareness and diffusion tools to present to recipients and potential users the opportunities and advantages, both professional and personal, that can be offered by the products and results of FoRWaRD.

The **dissemination strategy** is devised in order to:

- Raise awareness of the project and the issues relevant to FORWARD activities in the appropriate circles of interests.
- Foster acquaintance among European food supply sector and charities of the products developed in FORWARD so to favour access of the target public to project results and prepare the way for further exploitation
- Cluster with other similar projects in order to learn from them and to make FORWARD known to them in turn.

The activities scheduled and described in the Dissemination Plan include:

- Internet presence: project website, partners' and other relevant websites
- Elaboration of paper-based and web-based information and promotion materials: press articles, leaflets, newsletters, technical manuals
- Organisation of public events in each country involved (at least two per partner) and a closing conference in Germany
- Presence in public events, contribution to seminars and conferences relevant to the use of web project
- Networking and cooperation with organisations, associations and training networks of the civil society, in particular with organisations active in the promotion of sustainable development and fight to poverty

Two dissemination levels are envisaged:

1. The overall strategy of the consortium, which includes actions and tools described in the Dissemination Plan. At this level the consortium acts as a whole.

2. The national/regional/local level affected by the individual strategies developed by each partner, according to its specific type of organisation, businesses, activities, resources, etc.

The **exploitation of results** will take place in order to transfer what has been learnt into new practices. This task will involve above all an identification of target groups which are likely to find the products/outcomes of the project interesting and relevant to their needs, starting from the stakeholders who have been involved during the development of the project.

In addition, the partners will use the developed product to update their activities so as to deliver the brand new training system through their formative activities and/or consultancy. The agreed ways to exploit the results has the aim to make living the projects and outputs beyond the contractualized life of the activities.

### 3. Project Outcomes & Results

The project will produce two main outputs: on one hand a training pathway for food suppliers and NGOs and charitable associations, on the other a food recovery simple IT solution.

Also the target group is twofold: a) the representatives of the food supply chain (such as agro-chain, manufacturing, supermarkets, the catering sector, hospitals, restaurants, food preparation companies, hotels) , b) NGOs and charitable associations.

The two groups will benefit from the project because participants will be trained as food waste managers: they'll be able to identify where and how waste is produced and the best solutions to reduce and collect it, saving money, pollution and time.

While target group a) will directly exploit the acquired skills in their facilities/business, target group b) could also exploit such knowledge in order to work as "consultants" for food suppliers and/or to organise recovery systems in their territory. A good practice of this field is that of Food Banks, represented by P2, P7 and P8.

The results of the first year of project lifetime are mainly related to:

1. Results of the investigation of the state of the art in the 8 countries involved. To be able to base these on the real needs of companies and charity organisations, the project consortium undertook a research in Spring 2013. The objectives of the research were: to scan the public sphere for food waste data and already existing educational programmes and materials; to understand companies' situation, attitudes and practices regarding food surplus, waste and donation; to understand the situation, attitudes and practices of charities that receive and distribute food surplus.

The research covered Czech Republic, Germany, Greece, Hungary, Italy, Lithuania, the Netherlands and Poland. For food waste data and already existing educational materials and programmes we did internet-based desktop research. For surveying the companies and charities we jointly developed two separate questionnaires (one for food companies, one for food distributing charity organisations). Consortium partners then translated and used this questionnaire in different ways to gather responses.

In all participating countries we aimed at collecting 15 responses from companies and 5 from charities. Altogether 151 companies and 100 charities replied to our questionnaire. Apart from the survey, each partner conducted a research to list in a regional report the most relevant data at national level about food waste in each country and also the most important already existing educational materials.

2. The definition of the contents in the Report on training Plan, which indicates in details the educational aims, the learning outcomes, the approach, methods and materials, how to engage the learners, a detailed list of learning units, who does what and the timeline. Per each unit, P5-TEMPO, in charge for the development of the Training Plan, provided a Learning Unit Descriptor (LUD), aimed at helping the partners to design the material and also for other potential tutors to have an idea as to what the author is trying to achieve in the module. The LUDs, in particular, illustrate per each unit the learning time, the indicative contents (key topics and concepts), learning outcomes, learning strategies and resources, feedback methods.

The training Plan is as follows:

N°	Module
1	<b>COMMON PARTS</b> Introduction Definition of food waste
2	<b>COMMON PARTS</b> Where and why waste is generated, measurement of food waste
3	<b>SPECIFIC CONTENTS FOR REDUCTION OF FOOD WASTE FOR FOOD SUPPLY SECTOR</b>
3.1	Improvement of planning and management of purchase needs
3.2	Managing the purchase and supply chains
3.3	Storage, food safety and food security Better
3.4	Better transportation management
3.5	Corporate Social Responsibility (specifically related to reduction of food waste)
3.6	Marketing strategies to reduce food waste
4	<b>SPECIFIC CONTENTS FOR DONATION FOR FOOD SUPPLY SECTOR</b>
4.1	Storage, food safety and food security
4.2	Transportation (especially for chilled, fresh, cooked and frozen food)
4.3	Legislation on food safety (national and European)
4.4	Tax regulation in all project countries
4.5	Corporate Social Responsibility (specifically related to recovery of food waste)
4.6	Accounting system for donated food in bookkeeping
4.7	How to find the right contacts (charities)
4.8	How to manage relationship with charities
4.9	Donation models
4.10	Monitoring of the goods and reporting
4.11	Risk management
4.12	Separation and recycling
5	<b>SPECIFIC CONTENTS FOR CHARITIES</b>
5.1	Storage, food safety and food security
5.2	Transportation (especially for chilled, fresh, cooked and frozen food)
5.3	Legislation on food safety (national and European)
5.4	Tax regulation in all project countries
5.5	Corporate Social Responsibility (specifically related to recovery of food waste)
5.6	Accounting system for donated food in bookkeeping
5.7	How to find the right contacts (donors, end beneficiaries)
5.8	How to manage relationship with donors
5.9	Donation models
5.10	Monitoring of the goods and reporting

The units are under proof reading. By March 2014 all the contents will be online and the pilot test will be launched.

## 4. Partnerships

The consortium of promoters is composed of 8 organisations from 8 European countries, representing different expertise and backgrounds, altogether able to mobilise the skills necessary to reach project objectives:

- **Eurocrea Merchant (IT)** is a consulting company experienced in business and vocational training projects at European level. It is the coordinator of the project and assures high level quality and implementation standards.
- **Hungarian Food Bank (HU)**, **Lithuanian Food Bank (LT)** and the **Federation of Polish Food Banks (PL)**, three members of the worldwide network of Food Banks, whose main aim is to support the reduction of malnutrition and poverty by collecting and distributing food donations. They represent in the project the no-profit sector and in particular the actors working in the recollection of food waste.
- **AVACA Technologies (GR)**, an independent software development house and IT integrator based in Athens, Greece and provides consulting, informatics and engineering services.
- **Greenport Venlo (NL)** is an economic network of businesses, organisations and institutions associated with the horticulture supply chain. It represents in the project the technical skills necessary to develop a food waste reduction programme.
- **TEMPO Training and Consulting (CZ)** is the biggest private training organization in the Czech Republic. It represents in the project the contribution of the experts in vocational training and innovation in education.
- The **European Retail Academy (GE)** has as its scope to act as a virtual platform and as an initiator of workshops/seminars/conferences to bring more transparency about retail-research and retail-education at universities or universities of applied sciences. ERA represents the retail sector and leads dissemination activities.

Besides the specific fields of expertise, all partners are able to involve target group and have a wide network of partners/clients/stakeholders/members, which will assure high visibility to project results and facilitate the exploitation of the produced products. Their staff have different profiles, including experts on issues related to environment, business, training and social issues. The project relies on the combination of those different expertise and synergies, and the quality of the results is directly proportional to the level of interaction among the different competences.

All the partners work or already worked on various multi-actors projects and programmes at regional/national/European level.

The added value of working in a multi-actor and transnational consortium is the possibility to exchange visions and experiences in all the phases of the project.

The geographical composition has also been taken into appropriate account: the project in fact gathers together different partners from 8 different European countries, not only to analyse diverse scenarios, but especially to promote, from the beginning the widest diffusion.

## 5. Plans for the Future

The consortium is now (December 2013) engaged in the "core part" of the project activities: the training contents and the IT tools are under development. In particular,

- the modules already developed are under proof reading, which is organised as a peer checking of contents: each partner has been assigned 3 to 4 units to proof-read, checking the clarity of the language, errors and mistyping, appropriateness and completeness of the contents according to the Learning Unit descriptors developed in the definition of the Training Plan phase.
- The IT tools are under development. The partner responsible for this provided a series of documents to describe the ideas for the design of the training platform, the matching tool for demand and supply of unsold food and the simulation game.

By the end of February 2014 all products will be available online and in march 2014 the consortium will officially launch the pilot test activities.

The Training Pilot Test will be performed in order to detect possible lacks or inconsistencies of the proposed training modules, contents and support materials.

It will be executed in each of the participating regions and this task will imply:

- selection of participants – at least 135 participants (15 per country) chosen among entrepreneurs, managers, directors of stores of the food supply sector + 5 per country representatives of the charitable sector (for a total of about 160 participants)
- selection of tasks, roles and responsibilities of agents involved;
- organization of training;
- execution of training.

The participation of representatives of the no-profit sector and charitable organisations, which are willing to have access to unsold food to recovery and re-distribute it, will guarantee two main objectives: on one hand they will take part in the training and could re-use the skills and knowledge acquired to work as waste managers for the food supply sector; on the other hand they will participate in the recovery database pilot test, allowing an adaptation of the database to their needs and suggestions: they will be protagonists of the recovery, so their contribution is deemed very important.

Participants will be asked to fill in questionnaires for evaluation of the system and then the consortium will make an overall evaluation aiming to adjust the platform according to the target groups feedbacks.

Besides the training, the promoters will be active in dissemination and visibility actions, aiming to favour further exploitation of the results by all potential stakeholders.

Target of dissemination and exploitation will be:

- The two targets of the project: food supply chain representatives and charitable sector;
- Private and Public VET providers of the countries involved and possibly of other European countries, with the aim to favour the incorporation of project results into the VET systems;
- Policy makers and public bodies responsible for vocational training provisions, environmental and development issues: the aim is to raise awareness of the problem and favour the use of the developed tools at a wider level, with the exploitation by public bodies.

The dissemination and exploitation strategy aims at raising awareness of the project outcomes and the EU support, but also to sensitize the general public and the sectors involved to act in their facilities or houses in order to avoid the waste of food.

The exploitation strategy is based on the idea laying at the basis of the project: it is not enough to train food waste managers, it is also necessary to give the target groups an effective tool to allow food waste recovery and an autonomous management of food resources, also beyond the project lifetime. To reach this goal, therefore, it is necessary to raise awareness first on the problem of food waste, secondly on the possible solutions to reduce and recovery it, thirdly on the tools developed in the projects and available to the public on the web.

Moreover, the training will show how food waste reduction and recovery its convenient for everyone, especially for producers and suppliers, in terms of disposal costs reduction, improvements in inventory management, tax deductions for donated products (in some countries), creation of new markets for products, strengthening their brand and customer loyalty by demonstrating environmental and social responsibility, improving employee morale by displaying good corporate citizenship.

The training platform will remain online for three years after the end of project lifetime, allowing use of the educational materials and the matching of food waste demand and supply for free on internet, with the possibility to improve later on its features and open new windows for different sectors, products, target groups.

Furthermore, one of the best way to assure project sustainability will be the diffusion of Food Banks best practices in 8 European countries and the creation of training materials able to train the manager of food waste: that would potentially lead to the creation of new Food Banks branches or other association/organisation working for food waste recovery.

The dissemination and promotion potential offered by Food Banks through their network it's quite big, thanks to the networking potentiality of the European Federation of Food Banks (FEBA), that brings together 240 food banks in Europe, which fight daily against hunger and food waste.

Project sustainability will be assured by exploitation activities, that may ultimately lead to commercialisation and/or free-of-charge of project outcomes, that is the VET system for food waste manager and the developed IT solution for food recovery. Project partners will sign an intellectual property rights agreement covering all project outcomes. Anyway the consortium is more oriented to a free online solution: they most probably will maintain project outcomes available online after the project lifetime, especially in order to assure free use for the third sector.

## 6. Contribution to EU policies

The European Commission is now focusing its efforts to improve the environmental sustainability of the food chain on food waste minimisation and food packaging optimisation ([http://ec.europa.eu/food/food/sustainability/index\\_en.htm](http://ec.europa.eu/food/food/sustainability/index_en.htm)).

The first step the EC has taken to this purpose has been to fund a Preparatory study of food waste across the EU, which estimates that about 89 million tonnes of food is wasted per year or 179 kg per capita per year, and that food is wasted at all the levels of the food chain.

FoRWaRd aims to intervene in one specific link of the chain causing food waste, that of food supply: this sector is in need of specific competencies to assure a better management of food resources, in terms of waste reduction, separation and recovery. Among the policy recommendation of the Preparatory study, in fact, there are: awareness raising campaign, food waste prevention and collection programmes.

It also intends to furnish them skills and competences which will be more and more important in the labour market in the upcoming years, since the *Preparatory study for the review of the Thematic Strategy on the Prevention and Recycling of Waste* of the European Commission demonstrated that overall food waste generation in the EU is increasing rather than diminishing and it is projected to increase together with demographics.

The project addresses various European priorities and legislation:

- The Directive 1999/31/EC aims to prevent or reduce the adverse effects of the landfill of waste on the environment
- Promoting recycling and separation of food waste to produce bio-fuels favours the application of Directive 2009/28/CE and the *Thematic Strategy on the Prevention and Recycling of Waste* (COM 2005/666) reviewed in 2010
- The European Parliament has recently made a resolution which follows a European Commission Green Paper on the management of bio-waste in the EU, arguing that a specific directive for bio-waste should be approved (Resolution of 06/07/2010). The EP has also been involved in an important initiative on food waste, a conference titled the *Transforming food waste into a resource*. Held on the 28 October 2010 in Brussels, the meeting had the ambition aim to reach the final draft of a document signed by the participants to achieve by 2025 a reduction of 50% of food waste in Europe
- The project falls within the principles *New skills for new jobs*, because it fosters a qualification system more responsive to labour market needs: the aim is to train a new professional figure working as waste manager and able to optimize the process of purchase and supply of foodstuff, reducing wastage
- FoRWaRd, aiming at reducing wastage, promoting recycling, protection of the environment, solidarity and social cohesion fits perfectly with: the principles on which the Union is founded (as listed in Article 2 of Treaty establishing the EC); protection of the environment(Art. 6); the launched EU 2020 Strategy and the EU 202 Resource efficiency Flagship.

Finally, improving waste management efficiency and social responsibility of the food supply sector, the project falls within the priority of sustainable growth and competitiveness set out in the Lisbon Strategy. The project intends to improve European food production and supply sector competitiveness through a better management of the order/purchase/supply cycle.

